



**Metropolitan Water Reclamation  
District of Greater Chicago  
2017 Budget  
MOVING DOWN THE TRACK**

**Final Budget**

Adopted December 8, 2016  
and Amended December 15, 2016





GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Metropolitan Water Reclamation District of Chicago  
Illinois**

For the Fiscal Year Beginning

**January 1, 2016**

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Metropolitan Water Reclamation District of Greater Chicago, Illinois for its annual budget for the fiscal year beginning January 1, 2016. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

The Metropolitan Water Reclamation District of Greater Chicago received special recognition in the category of Performance Measures.

The award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.



# Metropolitan Water Reclamation District of Greater Chicago 2017 Budget

**MOVING DOWN THE TRACK**

## Final Budget

Adopted December 8, 2016  
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### OFFICERS

**David St. Pierre**  
EXECUTIVE DIRECTOR

**Mary Ann Boyle**  
TREASURER

**Allison Fore**  
PUBLIC AND INTERGOVERNMENTAL AFFAIRS OFFICER

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**Beverly K. Sanders**  
DIRECTOR OF HUMAN RESOURCES

**John H. Sudduth**  
DIRECTOR OF INFORMATION TECHNOLOGY

**Jacqueline Torres**  
CLERK/DIRECTOR OF FINANCE

### BOARD OF COMMISSIONERS



*Seated, from left to right:*

**Barbara J. McGowan**  
VICE PRESIDENT

**Mariyana T. Spyropoulos**  
PRESIDENT

**Frank Avila**  
CHAIRMAN OF FINANCE

*Standing, from left to right:*

**David J. Walsh**

**Kari K. Steele**

**Debra Shore**

**Timothy Bradford**

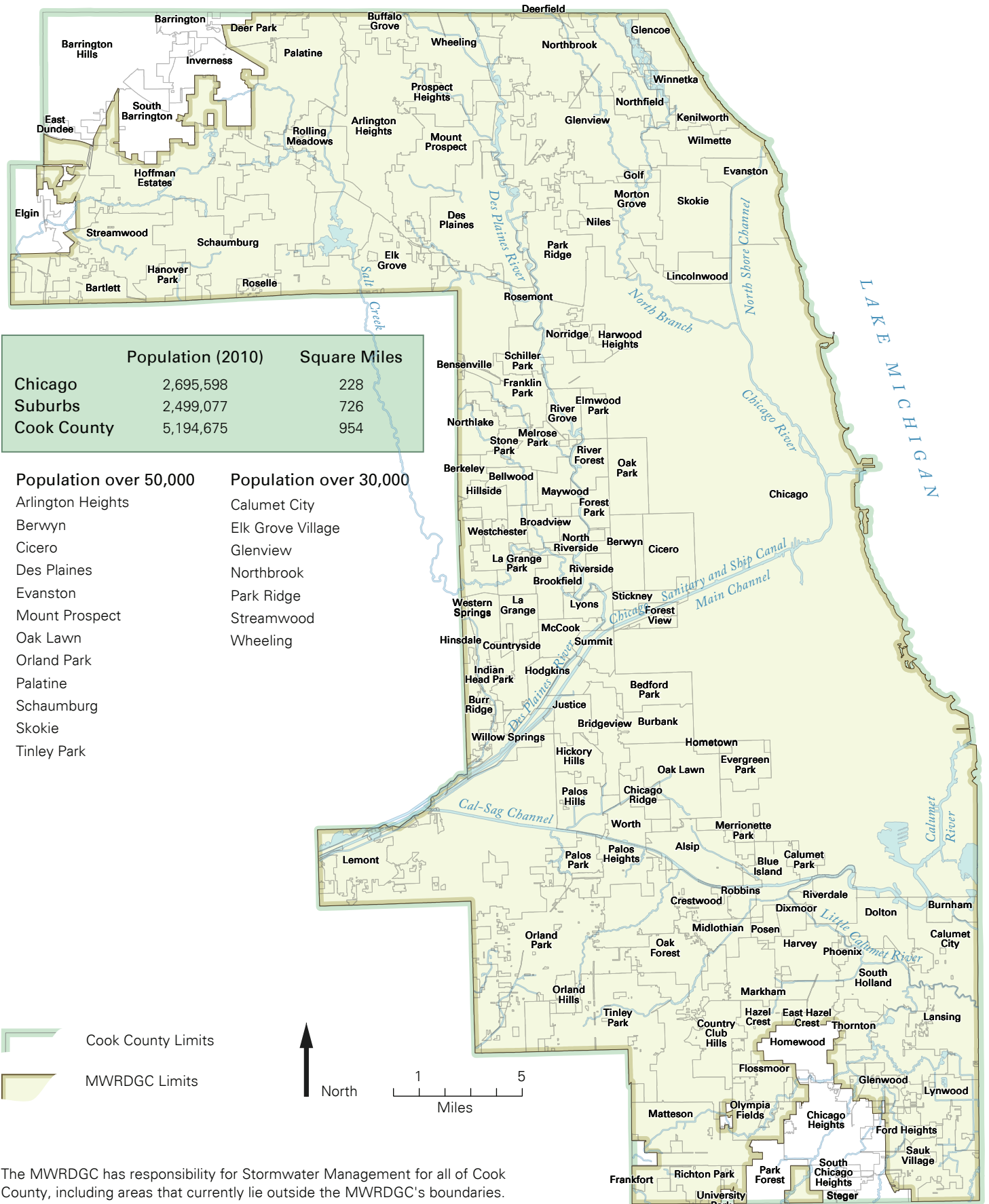
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# Cook County and Metropolitan Water Reclamation District of Greater Chicago



The MWRDGC has responsibility for Stormwater Management for all of Cook County, including areas that currently lie outside the MWRDGC's boundaries.



## **DESCRIPTION OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO: ITS HISTORY, LOCATION, SIZE, POPULATION, AND TYPE OF GOVERNMENT**

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### **Origin and History**

The Metropolitan Water Reclamation District of Greater Chicago (District) is an independent government and taxing body encompassing approximately 92 percent of the land area and 98 percent of the assessed valuation of Cook County, Illinois.

The District is a separate legal entity sharing an overlapping tax base with the City of Chicago, the Chicago Board of Education, the County of Cook, the Cook County Forest Preserve District, the Chicago Park District, the Chicago Public Building Commission, the Cook County Community College District, and various municipalities and school districts outside the City of Chicago but within the District's boundaries.

The District was originally organized as the Sanitary District of Chicago in 1889 under an act of the Illinois General Assembly, which has been modified from time to time to increase the District's authority and jurisdiction. The enabling act in 1889 was in direct response to a long standing problem with contamination of the water supply and nuisance conditions of the rivers. The District reversed the flow of the Chicago and Calumet River Systems to stop the discharge of sewage to Lake Michigan and instead, discharge it to the Des Plaines River, where it could be diluted as it flowed into the Illinois River and eventually the Mississippi River. Prior to the District's construction of a 61.3 mile system of canals and waterway improvements, the Chicago and Calumet River Systems were tributaries to Lake Michigan. These river systems are now tributaries to the Illinois River system.

From 1955 through 1988, the District was called The Metropolitan Sanitary District of Greater Chicago. In order to provide a more accurate perception of the District's current functions and responsibilities, the name was changed effective, January 1, 1989, to the Metropolitan Water Reclamation District of Greater Chicago.

### **Mission and Responsibilities**

The mission of the District is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of water in watercourses in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area.

The District collects wastewater from municipalities in its service area, conveys it to wastewater reclamation plants, provides full secondary treatment, and discharges clean water to local waterways. The District is also responsible for stormwater management for all of Cook County, including areas outside of the District's corporate boundaries for wastewater services.

### **Services**

The District's seven modern water reclamation plants provide excellent treatment for residential and industrial wastewater, meeting permitted discharge limits virtually at all times. The treatment process is protected by a pretreatment program to guard against hazardous substances and toxic chemicals. These are strictly regulated pursuant to federal and state requirements. The District routinely monitors industries and non-residential sources to assure that wastes are disposed of in an environmentally responsible and lawful manner.

Treated wastewater, along with runoff from rainfall, enters local canals, rivers, and streams that serve as headwaters of the Illinois River system. Stormwater in the separate sewered area is controlled to reduce flood damages by a number of stormwater detention reservoirs. In the combined sewer area, the District's Tunnel and Reservoir Plan (TARP) has significantly reduced basement backup and overflows to local waterways.

Flow within the District's waterway system and the Lake Michigan discretionary diversion flow are controlled by three inlet structures on Lake Michigan: the Wilmette Pumping Station, the Chicago River Controlling Works, and the O'Brien Lock and Dam. The single outlet control structure is the Lockport Lock and Powerhouse.

While exercising no direct control over wastewater collection systems owned and maintained by cities, villages, sewer districts, and utilities, the District does control municipal sewer construction by permits outside the City of Chicago. It also owns a network of intercepting sewers to convey wastewater from the local collection systems to the water reclamation plants.

### **Facilities**

The District is located primarily within the boundaries of Cook County, Illinois. The District serves an area of 882.1 square miles, which includes the City of Chicago and 128 surrounding suburban communities. The District serves an equivalent population of 10.35 million people; 5.25 million real people, a commercial and industrial equivalent of 4.5 million people, and a combined sewer overflow equivalent of 0.6 million people. The District's 560 miles of intercepting sewers and force mains range in size from 6 inches to 27 feet in diameter, and are fed by approximately 10,000 local sewer system connections.

The TARP is one of the country's largest public works projects for pollution and flood control. Four tunnel systems total 109.4 miles of tunnels, 8 to 33 feet in diameter and 150 to 300 feet underground. The tunnels are planned to empty into three large reservoirs to provide storage for the polluted water captured by TARP.

**DESCRIPTION OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO: ITS HISTORY, LOCATION, SIZE, POPULATION, AND TYPE OF GOVERNMENT**

The District owns and operates one of the world’s largest water reclamation plants, in addition to six other plants and 23 pumping stations. The District treats an average of 1.3 billion gallons of wastewater each day. The District’s total wastewater treatment capacity is over 2.0 billion gallons per day.

The District controls 76.1 miles of navigable waterways, which are part of the inland waterway system connecting the Great Lakes with the Gulf of Mexico. It also owns and operates 34 stormwater detention reservoirs to provide regional stormwater flood damage reduction.

In conjunction with its biosolids beneficial utilization of farm land application program, the District recycles all of its biosolids through land application in northeast Illinois, and owns over 13,500 acres of land in Fulton County, Illinois, formerly used for biosolids application.

**Governance**

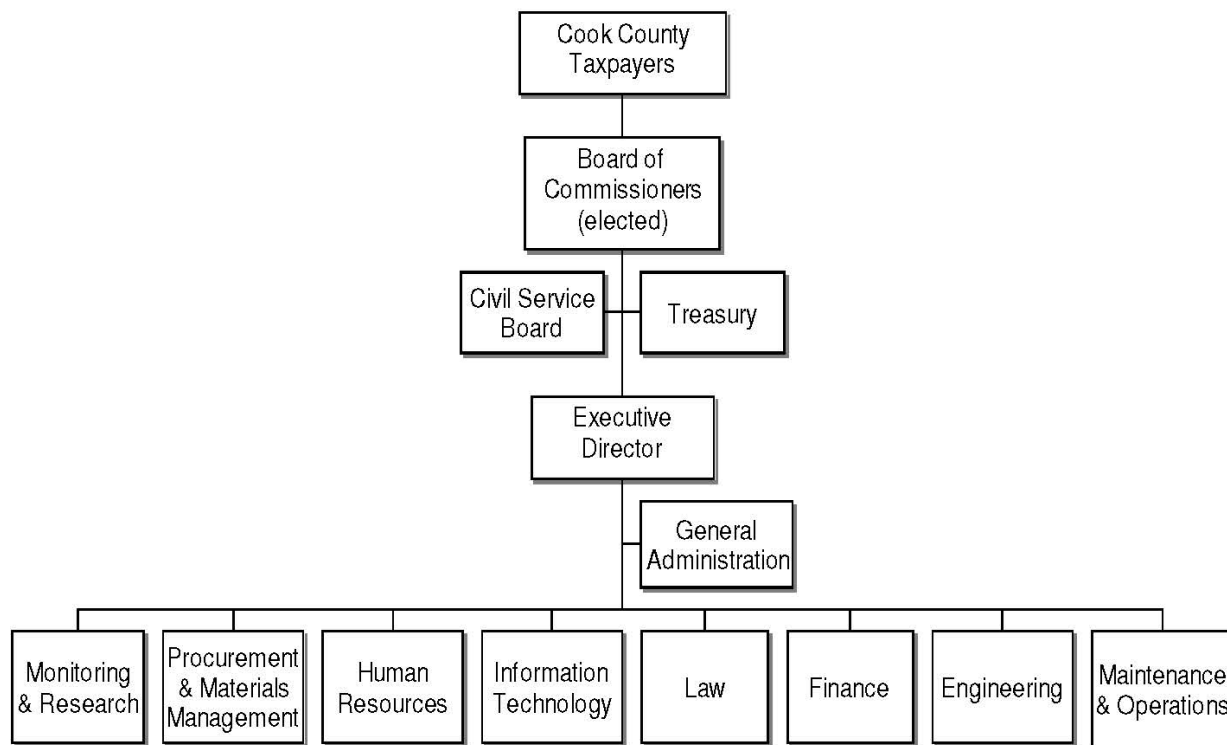
The District is governed by a nine-member Board of Commissioners (Board). Commissioners are elected at large and serve on a salaried basis. Three Commissioners are elected every two years for six-year terms. Biannually, the Board elects from its membership a President, Vice President, and Chairman of the Committee on Finance.

**Organization Structure**

The Executive Director, who reports directly to the Board, manages the District’s day-to-day operations. Eight appointed department heads report to the Executive Director.

The Treasurer of the District, its chief financial officer, is appointed by and reports directly to the Board.

General Administration, which includes the Administrative Services Division, Diversity Section, and Public Affairs Section are direct staff and support units, reporting to the Executive Director.



# HOW TO USE THE DISTRICT’S BUDGET

The organization and presentation of the District’s Budget is designed to satisfy the needs of citizens, public officials, and District employees. It is organized in compliance with the Illinois Compiled Statutes and structured to meet external and internal managerial needs. As a comprehensive management and balanced financial plan, this document describes the programs, services, and resources the District provides, as well as policies and long-run financial plans.

The District’s Budget is organized as follows:

- 1) **By Appropriation and Tax Levy Ordinances.** Enacted by the Board of Commissioners under the authority of the Illinois Compiled Statutes, these are the legal authority allowing the District to carry out its legally mandated mission.
- 2) **By Funds.** These are the accounting entities segregating sums of money or other resources for the purpose of carrying on specific activities or government functions in accordance with certain legal restrictions or limitations.
- 3) **By Department.** These are the primary organizational units of the District.

The District’s Budget is presented in various sections, each providing the reader with specific information related to the District’s financial plans and services.

The sections are presented as follows:

- I. **BUDGET FOREWORD.** An introductory section that contains: the message from the President and the Chairman of the Committee on Budget and Employment; Strategic Business Plan; narratives on operational goals and accomplishments, major issues, policy and program changes; Budget Highlights; Financial Policies, Objectives, and Accomplishments; Policy Development and the Budget Process; and the beginning of the annual Appropriation Ordinance, which gives the Budget legal authority. The full Appropriation Ordinance consists of pages 37 and 38 and sections II through VII.
- II. **BUDGET AND FINANCIAL SUMMARIES, SCHEDULES, AND EXHIBITS.** These provide an overview of the District’s Budget and financial plans of the past, present, and future, including proposed tax levies, revenues, and appropriations.
- III. **FINANCIAL STATEMENTS BY FUND.** These contain detailed information on taxes and all other sources of revenue and expenditure, plus financial statements detailing current assets, current liabilities, and the amount of assets available for appropriation in 2017.
- IV. **CORPORATE FUND.** These present detailed information by department, and priority of activities, objectives, programs, performance measures, proposed line item expenditures, and staffing. The legend to the right shows the placement of data within the text boxes of the organizational charts. Each department provides actual, budgeted, and proposed full-time equivalent (FTE) positions over a three year period. Salary ranges for pay plans and grades, as shown in the Position Analysis, are included in the Appendix.
 

Organization Unit Number		
Organization Unit Name		
2015	2016	2017
FTE	FTE	FTE
Count	Count	Count
Actual	Budgeted	Proposed
- V. **CAPITAL BUDGET.** The District’s current and long-term programs for capital construction, modernization, and rehabilitation are detailed in the Construction Fund and Capital Improvements Bond Fund.
- VI. **STORMWATER MANAGEMENT FUND.** The District’s current and long-term programs for the Stormwater Management Fund are detailed.
- VII. **OTHER FUNDS.** Information detailing the Reserve Claim Fund, Bond Redemption and Interest Sinking Funds, and the MWRD Retirement Fund are provided in this section.
- VIII. **TAX LEVY ORDINANCES.** These present the financial and management plan of the District as a legal document which coordinates and establishes the legal authority for the District to obtain and expend funds during the fiscal year.
- IX. **APPENDIX.** Information detailing the District’s compensation plan, glossaries, acronym list, awards, and organizational memberships.

To aid the reader in finding specific information quickly, there is a Table of Contents inserted on the manila tabbed divider before each section.



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# SECTION I

## BUDGET FOREWORD

This section introduces the budget with explanations of the organization and structure of the District's Budget. It also presents an overview of the substance of the 2017 Budget. It includes the following:

- In the *Transmittal Letter from the President and the Chairman of the Committee on Budget and Employment*, major policies, initiatives, changes, and other significant features of the Final 2017 Budget are presented.
- In the *Strategic Business Plan*, an update of the strategic business plan is presented.
- The *Budget Message/Highlights* section includes a statement of the District's operational goals and accomplishments and a narrative on major issues, policy, and program changes. It is in this section that broad policy, program objectives, and operational accomplishments are defined.
- In the *Financial Policies, Objectives, and Accomplishments* section, an overview of the financial guidelines and accomplishments of the District is presented.
- The *Policy Development and the Budget Process* section describes policy development and the total budget process. The detailed budget process is presented in 13 clearly stated steps with a flowchart of the budget cycle.
- The *Report of Committee on Budget and Employment* officially transmits and recommends for approval, the 2017 Budget, Annual Appropriation Ordinance, and tax levy ordinances to the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago.
- The *Annual Appropriation Ordinance* gives legal effect to the entire budget document as enacted into law by the Board of Commissioners under authority of the Illinois Compiled Statutes. It includes an explanation of the crosshatch (#) symbols used with some personnel positions within the budget, indicating changes to positions once vacated.

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**Metropolitan Water Reclamation District of Greater Chicago**

100 EAST ERIE STREET

CHICAGO, ILLINOIS 60611-3154

312.751.5600

January 3, 2017

To the Residents of the Metropolitan Water Reclamation District of Greater Chicago:

The Board of Commissioners (Board) and staff are pleased to present the 2017 Budget, as recommended by the Executive Director and revised by the Committee on Budget and Employment (Committee), which includes the resources to allow the Metropolitan Water Reclamation District of Greater Chicago (District) to provide a quality water environment for our service area.

**Committee Hearings**

The Committee on Budget and Employment received the Executive Director’s Recommendations on October 11, 2016. A hearing on these recommendations was conducted on November 3, 2016, when the Executive Director and his Executive Team presented major changes and initiatives included in the 2017 Budget. The Executive Director presented a summary of the 2017 updates to the Strategic Business Plan, including a discussion on how the District is “Moving Down the Track”, the theme of the 2017 Budget. The District has a stable Corporate Fund and a sustainable capital plan, increased funding to the Retirement Fund, and continued commitment to the Other Postemployment Benefits (OPEB) Fund. The District continues to expand Stormwater Management efforts, invest in resource recovery projects, and commit to the training and development of District employees.

**Budget Message**

The year 2017 marks the third year of the Strategic Business Plan, *Recovering Resources, Transforming Water*, adopted in 2015. Several visions of the past came to fruition in 2016 as the Thornton Reservoir was placed in service, the disinfection facilities at the O’Brien and Calumet Water Reclamation Plants (WRPs) became operable, the phosphorus recovery facility at the Stickney WRP was placed in service, the ANITA™ Mox treatment system came online at the Egan WRP, the Space to Grow Program transformed several school yards, and stormwater projects are protecting citizens throughout Cook County. These accomplishments encompass visions from the past and new visions that have been incorporated into our program over the past few years. Progress is rolling along as we continue moving down the track.



The first section of the McCook Reservoir, holding 3.5 billion gallons, is nearing completion in 2017. The reservoir is the final component of the Metropolitan Water Reclamation District of Greater Chicago’s Tunnel and Reservoir Plan.

The accomplishments of 2015 and 2016 have made steady progress toward the six goals established in the strategic plan and provide a foundation necessary to achieve the remaining goals and objectives. 2017 will be an exciting year for the District as many milestones will be reached. The first stage of the McCook Reservoir will be coming online with a capacity of 3.5 billion gallons, the final component of the Tunnel and Reservoir Plan (TARP) to be completed, and work will continue on the second stage scheduled to be completed in 2029. The District’s resource recovery efforts that began in 2016 will continue and expand production during 2017, while the District continues development and implementation of stormwater and green infrastructure projects to address local flooding issues.

We are pleased to present the 2017 budget, which represents a comprehensive plan to meet the Strategic Business Plan’s goals in a fiscally responsible manner. The Corporate Fund budget remains virtually flat to the 2016 appropriation, increasing by 0.7 percent as we continue to prioritize spending while controlling cost increases. The

budget includes a net increase of 66 positions District-wide, driven primarily by the phase-in of an expanded apprenticeship program while balancing rising personnel costs with departmental reorganizations and succession planning that will prepare the District for the future.

The District operates a fiscally sound organization, maintaining a AAA bond rating with Fitch Ratings and a AA+ bond rating from Standard & Poor's. Contributing to strong credit ratings, the District's funding policies for both the Retirement Fund and Other Postemployment Benefits Fund exemplify the District's commitment to fiscal management. Solid ratings led to strong investor confidence at the District's 2016 bond sale, resulting in excess of \$120 million in savings on future debt service as the District was able to take advantage of 51-year-low interest rates. This accomplishment, in the midst of an uncertain Illinois financial environment, is an outstanding achievement and speaks to the careful, thoughtful management of the agency as directed by the District's Board of Commissioners.

### **Environmental Leadership**

The District has continued its environmental leadership focus with a commitment to improving water quality of the Chicago Area Waterway System. In 2015, all seven of the water reclamation plants were 100 percent compliant in meeting National Pollutant Discharge Elimination System permits, leading to National Association for Clean Water Agencies Platinum Peak Performance Awards for five of the seven plants, with similar results anticipated for 2016. Disinfection upgrades were implemented at the Calumet WRP in 2015, and an ultraviolet radiation disinfection system was introduced at the O'Brien WRP in 2016.

To prevent or reduce accidental pharmaceutical contamination of streams, rivers, and lakes, the District has installed permanent drug collection boxes in District facilities, as well as partnering with the U.S. Drug Enforcement Administration and the Cook County Sheriff's Office on similar programs.

### **Stormwater Management**

Historic rain patterns consisting of intense, short bursts that overwhelm community systems, have continued in the region. Flooding continues to be the number one issue facing the District. To support solutions for local stormwater issues, the 2017 Stormwater Management Fund budget increases appropriations over 2016 by 13.1 percent. The Stormwater Management Program is aggressively working to minimize flooding damage by helping communities with local flooding issues, acquiring flood-prone properties, and partnering with municipalities or other local governments on large capital and green infrastructure projects. The District currently has nearly 100 stormwater projects under way, including 13 intergovernmental agreements for the construction of large stormwater projects throughout the County and six intergovernmental agreements to acquire 132 flood-prone residential structures.

The District is working to promote the Residential Cost Share Program (HB 4659) with the Illinois General Assembly, which aims to reduce basement backup flooding of residences and eliminate infiltration and inflow from the sewer system. The proposed legislation would allow the District to provide funding to support work on private property, creating a cost share program with local municipalities for residential improvements. A pilot program with the City of Chicago is planned for 2017 that will demonstrate that it is more cost effective to install backflow preventers or overhead plumbing than to construct additional infrastructure.

Cost effective stormwater management strategies include a mix of large and small projects. In 2016, the District distributed more than 95,000 rain barrels and encourages homeowners to disconnect downspouts to keep rain runoff out of the sewer system and distributed more than 21,000 oak tree saplings as part of the "Restore the Canopy, Plant a Tree" initiative, driven by the devastation of the emerald ash borer and extreme weather events that have led to the loss of approximately 13 million trees. Partnering with 29 municipalities, 38 schools, and 65 community groups, the tree program seeks to reduce the urban heat island effects, absorb carbon gases, improve habitat for wildlife, and manage stormwater.

### **Resource Recovery**

The District understands the obligation to implement sustainable practices and has invested in research and development of resource recovery programs. In 2016, the District accomplished two major milestones in resource recovery. First, in partnership with Ostara Nutrient Recovery Technologies, the District opened the world's



*Biosolids are delivered by train from the Stickney Water Reclamation Plant to the Lawndale Avenue Solids Management Area, where they are mixed with wood chips to produce high quality compost.*



largest nutrient recovery facility at the Stickney WRP. Phosphorus and nitrogen recovery will provide significant environmental benefits to the Chicago Area Waterway System and downstream through the Mississippi River to the Gulf of Mexico. Excess phosphorus in waterways can cause algae to grow and bloom, creating toxic conditions that destroy aquatic life and severely limit recreational activities. Ostara’s technology recovers phosphorus and nitrogen to create a high value fertilizer that is both economically and environmentally viable.

Secondly, due to changes in Illinois law in 2015, the District can sell Exceptional Quality (EQ) biosolids and EQ biosolids blend that is composted with wood chips to the general public. Biosolids can be used almost anywhere that soil amendments and chemical fertilizers are used. In addition to revenue from the sale of biosolids, the District will also save on disposal costs.

The District continues development of algae processes for nutrient removal and harvest that can be utilized in the manufacture of a variety of products such as biofuels and bioplastics.

During 2017, the District will continue to evaluate processes and design treatment processes to optimize energy efficiency in order to reach our goal of energy neutrality by 2023. In addition to implementing a food-to-energy program that will maximize use of digester capacity, the District is marketing electrical capacity at the Lockport Powerhouse, optimizing aeration processes that will reduce energy consumption by 25 percent, and introducing solar thermal and sewer thermal systems to heat water at the water reclamation plants.



Lab Tech I Maricela Sabido demonstrates the algae process for nutrient removal.

**Recovering Resources, Transforming Water**

On June 16, 2016, the District held a public meeting to kick off the budget season and receive feedback to incorporate changes into the 2015 – 2020 Strategic Business Plan. The six goals, and the strategies to meet them have not changed and represent the major focus areas for staff as we seek to move forward the vision of *Recovering Resources, Transforming Water*.

**Add Value.** *Every employee at the District will look for opportunities to add value.* There are three main strategy areas of focus within this goal. These areas are customer service opportunities, real estate, and service levels between departments. The idea behind this goal is to advance the understanding of results versus task orientation. Every employee within the District should understand the end goal of the activity and perform the job with results in mind. Instead of merely performing tasks, the organization should understand the reason behind the activity and strive for the target.

**Excellence.** *Nothing of consequence is accomplished without enthusiasm.* Everything must work reliably. Our finances should be managed in an excellent manner, ensuring value for every dollar spent. Our processes should be optimized within our plants to ensure resources are not wasted. We should have a sense of urgency in the delivery of services to our constituents. Every employee should understand their value and role within the organization.



The District’s “Restore the Canopy, Plant a Tree” program was aided by Crystal Green fertilizer, the product made from phosphorus and nitrogen recovered at the Stickney Water Reclamation Plant.

**Resource Recovery.** *The District will pursue recovery of natural resources.* This goal focuses on four resources – water, phosphorus, biosolids, and energy. The District has a potential revenue stream of \$70 million annually through resource recovery. These projects have significant environmental impact, play a role in advancing stability at the District, encourage thoughtful action within the community.

**Develop Employees.** *Value is measured through personal contribution and growth.* Every employee at the District should be valued. As such, the focus to invest in the personal growth of each employee remains a critical component of the 2015 plan.

**Leading Partnerships.** *We recognize the importance of active involvement in the world around us.* The District is a leader in water and resource recovery management. We need to strategically lead in our communities, state, and nation. Having the top staff in the country does not come without

responsibility. The District recognizes this responsibility and is positioned to take leadership roles within the community we serve.

**Technology.** *The District will embrace a new era of technology that delivers reliable and useful information.* This initiative recognizes the importance of useful technology tools that are needed to promote the District in all of our efforts. Utilizing information to be transparent and to provide guidance to the organization is critical to our future success.

Please take the time to review the 2017 update to the Strategic Business Plan in full on the following pages. The challenges are many. Our role is clear. We are committed as an agency to continue providing the excellent service expected of the District.

**Financial Summary**

The 2017 Five-Year Financial Plan was developed to maintain budgetary fund balances at policy levels using the Strategic Business Plan as a guideline to establish priorities. The operation, maintenance, and investment in the District’s infrastructure, and other essential services will continue to receive primary focus, while some discretionary activities and non-essential services will be reduced. The District has been aggressive over the past year in addressing some of the primary drivers of the budget, including energy costs, personnel and health care costs, and pension obligations.

These recommendations continue our conservative fiscal management and include the policies, objectives, and resources to allow the District to remain true to our core mission of protecting our water environment and the health of the residents of Cook County.

The District’s appropriation and tax levy for the 2017 Final Budget, compared to the 2016 Budget as Adjusted is:

	<u>2017</u>	<u>2016 (Adjusted)</u>	<u>Increase / (Decrease)</u>	<u>Percent Change</u>
Total Tax Levy	\$595,027,331	\$577,561,630	\$17,465,701	3.0
Aggregate Levy	\$320,284,200	\$310,348,797	\$9,935,403	3.2
Appropriation	\$1,142,749,813	\$1,244,135,730	\$(101,385,917)	(8.1)

The aggregate levy is statutorily limited to an annual increase of five percent or the Consumer Price Index (CPI), whichever is lower. The increase in the 2017 aggregate levy is equal to the estimated CPI plus new property for 2017.

**Conclusion**

The District is raising the bar on water quality initiatives, recovering resources, neutralizing energy usage, and managing stormwater. In 2017, we will continue to implement our Strategic Business Plan and we are set for another great year in 2017.

Respectfully submitted,



Mariyana T. Spyropoulos  
President of the Board of Commissioners



Kari K. Steele  
Chairman, Committee on Budget and Employment

# STRATEGIC BUSINESS PLAN

## Recovering Resources, Transforming Water

### 2017 UPDATE TO THE 2015-2020 STRATEGIC BUSINESS PLAN

In 2015, the Executive Team reviewed the 2011–2014 strategic plan and determined that the goals and strategies had been significantly advanced. The vision to “Improve Our Environment” in the areas of Finance, Employee, Public, and Natural Environments served the District well. Although it remains important to keep our eyes focused on these areas to ensure that we continue to maintain excellence, the team set new goals for the next five years.

On June 16, 2016, the District held a public meeting to kick off the budget season and to present to the Board of Commissioners (Board) the draft Strategic Business Plan update that was developed for 2017. The Executive Team had previously performed a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) and from this information formed goals and strategies for the plan. At the public meeting, staff received input from the Board and the public and incorporated these comments into the plan. It was clear that the Board wants to make certain that we maintain the improvements made in the four areas of focus.

During the past Strategic Business Plan, the District passed a Watershed Management Ordinance and a new infiltration and inflow program. These programs are aimed at improving flood controls throughout the county and maintaining important infrastructure. The District also received additional authority from the Illinois General Assembly authorizing local support to flood mitigation projects and the purchase of flood-prone properties – two important tools that are used in our work to protect the community from the impacts of severe storms.

During the current Strategic Business Plan cycle, Thornton Composite Reservoir came online and the first phase of McCook Reservoir will also be placed in service. This dynamic duo will provide over 10 billion gallons of flood protection to residents and water quality improvements to the Chicago Area Waterway System.

In 2015, the District received authority to recover resources from the treatment process and resell these assets to help offset treatment costs. Becoming a sustainable partner in the region by recovering resources, lowering carbon emissions, creating new revenue streams and promoting resiliency are all part of the goals set for the near future. The District has a great soil enhancer product, nutrients, clean water, and energy that can all be used to encourage economic job creation and add benefit to our communities. The District has real estate resources that can also be used to add value to the communities we serve.

Decisions were made to keep the Mission Statement and Values that have been adopted in the past. So, without further ado, the District is excited to introduce the 2017 update to the Strategic Business Plan.

## VALUES

### Excellence

*We believe excellence is a never-ending journey to exceed the expectations placed upon us as individuals and as an organization.*

Individual excellence is exhibited by performing one’s responsibilities to the best of his or her ability. We promote employee development and encourage everyone to perform at their best. Organizational excellence is obtained by continuous improvement to existing processes. Excellence at both levels is achieved through proactive, resourceful, reliable, and prudent execution of processes and responsibilities. Striving for excellence will result in continuous improvements in the way we operate and the quality of the environment.

### Innovation

*We seek optimal solutions to provide the best services and products available.*

Innovation increases efficiency and performance by being adaptable and strategic in the face of change. Meaningful, productive change involves looking at challenges and opportunities from new perspectives and then developing and implementing new ideas to address the challenge. We are open to implementing new concepts and sharing what we have learned from our diverse experiences and, in the process, evolving. Embracing growth within the District’s mission, we continue to be a model of wastewater treatment and stewardship of the water environment.

### Respect

*We create an atmosphere of open communication that rewards commitment and performance and is responsive to the needs of our employees and our communities.*



Respect is measured by how we treat each other, by the contributions that flow from our diversity, by the productivity of our relationships, and by a job well done, no matter what the job. To meet our goals, we depend on the integrity, knowledge, skill, diversity, and teamwork of our employees. Creating a respectful, courteous, and fair workplace will lead to improved communication, heightened levels of workplace participation, and innovation due to diverse thinking.

## **Safety**

*We are dedicated to safeguarding our greatest assets – our employees – together with the environment and our communities.*

There is always time to do it safely. We strive to provide a safe environment for our employees and our communities. We continually seek new ways to improve safety performance by routinely training employees in safe operating practices and regulatory responsibilities. We incorporate safety in all planning, operations, and activities. Continuously improving our safety practices will improve the well-being of our employees and the District as a whole.

## **Accountability**

*We are dedicated to fulfilling our responsibility by being accountable to our taxpayers, coworkers, and the environment in a prudent manner.*

As public service employees, we bring a high degree of integrity, professionalism, quality, and caring to our work. We have a commitment to our communities to provide service with the highest level of integrity, transparency, and accountability. Acting with accountability will make us a stronger organization by earning the respect, trust, and confidence of our coworkers and the communities we serve.

## **MISSION**

The District will protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of water in watercourses in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area. The District's service area is 882.1 square miles of Cook County, Illinois. The District is committed to achieving the highest standards of excellence in fulfilling its mission.

## **VISION**

The vision statement "*Recovering Resources, Transforming Water*" captures the changing landscape taking place in the water industry. The District is looking to add value in traditional and non-traditional ways. This vision has produced six main goals for the organization. These goals are listed below with a descriptive statement that captures the thinking behind each goal.

**Add Value:** Every employee at the District will look for opportunities to add value.

**Excellence:** Nothing of consequence is accomplished without enthusiasm.

**Resource Recovery:** The District will pursue the beneficial recovery of natural resources.

**Develop Employees:** Value is measured through personal contribution and growth.

**Leading Partnerships:** We recognize the importance of active involvement in the world around us.

**Technology:** The District will embrace a new era of technology that delivers reliable and useful information.

## **GOALS AND STRATEGIES**

The strategic plan outlines six major goals aimed at achieving the vision of the District. Under each goal, strategies were developed to accomplish the goal. Each strategy will have performance measures. The measures will be used to ensure efforts are achieving the desired results. During the strategic planning review, the measures will be used to make adjustments to the plan as needed so the District can remain focused on continual improvement.

### **GOAL 1 – Add Value**

*Every employee at the District will look for opportunities to add value.* The District will be focused on adding value at every level in the organization. Each employee is challenged to add value in every interaction either internal or external to the agency. The following specific strategies have been developed to meet this goal:

**Customer Service:** Every employee's action should mindfully fulfill the customer's needs.

- Issue permits in less than 30 days;
- Transition from an enforcement perspective to informed compliance;
- Develop and implement effective flood mitigation programs for our customers;
- Structure a multi-dimensional, culture changing strategy around green infrastructure implementation;
- Develop and implement targeted odor control strategies.

**Real Estate:** Explore opportunities for community partnerships aimed at reducing waste, our carbon footprint, or revitalizing the environment.

- Utilize wood chips in biosolids compost blend;
- Work with communities to revitalize the urban forest using property adjacent to water reclamation plants (WRPs);
- Utilize Fulton County property for nutrient control.

**Service Levels:** The District will establish service level agreements that meet the needs and expectations of the internal customer.

- Establish contract turnaround timeframe agreements for all contract classes;
- Develop planning schedules and adhere to project timeframes;
- Streamline and simplify the budget process.

## **GOAL 2 – Excellence**

*Nothing of consequence is accomplished without enthusiasm.* Excellence should be our goal in everything we do from meeting compliance objectives to delivering projects on time. In order to achieve excellence, the organization should focus on results. It is the measure of the result that determines the degree of success.

**Finances:** Ensure the responsible use of resources in the delivery of services.

- Continue the prioritization of projects to ensure best use of current spending;
- Provide base budget targets and assure approvals above base are tied to strategic initiatives;
- Manage resources to ensure financial stability targets are met.

**Process Evaluation:** Develop processes that are results oriented.

- Optimize energy intensive processes;
- Optimize chemical intensive processes;
- Optimize work distribution processes and workflow.

**Sense of Urgency:** Establish a sense of urgency in delivering community services.

- Deliver and implement flood relief plan for Cook County;
- Establish excellence in maintenance and operations;
- Expedite capital improvement program projects in design, bid, contract award, and construction schedules.

**Performance Management:** The District will develop performance measures that reflect the excellent contributions of staff.

- Develop automatic measures that indicate performance to our public.

## **GOAL 3 – Resource Recovery**

*The District will pursue the recovery of natural resources.* The District understands the obligation of every organization to implement sustainable and resilient practices. The District also understands the importance of a sustainable economy and financial base. Therefore, the District will seek to recover resources in a way that has a return on investment and can produce private sector jobs in our region.

**Water:** Pursue reuse applications for the high quality water produced at our plants and for the capture and reuse of stormwater.

- Explore reuse opportunities in the Calumet and Stickney industrial corridors;
- Evaluate park and golf course water reuse;
- Evaluate cistern capture and reuse opportunities in Cook County.

**Phosphorus:** Recover phosphorus in a slow release fertilizer for environmentally-friendly reuse.

- Implement recovery process at the Stickney WRP by 2016;
- Implement recovery process at the Calumet WRP by 2018;
- Implement recovery process at the Egan WRP by 2018.

**Energy:** Achieve energy neutrality by 2023.

- Implement food-to-energy, doubling gas production at the Calumet WRP;
- Maximize use of digester capacity at the Stickney WRP;
- Market electrical capacity at Lockport to maximize return on investment;
- Optimize aeration processes and reduce energy consumption by 25 percent.

**Biosolids:** Pursue the sale of biosolids to the marketplace for repackaging.

- Work with IEPA to adopt federal standards concerning exceptional quality biosolids;
- Successfully bid the sale of biosolids to private partners.

**Recycle and Prevention:** Promote environmental stewardship through recycling and preventative measures.

- Recycle demolition material on all District projects;
- Ensure availability of medical disposal options;
- Explore opportunities for recycle partnerships;
- Develop prevention education materials.

#### **GOAL 4 – Develop Employees**

*Value is measured through personal contribution and growth.* Employees at the District are the best in the industry. In order to maintain a leadership role in wastewater, the District needs to develop future leadership and pass down competencies. The District will invest in its future by investing in its employees.

- Develop and implement leadership initiatives that support succession planning;
- Develop and implement competency-based individual development plans;
- Develop a culture that recognizes the value of every employee.

#### **GOAL 5 – Leading Partnerships**

*We recognize the importance of active involvement in the world around us.*

**Relationships:** Develop strategic relationships with constituents through active involvement in a variety of venues and organizations on a local, state, and national level.

- Inventory and align professional memberships and participation;
- Participate in active leadership roles in a variety of organizations;
- Utilize our enhanced awareness from strategic relationships to make informed decisions.

**Leadership:** Promote the District as one of the top leaders in the water industry.

- Provide active leadership in the invasive species discussion;
- Provide active leadership in water issues in Cook County;
- Provide active leadership in state water issues;
- Provide active leadership in federal water issues.

#### **GOAL 6 – Technology**

*The District will embrace a new era of technology that delivers reliable and useful information.* We live in an age of information. Information allows for good decision making and navigation toward success. The District has always collected volumes of data. This initiative to focus on accessing that data and converting it to useful information will help the District navigate a successful future.

- Simplify SAP to increase utilization, maximize effectiveness, and bring up-to-date;
- Provide reliable system services to every user;
- Utilize current capability and develop a shared information technology vision;
- Ensure consistent data input from all users to produce useful information;
- Enhance use of current technology platforms.

### **SUMMARY**

The District's Strategic Business Plan is used throughout the year to measure results and communicate progress to the Board and staff. This plan is reviewed and updated on an annual basis. It serves as a guiding document until replaced by a new strategic plan.

## *Budget Message / Highlights*

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*The following pages summarize the major policies, ongoing programs, and initiatives that directly support implementation of the Strategic Business Plan and the development of the District's 2017 annual budget.*

### **Goal 1 – Add Value**

**To maximize our real estate portfolio:** Over the years, the District has acquired substantial real property holdings to carry out its corporate responsibilities. It currently owns approximately 24,000 acres of land located in Cook, Will, DuPage, and Fulton Counties in Illinois and controls approximately 76 miles of navigable waterways, which include the Cal-Sag Channel, Chicago Sanitary and Ship Canal (Main Channel), and the North Shore Channel. Additionally, the District has acquired rights-of-way and easements for the construction and installation of its facilities and structures upon, under, and through miles of real estate owned by other parties.

The District's land holdings are necessary to carry out its lawfully authorized corporate purpose of wastewater collection, treatment, disposal, and ancillary activities. The additional corporate responsibility of stormwater management conferred by the Illinois General Assembly in 2004 has increased the District's activities and may result in an increase of its land holdings in Cook County to facilitate the construction of projects.

The District's land holdings are generally categorized as corporate or non-corporate use properties. Its corporate use properties are those land holdings which are used or will soon be used for the District's corporate purposes. Non-corporate use properties are those land holdings which are not immediately required for corporate purposes. The non-corporate use properties may be required for future use or it is in the District's best interest strategically to maintain ownership. An example of the latter is land along the waterway corridors that may be needed for future water quality improvement or stormwater management projects.

Currently, non-corporate land holdings include approximately 4,800 acres in Cook County, 250 acres in DuPage County, and 750 acres in Will County. These non-corporate use properties are for the most part managed by the Real Estate/General Administration Division of the District's Law Department. These properties may be leased to other parties until required for corporate purposes in accordance with requirements set forth in state law (70 ILCS 2605/8-8c). State law provides, among other things, that a District lease to a private party/entity may be awarded only upon open and public competitive bidding to the highest responsible bidder. Additionally, state law provides that the District may issue permits or grant easements for others to use District land, provided such use would not interfere with the District's corporate purposes. Management of District land currently includes over 175 leases, 370 easements, and 80 permits.

The District continues to pursue a balanced and mixed-use approach with respect to administering its non-corporate use properties. This balanced program seeks to maximize rental income in those instances where District land is made available for private use, while setting aside substantial holdings for public recreational use by leasing to other governmental entities (park districts, municipalities, and forest preserve districts). The leases to other governmental entities are for a nominal fee and typically for the express purpose of enhancing public access to, and the development of parks, hiking and bicycle trails, and passive recreational use along the waterways. The District's balanced approach has resulted in approximately 75 percent of District leased lands being leased to governmental entities for public recreational or other public use. The other approximately 25 percent of District leased lands are leased to private parties for industrial and business purposes from which the District expects to derive approximately \$19.0 million in 2017 in rental and fee income.

Regardless of whether its land is leased to a public or private entity, the District has remained committed to improving the aesthetics, public access, and public recreational opportunities along its waterways. A District lease, whether issued to a private party or public entity, requires that the tenant commit to being a good steward of the land. Included among those commitments are compliance with the District's Waterway Strategy Resolution, which represents the District's formal commitment to the creation and maintenance of an attractive linear scenic corridor the entire length of the inland waterways, which will be accessible to the public, where feasible. Toward that end, the resolution imposes certain requirements for new leases located along the waterways, including, but not limited to, the 60-foot waterway edge setback or scenic corridor or construction and maintenance of a landscaped visual screen and trail within the setback. Additionally, in March 2005, the Board adopted a resolution establishing the policy that any land leased along the North Shore located north of Devon Avenue, up to and including Wilmette Harbor channel, shall be dedicated exclusively to open green space and recreational use.

**To improve the water quality of area waterways:** The District will cost-effectively collect and treat approximately 480.1 billion gallons of wastewater from businesses and homes and captured stormwater runoff from its service area. Our performance for treating this wastewater approaches 100 percent compliance with all applicable effluent standards at all WRPs.

## Budget Message / Highlights

On June 7, 2011, the Board adopted a policy to disinfect the effluent from the O'Brien and Calumet WRPs. To expedite the installation of disinfection facilities, an interdepartmental task force was convened to update the disinfection study document, Technical Memorandum TM 1-WQ (CTE/AECOM, Aug. 2005). TM 1-WQ indicated that ultraviolet disinfection was the best option for the District. The task force reviewed the findings of the study, considered recent advances with various disinfection technologies, and updated cost estimates. The task force selected chlorination/de-chlorination for the Calumet WRP and ultraviolet technology for the O'Brien WRP. The task force also developed design criteria, block diagrams, and space reservations to inform the final design of the disinfection facilities. The construction of these facilities was completed in 2015 and placed into service during 2016.

**To protect the health and safety of our residents:** The District complies with environmental regulations governing discharges to air, land, and water and assists first responders in handling threatening incidents and hazardous waste spills.

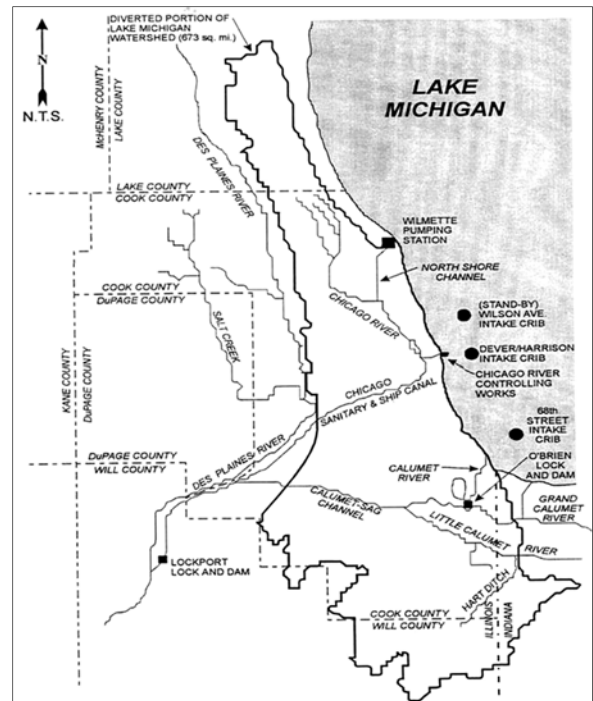
**To protect the quality of Lake Michigan water:** The District has successfully eliminated all sewage discharges to Lake Michigan and strives to minimize discharges to the lake caused by excessive rainfall runoff. To continue to protect Lake Michigan, our region's fresh drinking water supply, and protect the public health, the District will continue to monitor potential sources of discharges that may threaten Lake Michigan and will minimize combined sewer discharges to the lake through careful operation of the TARP project and the waterway system.

**To provide stormwater management for Cook County:** The mission of the Stormwater Management Fund is to protect the safety of Cook County's residents and minimize flood damage by coordinating, planning, implementing, financing, and operating regional stormwater management projects and to develop and enforce reasonable rules with respect to watershed development. The framework of the District's countywide stormwater management program is presented in the Cook County Stormwater Management Plan.

In 2011, the District completed detailed watershed plans (DWPs) identifying flooding problems within each of the six major watersheds within its service area. As a part of the Capital Improvement Program, the District began preliminary and final engineering for projects identified within the DWPs and approved by the Board. In 2014, the Illinois General Assembly expanded the authority of the District's Stormwater Management Program to allow the District to address local drainage problems and acquire flood-prone property from property owners on a voluntary basis. These legislative changes allow the District to identify and assist municipalities with the implementation of projects that address local flooding concerns.

**To protect aquatic life:** The District operates in-stream and sidestream elevated pool aeration (SEPA) stations to maintain sufficient dissolved oxygen in key sections of the Chicago Area Waterway System (CAWS) to protect aquatic life. The District conducts intensive chemical and biological monitoring of all WRPs and has developed, through collaborators in academia, both a one-dimensional and a three-dimensional water quality model of portions of the CAWS to assess the operation of the waterway to continually improve water quality and protect aquatic life. In 2016, the District continued to implement optimization strategies for Lake Michigan diversion to utilize this resource most efficiently, while improving water quality in the CAWS.

**To provide flood protection to residents under the Tunnel and Reservoir Plan:** TARP consists of 109.4 miles of deep rock tunnels designed to capture up to 2.3 billion gallons of the first flush of sewage contaminated stormwater from combined sewers that had previously flowed into the area waterways. The final leg of the TARP tunnels began operation in March 2006.



*Drainage from the Chicago watershed was redirected to the Des Plaines River and away from Lake Michigan in 1900, thereby protecting the drinking water supply.*

## Budget Message / Highlights

In addition, two of three planned storage reservoirs provide an additional 8.2 billion gallons of capacity. Gloria A. Majewski and Thornton Composite Reservoirs were completed in 1998 and 2015, respectively. The final reservoir, McCook Reservoir, will add another 10 billion gallons of capacity when completed. See page 438 for the TARP system project status map.

**Majewski Reservoir:** This 350 million gallon reservoir was completed in 1998 and has prevented over 5 billion gallons of combined sewer overflow from entering the waterways and mitigated over \$350 million in flood damage.

**Thornton Composite and Transitional Reservoirs:** In November 2015, construction of the Thornton Composite Reservoir was substantially completed, and it became operational. Through the first nine months of operations, more than 3.5 billion gallons have been captured during 12 fill events.

**McCook Reservoir:** The McCook Reservoir, the last component of the TARP system, will service 3.1 million people in 37 communities in southwest Cook County, providing a total volume of 10.0 billion gallons. The first stage will be completed in 2017 and provide 3.5 billion gallons of storage. The second stage will provide 6.5 billion gallons of storage and is expected to be completed in 2029. The McCook Reservoir is projected to bring \$100 million per year in flood reduction benefits to its residents.

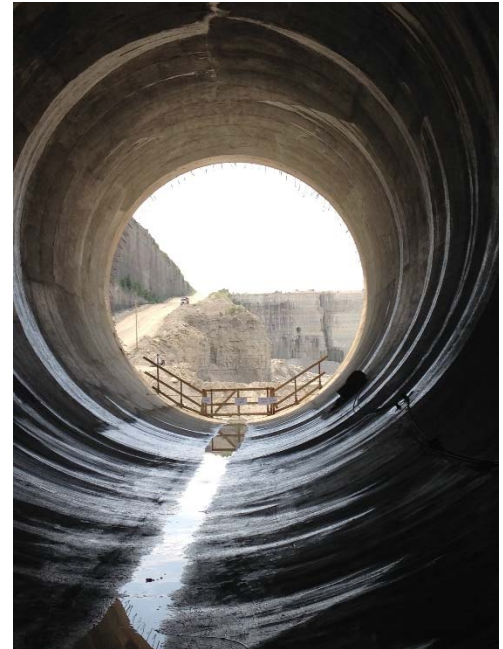
The McCook Reservoir is being constructed on District property between the Des Plaines River and the Sanitary and Ship Canal. In 2016, mining of stage one was completed and stage two was 11 percent complete as of June. A new 20-foot-diameter inflow tunnel and gate shaft, scheduled to be completed in 2019, is being constructed to connect the existing Des Plaines Tunnel system directly to the McCook Reservoir. The new tunnel provides a greater benefit to the communities served by the Des Plaines Tunnel than using the current tunnels as dual purpose inflow/outflow tunnels.

**To control commercial and industrial waste discharges to the sewers and waterways:** The District effectively eliminates offensive or dangerous discharges into the public sewer system through the administration of the Sewage and Waste Control Ordinance that specifies limits on the quantity and quality of wastes discharged by industrial users as required by United States Environmental Protection Agency (USEPA) Regulations. The discharges, unless properly controlled and treated, could interfere with our treatment processes, adversely impact waterways, and could accumulate in biosolids, rendering them unsuitable for reuse.

**To maintain our facilities and infrastructure to ensure that they remain an asset to the residents of the District:** The District owns and operates seven modern and effective WRPs, 560 miles of intercepting sewers and force mains, 109.4 miles of TARP tunnels, 22 pumping stations, 34 flood control reservoirs, and two TARP reservoirs. Through preventive maintenance management, modernization, rehabilitation, and planned replacement, the District will ensure the long-term reliability and cost-effectiveness of operations. To aid planning and prioritize projects for both the near term, defined as zero to five years, and the long-term, projects in a five to 20-year timeframe, the District implemented procedures for project vetting and Long-Term Capital Plan evaluation. The project evaluation process requires review and approval from all of the operational departments.

### Goal 2 – Excellence

**To provide sewage collection and treatment, and maintain award-winning plants:** In 2017, the District expects to collect and treat approximately 480.1 billion gallons of wastewater at our seven WRPs. These services will be performed in compliance with discharge permits issued by the USEPA, which regulates the quality of our effluent as it leaves our treatment plants. Our high level of compliance emphasizes our excellent performance. This is reflected in a 99.98 percent overall compliance with the National Pollutant Discharge Elimination System (NPDES) requirements in 2015. This compliance resulted in two Gold Awards and five Platinum Awards from the National Association of Clean Water Agencies (NACWA). Operating performance in 2016 is expected to achieve higher performance levels.



*The first stage of the McCook Reservoir in Bedford Park will be completed in 2017.*



## *Budget Message / Highlights*

The District is currently awaiting responses from the Illinois Environmental Protection Agency (IEPA) for the following renewal applications: Egan WRP Federally Enforceable State Operating Permit (FESOP), Calumet WRP FESOP, Kirie WRP FESOP, O'Brien WRP FESOP, Stickney WRP Title V permits, Egan WRP Solids Drying, Stickney WRP Solids Drying Areas, Calumet WRP East & West Solids Drying Areas, Stickney WRP Septage Disposal, Gloria Alitto Majewski (O'Hare CUP) Reservoir, Kirie WRP NPDES, Hanover Park WRP NPDES, Lemont WRP NPDES, Egan WRP NPDES, Lemont WRP NPDES, and General Stormwater NPDES.

### Collection, Treatment, and Solids Utilization for the Maintenance & Operations Department

	<b>Budgeted 2017</b>	<b>Budgeted 2016</b>	<b>Actual 2015</b>	<b>% Change 2016-2017</b>
Total cost of collection (millions)	\$48.5	\$47.8	\$41.7	1.5%
Total cost of treatment (millions)	\$69.1	\$71.0	\$65.9	(2.7%)
Total cost of solids utilization (millions)	\$21.5	\$22.8	\$21.0	(5.7%)
Number of full time equivalent employees:				
Collection	237	239	241	(0.8%)
Treatment	382	384	391	(0.5%)
Solids Utilization	42	45	49	(6.7%)

Design average flow/design maximum flow million gallons per day (MGD) level of treatment by plant:

Stickney WRP – Secondary	1,200/1,400	1,200/1,400	1,200/1,400
Calumet WRP – Secondary	354/430	354/430	354/430
O'Brien WRP – Secondary	333/450	333/450	333/450
Kirie WRP – Secondary	52/110	52/110	52/110
Egan WRP – Tertiary	30/50	30/50	30/50
Hanover Park WRP – Tertiary	12/22	12/22	12/22
Lemont WRP – Secondary	2.3/4	2.3/4	2.3/4

	<b>Budgeted 2017</b>	<b>Budgeted 2016</b>	<b>Actual 2015</b>	<b>% Change 2016-2017</b>
<b>Outputs:</b>				
Amount of wastewater collected and treated by plant:				
Stickney WRP (million gallons)	260,000	265,000	257,214	(1.9%)
Calumet WRP (million gallons)	100,000	100,000	84,097	--
O'Brien WRP (million gallons)	89,000	89,000	84,824	--
Kirie WRP (million gallons)	14,400	15,558	13,373	(7.4%)
Egan WRP (million gallons)	10,200	10,200	8,765	--
Hanover Park WRP (million gallons)	3,500	3,500	3,540	--
Fox River WRP (contract agreement)	2,000	2,000	2,168	--
Lemont WRP (million gallons)	1,000	1,000	935	--

*Budget Message / Highlights*

<b>Outputs:</b>	<b>Budgeted 2017</b>	<b>Budgeted 2016</b>	<b>Actual 2015</b>	<b>% Change 2016-2017</b>
Dry tons of biosolids utilized by area:				
North Service Area	1,000	1,000	999	--
Calumet Service Area	29,000	29,100	16,366	(0.3%)
Stickney Service Area	60,000	60,000	55,892	--
<b>Outcomes:</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
Achievement of water reclamation plant pollution permit requirements by plant:				
Stickney WRP	99.94%	99.40%	99.71%	100.00%
Calumet WRP	100.00%	100.00%	100.00%	100.00%
O'Brien WRP	100.00%	100.00%	100.00%	100.00%
Kirie WRP	100.00%	100.00%	100.00%	99.97%
Egan WRP	100.00%	100.00%	99.96%	99.78%
Hanover Park WRP	100.00%	100.00%	100.00%	100.00%
Lemont WRP	100.00%	100.00%	100.00%	100.00%

**To fund Other Postemployment Benefits:** The District provides and subsidizes health care benefits for its retirees. On August 23, 2007, the General Assembly of the State of Illinois approved the amendment to the Metropolitan Water Reclamation District Act (70 ILCS 2605/9.6d), which authorized and set forth the requirements for the establishment of the District's Other Postemployment Benefits (OPEB) Trust for the purpose of providing for the funding and payment of health benefits for retired, disabled, or terminated employees of the District or for their dependents and beneficiaries.

In 2007, the District adopted an initial OPEB advance funding policy meant to (i) improve the District's financial position by reducing the amount of future employer contributions and (ii) serve to establish a reserve to help ensure the financial ability to provide healthcare coverage for District retirees and annuitants in the future. The funding policy was amended by the Board on October 2, 2014. The amended funding policy changed the target funding level from 50 percent to 100 percent, advanced funding period from 50 years to 12 years, and defined the advance funding amount of \$5 million to be contributed in each of the 12 years from 2015 through 2026. No further advance funding contributions are expected after 2026. Through December 31, 2016, \$122.4 million has been contributed by the District to the OPEB Trust Fund. The advance funding contribution for 2016 was \$5.0 million and the 2017 budgeted contribution is \$5.0 million. While authorized by statute, there is currently no legal requirement for the District to partially or fully fund the OPEB Trust Fund.

The accumulated unfunded OPEB obligation is \$137.3 million as of December 31, 2015, the date of the most recent actuarial valuation. The unfunded liability represents the amount by which the Accrued Liability exceeds the value of the plan assets that have been placed in a trust and dedicated to providing benefits to retirees and their beneficiaries. The policies adopted by the District are cautious by design, and will provide ample opportunity for adjustment. Future direction may also be changed significantly by national health care policies.

### **Goal 3 – Resource Recovery**

In 2016, the District implemented two resource recovery projects, and the 2017 Budget reflects modest revenue recovery from these two projects. First, in partnership with Ostara Nutrient Recovery Technologies, the District opened the world's largest nutrient recovery facility at the Stickney Water Reclamation Plant. Phosphorus and nitrogen recovery will provide significant environmental benefits to the CAWS and downstream through the Mississippi River to the Gulf of Mexico. Excess phosphorus in waterways can cause algae to grow and bloom, creating toxic conditions that destroy aquatic life and severely limit recreational activities. Ostara's technology recovers phosphorus and nitrogen to create a high value fertilizer that is both economically and environmentally viable. The 2017 budget includes \$1 million revenue estimate for phosphorus recovery efforts.

Secondly, due to changes in Illinois law in 2015, the District can sell Exceptional Quality (EQ) biosolids and EQ biosolids blend that is composted with wood chips to the general public. Biosolids can be used almost anywhere that soil amendments and chemical fertilizers are used. In addition to being sold, the District will also save on disposal costs. The 2017 Budget includes \$3 million in anticipated revenue from the sale of biosolids.

## *Budget Message / Highlights*

The District has adopted the ambitious goal of becoming energy neutral. A major activity to achieve this goal is maximizing the use and production of digester gas. The District has been negotiating with a firm selected through a Request for Proposal process to guarantee a long-term supply of organic waste material to boost digester gas production by 160 percent at the Calumet WRP. The contractor will also construct an organic waste receiving station. A second agreement will be negotiated with another contractor to design and build a facility to clean the digester gas to pipeline quality standards. The cleaned digester gas, biomethane, will be transferred in a new pipeline to a connection with a natural gas transmission main. The District is also in the process of negotiating a long-term, off-take agreement with the contractor for purchase of the biomethane.

In 2015, the District began to investigate use of grey-water industrial reuse of treated water for industrial and commercial users on Chicago's south side. By using reclaimed water instead of potable water, there is an environmental benefit as less water is removed from Lake Michigan, and less energy and chemicals are used to clean that equivalent volume of water to drinking water quality.

### **Goal 4 – Develop Employees**

**To improve recruiting, hiring, and development of a dedicated work force, including minorities and women:** The District's female and minority work force rates are 27 and 40 percent, respectively, as of September 30, 2015. The rates are calculated based on published data from the 2010 census. In 2017, the District is adding 70 apprentice positions for various skilled trade classifications to expand the current apprenticeship program. Through partnerships with unions, the program will seek to increase representation of females and minorities in selected trades' classifications.

**To control staff growth and costs through effective management of District operations:** Productivity gains are achieved through investment in cost-effective technology and sound management principles. The District will continue to control full-time personnel consistent with the demands of safety, productivity, and new responsibilities and utilize advances in technology following careful analyses of their efficiency and reliability.

**To maximize efficiency:** Beginning in 2011, the District implemented a reorganization plan which focused on eliminating layers within the organization and consolidating the number of job classifications. As part of this reorganization plan, operating departments were asked to review their individual structure. The goal was to gain flexibility in the utilization of staff and to increase the efficiency of operations throughout the District.

The District continues its policy of staff reductions only through attrition. For two decades, the staff size and composition has been managed through the use of our "crosshatch program." A "#1" following a position title in the budget indicates that the position will be dropped immediately upon becoming vacant. A "#2" after a position title signifies that when the position is vacated, the person filling the vacancy will receive the title in the parentheses. It can also indicate that while a grade level for a class title has been lowered, the incumbent in the position will be retained at the current grade level. This is indicated by a notation of the new grade level in parentheses following the title. A "#4" after a title signifies that while a class title has been assigned to the Technical, Administrative and Managerial (TAM) salary schedule, the incumbent in the position will be compensated under the previously assigned Professional and Managerial or General Service salary schedule. When the position is vacated, the person filling the vacancy by promotion or new appointment will be compensated under the TAM salary schedule.

A total of 2,042 positions are budgeted for 2017, an increase of 66 budgeted positions from 2016, including the 70 apprentice positions. The District continues to budget to slow the growth of future salary appropriations to fit within restrictions on property taxes resulting from the Property Tax Extension Limitation Act.

Salary related expenditures, not including benefits, are the largest item in our operating budget, comprising approximately 50 percent of the Corporate Fund appropriation. It is impossible to match future appropriation requirements with restricted growth in property tax revenue without making plans to change the way we work. Efforts have been made since 1995 to reengineer many labor intensive functions and reallocate staff, impacting all areas of District operations, including professional/managerial, clerical, operating, and building trade personnel.

### **Goal 5 – Leading Partnerships**

On May 15, 2014, the Board authorized the District to enter into an Intergovernmental Agreement with the Chicago Public Schools (CPS) to provide funding towards the construction of green infrastructure at four Chicago Public School campuses in 2014. The District and the City of Chicago Department of Water Management (DWM) are sharing the costs of the green infrastructure equally to \$500,000 per school, while CPS is responsible for all fees associated with recreational amenities. The projects at the four schools were completed in 2014. Due to the success of the program, the Board subsequently authorized the District to reconstruct 30 more school playgrounds over the next six years. Two were completed in 2015, and three more were

## *Budget Message / Highlights*

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completed in 2016. The projects are great vehicles to promote water conservation and green infrastructure, while helping to reduce localized flooding.

In 2015, the District joined other wastewater agencies and water organizations in forming the Value of Water Coalition. This partnership seeks to educate the public and legislatures on the value of water in our lives and to increase funding for water and infrastructure projects.

Currently, the District is leading a work group to address the water quality standards for chlorides within the CAWS. An important purpose of the group is to develop and implement Best Management Practices to address chloride issues within the CAWS due to the usage of road salt, particularly in the winter. The chlorides work group consists of municipalities, private industry, and nongovernmental organizations. The group includes four committees: social and economic impact, legal, water quality, and data acquisition, which all seek to provide insight on the most effective method to reduce chlorides within the CAWS.

The Local Governmental Law Consortium (LGLC) that the Law Department established in 2015 provides a professional network with other local government in-house counsel in Cook County. Regular semi-annual meetings have been conducted and the LGLC is currently comprised of 16 public bodies, including eight Cook County municipalities, the City of Chicago Corporation Counsel, City of Chicago Department of Water Management, City Colleges, Chicago Housing Authority, Forest Preserve District of Cook County, Metropolitan Pier and Exposition Authority, and the Public Building Commission of Chicago. The District continues its leadership role in the organization through active participation in planning meetings, giving presentations on various legal topics, and ongoing recruitment of new members.

### **Goal 6 – Technology**

The District will continue to embrace technology that delivers reliable and useful information, and has launched initiatives to increase effectiveness and reduce the total cost of operations. Through the implementation of an IT Program Management Office, the District will seek to maximize the effectiveness of new system implementations and leverage District-wide resources within the system planning and implementation environment.

The District continues to upgrade its technology infrastructure including storage area networks, server infrastructures, and desktop systems to provide increased reliability, while reducing associated power and cooling requirements. In 2016, the majority of the District's systems were migrated to new, more efficient and cost-effective server platforms.

The District is also continuing to leverage cloud technologies. In 2016 the District completed the migration of all District email to Microsoft's Office 365, allowing increased use of the mobile workspace via phones and tablets, increasing worker efficiency. Considerable savings in infrastructure, administration, and licensing costs will be realized by leveraging the cloud computing landscape offered in the Office 365 platform. During 2017, the District will focus on creating a concise cloud strategy for next generation systems.

The District's financial enterprise resource planning system, SAP, is being evaluated to increase utilization and maximize effectiveness. Geographic Information System (GIS) is also being utilized in an increasing number of applications, providing field personnel with accurate, up-to-date maps and locations in aid of their mission to monitor and service District systems and the industries that discharge into the system and to maintain an accurate inventory of District properties.

## *Budget Message / Highlights*

### Tax Levy, Tax Rate, and Appropriations

The overall 2017 tax levy required to finance the 2017 Budget is \$595.0 million, an increase of \$17.5 million, or 3.0 percent, from the 2016 Adjusted Budget. This overall increase is due to levy increases of \$8.3 million in the Retirement Fund, \$6.6 million in the Stormwater Management Fund, \$3.7 million in the Construction Fund, \$0.9 million in the Bond Redemption & Interest Fund, and \$0.1 million in the Reserve Claim Fund, offset by a decrease of \$2.2 million in the Corporate Fund.

The overall tax rate for 2017, based on the most recent Equalized Assessed Valuation (EAV), totals 43.03 cents, no change from the 2016 Adjusted Budget. The allowance for loss in collection of property taxes is budgeted at 3.5 percent, the same as 2016. The budgeted loss will be maintained at this level, based on trends in the required refunds of prior property tax payments.

Overall appropriations for 2017 total \$1,142.7 million, a decrease of \$101.4 million, or 8.1 percent, from the 2016 Adjusted Budget. The decrease is driven by a decrease of \$129.1 million in the Capital Improvements Bond Fund and a \$2.2 million decrease in the Construction Fund, offset by an \$12.8 million increase in the Bond Redemption & Interest Fund, \$8.7 million increase in the Retirement Fund, \$5.3 million increase in the Stormwater Management Fund, a \$2.7 million increase in the Corporate Fund, and \$0.4 million increase in the Reserve Claim Fund. Explanations of these changes are provided in the following detailed Fund summaries.

The following tables and narratives provide clearer explanations of budgetary differences between the 2017 Budget and the 2016 Adjusted Budget.

<u>Levies</u>	<u>2017</u>	<u>2016 Adjusted</u>	<u>Increase (Decrease)</u>	<u>Percent Change</u>
Corporate Fund	\$223,946,065	\$226,109,300	(\$2,163,235)	(1.0%)
Construction Fund	17,000,000	13,278,297	3,721,703	28.0%
Stormwater Management Fund	40,856,008	34,250,000	6,606,008	19.3%
Retirement Fund	73,438,135	65,161,200	8,276,935	12.7%
Reserve Claim Fund	5,900,000	5,800,000	100,000	1.7%
Bond Redemption & Interest Fund	233,887,123	232,962,833	924,290	0.4%
TOTAL	\$595,027,331	\$577,561,630	\$17,465,701	3.0%
<u>Appropriations</u>	<u>2017</u>	<u>2016 Adjusted</u>	<u>Increase (Decrease)</u>	<u>Percent Change</u>
Corporate Fund	\$368,925,800	\$366,260,700	\$2,665,100	0.7%
Construction Fund	34,450,400	36,614,400	(2,164,000)	(5.9%)
Capital Improvements Bond Fund	354,625,600	483,764,800	(129,139,200)	(26.7%)
Stormwater Management Fund	45,800,100	40,500,800	5,299,300	13.1%
Retirement Fund	79,505,000	70,772,000	8,733,000	12.3%
Reserve Claim Fund	30,617,100	30,175,900	441,200	1.5%
Bond Redemption & Interest Fund	228,825,813	216,047,130	12,778,683	5.9%
TOTAL	\$1,142,749,813	\$1,244,135,730	(\$101,385,917)	(8.1%)

Comparisons of the estimated taxes paid by the owner of a home with a market value of \$100,000 for 2017 as budgeted, and 2016 as adjusted for the 2015 EAV, are as follows:

	<u>2017 Budgeted</u>	<u>2016 Adjusted</u>	<u>Increase</u>	<u>Percent Change</u>
Estimated taxes for \$100,000	\$117.27	\$117.27	\$0.00	0.0%

## *Budget Message / Highlights*

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### **Basis of Budgeting and Accounting**

The basis of budgeting and the basis of accounting determine when revenues and expenditures are recognized for the purposes of budget control and financial reporting. As per Illinois Compiled Statutes, the District's budget is adopted and executed such that receipts are recognized on a cash basis and expenditures on an accrual basis or as soon as they are incurred. The Comprehensive Annual Financial Report is prepared using the modified accrual basis of accounting in conformity with General Accepted Accounting Principles (GAAP). The exceptions between the basis of budgeting and the basis of accounting are noted below.

In the Corporate, Construction, and Stormwater Management Fund budgets, revenues are recognized on a cash basis except for property and personal property replacement taxes, which are recognized based on working cash borrowing plus an estimate of collections of property and property replacement taxes over and above the working cash borrowing. Expenditures are recognized on a GAAP basis except for inventory expenditures, which are accounted for on the purchase method for budgetary purposes and on the consumption method for GAAP financial reporting purposes. Transfers out to other funds are budgeted as expenditures, while transfers in are considered other financing sources.

The Capital Improvements Bond Fund (CIBF) is budgeted on an "obligation" basis of accounting, which records total expenditures and grant revenues in the period in which contracts or grants are awarded.

Appropriations lapse at year-end for the Corporate, Construction, Retirement, Stormwater Management, and Debt Service Funds. Appropriations for the CIBF lapse at the end of the year to the extent of the unencumbered balances. Encumbered balances are not reported as reservations of fund balances, as the amounts are reappropriated in the following year.

The government-wide and fiduciary financial statements are reported using the economic resource measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded at the time liabilities are incurred, regardless of the period of related cash flows. Property taxes are recognized in the year of levy and personal property replacement taxes are recognized in the year earned. Grants and similar items are recognized as revenue in the fiscal year that all eligibility requirements have been met.

The District's governmental funds are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Under the modified accrual basis, revenues are recognized when susceptible to accrual, i.e., when measurable and available to finance operations. Expenditures are recognized in the period in which the fund liability is incurred, except for principal and interest on long-term debt, compensated absences, claims, judgments, and arbitrage, which are recognized when due and payable.

The accounting and reporting treatment applied to the capital assets and long-term liabilities associated with a fund are determined by its measurement focus. Since governmental funds are accounted for on the current financial resources measurement focus, only current assets and current liabilities are included on their balance sheets. Their reported fund balance (net current assets) is considered a measure of "available spendable resources." Governmental fund operating statements present increases (revenues and other financing sources) and decreases (expenditures and other financing uses) in net current assets. Accordingly, they are said to present a summary of sources and uses of "available spendable resources" during a period.

Property taxes, user charge revenue, interest, land rentals, and personal property replacement tax revenue are accrued to the extent that they are measurable and available to satisfy liabilities of the reporting period. In general, the revenue recognition period is limited to amounts collected within 60 days following year-end. Receivables that are unavailable are reported as deferred revenue.

Grants from federal and state agencies are recorded as revenues in fund financial statements when reimbursable expenditures are incurred, or other eligibility requirements imposed by the provider are met, and the grant resources are measurable and available.

Property taxes attach as an enforceable lien on property as of January 1 of the levy year. They are levied and recorded as a receivable as of January 1 and are due in two installments in the following year.

### **Corporate Fund**

The Corporate Fund is the District's general operating fund and includes appropriation requests for all the day-to-day operational costs anticipated for 2017. The total appropriation for the Corporate Fund in 2017 is \$368.9 million, an increase of \$2.7 million, or 0.7 percent, from the 2016 Adjusted Budget.



## *Budget Message / Highlights*

The 2017 tax levy for the Corporate Fund is \$223.9 million, a decrease of \$2.2 million or 1.0 percent compared to the 2016 Adjusted Budget. It is the District's intent over the next few years to maintain a fund balance, or net assets appropriable for the Corporate Fund, higher than the \$44 to \$55 million range. This fund balance levels the competing imperatives of minimizing the annual levy and providing for unexpected shortfalls in revenues.

Continuing through 2017, economically sensitive non-property tax revenues, such as interest income, are expected to remain stagnant based on forecasted local and national economic indicators.

Property taxes and user charge revenues are the primary funding sources for the District's Corporate Fund. Illinois law limits the tax rate of this fund to 41.00 cents per \$100 of EAV. The estimated tax rate for the Corporate Fund in 2017 is 16.20 cents, a decrease of 0.67 cents from 2016 Adjusted Tax Rate. User charges are collected from industrial, commercial, and non-profit organizations to recover operations, maintenance, and replacement costs proportional to their sewage discharges, in excess of property taxes collected. The major categories of payers include chemical manufacturers, food processors, and government services, are generally expected to maintain their recent level of discharges.

### **Stormwater Management Fund**

The Stormwater Management Fund was established on January 1, 2005. This fund accounts for tax levies and other revenue to be used for stormwater management activities throughout all of Cook County, including areas that currently lie outside the District's boundaries. The fund consolidates the stormwater management activities of the Engineering and Maintenance & Operations Departments and supports the activities outlined in the Cook County Stormwater Management Plan, which serves as a framework for the District's countywide Stormwater Management Program.

One of the initial goals of the Stormwater Management Program was to develop detailed watershed plans (DWPs) for each of the watersheds in Cook County. The DWPs identified and prioritized "regional" stormwater projects based on a benefit to cost ratio. These include streambank stabilization projects, which involve addressing critical active streambank erosion threatening public safety, structures, and/or infrastructure, or flood control projects, which address regional overbank flooding. As funding becomes available, the Board of Commissioners selects projects to move forward to design and construction.



*Flood Control and Streambank Stabilization Project on Tinley Creek in Crestwood.*

In 2014, the State Legislature expanded the authorities of the District's stormwater management legislation to allow for the District to address local drainage problems and acquire flood-prone property from property owners on a voluntary basis. These legislative changes form the basis of Phase II, the intent of which is to identify and assist municipalities with the implementation of projects that address local flooding concerns, develop Stormwater Master Plans, and implement a Flood-Prone Property Buyout Program.

The initial Stormwater Master Plans were completed in 2016 and consist of five pilot studies to comprehensively address flooding by identifying potential projects within publicly and privately owned property. The pilot areas were recommended to the District by the four Councils of Government and the City of Chicago. It is anticipated that Stormwater Master Plans will be developed for all areas of Cook County over the next several years following the process defined through these pilot studies.

The Board of Commissioners granted authority in 2011 for the establishment of a Green Infrastructure Program (GIP), which facilitates the planning, design, and construction of multiple green infrastructure projects throughout Cook County. In 2014, the District began a partnership with the Chicago Department of Water Management and the Chicago Public Schools in the Space to Grow program to provide stormwater retention at elementary schools while reconstructing substandard playgrounds. In 2016, the District also partnered in green infrastructure projects in the Villages of Kenilworth and Niles.

## Budget Message / Highlights

The District’s Board of Commissioners adopted the Watershed Management Ordinance (WMO) on October 3, 2013, and it became effective on May 1, 2014. The WMO establishes uniform and minimum stormwater regulations throughout Cook County. The District is currently developing a Technical Guidance manual, which will serve as a companion reference to the WMO. The District plans to conduct training for municipal representatives and design engineers for them to gain a better understanding of the WMO’s requirements.

Property taxes are the primary funding source for the District’s Stormwater Management Fund. Illinois law limits the tax rate of this fund to five cents per \$100 of EAV. The estimated tax rate for the Stormwater Management Fund in 2017 is 2.96 cents, an increase of 0.41 cents from 2016 Adjusted Tax Rate.



*Schoolyard transformation at James Wadsworth Elementary School. The picture on the left shows the schoolyard before the \$1.5 million transformation through the Space to Grow program, a partnership between the District, Chicago Public Schools, and the Chicago Department of Water Management. The same space, completely transformed, is shown on the right.*

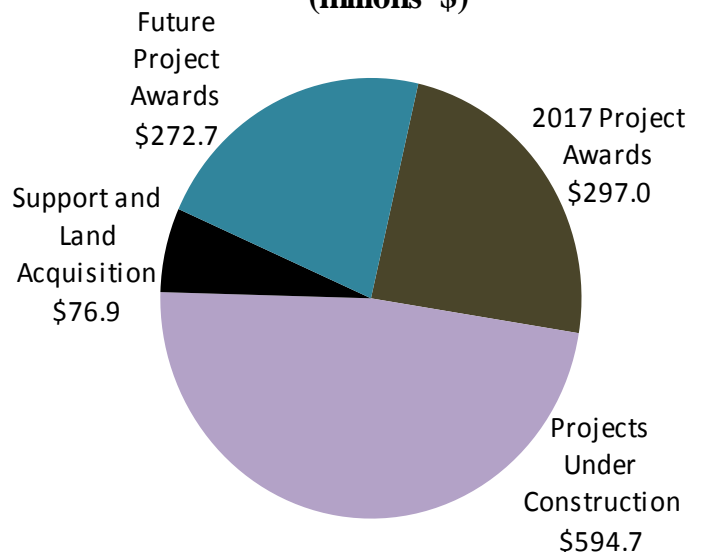
### Capital Improvement Program:

#### Construction Fund and Capital Improvements Bond Fund

The District’s overall Capital Improvement Program (CIP) includes 2017 project awards, land acquisition, support, future projects, and projects under construction, with a total cost of approximately \$1.2 billion. Capital projects involve the acquisition, improvement, replacement, remodeling, completing, altering, constructing, and enlarging of District facilities. Included are all fixtures which are permanently attached to and made a part of such structures and non-structural improvements, and which cannot be removed without, in some way, impairing the facility or structure.

Projects under construction have been presented and authorized in previous budgets and are recognized in the annual budget as both outstanding liabilities in the Capital Improvements Bond Fund (CIBF) and as re-appropriations in the Construction Fund. Future projects, not yet appropriated, are included in the annual budget to present a comprehensive picture of the District’s CIP. These future projects will be requested for appropriation subject to their priority, design, and available funding.

### Overall Capital Improvement Program (millions \$)



## *Budget Message / Highlights*

The District utilizes two funds for its CIP: the Construction Fund and the CIBF. The Construction Fund is utilized as a pay-as-you-go capital rehabilitation and modernization program. Capital projects are financed by a tax levy sufficient to pay for project costs as they are constructed. As the District replaces, rehabilitates, and modernizes aged and less effective infrastructure, capital projects are assigned to the Corporate Fund, Construction Fund, or CIBF based on the nature of the project, dollar magnitude, and useful life of the improvement. The Construction Fund is used for operations-related projects, where the useful life of the improvement is less than 20 years.

The CIBF, the District's other capital fund, includes major capital infrastructure projects whose useful lives extend beyond 20 years, and which will be financed by long-term debt, federal and state grants, and State Revolving Fund loans.

The 1995 Tax Extension Limitation Law (Tax Cap), and subsequent amendments to the bill, dramatically impacted the methods of financing the CIBF. The original legislation required, in general, that all new debt be approved by referendum. However, an exemption for projects initiated before October 1, 1991 was granted to the District to enable completion of the TARP. The bill was later amended to establish a debt service extension base (DSEB), which allowed local governments, with non-referendum authority, to continue to issue non-referendum debt in terms of "limited bonds," as long as their annual debt service levies did not exceed 1994 levels. This law was further amended in 1997 to exclude TARP project debt from this debt service extension base. The passage of legislation in 1997 allowing for expanded authority to issue "limited bonds" by excluding pre-existing TARP projects provides additional financing flexibility to proceed with our CIP.

In 2009, a further modification to the law allows the DSEB to increase annually by the Consumer Price Index (CPI) or five percent, whichever is less. These changes allow the District to effectively utilize "limited bonds" as a source of financing.

### **Construction Fund**

The Construction Fund appropriation for 2017 totals \$34.5 million, a decrease of \$2.2 million, or 5.9 percent, from the 2016 Adjusted Budget.

Capital projects in the Construction Fund are primarily supported by property taxes. The 2017 tax levy planned for the Construction Fund is \$17.0 million, an increase of \$3.7 million, or 28.0 percent, from the 2016 Adjusted Levy.

### **Capital Improvements Bond Fund**

The 2017 appropriation for the Capital Improvements Bond Fund is \$354.6 million, a decrease of \$129.1 million, or 26.7 percent, from the 2016 Adjusted Budget. The appropriation is based on the scheduled award of \$273.3 million in construction costs on projects. The decrease in appropriation for the CIBF reflects the pattern in the award of major projects. An appropriation for the open value of existing contracts is also carried forward from the prior year.

The remaining \$81.3 million appropriation for this fund will provide for studies and professional services to support District design and administration of proposed and ongoing construction activity, including the TARP reservoirs. A comprehensive narrative and exhibits detailing our entire CIP is provided in the Capital Budget (Section V) of this budget document.

A listing and description of proposed projects and projects under construction, scheduled for 2017, can be found in the Capital Budget (Section V) of this budget document.

### **Retirement Fund**

The Retirement Fund of the District is established under Illinois Compiled Statutes to provide funding and administration for a retirement program for District employees. The Fund is financed with employee and employer contributions and investment income, which are distributed to the fund when collected. The annual appropriation requests for this fund are taxes receivable from previous years' tax levies. The passage of legislation in 2008 allows the Board to transfer interest earned on any monies to the District's funds or funds that are most in need.

To address growing unfunded pension liabilities, Public Act 96-0889, signed by the Governor on April 14, 2010, modifies benefits for most Illinois public pension systems, other than Police and Fire Pension Funds, by creating two tiers within the plans. The provisions apply to a person who first becomes an employee and participant of the fund on or after January 1, 2011. The bill increases the age to receive full retirement benefits to age 67 with at least 10 years of service, and age 62 to receive a reduced benefit. It also increases the number of months used to calculate the final average salary to 96 months within the last 10 years and caps the final average salary used to calculate an annuity, which was \$106,800 when Public Act 96-0889 became effective. This amount is increased annually by three percent or one-half of the increase in the Consumer Price Index-U (CPI-U), whichever is lower.

The District has addressed pension liabilities through both funding policies approved by the Board of Commissioners and supporting legislative changes for the Metropolitan Water Reclamation District Retirement Fund. On August 3, 2012, Public Act 97-0894 was signed into law and increased the employee contributions by one percent per year for three years for employees

## *Budget Message / Highlights*

who were members before January 1, 2011. The increased contribution will remain in place until the fund reaches a 90 percent funding ratio.

The 2017 appropriation for the Retirement Fund is \$79.5 million, an increase of \$8.7 million, or 12.3 percent, compared to the 2016 Adjusted Budget. The 2017 total tax support for the Retirement Fund is \$89,604,000, which is comprised of \$18.7 million from the District’s Personal Property Replacement Tax allocation and a \$73.4 million property tax levy. The property tax levy of \$73.4 million is an increase of \$8.3 million, or 12.7 percent, from the 2016 Adjusted Levy. The appropriation is based on a statutorily required formula that bases the District levy, and subsequent appropriations, on employee contributions made in previous years. The 2012 law increased the tax levy calculation from a multiplier of 2.19 of employee to a multiplier of 4.19. Also by statute, the District may transfer interest income to the Retirement Fund. A detailed explanation of the fund’s fiscal status, participation, and income is presented in the Other Funds pages (Section VII) of this budget document.

### **Reserve Claim Fund**

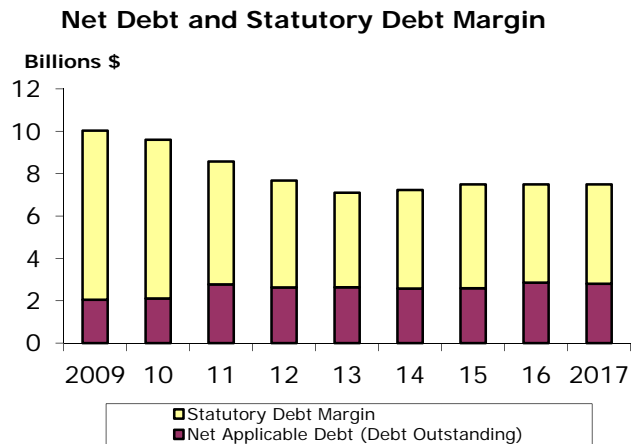
The Reserve Claim Fund acts as the District’s insurance fund. The District is partially self-insured and utilizes this fund for emergency repairs and claims against the District. District policy is to annually levy a half-cent annual tax rate to provide funds for current claims and to accumulate a fund reserve towards the statutorily authorized limit of \$65.2 million.

The 2016 appropriation of \$30.6 million is an increase of \$0.4 million, or 1.5 percent, from the 2016 Adjusted Budget. The practice is to fund toward the maximum fund balance allowable. The \$0.4 million estimate for accounts payable and other liabilities is based on an internal review and analysis. This estimate is reviewed and adjusted annually. A historical profile of the resources available in the fund is provided in Section VII of this budget document. The levy increased \$0.1 million for this fund in 2017. The District is levying against the last known EAV at the maximum rate allowed by state statute in 2017. The Board reaffirmed the policy to permit a levy at the statutorily allowable tax rate to protect the District in the event of catastrophic failure of District operational infrastructure or other claims. For the 2017 Budget, the last known EAV (\$130.3 billion) is for the 2015 levy year.

### **Bond Redemption & Interest Fund**

The Bond Redemption & Interest Fund is the District’s debt service fund. The District finances its major CIP with the sale of long-term general obligation bonds, grants received from the state and federal government, and loans from the Illinois State Water Pollution Control Revolving Loan Fund, or State Revolving Fund (SRF). Principal and interest payments on District general obligation bonds, and SRF loans, require an annual levy and appropriation.

The SRF Loan Fund provides low-interest loans to finance qualifying projects. Upon project completion, District bonds are issued at the same low-interest rate. The current interest rate for new loans to the District is 1.75 percent. The District has authorized approximately \$2.2 billion of SRF loans since the program’s inception. Several projects are currently financed through SRF loans. The State of Illinois expanded the SRF program to provide additional loan funding in 2016 through 2018.



The District expects to receive approximately \$200 million in SRF loans for the years 2017 – 2020. The SRF Loan Fund replaced the Federal Construction Grants program from which the District had historically received 55 to 75 percent direct funding for qualifying capital improvements.

The District’s debt is authorized under Illinois Compiled Statutes, which specifies a debt limit equal to 5.75 percent of the District’s EAV. The District’s 2015 EAV is \$130.3 billion, setting the District’s statutory debt limit at \$7.5 billion. Outstanding debt applicable to the debt limit as of December 31, 2016, totals \$2.8 billion. The debt margin is \$4.7 billion.

The 2017 appropriation for the Bond Redemption & Interest Fund totals \$228.8 million, an increase of \$12.8 million, or 5.9 percent, compared to the 2016 Adjusted Budget. A debt service graph is found on page 52 that displays debt service from 2009 through 2021 and one on page 552 that displays debt service from 2017 through retirement.

The 2017 tax levy for this fund is \$233.9 million, an increase of \$0.9 million, or 0.4 percent, from the 2016 Adjusted Levy.



## *Budget Message / Highlights*

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### **Real Estate Tax Levies**

The District's primary source of operating revenue is ad valorem real estate taxes. The passage of the Tax Cap in 1995 limited future increases in property tax levies, except debt service, to the lesser of five percent or the change in the national CPI, plus allowable increases for new property. The District made significant reductions in operating expenditures in 1995 and 1996 to absorb the initial impact of revenue reductions due to the Tax Cap. Since then, restructuring of the Construction Fund projects, a healthy fund balance, interest transfers, and reduced property tax funding requirements for the Working Cash Funds allowed controlled growth in the Corporate Fund within the limits of the Tax Cap.

Since 2006, the CPI has averaged 1.9 percent, and the growth in Corporate Fund expenditures has increased about 0.9 percent annually. The Corporate Fund Expenditure Rate has been impacted in the past few years by increased contributions to the OPEB Fund and to the Retirement Fund. The District remains aggressive in controlling Corporate Fund expenditures. Cook County reassesses property values on a triennial cycle, rotating from North Suburban to South Suburban to City of Chicago. Historically, when the city is reassessed, there are a larger number of assessment appeals that must be resolved before the final EAV can be set, tax rates calculated, and property tax bills prepared. To provide for refunds, the rate for loss in collections is 3.5 percent.

### **Non-Property Tax Revenues – Fund Balances**

The economic decline in this region has been reflected in decreased non-property tax revenues that help support District operations and fund balance levels. While the District is primarily supported by property taxes, prior years' strong levels of investment interest income, personal property replacement tax, and user charge revenues significantly cushioned the impacts of the Tax Cap Law restrictions on tax levy increases.

Decreases in certain non-property tax revenues are anticipated in the conservative revenue estimates used for the 2017 Budget. Before 2004, all net assets appropriable had been reappropriated as revenue for the subsequent year. Beginning in 2004, a portion of the projected net assets remained unappropriated to provide for a fiscally responsible fund balance. A Corporate Fund balance within \$44.0 to \$54.0 million, or 12 to 15 percent of appropriations, is consistent with recommendations of the Government Finance Officers Association (GFOA). The District's current fund balance exceeds this goal and is viewed by District management and the financial markets as necessary to maintain financial stability and sustain us through economic uncertainties. This is an integral part of a long-term plan that also includes reductions of future expenditures to better match current revenues. Revenues and expenditures are closely monitored, so that favorable variances in revenues are recognized and made available for expenditure or unfavorable revenue variances lead to appropriate restrictions.

Investment interest income in 2017 is projected to be \$5.0 million, no change from the 2016 Adjusted Budget. The actual revenue for 2015 was \$5.1 million. The Treasurer is statutorily limited to investments in U.S. Government direct and agency securities, and high quality, short-term municipal bonds, bank securities of deposit, certain short-term obligations of corporations (commercial paper) rated in the highest classifications, the State Treasurer's Illinois funds, and certain other investments with a maximum maturity of five years. The variation in investment income is largely due to the decrease in short-term interest rates and cyclical increases and decreases in fund balances. The current level of short-term interest rates is anticipated to continue through 2017. Interest income earned in any fund except the Reserve Claim Fund and the Retirement Fund may be transferred to other funds as necessary.

Personal Property Replacement Tax (PPRT) revenue estimated for 2017 is \$35.4 million, a decrease of \$6.5 million from the 2016 Adjusted Budget. The decrease is due to expectations for revenues to remain flat, a correction of the State of Illinois' calculation error found in 2016 and the increase of business income tax refund fund percentage from 15.14 percent in fiscal year 2016 to 17 percent in fiscal year 2017. The estimate includes a reduction for the recoupment of the PPRT overpayments to local taxing districts. As the PPRT is primarily a tax on corporate income, it trends in parallel with the condition of the state and national economy. PPRT revenue is distributed first to fully fund the Retirement Fund and subsequent receipts are distributed to other non-debt funds.

User Charge revenues have fluctuated in the \$47.0 to \$78.0 million range over the last 10 years. Food processing, chemical, and government segments of the local economy comprise the majority of large payers. Several large payers have closed over the past several years. Increased production and payments at many of the remaining industries have made up for the closures. The 2017 revenues are conservatively estimated to be \$47.0 million and are projected at \$47.5 million in 2016.

### **Non-Referendum Bonding Authority**

The District has authority to issue bonds without seeking voter approval via referendum through the year 2024, effective January 1, 2011. The initial Tax Cap legislation (PA89-1) limited this non-referendum authority to projects that were initiated prior to October 1, 1991. Public Act 89-385 provided the District with the authority to issue non-referendum "limited bonds" for capital



## *Budget Message / Highlights*

projects initiated after October 1, 1991. However, it was limited to the District's 1994 debt service level of \$141,463,920 and amended by Public Act 96-0501 to allow for an annual increase equal to the CPI or five percent, whichever is less. It is currently at \$159,305,390. Public Act 90-0485 has provided a further modification by authorizing the exclusion of debt for TARP projects from this debt service limit. With inclusion of the levies for the 2004, 2007, 2009, 2012, and 2014 SRF series of bonds for non-TARP projects, Capital Improvement Bond Series of July 2006, Series of August 2009, Series A & B of July 2011, 2014 Series C, the 2016 D Bonds and the 2016F Bonds, Refunding Bonds Series C of March 2007, the 2014 Series D, and the 2016B Bonds. There is approximately \$18.7 million annual debt service available under the 1994 debt service limit related to the tax levy year 2016.

Additional bond issues through 2024 will be used to finance capital projects identified by prioritization. Initial estimates and schedules for the projects were analyzed and compared to bond issuance authority and funding availability. The bond issuance authority will generally accommodate the proposed project expenditures through 2024. Extension or increase in the authority may be necessary for additional projects that may be required to meet more stringent NPDES permit discharge limits, including effluent disinfection, nutrient removal, and supplemental aeration.

### Legislative Changes

The District had one 2016 legislative initiative which passed the legislature and was signed into law by the Governor in 2016.

**Public 099-0736** amends the District's enabling legislation to include the Administrative Services Officer as an appointee of the Executive Director, with the advice and consent of the Board of Commissioners.

### Major Budget Amendments Impacting the 2017 Final Adopted and Amended Budget

The 2017 Executive Director's Recommendations were presented to the Board of Commissioners on October 11, 2016 according to the budget process detailed on pages 31-33 of the 2017 Executive Director's Recommendations. At the October 20, 2016 Capital Improvement Program public hearing, the plan detailing work planned for 2017 was presented relating the large number of projects to the District's Strategic Business Plan. The Committee on Budget and Employment held departmental budget presentations on November 3, 2016 and a Public Hearing on the entire budget was held on December 1, 2016. At the public hearing, the Civic Federation testified in support of the District's budget and policy priorities. The Board voted on the budget on December 8, 2016, and pursuant to State Statute (70 ILCS 2605), made all final amendments on December 15, 2016.

The purpose of this section is to discuss the impacts of budgetary amendments between the Executive Director's Recommendations and the Final Adopted and Amended Budget.

	<u>Appropriations</u>	
	<u>2017 Executive Director's Recommendations</u>	<u>2017 Final Adopted and Amended Budget</u>
Corporate Fund	\$ 367,062,000	\$ 368,925,800
Construction Fund	33,852,900	34,450,400
Capital Improvements Bond Fund	348,037,200	354,625,600
Stormwater Management Fund	44,997,100	45,800,100
Retirement Fund	79,505,000	79,505,000
Reserve Claim Fund	30,617,100	30,617,100
Bond Redemption & Interest Fund	227,761,075	228,825,813
<b>Total Budget</b>	<b>\$ 1,131,832,375</b>	<b>\$ 1,142,749,813</b>

The total appropriation increased by \$10,917,438, or 1.0 percent, from the 2017 Executive Director's Recommendations of \$1,131,832,375 to \$1,142,749,813. No changes to the property tax levies or user fees were necessary to support these increases.

The Retirement Fund and Reserve Claim Fund were adopted without modification from the 2017 Executive Director's Recommendations.

## *Budget Message / Highlights*

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### **Corporate Fund**

The Corporate Fund is the District's general operating fund and includes appropriation requests for all the day-to-day operational costs anticipated for 2017. The total appropriation request for the Corporate Fund increased by \$1,863,800, or 0.5 percent, from the 2017 Executive Director's Recommendations of \$367,062,000 to \$368,925,800. The increase is primarily due to the addition of the apprenticeship program and is funded by the Tax Increment Financing (TIF) surplus declared by the City of Chicago, originally estimated at \$2.7 million and later revised to \$10.5 million for the 2017 Tentative Budget. The TIF surplus also allowed the District to increase the budgetary reserves for 2017.

### **Construction Fund**

The Construction Fund, which finances smaller construction projects on a pay-as-you-go basis, increased by \$597,500, or 1.8 percent, from the 2017 Executive Director's Recommendations of \$33,852,900 to \$34,450,400. Funding is being added with no changes to the property tax levies or user fees and is based on the timing and equipment delivery for projects within the water reclamation plants as well as the addition of several priority projects. Major projects added include an odor monitoring system at the Stickney WRP, new boilers in the Calumet Service Area, and a project for digester gas utilization at the Calumet WRP.

### **Capital Improvements Bond Fund**

The Capital Improvements Bond Fund is budgeted on an "obligation basis," meaning that funding for the project is budgeted at the time of award. The projects are funded through current and future anticipated bonds, loans, or grants. The total appropriation request for the Capital Improvements Bond Fund increased by \$6,588,400, or 1.9 percent, from the 2017 Executive Director's Recommendations of \$348,037,200 to \$354,625,600. The increase is due to the changes in the project schedules and cost estimates.

### **Stormwater Management Fund**

The Stormwater Management Fund accounts for a tax levy specifically to be used for stormwater management activities throughout all of Cook County. The total appropriation request for the Stormwater Management Fund increased by \$803,000, or 1.8 percent, from the 2017 Executive Director's Recommendations of \$44,997,100 to \$45,800,100. The increase is being funded by the changes in the project schedules and cost estimates.

### **Bond Redemption & Interest Fund**

The Bond Redemption & Interest Fund is the District's debt service fund, increase by \$1,064,738, or 0.5 percent, from the 2017 Executive Director's Recommendations of \$227,761,075 to \$228,825,813. The increase is due to the addition of State Revolving Fund loan 14C SRF L174559.

## *Financial Policies, Objectives, and Accomplishments*

### **Financial Policies, Objectives, and Accomplishments**

In order to meet its federal, state, and local responsibilities, while ensuring cost-effective operations, the District adheres to a number of financial policies. These policies are part of a dynamic process whereby the best use is made of available District resources. The following provides an overview of these policies, their objectives, and the measurable accomplishments resulting from their use.

#### **Budgetary Policies**

In order to protect the strong financial position of the District, ensure uninterrupted services, and stabilize annual tax levies, the Board adopted the following policies on December 21, 2006 to enhance and maintain budgetary fund balances. The General Corporate Fund policy was amended on December 10, 2009. The Bond Redemption & Interest Funds Investment Income policy was amended on November 3, 2011. The Stormwater Management Fund policy was adopted on December 10, 2009 and amended on November 3, 2011 and December 17, 2015.

#### **General Corporate Fund**

- Corporate Fund undesignated fund balance as of January 1 of each budget year must be maintained at between 12 percent and 15 percent of appropriations. The fund balance may be maintained by not fully appropriating prior year fund balances. This level of fund balance will ensure the District's ability to maintain all operations even in the event of unanticipated revenue shortfalls and provide time to adjust budget and operations;
- Corporate Working Cash Fund must be sufficient to finance 95 percent of the full annual expenditure of the Corporate Fund. This will be financed through transfers of surpluses from the Construction Working Cash Fund, direct tax levies, tax levy financed debt (Working Cash Bonds), and transfers of accumulated interest from other funds. This level of fund balance will continue financing of the Corporate Fund in the event of the typical and extraordinary delays in second installment real estate tax collections; and
- Reserve Claim Fund balance will be targeted toward the maximum level permitted by statute, 0.05 percent of the equalized assessed valuation (EAV), whenever economically feasible. This will be financed through tax levies at the maximum 0.5 cents per \$100 of EAV when economically feasible and financially prudent. This level of funding will protect the District in the event that environmental remediation costs cannot be recovered from former industrial tenants of District properties, catastrophic failure of District operational infrastructure, or other claims. As the District is partially self-insured, adequate reserves are critical.

The District will appropriate funds from the unassigned fund balance for emergencies and other requirements that the District believes to be in its best interest. In the event that any of these specific component objectives cannot be met, the Executive Director will report this fact and the underlying causes to the Board with a plan to bring the fund balances back into compliance with policy within a two-year period. In order to maintain relevance, this policy will be reviewed every three years following adoption or sooner at the discretion of the Executive Director.

#### **Stormwater Management Fund**

The maximum property tax levy of five cents per \$100 of EAV for the Stormwater Management Fund shall be allocated at a maximum two cents per \$100 of EAV to fund operations and maintenance expenditures and the remainder of the levy shall fund direct cash outflows for capital and capital related expenditures and the interest and redemption of general obligation bond issues for capital projects.

#### **Capital Improvements Bond Fund Investment Income**

Investment earnings from the Capital Improvements Bond Fund (CIBF) resulting from all future bond issues will fund an equity transfer to the Bond Redemption & Interest Funds and be used to abate property tax levies or for other corporate needs. This practice will also limit the payment of arbitrage rebates.

#### **Bond Redemption & Interest Funds Investment Income**

Fund balances in the Bond Redemption & Interest Funds that might accumulate due to investment income will be identified and used to abate Bond Redemption & Interest property tax levies or for other corporate purposes. These abatements appropriately reduce property tax levies by the amount earned on invested balances above what is necessary for paying principal and interest due over the following 12 months, while still maintaining appropriate fund balances and when not required for other corporate purposes. This policy and the subsequent tax abatements will assist in compliance with the Board's overall tax levy policy, which is not to exceed a five percent increase over the prior year, excluding the Stormwater Management Fund tax levy.

## *Financial Policies, Objectives, and Accomplishments*

### Abatement of Interest Rate Subsidies from Build America Bond Issuances

Interest reimbursement payments related to taxes levied for Build America Bond issuances will be presented to the Board for approval to abate, to be used for any lawful corporate purpose, or a combination thereof as determined as part of the annual budget process. Such abatement or alternative lawful use of the funds will be presented to the Board for approval prior to any abatement or use of reimbursement funds.

### Capital Improvements Bond Fund Accumulated Income

Revenues that have accumulated in the CIBF from investment income, royalties, grants, or SRF revenues will primarily be used for capital projects. Capital projects are generally in the CIBF; however, capital projects in the Construction or Corporate Funds of critical importance may be financed by transfers from this revenue source. These funds may be transferred to the Bond Redemption & Interest Funds to be used to abate property taxes or may be used for other corporate needs as necessary.

The District's Annual Budget shall present a complete financial plan for the budget year.

The Budget will be prepared and presented as one comprehensive management and balanced financial plan, including capital and operating requirements, financing requirements, requirements for employee retirement, and reserve claim funding.

In addition, the District prepares and manages its budgets based on the following long-standing policies:

Budget estimates shall be prepared, and appropriations made, in a manner that reflects the use of program and performance principles and unit cost data. Appropriations shall be arranged according to funds, programs, and organizational units.

Historical levels of funding and expenditure shall be included in the Budget to provide comparisons. Financial forecasting of future requirements shall be included to provide estimates of future financial and operating conditions.

The Budget shall contain separate and combined estimated balance sheets for each fund, with estimates of current assets and liabilities as available for appropriation at the beginning of the budget year.

The Budget shall include a statement showing the method of arriving at the net tax figure, and provide estimates of all taxes to be levied for such budget year, as well as all other current receipts to be derived from other revenue sources.

Statements shall be included in the Budget, which detail bonded indebtedness of the District, and show bonds authorized and unsold, District borrowing capacity, and the maturity dates of bond issues and corresponding rates of interest.

The District will comply with the 1995 Tax Cap and Board policy limiting increases in the total property tax levy to five percent, excluding the Stormwater Management Fund.

### Retirement Fund

On October 2, 2014, the Board adopted a policy establishing the objectives, goals, and funding sources for the annual contribution to the Metropolitan Water Reclamation District Retirement Fund.

Policy Objectives:

- A. Provide for a funding plan based on actuarially determined contributions;
- B. Provide funding discipline to ensure promised benefits can be paid;
- C. Seek reasonable and equitable allocation of the cost of benefits over time;
- D. Minimize volatility of the District's contributions to the extent reasonably possible and consistent with other policy goals; and
- E. Support the goals of accountability and transparency with clear benchmarks and reporting.

Funding Goal:

The funding goal of the District is to contribute annually to the Fund an amount that over time will increase the ratio of Fund assets to accrued liabilities to 100 percent by the year 2050.

Source of Funding:

The source of funding for the District's contribution is the annual real estate tax levy and personal property replacement tax receipts as allowed under 40 ILCS 5/13-503.

The District may, at its discretion, transfer excess interest income to the Fund in accordance with 70 ILCS 2605/5.9. Such transfers will be made in addition to the annual tax levy amount funded by real estate and personal property replacement tax receipts.

## *Financial Policies, Objectives, and Accomplishments*

### Implementation of Funding Policy:

In order to achieve the above goals and objectives, the District will annually contribute 1) an amount equivalent to the maximum employer contribution allowable by statute or 2) if the maximum amount exceeds the amount available for contribution from the District's tax levy in any budget year, the District may contribute an amount determined by the Fund actuary based on a triennial projection that exceeds the minimum employer contribution required by the statute and achieves a funded ratio of 100 percent by the year 2050.

### Benchmarks:

Progress toward the above funding goal will be determined in part by an actuarial projection to be performed by the Fund's actuary every three years. This triennial projection will calculate a consistent multiple through the year 2050 that 1) satisfies the statutory requirements every year and 2) achieves a funded ratio of 100 percent by 2050. The projection multiple will serve as a guide for determining employer contributions until the next projection is performed. In addition to the triennial projection, the funded ratio calculated each year by the Fund actuary will serve as a benchmark to determine progress toward the funding goal.

### Budgetary Objectives

The District shall make every effort to minimize the tax levy through the use of sound management and cost-effective operations.

The District will maintain a positive relationship between revenues and expenditures.

The financing of the Corporate, Stormwater Management, and Construction Funds Budgets will be managed through use of the Corporate, Stormwater and Construction Working Cash Funds, respectively. Interfund transfers will be used to minimize property tax levies for the Working Cash Funds.

The District's Budget shall be prepared and presented in such a manner that it serves as a clear and comprehensive policy document, financial plan, operations guide, and communications device to its staff, public officials, and citizens.

### Budgetary Accomplishments

The District's property tax levies are in compliance with the Tax Cap Law. Fiscal plans have been developed and implemented to reduce expenditures as necessary to meet property tax revenue constraints while meeting our statutory and regulatory responsibilities.

The District has effectively institutionalized a financing strategy that avoids short-term financing of District operations. The bond rating agencies have favorably recognized this practice. For 2017, the Working Cash Funds have sufficient balances to provide the desired level of financing without imposing a tax levy.

The Five-Year Financial Forecast component of the Budget and interim budgetary reporting have identified future revenue shortfalls well ahead of time to allow for legislative relief to be sought or for other management plans and programs to be developed to avoid actual revenue shortfalls or financial overcommitments.

For the 32nd consecutive year, the GFOA of the United States and Canada has presented the Distinguished Budget Presentation for the District's 2016 Annual Budget. In 2016, the District also received special recognition in the category of Performance Measures. For the years 1988 through 1998, the District's Budget was recognized as "Especially Notable" or "Outstanding." The entire 2016 Budget is available at [www.mwr.org](http://www.mwr.org).

### Investment and Cash Management Policy

The District's formal investment policy, in place since December 1999, and last revised in July 2010, states in its preamble that, "It shall be the policy of the District that all public funds available, not restricted by immediate need, be invested in investment securities so as to maximize return without sacrifice of safety or necessary liquidity." This policy complies with Public Act 90-688 requiring all public entities within the State of Illinois to have a formal investment policy passed by its governing authority and sets forth the parameters and objectives of the District's investment and cash management policy.

The primary objectives of investment activities, in priority order, are safety, liquidity, and yield.

District funds can be invested in such securities as authorized by Illinois Public Act 235, the Public Funds Investment Act. The investments which the District may purchase are limited to the following: (1) securities, which are fully guaranteed by the U.S. Government as to principal and interest; (2) certain U.S. Government Agency securities; (3) certificates of deposit or time



## *Financial Policies, Objectives, and Accomplishments*

deposits of banks and savings and loan associations which are insured by a federal corporation; (4) short-term discount obligations of the Federal National Mortgage Association; (5) certain short-term obligations of corporations (commercial paper) rated in the highest classifications by at least two of the major rating services; (6) fully collateralized repurchase agreements; (7) the State Treasurer's Illinois and Prime Funds; (8) money market mutual funds and certain other instruments; and (9) municipal bonds of the state, or of any other state, or of any political subdivisions thereof, whether interest is taxable or tax-exempt under federal law, rated within the four highest classifications by a major rating service.

Certificates of deposit or time deposits will be collateralized with securities of the U.S. Government, in an amount equal to 105 percent (at market) of the funds on deposit, or with a Federal Home Loan Bank letter of credit equal to 102 percent (at market).

Funds received are to be deposited on the day of receipt and invested as soon as the funds become available, if not immediately required for cash flow needs.

### **Investment Objectives**

To maintain an average daily investment of at least 99 percent of funds available for investment.

To increase minority and community development banking and broker/dealer participation in District investments to 30 percent of invested funds.

### **Investment Accomplishments**

In the past ten years, the interest income earned on investments has been:

2007	\$ 46,200,000	2012	\$ 10,300,000
2008	32,100,000	2013	11,525,000
2009	11,000,000	2014	8,335,000
2010	8,100,000	2015	6,426,000
2011	9,800,000	2016	5,091,000 (Estimated)
		Total	\$ 148,877,000

### **Bonded Debt Policy**

Bonded debt of the District is to be issued only in the amounts and for the purposes to which Illinois Statutes limit the District.

Bonded debt issued for working cash or capital improvement purposes is to be issued as general obligation debt of the District. Capital improvement bonded debt is to be issued to mature no more than 30 years from the year of issue.

Bonded debt is to be issued only when needed, and in amounts necessary for meeting such needs, unless financial market conditions and/or projections indicate that it is in the District's best interest to deviate from this practice.

Excess fund balances in the Bond Redemption & Interest Fund may be identified and used to abate Bond Redemption & Interest Fund levies.

### **Bonded Debt Objectives**

To maintain or improve the District's Aa2, AAA, and AA+ bond ratings from Moody's Investor Services, Fitch Ratings, and Standard & Poor's Corporation, respectively.

To provide timely and cost-effective bonded debt financing.

To structure future debt service so as to provide a stable trend in future debt service tax levies.

### **Bonded Debt Accomplishments**

In April 2001, Fitch Ratings upgraded the District's outstanding General Obligation Bonds to AAA from AA+ and Standard & Poor's Corporation (S&P) upgraded the District's Bonds to AA+ from AA. In April 2002, Moody's Investor's Service (Moody's) upgraded the District's Bonds to Aaa from Aa1. For the July 2006 bond issue, Standard & Poor's increased the District's rating to AAA. In August 2013, Moody's downgraded the District's Bonds from Aaa to Aa1. In July 2015, Moody's further downgraded the District's Bond from Aa1 to Aa2. In May 2016, S&P downgraded the District's bond rating from AAA to AA+. The primary reason for the downgrades is the pressure on the District's tax base due to the significant debt burden and pension liabilities for major governmental agencies in Cook County, reflecting Moody's and S&P's opinion on the affordability of possible tax increases by other agencies and how this could impact Cook County residents. In addition, Moody's changed its pension rating methodology in April 2013 and implemented different assumptions to estimate the unfunded pension liability than is currently required by governmental accounting standards.

## *Financial Policies, Objectives, and Accomplishments*

For the 2016 Bond issuance, Fitch Ratings affirmed the District’s rating at AAA citing its diverse economic base, structurally balanced financial operations, managed debt load, pension funding improvement, and the District’s history of prudent financial stewardship. Standard & Poor’s Corporation downgraded the District’s rating to AA+ from AAA, citing the increasing overall debt burden and potential impact of pension liabilities, and the overlapping tax base. The District did not request a rating from Moody’s for the 2016 Bonds.

**Bond Rating History**

Moody’s Investor Services		Fitch Ratings		Standard & Poor’s Corporation	
1938-1944	Baa				
1944-1968	A				
1944-1968	A1				
1968-1974	Aa				
1974-1997	Aa2				
1997-1999	Aa1				
1999-2002	Aa1			1969-2001	AA
2002-2013	Aaa	1995-1999	AA	2001-2006	AA+
2013-2014	Aa1	1999-2001	AA+	2006-2016	AAA
2015-present	Aa2	2001-present	AAA	2016-present	AA+

In May 2016, Standard & Poor’s Corporation downgraded the District’s Bond from AAA to AA+ due to the potential impacts of pension liabilities and debt of overlapping governmental entities on the District’s tax base. The Illinois Legislature amended the Metropolitan Water Reclamation District Act to provide that the District must levy a direct annual tax to pay the principal and interest on indebtedness within 30 years after contracting the debt, enabling the District to now issue debt for a maximum of 30 years after contracting the debt. Previously, the District was allowed to issue debt for a maximum of 20 years. In addition, the District’s Act was amended to extend non-referendum bonding authority from December 31, 2016 to December 31, 2024, effective January 1, 2011.

**Financial and Accounting Policies**

The significant accounting policies of the District conform to GAAP in the United States of America, promulgated by the Government Accounting Standards Board (GASB) as applicable to governmental units.

The basic accounting and reporting entity of the District is a “fund”. The District’s governmental funds are reported using the current financial resources measurement focus and modified accrual basis of accounting.

The fiduciary funds of the District are the Pension Trust Fund and the OPEB Trust Fund. Trust fund assets and liabilities are accounted for on the full accrual basis, and investments are recorded at market value.

Property taxes, user charge revenue, and the personal property replacement tax are accrued to the extent that they are measurable and available to satisfy liabilities of the reporting period.

An internal audit function is maintained as an independent appraisal activity for the review of accounting, financial, internal control structure, and other operations. It aids managerial control by measuring and evaluating the effectiveness of and compliance with District policies, procedures, and other internal controls, as directed by the Executive Director.

**Financial and Accounting Objectives**

District financial information is available through the Comprehensive Annual Financial Report (CAFR), Budget Report, Grantor Agency Reports, and supplementary information.

District financial reports are prepared in compliance with GAAP to fulfill the District’s duty to be publicly accountable while allowing users to assess that accountability.

District financial reports are designed to assist users in evaluating the District’s ongoing operations and assessing the level of services provided and our ability to meet obligations as they become due.

The annual audit performed by independent certified public accountants ensures compliance with the District’s financial objectives. In addition to meeting the requirements as set forth in the State of Illinois Compiled Statutes, Chapter 70, 2605/5.12, the audit will also ensure compliance with the Federal Single Audit Act regulations in OMB Circular A-133.

The Internal Auditing Section assists the Executive Director by furnishing independent and objective analyses, appraisals, and recommendations for improvement concerning the activities reviewed.

On July 13, 2006, the Board adopted a policy to address GASB Pronouncement #45, requiring reporting of the future liability for maintaining OPEB, primarily retiree health insurance benefits. An irrevocable trust was established to fund the future liability

## *Financial Policies, Objectives, and Accomplishments*

with the following operating parameters. On October 2, 2014, the funding policy was amended by the Board with the following parameters:

- 100 percent maximum funding level;
- 12 year funding period;
- \$5 million funding in each of the twelve years 2015 through 2026, with no further advance funding contributions required after 2026. Beginning in 2027, cash to be withdrawn from the Trust to fund claims and insurance premiums will be determined by the plan's actuary with the funding percentage to be maintained at 100 percent for all future years.

On November 19, 2009, the Board adopted the OPEB Trust Investment Policy, which was subsequently amended on December 19, 2013, and states that investments shall be made with judgment and care, with prudence, discretion, and intelligence exercised in the management of the Trust assets. The Trust's investment asset allocation and target percentages were amended, as follows:

Asset Class	Fund Asset Mix		
	Minimum	Normal	Maximum
Domestic Equities	25.0%	30.0%	35.0%
Developed International Equities	12.0%	15.0%	18.0%
Fixed Income Securities (Bonds)	40.0%	45.0%	50.0%
Global Balance Portfolio	7.5%	10.0%	12.5%
Cash/Cash Equivalents (Money Market)	0.0%	1.0%	100.0%

The District has adopted the following fund balance policy in conformity with GASB Pronouncement #54, *Fund Balance Reporting and Governmental Fund Type Definitions*:

- *Committed Fund Balances* – The District's Board shall establish, modify, or rescind a fund balance commitment by formal action of the Board;
- *Assigned Fund Balances* – The Executive Director may assign amounts of fund balances to a specific purpose;
- *Accounting Policies of Fund Balances* – The General Corporate Fund is a combination of the Corporate, Working Cash, and Reserve Claim Funds. In the General Corporate Fund, the District considers restricted amounts to have been spent first when an expenditure is incurred for purposes for which both restricted and unrestricted fund balance is available, followed by committed amounts, and then assigned amounts. Unassigned amounts are used only after the other categories of fund balance have been fully utilized. In governmental funds, other than the General Corporate Fund, the District considers restricted amounts to have been spent last. When an expenditure is incurred for purposes for which both restricted and unrestricted fund balance is available, the District will first utilize assigned amounts, followed by committed amounts, and then restricted amounts.

Initiatives are being considered to improve the policies and procedures for the management of capital assets. The process of determining more realistic estimated useful lives and dollar thresholds for capital assets is being examined. Also, an enhanced policy is essential to ensure all bond compliance and regulatory reporting requirements are properly fulfilled.

For the year ended December 31, 2015, the Board adopted a policy to implement GASB 68. The following categories are recognized and reported in the CAFR to better illustrate the pension liability to the District:

- Net pension liability
- Annual pension expense

### **Financial Accomplishments**

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to the District for its CAFR for the year ended December 31, 2015, and for the MWRD Retiree Health Care Trust for the year ended December 31, 2015. This is the 41st consecutive year and 9th consecutive year that the District has received these prestigious awards, respectively. The CAFRs are available on the Internet at [www.mwrdd.org](http://www.mwrdd.org). The external audit of the District's 2015 financial statements, completed on May 9, 2016, includes an unmodified opinion. In 2016, the Internal Audit Section completed 13 audits. For 2017, approximately 10 audits are scheduled for completion.

## *Policy Development and The Budget Process*

### **Policy Development and the Budget Process**

Policy development for the District, performed on both the legislative and executive level, is ongoing and integrally related to the budget process.

#### **Planning and Policy Development Activities of the Board of Commissioners**

The District’s Board is the organization’s legislative branch wherein planning is done through a standing committee structure, whereby committee chairpersons and vice-chairpersons are elected by the Board concurrent with the biannual election of officers. With the exception of the Committee on Finance, whose chair is specifically referred to in the District’s enabling legislation, the focus of each committee is determined by the Board itself. The members of these committees are made up of fellow commissioners. The Board’s committees follow:

Affirmative Action	Budget and Employment	Engineering
Ethics	Federal Legislation	Finance
Industrial Waste and Water Pollution	Information and Technology	Judiciary
Labor and Industrial Relations	Maintenance and Operations	Monitoring and Research
Municipalities	Procurement	Public Information and Education
Pension, Human Resources, and Civil Service	Public Health and Welfare	Real Estate Development
State Legislation and Rules	Stormwater Management	

These standing committees develop plans and formulate policies that are then brought before the entire Board for formal adoption. These plans and policies provide direction to both the Board itself and the staff. On critical issues, and where broad discussion is warranted for future consensus building, the committee chairperson periodically calls “study sessions” inviting public testimony and discussion.

District Commissioners participate in regional planning and policy development as members of commissions, associations, and steering committees. By law, the Chairman of Finance serves on the Cook County Public Building Commission. The District has formally designated Commissioner representatives on the Chicago Metropolitan Agency for Planning and Fulton County Steering Committee. District participation in these regional planning committees ensures regional coordination, cooperation, and communication for policy development and planning.

The Board periodically recruits pro bono ad hoc Blue Ribbon Committees made up of government and business leaders to solicit input on issues of either regional interest or where expertise in an area outside the District’s primary functions is required.

Formal adoption of District policies is enacted at regularly scheduled Board meetings (semi-monthly) or at special Board meetings focused on a specific issue.

#### **Strategic Business Plan**

Policy decisions and budgetary priorities are guided by the District’s Strategic Business Plan, which is updated annually after a public meeting that kicks off the budget season. 2017 is the third year of the current five-year plan, with the vision statement *Recovering Resources, Transforming Water*. The strategic plan sets out values, mission, a vision statement, and goals and strategies that guide decision making and is used throughout the year to measure results and communicate progress to the Board of Commissioners and staff. It serves as a guiding document until replaced by a new strategic business plan.

#### **Planning Activities by Staff**

The Executive Director serves as the District’s Chief Executive Officer and is responsible for the day-to-day administration of the organization. It is through the direction and authority of this office that compliance with the laws governing the agency and the policies established by the Board is assured. Under the direction of these laws and policies, staff planning takes place on various organizational platforms. Through organizational planning units, steering committees, task forces, and general managerial planning, District staff establishes organizational goals, objectives, and priorities. Planning takes place on both an interdepartmental and intradepartmental basis. Each committee or task force has representation that crosses departmental lines to ensure corporate agreement.

## *Policy Development and The Budget Process*

### **Committees and Task Forces Planning**

Other formal planning is accomplished through the utilization of committees and task forces. Committees and task forces meet monthly with the exception of the Board of Standardization, which meets quarterly or as needed. A list of the various staff committees and task forces is as follows:

Inventory Review Board	Biosolids Task Force	Non-Core Business Project Committee
Board of Standardization	Injury Task Force	Records Management Committee
Natural Gas Committee	Audit Committee	Operations Committee

Each of these planning groups is delegated the responsibility to serve as District-wide planners for specific organizational needs. The Operations Committee includes subcommittees with designated assignments and purpose. These subcommittees work independently and then report their recommendations to the committee of the whole.

### **The Budget Process and Budget Procedures**

The Management and Budget Section of General Administration, staff to the Executive Director, prepares the Annual Budget and five-year financial plan, including coordinating and consolidating the capital and maintenance plans for the upcoming and future years. Revenue projections and debt service requirements are examined along with the financial feasibility of capital projects in light of external and self-imposed financial constraints. The end product of this process is the annual appropriation ordinance and a Five-Year Financial Forecast.

The Five-Year Financial Forecast is prepared prior to the Executive Director's Budget Recommendations and reflects the best estimates of revenues, fund equity, and appropriation needs available at the time. The forecast is presented to the Executive Director. Subject to his review and approval, it is then included in the Budget. The projections are a tool designed to aid the District in planning and controlling its financial position over a longer range than the Annual Budget. It contributes to making the budget a comprehensive financial plan of District operations, past, present, and future. It summarizes the tax impact of the District's strategic goals and objectives.

All participants in the planning process are made aware of the District's budget process and cycle. The budget calendar is relatively the same from year-to-year and is distributed to the Board and staff in the first quarter of the preceding budget year. Correspondingly, planning groups develop plans, schedules, and detailed justification for personnel contractual services, materials and supplies, equipment, and capital projects to comply with the annual budgeting process and cycle. Existing facilities' plans, historical expenditures, cash-flow projections, and long-term forecasts provide valuable guidelines as to the availability of resources for the upcoming budget development. These guidelines both facilitate the development of the budget and allow for meaningful debate during the budget review process as to priorities and organizational goals for the budget year, as well as future years. An outline of the Annual Budget process and procedures follows. The Strategic Business Plan guides the development of the Budget and the Five-Year Financial Forecast.

## *Policy Development and The Budget Process*

The fiscal year of the District begins on January 1 and ends on December 31.

1. After the first half of the fiscal year, the Budget Office holds a meeting with departmental budget representatives to discuss policy and procedures for budget preparation that begins in July. Instructions are distributed to departments, together with guidelines from the Executive Director, which indicate the direction the Budget should follow for the coming fiscal year. The basic forms are returned to the Budget Office and a general summary is prepared for the Executive Director, who conducts departmental hearings in September.
2. A revenue meeting is conducted by the Executive Director, Administrative Services Officer, and Budget Officer, along with those departments responsible for revenue items. Available resources used to finance the Budget are analyzed at this meeting.
3. It is usual to have two rounds of departmental hearings. When departmental estimates are approved and final decisions are made, a Budget Message is prepared and the proposals of the Executive Director become the initial budget document. After departmental requests are finalized, the Executive Director's Budget Recommendations are published within 15 days. The Executive Director's Budget Recommendations are published and presented to the Board in October. At all times, the Budget figures are balanced between revenues and expenditures.
4. The Board holds a public hearing on the Capital Improvement Program in October.
5. The Board's Committee on Budget and Employment holds public meetings with the Executive Director and department heads regarding the Executive Director's proposals.
6. At the conclusion of these hearings, the Committee on Budget and Employment recommends the preparation of a second document, a supplement to the Executive Director's Budget Recommendations called the "Tentative Budget," which incorporates changes approved at the hearings. Once printed, this is placed on public display, along with the Executive Director's Budget Recommendations, for a minimum of 10 days. An advertisement is published in a general circulation newspaper announcing the availability of the Tentative Budget for inspection at the main office of the District, and specifying the time and date of the public hearing.
7. At least one public hearing is held between 10 and 20 days after the Budget has been made available for public inspection. All interested individuals and groups are invited to participate.
8. After the public hearing, the Committee on Budget and Employment presents the Tentative Budget, which includes revisions and the approved Appropriation and Tax Levy Ordinances, to the Board for adoption. This action must take place before January 1.
9. The Budget, as adopted by the Board, can be amended once at the next Regular Meeting of the Board. No amendment, however, can be requested before a minimum of five days after the Budget has been adopted. Amendments for contracts and/or services not received before December 31 must be reappropriated in the new Budget and are included through this amendment process.
10. The final budget document "As Adopted and Amended" is produced, and an abbreviated version, known as the "short form" is published in a newspaper of general circulation before January 20 of the fiscal year.
11. Budget implementation begins on January 1. The Finance Department and Budget Office provide control of appropriations and ensure that all expenditures are made in accordance with budget specifications. The manual entitled "Budget Code Book" is published in conformance with the Adopted Budget and is used to administer, control, and account for the Budget.
12. Supplemental appropriations can be made for the appropriation of revenues from federal or state grants, loans, bond issues, and emergencies. The Executive Director is authorized to transfer appropriations between line items within an object class of expenditure within a department. After March 1 of each fiscal year, transfers of appropriations between objects of expenditures or between departments must be presented for approval to the Board in accordance with applicable statutes.
13. The Board can authorize, by a two-thirds majority, the transfer of accumulated investment income between funds and the transfer of assets among the Working Cash Funds.





CHICAGO, November 17, 2016

**REPORT OF COMMITTEE ON BUDGET AND EMPLOYMENT**

Presented to the Board of Commissioners of the  
Metropolitan Water Reclamation District of Greater Chicago

*To the Honorable, President and Members of the Board of  
Commissioners of the Metropolitan Water Reclamation District  
of Greater Chicago*

LADIES AND GENTLEMEN:

Your Chairman of the Committee on Budget and Employment respectfully reports that she has under consideration the resources of the Metropolitan Water Reclamation District of Greater Chicago and its estimated receipts, together with the sum of money required to be appropriated to defray the necessary expenses and liabilities of the Metropolitan Water Reclamation District of Greater Chicago for the fiscal year beginning January 1, 2017 and ending December 31, 2017, as prepared and submitted by the Executive Director in the document entitled "2017 Budget – Executive Director's Recommendations – October 11, 2016," which document is incorporated by reference herein, made a part hereof and attached hereto.

Your Chairman of the Committee on Budget and Employment has duly considered and reviewed the above budget estimates and revised and amended the same, in certain particulars, which estimates, as amended, were and are approved by your Chairman of the Committee on Budget and Employment and are submitted herewith in final revised form, setting forth the details of the estimates of the resources, revenues and expenditures for the future consideration, review, adoption, and passage by the Board of Commissioners. Your Chairman of the Committee on Budget and Employment further reports that in the consideration and revision of the estimated resources and departmental expenditures, it has received, considered, and transmits them herewith for the guidance of the Board of Commissioners and for public information. The budget estimates are prepared and made up of the following three parts:

- a. General Budget summary setting forth the aggregate figures of the budget in such manner as to show the balanced relations between the total proposed expenditures and the total anticipated revenues and other means of financing the budget for the fiscal year ending December 31, 2017, contrasted with the actual receipts and disbursement figures for the preceding year and the estimated figures for the current year. The budget of the Corporate Fund, Construction Fund, Capital Improvements Bond Fund, and Stormwater Management Fund has been planned and balanced with receipts on an actual cash basis and expenditures on an accrual basis pursuant to Statutes,
- b. The several estimates, statements and other detail, and the complete financial plan for the budget year, set forth as required in Section 5.3 of the Metropolitan Water Reclamation District Act (Chap. 70, Sec. 2605/5.3, Illinois Compiled Statutes),

- c. Complete draft of the Appropriation Ordinances and Tax Levy Ordinances required to give legal sanction to the appropriation when approved and adopted by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago.

Your Chairman of the Committee on Budget and Employment further reports that she has prepared and herewith transmits a draft of Ordinances to be adopted and passed by the Board of Commissioners entitled:

"Annual Appropriation Ordinance of the Metropolitan Water Reclamation District of Greater Chicago for the fiscal year beginning January 1, 2017 and ending December 31, 2017";

and

"An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Metropolitan Water Reclamation District Retirement Fund and Corporate Fund";

and

"An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Construction Fund";

and

"An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, to pay the interest on outstanding Bonds and to discharge the principal thereof";

and

"An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago

as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Reserve Claim Fund”;

and

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Stormwater Management Fund”;

Your Chairman of the Committee on Budget and Employment also recommends the passage of the following Orders:

*Ordered:* That the foregoing report and budget estimates as transmitted by the Chairman of the Committee on Budget and Employment, and the following Ordinances submitted with said report, which have not been adopted be and the same are hereby received for the consideration, adoption and passage by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

“Annual Appropriation Ordinance of the Metropolitan Water Reclamation District of Greater Chicago for the fiscal year beginning January 1, 2017 and ending December 31, 2017”;

and

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017 upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Metropolitan Water Reclamation District Retirement Fund and Corporate Fund”;

and

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Construction Fund”;

and

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, to pay the interest on outstanding Bonds and to discharge the principal thereof”;

and

Approved as to Form and Legality:

*Helen Shields-Wright*

Head Assistant Attorney

*Ronald M. Hill*

General Counsel

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Reserve Claim Fund”;

and

“An Ordinance for the Levy of Taxes for the fiscal year beginning January 1, 2017 and ending December 31, 2017, upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the purpose of providing revenues for the Stormwater Management Fund”;

and it is further

*Ordered:* That upon the adoption and passage of the Appropriation Ordinance and the above mentioned Tax Levy Ordinances, the report of your Chairman of the Committee on Budget and Employment, together with the complete budget and statements of the assets, the estimated resources and the revenues of the Metropolitan Water Reclamation District of Greater Chicago for the fiscal year 2017 and the Ordinances listed above which are required to give legal sanction to the appropriations when adopted and passed by the Board of Commissioners, the vote shall be entered in the Proceedings of the Board of Commissioners and the ordinances, report, budget and statements shall be printed in book form for easy reference and examination, and for controlling the expenditures by the Board of Commissioners during the fiscal year beginning January 1, 2017 and ending December 31, 2017;

and it is further

*Ordered:* That the report of your Chairman of the Committee on Budget and Employment and the Appropriation Ordinances of the Metropolitan Water Reclamation District of Greater Chicago for the year 2017 and the Tax Levy Ordinances listed above which are required to give legal sanction to the appropriation when adopted and passed by the Board of Commissioners together with the summary of estimated revenues and estimated expenditures for the year beginning January 1, 2017 and ending December 31, 2017, shall be published once before January 20, 2017, in a newspaper having general circulation within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago;

and it is further

*Ordered:* That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby authorized and directed to carry out the aforementioned orders and to incur the necessary expenses thereof.

Respectfully submitted,

*Kari K. Stule*

Chairman,  
Committee on Budget and Employment

**ORDINANCE NUMBER O16-011A**

**ANNUAL APPROPRIATION ORDINANCE OF THE  
METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2017  
AND ENDING DECEMBER 31, 2017**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* That this Ordinance be and the same is hereby termed the “Annual Appropriation Ordinance of the Metropolitan Water Reclamation District of Greater Chicago for the fiscal year beginning January 1, 2017 and ending December 31, 2017.”

*Section 2.* That the amounts hereinafter set forth or so much thereof as may be authorized by law and as may be needed, and not exceeding the aggregate sum allocated to and expendable by each department or principal division, be and the same are hereby appropriated for the payment of: (a) interest coupons on bonds; (b) sinking fund requirements for the payment of the principal of said bonds; (c) the Metropolitan Water Reclamation District Retirement Fund; (d) Construction Fund purposes; (e) Capital Improvements Bond Fund purposes; (f) Reserve Claim Fund; (g) Stormwater Management Fund purposes; and (h) all other corporate purposes of the Metropolitan Water Reclamation District of Greater Chicago during the fiscal year beginning January 1, 2017 and ending December 31, 2017.

*Section 3.* That for the purposes of accounting and expenditure control, the budgetary accounts set forth under the recital of estimated resources of the Metropolitan Water Reclamation District of Greater Chicago and budgetary accounts and code designations set forth in this Ordinance, shall be the official code designations of the Metropolitan Water Reclamation District of Greater Chicago and that the manual of Classification of Budgetary Code Accounts issued by General Administration of the Metropolitan Water Reclamation District of Greater Chicago, as revised, shall be in conformity therewith.

*Section 4.* That the Clerk and the other Heads of Departments of the Metropolitan Water Reclamation District of Greater Chicago shall use the aforesaid official code designations in administering the Appropriation Ordinance and in accounting for expenditures authorized herein.

*Section 5.* That wherever an appropriation is made under the classification “Personal Services,” “Contractual Services,” “Materials and Supplies,” “Machinery and Equipment,” “Capital Improvements,” “Land” or “Fixed and other Charges,” it is supported by a schedule of Line Items.

The Executive Director is authorized to transfer appropriations between line items within an object class of expenditure within a department. Transfers of appropriations between objects of expenditure or between departments must

be presented for approval to the Board of Commissioners in accordance with applicable statutes.

All expenditures against such appropriations shall be made in accordance with such supporting Line Item Schedules, and no voucher shall be approved by the Clerk for a sum exceeding the amount shown in said schedules; that the titles and the compensations appearing in the Personal Services supporting schedules shall be construed to be the official titles and maximum compensation for the same.

(a) Included in the appropriation for Total Personal Services is Account Number 601010 “Salaries of Regular Employees” that includes District pickup of employees’ contributions to the Pension Fund and in applicable departments, divisions or sections is Account Number 601060 “Compensation Plan Adjustments” provided for the purpose of implementing the Compensation Plan and associated salary and pay grade schedules for classified employees and exempt secretaries as adopted by the Board of Commissioners. The amount set up under Account Number 601060 “Compensation Plan Adjustments” include (1) the adjustment of salaries for employees eligible to receive step increases based on the prescribed standards of service and performance, (2) changes in Labor and Trades Wage Schedule Classifications as authorized by the Board of Commissioners, and (3) payments to eligible employees for incentive pay for unused sick leave, retirements, severance, termination, and unused overtime and/or vacation pay as authorized by the Board of Commissioners.

(b) The symbol “#” or crosshatch followed by a number, when used in the budget document, means the following:

#1. After a title, signifies that the incumbent will retain the title until he or she vacates the position and then the position will be dropped.

#2. After a title, signifies that when the position is vacated, the person filling the vacancy will receive the title within the parentheses. It can also indicate that while a grade level for a class title has been lowered, the incumbent in the position will be retained at the current grade level. This is indicated by a notation of the new grade level in parentheses following the title.

#4. After a title, signifies that while a class title has been assigned to the Technical, Administrative and Managerial (TAM) salary schedule, the incumbent in the position will be compensated under the previously assigned Professional and Managerial (PM) or General Service (GS) salary schedule. When the position is vacated, the person filling the vacancy by

promotion or new appointment will be compensated under the TAM salary schedule.

*Section 6.* That amounts appropriated under classifications other than “Personal Services” to any department or division of the Metropolitan Water Reclamation District of Greater Chicago shall be expended under the following conditions:

(a) Insofar as practicable, all contracts for purchases and open market orders for purchases to be charged against such appropriation shall be based upon specifications which are definite and certain as to character and quality, and which conform to standard specifications for the various classes of Materials and Supplies, Machinery and Equipment already prescribed or hereafter to be prescribed by the Board of Standardization of the Metropolitan Water Reclamation District of Greater Chicago.

(b) The Clerk of the Metropolitan Water Reclamation District of Greater Chicago shall certify to the sufficiency of appropriations out of which such amounts due under contracts are to be paid.

(c) The Director of Procurement and Materials Management shall certify that the specifications for purchases of such Materials and Supplies, and Machinery and Equipment, for which standard specifications have been prescribed by the Board of Standardization of the Metropolitan Water Reclamation District of Greater Chicago, are in conformity with such standard specifications.

(d) All open market orders issued by any department or division for Materials and Supplies, and Machinery and Equipment, for which specifications shall have been prescribed by the Board of Standardization of the Metropolitan Water Reclamation District of Greater Chicago, shall contain a description of the goods ordered and insofar as practicable and feasible conform with such standard specifications.

(e) The Director of Procurement and Materials Management shall, in auditing claims for goods delivered on open market order, determine through inspection or otherwise, whether the goods delivered conform to such standard specifications.

(f) Every contract or purchase order involving amounts in excess of \$10,000.00 shall be signed by the Chairman of the Committee on Finance or other duly authorized officer of the Board of Commissioners, by the Executive Director, by the Clerk, and by the Director of Procurement and Materials Management of the Metropolitan Water Reclamation District of Greater Chicago.

The only exception to the above is for contracts and purchase orders for materials, supplies, and equipment for which the competitive bid threshold is \$25,000.00. These contracts and purchase orders only require the signature of the Director of Procurement and Materials Management of the Metropolitan Water Reclamation District of Greater Chicago.

(g) The Comptroller of the Metropolitan Water Reclamation District of Greater Chicago shall conduct audits of all expenditures. The Comptroller shall report the results

of such audit to the President and the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago.

*Section 7.* That no employee shall have the right to demand continuous employment and compensation by reason of the appropriation if it becomes necessary to lay an employee off due to lack of work or lack of funds.

*Section 8.* That the supporting schedules and statements including unpaid bills and the item objects and purposes are appropriated for as follows:

# SECTION II

## BUDGET AND FINANCIAL SUMMARIES, SCHEDULES, AND EXHIBITS

This section includes a broad overview of the 2017 Budget with comparisons to past years and the projection of future District needs.

It begins by asking two basic questions: Where Does the Money Come From? and Where Does the Money Go? Answers are presented graphically using a dollar bill to illustrate.

The comparison of budget and current year appropriations, tax levies, and tax rates by fund is one of the most comprehensive and most useful comparisons in the budget.

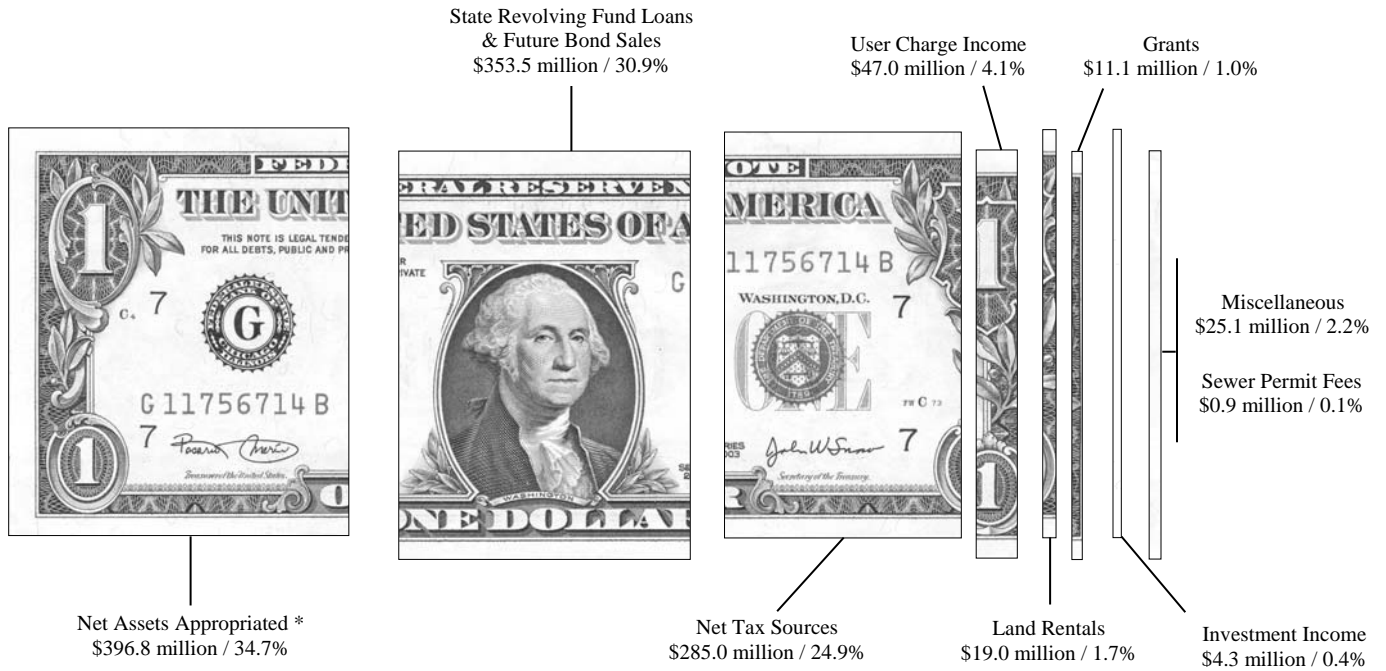
Continuing to look at the overall picture, this section presents a detailed view of the entire budget, organizing information in different ways so that the user can compare budget and current year appropriations by department, fund, object, and program. Allocation of personnel is also compared by year, department, and fund.

Having looked at the budget plan for 2017 and comparing it to previous years, this section also provides a projection of the future: the comprehensive Five-Year Financial Forecast for 2017-2021.

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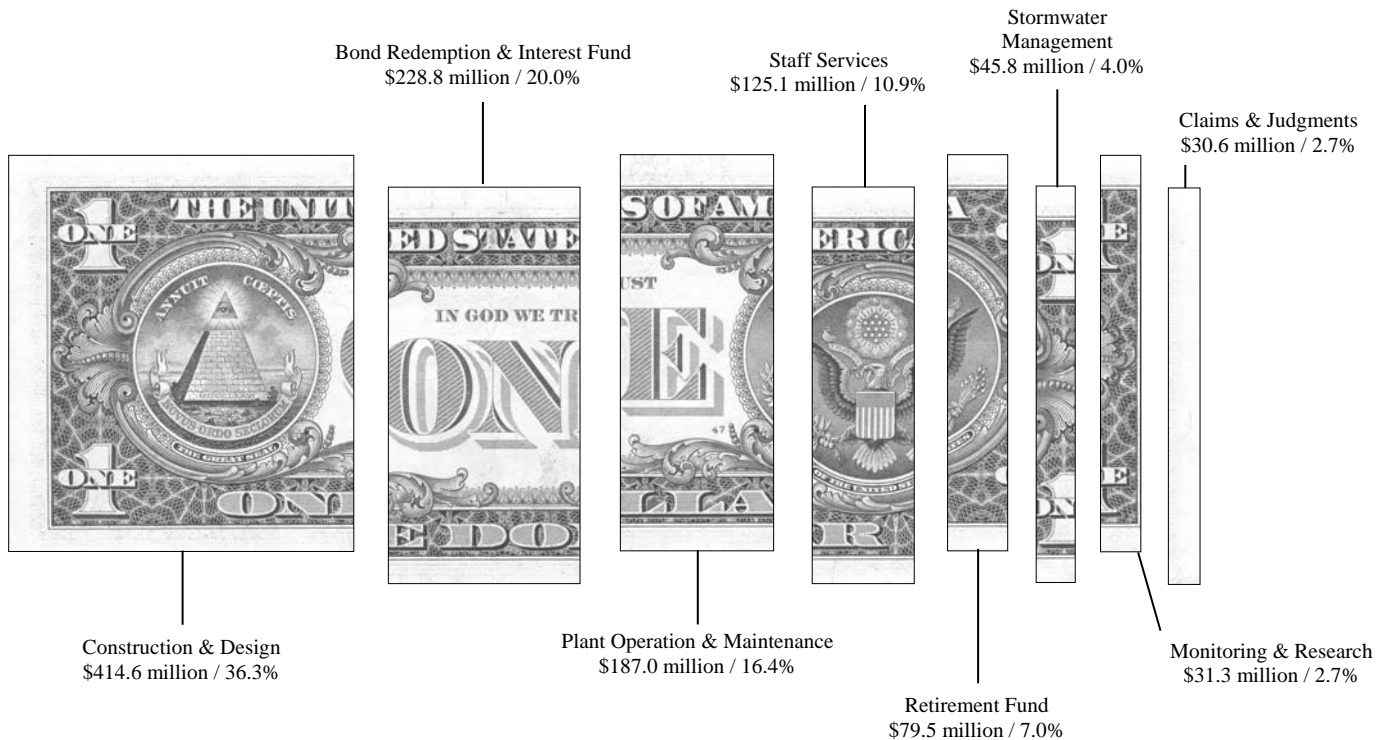


**WHERE THE MONEY COMES FROM: \$1,142.7 MILLION**



\* \$396.8 of the \$485.9 Net Assets Appropriable detailed in the analysis on the next page will be appropriated as revenue for 2017 (excludes Capital Improvements Bond Fund).

**WHERE THE MONEY GOES: \$1,142.7 MILLION**



**SUMMARY OF NET ASSETS APPROPRIABLE**

at January 1, 2017

(In Millions)

CURRENT ASSETS	FUND								TOTAL
	CORPORATE	CAPITAL IMPROVEMENTS BOND	CONSTRUCTION	STORMWATER MANAGEMENT	RETIREMENT	BOND REDEMPTION & INTEREST	RESERVE CLAIM		
Cash & Investments	\$ 102.8	\$ 138.4	\$ 8.7	\$ 7.2	\$ -	\$ 110.3	\$ 25.2	\$ -	\$ 392.6
Restricted Cash	-	-	-	-	-	-	-	-	-
Deposit with Escrow Agent	-	-	-	-	-	-	-	-	-
Taxes Receivable	218.8	-	16.1	33.3	62.9	222.9	5.6	-	559.6
Replacement Tax	17.7	-	1.1	-	16.6	-	-	-	35.4
Grants	-	1.0	-	-	-	-	-	-	1.0
State Revolving Fund									
Loans Receivable	-	150.0	-	-	-	-	-	-	150.0
Due from Other Funds	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 339.3</b>	<b>\$ 289.4</b>	<b>\$ 25.9</b>	<b>\$ 40.5</b>	<b>\$ 79.5</b>	<b>\$ 333.2</b>	<b>\$ 30.8</b>	<b>\$ -</b>	<b>\$ 1,138.6</b>
<b>CURRENT LIABILITIES, DESIGNATIONS AND RESTRICTIONS</b>									
Unpaid Bills and									
Contingent Liabilities	\$ 23.4	\$ 907.2	\$ 3.5	\$ 7.0	\$ -	\$ -	\$ 0.4	\$ -	\$ 941.5
Due to Working Cash Funds	180.0	-	12.0	26.5	-	-	-	-	218.5
Liabilities for Restricted Assets	-	-	-	-	-	-	-	-	-
Principal and Interest	-	-	-	-	-	110.6	-	-	110.6
<b>Total</b>	<b>\$ 203.4</b>	<b>\$ 907.2</b>	<b>\$ 15.5</b>	<b>\$ 33.5</b>	<b>\$ -</b>	<b>\$ 110.6</b>	<b>\$ 0.4</b>	<b>\$ -</b>	<b>\$ 1,270.6</b>
<b>*Net Assets Appropriable</b>	<b>\$ 135.9</b>	<b>\$ (617.8)</b>	<b>\$ 10.4</b>	<b>\$ 7.0</b>	<b>\$ 79.5</b>	<b>\$ 222.6</b>	<b>\$ 30.4</b>	<b>\$ -</b>	<b>\$ (132.0)</b>
Budget Reserve	\$ (89.1)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (89.1)
<b>Net Assets Appropriated</b>	<b>\$ 46.8</b>	<b>\$ (617.8)</b>	<b>\$ 10.4</b>	<b>\$ 7.0</b>	<b>\$ 79.5</b>	<b>\$ 222.6</b>	<b>\$ 30.4</b>	<b>\$ -</b>	<b>\$ (221.1)</b>
<b>Equity Transfer</b>	<b>\$ 6.0</b>	<b>\$ (13.0)</b>	<b>\$ 7.0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5.8</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5.8</b>

\* Net Assets Appropriable = Current Assets - Current Liabilities

Note: Amounts are rounded.

**ESTIMATED TAX RATE**

Estimated tax rate to be levied for each \$100.00 of assessed valuation as equalized to finance the appropriations of the Metropolitan Water Reclamation District of Greater Chicago is as follows:

Upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017.

Gross Corporate Fund.....	16.20 ¢
Construction Fund.....	1.23
Stormwater Management Fund.....	2.96
Retirement Fund.....	5.31
Reserve Claim Fund.....	<u>0.43</u>

Subtotal..... 26.13 ¢

Bond Redemption & Interest Fund:

Capital Improvement Bonds - Series:

August 2009 Limited Tax.....	2.57 ¢
July 2011 Limited Tax Series B.....	3.00
July 2011 Unlimited Tax Series C.....	0.29
December 2014 Unlimited Tax Series A.....	0.37
December 2014 StormwaterAlt Rev Unlimited Tax Series B.....	0.25
December 2014 Limited Tax Series C.....	0.23
July 2016 Stormwater Alt Rev Unlimited Tax Series E.....	0.19
July 2016 Unlimited Tax Series C.....	0.11
July 2016 Limited Tax Series D.....	0.07
July 2016 Qualified Energy Conservation Series F.....	0.01

State Revolving Fund Bonds - Series:

1994 R,V; 1997 AA-DD; 2001 A-C; 2004 A-H; 2007 A-D; 2009 A-I; 2012 A-F, H-L,N, O; 2014 A, B, J .....	5.26 ¢
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Refunding Bonds - Series:

March 2007 Unlimited Tax A.....	1.92 ¢
March 2007 Unlimited Tax B.....	0.36
March 2007 Limited Tax C.....	0.40
December 2014 Limited Tax Series D.....	0.67
July 2016 Unlimited Tax Series A.....	1.05
July 2016 Limited Tax Series B.....	<u>0.15</u>

Subtotal Bond Redemption & Interest Fund..... 16.90 ¢

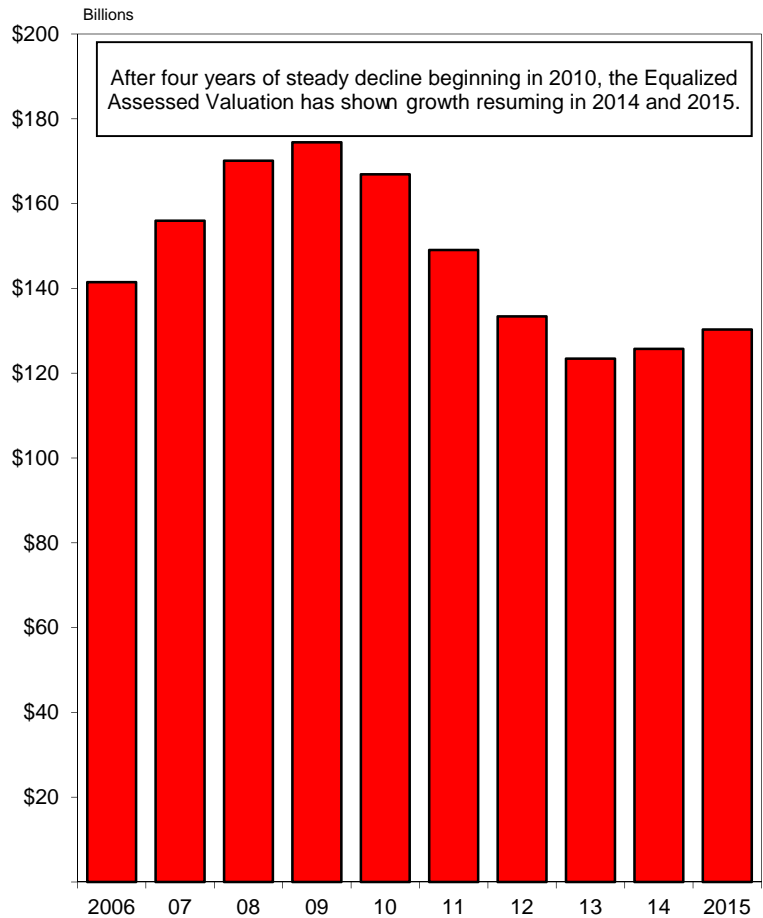
**TOTAL ESTIMATED TAX RATE - 2017..... 43.03 ¢**

### TAXABLE PROPERTY WITHIN THE DISTRICT (Equalized Assessed Valuation)

The equalized assessed property valuation (EAV) of the Metropolitan Water Reclamation District increased 3.63% from 2014 to 2015, showing the second year of growth after four years of decline. The boundaries of the District encompass 91 percent of the area of Cook County. The District is located in one of the strongest and most economically diverse geographical areas of the country. The growth in commercial, industrial, and residential sectors in both downtown Chicago and the suburbs contributes to the strong base and the growth in the value of properties located within the District. The Cook County Assessor is responsible for all taxable real property within Cook County except for railroad property and pollution control facilities, which are assessed directly by the State of Illinois.

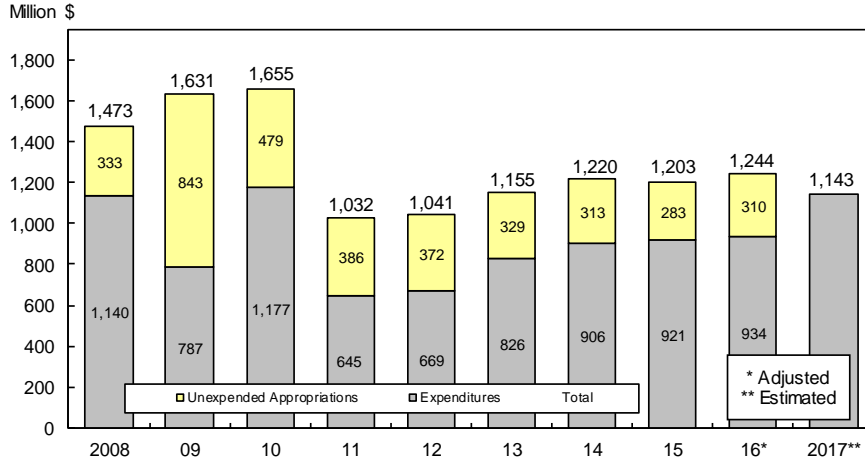
The equalized assessed valuation of real estate property is determined in Cook County based on market values of real estate, reduced by a classification factor determined by property use, and then multiplied by the State of Illinois equalization factor. The statutory objective is to value property at 33 1/3 percent of estimated fair market value.

The equalized assessed property valuation of the District is very important due to the primary reliance of the District on the property tax to fund current operations and future capital programs.



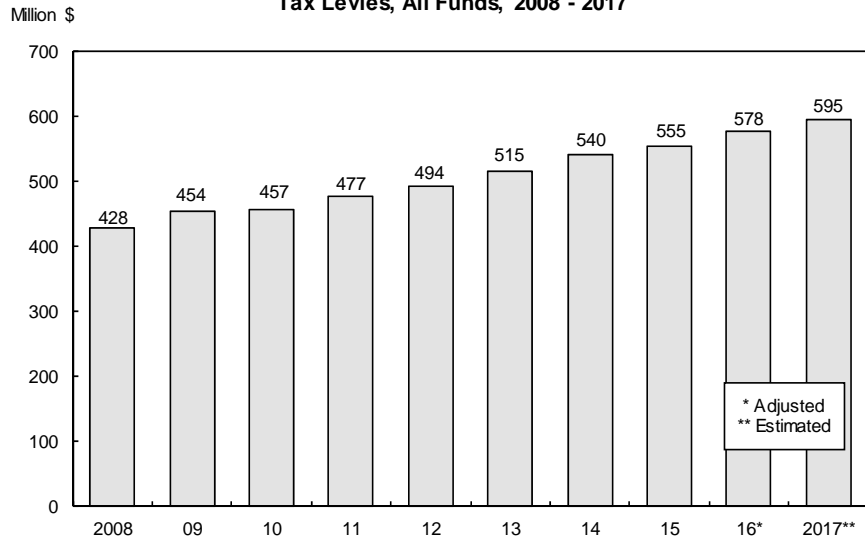
Year	Real Property	Railroad Property and Pollution Control Facilities	Total
2006	\$141.31 billion	\$156.27 million	\$141.47 billion
2007	155.80 billion	172.25 million	155.97 billion
2008	169.91 billion	186.24 million	170.10 billion
2009	174.26 billion	212.23 million	174.47 billion
2010	166.66 billion	256.49 million	166.92 billion
2011	148.77 billion	275.01 million	149.05 billion
2012	133.11 billion	286.93 million	133.40 billion
2013	123.11 billion	311.53 million	123.42 billion
2014	125.43 billion	308.36 million	125.74 billion
2015	129.96 billion	344.38 million	130.30 billion

**Appropriations & Expenditures, 2008 - 2017**

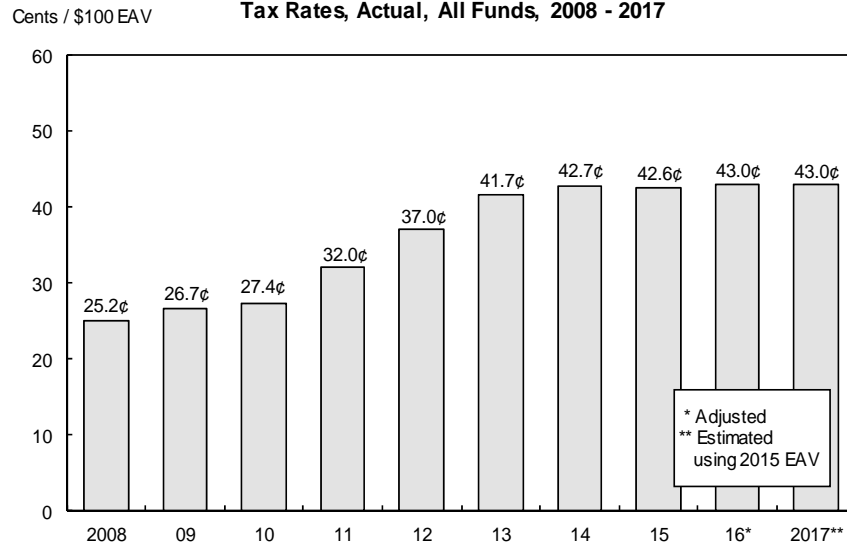


Note: Amounts are rounded.

**Tax Levies, All Funds, 2008 - 2017**



**Tax Rates, Actual, All Funds, 2008 - 2017**



## COMPARATIVE STATEMENT OF APPROPRIATIONS AND TAX LEVIES 2017-2015 ALL FUNDS

APPROPRIATIONS	2017 **	2016 AS PASSED	2016 AS ADJUSTED *	2015 ACTUAL
<b>FUND</b>				
Corporate Fund	\$ 368,925,800	\$ 366,260,700	\$ 366,260,700	\$ 358,995,400
Construction Fund	34,450,400	36,614,400	36,614,400	37,910,700
Capital Improvements Bond Fund ***	354,625,600	483,764,800	483,764,800	453,072,500
Stormwater Management Fund	45,800,100	40,500,800	40,500,800	46,588,800
Retirement Fund	79,505,000	70,772,000	70,772,000	61,654,000
Reserve Claim Fund	30,617,100	30,175,900	30,175,900	30,700,000
Bond Redemption & Interest Fund	228,825,813	216,047,130	216,047,130	214,525,801
<b>TOTAL</b>	<b>\$ 1,142,749,813</b>	<b>\$ 1,244,135,730</b>	<b>\$ 1,244,135,730</b>	<b>\$ 1,203,447,201</b>
<b>LEVIES</b>				
Corporate Fund	\$ 223,946,065	\$ 226,109,300	\$ 226,109,300	\$ 227,659,785
Construction Fund	17,000,000	16,600,000	13,278,297	15,196,952
Stormwater Management Fund	40,856,008	34,250,000	34,250,000	24,050,000
Retirement Fund	73,438,135	65,161,200	65,161,200	58,004,000
Reserve Claim Fund	5,900,000	5,800,000	5,800,000	5,700,000
Subtotal	\$ 361,140,208	\$ 347,920,500	\$ 344,598,797	\$ 330,610,737
Bond Redemption & Interest Fund:				
Capital Improvement Bonds - Series:				
July 2006 Limited Tax	\$ -	\$ -	\$ -	\$ 16,469,690
July 2016 Q E C B	165,804	-	165,805	-
August 2009 Limited Tax	35,564,767	35,564,767	35,564,767	35,564,767
July 2011 Limited Tax Series A	41,406,315	20,230,925	20,230,925	13,894,139
July 2011 Limited Tax Series B	-	-	-	5,646,431
July 2011 Unlimited Tax Series C	3,981,898	7,622,520	7,622,520	13,205,421
2014 Unlimited Tax Series A	5,181,348	5,181,347	5,181,347	5,181,347
2014 Alt Rev Unlimited Tax Series B ****	3,389,171	3,387,824	3,387,824	3,391,347
Alternate Revenue Abatement ****	-	-	-	(3,391,347)
December 2014 Limited Tax Series C	3,240,156	15,540,933	15,540,933	5,052,021
2016 Alt Rev Unlimited Tax Series E ****	2,590,674	-	2,590,674	-
June 2016 Unlimited Tax Series C	1,554,405	-	1,554,404	-
June 2016 Limited Tax Series D	1,036,270	-	1,036,269	-
State Revolving Fund Bonds - Series: Various	72,765,937	70,482,161	72,078,023	69,284,259
Refunding Bonds - Series:				
May 2006 Unlimited Tax	-	17,958,549	-	17,958,550
May 2006 Limited Tax	-	2,631,607	-	2,631,607
March 2007 Unlimited Tax A	26,509,845	25,279,534	25,279,534	29,061,140
March 2007 Unlimited Tax B	4,996,749	4,996,749	4,996,749	4,996,749
March 2007 Limited Tax C	5,541,607	5,541,606	5,541,607	5,541,607
December 2014 Limited Tax Series D	9,264,767	15,494,041	15,494,042	-
June 2016 Unlimited Tax Series A	14,555,959	-	14,555,959	-
June 2016 Limited Tax Series B	2,141,451	-	2,141,451	-
Subtotal Bond Redemption & Interest Fund	\$ 233,887,123	\$ 229,912,563	\$ 232,962,833	\$ 224,487,728
<b>TOTAL</b>	<b>\$ 595,027,331</b>	<b>\$ 577,833,063</b>	<b>\$ 577,561,630</b>	<b>\$ 555,098,465</b>
Abatement after the budget year ****	(5,979,845)		(5,978,498)	
<b>Total (after planned abatement)</b>	<b>\$ 589,047,486</b>		<b>\$ 571,583,132</b>	

NOTES: \* As Adjusted reflects the 2015 Equalized Assessed Valuation (EAV) (\$130,304,803,798) estimated to increase 3.0 percent, plus any subsequent supplemental levies and/or appropriations.

\*\* 2017 reflects an estimated 3.0 percent increase in the EAV from the 2016 estimate.

\*\*\* Prior year obligations for the Capital Improvements Bond Fund are included in the Appropriation for Liabilities.

\*\*\*\* As part of the plan of financing, it is intended and anticipated that tax revenues deposited in the Stormwater Management Fund be transferred to the Bond Redemption & Interest Fund and used to abate taxes levied for this issue.

## COMPARATIVE STATEMENT OF TAX RATES 2017-2015 ALL FUNDS

Per \$100 in Equalized Assessed Valuation (EAV)

FUND		2017 **	2016 AS PASSED	2016 AS ADJUSTED *	2015 ACTUAL
	tax rate limit				
Corporate Fund	41 ¢	16.20 ¢	16.87 ¢	16.85 ¢	17.47 ¢
Construction Fund	10 ¢	1.23	1.24	0.99	1.17
Stormwater Management Fund	5 ¢	2.96	2.56	2.55	1.85
Retirement Fund		5.31	4.86	4.86	4.45
Reserve Claim Fund	½ ¢	0.43	0.43	0.43	0.44
Subtotal		26.13 ¢	25.96 ¢	25.68 ¢	25.38 ¢
Bond Redemption & Interest Fund:					
Capital Improvement Bonds - Series:					
July 2006 Limited Tax		- ¢	- ¢	- ¢	1.26 ¢
July 2016 Q E C B		0.01	-	0.01	-
August 2009 Limited Tax		2.57	2.65	2.65	2.73
July 2011 Limited Tax Series A		3.00	1.51	1.51	1.07
July 2011 Limited Tax Series B		-	-	-	0.43
July 2011 Unlimited Tax Series C		0.29	0.57	0.57	1.01
December 2014 Unlimited Tax Series A		0.37	0.39	0.39	0.40
2014 Alt Rev Unlimited Tax Series B ***		0.25	0.57	0.25	0.26
Alternate Revenue Abatement ***		-	-	-	(0.26)
December 2014 Limited Tax Series C		0.23	0.39	1.16	0.39
2016 Alt Rev Unlimited Tax Series E ***		0.19	-	0.19	-
June 2016 Unlimited Tax Series C		0.11	-	0.12	-
June 2016 Limited Tax Series D		0.07	-	0.08	-
State Revolving Fund Bonds - Series:					
Various		5.26	5.26	5.37	5.32
Refunding Bonds - Series:					
May 2006 Unlimited Tax		-	1.34	-	1.38
May 2006 Limited Tax		-	0.20	-	0.20
March 2007 Unlimited Tax Series A		1.92	1.89	1.88	2.23
March 2007 Unlimited Tax Series B		0.36	0.37	0.37	0.38
March 2007 Limited Tax Series C		0.40	0.41	0.41	0.43
December 2014 Limited Tax D		0.67	1.16	1.15	-
June 2016 Unlimited Tax Series A		1.05	-	1.08	-
June 2016 Limited Tax B		0.15	-	0.16	-
Subtotal Bond Redemption & Interest Fund		16.90 ¢	16.71 ¢	17.35 ¢	17.23 ¢
<b>TOTAL</b>		<b>43.03 ¢</b>	<b>42.67 ¢</b>	<b>43.03 ¢</b>	<b>42.61 ¢</b>

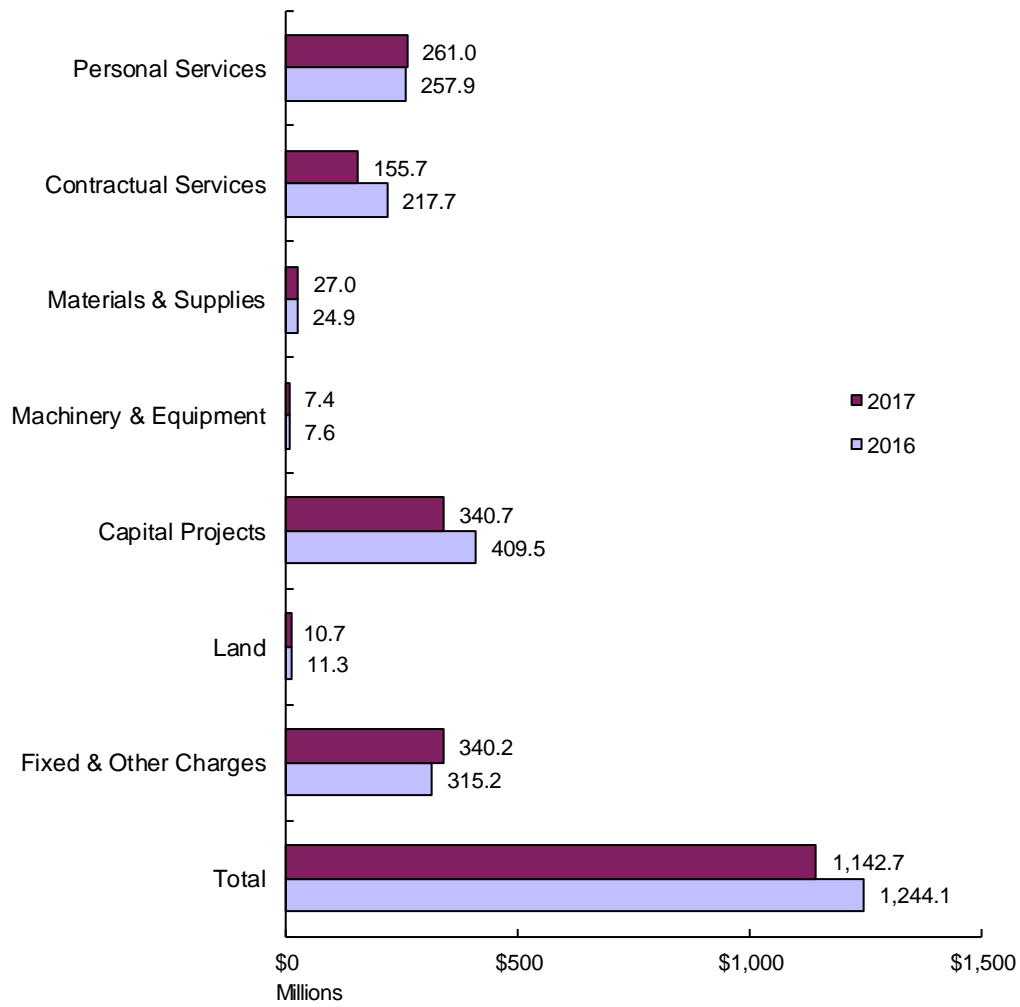
NOTES: \* As Adjusted reflects the 2015 EAV (\$130,304,803,798) estimated to increase 3.0 percent, plus any subsequent supplemental levies and/or appropriations.

\*\* 2017 reflects an estimated 3.0 percent increase in the EAV from the 2016 estimate.

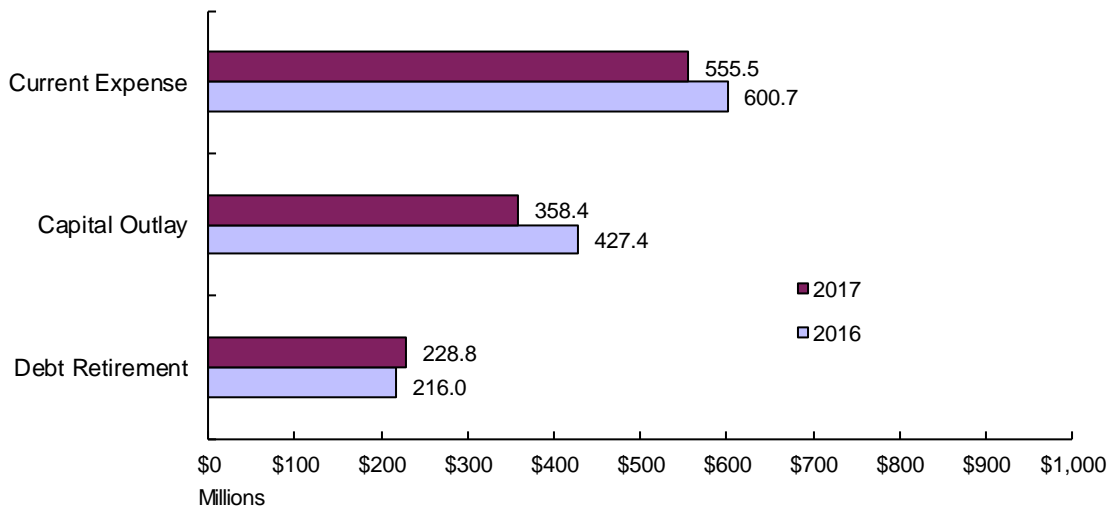
\*\*\* As part of the plan of financing, it is intended and anticipated that tax revenues deposited in the Stormwater Management Fund be transferred to the Bond Redemption & Interest Fund and used to abate taxes levied for this issue.



**COMPARATIVE APPROPRIATIONS BY MAJOR OBJECT OF EXPENDITURE**



**COMPARATIVE APPROPRIATIONS BY MAJOR CHARACTER OF EXPENDITURE**



## COMPARATIVE APPROPRIATIONS BY MAJOR OBJECT OF EXPENDITURE 2017-2016\* ALL FUNDS

ORGANIZATION or FUND	YEAR	TOTAL	PERSONAL SERVICES	CONTRACTUAL SERVICES	MATERIALS & SUPPLIES	MACHINERY & EQUIPMENT	CAPITAL PROJECTS	LAND	FIXED & OTHER CHARGES
Board of Commissioners	2017	\$ 4,496,300	\$ 4,188,700	\$ 297,600	\$ 10,000	\$ -	\$ -	\$ -	\$ -
	2016	\$ 4,407,800	\$ 4,029,000	\$ 370,700	\$ 8,100	\$ -	\$ -	\$ -	\$ -
General Administration	2017	17,387,400	12,052,900	5,046,700	287,800	-	-	-	-
	2016	16,819,300	11,672,600	4,837,300	299,400	10,000	-	-	-
Monitoring & Research	2017	31,270,400	28,876,800	1,413,800	556,800	423,000	-	-	-
	2016	30,523,200	28,064,900	1,606,100	512,200	340,000	-	-	-
Procurement & Materls. Management	2017	9,567,100	5,780,200	152,000	3,634,900	-	-	-	-
	2016	8,777,400	5,536,900	193,000	3,047,500	-	-	-	-
Human Resources	2017	60,905,400	55,589,000	5,077,500	238,900	-	-	-	-
	2016	60,816,800	55,463,500	5,192,900	160,400	-	-	-	-
Information Technology	2017	17,358,600	9,017,500	7,362,000	904,100	75,000	-	-	-
	2016	17,448,600	9,068,800	7,355,300	877,700	146,800	-	-	-
Law	2017	8,386,100	5,267,700	2,210,700	17,700	-	-	-	890,000
	2016	7,972,600	5,152,200	1,975,700	24,700	-	-	-	820,000
Finance	2017	3,684,400	3,270,200	394,600	19,600	-	-	-	-
	2016	3,696,300	3,274,900	413,600	7,800	-	-	-	-
Maint. & Operations:									
General Division	2017	26,761,600	13,085,400	12,767,700	908,500	-	-	-	-
	2016	23,111,200	9,456,000	12,665,300	989,900	-	-	-	-
North Service Area	2017	42,055,300	24,810,900	14,441,400	2,675,000	128,000	-	-	-
	2016	43,830,100	26,237,100	14,691,500	2,759,500	142,000	-	-	-
Calumet Service Area	2017	37,210,100	18,485,800	13,522,000	5,169,300	33,000	-	-	-
	2016	38,039,500	19,189,600	13,669,300	5,145,600	35,000	-	-	-
Stickney Service Area	2017	81,007,700	37,765,100	31,956,000	11,281,600	5,000	-	-	-
	2016	82,745,000	38,855,000	34,462,500	9,380,500	47,000	-	-	-
TOTAL Maintenance & Operations	2017	\$ 187,034,700	\$ 94,147,200	\$ 72,687,100	\$ 20,034,400	\$ 166,000	\$ -	\$ -	\$ -
	2016	\$ 187,725,800	\$ 93,737,700	\$ 75,488,600	\$ 18,275,500	\$ 224,000	\$ -	\$ -	\$ -
Engineering	2017	28,835,400	28,292,200	473,000	70,200	-	-	-	-
	2016	28,072,900	27,300,200	689,200	83,500	-	-	-	-
TOTAL Corporate Fund	2017	\$ 368,925,800	\$ 246,482,400	\$ 95,115,000	\$ 25,774,400	\$ 664,000	\$ -	\$ -	\$ 890,000
	2016	\$ 366,260,700	\$ 243,300,700	\$ 98,122,400	\$ 23,296,800	\$ 720,800	\$ -	\$ -	\$ 820,000
Construction Fund	2017	34,450,400	-	6,401,300	-	6,623,000	21,426,100	-	-
	2016	36,614,400	-	6,220,900	331,000	6,760,800	23,301,700	-	-
Capital Improvements Bond Fund	2017	354,625,600	-	29,055,400	-	-	313,054,300	10,300,000	2,215,900
	2016	483,764,800	-	95,883,000	-	-	376,478,600	10,300,000	1,103,200
Stormwater Management Fund	2017	45,800,100	6,531,200	25,081,300	1,274,500	85,000	6,248,800	410,000	6,169,300
	2016	40,500,800	6,593,600	17,512,600	1,274,500	100,000	9,747,400	1,000,000	4,272,700
Bond Redemption & Interest Fund	2017	228,825,813	-	-	-	-	-	-	228,825,813
	2016	216,047,130	-	-	-	-	-	-	216,047,130
Retirement Fund	2017	79,505,000	-	-	-	-	-	-	79,505,000
	2016	70,772,000	-	-	-	-	-	-	70,772,000
Reserve Claim Fund	2017	30,617,100	8,000,000	-	-	-	-	-	22,617,100
	2016	30,175,900	8,000,000	-	-	-	-	-	22,175,900
<b>GRAND TOTAL</b>	2017	\$1,142,749,813	\$ 261,013,600	\$ 155,653,000	\$ 27,048,900	\$ 7,372,000	\$ 340,729,200	\$ 10,710,000	\$ 340,223,113
	2016	\$1,244,135,730	\$ 257,894,300	\$ 217,738,900	\$ 24,902,300	\$ 7,581,600	\$ 409,527,700	\$ 11,300,000	\$ 315,190,930
PERCENTAGES	2017	100.0%	22.8%	13.6%	2.4%	0.6%	29.8%	0.9%	29.8%
	2016	100.0%	20.7%	17.5%	2.0%	0.6%	32.9%	0.9%	25.3%

Note: Percentages are rounded.

\* Adjusted Appropriation

## COMPARATIVE APPROPRIATIONS BY CHARACTER OF EXPENDITURE 2017-2016\* ALL FUNDS

ORGANIZATION OR FUND	YEAR	TOTAL	CURRENT EXPENSE	CAPITAL OUTLAY	DEBT RETIREMENT
Board of Commissioners	2017	\$ 4,496,300	\$ 4,496,300	\$ -	\$ -
	2016	\$ 4,407,800	\$ 4,407,800	\$ -	\$ -
General Administration	2017	17,387,400	17,387,400	-	-
	2016	16,819,300	16,809,300	10,000	-
Monitoring & Research	2017	31,270,400	30,847,400	423,000	-
	2016	30,523,200	30,183,200	340,000	-
Procurement & Materials Management	2017	9,567,100	9,567,100	-	-
	2016	8,777,400	8,777,400	-	-
Human Resources	2017	60,905,400	60,905,400	-	-
	2016	60,816,800	60,816,800	-	-
Information Technology	2017	17,358,600	17,283,600	75,000	-
	2016	17,448,600	17,301,800	146,800	-
Law	2017	8,386,100	8,386,100	-	-
	2016	7,972,600	7,972,600	-	-
Finance	2017	3,684,400	3,684,400	-	-
	2016	3,696,300	3,696,300	-	-
Maintenance & Operations:					
General Division	2017	26,761,600	26,761,600	-	-
	2016	23,111,200	23,111,200	-	-
North Service Area	2017	42,055,300	41,927,300	128,000	-
	2016	43,830,100	43,688,100	142,000	-
Calumet Service Area	2017	37,210,100	37,177,100	33,000	-
	2016	38,039,500	38,004,500	35,000	-
Stickney Service Area	2017	81,007,700	81,002,700	5,000	-
	2016	82,745,000	82,698,000	47,000	-
TOTAL Maintenance & Operations	2017	\$ 187,034,700	\$ 186,868,700	\$ 166,000	\$ -
	2016	\$ 187,725,800	\$ 187,501,800	\$ 224,000	\$ -
Engineering	2017	28,835,400	28,835,400	-	-
	2016	28,072,900	28,072,900	-	-
TOTAL Corporate Fund	2017	\$ 368,925,800	\$ 368,261,800	\$ 664,000	\$ -
	2016	\$ 366,260,700	\$ 365,539,900	\$ 720,800	\$ -
Construction Fund	2017	34,450,400	6,401,300	28,049,100	-
	2016	36,614,400	6,551,900	30,062,500	-
Capital Improvements Bond Fund	2017	354,625,600	31,271,300	323,354,300	-
	2016	483,764,800	96,986,200	386,778,600	-
Stormwater Management Fund	2017	45,800,100	39,466,300	6,333,800	-
	2016	40,500,800	30,653,400	9,847,400	-
Bond Redemption & Interest Fund	2017	228,825,813	-	-	228,825,813
	2016	216,047,130	-	-	216,047,130
Retirement Fund	2017	79,505,000	79,505,000	-	-
	2016	70,772,000	70,772,000	-	-
Reserve Claim Fund	2017	30,617,100	30,617,100	-	-
	2016	30,175,900	30,175,900	-	-
<b>GRAND TOTAL</b>	2017	<b>\$ 1,142,749,813</b>	<b>\$ 555,522,800</b>	<b>\$ 358,401,200</b>	<b>\$ 228,825,813</b>
	2016	<b>\$ 1,244,135,730</b>	<b>\$ 600,679,300</b>	<b>\$ 427,409,300</b>	<b>\$ 216,047,130</b>
PERCENTAGES	2017	100%	49%	31%	20%
	2016	100%	48%	34%	17%

Note: Percentages are rounded.

\* Adjusted Appropriation

## 2017 - 2016\* PROGRAM APPROPRIATION - ALL FUNDS BY DEPARTMENT AND MAJOR PROGRAM

(In Millions)

### MAJOR PROGRAM

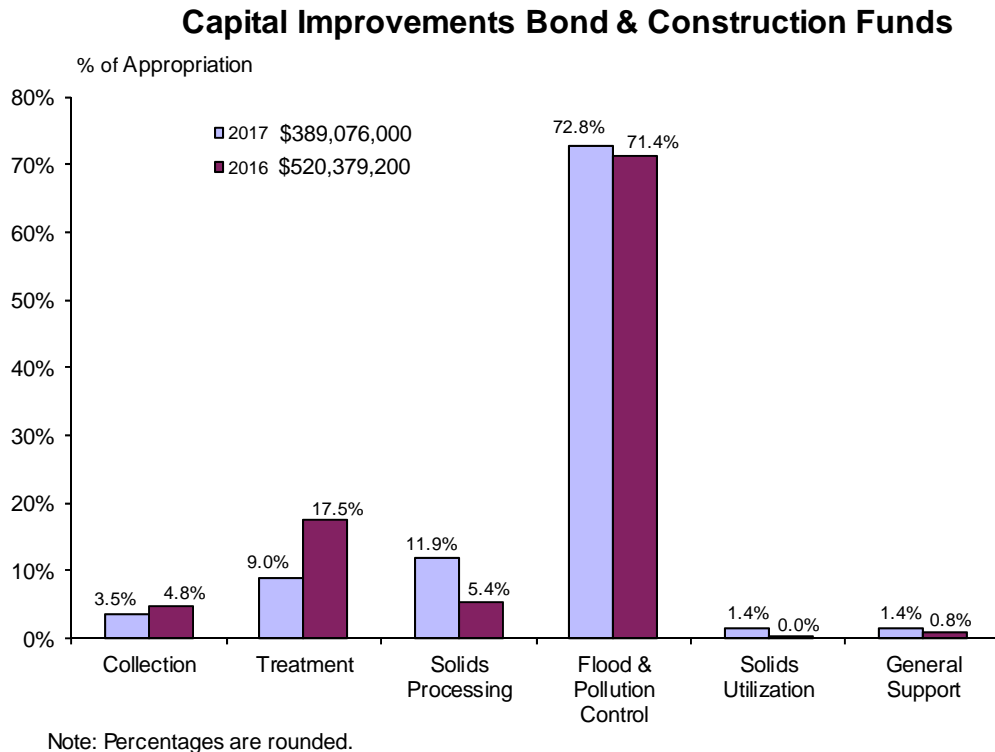
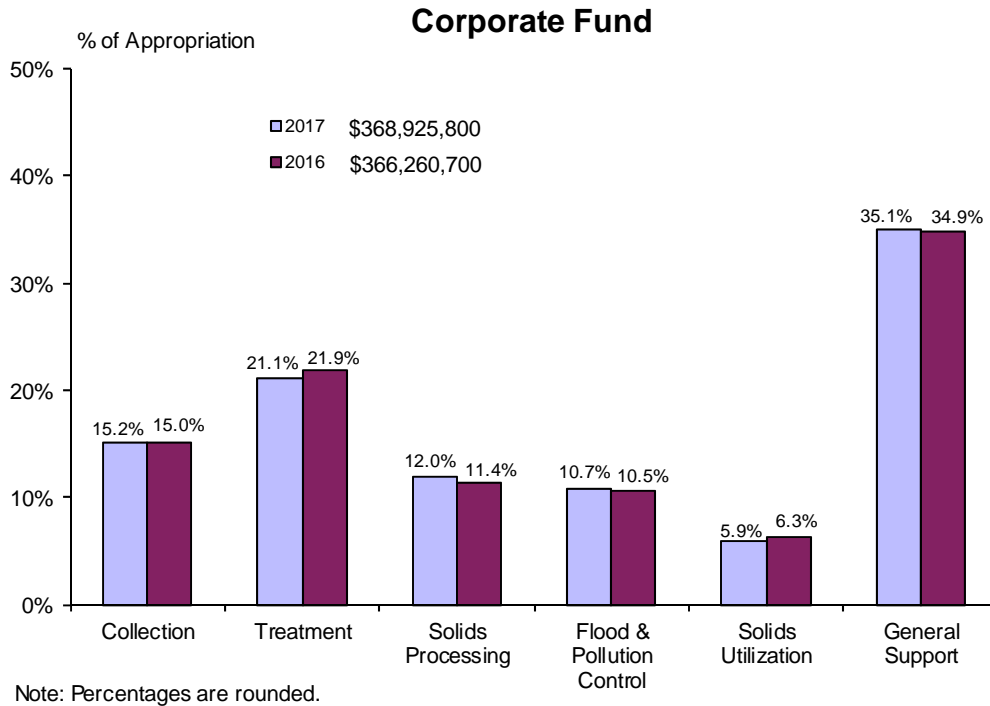
DEPARTMENT	COLLECTION		TREATMENT		SOLIDS PROCESSING		SOLIDS UTILIZATION		FLOOD & POLLUTION CONTROL		GENERAL SUPPORT		TOTAL	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Board of Commissioners	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4.5	\$ 4.4	\$ 4.5	\$ 4.4
General Administration	-	-	-	-	-	-	-	-	-	-	17.4	16.8	17.4	16.8
Monitoring & Research	-	-	-	-	-	-	-	-	30.9	30.5	0.4	-	31.3	30.5
Procurement & Materials Management	-	-	-	-	-	-	-	-	-	-	9.6	8.8	9.6	8.8
Human Resources	-	-	-	-	-	-	-	-	-	-	60.9	60.8	60.9	60.8
Information Technology	-	-	-	-	-	-	-	-	-	-	17.4	17.4	17.4	17.4
Law	-	-	-	-	-	-	-	-	0.5	-	7.9	7.9	8.3	7.9
Finance	-	-	-	-	-	-	-	-	-	-	3.7	3.7	3.7	3.7
Maintenance & Operations	48.5	47.8	69.1	71.0	37.8	35.9	21.5	22.8	4.8	4.7	5.4	5.5	187.1	187.8
Engineering	7.5	7.2	8.8	9.0	6.4	5.8	0.4	0.4	3.4	3.3	2.4	2.4	28.8	28.1
<b>Total Corporate Fund</b>	<b>\$56.0</b>	<b>\$55.0</b>	<b>\$77.9</b>	<b>\$80.0</b>	<b>\$44.2</b>	<b>\$41.7</b>	<b>\$21.8</b>	<b>\$23.1</b>	<b>\$39.5</b>	<b>\$38.6</b>	<b>\$129.4</b>	<b>\$127.8</b>	<b>\$368.9</b>	<b>\$366.3</b>
Construction and Capital Improvements Bond Funds	\$13.6	\$25.0	\$35.0	\$91.3	\$46.4	\$27.9	\$5.5	\$0.2	\$283.2	\$371.6	\$5.4	\$4.4	\$389.1	\$520.4
Stormwater Management Fund	1.0	-	-	-	-	-	-	-	39.0	40.5	5.9	-	45.8	40.5
Miscellaneous (Debt Service, Retirement, and Reserve Funds)	-	-	-	-	-	-	-	-	-	-	338.9	317.0	338.9	317.0
<b>GRAND TOTAL</b>	<b>\$70.6</b>	<b>\$80.0</b>	<b>\$112.9</b>	<b>\$171.3</b>	<b>\$90.6</b>	<b>\$69.6</b>	<b>\$27.3</b>	<b>\$23.3</b>	<b>\$361.7</b>	<b>\$450.7</b>	<b>\$479.6</b>	<b>\$449.1</b>	<b>\$1,142.8</b>	<b>\$1,244.2</b>

Note: Totals are rounded.

\* Adjusted Appropriation

### APPROPRIATION DISTRIBUTION BY PROGRAM

To comply with Illinois State Statute, it is necessary to prepare budget estimates and appropriate funds according to programs, as well as organizational units, performance principles, and unit cost data. The two charts on this page show the relationship of major objectives or functions within the Corporate, Construction, and Capital Improvements Bond Funds. The charts compare major program appropriations to the total fund appropriations for 2017 and 2016, as shown on page 51.



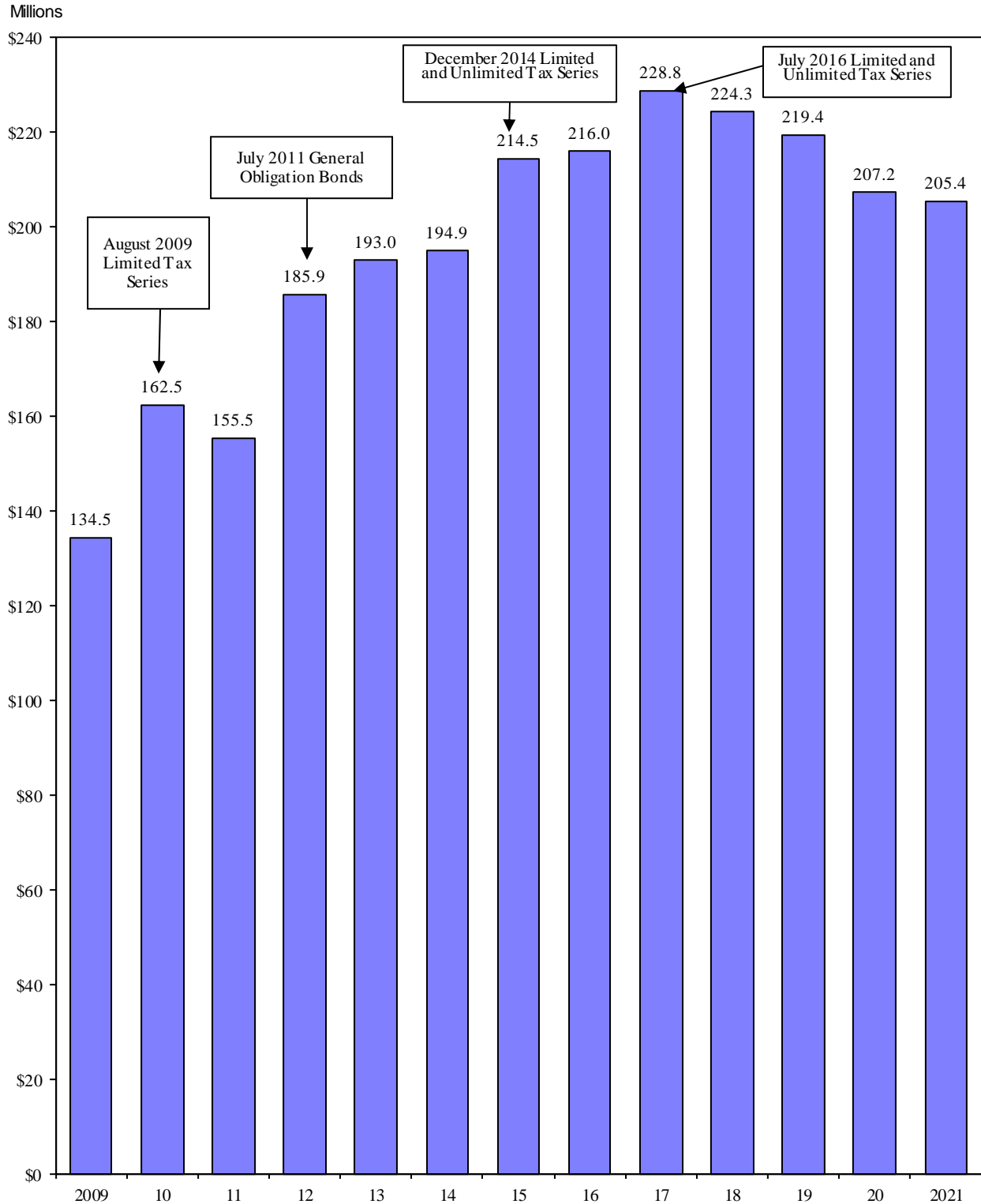
## 2017 - 2016 PROGRAM APPROPRIATION COMPARISON ALL FUNDS

PROGRAM OBJECTIVE		2017 BUDGET	2016 ADJUSTED BUDGET	DOLLAR INCREASE (DECREASE)	PERCENT INCREASE (DECREASE)	FTE POSITIONS	
NUMBER	NAME					2017	2016
1000	Collection	\$ 70,649,419	\$ 80,037,851	\$ (9,388,432)	(11.7)	312	315
2000	Treatment	112,893,520	171,310,957	(58,417,437)	(34.1)	459	466
3000	Solids Processing	90,593,009	69,593,901	20,999,108	30.2	263	254
4000	Flood & Pollution Control	361,731,431	450,785,249	(89,053,818)	(19.8)	416	417
5000	Solids Utilization	27,321,901	23,286,462	4,035,439	17.3	45	48
7000	General Support (Debt, Retirement, Law, etc.)	479,560,533	449,121,310	30,439,223	6.8	547	476
<b>TOTAL</b>		<b>\$ 1,142,749,813</b>	<b>\$ 1,244,135,730</b>	<b>\$ (101,385,917)</b>	<b>(8.1)</b>	<b>2,042</b>	<b>1,976</b>

SUMMARY BY FUND		2017 BUDGET	2016 ADJUSTED BUDGET	DOLLAR INCREASE (DECREASE)	PERCENT INCREASE (DECREASE)	FTE POSITIONS	
						2017	2016
Corporate Fund		\$ 368,925,800	\$ 366,260,700	\$ 2,665,100	0.7	1,983	1,917
Construction & Capital Improvements Bond Funds		389,076,000	520,379,200	(131,303,200)	(25.2)	-	-
Stormwater Management Fund		45,800,100	40,500,800	5,299,300	13.1	59	59
Retirement Fund		79,505,000	70,772,000	8,733,000	12.3	-	-
Bond Redemption & Interest Fund		228,825,813	216,047,130	12,778,683	5.9	-	-
Reserve Claim Fund		30,617,100	30,175,900	441,200	1.5	-	-
<b>TOTAL</b>		<b>\$ 1,142,749,813</b>	<b>\$ 1,244,135,730</b>	<b>\$ (101,385,917)</b>	<b>(8.1)</b>	<b>2,042</b>	<b>1,976</b>



**ANNUAL DEBT SERVICE - PRINCIPAL AND INTEREST 2009 - 2021**



This chart shows debt service for current bonds outstanding. It does not include bonds to be sold in the future, which are detailed in the Five-Year Financial Forecast on pages 60 and 68.

## OUTSTANDING BONDS AND ESTIMATED STATUTORY DEBT MARGIN DECEMBER 31, 2016

BOND SERIES	DATE OF MATURITY	INTEREST RATES	AMOUNT PAYABLE
Capital Improvements Bonds - Series:			
August 2009 Limited Tax Series	2038	5.72	\$ 600,000,000
July 2011 Limited Tax Series	2032	3.1 to 5.0	270,000,000
July 2011 Unlimited Tax Series C	2031	3.0 to 5.0	50,330,000
December 2014 Unlimited Tax Series A	2044	5.0	100,000,000
December 2014 Stormwater Alternate Revenue Series B	2044	2.0 to 5.0	49,080,000
December 2014 Limited Tax Series C	2028	2.0 to 5.0	73,840,000
July 2016 Unlimited Tax Series C	2045	5.0	30,000,000
July 2016 Limited Tax Series D	2030	5.0	20,000,000
July 2016 Stormwater Alternate Revenue Series E	2045	5.0	50,000,000
July 2016 Qualified Energy Conservation Series F	2036	4.0	4,000,000
SUBTOTAL - Capital Improvements Bonds:			\$ 1,247,250,000
Refunding Bonds - Series:			
March 2007 Unlimited Tax Series A	2022	4.0 to 5.0	\$ 129,295,000
March 2007 Unlimited Tax Series B	2035	4.0 to 5.0	91,845,000
March 2007 Limited Tax Series C	2033	4.0 to 5.0	101,860,000
December 2014 Limited Tax Series D	2022	2.0 to 5.0	70,535,000
July 2016 Unlimited Tax Series A	2031	5.0	280,930,000
July 2016 Limited Tax Series B	2031	5.0	41,330,000
SUBTOTAL - Refunding Bonds:			\$ 715,795,000
State Revolving Fund Bonds - Series:			
June 1996, 94R L170820	2017	2.50	\$ 1,668,399
January 1997, 92T L170876	2016	2.50	606,539
July 1996, 92U L170877	2017	2.50	1,356,718
February 1997, 94V L171150	2018	2.50	4,182,885
January 2000, 97AA L170822	2019	2.506	9,375,892
December 2000, 97BB L171151	2020	2.535	2,477,490
July 2002, 97CC L172031	2021	2.535	12,155,520
August 2003, 97DD L171152	2023	2.905	6,538,777
July 2004, 01A L172126	2024	2.57	25,749,204
July 2004, 01B L172127	2024	2.50	29,356,796
July 2006, 01C L172128	2026	2.50	28,544,788
January 2009, 04A L172485	2028	2.50	15,102,693
January 2009, 04B L172488	2028	2.50	17,642,889
March 2007, 04C L172493	2027	2.50	1,585,759
March 2007, 04D L172494	2027	2.50	1,520,704
January 2009, 04E L172495	2028	2.50	5,142,299
March 2007, 04G L172611	2027	2.50	2,470,439
February 2009, 04H L172849	2029	2.50	37,775,054
June 2010, 07A L172625	2030	2.50	31,578,079
June 2010, 07D L172763	2030	2.50	7,202,612
July 2010, 07B L172850	2030	2.50	21,743,034
April 2011, 09H L173800	2031	0.00	533,489
April 2011, 04F L172496	2031	0.00	2,881,649
June 2011, 09B L173064	2031	0.00	5,551,902
June 2011, 09I L174675	2031	1.25	8,346,604
August 2011, 09E L173005	2031	1.25	31,003,729
September 2011, 09C L173063	2031	0.00	1,623,378
September 2011, 07C L172770	2031	0.00	48,333,333
September 2012, 09A L173074	2032	1.25	38,739,028
September 2012, 09F L174557	2032	1.25	52,647,432
July 2013, 09D L174558	2032	2.30	36,770,667
July 2013, 09G L173075	2032	1.25	25,588,498
August 2014, 12A L174710	2034	2.30	6,861,527
August 2014, 12B L174712	2034	2.30	5,876,366
July 2015, 12D L174988	2035	1.93	31,775,570
July 2015, 12E L174709	2035	1.93	5,455,885
July 2015, 12F L174989	2035	1.93	55,004,622
July 2015, 12H L174924	2035	1.93	27,438,824
July 2015, 12J L175172	2035	1.995	2,586,855
July 2015, 12K L174925	2035	1.995	11,886,404
July 2015, 12O L175166	2035	1.995	4,467,497
July 2016, 12C L174621	2036	1.995	10,720,563
July 2016, 12I L175222	2036	2.21	3,434,444
July 2016, 12L L175161	2036	2.21	30,082,449
July 2016, 12N L175164	2036	1.995	2,460,585

## OUTSTANDING BONDS AND ESTIMATED STATUTORY DEBT MARGIN (continued) DECEMBER 31, 2016

State Revolving Fund Bonds - Series (continued):			
July 2016, 14A L173076	2036	2.21	72,514,775
July 2016, 14B L175171	2036	2.21	2,309,590
July 2016, 14J L175219	2036	2.21	1,228,092
SUBTOTAL - State Revolving Fund Bonds:			<u>\$ 789,900,327</u>
<b>TOTAL OUTSTANDING BONDS:</b>			<u><u>\$ 2,752,945,327</u></u>

### CALCULATION OF ESTIMATED STATUTORY DEBT MARGIN

<u>Debt Applicable to Debt Limit:</u>			
Outstanding Bonds	\$	2,752,945,327	
Less: Alternate Revenue Bonds Outstanding		(99,080,000)	
Bond Anticipation Note - Principal		86,000,000	
Bond Anticipation Note - Interest		1,000,000	
Capital Lease - Biosolids Facility		41,047,900	
Liabilities of Tax - Financed Funds		12,621,000	\$ 2,794,534,227
<u>Less Applicable Assets:</u>			
Cash and Investments - Bond Redemption & Interest Fund	\$	(110,265,700)	
Interest on Bonds Payable in Next Twelve Months		117,373,672	\$ 7,107,972
NET DEBT APPLICABLE TO LIMIT:			<u>\$ 2,801,642,199</u>
Statutory Debt Limit 5.75% of 2015 Equalized Assessed Valuation (\$130,304,803,798)			\$ 7,492,526,218
Less Net Debt Applicable to Limit			<u>2,801,642,199</u>
<b>ESTIMATED STATUTORY DEBT MARGIN:</b>			<u><u>\$ 4,690,884,019</u></u>

**ACCOUNT SUMMARY COMPARISON  
2017 - 2016 ALL FUNDS**

ORGANIZATION OR FUND	Account Appropriation		Increase (Decrease) 2017 - 2016	
	2017	2016*	Dollars	Percent
<b>Board of Commissioners</b>	\$ 4,496,300	\$ 4,407,800	\$ 88,500	2.0
<b>General Administration</b>	17,387,400	16,819,300	568,100	3.4
<b>Monitoring &amp; Research</b>	31,270,400	30,523,200	747,200	2.4
<b>Procurement &amp; Materials Management</b>	9,567,100	8,777,400	789,700	9.0
<b>Human Resources</b>	60,905,400	60,816,800	88,600	0.1
<b>Information Technology</b>	17,358,600	17,448,600	(90,000)	(0.5)
<b>Law</b>	8,386,100	7,972,600	413,500	5.2
<b>Finance</b>	3,684,400	3,696,300	(11,900)	(0.3)
<b>Maintenance &amp; Operations:</b>				
<b>General Division</b>	26,761,600	23,111,200	3,650,400	15.8
<b>North Service Area</b>	42,055,300	43,830,100	(1,774,800)	(4.0)
<b>Calumet Service Area</b>	37,210,100	38,039,500	(829,400)	(2.2)
<b>Stickney Service Area</b>	81,007,700	82,745,000	(1,737,300)	(2.1)
<b>TOTAL Maintenance &amp; Operations</b>	<u>\$ 187,034,700</u>	<u>\$ 187,725,800</u>	<u>\$ (691,100)</u>	<u>(0.4)</u>
<b>Engineering</b>	28,835,400	28,072,900	762,500	2.7
<b>TOTAL Corporate Fund</b>	<u>\$ 368,925,800</u>	<u>\$ 366,260,700</u>	<u>\$ 2,665,100</u>	<u>0.7</u>
<b>Construction Fund</b>	34,450,400	36,614,400	(2,164,000)	(5.9)
<b>Capital Improvements Bond Fund</b>	354,625,600	483,764,800	(129,139,200)	(26.7)
<b>TOTAL Capital Budget</b>	<u>\$ 389,076,000</u>	<u>\$ 520,379,200</u>	<u>\$ (131,303,200)</u>	<u>(25.2)</u>
<b>Stormwater Management Fund</b>	45,800,100	40,500,800	5,299,300	13.1
<b>Bond Redemption &amp; Interest Fund</b>	228,825,813	216,047,130	12,778,683	5.9
<b>Retirement Fund</b>	79,505,000	70,772,000	8,733,000	12.3
<b>Reserve Claim Fund</b>	30,617,100	30,175,900	441,200	1.5
<b>GRAND TOTAL</b>	<u><u>\$1,142,749,813</u></u>	<u><u>\$1,244,135,730</u></u>	<u><u>\$ (101,385,917)</u></u>	<u><u>(8.1)</u></u>

\*Adjusted Appropriation

**PERSONNEL SUMMARY COMPARISON  
2017 - 2015 ALL FUNDS**

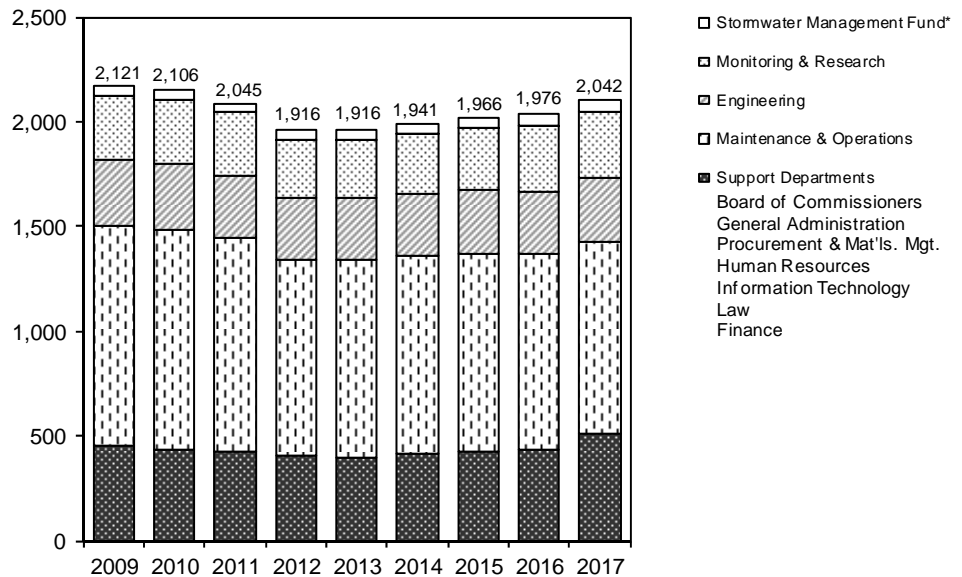
ORGANIZATION OR FUND	Proposed FTEs 2017	Budgeted FTEs 2016	Actual FTEs 2015	Increase (Decrease) 2017 - 2016	
				FTEs	Percent
<b>Board of Commissioners</b>	38	38	37	-	-
<b>General Administration</b>	123	122	118	1	0.8
<b>Monitoring &amp; Research</b>	309	308	296	1	0.3
<b>Procurement &amp; Materials Management</b>	63	63	63	-	-
<b>Human Resources</b>	141	73	74	68	93.2
<b>Information Technology</b>	75	76	63	(1)	(1.3)
<b>Law</b>	38	38	37	-	-
<b>Finance</b>	28	28	29	-	-
<b>Maintenance &amp; Operations:</b>					
<b>General Division</b>	115	87	94	28	32.2
<b>North Service Area</b>	247	259	259	(12)	(4.6)
<b>Calumet Service Area</b>	188	196	201	(8)	(4.1)
<b>Stickney Service Area</b>	372	385	398	(13)	(3.4)
<b>TOTAL Maintenance &amp; Operations</b>	<u>922</u>	<u>927</u>	<u>952</u>	<u>(5)</u>	<u>(0.5)</u>
<b>Engineering</b>	246	244	242	2	0.8
<b>TOTAL Corporate Fund</b>	<u>1,983</u>	<u>1,917</u>	<u>1,911</u>	<u>66</u>	<u>3.4</u>
<b>Construction Fund</b>	-	-	-	-	-
<b>Capital Improvements Bond Fund</b>	-	-	-	-	-
<b>TOTAL Capital Budget</b>	-	-	-	-	-
<b>Stormwater Management Fund</b>	59	59	55	-	-
<b>Bond Redemption &amp; Interest Fund</b>	-	-	-	-	-
<b>Retirement Fund</b>	-	-	-	-	-
<b>Reserve Claim Fund</b>	-	-	-	-	-
<b>GRAND TOTAL</b>	<u><u>2,042</u></u>	<u><u>1,976</u></u>	<u><u>1,966</u></u>	<u><u>66</u></u>	<u><u>3.3</u></u>

### PERSONAL SERVICE APPROPRIATIONS

Positions reported in this chart are actual positions through 2015, meaning that at some point during the year the position was filled. In 2015, 16 positions were unfilled for the entire year. In 2014, there were 20 positions that remained vacant for the entire year.

The Maintenance & Operations, Engineering, and Monitoring & Research Departments are referred to as the District's operating departments. These departments are directly responsible for the daily operations of sewage collection, treatment, disposal, and environmental monitoring activities. The remaining departments are generally termed as support departments. While positions in these departments may be considered indirect or overhead, they are also necessary for technical expertise, statutory compliance, governance, and public accountability.

**Position History (2009-2017)**



\* In 2017, 59 positions for the Maintenance & Operations and Engineering Departments are budgeted in the Stormwater Management Fund, while the operations remain within the departments.

Modest staffing changes in the operating departments in 2009 and 2010 were necessary to adequately staff for the design and implementation of the Master Plans and Stormwater Management initiatives. The staffing reductions in 2011 and 2012 were part of a five-year plan to restructure the organization to ensure future financial viability. The staffing increases in 2014 through 2016 were necessary to address new and continuing initiatives as presented in the Strategic Business Plan. The staffing increase in 2017 is due to the addition of 70 positions to the expanded apprenticeship program.

The exhibit below provides the personal service appropriations for 2016 and 2017, and the actual expenditures for personal services in 2015. The District has introduced a number of initiatives in an effort to control all areas of personal service appropriations, several of which are discussed in the Budget Foreword section of this document.

	2015	2016	2017	Increase (Decrease)	
	Actual Exp.	Adj. Approp.	Budgeted	2017 - 2016	
				Dollars	Percent
Salaries of Regular Employees*	\$ 175,465,897	\$ 188,493,200	\$ 192,808,900	\$ 4,315,700	2.3%
Compensation Plan Adjustments	7,682,863	8,057,200	7,937,700	(119,500)	-1.5%
Social Security & Medicare Contributions	2,631,404	2,734,600	2,700,200	(34,400)	-1.3%
Employee Claims	4,137,218	8,047,900	8,060,200	12,300	0.2%
Other Employee Personal Services**	1,408,494	1,784,800	2,221,200	436,400	24.5%
Health & Life Insurance Premiums***	44,709,251	48,776,600	47,285,400	(1,491,200)	-3.1%
<b>Total</b>	<b>\$ 236,035,127</b>	<b>\$ 257,894,300</b>	<b>\$ 261,013,600</b>	<b>\$ 3,119,300</b>	<b>1.2%</b>

\* Includes 2017 Salary Adjustments  
 \*\* Includes Tuition, Training, and Non-budgeted Salaries  
 \*\*\* Includes Other Postemployment Benefits Distribution

# **FIVE-YEAR FINANCIAL FORECAST**

## **2017 - 2021**

The District's Five-Year Financial Forecast (FYFF), as defined by generally accepted accounting principles, is an interim financial report. Interim financial reports are designed to provide estimates of future financial operating conditions to policymakers and managers. They reflect no legal obligation of the organization, present or future.

The FYFF is prepared prior to the Executive Director's Budget Recommendations and reflects the best estimates of revenues, fund equity, and appropriation needs available at the time. This forecast is presented to the Executive Director. Subject to his review and approval, it is then included in the Budget.

The FYFF presentation is in the form of a letter from the Budget Officer to the Executive Director, which discusses the assumptions used in making the forecast. It also provides a discussion of the changes and trends in operations, which are expected to occur during the FYFF period. Graphs and tables are provided, detailing the financial projections of all funds.



**Metropolitan Water Reclamation District of Greater Chicago**

100 EAST ERIE STREET

CHICAGO, ILLINOIS 60611-3154

312.751.5600

Mr. David St. Pierre  
Executive Director  
OFFICE

October 11, 2016

**SUBJECT: FIVE-YEAR FINANCIAL FORECAST, 2017 – 2021**

Dear Sir:

I have reviewed the Five-Year Financial Forecast prepared for the fiscal years 2017 – 2021 and offer the following report and summary. Subject to your review and approval, this will be included in the 2017 Budget. These projections are a tool designed to aid the District in planning and controlling its financial position over a longer range than the 2017 Budget itself. They also contribute to making the Budget a comprehensive financial plan of District operations, present, and future.

This forecast is designed to provide the reviewer with a better understanding of how the District’s revenues and expenditures are expected to develop during the next five years. It also summarizes the tax impact of the District’s strategic goals and objectives. As useful as the forecast is in providing a short- and long-term view of the District’s financial position, it should be used with an understanding of the underlying expenditure and revenue assumptions. The report’s value lies in the projected trends rather than the absolute numbers. The current trends require the District to remain diligent in cutting costs and increasing efficiencies.

**OVERVIEW**

The Property Tax Extension Limitation (Tax Cap) law of 1995, Public Act 89-1, remains the primary limiting factor for the District’s long-term financial planning. This law essentially limits increases in property tax levies for our aggregate or operating funds, to an increase of five percent or the change in the national Consumer Price Index (CPI), whichever is less. Revenue sources for the District are limited by statute and are derived primarily from property taxes. Projections of economic growth in Illinois, reflected in revenues from personal property replacement tax collections, investment income, real estate leases, and user charge collections are anticipated to show slow to moderate growth over the projection period as the economy slowly recovers. Large swings in these smaller revenue streams are possible, but unpredictable.

The aggregate levy for 2017 is estimated to increase by 3.2 percent over 2016, as adjusted, and is projected to increase an average of 3.2 percent per year for 2017 through 2021. As noted on the graph on page 64, the 2017 levy is projected to be at the Tax Cap limitation. In planning for future years, it is necessary to plan major expenditures such that appropriations and resulting levies do not exceed the statutory limitations on property tax revenues in any given year. The Cook County Clerk ensures that the District’s levy remains in compliance by adjusting the levy extension, if required. The District has directed the Cook County Clerk to make any such reduction only to the Construction Fund. The Tax Cap may reduce the 2016 aggregate levy to be collected in 2017, depending on the 2016 CPI. It is not anticipated to be a significant reduction.

The Tax Cap law also has an impact on the future funding of the District’s capital program. While the Debt Service levy is not part of the aggregate levy, under Public Act 89-0001, the District’s non-referendum bond authority was restricted to fund only projects initiated prior to October 1, 1991, which generally covered only Tunnel and Reservoir Plan (TARP) projects. However, Public Act 89-0385 provided additional non-referendum authority to the District by authorizing the issuance of “limited bonds.” These “limited bonds” can be issued to the extent that the total debt service requirement of any new debt when combined with existing debt service does not exceed the debt service extension base of \$141.5 million established by the Act. This “limited bond” capacity was expanded for the District by passage of Public Act 90-485 in the 1997 legislative session by excluding debt issued and used for TARP projects from the limiting debt service extension base. In 2009, Public Act 96-0501 was passed which allows for an annual increase in this limiting debt service base by the lesser of five percent or the percentage increase in the CPI beginning with the 2011 levy. The debt service extension base is currently \$159.3 million and estimated to be at \$163.3 million in 2017.

In 2001, the Illinois Legislature amended the Metropolitan Water Reclamation District Act to allow the issuance of debt for up to 30 years (previously 20 years). In 2002, the District’s overall non-referendum authority was extended through December 31, 2016 and in 2010, it was extended again through December 31, 2024. In 2004, the District received authority to issue \$150

**Five-Year Financial Forecast, 2017-2021**

**October 11, 2016**

million (previously \$100 million) of non-referendum bonds during any budget year. These legislated changes provide resources for financing the capital program for the foreseeable future.

**EXPENDITURES: DEPARTMENTAL GUIDELINES AND METHODOLOGY**

The Budget Office asked each department to project its needs for the years 2017 – 2021. These projections were made before the actual 2017 departmental budget requests were finalized and may not precisely match 2017 budget requests. The projections were made in current dollars, then inflated based on the most recently provided inflation factors from the Illinois Commission on Government Forecasting and Accountability. These were applied to reflect market forecasts for material and service expenditures appropriate to our industry. The Human Resources Department directly projected health and life insurance costs based on current multi-year agreements and industry trends. Electricity was adjusted for rate changes due to industry deregulation, current multi-year agreements, and operating needs.

**REVENUE AND FINANCING ASSUMPTIONS**

Key assumptions made in the projections of revenues and tax rates are:

- Short-term fluctuations in commodities such as lumber and metals should have little impact over the long term. Over the long term, these costs will be viewed as normal cost increases in tandem with an economy that will continue with modest growth trends for the projection period;
- Tax collections will be 96.5 percent of what is levied - allowing for loss in collections, Property Tax Appeals Board (PTAB) decisions, circuit court decisions, and other tax refunds;
- The annual Equalized Assessed Valuation (EAV) projection is based on the 2015 amount as provided by the Cook County Clerk, an estimated 3.0 percent increase in 2016, and a 3.0 percent increase in each year thereafter;
- The estimated annual tax levy increase for the aggregate funds controlled by the Tax Cap is based on projections of available funding, increases in the CPI, estimated at 0.7 percent for 2016 and 2.5 percent for the years 2017 – 2021, and allowable adjustments to EAV for new property at just under 1.0 percent annually;
- The planned sale of capital improvement bonds, assumed to be a 30-year level payment, will occur as follows:

<u>Year</u>	<u>Limited Bonds</u>	<u>Unlimited Bonds</u>	<u>Unlimited Stormwater Bonds</u>
2017			\$50 million
2018			\$50 million
2019			\$50 million
2020			\$50 million
2021	\$150 million	\$50 million	\$50 million

- Bond Redemption & Interest Fund levy estimates are based on a 5.0 percent interest rate on bond issues;
- The District is expected to receive between \$180 to \$200 million annually in State Revolving Fund loans;
- Operating fund balances will be no less than 12.0 percent of appropriations.

**APPROPRIATION FORECASTS**

Total District appropriations are summarized in the exhibit on page 64, and detailed in Table I on page 65. The year-to-year variation is largely due to the schedule of awards for major capital projects. Changes and explanations within the various District funds are as follows:

Corporate Fund

The Corporate Fund, the District's general fund, includes all appropriations for day-to-day operations. Appropriations for the fund are expected to increase an average of 1.85 percent annually from 2017 – 2021. This relative stability of appropriations is attributed to the Tax Cap limits, as well as planned control of growth in operations and stability in staffing levels. Annual average increases greater than the general price index are anticipated for health care, contracted solids disposal, chemicals, repairs, and energy.

The District’s long-term benefits strategy continues to focus on rising health-care costs and the impact of the Patient Protection and Affordable Care Act. In 2015, the District made several changes to the medical plan design to help contain the cost of medical claims and to mitigate exposure to the excise or “Cadillac” tax scheduled for implementation in 2021. A retiree benefits strategy is also being developed to manage the cost of retiree health benefits going forward. In addition, the District continues to fund the Other Postemployment Benefits Trust to address its future healthcare liability with an anticipated appropriation of \$5 million annually.

A fund balance of 12 to 15 percent of appropriations, or within the \$44 to \$55 million range, is viewed by District management and the financial markets as necessary to maintain financial stability and sustain us through economic uncertainties. The beginning

**Five-Year Financial Forecast, 2017-2021**

**October 11, 2016**

2017 fund balance is projected to be higher, reflecting substantial restructuring over the past few years, including 149 positions dropped in 2012, an increase in in-house maintenance, and other operating efficiencies. A portion of the projected net assets will remain unappropriated to protect the downside of possible economic swings and provide for a fiscally responsible fund balance.

With the planned construction of new facilities that will require significant amounts of new energy, aggressive conservation efforts and alternative energy generation have been pursued at existing facilities to minimize the cost impact. In this forecast, energy costs are expected to increase in 2017 through 2019 and be balanced against reduced consumption as we realize the benefits of these modernization projects in later years. In November 2014, the District conducted a reverse auction to procure electricity for 2016 and 2017, at a 4.4 percent price increase over the 2015 rate. In 2016, the District extended the electricity supply contract for 2018 at a rate that is 7.2 percent lower than 2016-2017 rate. To further control energy costs, the District has entered into an agreement with CPower to curtail electrical energy use during periods of high demand, from July 1, 2016 through June 30, 2017. The District anticipates a cost savings of \$1.45 million. The District has entered into an agreement with Blue Delta Energy to sell Renewable Energy Credits on the open market in Illinois, Maryland, and the District of Columbia. Estimated revenue is approximately \$300,000 annually. Finally, the District has performed an Energy Grade audit and entered into an agreement with the Public Building Commission and NORESKO to replace lighting, controls, and steam blanket insulation at the Calumet Water Reclamation Plant.

Overall, biosolids disposal costs are competitive due to favorable local markets. The District continues to seek alternative markets for biosolids that do not compete with current disposal outlets, thus avoiding the potential for volatile costs associated with a single outlet. Beginning in 2014 and continuing into 2015, the District evaluated turnkey composting systems for biosolids processing by conducting on-site, pilot-scale tests. In addition, the District researched what type of equipment would be needed for open windrow composting. Based on the positive findings that show the use of such equipment will reduce both the carbon footprint and processing costs, the District procured windrow turners for composting. In 2016, the District utilized two newly purchased windrow turners to mix wood chips with biosolids and then composting the mix into an organic material for public distribution. The composted biosolids are odor free and meet USEPA’s Exceptional Quality Designation, which is a term given to biosolids that meet Class A pathogen reduction requirement and the most stringent metals limits and vector attraction standards. Composted biosolids are used as a soil conditioner in landscaping applications by blending with topsoil or as amendment for establishing turf grass, sod, trees, nurseries or plant beds. With composting, product quality (odor and appearance) will also improve due to the addition of wood chips received through an Intergovernmental Agreement with the City of Chicago, which has been delivering wood chips since 2013. In 2016, about 40,000 cubic yards of wood chips were utilized in producing about 13,000 tons of composted biosolids. Projected composted biosolids production goals are 50,000 tons in 2017 and 100,000 tons in 2018. It is also expected that composting will generate a revenue stream for the District.

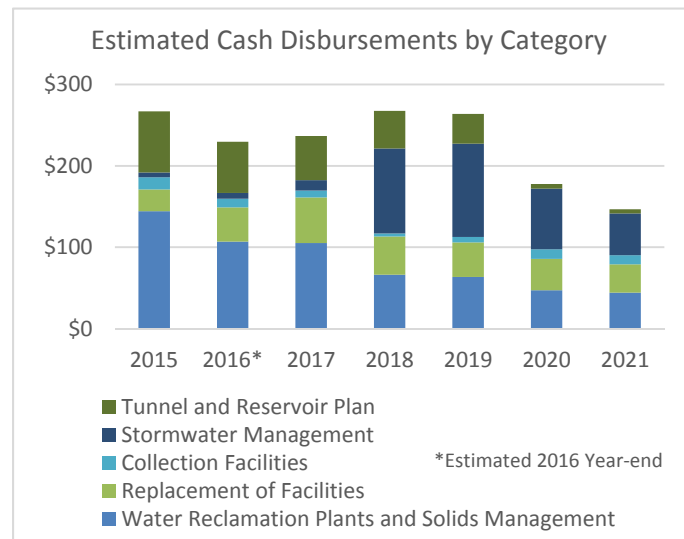
Capital Improvements Bond and Construction Funds

The Capital Improvements Bond Fund (CIBF) accounts for all resources, principally bond proceeds and construction grants, used for the construction of capital facilities. Total bond sales to support the CIBF are projected at \$200 million in 2021. Stormwater Alternative Revenue Bonds are expected to be sold at \$50 million annually from 2017 to 2021. These bond sales will provide a sufficient level of available funds to continue the District’s Capital Improvement Program, including the construction of the Tunnel and Reservoir/CUP Plan (Chicago Underflow Plan). By law, the District may separate the funding of its projects into “Limited” and “Unlimited Bonds.” This funding will be used in conjunction with federal appropriations from the Army Corps of Engineers to support a major portion of the McCook reservoir projects.

The District has agreements with the Army Corps of Engineers to share the funding costs of the CUP reservoirs. The District also had language inserted into the Water Resources Development Act calling for reimbursement of funds for these projects. Due to the current federal fiscal climate, reimbursements are not expected in the near future and are not included in this projection.

The Construction Fund is used to finance modernization and rehabilitation projects and is funded primarily through annual property tax levies. Appropriations for this fund lapse at year-end and uncompleted projects must be reappropriated.

Initial estimates and schedules have been analyzed and compared to bond issuance authority and funding availability. The cash balance in the CIBF will accommodate the proposed projects through 2021. Effective January 1, 2011, the District’s non-



**Five-Year Financial Forecast, 2017-2021****October 11, 2016**

referendum bonding authority was extended through December 31, 2024. Extension of the authority was necessary for additional projects, including nutrient removal and effluent disinfection.

In 2017, the Process Facility Capital Planning and Technology Evaluation Group will continue to update the Master Plans and prioritize and size future capital projects ensuring the most effective use of the CIBF.

**Retirement, Debt Service, and Reserve Claim Funds**

The appropriation for the Retirement Fund will increase 12.7 percent from 2017 to 2018 and then is expected to level off from 2019-2021 due to the full implementation of legislative changes aimed at eliminating the unfunded pension liabilities. Due to a change in legislation, beginning in 2013, the tax levy is based on the fund's actuarially determined contribution requirement, but shall not exceed an amount equal to employee contributions of two years prior, multiplied by 4.19. The previous multiplier was 2.19, and employee contributions for employees who were fund members before January 1, 2011 increased one percent per year from nine percent in 2012 to 12 percent in 2015.

Debt Service Fund appropriations will increase an average of 1.2 percent annually over the period. Current debt service schedules, additional debt service requirements for new revolving fund loans, and anticipated bond sales in the years 2017 through 2021 will increase due to increased capital expenditures related to major plant expansion and system improvements, a disinfection project, TARP reservoir projects, and Stormwater Management Program projects. In 2016, the District issued \$100 million of General Obligation Capital Improvement Bonds and \$4.0 million in Qualified Energy Conservation Bonds, along with \$322.0 million in General Obligation Refunding Bonds that take advantage of low interest rates. The bonds provide partial financing for the ongoing new construction and rehabilitation program of the District and will mature over the years 2017 – 2045. The District's additional margin for "limited" bonds under the debt service extension base is roughly \$18.7 million. As stated earlier, recent legislative changes allow for an annual inflationary increase to the debt service tax extension limit beginning with the 2009 levy. The debt service extension base capacity is at approximately \$159.3 million.

The appropriation for the Reserve Claim Fund is expected to increase an average of 4.8 percent annually and is expected to continue in this manner. The Reserve Claim Fund is the District's self-insurance fund, and the annual appropriation equals all available resources in the fund. The projected annual increases, which are based on historical trends, will continue moving towards the fund's statutory limit, as established by the Board of Commissioners. Expenditures related to Workers' Compensation claims are low and stable due to an active safety education and enforcement program. In 2015, the District purchased insurance coverage for roughly \$10.5 billion in assets.

**TAX LEVY FORECASTS**

Overall tax levies are projected to increase an average rate of 4.1 percent annually over the five-year period. Efforts will be undertaken to adjust annual variability consistent with meeting our objectives. The District has been very successful in managing its financial resources to limit any increases in the overall tax levy, excluding Stormwater Management, to five percent with tax abatements since before the imposition of the Tax Cap. Projections of tax levies and revenue sources for the various District funds are as follows:

**Corporate Fund**

Tax levy projections for the Corporate Fund are expected to increase an average of 3.4 percent annually from 2017 – 2021. This fund provides for day-to-day operations and has diverse sources of revenue. Taxes account for 63.8 percent of Corporate Fund revenue. Other significant funding sources include industrial user charge fees, investment income, and land rentals. The funding from the user charge system, which by design recovers costs attributable to industrial users, is expected to continue to slowly decline over the next five years from \$47 million to \$43 million. Local governments, and chemical and food processing users pay the majority of user charge fees.

**Construction Fund**

The tax levy for the Construction Fund is \$17.0 million in 2017. Beginning in 2012, pay-as-you-go capital projects related to equipment replacement were moved from the Corporate and Capital Improvements Bond Funds to the Construction Fund. It is anticipated appropriations will range from \$17.0 million to \$25.8 million per year from 2017 – 2021.

**Stormwater Management Fund**

The Stormwater Management Fund levy is projected to increase as the District continues to address local flooding issues from \$40.9 million in 2017 to \$74.4 million in 2021. Regional stormwater management projects are being vetted for funding in 2017 and the following years.

**Retirement Fund**

The average increase projected for 2017 – 2021 is 0.7 percent for the Retirement Fund levy. In 2012, the Governor signed modifications to the District's pension plan into law. The provisions of Public Act 97-0894 are described in detail on page 555.

**Debt Service Fund**

The existing tax levies for the District's Debt Service Fund are based on six refunding bonds, 10 capital improvement bonds, and 49 State Revolving Fund (SRF) bonds. Additional projected capital improvement and SRF bond sales will be used to finance TARP and other capital projects. Debt service funds account for annual property tax levies and certain other revenues,

**Five-Year Financial Forecast, 2017-2021****October 11, 2016**

primarily investment income, that is used to finance the payment of interest and principal on general obligation bond issues. It is District policy to use excess investment income from bond issues to abate portions of the levy. The projected debt for the District during 2017 – 2021 appears on page 68. The District's outstanding bonds and ability to issue additional bonds are presented on pages 551 – 554.

**Reserve Claim and Working Cash Funds**

The tax levy for the Reserve Claim Fund is projected to range from \$5.9 million to \$6.3 million from 2017 – 2021. There is no levy planned for the working cash funds for this period. The District is authorized to levy a half-cent annually against taxable property for the Reserve Claim, Corporate, and Construction Working Cash funds. The Stormwater Working Cash Fund has no debt or tax levy authority. The increase projected for the Reserve Claim Fund levy is based on slow growth of EAV. The District maintains insurance for catastrophic coverage.

The District's Board of Commissioners may, by a two-thirds vote of all its members, transfer fund balances among its working cash funds. The Corporate, Stormwater, and Construction Working Cash Funds will remain sufficiently funded by transfers among the working cash funds, themselves.

**TAX RATE FORECASTS**

Forecasts of property tax rates are dependent on projected EAV. The estimated tax rates are calculated using the projected levy and EAV applicable for a particular tax year. Annual tax rate limits exist for the District's Corporate, Construction, Reserve Claim, and Working Cash Funds. The District's Corporate and Construction Funds annual tax rate limits are 41 and 10 cents, respectively. Adequate margins exist in both the Corporate and Construction Funds to extend taxes for District operations. A half-cent annual levy is allowed for the Reserve Claim, Corporate, and Construction Working Cash Funds. The Stormwater Management Fund can levy up to five cents and is not limited by the Tax Cap.

The rates are expected to increase primarily due to increases for stormwater management and debt service. Public Act 93-0715 limits the growth of residential property EAV to seven percent annually with a maximum individual property exemption of \$20,000. This law had only a marginal impact on the revenue for funds levying their maximum rate, e.g., the Reserve Claim Fund. The seven percent limit on residential EAV increases was effective 2004 through 2006. In 2007, Public Act 95-0644 renewed the seven percent Expanded Homeowner's Exemption for an additional assessment period with new maximum exemption amounts.

**SUPPORTING EXHIBITS**

The data presented to illustrate the projected financial status of the District is divided into six segments: Summary of All Funds, the Corporate Fund, Capital Improvements Funds, Debt Service, Program Distribution within Fund, and the Combined GAAP-Basis Balance Sheets for the Corporate Fund Group.

The graphs on page 64, and the tables on page 65, summarize the projected appropriations, property tax rates, and tax levies for all funds for the years 2017 – 2021. Historical comparisons can be made by reviewing the actual appropriations, tax rates, and levies for the years 2008 – 2017 on page 43.

Table II, on page 66 provides detailed revenue and tax rate projections, as well as appropriations by department and major categories for the Corporate Fund for 2017 – 2021. Corporate Fund appropriations and expenditures for the years 2008 – 2017 can be found on page 105.

Projections for revenues, tax rates, and appropriations for the Construction Fund for the years 2017 – 2021, appear on page 67, and projected appropriable resources and appropriations for the Capital Improvements Bond Fund appear on page 68. The table on the bottom of page 66 and the exhibits on page 69 present appropriation projections by major programs. A summary of actual and projected expenditures for both funds, for the years 2012 – 2021, can be found in the Capital Improvement Program Section, on page 338.

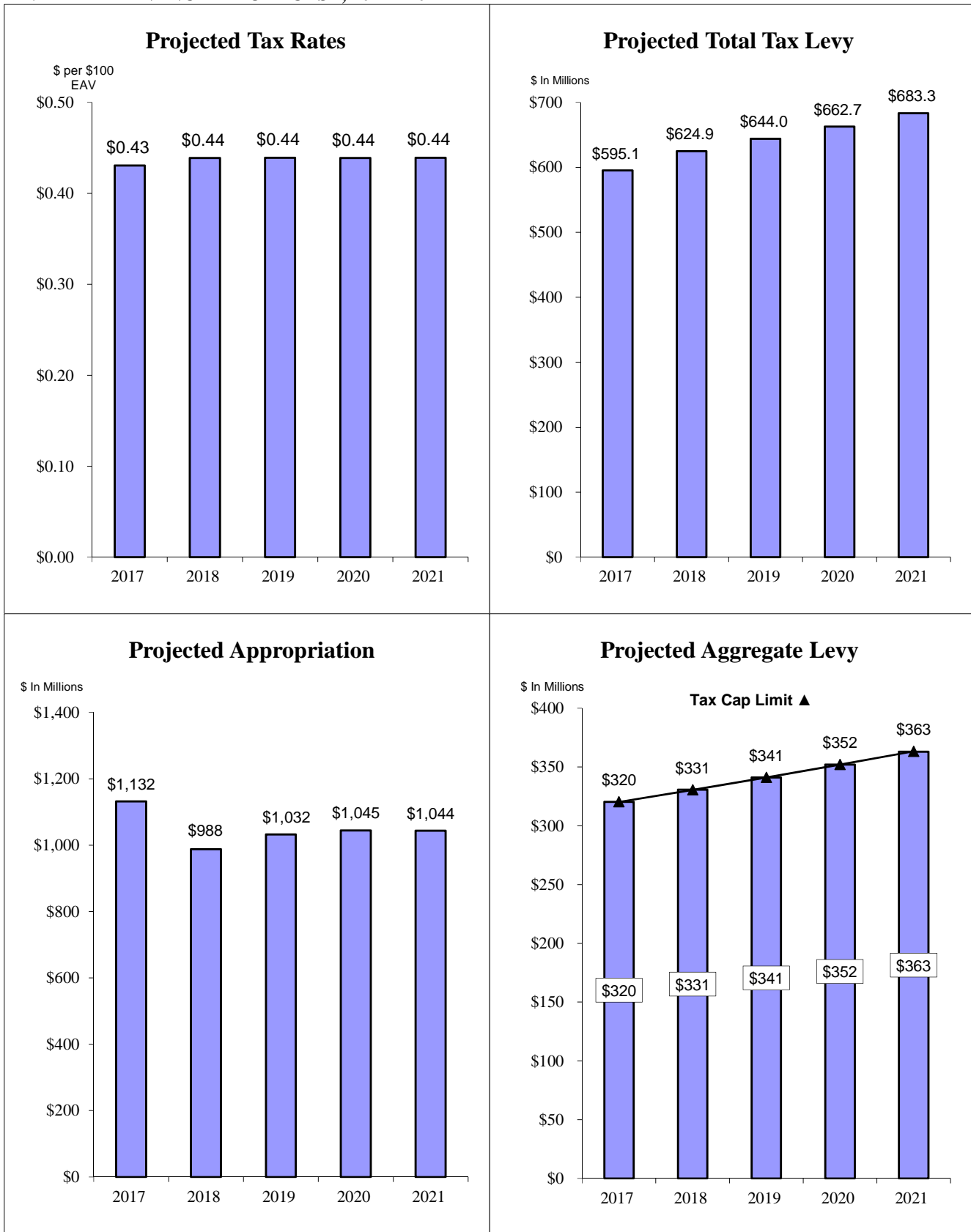
The balance sheet statement on page 70 is prepared on a GAAP-basis of accounting and is included to show the effect on the Corporate Fund Group, which is comprised of the Corporate, Corporate Working Cash, and Reserve Claim Funds. One of the most important factors in evaluating the financial position of a government is the balance sheet of the Corporate Fund Group, which relates total assets, liabilities, and fund equity. The strength of a government's financial position is shown in its total fund equity and unreserved, undesignated fund balance. The total fund equity projection for 2017 is \$298.4 million. This total fund equity projection includes future claims in the Reserve Claim Fund. The projection for the years 2017 – 2021 shows an average of \$308.5 million.

Very truly yours,



Shellie A. Riedle  
Budget Officer

**FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021**



**FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021**

TABLE I

<b>ALL FUNDS</b>					
<b>Projected Tax Rates</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Corporate	\$0.1620	\$0.1600	\$0.1611	\$0.1623	\$0.1645
Construction	0.0123	0.0157	0.0164	0.0171	0.0163
Stormwater Management	0.0296	0.0340	0.0388	0.0428	0.0478
Debt Service	0.1692	0.1727	0.1677	0.1628	0.1580
Retirement	0.0531	0.0521	0.0509	0.0496	0.0485
Reserve Claim	0.0043	0.0044	0.0043	0.0042	0.0040
<b>Total (\$ in cents)</b>	<b>\$0.4305</b>	<b>\$0.4389</b>	<b>\$0.4391</b>	<b>\$0.4387</b>	<b>\$0.4392</b>
Percentage Change		1.96%	0.06%	(0.10%)	0.11%
Projected tax rate per \$100 Equalized Assessed Valuation (EAV). Assumes 2016 EAV of \$134.213 billion increasing 3.0% in 2017 and 3.0% each year thereafter.					
<b>Projected Tax Levies</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Corporate	\$223,946	\$227,809	\$236,201	\$245,131	\$256,000
Construction	17,000	22,393	24,042	25,777	25,327
Stormwater Management	40,856	48,398	56,965	64,713	74,364
Debt Service-Existing	233,944	233,957	233,957	233,957	233,957
Debt Service-Proposed	-	11,928	11,928	11,928	11,928
Retirement	73,438	74,241	74,642	74,862	75,414
Reserve Claim	5,900	6,200	6,300	6,300	6,300
<b>Total Levy (\$ in thousands)</b>	<b>\$595,084</b>	<b>\$624,925</b>	<b>\$644,035</b>	<b>\$662,668</b>	<b>\$683,290</b>
Percentage Change		5.01%	3.06%	2.89%	3.11%
<b>Aggregate Levy (\$ in thousands)</b>	<b>\$320,284</b>	<b>\$330,642</b>	<b>\$341,185</b>	<b>\$352,070</b>	<b>\$363,042</b>
Percentage Change		3.23%	3.19%	3.19%	3.12%
<b>Projected Annual Appropriations</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Corporate	\$367,062	\$376,023	\$381,285	\$388,368	\$394,962
Capital Improvements Bond	348,037	178,413	204,243	183,819	176,599
Construction	33,853	26,887	26,140	27,738	26,925
Stormwater Management	44,997	51,303	60,193	68,572	78,718
Debt Service-Existing	227,761	224,293	219,445	207,236	205,440
Debt Service-Proposed	-	7,614	15,653	41,933	32,623
Retirement	79,505	89,604	90,583	91,073	91,341
Reserve Claim	30,617	33,600	34,700	35,800	36,900
<b>Total Appropriation (\$ in thousands)</b>	<b>\$1,131,832</b>	<b>\$987,738</b>	<b>\$1,032,242</b>	<b>\$1,044,540</b>	<b>\$1,043,508</b>
<b>Projected Positions</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Corporate	1,898	1,896	1,895	1,894	1,892
Stormwater Management	57	56	56	56	56
<b>Total Positions</b>	<b>1,955</b>	<b>1,952</b>	<b>1,951</b>	<b>1,950</b>	<b>1,948</b>

Note: Totals are rounded.



## FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021

TABLE II

<b>CORPORATE FUND</b>						<b>% average annual change</b>
<b>Five-Year Revenue and Tax Rate Projections</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2017 - 2021</b>
Property Taxes	\$216,108	\$219,835	\$227,934	\$236,552	\$247,040	3.41%
Personal Property Replacement Tax	18,164	19,084	18,982	18,926	18,785	0.87%
User Charge	47,000	46,000	45,000	44,000	43,000	(2.20%)
Investment Income	600	1,700	2,200	2,300	2,300	54.32%
Land Rentals	19,000	19,500	20,000	20,500	21,000	2.53%
Sewer Permits	900	945	992	1,042	1,094	5.00%
Miscellaneous	12,521	13,147	13,607	14,083	14,576	3.88%
Net Assets Appropriable	135,931	132,915	116,586	104,051	93,864	(8.76%)
Net Assets Available for Future Use	(83,162)	(77,103)	(64,016)	(53,086)	(46,698)	(13.34%)
<b>Total Appropriable Resources (\$ in thousands)</b>	<b>\$367,062</b>	<b>\$376,023</b>	<b>\$381,285</b>	<b>\$388,368</b>	<b>\$394,962</b>	<b>1.85%</b>
<b>Projected Equalized Assessed Valuation (EAV)</b> (Based on 2015 EAV, assumes 3.0% increase for 2016 and then 3.0% annually)	\$138.240 billion	\$142.388 billion	\$146.659 billion	\$151.059 billion	\$155.591 billion	
Projected Tax Rate Cents per \$100 EAV	16.2¢	16.0¢	16.1¢	16.2¢	16.5¢	
Gross Levy - assumes 3.5% uncollectible.	\$223,946	\$227,809	\$236,201	\$245,131	\$256,000	
<b>Projected Appropriations by Major Categories</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2017 - 2021</b>
Employee Cost - Salaries	\$198,179	\$202,142	\$204,164	\$206,205	\$208,267	1.25%
Employee Cost - Health Care	41,705	46,686	49,958	54,836	59,007	9.08%
Other Postemployment Benefits Trust	5,000	5,000	5,000	5,000	5,000	0.00%
Professional Services	5,854	5,913	5,972	6,031	6,092	1.00%
Energy Cost	39,966	40,365	39,558	38,767	38,864	(0.69%)
Chemicals	13,734	13,717	13,752	13,759	13,766	0.06%
Materials & Supplies	10,985	11,070	11,181	11,293	11,405	0.94%
Solids Disposal	11,033	11,019	10,798	10,582	10,371	(1.53%)
Contracted Solids Disposal	3,204	3,220	3,236	3,253	3,269	0.50%
Computer Systems & Telecommunications	8,378	8,803	9,540	9,963	10,240	5.17%
Repairs to Structures & Equipment	10,736	10,002	9,903	9,772	9,538	(2.89%)
Contractual Services	16,753	16,408	16,440	17,017	17,142	0.59%
Machinery & Equipment	645	718	753	791	831	6.56%
Real Estate Taxes	890	960	1,030	1,100	1,170	7.08%
<b>Total (\$ in thousands)</b>	<b>\$367,062</b>	<b>\$376,023</b>	<b>\$381,285</b>	<b>\$388,368</b>	<b>\$394,962</b>	<b>1.85%</b>
<b>Projected Appropriations by Department</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2017 - 2021</b>
Board of Commissioners	\$4,511	\$4,575	\$4,619	\$4,611	\$4,601	0.50%
General Administration	18,545	18,158	18,190	18,284	18,246	(0.40%)
Monitoring & Research	31,030	31,571	31,560	31,544	31,494	0.37%
Procurement & Materials Management	9,534	9,940	9,644	9,702	9,655	0.35%
Human Resources	59,032	63,192	66,164	72,369	75,698	6.43%
Information Technology	17,283	17,712	18,494	18,948	19,253	2.74%
Law	8,375	8,148	8,246	8,337	8,422	0.15%
Finance	3,656	3,748	3,712	3,748	3,827	1.16%
Engineering	28,589	29,215	29,459	29,934	30,663	1.77%
Maintenance & Operations	186,506	189,764	191,197	190,890	193,103	0.88%
<b>Total (\$ in thousands)</b>	<b>\$367,062</b>	<b>\$376,023</b>	<b>\$381,285</b>	<b>\$388,368</b>	<b>\$394,962</b>	<b>1.85%</b>
<b>Projected Appropriation Distribution by Program</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2017 - 2021</b>
1000 Collection	\$56,052	\$55,210	\$55,650	\$56,235	\$56,857	0.36%
2000 Treatment	78,088	80,110	80,125	80,340	80,879	0.89%
3000 Solids Processing	43,742	43,581	43,801	44,530	44,595	0.49%
4000 Flood & Pollution Control	39,232	40,186	40,224	40,344	40,493	0.80%
5000 Solids Disposal	21,625	24,350	25,231	24,823	25,110	3.94%
7000 General Support	128,323	132,587	136,254	142,096	147,028	3.46%
<b>Total (\$ in thousands)</b>	<b>\$367,062</b>	<b>\$376,023</b>	<b>\$381,285</b>	<b>\$388,368</b>	<b>\$394,962</b>	<b>1.85%</b>

Note: Totals are rounded.

## FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021

TABLE III

<b>CONSTRUCTION FUND</b>					
<b>Five-Year Revenue and Tax Rate Projections</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Property Taxes	\$16,405	\$21,609	\$23,201	\$24,874	\$24,441
Personal Property Replacement Tax	-	-	-	-	-
Equity Transfer	7,000	-	-	-	-
Investment Income & Miscellaneous Revenue	845	200	250	250	265
Net Assets Appropriable	9,603	5,078	2,689	2,614	2,219
<b>Total Revenue &amp; Appropriable Resources (\$ in thousands)</b>	<b>\$33,853</b>	<b>\$26,887</b>	<b>\$26,140</b>	<b>\$27,738</b>	<b>\$26,925</b>
Projected Equalized Assessed Valuation (EAV) (Based on 2015 EAV, assumes 3.0% increase for 2016 and then 3.0% annually thereafter)	\$138.240 billion	\$142.388 billion	\$146.659 billion	\$151.059 billion	\$155.591 billion
Projected Tax Rate Cents per \$100 of EAV	1.2¢	1.6¢	1.6¢	1.7¢	1.6¢
Gross Levy - assumes 3.5% uncollectible rate.	\$17,000	\$22,393	\$24,042	\$25,777	\$25,327
<b>Projected Appropriations</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Capital Projects	\$27,053	\$20,946	\$19,329	\$19,583	\$17,533
Professional Services	5,388	4,014	4,820	5,850	6,300
Other Charges	1,412	1,928	1,991	2,305	3,092
<b>Total (\$ in thousands)</b>	<b>\$33,853</b>	<b>\$26,887</b>	<b>\$26,140</b>	<b>\$27,738</b>	<b>\$26,925</b>
<b>Projected Appropriation Distribution by Program</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
1000 Collection	\$3,753	\$3,230	\$4,450	\$5,262	\$5,428
2000 Treatment	16,883	12,539	10,298	11,087	10,061
3000 Solids Processing	1,545	2,533	3,250	3,483	3,483
4000 Flood & Pollution Control	7,882	5,010	3,655	3,375	3,375
5000 Solids Disposal	\$650	\$475	\$499	\$524	\$550
7000 General Support	3,140	3,100	3,988	4,008	4,028
<b>Total (\$ in thousands)</b>	<b>\$33,853</b>	<b>\$26,887</b>	<b>\$26,140</b>	<b>\$27,738</b>	<b>\$26,925</b>
<b>STORMWATER MANAGEMENT FUND</b>					
<b>Five-Year Revenue and Tax Rate Projections</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Property Taxes	\$39,426	\$46,704	\$54,971	\$62,448	\$71,761
Investment Income & Miscellaneous Revenue	-	100	100	100	100
Net Assets Appropriable	5,571	4,500	5,121	6,024	6,857
<b>Total Revenue &amp; Appropriable Resources (\$ in thousands)</b>	<b>\$44,997</b>	<b>\$51,303</b>	<b>\$60,193</b>	<b>\$68,572</b>	<b>\$78,718</b>
Projected EAV (Based on 2015 EAV, assumes 3.0% increase for 2016 and then 3.0% annually)	\$138.240 billion	\$142.388 billion	\$146.659 billion	\$151.059 billion	\$155.591 billion
Projected Tax Rate Cents per \$100 of EAV	3.0¢	3.4¢	3.9¢	4.3¢	4.8¢
Gross Levy - assumes 3.5% uncollectible rate.	\$40,856	\$48,398	\$56,965	\$64,713	\$74,364
<b>Projected Appropriations</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Employee Cost - Salaries	\$5,951	\$6,070	\$6,131	\$6,192	\$6,254
Employee Cost - Health Care	580	609	640	672	705
Contractual Services	9,701	8,181	13,376	15,620	13,925
Capital Projects	5,439	10,425	13,328	20,534	24,654
Other Charges	17,557	17,231	14,884	12,123	14,558
Equity Transfer (Debt Service for Alternative Revenue Bonds)	5,769	8,787	11,834	13,431	18,622
<b>Total (\$ in thousands)</b>	<b>\$44,997</b>	<b>\$51,303</b>	<b>\$60,193</b>	<b>\$68,572</b>	<b>\$78,718</b>
<b>Projection Appropriation Distribution by Program</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
4000 Flood & Pollution Control	\$44,997	\$51,303	\$60,193	\$68,572	\$78,718
<b>Total (\$ in thousands)</b>	<b>\$44,997</b>	<b>\$51,303</b>	<b>\$60,193</b>	<b>\$68,572</b>	<b>\$78,718</b>

Note: Totals are rounded.

**FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021**

TABLE IV

<b>CAPITAL IMPROVEMENTS BOND FUND*</b>					
<b>Appropriable Resources (Cash)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Bond Sales - Limited	\$ -	\$ -	\$ -	\$ -	\$150,000
Bond Sales - Unlimited	-	-	-	-	50,000
Bond Sales - Unlimited Stormwater Management	50,000	50,000	50,000	50,000	50,000
State Revolving Loan Fund Receipts	180,000	200,000	200,000	200,000	200,000
Investment Income & Grant Revenue	14,135	13,935	14,335	15,200	15,700
Beginning Cash	308,538	315,903	312,248	312,703	400,273
Total Assets Appropriable (\$ in thousands)	\$552,673	\$579,838	\$576,583	\$577,903	\$865,973
Expenditures	\$236,770	\$267,590	\$263,880	\$177,630	\$146,710
Ending Cash (\$ in thousands)	\$315,903	\$312,248	\$312,703	\$400,273	\$719,263
<b>Projected Appropriations by Major Categories</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Professional Consulting Services	\$14,442	\$8,950	\$8,950	\$8,700	\$8,784
Capital Projects	323,754	165,082	190,693	170,406	162,102
Other Charges	9,841	4,381	4,600	4,713	5,714
Total (\$ in thousands)	\$348,037	\$178,413	\$204,243	\$183,819	\$176,599
<b>Projected Appropriation Distribution by Program</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
1000 Collection	\$9,695	\$49,520	\$33,304	\$35,500	\$24,000
2000 Treatment	22,000	18,950	68,922	34,700	32,071
3000 Solids Processing	39,325	10,100	11,100	10,698	31,909
4000 Flood & Pollution Control	270,126	98,593	89,667	101,671	87,370
5000 Solids Disposal	4,675	1,000	1,000	1,000	1,000
7000 General Support	2,216	250	250	250	250
Total (\$ in thousands)	\$348,037	\$178,413	\$204,243	\$183,819	\$176,599

\*The Capital Improvements Bond Fund is appropriated on an obligation basis. Expenditures are expected to be disbursed over the term of the projects funded.

<b>DEBT SERVICE FUNDS</b>					
<b>Projected Debt</b>					
<b>EXISTING DEBT</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
January 1 Debt	\$2,752,945	\$2,872,558	\$3,015,685	\$3,150,712	\$3,277,352
Annual Current Debt Retirement	(110,387)	(103,363)	(103,437)	(102,264)	(93,705)
Net Debt	\$2,642,558	\$2,769,195	\$2,912,249	\$3,048,448	\$3,183,647
<b>PROPOSED FUTURE DEBT</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Annual Sale of Bonds:					
Capital Bonds - Limited	\$ -	\$ -	\$ -	\$ -	\$150,000
Capital Bonds - Unlimited	-	-	-	-	50,000
Alternate Bonds - Unlimited Stormwater	50,000	50,000	50,000	50,000	50,000
State Revolving Fund Bond Issues	180,000	200,000	200,000	200,000	200,000
Future Debt Retirement	-	(3,510)	(11,537)	(21,097)	(30,383)
Proposed New Debt (\$ in thousands)	\$230,000	\$246,490	\$238,463	\$228,903	\$419,617
<b>PROJECTED DEBT OUTSTANDING</b>	\$2,872,558	\$3,015,685	\$3,150,712	\$3,277,352	\$3,603,264
Gross Levy for Existing Debt	\$233,887	\$233,901	\$233,901	\$233,901	\$233,901
Gross Levy for Future Debt	-	11,928	11,928	11,928	11,928
Total Debt Levy	\$233,944	\$245,885	\$245,885	\$245,885	\$245,885
Tax Rate (cents)	16.9¢	17.3¢	16.8¢	16.3¢	15.8¢
Forecasted Stormwater Alternative Revenue Abatement**	(\$5,980)	(\$11,525)	(\$11,525)	(\$17,069)	(\$23,777)
Projected Levy After Abatement	\$227,964	\$234,360	\$234,360	\$228,816	\$222,108
Projected Equalized Assessed Valuation (EAV)***	\$138.240	\$142.388	\$146.659	\$151.059	\$155.591
	billion	billion	billion	billion	billion

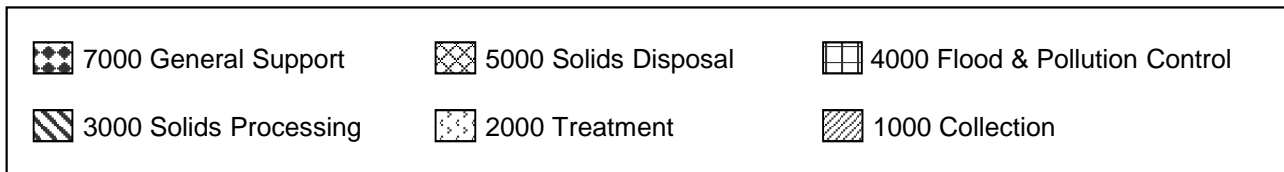
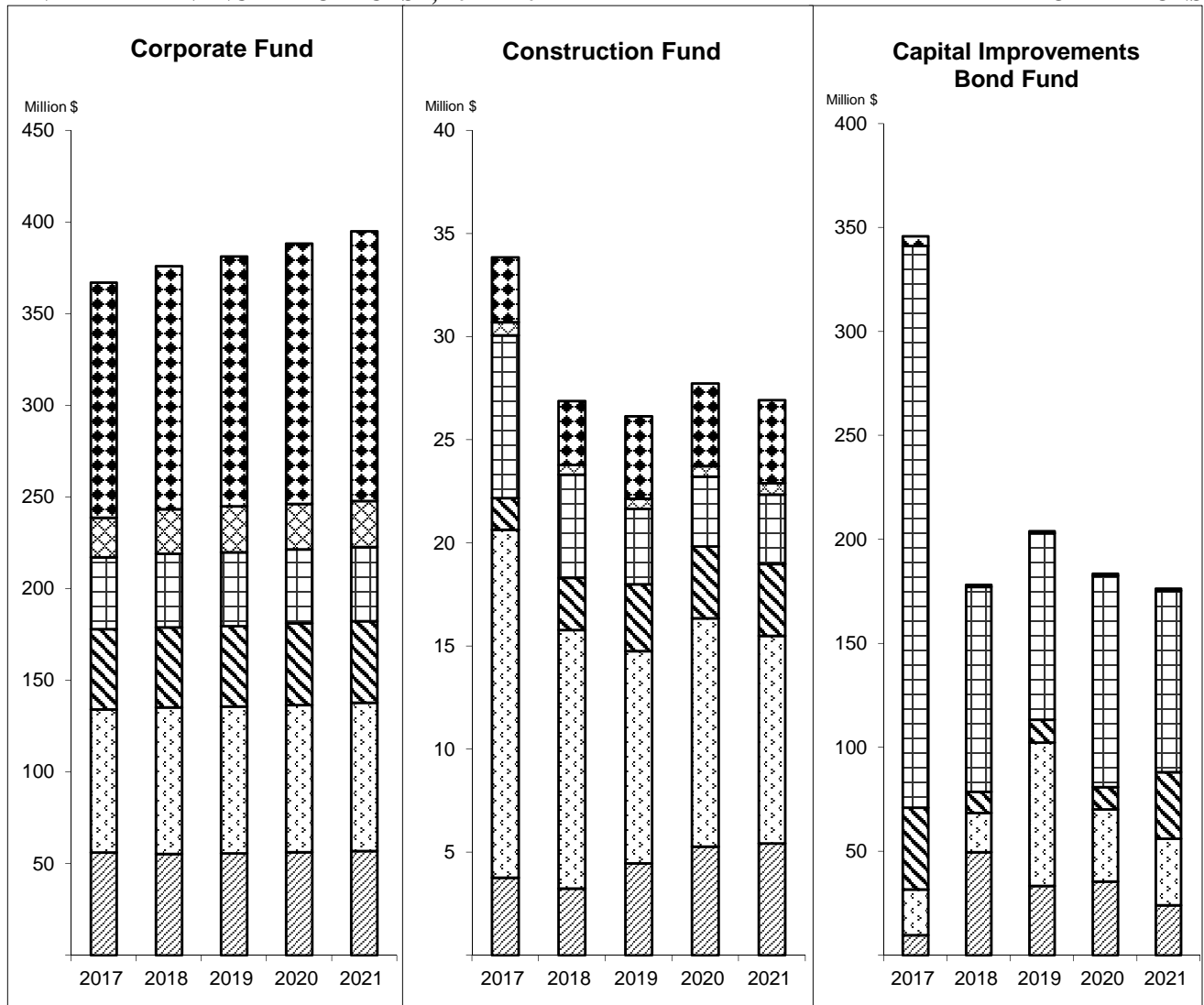
\*\*As part of the plan of financing, it is intended and anticipated that tax revenues deposited in the Stormwater Fund be transferred to the Bond Fund and used to abate taxes levied for the program.

Note: Totals are rounded.

\*\*\*Assumes a 3.0% increase in 2016, and a 3.0% increase annually thereafter.

**FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021**

**APPROPRIATIONS**



This set of stacked bar charts is a restatement of each fund's appropriation table. The relatively steady proportions across all programs within the Corporate Fund reflect the District's consistent view of its objectives in the near term. The most significant aspect of the Construction Fund involves increasing its use for smaller pay-as-you-go capital projects administered by the Maintenance & Operations Department. The fluctuations in the Capital Improvements Bond Fund's (CIBF) appropriations represent the award of major Master Plan and disinfection projects. The CIBF operates on a full obligation basis and is the only fund where the encumbered appropriations do not lapse at the fiscal year end.

**FIVE-YEAR FINANCIAL FORECAST, 2017 - 2021**  
 Combined GAAP Balance Sheets - General Corporate Fund  
 (in Thousands)

Assets	2017	2018	2019	2020	2021
Cash	\$ 60,103	\$ 61,305	\$ 62,531	\$ 63,782	\$ 65,057
Restricted Cash	2,223	2,268	2,313	2,359	2,407
Investments	186,278	190,004	193,804	197,680	201,634
Receivables:					
Property Taxes	268,376	272,401	276,487	280,635	284,844
Less Allowance for Uncollectible Taxes	36,838	37,390	37,951	38,520	39,098
Net Property Taxes Receivable	231,538	235,011	238,536	242,114	245,746
Personal Property Replacement Tax	-	-	-	-	-
User Charges	830	855	880	907	934
Miscellaneous	9,801	9,997	10,197	10,400	10,608
Inventories	39,192	39,137	38,937	38,807	39,044
<b>Total Assets</b>	<b>\$ 529,964</b>	<b>\$ 538,576</b>	<b>\$ 547,198</b>	<b>\$ 556,049</b>	<b>\$ 565,430</b>
<b>Liabilities and Fund Equity</b>					
<b>Liabilities:</b>					
Deferred Tax Revenue	\$ 197,156	\$ 200,114	\$ 203,115	\$ 206,162	\$ 209,254
Accounts Payable and Other Liabilities	34,372	35,059	35,760	36,476	37,205
Due to Other Funds	-	-	-	-	-
<b>Total Liabilities</b>	<b>\$ 231,528</b>	<b>\$ 235,173</b>	<b>\$ 238,876</b>	<b>\$ 242,638</b>	<b>\$ 246,459</b>
<b>Fund Equity:</b>					
Fund Balances					
Non-spendable - Inventory	\$ 37,698	\$ 37,736	\$ 37,774	\$ 37,811	\$ 37,849
Restricted - Working Cash	287,280	291,590	295,963	300,403	304,909
Real Estate Escrow	3,549	3,553	3,556	3,560	3,563
Reserve Claim	26,035	26,295	26,558	26,824	27,092
Designated for Future Claims	-	-	-	-	-
Unreserved:					
Undesignated	(56,126)	(55,771)	(55,529)	(55,186)	(54,443)
<b>Total Fund Equity</b>	<b>\$ 298,437</b>	<b>\$ 303,403</b>	<b>\$ 308,322</b>	<b>\$ 313,412</b>	<b>\$ 318,970</b>
<b>Total Liabilities and Fund Equity</b>	<b>\$ 529,964</b>	<b>\$ 538,576</b>	<b>\$ 547,198</b>	<b>\$ 556,049</b>	<b>\$ 565,430</b>

Note: Totals are rounded.

# SECTION III

## FINANCIAL STATEMENTS BY FUND

In this section, the financial structure of the District is presented with an explanation of the funds used, the accounting basis employed, and the relationships among the various funds. All financial statements, which Illinois Compiled Statutes require to be included in the Budget, are presented in this section. These statements and schedules provide full disclosure of assets and liabilities.

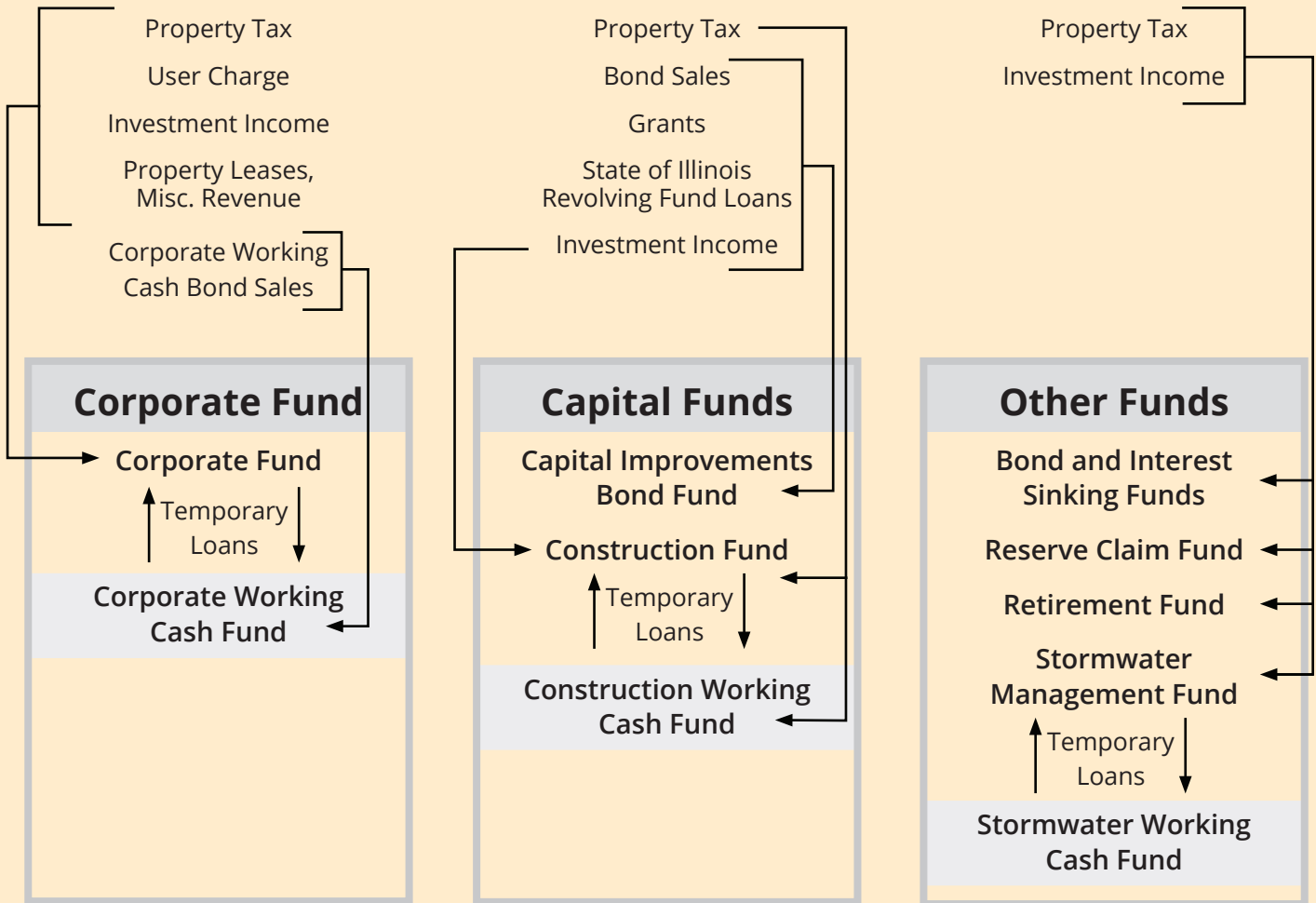
The financial statements are first presented in summary, with an overall financial narrative, then with summary statements of revenue and expenditures for 2015 through the Budget Year 2017. Consolidated statements of taxes receivable, providing historical data on tax levies, are included in this section. A consolidated Appropriation for Liabilities statement is presented, which identifies and provides an appropriation for unpaid bills, contracts, and other liabilities. These liabilities are then subtracted from current assets to determine assets available for appropriation.

Major fund category narratives are presented for the Corporate Fund, Capital Funds, and Other Funds, which discuss revenue sources, trends in revenue and expenditures, fiscal/financial policies, and other elements of these funds. Estimated balance sheets, statements of appropriable revenue, and statements of financial sources are then presented individually for each fund.

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# District's Flow of Funds Structure

## Revenue Sources



## Uses of Funds

General Operational Expenditures

Permanent Facilities  
 Environmental Facilities  
 Stormwater Management Projects  
 Other Capital Expenditures

Principal and Interest on Bond Issues  
 Payments for Claims and Damages  
 Employee Pension Payments  
 Stormwater Management Expenditures

Note: Working Cash can be transferred between other Working Cash Funds.

## FINANCIAL NARRATIVE

### FUND STRUCTURE, PURPOSE, AND ACCOUNTING BASIS

The financial structure of the Metropolitan Water Reclamation District of Greater Chicago (District) is organized on a fund accounting basis. Each statutorily authorized fund maintains a self-balancing set of accounts that are reported separately in their own financial statements. The District's use of funds ensures that public money is spent appropriately and within the amounts authorized. Established funds account for the different types of activities and legal restrictions that are associated with a particular government function. The use of funds and the budgeting, accounting, and auditing that are associated with this type of structure are governed by Illinois Compiled Statutes and Generally Accepted Accounting Principles (GAAP), as determined by the Governmental Accounting Standards Board (GASB).

The District uses the following funds to control its financial activities:

- Corporate
- Capital Improvements Bond
- Construction
- Stormwater Management
- Reserve Claim
- Corporate Working Cash
- Bond Redemption & Interest (Debt Service)
- Construction Working Cash
- Stormwater Working Cash
- Retirement

The chart on the facing page shows the flow of money within and between these funds.

The Corporate Fund is used to pay for the operations and general expenditures of the District, not specifically chargeable to other funds. The Corporate Working Cash Fund consists of accounts maintained for the sole purpose of making temporary loans to the Corporate Fund in anticipation of tax collections. The accounts of the Corporate, Corporate Working Cash, and Reserve Claim Funds are combined and reported as the General Corporate Fund for financial reporting purposes.

The capital project funds account for resources used for the acquisition of capital facilities. The Capital Improvements Bond Fund is used for improvements, replacements, and additions to designated environmental improvement projects and accounts for the proceeds of bonds authorized by the Illinois General Assembly, grant revenues, and other revenues. Beginning in 2014, this fund is also used for larger stormwater capital projects utilizing alternate bond proceeds. The Construction Fund is used as a pay-as-you-go capital fund for the construction, replacement, or remodeling of long-term assets used in the principal functions of the District, funded primarily by a property tax levy. The Construction Working Cash Fund consists of accounts maintained for the sole purpose of making temporary loans to the Construction Fund in anticipation of tax collections. The accounts of the Construction and Construction Working Cash Funds are combined and reported as the Construction Fund for financial reporting purposes.

The Bond Redemption & Interest Fund is used for the payment of interest and redemption of general obligation bond issues. It accounts for property tax levies and certain other revenues, such as interest on investments. A subfund is created for each bond issue.

The Reserve Claim Fund is used for the payment of claims, awards, losses, or liabilities that might be imposed against the District and for the emergency replacement or repair of damaged District property. It accounts for a property tax levy and other revenues. As stated above, the accounts of the Reserve Claim Fund are included in the General Corporate Fund for financial reporting purposes.

The Stormwater Management Fund was established in 2005 by an act of the Illinois state legislature. The purpose of this fund is to account for property tax levies and certain other revenues, such as interest on investments and permit fees, which are used for planning, management, and implementation activities relating to stormwater, flood, and floodwater management in Cook County, including areas outside of the District's corporate boundaries. The Stormwater Working Cash Fund, established in 2005 by an act of the Illinois General Assembly, consists of accounts maintained for the sole purpose of making temporary loans to the Stormwater Management Fund in anticipation of tax collections. The accounts of the Stormwater Management Fund and the Stormwater Working Cash Fund are combined and reported as the Stormwater Management Fund for financial reporting purposes.

The Retirement Fund is used to fund pension costs in accordance with statutory provisions and to account for a specific property tax levy. The taxes are collected by the District and paid to the MWRD Retirement Fund, a pension trust fund.

### BASIS OF BUDGETING AND ACCOUNTING

The budget is prepared using a cash basis of accounting for revenue recognition and an accrual basis for recording expenditures, as prescribed by Illinois Compiled Statutes. Revenues are recognized when received in cash, and expenditures are recorded at the time the liability is incurred, except for principal and interest on long-term debt, compensated absences, claims, judgments, and arbitrage, which are recognized when due and payable.

Encumbrance accounting is used in the budgetary process for all funds. Appropriations lapse at year end for the Corporate, Stormwater Management, Reserve Claim, Construction, Retirement, and Bond Redemption & Interest Funds. Appropriations for the Capital Improvements Bond Fund use a full encumbrance (obligation) method of budgetary accounting, which means



**FINANCIAL NARRATIVE (continued)**

that appropriations lapse at year-end only to the extent of the unencumbered balances. The appropriation for the Capital Improvements Bond Fund is adjusted to carry forward the open value of encumbrances from the prior year.

All of the funds in the previous section are defined as governmental-type funds, except for the pension trust fund. For GAAP purposes, the governmental-type funds are accounted for on a spending or “financial flow” measurement focus using the modified accrual basis of accounting, which means that only current assets and liabilities are generally included on the balance sheets. The reported fund balances (net current assets) are considered a measure of “available spendable resources.”

The Comprehensive Annual Financial Report of the District is prepared on a GAAP basis. GASB Statement Number 34 became effective for the 2002 fiscal year, and the District is in compliance with all of its provisions. The District is using the modified approach for assessing infrastructure, except for Tunnel and Reservoir Plan (TARP) deep tunnels and drop shafts, which will be depreciated. The District uses specific budgetary accounts to record the repair or preservation of existing capital assets, in addition to the construction of new assets or enhancements of existing capital assets. Inventory is accounted for on the purchase method for budgetary purposes and on the consumption method for GAAP financial reporting.

The District is a special district government created by the State of Illinois. Its powers and authority, in regard to revenue sources, are generally restricted to those powers granted by applicable state statutes. The following exhibits, 1 - 6, are derived from the summary of revenue and expenditures found on pages 76 - 78 of the 2017 Budget and similar summaries in prior years' budgets. This is a summary of all District funds.

**TAX SOURCES**

The main source of revenue for the District is ad valorem property taxes. The authority to levy property taxes for the various funds generally specifies a tax rate limit per hundred dollars of property value, which when applied, yields a maximum amount of money which can be levied or collected against property owners. All District funds, with the exception of the District's Capital Improvements Bond Fund, derive their revenues primarily from property taxes. Approximately 52.8 percent of the 2017 appropriation is supported by property taxes. Taxes levied in one year are collected in the next year, and Working Cash Funds for the Corporate, Construction, and Stormwater Management Funds provide temporary financing while awaiting property tax receipts. Net Tax Sources displayed in Exhibit 1 reflect only property tax revenue for the Corporate, Construction, and Stormwater Management Funds. The estimate for uncollectible taxes for 2017 is 3.5 percent, based on annual review of prior years' tax collections.

A personal property replacement tax provides income tax revenue from corporations, partnerships, and the invested capital of public utilities to replace the personal property taxes, which were once received from these sources. These revenues are received directly from the State of Illinois. Revenue from this source is estimated at \$35.4 million for 2017, a decrease of \$2.5 million from the 2016 Adjusted Budget or 6.6 percent. This revenue source typically trends with the state of the economy.

Exhibit 1 presents revenue from net tax sources for the years 2013 - 2017. Due to the enactment of Tax Cap laws in 1995, future increases in property tax levies, except for debt service and the Stormwater Management Fund, are limited to the lesser of 5.0 percent or the change in the national Consumer Price Index (CPI), plus new property. For 2017, an increase of 3.2 percent is forecast, consisting of an estimated 2.5 percent change in the CPI plus an estimated 0.7 percent for new development and newly annexed properties. For 2017, the District is estimated to be near the Tax Cap limit. Impacts of the Tax Cap laws are discussed in the fund narratives and budget foreword.

**GRANTS AND LOANS**

Federal and state grants, and state loans contribute to finance the District's capital programs. For 2017, \$180.0 million in State Revolving Fund (SRF) loan revenue and \$11.1 million in federal grants is budgeted. In the past, the District has been successful in obtaining some grant funding and will continue to pursue grants for additional TARP projects. Exhibit 2 shows the grants and loans for the years 2013 - 2017.

The District anticipates receiving an annual allocation of up to \$200.0 million in State Revolving Fund loans in each of the next four years.

Exhibit 1

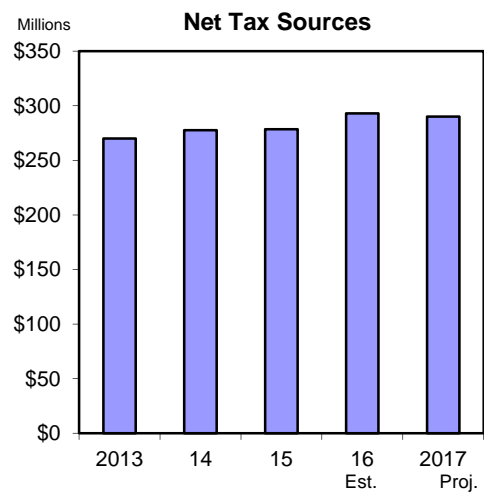
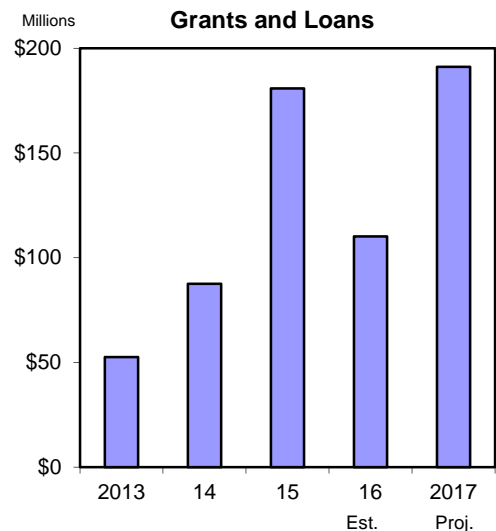


Exhibit 2



## FINANCIAL NARRATIVE (continued)

### BOND SALES

The District's Capital Program is financed primarily with general obligation bond sale proceeds. Bonds are used to provide necessary revenue for capital project cash flows. The District issued \$104 million of General Obligation Capital Improvement Bonds, 2016 Series C, D, E, and F.

The 2016 Series E General Obligation Unlimited Tax Bonds were issued as “alternate bonds” pursuant to the Debt Reform Act. The 2016 Series E bonds will be paid by the District from the levy and collection of Stormwater Management tax receipts, which constitute a “revenue source” pledged as security for the payment of principal and interest on the bonds. Series F bonds are Qualified Energy Conservation Bonds to fund energy efficiency projects in the WRPs. In addition to the Capital Improvement Bonds, the District issued Refunding Bonds that will achieve in excess of \$120 million in savings on future debt service payments.

Tax Cap laws restrict the District’s non-referendum bonding authority to funding projects initiated prior to October 1, 1991, which generally include only TARP projects. However, Public Act 89-385 provided additional non-referendum authority to the District to authorize the issuance of “limited bonds.” In 1997, Public Act 090-485 was adopted and expands this “limited bond” authority by excluding bonds issued for TARP purposes from the tax extension limitation. The District’s limited bonds have sold successfully and will be used in the future. In 2003, Public Act 092-143 was passed to authorize the issuance of 30 year bonds. Public Act 092-726 extended the non-referendum bonding authority from December 31, 2006 to December 31, 2016, and Public Act 096-1308, effective January 1, 2011, extended the non-referendum bonding authority from December 31, 2016 to December 31, 2024.

The Capital Funds narrative on page 91 provides a more detailed discussion. The statement of outstanding bonds and statutory debt margin on pages 53 and 54 shows the District's strong position. The Five-Year Financial Forecast on pages 60 and 68 details future bond sale projections. Bond sales are summarized in Exhibit 3.

### PROPERTY, SERVICES, AND MISCELLANEOUS

Exhibit 4 summarizes revenue from property, services, and miscellaneous items. A major revenue source is the user charge system, which imposes a surcharge above property tax payments for commercial, industrial, and tax-exempt users of the sewage systems. Estimated user charge revenues in 2017 are \$47.0 million.

Land rentals, investment income, sewer permit fees, connection impact fees, and other revenues will provide an estimated \$45.0 million in 2017. Estimates for land rental revenues are based on existing and renegotiated leases. Investment income is based on projections of cash flow and interest rates for 2017. Interest rates on short-term securities are expected to remain stable or decrease slightly through 2017. Our investments are predominately short-term in nature. Sewer permit revenue estimates are based on anticipated development projects and 2016 rates. Connection impact fees were established in 1998 to require new service areas to contribute to the past investment in the District’s infrastructure.

### NET ASSETS APPROPRIABLE

Exhibit 5 shows the trend in net assets appropriable, which is primarily impacted by bond sales, expenditures for capital projects, and the reservation of future years’ principal and interest payments in the debt service funds. Net assets appropriable have been used to reduce future years’ taxes. Beginning in 2005, a portion of the projected Corporate Fund net assets was left unappropriated to maintain a fiscally sound fund balance. The negative

Exhibit 3

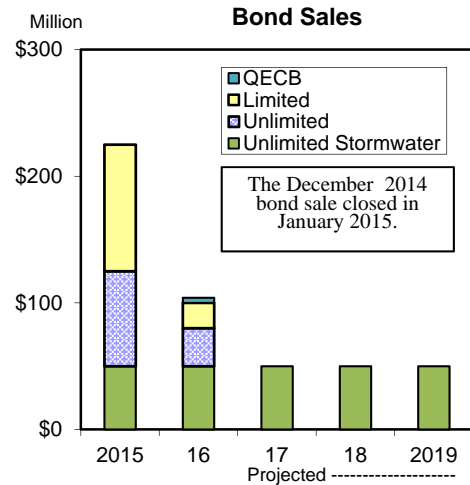
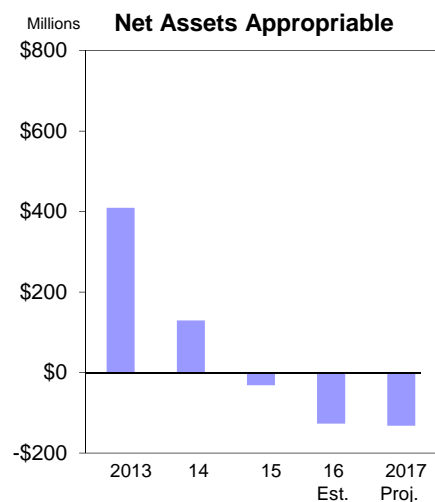


Exhibit 4



Exhibit 5



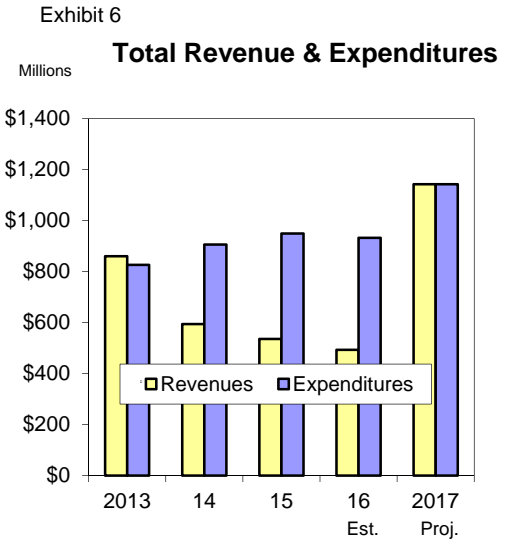
## FINANCIAL NARRATIVE (continued)

amounts in 2015 - 2017 are attributable to use of the obligation basis of budgetary accounting for the Capital Improvements Bond Fund and indicated that future bond sales or State Revolving Fund loans are necessary to finance projects.

### TOTAL REVENUES AND EXPENDITURES

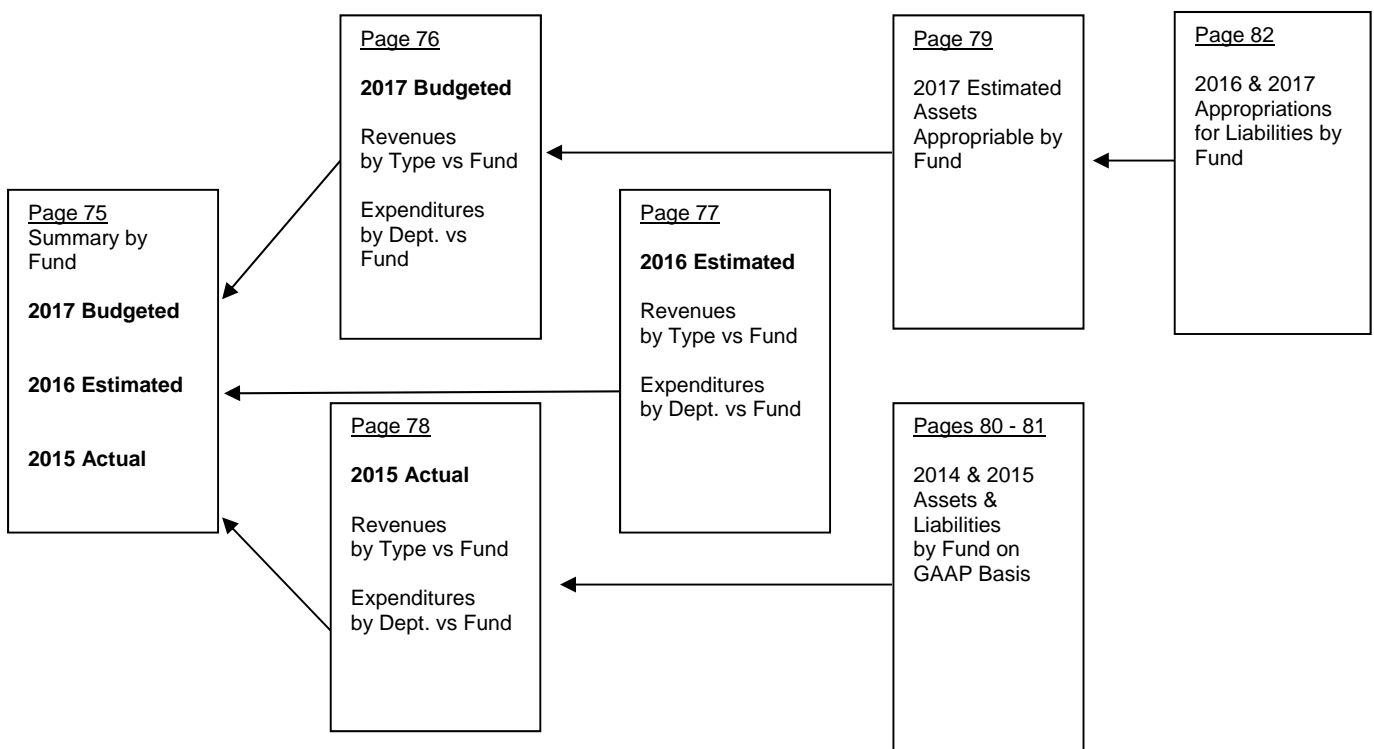
Exhibit 6 displays the relationship between revenues and expenditures. The difference between revenues and expenditures is primarily accounted for by bond sale proceeds to finance future payments for capital projects. In general, the Capital Improvements Bond Fund aside, a balance is maintained between revenues and expenditures to fully utilize net assets appropriate, therefore, limiting property taxes.

For 2017, a portion of the Corporate Fund projected net assets will remain unappropriated to ensure a fiscally responsible fund balance. District management and the financial markets view a Corporate Fund balance within the \$44 to \$55 million range as necessary to maintain financial stability in the face of economic uncertainties. This fund balance level is consistent with the level recommended by the Government Finance Officers Association. This strategy is an integral part of a long-term plan that also includes reductions of future expenditures to better match current revenues.



### SUMMARY FINANCIAL STATEMENTS

Summary financial statements presented on pages 75 - 78 provide comparisons of revenues and expenditures for all funds for the years 2015 - 2017. These statements provide a financial summarization by fund of the 2017 Budget as proposed, the estimated status at 2016 fiscal year-end, and the actual results of operations for fiscal year 2015. The relationships among the pages are diagramed below.



The table of taxes receivable on page 83 provides detailed data on property tax levies and tax receipts from 2012 to 2016. While 2012 through 2014 show high levels of collection, delayed refunds continue to be processed through the Property Tax Appeals Board and the Circuit Courts. Estimated refunds affecting levy years prior to 2012 are summarized.

Specific details about all revenue sources, assets, liabilities, and appropriable revenue are presented in the various funds' financial narratives and statements on pages 85 through 104.

**ALL FUNDS**  
**SUMMARY OF REVENUE, EXPENDITURES, AND NET ASSETS APPROPRIABLE (b)**  
**2017 BUDGETED, 2016 ESTIMATED, AND 2015 ACTUAL**

(In Thousands)

	<b>FUND</b>							
	<b>CORPORATE</b>	<b>CAPITAL IMPROVEMENTS BOND</b>	<b>CONSTRUCTION</b>	<b>STORMWATER MANAGEMENT</b>	<b>RETIREMENT (d)</b>	<b>BOND REDEMPTION &amp; INTEREST (d)</b>	<b>RESERVE CLAIM (d)</b>	<b>TOTAL</b>
<b>2017 BUDGETED</b>								
<b>Net Assets Appropriable</b>	\$ 135,931.3	\$ (617,850.8)	\$ 10,405.4	\$ 7,000.1	\$ 79,505.0	\$ 222,656.5	\$ 30,417.1	\$ (131,935.4)
<b>Net Assets Appropriated</b>	\$ 46,832.8	\$ (617,850.8)	\$ 10,405.4	\$ 7,000.1	\$ 79,505.0	\$ 222,656.5	\$ 30,417.1	\$ (221,033.9)
<b>Revenue</b>	322,093.0	972,476.4	24,045.0	38,800.0	-	6,169.3	200.0	1,363,783.7
<b>Appropriation</b>	\$ 368,925.8	\$ 354,625.6	\$ 34,450.4	\$ 45,800.1	\$ 79,505.0	\$ 228,825.8	\$ 30,617.1	\$ 1,142,749.8
<b>2016 ESTIMATED</b>								
<b>Beginning Net Assets Appropriable as adjusted (c)</b>	\$ 145,889.3	\$ (609,914.9)	\$ 16,341.7	\$ 9,371.5	\$ 70,772.0	\$ 210,648.9	\$ 29,905.5	\$ (126,986.0)
<b>Revenue (a)</b>	320,199.2	239,309.1	17,745.7	32,599.1	-	4,292.7	283.0	614,428.8
<b>Adjustment for 2016 receipts</b>	4,305.6	-	791.4	304.0	-	-	-	5,401.0
<b>Expenditures</b>	(334,462.8)	(247,245.0)	(24,473.4)	(35,274.5)	(70,772.0)	(214,941.6)	(5,398.2)	(932,567.5)
<b>Ending Net Assets Appropriable</b>	\$ 135,931.3	\$ (617,850.8)	\$ 10,405.4	\$ 7,000.1	\$ -	\$ -	\$ 24,790.3	\$ (439,723.7)
<b>2015 ACTUAL</b>								
<b>Beginning Net Assets Appropriable as adjusted (c)</b>	\$ 142,060.3	\$ (519,237.2)	\$ 20,538.2	\$ 21,297.6	\$ 62,498.0	\$ 211,354.6	\$ 29,891.5	\$ (31,597.0)
<b>Revenue</b>	336,867.1	185,601.1	17,706.8	23,400.4	-	3,171.2	417.4	567,164.0
<b>Expenditures</b>	(333,038.1)	(276,278.8)	(21,903.3)	(35,326.5)	(62,498.0)	(214,525.8)	(5,890.4)	(949,460.9)
<b>Ending Net Assets Appropriable</b>	\$ 145,889.3	\$ (609,914.9)	\$ 16,341.7	\$ 9,371.5	\$ -	\$ -	\$ 24,418.5	\$ (413,893.9)
Adjusted NAA 1/1/2016	\$ 150,194.9		\$ 17,133.1	\$ 9,675.5				
Adjustment (a)	\$ 4,305.6		\$ 791.4	\$ 304.0				

(a) Adjustment to NAA required due to current 2016 estimate on collection of property tax levies and PPRT. See the Balance Sheets and Appropriable Revenue statements 1/1/2016 for the Corporate (pages 87-88), Construction (pages 94-95), and Stormwater Management (pages 98-99) Funds. The adjustment is reflected in the 2016 revenues.

(b) This statement is a summary presentation of pages 76-79, separating current revenue and NAA from the revenue category.

(c) Ending NAA for one year are revised for accounting adjustments, equity transfers, and changes in the amount of designations to establish beginning net assets for the next year.

(d) Revenue for the Retirement, Reserve Claim, and Bond Redemption & Interest Funds does not include the current year tax levies, which are reflected in the next year's NAA.

**ALL FUNDS  
SUMMARY OF REVENUE AND EXPENDITURES  
2017 BUDGETED**

(In Thousands)

	FUND							
	CORPORATE	CAPITAL IMPROVEMENTS BOND*	CONSTRUCTION	STORMWATER MANAGEMENT	RETIREMENT	BOND REDEMPTION & INTEREST	RESERVE CLAIM	TOTAL
<b>REVENUE</b>								
Net Assets Appropriable	\$ 135,931.3	\$ (617,850.8)	\$ 10,405.4	\$ 7,000.1	\$ 79,505.0	\$ 222,656.5	\$ 30,417.1	\$ (131,935.4)
Budget Reserve	(89,098.5)	-	-	-	-	-	-	(89,098.5)
Net Property Taxes	216,108.0	-	16,405.0	39,426.0	-	-	-	271,939.0
Personal Property Replacement Tax	18,164.0	-	-	-	-	-	-	18,164.0
Working Cash Borrowings Adjustment	(4,272.0)	-	(205.0)	(626.0)	-	-	-	(5,103.0)
Bond Sales (Present & Future)	-	791,341.3	-	-	-	-	-	791,341.3
Grants (Federal & State)	-	11,135.1	-	-	-	-	-	11,135.1
Investment Income	600.0	3,000.0	100.0	-	-	400.0	200.0	4,300.0
State Revolving Fund Loans	-	180,000.0	-	-	-	-	-	180,000.0
Property & Services	19,900.0	-	-	-	-	-	-	19,900.0
User Charge	47,000.0	-	-	-	-	-	-	47,000.0
TIF Differential Fee & Impact Fee	11,025.0	-	745.0	-	-	-	-	11,770.0
Equity Transfer	6,000.0	(13,000.0)	7,000.0	-	-	5,769.3	-	5,769.3
Resource Recovery	4,000.0	-	-	-	-	-	-	4,000.0
Miscellaneous	3,568.0	-	-	-	-	-	-	3,568.0
<b>TOTAL REVENUE</b>	<b>\$ 368,925.8</b>	<b>\$ 354,625.6</b>	<b>\$ 34,450.4</b>	<b>\$ 45,800.1</b>	<b>\$ 79,505.0</b>	<b>\$ 228,825.8</b>	<b>\$ 30,617.1</b>	<b>\$ 1,142,749.8</b>
<b>EXPENDITURES</b>								
Board of Commissioners	\$ 4,496.3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,496.3
General Administration	17,387.4	-	-	-	-	-	-	17,387.4
Monitoring & Research	31,270.4	-	-	-	-	-	-	31,270.4
Procurement & Materials Mgmt.	9,567.1	-	-	-	-	-	-	9,567.1
Human Resources	60,905.4	-	-	-	-	-	-	60,905.4
Information Technology	17,358.6	-	-	-	-	-	-	17,358.6
Law	8,386.1	-	-	-	-	-	-	8,386.1
Finance	3,684.4	-	-	-	-	-	-	3,684.4
Engineering	28,835.4	354,625.6	34,450.4	-	-	-	-	417,911.4
Maintenance & Operations	187,034.7	-	-	-	-	-	-	187,034.7
Stormwater Management Fund	-	-	-	40,030.8	-	-	-	40,030.8
Retirement Fund	-	-	-	-	79,505.0	-	-	79,505.0
Bond Redemption & Interest Fund	-	-	-	-	-	228,825.8	-	228,825.8
Reserve Claim Fund	-	-	-	-	-	-	30,617.1	30,617.1
Equity Transfer	-	-	-	5,769.3	-	-	-	5,769.3
<b>TOTAL EXPENDITURES</b>	<b>\$ 368,925.8</b>	<b>\$ 354,625.6</b>	<b>\$ 34,450.4</b>	<b>\$ 45,800.1</b>	<b>\$ 79,505.0</b>	<b>\$ 228,825.8</b>	<b>\$ 30,617.1</b>	<b>\$ 1,142,749.8</b>

\* The Capital Improvements Bond Fund is budgeted on an "obligation" basis, which records expenditures in the period in which the contracts or grants are awarded.

**ALL FUNDS  
SUMMARY OF REVENUE AND EXPENDITURES  
2016 ESTIMATED**

(In Thousands)

	FUND							
	CORPORATE	CAPITAL IMPROVEMENTS BOND*	CONSTRUCTION	STORMWATER MANAGEMENT	RETIREMENT	BOND REDEMPTION & INTEREST	RESERVE CLAIM	TOTAL
<b>REVENUE</b>								
Net Assets Appropriable	\$ 145,889.3	\$ (609,914.9)	\$ 16,341.7	\$ 9,371.5	\$ 70,772.0	\$ 210,648.9	\$ 29,905.5	\$ (126,986.0)
Adjustment for Receipts	4,305.6	-	791.4	304.0	-	-	-	5,401.0
Net Property Taxes	218,195.5	-	16,019.0	33,051.3	-	-	-	267,265.8
Personal Property Replacement Tax	24,676.0	-	1,100.0	-	-	-	-	25,776.0
Working Cash Borrowings Adjustment	(4,671.5)	-	(319.0)	(551.2)	-	-	-	(5,541.7)
Bond Sales (Present & Future)	-	125,003.5	-	-	-	-	-	125,003.5
Grants (Federal & State)	-	11,195.2	-	-	-	-	-	11,195.2
Investment Income	793.0	1,905.0	156.8	99.0	-	1,020.0	283.0	4,256.8
State Revolving Fund Loans	-	98,982.0	-	-	-	-	-	98,982.0
Property & Services	21,180.8	-	-	-	-	-	-	21,180.8
User Charge	47,500.0	-	-	-	-	-	-	47,500.0
TIF Differential Fee & Impact Fee	8,380.3	-	745.0	-	-	-	-	9,125.3
Equity Transfer	-	-	-	-	-	3,272.7	-	3,272.7
Miscellaneous	4,145.1	2,223.4	43.9	-	-	-	-	6,412.4
<b>TOTAL REVENUE</b>	<b>\$ 470,394.1</b>	<b>\$ (370,605.8)</b>	<b>\$ 34,878.8</b>	<b>\$ 42,274.6</b>	<b>\$ 70,772.0</b>	<b>\$ 214,941.6</b>	<b>\$ 30,188.5</b>	<b>\$ 492,843.8</b>
<b>EXPENDITURES</b>								
Board of Commissioners	\$ 4,204.1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	4,204.1
General Administration	15,452.6	-	-	-	-	-	-	15,452.6
Monitoring & Research	27,592.1	-	-	-	-	-	-	27,592.1
Procurement & Materials Mgmt.	8,650.0	-	-	-	-	-	-	8,650.0
Human Resources	55,772.3	-	-	-	-	-	-	55,772.3
Information Technology	14,055.6	-	-	-	-	-	-	14,055.6
Law	6,751.5	-	-	-	-	-	-	6,751.5
Finance	3,475.0	-	-	-	-	-	-	3,475.0
Engineering	25,551.2	247,245.0	24,473.4	-	-	-	-	297,269.6
Maintenance & Operations	172,958.4	-	-	-	-	-	-	172,958.4
Stormwater Management Fund	-	-	-	32,001.8	-	-	-	32,001.8
Retirement Fund	-	-	-	-	70,772.0	-	-	70,772.0
Bond Redemption & Interest Fund	-	-	-	-	-	214,941.6	-	214,941.6
Reserve Claim Fund	-	-	-	-	-	-	5,398.2	5,398.2
Equity Transfer	-	-	-	3,272.7	-	-	-	3,272.7
<b>TOTAL EXPENDITURES</b>	<b>\$ 334,462.8</b>	<b>\$ 247,245.0</b>	<b>\$ 24,473.4</b>	<b>\$ 35,274.5</b>	<b>\$ 70,772.0</b>	<b>\$ 214,941.6</b>	<b>\$ 5,398.2</b>	<b>\$ 932,567.5</b>

\* The Capital Improvements Bond Fund is budgeted on an "obligation" basis, which records expenditures in the period in which the contracts or grants are awarded.

**ALL FUNDS  
SUMMARY OF REVENUE AND EXPENDITURES  
2015 ACTUAL**

(In Thousands)

	FUND							TOTAL
	CORPORATE	CAPITAL IMPROVEMENTS BOND*	CONSTRUCTION	STORMWATER MANAGEMENT	RETIREMENT	BOND REDEMPTION & INTEREST	RESERVE CLAIM	
<b>REVENUE</b>								
Net Assets Appropriable	\$ 142,060.3	\$ (519,237.2)	\$ 20,538.2	\$ 21,297.6	\$ 62,498.0	\$ 211,354.6	\$ 29,891.5	\$ (31,597.0)
Adjustment for Receipts	17,607.7	-	575.9	373.1	-	-	-	18,556.7
Net Property Taxes	219,244.1	-	15,922.5	23,208.3	-	-	-	258,374.9
Personal Property Replacement Tax	20,101.6	-	-	-	-	-	-	20,101.6
Working Cash Borrowings Adjustment	(4,445.6)	-	(622.5)	(408.3)	-	-	-	(5,476.4)
Bond Sales	-	-	-	-	-	4.4	-	4.4
Grants (Federal & State)	-	-	-	-	-	-	-	-
Investment Income	1,003.4	2,278.6	280.7	227.0	-	1,039.5	403.9	5,233.1
State Revolving Fund Loans	-	180,840.6	-	-	-	-	-	180,840.6
Property & Services	22,974.8	-	-	-	-	-	-	22,974.8
User Charge	48,176.5	-	300.0	-	-	-	-	48,476.5
TIF Differential & Impact Fee	6,168.5	-	745.5	-	-	-	-	6,914.0
Equity Transfer	-	-	-	-	-	2,123.9	-	2,123.9
Miscellaneous	6,036.1	2,481.9	504.7	0.3	-	3.4	13.5	9,039.9
<b>TOTAL REVENUE</b>	<b>\$ 478,927.4</b>	<b>\$ (333,636.1)</b>	<b>\$ 38,245.0</b>	<b>\$ 44,698.0</b>	<b>\$ 62,498.0</b>	<b>\$ 214,525.8</b>	<b>\$ 30,308.9</b>	<b>\$ 535,567.0</b>
<b>EXPENDITURES</b>								
Board of Commissioners	\$ 3,660.1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,660.1
General Administration	14,800.3	-	-	-	-	-	-	14,800.3
Monitoring & Research	26,892.4	-	-	-	-	-	-	26,892.4
Procurement & Materials Mgmt.	8,139.3	-	-	-	-	-	-	8,139.3
Human Resources	58,426.0	-	-	-	-	-	-	58,426.0
Information Technology	14,574.6	-	-	-	-	-	-	14,574.6
Law	6,018.2	-	-	-	-	-	-	6,018.2
Finance	3,426.1	-	-	-	-	-	-	3,426.1
Engineering	25,961.6	276,278.8	21,903.3	-	-	-	-	324,143.7
Maintenance & Operations	171,139.5	-	-	-	-	-	-	171,139.5
Stormwater Management Fund	-	-	-	33,202.6	-	-	-	33,202.6
Retirement Fund	-	-	-	-	62,498.0	-	-	62,498.0
Bond Redemption & Interest Fund	-	-	-	-	-	214,525.8	-	214,525.8
Reserve Claim Fund	-	-	-	-	-	-	5,890.4	5,890.4
Equity Transfer	-	-	-	2,123.9	-	-	-	2,124
<b>TOTAL EXPENDITURES</b>	<b>\$ 333,038.1</b>	<b>\$ 276,278.8</b>	<b>\$ 21,903.3</b>	<b>\$ 35,326.5</b>	<b>\$ 62,498.0</b>	<b>\$ 214,525.8</b>	<b>\$ 5,890.4</b>	<b>\$ 949,461.0</b>

\* The Capital Improvements Bond Fund is budgeted on an "obligation" basis which records expenditures in the period in which the contracts or grants are awarded.

**SUMMARY OF ESTIMATED ASSETS APPROPRIABLE FOR THE CORPORATE,  
CAPITAL IMPROVEMENTS BOND, RETIREMENT, CONSTRUCTION,  
STORMWATER MANAGEMENT, BOND REDEMPTION & INTEREST,  
AND RESERVE CLAIM FUNDS  
FOR THE YEAR 2017**

DESCRIPTION	FUND							TOTAL
	CORPORATE	CAPITAL IMPROVEMENTS BOND	CONSTRUCTION	STORMWATER MANAGEMENT	RETIREMENT	BOND REDEMPTION & INTEREST	RESERVE CLAIM	
2017 Revenue	\$ 316,093,000	\$ 985,476,400	\$ 17,045,000	\$ 38,800,000	\$ -	\$ 400,000	\$ 200,000	\$ 1,358,014,400
Resources Available at 01/01/17	<u>339,303,628</u>	<u>289,333,332</u>	<u>25,864,500</u>	<u>40,538,768</u>	<u>79,505,000</u>	<u>333,238,865</u>	<u>30,817,100</u>	<u>1,138,601,193</u>
Total Resources	\$ 655,396,628	\$ 1,274,809,732	\$ 42,909,500	\$ 79,338,768	\$ 79,505,000	\$ 333,638,865	\$ 31,017,100	\$ 2,496,615,593
Liabilities:								
Liabilities and Designations at 01/01/17	203,372,328	907,184,132	15,459,100	33,538,668	-	110,582,352 *	400,000	1,270,536,580
Equity Transfer	6,000,000	(13,000,000)	7,000,000	-	-	5,769,300	-	5,769,300
Budget Reserve	<u>89,098,500</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>89,098,500</u>
<b>ASSETS APPROPRIABLE</b>	<u>\$ 368,925,800</u>	<u>\$ 354,625,600</u>	<u>\$ 34,450,400</u>	<u>\$ 45,800,100</u>	<u>\$ 79,505,000</u>	<u>\$ 228,825,813</u>	<u>\$ 30,617,100</u>	<u>\$ 1,142,749,813</u>

\* Future Years' Principal and Interest



## GAAP Basis Statement From 2015 CAFR - Exhibit A-1 Governmental Funds Balance Sheets / Statements of Net Assets

*December 31, 2015 (with comparative amounts for prior year)*

*(in thousands of dollars)*

	<b>General</b>		<b>Debt Service</b>		<b>Capital Improvements</b>	
	<b>Corporate Fund</b>		<b>Fund</b>		<b>Bond Fund</b>	
	<b>2015</b>	<b>2014</b>	<b>2015</b>	<b>2014</b>	<b>2015</b>	<b>2014</b>
<b>Assets</b>						
Cash	\$ 57,769	\$ 45,390	\$ 15,826	\$ 2,065	\$ 92,764	\$ 6,574
Certificates of deposit (note 4)	4,498	10,295	2,014	7,013	16,617	6,002
Investments (note 4)	174,547	191,294	90,831	99,313	202,441	119,156
Prepaid insurance	2,137	2,143	-	-	-	-
Taxes receivable, net (note 5)	224,745	224,845	216,631	210,679	-	-
Other receivables, net (note 5)	8,720	4,380	-	928	41,521	32,908
Due from other funds (note 12)	77	52	-	-	-	-
Restricted deposits	1,405	1,409	-	-	-	-
Inventories	37,623	39,586	-	-	-	-
Capital assets not being depreciated (note 6)	-	-	-	-	-	-
Capital assets being depreciated, net (note 6)	-	-	-	-	-	-
Total Assets	<u>\$ 511,521</u>	<u>\$ 519,394</u>	<u>\$ 325,302</u>	<u>\$ 319,998</u>	<u>\$ 353,343</u>	<u>\$ 164,640</u>
Deferred outflows of resources:						
Loss on prior debt refunding	-	-	-	-	-	-
Deffered amount related to pension	-	-	-	-	-	-
Total deferred outflows of resources	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
<b>Liabilities, Fund Balances / Net Assets</b>						
Liabilities:						
Accounts payable and other liabilities (note 5)	\$ 28,815	\$ 37,817	\$ -	\$ -	\$ 48,760	\$ 42,951
Due to Pension Trust Fund	-	-	-	-	-	-
Due to other funds (note 12)	-	-	-	-	-	-
Accrued interest payable	-	-	-	-	-	-
Unearned Revenue (note 5)	4,222	3,686	-	-	-	-
Long-term liabilities: (note 11)						
Due within one year	-	-	-	-	-	-
Due in more than one year	-	-	-	-	-	-
Total Liabilities	<u>\$ 33,037</u>	<u>\$ 41,503</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 48,760</u>	<u>\$ 42,951</u>
Deferred inflows of resources:						
Unavailable tax revenue (note 5)	191,372	190,865	184,496	178,908	-	-
Other unavailable/unearned revenue (note 5)	-	-	-	928	933	-
Total deferred inflows of resources	<u>\$ 191,372</u>	<u>\$ 190,865</u>	<u>\$ 184,496</u>	<u>\$ 179,836</u>	<u>\$ 933</u>	<u>\$ -</u>
Fund Balances/Net Assets:						
Nonspendable for prepaid insurance	2,137	2,143	-	-	-	-
Nonspendable for inventories	37,623	39,586	-	-	-	-
Restricted for deposits	1,405	1,409	-	-	-	-
Restricted for working cash	278,852	278,148	-	-	-	-
Restricted for reserve claims	25,522	27,590	-	-	-	-
Restricted for debt service	-	-	140,806	140,162	-	-
Restricted for capital projects	-	-	-	-	175,730	8,921
Restricted for construction	-	-	-	-	-	-
Restricted for stormwater management	-	-	-	-	-	-
Assigned	-	-	-	-	127,920	112,768
Unassigned (Deficit)	(58,427)	(61,850)	-	-	-	-
Total Fund Balances	<u>\$ 287,112</u>	<u>\$ 287,026</u>	<u>\$ 140,806</u>	<u>\$ 140,162</u>	<u>\$ 303,650</u>	<u>\$ 121,689</u>
Total Liabilities, Deferred Inflows and Fund Balances	<u>\$ 511,521</u>	<u>\$ 519,394</u>	<u>\$ 325,302</u>	<u>\$ 319,998</u>	<u>\$ 353,343</u>	<u>\$ 164,640</u>
Net Position:						
Net investment in capital assets						
Restricted for corporate working cash						
Restricted for reserve claim						
Restricted for debt service						
Restricted for capital projects						
Restricted for construction working cash						
Restricted for stormwater working cash						
Unrestricted (Deficit)						
Total Net Position						

Notes reference the 2015 CAFR of the District - Available on the Internet at [www.mwr.org](http://www.mwr.org)

Metropolitan Water Reclamation District of Greater Chicago

Retirement Fund		Other Governmental / Nonmajor Funds		Total Governmental Activities		Adjustments (Note 2a)		Statements of Net Assets	
2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
\$ -	\$ -	\$ 7,342	\$ 3,244	\$ 173,701	\$ 57,273	\$ -	\$ -	\$ 173,701	\$ 57,273
-	-	502	1,801	23,631	25,111	-	-	23,631	25,111
-	-	50,305	71,555	518,124	481,318	-	-	518,124	481,318
-	-	-	-	2,137	2,143	-	-	2,137	2,143
61,566	54,678	39,131	37,056	542,073	527,258	-	-	542,073	527,258
-	-	745	745	50,986	38,961	-	-	50,986	38,961
-	-	-	-	77	52	(77)	(52)	-	-
-	-	-	-	1,405	1,409	-	-	1,405	1,409
-	-	-	-	37,623	39,586	-	-	37,623	39,586
-	-	-	-	-	-	5,571,371	5,317,556	5,571,371	5,317,556
-	-	-	-	-	-	1,710,649	1,722,885	1,710,649	1,722,885
<u>\$ 61,566</u>	<u>\$ 54,678</u>	<u>\$ 98,025</u>	<u>\$ 114,401</u>	<u>\$ 1,349,757</u>	<u>\$ 1,173,111</u>	<u>\$ 7,281,943</u>	<u>\$ 7,040,389</u>	<u>\$ 8,631,700</u>	<u>\$ 8,213,500</u>
-	-	-	-	-	-	12,511	13,518	12,511	13,518
-	-	-	-	-	-	91,456	73,906	91,456	73,906
<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 103,967</u>	<u>\$ 87,424</u>	<u>\$ 103,967</u>	<u>\$ 87,424</u>
\$ -	\$ -	\$ 11,785	\$ 12,337	\$ 89,360	\$ 93,105	\$ -	\$ -	\$ 89,360	\$ 93,105
13,867	13,293	-	-	13,867	13,293	57,174	41,385	71,041	54,678
-	-	77	52	77	52	(77)	(52)	-	-
-	-	-	-	-	-	14,924	13,623	14,924	13,623
-	-	-	-	4,222	3,686	-	(741)	4,222	2,945
-	-	-	-	-	-	123,555	114,993	123,555	114,993
-	-	-	-	-	-	3,903,359	3,530,124	3,903,359	3,530,124
<u>\$ 13,867</u>	<u>\$ 13,293</u>	<u>\$ 11,862</u>	<u>\$ 12,389</u>	<u>\$ 107,526</u>	<u>\$ 110,136</u>	<u>\$ 4,098,935</u>	<u>\$ 3,699,332</u>	<u>\$ 4,206,461</u>	<u>\$ 3,809,468</u>
47,699	41,385	33,331	31,489	456,898	442,647	(456,898)	(442,647)	-	-
-	-	-	-	933	928	(933)	(928)	-	-
<u>\$ 47,699</u>	<u>\$ 41,385</u>	<u>\$ 33,331</u>	<u>\$ 31,489</u>	<u>\$ 457,831</u>	<u>\$ 443,575</u>	<u>\$ (457,831)</u>	<u>\$ (443,575)</u>	<u>\$ -</u>	<u>\$ -</u>
-	-	-	-	2,137	2,143	(2,137)	(2,143)	-	-
-	-	-	-	37,623	39,586	(37,623)	(39,586)	-	-
-	-	-	-	1,405	1,409	(1,405)	(1,409)	-	-
-	-	59,163	58,868	338,015	337,016	(338,015)	(337,016)	-	-
-	-	-	-	25,522	27,590	(25,522)	(27,590)	-	-
-	-	-	-	140,806	140,162	(140,806)	(140,162)	-	-
-	-	-	-	175,730	8,921	(175,730)	(8,921)	-	-
-	-	2,759	6,316	2,759	6,316	(2,759)	(6,316)	-	-
-	-	-	5,339	-	5,339	-	(5,339)	-	-
-	-	-	-	127,920	112,768	(127,920)	(112,768)	-	-
-	-	(9,090)	-	(67,517)	(61,850)	67,517	61,850	-	-
<u>\$ -</u>	<u>\$ -</u>	<u>\$ 52,832</u>	<u>\$ 70,523</u>	<u>\$ 784,400</u>	<u>\$ 619,400</u>	<u>\$ (784,400)</u>	<u>\$ (619,400)</u>	<u>\$ -</u>	<u>\$ -</u>
<u>\$ 61,566</u>	<u>\$ 54,678</u>	<u>\$ 98,025</u>	<u>\$ 114,401</u>	<u>\$ 1,349,757</u>	<u>\$ 1,173,111</u>				
						\$ 4,630,463	\$ 4,548,793	\$ 4,630,463	\$ 4,548,793
						278,852	278,148	278,852	278,148
						6,499	7,764	6,499	7,764
						310,383	305,375	310,383	305,375
						-	15,457	-	15,457
						21,947	21,833	21,947	21,833
						37,216	37,035	37,216	37,035
						(756,154)	(722,949)	(756,154)	(722,949)
						<u>\$ 4,529,206</u>	<u>\$ 4,491,456</u>	<u>\$ 4,529,206</u>	<u>\$ 4,491,456</u>

## APPROPRIATION FOR LIABILITIES - BY FUND JANUARY 1, 2017 AND 2016

<b>CORPORATE FUND</b>	<b>2017</b>	<b>2016</b>
Unpaid Bills:		
Accrued Salaries & Wages	\$ 2,827,328	\$ 3,900,000
Personal Services - Other	-	-
Payroll Withholding & Miscellaneous	2,500,000	3,000,000
Contractual Services	18,045,000	26,528,000
Due to Corporate Working Cash Fund	180,000,000	190,000,000
Designated for Future Claims Liabilities	-	-
<b>Total Liabilities of Corporate Fund</b>	<b>\$ 203,372,328</b>	<b>\$ 223,428,000</b>
<b>CONSTRUCTION FUND</b>		
Unpaid Bills:		
Contracts Payable	\$ 3,162,000	\$ 4,507,955
Contractual Services	-	400,145
Machinery & Equipment	297,100	445,000
Due to Construction Working Cash Fund	12,000,000	12,000,000
<b>Total Liabilities of Construction Fund</b>	<b>\$ 15,459,100</b>	<b>\$ 17,353,100</b>
<b>CAPITAL IMPROVEMENTS BOND FUND</b>		
Unpaid Bills:		
Contractual Services	\$ 73,761,112	\$ 77,693,900
Contracts Payable	833,423,020	578,213,065
<b>Total Liabilities of Capital Improvements Bond Fund</b>	<b>\$ 907,184,132</b>	<b>\$ 655,906,965</b>
<b>RESERVE CLAIM FUND</b>		
Accounts Payable & Other Liabilities	\$ 400,000	\$ 200,000
<b>BOND REDEMPTION &amp; INTEREST FUND</b>		
Future Payment of Principal & Interest	\$ 110,582,352	\$ 112,547,243
<b>STORMWATER MANAGEMENT FUND</b>		
Accrued Salaries & Wages	\$ 632,368	\$ 200,000
Contracts Payable	6,406,300	9,776,446
Due to Stormwater Working Cash Fund	26,500,000	12,000,000
<b>Total Liabilities of Stormwater Management Fund</b>	<b>\$ 33,538,668</b>	<b>\$ 21,976,446</b>
<b>TOTAL LIABILITIES JANUARY 1, 2017 AND 2016</b>	<b>\$ 1,270,536,580</b>	<b>\$ 1,031,411,754</b>

**STATEMENT OF TAXES RECEIVABLE FOR 2016 AND PRIOR YEARS AT JANUARY 1, 2017  
INCLUDING THE ESTIMATED COLLECTIONS FOR THE YEAR 2017**

YEAR FUND	TAX EXTENSION	COLLECTED THRU 12/31/16	%	UNCOLLECTED AT 12/31/16	RESERVE \$	%	ESTIMATED NET TAXES RECEIVABLE	CASH ESTIMATED IN 2017
<b>2016</b> Corporate	\$ 226,109,300	\$ -	0%	\$ 226,109,300	\$ 7,913,826	3.5%	\$ 218,195,475	\$ 220,456,568
Bond Redemption & Interest	229,912,562	-	0%	229,912,562	8,046,940	3.5%	221,865,622	224,164,748
Retirement	65,161,200	-	0%	65,161,200	2,280,642	3.5%	62,880,500	62,880,500
Construction	16,600,000	-	0%	16,600,000	581,000	3.5%	16,019,000	16,185,000
Stormwater Management	34,250,000	-	0%	34,250,000	1,198,750	3.5%	33,051,250	33,393,750
Reserve Claim	5,800,000	-	0%	5,800,000	203,000	3.5%	5,597,000	5,655,000
<b>Total</b>	<b>\$ 577,833,062</b>	<b>\$ -</b>	<b>0%</b>	<b>\$ 577,833,062</b>	<b>\$ 20,224,158</b>	<b>3.5%</b>	<b>\$ 557,608,847</b>	<b>\$ 562,735,566</b>
<b>2015</b> Corporate	\$ 227,659,785	\$ 221,968,290	97.5%	\$ 5,691,495	\$ 7,968,092	3.5%	\$ -	\$ 2,504,258
Bond Redemption & Interest	224,487,727	218,875,534	97.5%	5,612,193	7,857,070	3.5%	-	2,469,365
Retirement	58,004,000	56,553,900	97.5%	1,450,100	2,030,140	3.5%	-	-
Construction	15,196,952	14,817,028	97.5%	379,924	531,893	3.5%	-	167,166
Stormwater Management	24,050,000	23,448,750	97.5%	601,250	841,750	3.5%	-	264,550
Reserve Claim	5,700,000	5,557,500	97.5%	142,500	199,500	3.5%	-	62,700
<b>Total</b>	<b>\$ 555,098,464</b>	<b>\$ 541,221,002</b>	<b>97.5%</b>	<b>\$ 13,877,462</b>	<b>\$ 19,428,445</b>	<b>3.5%</b>	<b>\$ -</b>	<b>\$ 5,468,039</b>
<b>2014</b> Corporate	\$ 230,415,559	\$ 227,189,741	98.6%	\$ 3,225,818	\$ 8,064,545	3.5%	\$ -	\$ (1,612,909)
Bond Redemption & Interest	218,319,348	215,262,877	98.6%	3,056,471	7,641,177	3.5%	-	(1,528,235)
Retirement	50,530,700	48,762,126	96.5%	1,768,574	1,768,575	3.5%	-	-
Construction	17,400,000	17,156,400	98.6%	243,600	609,000	3.5%	-	(121,800)
Stormwater Management	21,000,000	20,706,000	98.6%	294,000	735,000	3.5%	-	(147,000)
Reserve Claim	3,000,000	2,958,000	98.6%	42,000	105,000	3.5%	-	(21,000)
<b>Total</b>	<b>\$ 540,665,607</b>	<b>\$ 532,035,144</b>	<b>98.4%</b>	<b>\$ 8,630,463</b>	<b>\$ 18,923,297</b>	<b>3.5%</b>	<b>\$ -</b>	<b>\$ (3,430,944)</b>
<b>2013</b> Corporate	\$ 224,399,734	\$ 221,482,537	98.7%	\$ 2,917,197	\$ 7,853,991	3.5%	\$ -	\$ (1,570,798)
Bond Redemption & Interest	201,388,786	198,770,732	98.7%	2,618,054	7,048,608	3.5%	-	(1,409,722)
Retirement	51,620,700	49,813,976	96.5%	1,806,724	1,806,725	3.5%	-	-
Construction	11,079,300	10,935,269	98.7%	144,031	387,776	3.5%	-	(77,555)
Stormwater Management	20,000,000	19,740,000	98.7%	260,000	700,000	3.5%	-	(140,000)
Reserve Claim	6,170,977	6,090,754	98.7%	80,223	215,984	3.5%	-	(43,197)
<b>Total</b>	<b>\$ 514,659,497</b>	<b>\$ 506,833,268</b>	<b>98.5%</b>	<b>\$ 7,826,229</b>	<b>\$ 18,013,084</b>	<b>3.5%</b>	<b>\$ -</b>	<b>\$ (3,241,272)</b>
<b>2012</b> Corporate	\$ 237,247,822	\$ 232,265,618	97.9%	\$ 4,982,204	\$ 8,303,674	3.5%	\$ -	\$ (711,743)
Bond Redemption & Interest	180,747,560	176,951,861	97.9%	3,795,699	6,326,165	3.5%	-	(542,243)
Retirement	28,489,600	27,777,360	97.5%	712,240	997,136	3.5%	-	-
Construction	20,417,700	19,988,928	97.9%	428,772	714,620	3.5%	-	(61,253)
Stormwater Management	20,000,000	19,580,000	97.9%	420,000	700,000	3.5%	-	(60,000)
Reserve Claim	6,669,900	6,529,832	97.9%	140,068	233,447	3.5%	-	(20,010)
<b>Total</b>	<b>\$ 493,572,582</b>	<b>\$ 483,093,599</b>	<b>97.9%</b>	<b>\$ 10,478,983</b>	<b>\$ 17,275,042</b>	<b>3.5%</b>	<b>\$ -</b>	<b>\$ (1,395,249)</b>
<b>Prior Years'</b> Corporate								\$ (237,248)
<b>Levies</b> Bond Redemption & Interest								(180,748)
Retirement								-
Construction								(20,418)
Stormwater Management								(20,000)
Reserve Claim								(6,670)
<b>Total</b>								<b>\$ (465,084)</b>
<b>RECAPITULATION BY FUND</b>								
Corporate	\$ 1,145,832,200	\$ 902,906,186		\$ 242,926,014	\$ 40,104,128		\$ 218,195,475	\$ 218,828,128
Bond Redemption & Interest	1,054,855,983	809,861,004		244,994,979	36,919,960		221,865,622	222,973,165
Retirement	253,806,200	182,907,362		70,898,838	8,883,218		62,880,500	62,880,500
Construction	80,693,952	62,897,625		17,796,327	2,824,289		16,019,000	16,071,140
Stormwater Management	119,300,000	83,474,750		35,825,250	4,175,500		33,051,250	33,291,300
Reserve Claim	27,340,877	21,136,086		6,204,791	956,931		5,597,000	5,626,823
<b>Total</b>	<b>\$ 2,681,829,212</b>	<b>\$ 2,063,183,013</b>		<b>\$ 618,646,199</b>	<b>\$ 93,864,026</b>		<b>\$ 557,608,847</b>	<b>\$ 559,671,056</b>

**STATEMENT OF PERSONAL PROPERTY REPLACEMENT TAXES RECEIVABLE  
FOR 2017 AND PRIOR YEARS AT JANUARY 1, 2017  
INCLUDING THE ESTIMATED COLLECTIONS FOR THE YEAR 2017**

<b>YEAR</b>	<b>FUND</b>	<b>RECEIVABLE</b>	<b>ACTUAL/ESTIMATED COLLECTED THROUGH 2016</b>	<b>CASH ESTIMATED IN 2017</b>
<b>2017</b>	Corporate	\$ 18,164,000	\$ -	\$ -
	Retirement	18,736,200	-	-
	Construction	-	-	-
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 36,900,200	\$ -	\$ -
<b>2016</b>	Corporate	\$ 17,675,500	\$ -	\$ 17,675,500
	Retirement	16,624,500	-	16,624,500
	Construction	1,100,000	-	1,100,000
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 35,400,000	\$ -	\$ 35,400,000
<b>2015</b>	Corporate	\$ 23,101,600	\$ 23,101,600	\$ -
	Retirement	14,798,400	14,798,400	-
	Construction	-	-	-
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 37,900,000	\$ 37,900,000	\$ -
<b>2014</b>	Corporate	\$ 30,257,802	\$ 30,257,802	\$ -
	Retirement	12,891,900	12,891,900	-
	Construction	-	-	-
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 43,149,702	\$ 43,149,702	\$ -
<b>2013</b>	Corporate	\$ 27,830,000	\$ 27,830,000	\$ -
	Retirement	13,170,000	13,170,000	-
	Construction	-	-	-
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 41,000,000	\$ 41,000,000	\$ -
<b>2012</b>	Corporate	\$ 32,054,895	\$ 32,054,895	\$ -
	Retirement	7,268,500	7,268,500	-
	Construction	-	-	-
	Reserve Claim	-	-	-
	Corporate Working Cash	-	-	-
	Construction Working Cash	-	-	-
	Stormwater Working Cash	-	-	-
	Total	\$ 39,323,395	\$ 39,323,395	\$ -

## CORPORATE FUND FINANCIAL NARRATIVE

The Corporate Fund is the general fund of the District. It is used to account for the general operations and expenditures of the District. The 2017 appropriation is \$368.9 million, an increase of \$2.7 million, or 0.7 percent, from the 2016 Adjusted Budget.

Property taxes are the major source of revenue for the Corporate Fund. In 2017, the net property tax levy will provide 58.6 percent of the fund's revenue. The property tax levy proposed for 2017 is \$223.9 million, a decrease of \$2.2 million, or 1.0 percent, from the 2016 Adjusted Levy.

A fund balance within the \$44 to \$55 million range is viewed by District management and the financial markets as necessary to maintain financial stability and sustain us through economic uncertainties. This fund balance level is consistent with the level recommended by the Government Finance Officers Association. In order to ensure that an adequate fund balance is maintained, all net assets appropriable have not been reappropriated as revenue for the subsequent year. For 2017, a portion amounting to \$89.1 million of the projected net assets will remain unappropriated to provide for a fiscally responsible fund balance.

User charge revenue is estimated at \$47.0 million in 2017, a \$0.5 million decrease from the 2016 Adjusted Budget. While industries have made adjustments to reduce their loadings and associated expenses, current user charge rates continue to provide revenue paralleling the costs of treatment. The state economy significantly impacts the food processing and chemical industries, two major categories of user charge payers. The third major segment of user charge payers is government-operated airports and water filtration facilities. The revenues from these sources are more affected by weather conditions than the general economy.

User charge rates and revenues parallel changes in operations and maintenance costs. User charge rates are based on United States Environmental Protection Agency-required review of the classes of users to ensure that each class pays its proportionate share of actual operations, maintenance, and replacement (OM&R) costs. Large commercial, industrial, and tax-exempt users are charged fees based on the volume and strength of biochemical oxygen demand and suspended solids in their effluents, with credit given for the OM&R portion of any property taxes paid. The OM&R credit is adjusted for any users in tax increment financing districts to give credit only for property taxes actually received. Residential and small commercial/industrial classes pay only property taxes. This rate method ensures that the costs of providing service to these classes of users are fully recaptured. The user charge rate history appears in the Appendix.

Personal Property Replacement Tax (PPRT) revenue is primarily based on a corporate income tax. It is budgeted at \$18.2 million for 2017, an increase of \$0.5 million compared to the 2016 Budget. Due to an error in the State of Illinois' allocation calculation, the allocations will be decreased over the next two years for the recoupment period. Additionally, the PPRT is allocated first to the Retirement Fund to pay 20.9 percent of the Retirement Fund total levy.

In 2017, land rental revenue is budgeted at \$19.0 million, an increase of \$1.5 million from the 2016 Original Budget. Real estate income for the District has trended upwards in recent years. Expiring leases are reviewed and necessary environmental or other types of property remediation are performed, when possible, well ahead of lease expiration to expedite re-leasing at current market rates. This process should result in increased revenues in the future.

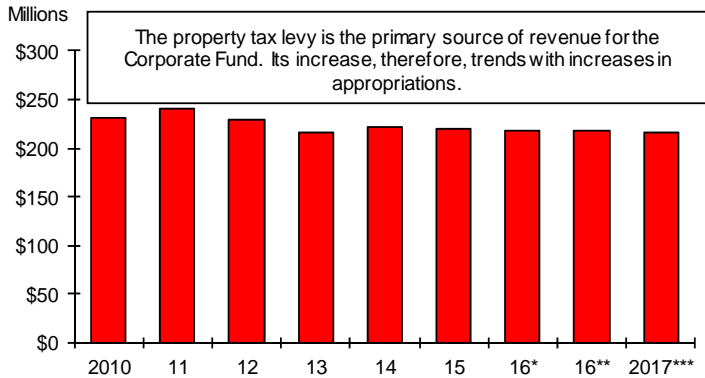
For 2017, a \$6.0 million equity transfer from the Capital Improvements Bond Fund's Build America Bonds subsidy will be used to supplement the Corporate Fund, as these subsidies can be used for any corporate purpose. Resource Recovery revenues of \$4.0 million are the result of the District's Strategic Business Plan goal to pursue the recovery of natural resources. This revenue stream includes \$1.0 million from phosphorus recovery efforts and \$3.0 million from the sale of Class A Biosolids. Investment income is budgeted for 2017 at \$0.6 million, no change from the 2016 Budget. The 2015 and 2014 actual amounts are \$1.0 and \$2.0 million, respectively. This level of income reflects relatively stable short-term interest rates and fund balances available for investment during the past several years.

The revenue estimate for sewer permit fees for 2016 is \$0.9 million. Actual 2016 revenues are projected to be \$1.1 million. The District is authorized to recover 100 percent of the sewer permit processing costs, and sewer permit fees are evaluated annually in light of this objective. Permits are required for new real estate development, and applications are expected to remain flat in 2017 due to the slow recovery in the local real estate market.

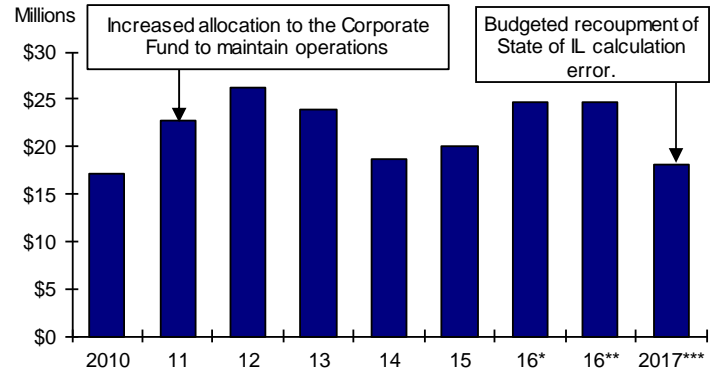
The Corporate Working Cash Fund is used to provide short-term financing to the Corporate Fund. As the property tax levy for one year is not collected until the next year, short-term financing of the current year tax levy is necessary. The District is authorized to sell Working Cash Bonds and is authorized to extend a property tax levy to meet these needs, but neither a tax levy nor bond sale is planned for 2017. State statute allows loans in the amount of 100 percent of the property tax levy plus personal property replacement tax receivables. The estimated amount the District will allocate as available for loan in 2017 is \$230.0 million, or 95 percent, of the maximum. Public Act 93-252 amended the District's Act to allow the Board of Commissioners, by a two-thirds vote, to transfer fund balances between its Working Cash Funds. The Board also has authority to transfer accumulated investment income between funds by a two-thirds vote.

**REVENUE - CORPORATE FUND (BUDGETARY BASIS)**

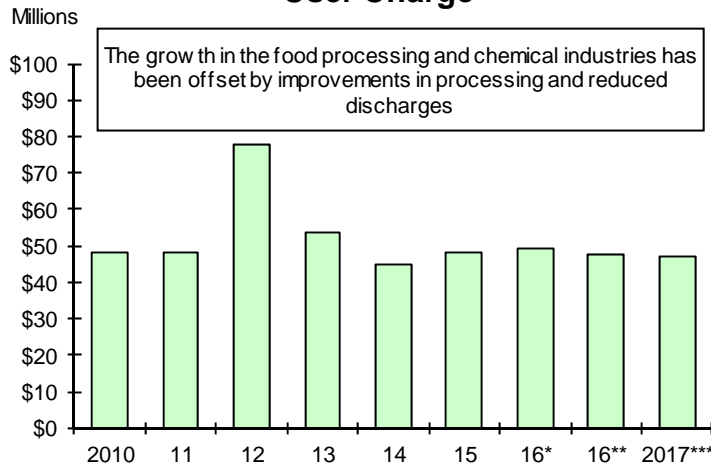
**Net Property Tax Levy**



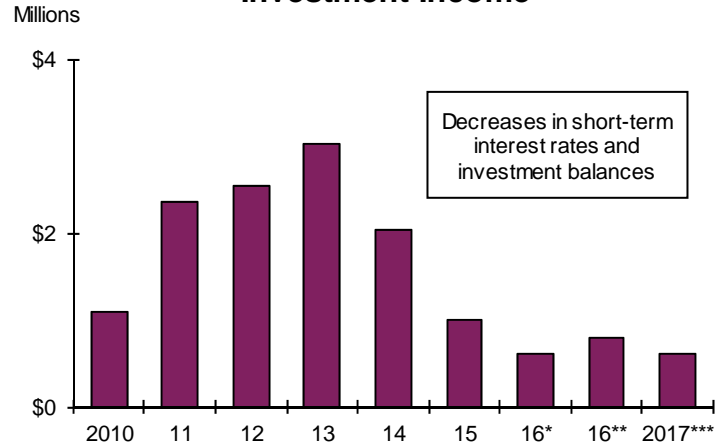
**Personal Property Replacement Tax**



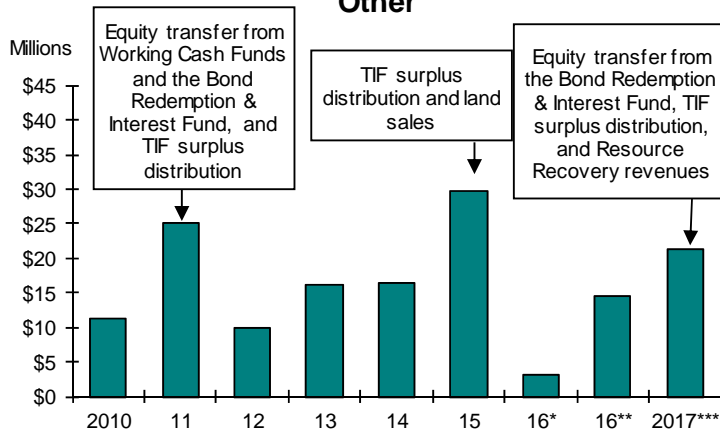
**User Charge**



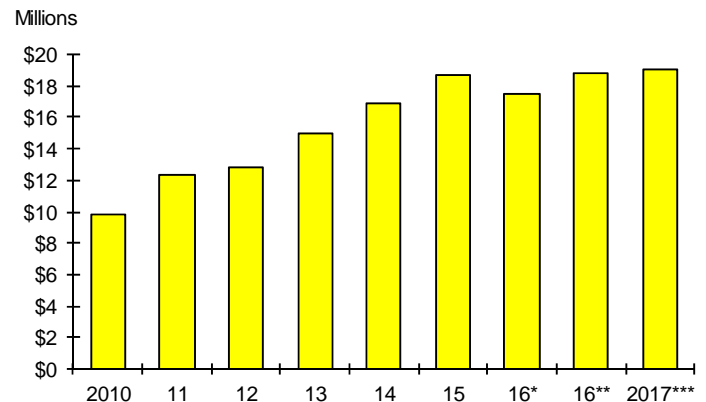
**Investment Income**



**Other**



**Land Rentals**



Note: Other includes sewer permit and permit services fees, land sales, agricultural product sales, Tax Increment Finance (TIF) district surplus distribution, and other small revenue sources.

Note: 2010 - 2015 actual  
 \* 2016 as budgeted  
 \*\* 2016 adjusted estimate  
 \*\*\* 2017 estimate

**CORPORATE FUND**  
**ESTIMATED BALANCE SHEET**  
**JANUARY 1, 2017 AND 2016**

	<b>ASSETS</b>			
	<b>2017</b>		<b>2016</b>	
	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>
<b>CURRENT ASSETS</b>				
Cash & Investments	\$ 102,800,000	\$ 102,800,000	\$ 129,640,100	\$ 129,640,100
Taxes Receivable	218,195,475	218,828,128	219,244,140	219,815,255
Replacement Tax	17,675,500	17,675,500	27,101,600	27,101,600
Due from Other Funds	-	-	200,000	200,000
<b>Total Current Assets</b>	<b>\$ 338,670,975</b>	<b>\$ 339,303,628</b>	<b>\$ 376,185,840</b>	<b>\$ 376,756,955</b>
<b>LIABILITIES &amp; FUND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Unpaid Bills:				
Accrued Salaries & Wages	\$ 2,827,328	\$ 2,827,328	\$ 3,900,000	\$ 3,900,000
Personal Services - Other	-	-	-	-
Payroll Withholding & Miscellaneous	2,500,000	2,500,000	3,000,000	3,000,000
Contractual Services	18,045,000	18,045,000	26,528,000	26,528,000
Materials & Supplies	-	-	-	-
Machinery & Equipment	-	-	-	-
Due to Corporate Working Cash Fund	180,000,000	180,000,000	190,000,000	190,000,000
<b>Total Current Liabilities</b>	<b>\$ 203,372,328</b>	<b>\$ 203,372,328</b>	<b>\$ 223,428,000</b>	<b>\$ 223,428,000</b>
<b>Total Liabilities &amp; Designations</b>		<b>\$ 203,372,328</b>		<b>\$ 223,428,000</b>
<b>ASSETS APPROPRIABLE FOR 2017 &amp; 2016</b>				
Net Assets Appropiable		\$ 135,931,300		\$ 153,328,955
Budget Reserve		\$ (89,098,500)		\$ (100,081,255)
Net Assets Appropriated		\$ 46,832,800		\$ 53,247,700
Equity Transfer		6,000,000		-
Estimated Revenue		316,093,000		313,013,000
<b>Total Assets Appropiable</b>		<b>\$ 368,925,800</b>		<b>\$ 366,260,700</b>
<b>FUND EQUITY</b>				
Undesignated	\$ 135,298,647		\$ 152,757,840	
<b>Total Fund Equity</b>	<b>\$ 135,298,647</b>		<b>\$ 152,757,840</b>	
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 338,670,975</b>		<b>\$ 376,185,840</b>	



**CORPORATE FUND**  
**APPROPRIABLE REVENUE**  
**2017 - 2014**

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
Revenue from Property Taxes					
Gross Tax Levy	\$ 223,946,065	\$ 226,109,300	\$ 226,109,300	\$ 227,196,000	\$ 230,000,000
Less Allowance for Uncollectible Taxes	(7,838,112)	(7,913,826)	(7,913,826)	(7,951,860)	(8,050,000)
Net Property Taxes	\$ 216,107,953	\$ 218,195,474	\$ 218,195,474	\$ 219,244,140	\$ 221,950,000
Revenue from Personal Property					
Replacement Tax	\$ 18,164,000	\$ 24,676,000	\$ 24,676,000	\$ 20,101,600	\$ 18,608,149
Net Tax Sources	\$ 234,271,953	\$ 242,871,474	\$ 242,871,474	\$ 239,345,740	\$ 240,558,149
Adjustment to match working cash borrowings	(4,271,953)	(4,671,474)	(4,671,474)	(4,445,740)	(4,358,149)
Working Cash Financing at 95% of Gross Tax Sources	\$ 230,000,000	\$ 238,200,000	\$ 238,200,000	\$ 234,900,000	\$ 236,200,000
Investment Income	\$ 600,000	\$ 793,000	\$ 600,000	\$ 1,003,361	\$ 2,030,933
Land Rentals	19,000,000	18,800,000	17,500,000	18,731,872	16,933,079
Sewer Permit Fees	900,000	1,099,787	750,000	1,078,886	940,228
Sewer Service Agreement Revenue	1,500,000	1,600,000	1,400,000	1,507,667	1,443,450
User Charge	47,000,000	47,500,000	49,000,000	48,176,512	44,664,848
Resource Recovery	4,000,000	-	-	-	-
Lockport Electricity Generation	1,000,000	1,165,000	1,000,000	1,236,698	1,395,547
Miscellaneous (details below)	12,093,000	11,041,424	4,563,000	12,624,456	7,642,040
Subtotal	\$ 86,093,000	\$ 81,999,211	\$ 74,813,000	\$ 84,359,452	\$ 75,050,125
Adjustment to Net Assets Available for Projected Receipts	-	4,305,586	-	17,607,678	9,432,662
Equity Transfer	6,000,000	-	-	-	-
<b>GRAND TOTAL</b>	<b>\$ 322,093,000</b>	<b>\$ 324,504,797</b>	<b>\$ 313,013,000</b>	<b>\$ 336,867,130</b>	<b>\$ 320,682,787</b>
<b>Components of Miscellaneous</b>					
TIF Surplus Distribution	\$ 10,800,000	\$ 8,155,324	\$ 2,020,000	\$ 5,943,460	\$ 4,170,246
TIF Differential Fee	225,000	225,000	225,000	225,000	225,000
Land Sales	-	1,281,000	1,250,000	3,164,016	8,031
Claims & Damage Settlements	-	-	-	55,090	125,729
Water Sales	-	-	-	3,357	13,821
Scrap Sales	50,000	60,000	50,000	137,817	97,907
Sales of Automobiles	15,000	17,000	15,000	72,855	107,554
Interest on Taxes - Cook County Treasurer	3,000	3,100	3,000	3,637	5,425
Other	1,000,000	1,300,000	1,000,000	3,019,224	2,888,327
<b>Total</b>	<b>\$ 12,093,000</b>	<b>\$ 11,041,424</b>	<b>\$ 4,563,000</b>	<b>\$ 12,624,456</b>	<b>\$ 7,642,040</b>

**CORPORATE FUND  
FINANCING  
2017 - 2012**

	<u>ESTIMATED</u>			<u>ACTUAL</u>			
	<u>2017 (1)</u>	<u>2016 REVISED</u>	<u>2016 ORIGINAL</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
<b><u>BORROWINGS</u></b>							
Working Cash Loans Current Year	\$ 230,000,000	\$ 190,000,000	\$ 238,200,000	\$ 190,000,000	\$ 236,200,000	\$ 190,000,000	\$ 190,000,000
Working Cash Loans Prior Year	-	-	-	-	-	-	-
<b>Total Borrowings</b>	<b>\$ 230,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 238,200,000</b>	<b>\$ 190,000,000</b>	<b>\$ 236,200,000</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>
<b><u>REPAYMENTS</u></b>							
Working Cash Loans Repaid Current	\$ 190,000,000	\$ 190,000,000	\$ 190,000,000	\$ 190,000,000	\$ 190,000,000	\$ 190,000,000	\$ 257,600,000
Working Cash Loans Repaid Prior	-	-	-	-	-	-	-
<b>Total Repayments</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 190,000,000</b>	<b>\$ 257,600,000</b>

**(1) FINANCING LIMITATION**

	<b>2017</b>
	(In Millions)
Property Tax Levy	\$ 223.9
Personal Property Replacement Tax	18.2
Total	<u>\$ 242.1</u>
* Borrowing Limitation	95.0 %
Total Available for Financing	<u>\$ 230.0</u>

\* Statutory limitation is 100%

**CORPORATE WORKING CASH FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016  
AND ESTIMATED AMOUNTS AVAILABLE FOR 2017 AND 2016**

<b>CURRENT ASSETS</b>	<b>ASSETS</b>		<b>2016</b>	
	<b>2017</b>		<b>AMOUNT</b>	<b>AVAILABLE FOR</b>
	<b>AMOUNT</b>	<b>AVAILABLE FOR</b>		<b>APPROPRIATION</b>
		<b>APPROPRIATION</b>		
Cash & Investments	\$ 88,790,821	\$ 88,790,821	\$ 88,058,394	\$ 88,058,394
Replacement Tax	-	-	-	-
Due from Corporate Fund	190,000,000	190,000,000	190,000,000	190,000,000
<b>Total Current Assets</b>	<b>\$ 278,790,821</b>	<b>\$ 278,790,821</b>	<b>\$ 278,058,394</b>	<b>\$ 278,058,394</b>

<b>FUND EQUITY</b>			
Estimated Revenue & Other Financing Sources	\$ 300,000		\$ 900,000
<b>ASSETS AVAILABLE FOR 2017 AND 2016</b>	<b>\$ 279,090,821</b>		<b>\$ 278,958,394</b>
<b>FUND EQUITY</b>	<b>\$ 278,790,821</b>		<b>\$ 278,058,394</b>

**CORPORATE WORKING CASH FUND  
REVENUES  
2017 - 2014**

<b>REVENUE DESCRIPTION</b>	<b>ESTIMATED</b>			<b>ACTUAL</b>	
	<b>2017</b>	<b>2016</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
	<b>BUDGET</b>	<b>ADJUSTED</b>	<b>BUDGET</b>		
Revenue from Money & Property					
Investment Income	\$ 300,000	\$ 513,000	\$ 900,000	\$ 832,380	\$ 834,350
Revenue from Miscellaneous Sources	-	-	-	-	-
<b>TOTAL</b>	<b>\$ 300,000</b>	<b>\$ 513,000</b>	<b>\$ 900,000</b>	<b>\$ 832,380</b>	<b>\$ 834,350</b>

## CAPITAL FUNDS FINANCIAL NARRATIVE

The Capital Funds of the District are the Capital Improvements Bond Fund (CIBF) and the Construction Fund. These funds are used to account for the acquisition of capital facilities and other capital assets. The District's major functions of sewage collection and treatment, solids processing, solids utilization, flood control, and stormwater management are capital intensive, requiring significant investments in infrastructure. The national priority of environmental protection, coupled with the District's prime mission of protecting the Lake Michigan drinking water supply from pollution, drives the capital program for the District. Funding for the national, state, and local priorities that drive the District's program is provided by bonds, grants, and other financial assistance available to the District.

The CIBF is used to provide resources from grants, bonds, and other sources to design and construct major capital facilities that are structures of permanent duration. The 2017 appropriation is \$354.6 million, a decrease of \$129.1 million from the 2016 Adjusted Budget, or 26.7 percent. The appropriation varies by the scheduled awards of major projects.

The CIBF balance sheet (page 92) estimates the net assets appropriable for 2017 at (\$617.9) million and (\$395.5) million for 2016. The CIBF balance sheet estimated negative net assets appropriable for 2017 and 2016 are a result of accounting for the full value of the contract awards as a liability, without recognizing the bonds to be sold during the course of the projects to meet financial needs. An obligation basis of budgetary accounting is used for this fund. Liabilities are recognized as the total value of all project awards at the time of award, even though cash disbursements are made over several future years.

Since 1969, the District has issued approximately \$6.0 billion in bonds in order to support its capital program. The District is authorized to issue \$150.0 million in nonreferendum Capital Improvements Bonds in any one year, plus amounts unissued from the prior three years. Bonds for State Revolving Fund loans are excluded. The District's nonreferendum bonding authority was extended to 2024 by state statute, effective January 1, 2011, and the annual debt issuance authorization was increased from \$100.0 million to \$150.0 million in 2003. This level of authority allows the District to proceed with the award of multi-year contracts, then sell bonds as cash flow requirements demand during the course of the project. The Five-Year Financial Forecast on pages 59 - 69 presents detailed projections of the financial aspects of the capital program into the future.

Property tax limitation laws enacted in Illinois had significant impacts on the future funding of the District's capital program through bond sales. Under Public Act 89-1, the District's nonreferendum bonding authority was restricted to finance only projects initiated prior to October 1, 1991, which generally covers only Tunnel and Reservoir Plan (TARP) projects. However, Public Acts 89-385 and 90-485 provided additional nonreferendum authority to the District by authorizing the issuance of "limited tax bonds." Limited bonds can be issued to the extent that any new debt when combined with existing debt service does not exceed the debt service extension base established by these Acts, which for the District is \$141.5 million. However, it was limited to the District's 1994 debt service level of \$141,463,920 and amended by Public Act 96-0501 to allow for an annual increase equal to the Consumer Price Index or five percent, whichever is less, and is currently estimated at \$159.3 million for the 2016 levy year and \$160.9 million for the 2017 levy year. These "limited tax bonds" allow the District to issue nonreferendum debt for projects initiated after October 1, 1991 and exclude debt associated with the TARP program and other projects initiated prior to that date from the extension base. There will be sufficient authorization to issue bonds to meet our capital program for the next few years.

The State of Illinois Revolving Loan Fund (SRF) provides low-interest loans to finance qualifying projects. Upon project completion, District bonds are issued at the same low-interest rate. The current interest rate for new loans to the District is 1.75 percent. Several projects are currently financed through SRF loans. The District expects to receive an allocation of at least \$200.0 million annually from SRF loans for the next several years. For 2017, \$180.0 million in SRF revenue is budgeted to fund plant projects.

For 2017, approximately \$11.2 million of Build America Bonds (BABs) subsidy is available to be used for capital projects in the Capital Improvements Bond Fund. In addition, \$7.0 million from the BABs subsidy will be transferred to the Construction Fund to fund capital projects. The District has been very successful in obtaining grant funding in the past, and future grants or appropriations are being pursued for the TARP program at the federal level through the Energy and Water Development Appropriations and the Water Resources Development Act.

The Construction Fund is a property tax supported fund designed to provide resources for capital projects for which long-term bond funding is not desirable or is not available. This fund is intended for pay-as-you-go capital projects to perform major rehabilitation of facilities, extending their useful life, and to acquire other capital assets. The funding mechanism for this is a working cash fund that provides loans in anticipation of tax collections. The liabilities for contracts not completed during a fiscal year are reappropriated in the next year. Net assets appropriable, therefore, fluctuate based on the value of contract liabilities carried forward to the next year.

The 2017 tax levy for the Construction Fund is \$17.0 million, an increase of \$3.7 million, or 28.0 percent, from the 2016 Adjusted Budget. The 2017 appropriation is \$34.5 million, a decrease of \$2.2 million, or 5.9 percent, from the 2016 Adjusted Budget. This decreased appropriation level reflects the anticipated expenditures for existing projects and the appropriations required to fund projects with 2017 award dates.

**CAPITAL IMPROVEMENTS BOND FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016**

	<u>ASSETS</u>		<u>2016</u>	
	<u>2017</u>		<u>AMOUNT</u>	<u>AVAILABLE FOR APPROPRIATION</u>
	<u>AMOUNT</u>	<u>AVAILABLE FOR APPROPRIATION</u>	<u>AMOUNT</u>	<u>AVAILABLE FOR APPROPRIATION</u>
<b>CURRENT ASSETS</b>				
Cash & Investments	\$ 138,400,400	\$ 138,400,400	\$ 108,774,219	\$ 108,774,219
Grants Receivable	932,932	932,932	-	-
State Revolving Fund Loans Receivable	150,000,000	150,000,000	151,640,631	151,640,631
<b>Total Current Assets</b>	<b>\$ 289,333,332</b>	<b>\$ 289,333,332</b>	<b>\$ 260,414,850</b>	<b>\$ 260,414,850</b>
<b>LIABILITIES &amp; FUND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Unpaid Bills:				
Contractual Services	\$ 73,761,112	\$ 73,761,112	\$ 77,693,900	\$ 77,693,900
Contracts Payable	833,423,020	833,423,020	578,213,065	578,213,065
<b>Total Current Liabilities</b>	<b>\$ 907,184,132</b>	<b>\$ 907,184,132</b>	<b>\$ 655,906,965</b>	<b>\$ 655,906,965</b>
Designated for Future Claims Liabilities	-	-	-	-
<b>Total Liabilities</b>	<b>\$ 907,184,132</b>	<b>\$ 907,184,132</b>	<b>\$ 655,906,965</b>	<b>\$ 655,906,965</b>
<b>ASSETS APPROPRIABLE</b>				
Net Assets Appropriable		\$ (617,850,800)		\$ (395,492,115)
Net Assets Appropriated		(617,850,800)		(395,492,115)
Equity Transfer		(13,000,000)		-
Estimated Revenue		985,476,400		879,256,915
<b>Total Assets Appropriable</b>		<b>\$ 354,625,600</b>		<b>\$ 483,764,800</b>
<b>FUND EQUITY</b>	\$ (617,850,800)		\$ (395,492,115)	
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 289,333,332</b>		<b>\$ 260,414,850</b>	

**CAPITAL IMPROVEMENTS BOND FUND**  
**APPROPRIABLE REVENUE**  
**2017 - 2014**

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
<b>Revenue from Money &amp; Property</b>					
Bond Sales (Present & Future)	\$ 791,341,276	\$ 125,003,513	\$ 786,521,791	\$ -	\$ -
Investment Income	3,000,000	1,905,000	1,600,000	2,278,586	2,694,091
<b>Subtotal</b>	<b>\$ 794,341,276</b>	<b>\$ 126,908,513</b>	<b>\$ 788,121,791</b>	<b>\$ 2,278,586</b>	<b>\$ 2,694,091</b>
<b>Revenue from Miscellaneous Sources</b>					
Federal & State Grants	\$ 11,135,124	\$ 11,195,184	\$ 11,135,124	\$ 11,165,154	\$ -
State Revolving Fund Loans	180,000,000	98,982,000	80,000,000	180,840,600	76,356,100
Miscellaneous	-	2,223,379	-	2,481,873	2,532,064
<b>Subtotal</b>	<b>\$ 191,135,124</b>	<b>\$ 112,400,563</b>	<b>\$ 91,135,124</b>	<b>\$ 194,487,627</b>	<b>\$ 78,888,164</b>
<b>Total Revenue</b>	<b>\$ 985,476,400</b>	<b>\$ 239,309,076</b>	<b>\$ 879,256,915</b>	<b>\$ 196,766,213</b>	<b>\$ 81,582,255</b>
<b>Other Financing Sources (Uses)</b>					
Equity Transfer	\$ (13,000,000)	\$ -	\$ -	\$ -	\$ (8,000,000)
<b>GRAND TOTAL</b>	<b>\$ 972,476,400</b>	<b>\$ 239,309,076</b>	<b>\$ 879,256,915</b>	<b>\$ 196,766,213</b>	<b>\$ 73,582,255</b>

**CONSTRUCTION FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016**

	<b>ASSETS</b>			
	<b>2017</b>		<b>2016</b>	
<b>CURRENT ASSETS</b>	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>
Cash & Investments	\$ 8,693,360	\$ 8,693,360	\$ 20,171,355	\$ 20,171,355
Taxes Receivable	16,019,000	16,071,140	15,922,500	16,051,145
Replacement Tax	1,100,000	1,100,000	-	-
<b>Total Current Assets</b>	<b>\$ 25,812,360</b>	<b>\$ 25,864,500</b>	<b>\$ 36,093,855</b>	<b>\$ 36,222,500</b>
<b>LIABILITIES &amp; FUND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Unpaid Bills:				
Contracts Payable	\$ 3,162,000	\$ 3,162,000	\$ 4,507,955	\$ 4,507,955
Contractual Services	-	-	400,145	400,145
Machinery & Equipment	297,100	297,100	-	-
Due to:				
Construction Working Cash Fund	12,000,000	12,000,000	12,000,000	12,000,000
<b>Total Current Liabilities</b>	<b>\$ 15,459,100</b>	<b>\$ 15,459,100</b>	<b>\$ 16,908,100</b>	<b>\$ 16,908,100</b>
Designated for Future Claims Liabilities		\$ -		\$ -
<b>Total Current Liabilities and Designations</b>		<b>\$ 15,459,100</b>		<b>\$ 16,908,100</b>
<b>ASSETS APPROPRIABLE FOR 2017 AND 2016</b>				
Net Assets Appropriable		\$ 10,405,400		\$ 19,314,400
Net Assets Appropriated		\$ 10,405,400		\$ 19,314,400
Equity Transfer		7,000,000		-
Estimated Revenue		17,045,000		17,745,000
<b>Total Assets Appropriable</b>		<b>\$ 34,450,400</b>		<b>\$ 37,059,400</b>
<b>FUND EQUITY</b>				
Designated for Future Claims Liabilities	\$ -		\$ -	
Undesignated	10,353,260		19,185,755	
<b>Total Fund Equity</b>	<b>\$ 10,353,260</b>		<b>\$ 19,185,755</b>	
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 25,812,360</b>		<b>\$ 36,093,855</b>	

## CONSTRUCTION FUND FINANCING 2017 - 2012

	ESTIMATED			ACTUAL			
	2017 (1)	2016 REVISED	2016 ORIGINAL	2015	2014	2013	2012
<b>BORROWINGS</b>							
Working Cash Loans	\$ 16,200,000	\$ 16,800,000	\$ 16,800,000	\$ 12,000,000	\$ 10,000,000	\$ 7,000,000	\$ 13,200,000
<b>Total Borrowings</b>	<b>\$ 16,200,000</b>	<b>\$ 16,800,000</b>	<b>\$ 16,800,000</b>	<b>\$ 12,000,000</b>	<b>\$ 10,000,000</b>	<b>\$ 7,000,000</b>	<b>\$ 13,200,000</b>
<b>REPAYMENTS</b>							
Working Cash Loans Repaid							
- Current	\$ 16,800,000	\$ 12,000,000	\$ 12,000,000	\$ 10,000,000	\$ 7,000,000	\$ 13,200,000	\$ 2,950,485
- Prior Year	-	-	-	-	-	-	3,049,515
<b>Total Repayments</b>	<b>\$ 16,800,000</b>	<b>\$ 12,000,000</b>	<b>\$ 12,000,000</b>	<b>\$ 10,000,000</b>	<b>\$ 7,000,000</b>	<b>\$ 13,200,000</b>	<b>\$ 6,000,000</b>

### (1) FINANCING LIMITATION

(In Millions)

Property Tax Levy	\$ 17.0
Personal Property Replacement Tax	-
Total	\$ 17.0
Borrowing Limitation *	95% * Statutory limitation is 100%
Total Available for Financing	\$ 16.2

## CONSTRUCTION FUND APPROPRIABLE REVENUE 2017 - 2014

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
Revenue from Property Taxes					
Gross Tax Levy	\$ 17,000,000	\$ 16,600,000	\$ 16,600,000	\$ 16,500,000	\$ 17,400,000
Less: Allowance for Uncollectible Taxes	(595,000)	(581,000)	(581,000)	(577,500)	(609,000)
Net Property Taxes	\$ 16,405,000	\$ 16,019,000	\$ 16,019,000	\$ 15,922,500	\$ 16,791,000
Revenue from Personal Property Replacement Tax		- 1,100,000	1,100,000	-	-
Net Tax Sources	\$ 16,405,000	\$ 17,119,000	\$ 17,119,000	\$ 15,922,500	\$ 16,791,000
Adjustment to Match Working Cash Borrowings	(205,000)	(319,000)	(319,000)	(622,500)	(791,000)
Working Cash Financing (Maximum 95% of Gross Tax Sources)	16,200,000	16,800,000	16,800,000	15,300,000	16,000,000
Revenue from Current Services					
Connection Impact Fees	745,000	745,000	745,000	745,500	745,500
Revenue from Money & Property					
Investment Income	100,000	156,752	200,000	280,695	388,074
Miscellaneous	-	43,854	-	504,687	821
User Charge	-	-	-	300,000	300,000
Equity Transfer from the Bond Redemp. & Interest Fund	7,000,000	-	-	-	-
Subtotal	\$ 7,845,000	\$ 945,606	\$ 945,000	\$ 1,830,882	\$ 1,434,395
Adjustment to Net Assets Available for Projected Receipts	-	791,433	-	575,933	229,347
<b>Total</b>	<b>\$ 24,045,000</b>	<b>\$ 18,537,039</b>	<b>\$ 17,745,000</b>	<b>\$ 17,706,815</b>	<b>\$ 17,663,742</b>



**CONSTRUCTION WORKING CASH FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016  
AND ESTIMATED AMOUNTS AVAILABLE FOR 2017 AND 2016**

	<u>ASSETS</u>			
	<u>AMOUNT</u>	<u>2017</u> <u>AVAILABLE FOR</u> <u>APPROPRIATION</u>	<u>AMOUNT</u>	<u>2016</u> <u>AVAILABLE FOR</u> <u>APPROPRIATION</u>
<b>CURRENT ASSETS</b>				
Cash & Investments	\$ 10,126,091	\$ 10,126,091	\$ 9,912,234	\$ 9,912,234
Taxes Receivable	-	-	-	-
Replacement Tax	-	-	-	-
Due to Corporate Fund	-	-	-	-
Due from Construction Fund	10,000,000	10,000,000	10,000,000	10,000,000
<b>Total Current Assets</b>	<u>\$ 20,126,091</u>	<u>\$ 20,126,091</u>	<u>\$ 19,912,234</u>	<u>\$ 19,912,234</u>

**FUND EQUITY**

Estimated Revenue & Other Financing Sources \$ 100,000 \$ 100,000

**ASSETS AVAILABLE FOR 2017 AND 2016** \$ 20,226,091 \$ 20,012,234

**FUND EQUITY** \$ 20,126,091 \$ 19,912,234

**CONSTRUCTION WORKING CASH FUND  
REVENUES  
2017 - 2014**

<u>REVENUE DESCRIPTION</u>	<u>ESTIMATED</u>			<u>ACTUAL</u>	
	<u>2017</u> <u>BUDGET</u>	<u>2016</u> <u>ADJUSTED</u>	<u>2016</u> <u>BUDGET</u>	<u>2015</u>	<u>2014</u>
Revenue from Money & Property					
Investment Income	\$ 100,000	\$ 126,000	\$ 100,000	\$ 128,937	\$ 147,239
Revenue from Miscellaneous Sources	-	-	-	-	-
<b>TOTAL</b>	<u>\$ 100,000</u>	<u>\$ 126,000</u>	<u>\$ 100,000</u>	<u>\$ 128,937</u>	<u>\$ 147,239</u>

## OTHER FUNDS FINANCIAL NARRATIVE

**The Stormwater Management Fund** was established by Public Act 93-1049 on January 1, 2005. This fund accounts for tax levies and other revenue to be used for stormwater management activities throughout all of Cook County. The 2017 property tax levy for the Stormwater Management Fund is \$40.9 million, an increase of \$6.6 million, or 19.3 percent from the 2016 Adjusted Budget. During 2005, Public Act 94-474 authorized the creation and use of a Stormwater Working Cash Fund for the sole purpose of providing temporary loans to the Stormwater Management Fund in anticipation of tax collections. Details of this fund's purpose and \$45.8 million appropriation for 2017 are presented on pages 493 - 548.

**The Bond Redemption & Interest (B&I) Fund** is a series of subfunds that account for the property tax levies and other revenues received to pay for the principal and interest of bonds issued by the District. The property tax levies for outstanding bond issues are collected and paid through this fund. The 2017 property tax levy for the B&I Fund is \$233.9 million, an increase of \$0.9 million, or 0.4 percent, from the 2016 Adjusted Budget. Appropriations and tax levies are adjusted for new bond sales or state revolving fund loans. The 2017 appropriation for this fund is \$228.8 million, which is an increase of \$12.8 million, or 5.9 percent, from the 2016 Adjusted Budget. As part of the 2016 Bond sale, the District was able to take advantage of lower interest rates by issuing refunding bonds, achieving savings that will result in savings of \$120 million in debt service payments.

Property tax levy collections are invested prior to the time when actual principal and interest payments must be made. Investment income earned on tax collections is credited to the specific sub-funds for each bond issue. The amount of estimated investment income for 2017 is \$0.4 million, which is a decrease of \$0.3 million from the 2016 Budget. Whenever possible, excess investment income will be used to abate a portion of the levy. A detailed presentation on the B&I Fund is found on pages 551 - 554.

**The Reserve Claim Fund** is the District's self-insurance fund, and is financed through an annual property tax levy of one-half cent (0.5¢) per \$100 of the last known equalized assessed valuation (EAV). This one-half cent tax rate is the maximum allowed by state statute. It is Board policy to levy the maximum whenever possible. For 2017, \$5.9 million is budgeted. The available fund balance and amount available for appropriation for the Reserve Claim Fund are based on the net impact of current revenues and current expenditures.

The 2017 appropriation for this fund is \$30.6 million, a decrease of \$0.4 million, or 1.5 percent, from the 2016 Adjusted Budget. The maximum fund balance that can be accumulated is 0.05 percent of the last known EAV. For the 2017 Budget, using the last known EAV of 2015, the maximum accumulation is estimated at \$65.2 million. The allowance for accounts payable and estimated liabilities is estimated at \$0.4 million.

The financial status of this fund is closely monitored. Administrative risk management programs in the Claims and Safety areas are in place to help control the rate of growth for the employee disability component. A detailed presentation of this fund begins on page 549.

**The Retirement Fund** receives the proceeds of the annual tax levy that the District extends on behalf of the Metropolitan Water Reclamation District Retirement Fund, a pension trust fund. The amounts, as certified by the Retirement Fund Board, are levied by the District and appropriated when received. The property tax levy for 2017 is \$73.5 million compared to the 2016 Adjusted Levy of \$65.2 million and is based on a statutory multiplier of employee contributions made in 2015 and 2014, respectively. On August 3, 2012, the Governor signed Public Act 97-0894, which establishes that beginning in 2013, the tax levy will be based on the fund's actuarially determined contribution requirement but shall not exceed an amount equal to employee contributions two years prior multiplied by 4.19. The previous statutory multiplier was 2.19. The appropriable resources and appropriation consist of the collection of the previous year's property tax levy plus personal property replacement tax receipts. The 2017 appropriation is \$79.5 million, an increase of \$8.7 million, or 12.3 percent, from the 2016 Adjusted Budget.

The District's Retirement Fund is part of the aggregate levy under the Tax Cap law that is limited to annual increases of 5.0 percent or the CPI, whichever is less. Due to the irregular nature of levy requirements of the fund which parallel retirements, the District's Board of Commissioners established a policy in 1995 to exclude the Retirement Fund levy from any future adjustments to the aggregate levy required by tax caps. When required, adjustments or limitations have been made to other funds subject to the aggregate levy limit. An expanded presentation on the Retirement Fund is made on pages 555 and 556.

**STORMWATER MANAGEMENT FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016**

	<b>ASSETS</b>			
	<b>2017</b>		<b>2016</b>	
	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>
<b>CURRENT ASSETS</b>				
Cash & Investments	\$ 7,247,468	\$ 7,247,468	\$ 6,373,896	\$ 6,373,896
Taxes Receivable	33,051,250	33,291,300	23,208,250	23,303,350
<b>Total Current Assets</b>	<b>\$ 40,298,718</b>	<b>\$ 40,538,768</b>	<b>\$ 29,582,146</b>	<b>\$ 29,677,246</b>
<b>LIABILITIES &amp; FUND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Unpaid Bills:				
Accrued Salaries & Wages	\$ 632,368	\$ 632,368	\$ 200,000	\$ 200,000
Contracts Payable	6,406,300	6,406,300	9,776,446	9,776,446
Personal Services	-	-	-	-
Contractual Services	-	-	-	-
Materials & Supplies	-	-	-	-
Machinery & Equipment	-	-	-	-
Due to:				
Stormwater Working Cash Fund	26,500,000	26,500,000	12,000,000	12,000,000
<b>Total Current Liabilities</b>	<b>\$ 33,538,668</b>	<b>\$ 33,538,668</b>	<b>\$ 21,976,446</b>	<b>\$ 21,976,446</b>
Designated for Future Claims Liabilities		\$ -		\$ -
<b>Total Current Liabilities and Designations</b>		<b>\$ 33,538,668</b>		<b>\$ 21,976,446</b>
<b>ASSETS APPROPRIABLE FOR 2017 AND 2016</b>				
Net Assets Appropriable		\$ 7,000,100		\$ 7,700,800
Net Assets Appropriated		\$ 1,230,850		\$ 4,428,100
Equity Transfer to Bond and Interest Fund		5,769,250		3,272,700
Estimated Revenue		38,800,000		32,800,000
<b>Total Assets Appropriable</b>		<b>\$ 45,800,100</b>		<b>\$ 40,500,800</b>
<b>FUND EQUITY</b>	<b>\$ 6,760,050</b>		<b>\$ 7,605,700</b>	
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 40,298,718</b>		<b>\$ 29,582,146</b>	

## STORMWATER MANAGEMENT FUND FINANCING 2017 - 2012

	ESTIMATED			ACTUAL			
	2017 (1)	2016 Revised	2016 Original	2015	2014	2013	2012
<b>BORROWINGS</b>							
Working Cash Loans	\$ 38,800,000	\$ 26,500,000	\$ 32,500,000	\$ 12,000,000	\$ 20,000,000	\$ 19,000,000	\$ 19,000,000
<b>Total Borrowings</b>	<b>\$ 38,800,000</b>	<b>\$ 26,500,000</b>	<b>\$ 32,500,000</b>	<b>\$ 12,000,000</b>	<b>\$ 20,000,000</b>	<b>\$ 19,000,000</b>	<b>\$ 19,000,000</b>
<b>REPAYMENTS</b>							
Working Cash Loans Repaid							
- Current	\$ 26,500,000	\$ 12,000,000	\$ 12,000,000	\$ 20,000,000	\$ 19,000,000	\$ 19,000,000	\$ 22,900,000
- Prior Year	-	-	-	-	-	-	-
<b>Total Repayments</b>	<b>\$ 26,500,000</b>	<b>\$ 12,000,000</b>	<b>\$ 12,000,000</b>	<b>\$ 20,000,000</b>	<b>\$ 19,000,000</b>	<b>\$ 19,000,000</b>	<b>\$ 22,900,000</b>

### (1) FINANCING LIMITATION

2016 (In Millions)	
Property Tax Levy	\$ 40.9
Personal Property Replacement Tax	-
<b>Total</b>	<b>\$ 40.9</b>
Borrowing Limitation *	95% * Statutory limitation is 100%
<b>Total Available for Financing</b>	<b>\$ 38.8</b>

## STORMWATER MANAGEMENT FUND APPROPRIABLE REVENUE 2017 - 2014

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
Revenue from Property Taxes					
Gross Tax Levy	\$ 40,856,008	\$ 34,250,000	\$ 34,250,000	\$ 24,050,000	\$ 21,000,000
Less: Allowance for Uncollectible Taxes	(1,429,960)	(1,198,750)	(1,198,750)	(841,750)	(735,000)
Net Property Taxes	\$ 39,426,048	\$ 33,051,250	\$ 33,051,250	\$ 23,208,250	\$ 20,265,000
Adjustment to Match Working Cash Borrowings	(626,048)	(551,200)	(551,200)	(408,250)	(265,000)
Working Cash Financing at 95% of Gross Tax Sources	\$ 38,800,000	\$ 32,500,000	\$ 32,500,000	\$ 22,800,000	\$ 20,000,000
Revenue from Money & Property					
Investment Income	\$ -	\$ 99,000	\$ 300,000	\$ 227,035	\$ 393,951
Miscellaneous	-	256	-	331	140,132
Grants	-	-	-	-	-
Subtotal	\$ -	\$ 99,256	\$ 300,000	\$ 227,366	\$ 534,083
Adjustment to Net Assets Available for Projected Receipts	\$ -	\$ 303,952	\$ -	\$ 373,103	\$ (548,397)
<b>Total</b>	<b>\$ 38,800,000</b>	<b>\$ 32,903,208</b>	<b>\$ 32,800,000</b>	<b>\$ 23,400,469</b>	<b>\$ 19,985,686</b>



**BOND REDEMPTION & INTEREST FUND**  
**ESTIMATED BALANCE SHEET**  
**JANUARY 1, 2017 AND 2016**

**ASSETS**

	2017		2016	
	AMOUNT	AVAILABLE FOR APPROPRIATION	AMOUNT	AVAILABLE FOR APPROPRIATION
<b>CURRENT ASSETS</b>				
Cash & Investments	\$ 110,265,700	\$ 110,265,700	\$ 102,566,469	\$ 102,566,469
Restricted Cash	-	-	-	-
Deposits with Escrow Agent	-	-	-	-
Taxes Receivable	221,865,622	222,973,165	220,723,299	222,058,562
<b>Total Current Assets</b>	<b>\$ 332,131,322</b>	<b>\$ 333,238,865</b>	<b>\$ 323,289,768</b>	<b>\$ 324,625,031</b>

**LIABILITIES & FUND EQUITY**

**CURRENT LIABILITIES**

Bonds Payable	\$ 111,221,894	\$ 100,311,969
Interest Payable	117,603,919	115,735,161
Program Expense Payable	-	-
Equity Transfer	-	-
<b>Total Current Liabilities</b>	<b>\$ 228,825,813</b>	<b>\$ 216,047,130</b>

**ASSETS APPROPRIABLE FOR 2017 AND 2016**

Net Assets Appropriable	\$ 333,238,865	\$ 324,625,031
Equity Transfer from Stormwater Management Fund	5,769,300	3,269,300
Estimated Revenue	400,000	700,000
<b>Total Assets Available</b>	<b>\$ 339,408,165</b>	<b>\$ 328,594,331</b>
Liabilities Payable from Restricted Assets	-	-
Less: Assets Available for Future Years (Principal & Interest Payments)	(110,582,352)	(112,547,243)
<b>Total Assets Appropriable</b>	<b>\$ 228,825,813</b>	<b>\$ 216,047,088</b>

**FUND EQUITY**

Undesignated	\$ 103,305,509	\$ 107,242,638
<b>TOTAL FUND EQUITY</b>	<b>\$ 103,305,509</b>	<b>\$ 107,242,638</b>
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 332,131,322</b>	<b>\$ 323,289,768</b>

**BOND REDEMPTION & INTEREST FUND**  
**APPROPRIABLE REVENUE**  
**2017 - 2014**

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
Revenue from Taxes					
Real Estate					
Current	\$ 224,164,748	\$ 223,010,587	\$ 223,010,587	\$ 211,268,060	\$ 194,660,105
Prior	(1,191,583)	(952,025)	(952,025)	517,194	1,087,327
<b>Total</b>	<b>\$ 222,973,165</b>	<b>\$ 222,058,562</b>	<b>\$ 222,058,562</b>	<b>\$ 211,785,254</b>	<b>\$ 195,747,432</b>
Revenue from Money & Property					
Investment Income	\$ 400,000	\$ 1,020,000	\$ 700,000	\$ 1,039,470	\$ 1,060,763
Build America Bond Subsidy	-	-	-	-	11,141,130
Revenue from Miscellaneous Sources					
Cash Available	110,265,700	108,532,835	102,566,469	108,525,217	108,094,576
Other	-	-	-	3,446	-
Other Financing Sources (Uses)					
Refunding (Net)	-	-	-	-	-
Transfer-in	-	-	-	-	-
Bond Premium	-	-	-	12,346,220	-
Sale of Capital Improvement Bonds (CIB)	-	-	-	70,805,000	-
Bond Redemption	-	-	-	(82,905,757)	-
Refunding Transaction Costs	-	-	-	(241,112)	-
Gain on Swap	-	-	-	-	-
Equity Transfer From Stormwater Management Fund	5,769,300	3,272,650	3,269,300	2,123,920	-
Equity Transfer To Retirement Fund	-	-	-	-	(3,000,000)
Equity Transfer From CIB Fund	-	-	-	-	-
Less: Amount to Be Expended After Budget Year	(110,582,352)	(119,942,465)	(112,547,243)	(108,955,857)	(118,138,187)
<b>GRAND TOTAL</b>	<b>\$ 228,825,813</b>	<b>\$ 214,941,582</b>	<b>\$ 216,047,088</b>	<b>\$ 214,525,801</b>	<b>\$ 194,905,714</b>

**RESERVE CLAIM FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016**

<b>CURRENT ASSETS</b>	<b>ASSETS</b>			
	<b>2017</b>		<b>2016</b>	
	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>	<b>AMOUNT</b>	<b>AVAILABLE FOR APPROPRIATION</b>
Cash & Investments	\$ 25,190,277	\$ 25,190,277	\$ 24,488,886	\$ 24,488,886
Taxes Receivable	5,597,000	5,626,823	5,500,500	5,487,014
Replacement Tax	-	-	-	-
<b>Total Current Assets</b>	<b>\$ 30,787,277</b>	<b>\$ 30,817,100</b>	<b>\$ 29,989,386</b>	<b>\$ 29,975,900</b>
<b>LIABILITIES &amp; FUND EQUITY</b>				
<b>ACCOUNTS PAYABLE &amp; OTHER LIABILITIES</b>	\$ 400,000	\$ 400,000	\$ 200,000	\$ 200,000
<b>ASSETS APPROPRIABLE FOR 2017 AND 2016</b>				
Net Assets Appropriable		\$ 30,417,100		\$ 29,775,900
Equity Transfer from Capital Improvements Bond Fund		-		-
Estimated Revenue		200,000		400,000
<b>Total Assets Appropriable</b>		<b>\$ 30,617,100</b>		<b>\$ 30,175,900</b>
<b>FUND EQUITY</b>	\$ 30,387,277		\$ 29,789,386	
<b>Total Liabilities &amp; Fund Equity</b>	<b>\$ 30,787,277</b>		<b>\$ 29,989,386</b>	

**RESERVE CLAIM FUND  
APPROPRIABLE REVENUE  
2017 - 2014**

<b>REVENUE DESCRIPTION</b>	<b>ESTIMATED</b>			<b>ACTUAL</b>	
	<b>2017 BUDGET</b>	<b>2016 ADJUSTED</b>	<b>2016 BUDGET</b>	<b>2015</b>	<b>2014</b>
Revenue from Taxes					
Real Estate - Current	\$ 5,655,000	\$ 5,557,500	\$ 5,557,500	\$ 2,903,106	\$ 5,964,647
Real Estate - Prior	(28,177)	(70,486)	(70,486)	15,848	40,124
Replacement Tax	-	-	-	-	-
<b>SUBTOTAL</b>	<b>\$ 5,626,823</b>	<b>\$ 5,487,014</b>	<b>\$ 5,487,014</b>	<b>\$ 2,918,954</b>	<b>\$ 6,004,771</b>
Equity Transfer from Capital Improvements Bond Fund	\$ -	\$ -	\$ -	\$ -	\$ -
Investment Income & Miscellaneous	200,000	283,000	400,000	417,397	545,158
<b>GRAND TOTAL</b>	<b>\$ 5,826,823</b>	<b>\$ 5,770,014</b>	<b>\$ 5,887,014</b>	<b>\$ 3,336,351</b>	<b>\$ 6,549,929</b>



**RETIREMENT FUND  
ESTIMATED BALANCE SHEET  
JANUARY 1, 2017 AND 2016**

**ASSETS**

	2017		2016	
	AMOUNT	AVAILABLE FOR APPROPRIATION	AMOUNT	AVAILABLE FOR APPROPRIATION
<b>CURRENT ASSETS</b>				
Taxes Receivable	\$ 62,880,500	\$ 62,880,500	\$ 55,973,600	\$ 55,973,600
Replacement Tax	16,624,500	16,624,500	14,798,400	14,798,400
<b>Total Current Assets</b>	<b>\$ 79,505,000</b>	<b>\$ 79,505,000</b>	<b>\$ 70,772,000</b>	<b>\$ 70,772,000</b>

**LIABILITIES & FUND EQUITY**

**ASSETS APPROPRIABLE FOR 2017 AND 2016**

Net Assets Appropriable	\$ 79,505,000	\$ 70,772,000
Equity Transfer from Stormwater Working Cash Fund	-	-
Equity Transfer from Capital Improvements Bond Fund	-	-
Equity Transfer from Bond Redemption & Interest Fund	-	-
Equity Transfer from Corporate Fund	-	-
<b>Total Assets Appropriable Due to Retirement Fund</b>	<b>\$ 79,505,000</b>	<b>\$ 70,772,000</b>

**FUND EQUITY**

<b>Total Fund Equity</b>	<b>\$ 79,505,000</b>	<b>\$ 70,772,000</b>
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**RETIREMENT FUND  
APPROPRIABLE REVENUE  
2017 - 2014**

REVENUE DESCRIPTION	ESTIMATED			ACTUAL	
	2017 BUDGET	2016 ADJUSTED	2016 BUDGET	2015	2014
Revenue from Taxes					
Real Estate - Current	\$ 62,880,500	\$ 55,973,600	\$ 55,973,600	\$ 49,032,024	\$ 50,067,365
Replacement Tax	16,624,500	14,798,400	14,798,400	12,891,900	13,170,000
<b>SUBTOTAL</b>	<b>\$ 79,505,000</b>	<b>\$ 70,772,000</b>	<b>\$ 70,772,000</b>	<b>\$ 61,923,924</b>	<b>\$ 63,237,365</b>
Equity Transfer from Corporate Fund	\$ -	\$ -	\$ -	\$ -	\$ -
Equity Transfer from Stormwater Working Cash Fund	-	-	-	-	1,000,000
Equity Transfer from Capital Improvements Bond Fund	-	-	-	-	8,000,000
Equity Transfer from Bond Redemption & Interest Fund	-	-	-	-	3,000,000
<b>GRAND TOTAL</b>	<b>\$ 79,505,000</b>	<b>\$ 70,772,000</b>	<b>\$ 70,772,000</b>	<b>\$ 61,923,924</b>	<b>\$ 75,237,365</b>

# SECTION IV

## CORPORATE FUND

The Corporate Fund provides for day-to-day staff services as well as the operations and maintenance of treatment plants, pumping stations, collection sewers, tunnels, and related facilities. This section provides appropriation detail for the operations and support departments.

Graphs indicate staffing, appropriations, and expenditures budgeted from 2008 through 2017. The structure of sub-units and sections, the number of actual 2015 full-time equivalent (FTE) positions, as well as FTE positions budgeted for 2016 and 2017 are shown in the organization chart. In this section, and throughout the Budget, actual expenditures are used for 2015 with estimated costs for 2016 and budgeted costs for 2017. Additional information for each department includes:

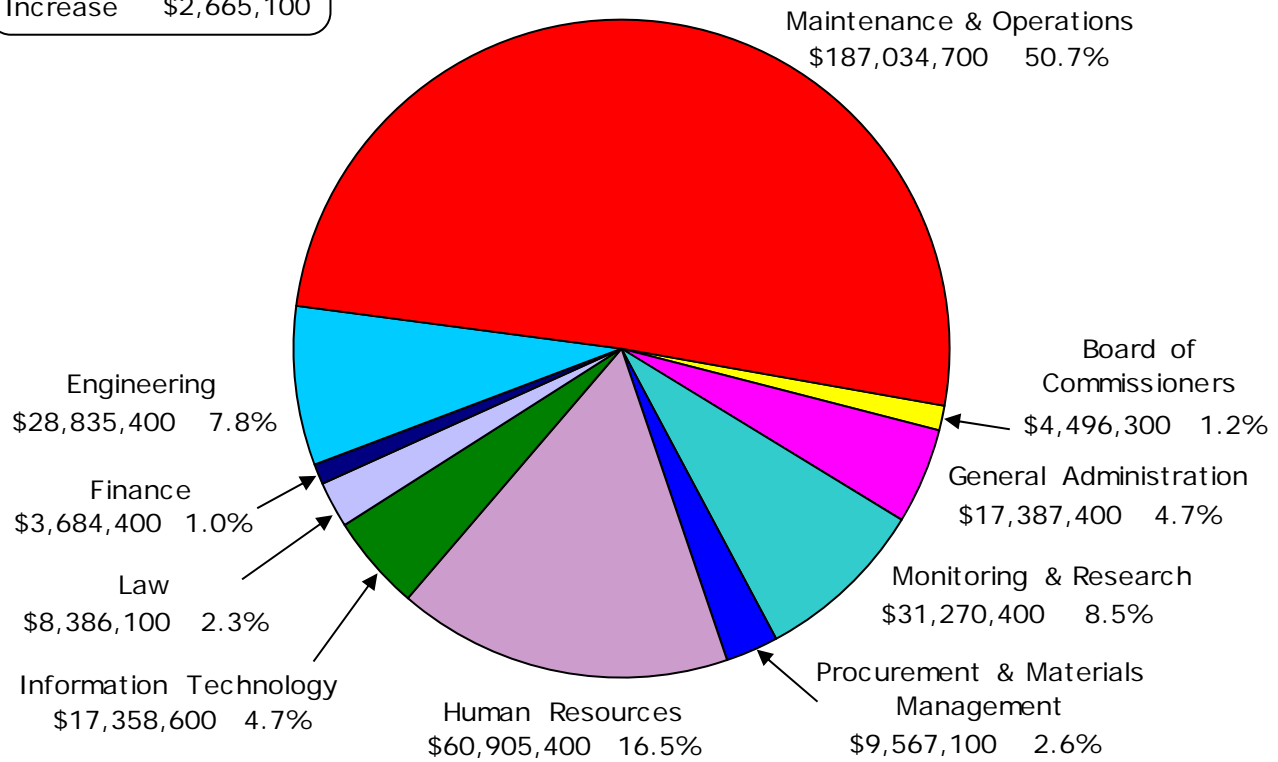
- A *Narrative* explanation of the responsibilities of the department, changes in appropriation from the 2016 Budget, accomplishments during 2016, and significant features for the 2017 Budget. The mission statement, major goals, and initiatives are also provided.
- A list of *Objectives by Priority* describes each objective, assigns the costs associated with it, and indicates its percentage of the total department budget.
- *Programs by Priority* includes major department functions and projected costs and staffing levels with comparison to budgeted 2016. Actual costs are shown for 2015.
- *Performance Data* measures specific department activities by cost and, where possible, measurable units, and compares budgeted costs for 2017 and 2016 with actual costs for 2015.
- The *Line Item Analysis* provides detailed line item appropriations over a three-year period. Appropriations for 2017 are shown as proposed by the Executive Director, subsequently recommended by the Committee on Budget and Employment, and ultimately adopted and amended by the Board of Commissioners. Original and adjusted appropriations and estimated expenditures are shown for 2016. Actual 2015 expenditures are provided.
- The *Position Analysis* provides comparative departmental personnel position information for the previous, current, and budget years. Position counts and appropriations for the current and budget years are provided as totals by section or unit, division, and department. The pay plan and grade for each class title is provided and can be used to reference the salary schedules contained in the appendix to determine the applicable salary range. The 2017 salary appropriation is adjusted for vacancies in the Line Item Analysis.

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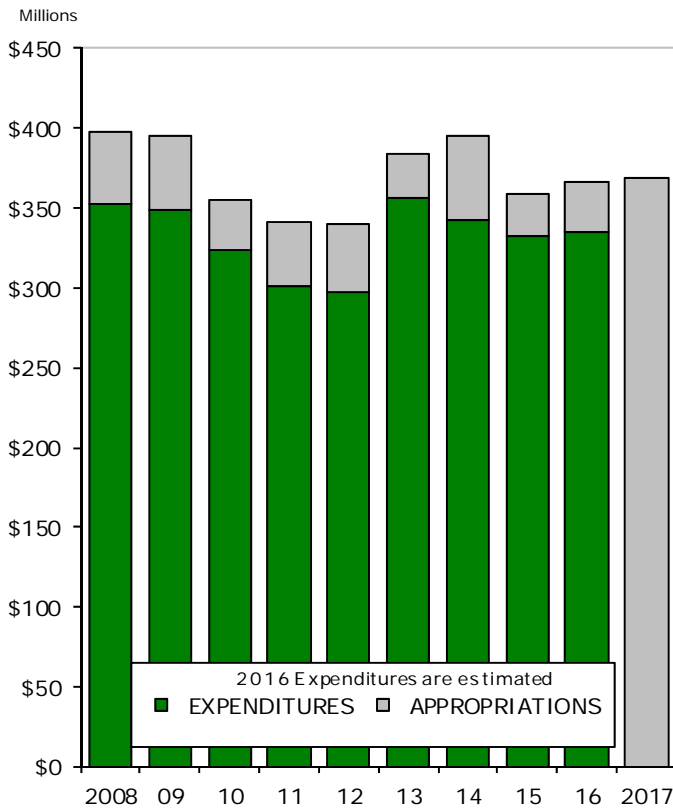
# CORPORATE FUND

## FUNCTIONS

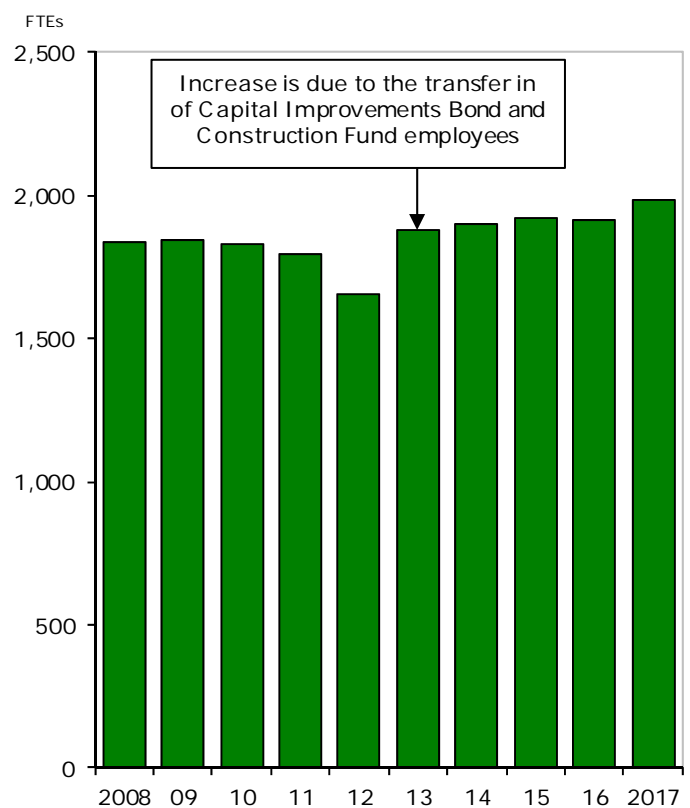
2017	\$368,925,800
2016	\$366,260,700
Increase	\$2,665,100



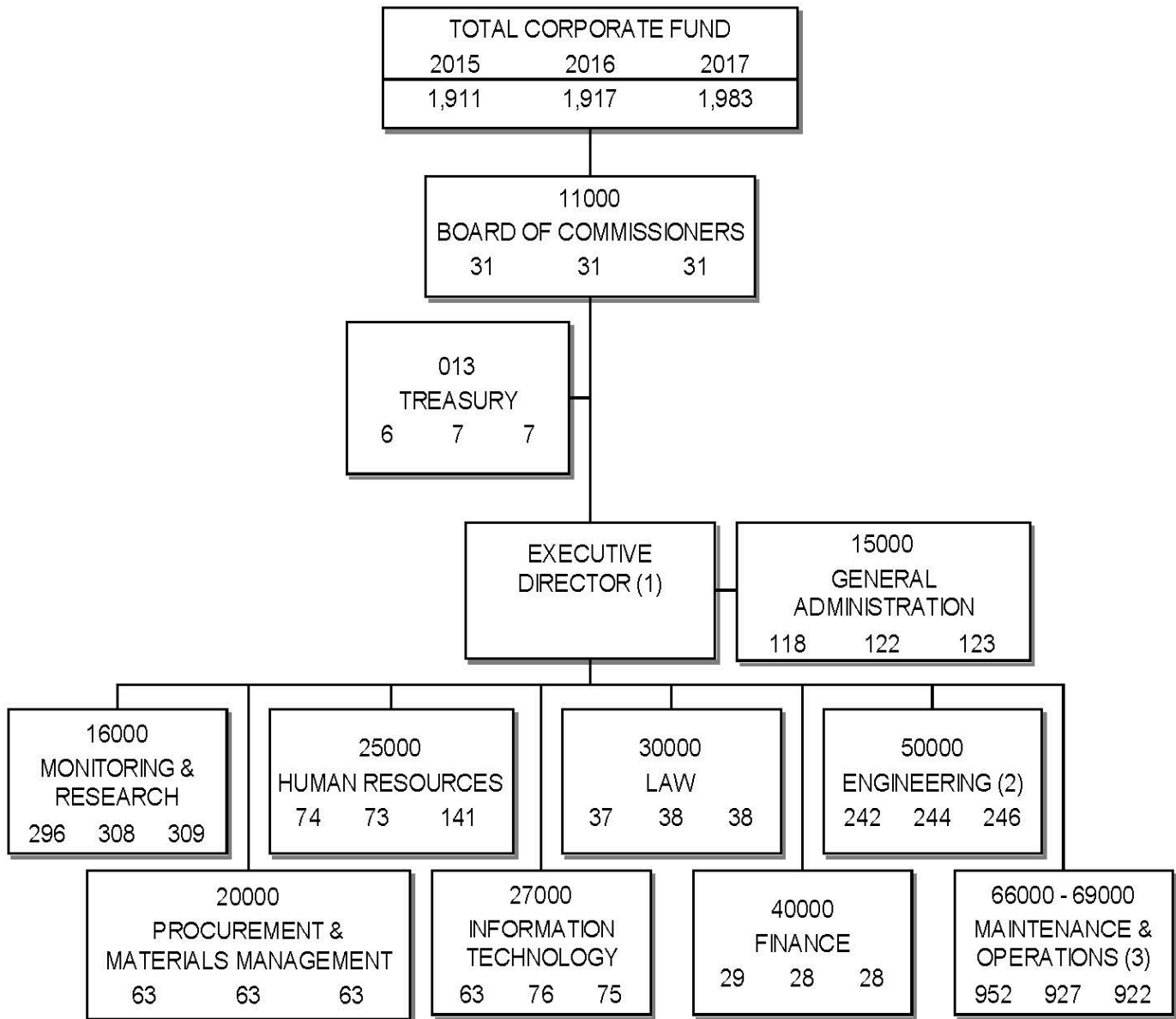
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# CORPORATE FUND



- (1) Personnel count for the Executive Director's Office is reflected in General Administration.
- (2) 30 positions are funded by the Stormwater Management Fund, the management of which remains in the Engineering Department.
- (3) 29 positions are funded by the Stormwater Management Fund, the management of which remains in the Maintenance & Operations Department.

101 11000 - 69000	Fund: Corporate Department: All Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
		Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director
601010	Salaries of Regular Employees	\$170,331,806	\$183,289,100	\$182,739,100	\$172,397,400	\$184,577,700	\$184,577,700	\$187,174,100
601060	Compensation Plan Adjustments	7,581,243	7,404,200	7,877,300	7,051,600	7,651,300	7,651,300	7,744,700
601070	Social Security and Medicare Contributions	2,631,404	2,610,500	2,655,000	2,629,400	2,619,100	2,619,100	2,619,100
601080	Salaries of Nonbudgeted Employees	60,568	23,400	45,400	23,000	39,300	39,300	39,300
601090	Employee Claims	37,475	47,900	47,900	47,900	60,200	60,200	60,200
601100	Tuition and Training Payments	996,634	1,180,200	1,190,600	856,700	1,319,300	1,319,300	1,461,100
601170	Payments for Professional Services	4,211,238	-	-	-	-	-	-
601250	Health and Life Insurance Premiums	44,187,178	48,226,600	48,226,600	43,950,300	46,705,100	46,705,100	46,705,100
601270	General Salary Adjustments	-	-	-	-	1,233,100	1,233,100	-
601300	Personal Services, N.O.C.	349,477	518,800	518,800	490,200	678,800	678,800	678,800
601410	Personal Services Exp for Prelim Engineering Rpts and Studies	100,001	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	230,487,022	243,300,700	243,300,700	227,446,500	244,883,900	244,883,900	246,482,400
612010	Travel	51,577	124,100	124,100	100,000	100,200	100,200	100,200
612030	Meals and Lodging	135,757	210,800	248,800	205,200	190,500	190,500	190,500
612040	Postage, Freight, and Delivery Charges	92,981	127,900	129,900	119,900	104,300	104,300	104,300
612050	Compensation for Personally-Owned Automobiles	245,921	267,000	267,000	229,600	207,300	207,300	207,300
612080	Motor Vehicle Operating Services	65,335	81,200	67,200	54,400	86,900	86,900	86,900
612090	Reprographic Services	25,822	167,500	162,800	72,600	153,500	153,500	153,500
612150	Electrical Energy	35,218,954	36,603,400	36,603,400	34,368,700	37,141,000	36,812,000	36,812,000
612160	Natural Gas	1,988,511	2,863,200	2,653,200	2,533,400	2,824,800	2,802,500	2,802,500
612170	Water and Water Services	1,667,676	1,738,600	1,924,600	1,738,900	1,749,800	1,749,800	1,749,800
612210	Communication Services	1,552,791	1,954,900	2,125,900	1,743,500	2,030,100	2,030,100	2,030,100
612240	Testing and Inspection Services	182,692	181,400	181,400	145,000	170,200	170,200	170,200
612250	Court Reporting Services	55,548	103,400	103,400	86,400	94,000	94,000	144,000
612260	Medical Services	123,656	180,000	180,000	150,700	123,700	123,700	123,700
612280	Subscriptions and Membership Dues	542,620	572,300	781,300	771,400	813,800	813,800	813,800
612290	Insurance Premiums	3,129,261	3,500,600	3,500,600	3,351,100	3,500,600	3,500,600	3,500,600
612330	Rental Charges	462,643	567,400	589,400	505,900	541,600	541,600	551,400

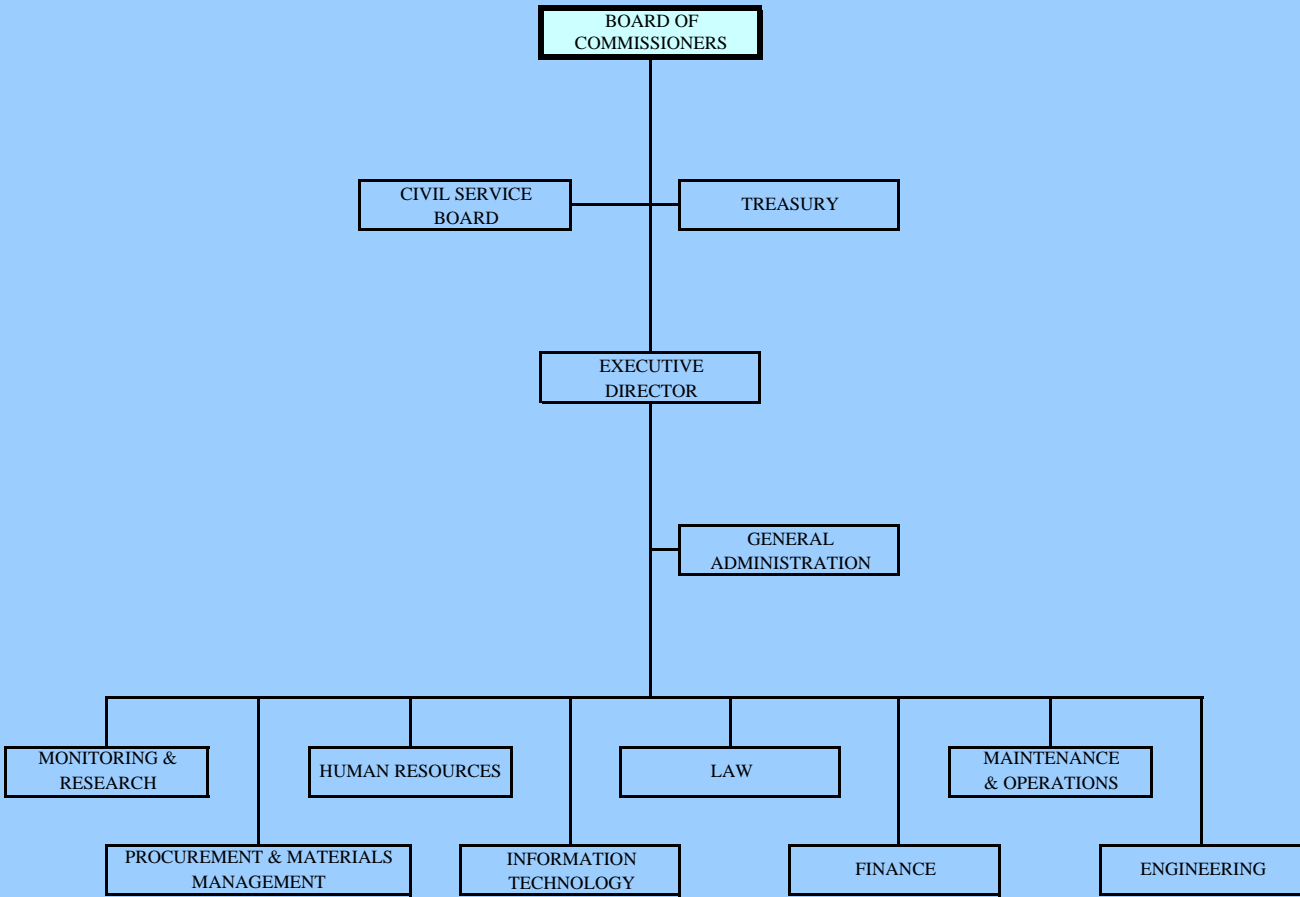
101 11000 - 69000	Fund: Corporate Department: All Division:	LINE ITEM ANALYSIS							
		2015	2016			2017			
		Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment
612340	Discount Loss	-	-	-	-	-	-	-	1,500
612360	Advertising	143,809	137,000	137,000	130,800	143,000	143,000	143,000	143,000
612370	Administration Building Operation	933,188	1,120,500	1,063,400	1,043,700	1,118,900	1,118,900	1,118,900	1,118,900
612390	Administration Building Mc Pav Operation	655,270	750,000	820,400	689,000	738,800	738,800	738,800	738,800
612410	Governmental Service Charges	3,223,284	3,240,500	3,240,500	3,230,300	3,317,200	3,317,200	3,317,200	3,317,200
612420	Maintenance of Grounds and Pavements	1,540,133	1,049,900	913,900	851,000	923,300	968,300	968,300	968,300
612430	Payments for Professional Services	-	6,317,800	6,237,900	4,180,800	5,832,100	5,897,100	5,910,900	5,910,900
612440	Preliminary Engineering Reports and Studies	-	40,000	65,000	40,000	22,000	27,000	27,000	27,000
612490	Contractual Services, N.O.C.	1,236,501	2,044,800	1,972,400	1,134,600	1,431,500	1,690,500	1,685,800	1,685,800
612520	Waste Material Disposal Charges	10,355,660	10,659,800	10,659,800	9,294,000	11,000,000	10,955,000	10,955,000	10,955,000
612530	Farming Services	29,600	29,600	29,600	29,000	33,200	33,200	233,200	233,200
612590	Sludge Disposal	3,604,252	5,000,000	5,000,000	4,000,000	3,204,300	3,204,300	3,204,300	3,204,300
612600	Repairs to Collection Facilities	2,893,165	3,796,000	3,590,000	3,175,100	3,332,900	3,332,900	3,332,900	3,332,900
612620	Repairs to Waterway Facilities	24,614	98,300	109,300	50,700	93,200	93,200	93,200	93,200
612650	Repairs to Process Facilities	5,985,400	5,643,700	5,639,700	4,979,200	4,963,500	4,975,800	4,975,800	4,975,800
612670	Repairs to Railroads	263,900	478,700	482,700	321,300	302,600	302,600	302,600	302,600
612680	Repairs to Buildings	920,380	1,335,400	1,330,100	819,300	1,119,000	1,119,000	1,119,000	1,119,000
612760	Repairs to Material Handling and Farming Equipment	364,127	315,200	315,200	297,200	304,000	304,000	304,000	304,000
612780	Safety Repairs and Services	313,335	365,300	365,300	272,800	540,000	540,000	540,000	540,000
612790	Repairs to Marine Equipment	73,441	118,400	127,400	112,000	110,800	110,800	110,800	110,800
612800	Repairs to Office Furniture and Equipment	86,086	107,300	114,800	69,300	117,600	117,600	117,600	117,600
612810	Computer Equipment Maintenance	510,287	651,000	610,000	479,900	376,100	376,100	376,100	376,100
612820	Computer Software Maintenance	3,481,438	3,678,300	3,678,300	3,162,200	4,083,000	4,083,000	4,083,000	4,083,000
612840	Communications Equipment Maintenance (Includes Software)	668,071	820,800	820,800	778,700	814,200	814,200	814,200	814,200
612860	Repairs to Vehicle Equipment	525,444	559,500	573,500	503,300	645,700	645,700	645,700	645,700
612970	Repairs to Testing and Laboratory Equipment	392,281	448,100	448,100	328,500	420,900	420,900	425,600	425,600
612990	Repairs, N.O.C.	12,742	72,800	72,800	67,300	29,800	29,800	29,800	29,800
200	TOTAL CONTRACTUAL SERVICES	83,778,152	98,122,400	98,060,900	86,216,700	94,849,900	94,839,900	95,115,000	95,115,000

101 11000 - 69000	Fund: Corporate Department: All Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
		Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director
623030	Metals	133,836	165,000	136,200	126,600	185,000	185,000	185,000
623070	Electrical Parts and Supplies	1,567,336	1,749,600	1,909,600	1,863,100	2,167,000	2,167,000	2,167,000
623090	Plumbing Accessories and Supplies	823,437	1,055,200	1,058,000	961,200	1,064,400	1,064,400	1,064,400
623110	Hardware	75,117	83,600	118,600	116,600	122,000	122,000	122,000
623130	Buildings, Grounds, Paving Materials, and Supplies	243,846	316,300	456,700	437,500	540,000	542,500	542,500
623170	Fiber, Paper, and Insulation Materials	48,213	54,200	57,200	52,200	59,100	59,100	59,100
623190	Paints, Solvents, and Related Materials	44,029	52,000	62,000	59,500	62,000	62,000	62,000
623250	Vehicle Parts and Supplies	100,399	186,400	191,600	176,200	210,100	210,100	210,100
623270	Mechanical Repair Parts	2,226,203	2,264,000	2,104,000	1,685,400	2,448,000	2,448,000	2,448,000
623300	Manhole Materials	9,863	10,600	10,600	9,500	11,000	11,000	11,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	289,471	397,900	386,900	300,100	374,300	374,300	374,300
623530	Farming Supplies	27,843	29,700	42,800	31,700	39,000	39,000	39,000
623560	Processing Chemicals	7,472,970	12,448,900	12,438,400	9,751,200	13,734,200	13,734,200	13,724,400
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	924,364	956,400	1,016,300	941,900	964,600	964,600	1,020,600
623660	Cleaning Supplies	244,702	250,900	279,900	278,700	307,000	307,000	307,000
623680	Tools and Supplies	266,242	303,500	308,300	282,400	590,000	590,000	590,000
623700	Wearing Apparel	174,889	196,500	232,200	222,600	229,000	229,000	229,000
623720	Books, Maps, and Charts	23,860	37,300	35,900	30,200	25,100	25,100	25,100
623780	Safety and Medical Supplies	393,767	365,900	365,900	280,600	323,300	323,300	323,300
623800	Computer Software	164,611	256,700	242,400	146,600	339,400	339,400	339,400
623810	Computer Supplies	638,415	592,000	568,300	560,400	519,400	519,400	519,400
623820	Fuel	455,314	808,500	559,400	426,900	585,100	585,100	585,100
623840	Gases	70,822	53,000	77,500	66,600	70,000	70,000	70,000
623850	Communications Supplies	94,403	135,300	169,300	126,000	140,700	140,700	140,700
623860	Lubricants	253,016	265,200	263,900	258,100	265,000	265,000	265,000
623990	Materials and Supplies, N.O.C.	226,820	262,200	276,400	253,400	343,500	351,000	351,000
300	TOTAL MATERIALS AND SUPPLIES	16,993,786	23,296,800	23,368,300	19,445,200	25,718,200	25,728,200	25,774,400

101 11000 - 69000	Fund: Corporate Department: All Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
634600	Equipment for Collection Facilities	80,936	50,000	50,000	47,100	50,000	50,000	50,000
634650	Equipment for Process Facilities	140,237	161,000	161,000	144,200	100,000	100,000	100,000
634760	Material Handling and Farming Equipment	4,487	-	-	-	-	-	-
634810	Computer Equipment	24,770	20,000	20,000	19,500	45,000	45,000	45,000
634820	Computer Software	34,334	14,800	14,800	13,000	30,000	30,000	30,000
634840	Communications Equipment (Includes Software)	79,647	112,000	112,000	45,000	-	-	-
634860	Vehicle Equipment	-	7,000	7,000	5,600	10,000	10,000	10,000
634970	Testing and Laboratory Equipment	271,464	346,000	346,000	280,000	485,000	485,000	429,000
634990	Machinery and Equipment, N.O.C.	74,388	10,000	-	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	710,263	720,800	710,800	554,400	720,000	720,000	664,000
656010	Land	326,181	-	-	-	-	-	-
600	TOTAL LAND	326,181	-	-	-	-	-	-
667130	Taxes on Real Estate	742,686	820,000	820,000	800,000	890,000	890,000	890,000
700	TOTAL FIXED AND OTHER CHARGES	742,686	820,000	820,000	800,000	890,000	890,000	890,000
<b>TOTAL CORPORATE FUND</b>		<b>\$333,038,090</b>	<b>\$366,260,700</b>	<b>\$366,260,700</b>	<b>\$334,462,800</b>	<b>\$367,062,000</b>	<b>\$367,062,000</b>	<b>\$368,925,800</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

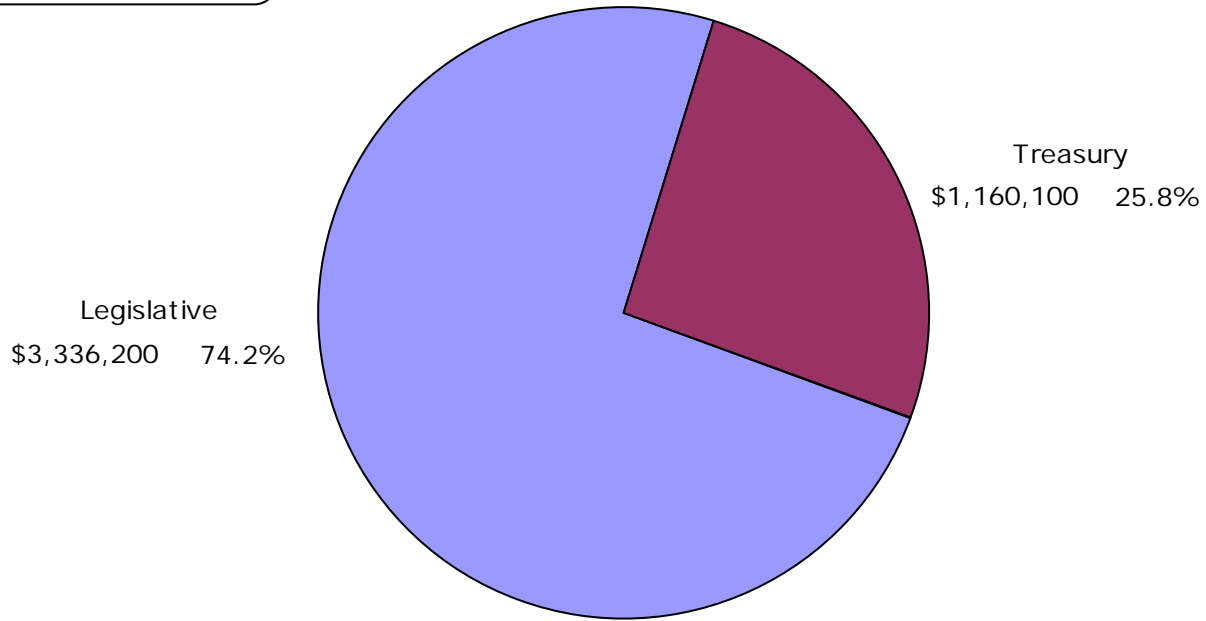




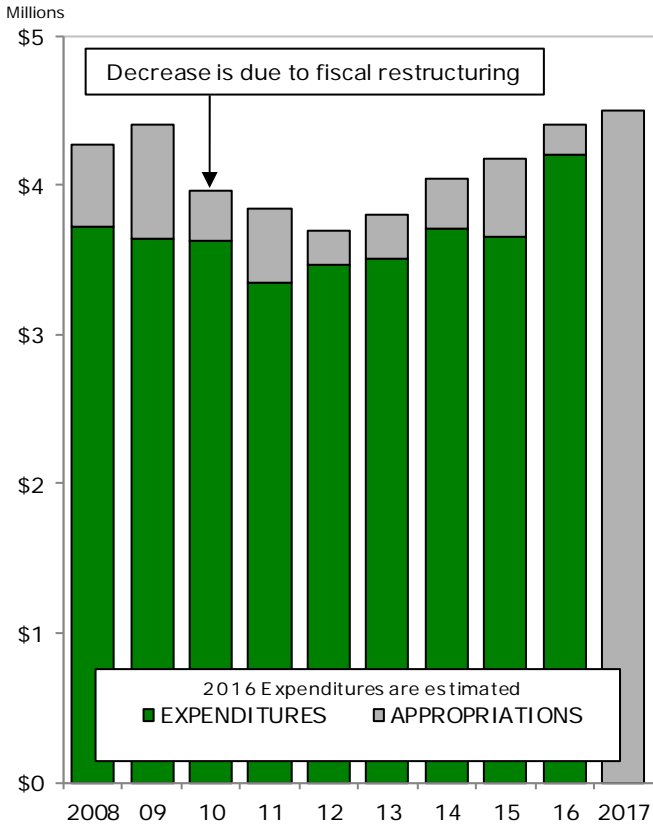
# BOARD OF COMMISSIONERS

## FUNCTIONS

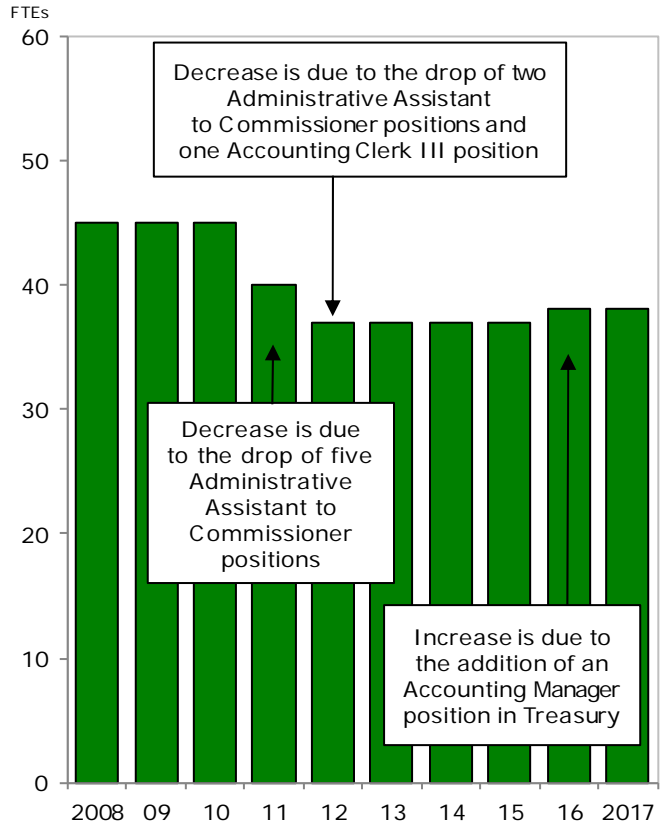
2017	\$4,496,300
2016	\$4,407,800
Increase	\$88,500



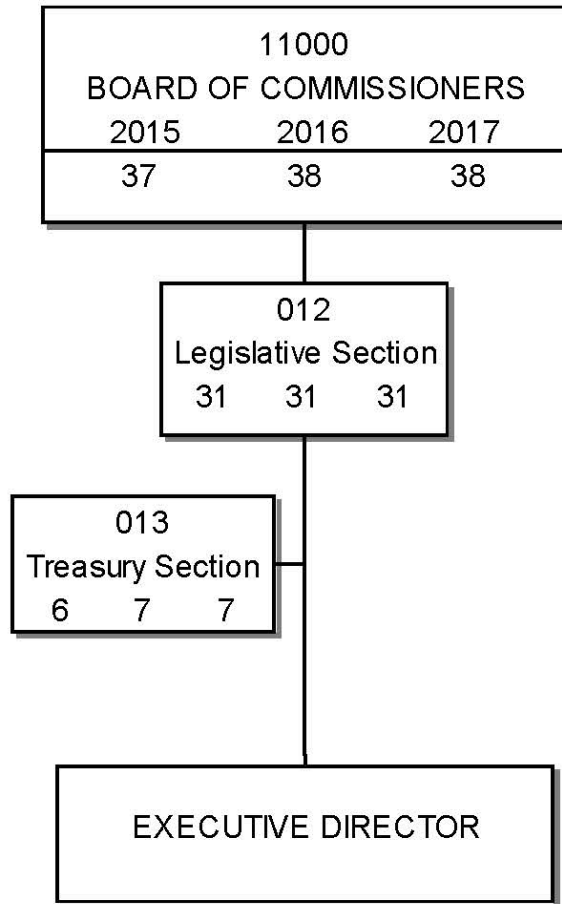
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# BOARD OF COMMISSIONERS



## BOARD OF COMMISSIONERS

**The mission of the Board of Commissioners is the mission of the District: to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of waterways in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area.**

**The mission of the Treasury Section is to provide quality management of the District's financial resources by maximizing income on investments with minimal risk, issuing bonds to finance the wastewater collection, treatment, and flood control facilities' capital needs, cost-effectively meeting the cash requirements of the District's operations through the utilization of appropriate technology and efficient banking practices, and maintaining the District's outstanding bond rating.**

### Departmental Summary

The Board of Commissioners comprises two sections: Legislative and Treasury. The Legislative Section is the policy-making entity of the District, responsible for establishing policies and procedures consistent with the District's mission of protecting the water environment for the citizens of Cook County, and providing a forum to facilitate community involvement. The Treasury Section is responsible for the collection and investment of District revenues, the issuance of bonds to meet District capital requirements, the payment of principal and interest on outstanding bonds as required, and the maintenance of the District's bond ratings.

### Summary of 2016 Accomplishments

- In July 2016, the District closed on the sale of \$426.2 million of General Obligation Capital Improvement Bonds to fund projects included in the District's Capital Improvement Plan and to refund certain maturities of outstanding general obligation bonds. The bond sale included \$104 million of bonds issued with a "Green Bond" designation to allow investors to invest directly in projects that the District has identified as environmentally beneficial projects. Of these bonds, \$4 million were issued as Qualified Energy Conservation Bonds to finance energy efficiency projects. Savings in excess of \$120 million of future debt service was achieved through the refunding of the District's May 2006 bonds;
- Investment interest income earned for the year was approximately \$5.1 million. The severe economic downturn in the financial markets that began in 2008 continues to present significant challenges for earning higher yields on short-term interest-bearing investments. The District experienced no loss on investments;
- For the fourth consecutive year, the District had access to \$200 million in low-interest loans made available from the Illinois Environmental Protection Agency's State Revolving Fund loan that will be used for wastewater and stormwater capital improvement projects. The Illinois Clean Water Initiative provides loans to fund construction projects and aid communities in complying with the United States Environmental Protection Agency's guidelines and standards, addresses critical infrastructure needs, and stimulates local economic development;
- The District continued toward the funding policy goals for the Retirement Fund and the Other Postemployment Benefits (OPEB) Trust. As of December 31, 2015, the Retirement Fund's funded ratio was 55.2 percent, and the OPEB Trust's funded ratio was 52.1 percent;
- The District was presented with the Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting for the 2015 Retiree Health Care Trust Comprehensive Annual Financial Report. This marks the ninth consecutive year that the Retiree Health Care Trust has been presented with the award.

### Budget Highlights

The 2017 appropriation request for the Board of Commissioners is \$4,496,300, an increase of \$88,500, or 2.0 percent, above the 2016 appropriation. The staffing level remains unchanged at 38 positions.

The significant feature of the Treasury Section 2017 budget is:

- Investment Interest Income Estimate: \$5.0 million or less – 2017 will be another difficult year for investing due to very low interest rates forecasted for the fixed income market.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

• **Add Value**

The Treasury Section will engage professional service providers, selected through the Request for Proposal process, that can most significantly assist the District in efficiently utilizing taxpayers’ assets.

The Treasury Section will continue to develop tools to monitor and ensure financial stability and to analyze and leverage market conditions to implement best strategies for investment and debt management.

The Treasury Section will explore new and different ideas on investment and debt management to maximize returns and cost efficiency for the District’s residents while adhering to District policies.

• **Excellence**

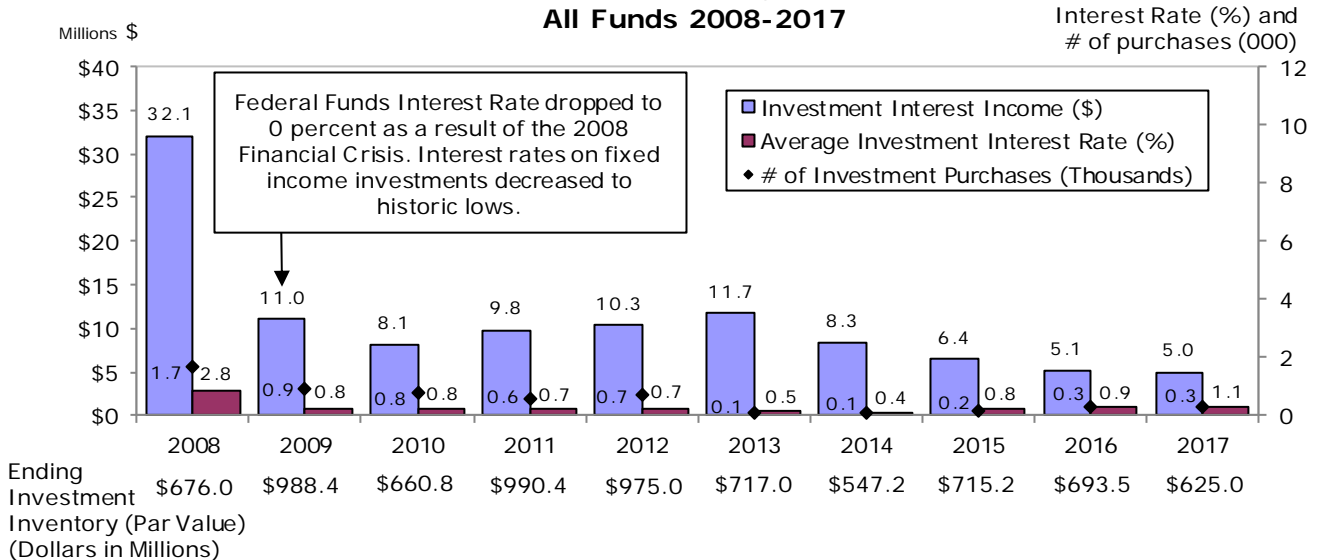
The Treasury Section will continue to provide excellent customer service to the District’s residents through the responsible management of cash, investments, and debt to ensure financial stability targets are met.

The Treasury Section will maintain sufficient liquidity to meet the District’s payment requirements for operations, payroll, and capital expenditures, fund all expenditures in compliance with federal law and state statute, and maintain pension and OPEB funding strategies to ensure the long-term health of the retirement programs.

The Treasury Section will maximize investment yield on District investments while safeguarding the principal by investing excess cash to maximize investment returns within the statutory and investment policy guidelines.

**Investment Interest Income / Average Investment Interest Rate**

**All Funds 2008-2017**



The Treasury Section will continue to focus the Capital Finance Program on the prudent use of debt financing for capital needs and debt service savings, while issuing debt financings in compliance with federal securities laws and state statutory authorization.

The Treasury Section will regularly evaluate, streamline, and improve its processes to increase efficiency and accuracy. Procedural documentation will continue to be created and updated to ensure knowledge continuity and assist in succession planning.

The Treasury Section will complete the creation of administrative procedures and legal and financing documents that define the Local Government Assistance Program according to District Statutory Authorization (70 ILCS 2605/9.6c). This project began in 2015 in collaboration with the Engineering and Law Departments. The project plan will be presented to the Board of Commissioners for approval in 2017. Should approval be given, the majority of the project will be executed.

The Treasury Section will complete the creation of procedures to define disclosure requirements for bond issues and adhere to post-issuance compliance regulations as required by the Internal Revenue Service.

• **Develop Employees**

Treasury Section employees will continue to attend seminars and conferences in 2017 to develop knowledge and skills in the areas of investment, treasury, and debt management. Employees will also continue to cross-train to ensure business continuity at all times.

**11000 BOARD OF COMMISSIONERS**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:		Cost	Percent
1.	Establish policies and priorities to guide the Executive Director in meeting the District's responsibilities, ensuring the protection of the environment, and the health and welfare of people in the community in the most responsive, efficient, and economical manner.	\$ 3,336,200	74.2%
2.	Provide cash management services to maximize investment interest return without sacrifice of principal or required liquidity, measured by exceeding the benchmark 90-day Treasury bill rate and investment on average of over 99 percent of available funds.	\$ 1,160,100	25.8%
Enhance the District's image in national financial markets through the prudent use of debt financing for capital needs and debt service savings.			
Total		<u>\$ 4,496,300</u>	<u>100.0%</u>

MEASURABLE GOALS:		2015 Actual	2016 Estimated	2017 Proposed
1.	Maximize investment earnings by exceeding the interest rate benchmark monthly.	100%	100%	100%
2.	Invest 99 percent of available funds on a daily basis.	100%	100%	100%
3.	Achieve AAA bond rating with all three major rating agencies.	67%	33%	33%
4.	Maintain minority broker/dealer investment participation at 30 percent or more of applicable investment purchases.	30%	30%	30%

PROGRAMS BY PRIORITY:		2015 Actual	Budgeted		Change	
Number	Name		FTEs	Dollars	Dollars	Percent
7110	Legislative	\$ 2,721,899	2017 31	\$ 3,251,200	\$ 137,600	4.4
			2016 31	\$ 3,113,600		
7210	Treasury Activities	\$ 605,866	2017 4	\$ 701,400	\$ (33,900)	(4.6)
			2016 4	\$ 735,300		
7316	OPEB Trust Management and Report Preparation	\$ 115,511	2017 1	\$ 141,000	\$ 3,200	2.3
			2016 1	\$ 137,800		
7601	Capital Financing Program and Other Related Costs	\$ 216,784	2017 2	\$ 317,700	\$ (34,900)	(9.9)
			2016 2	\$ 352,600		
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 85,000	\$ 16,500	24.1
			2016 -	\$ 68,500		
Totals		\$ 3,660,060	2017 38	\$ 4,496,300	\$ 88,500	2.0%
			2016 38	\$ 4,407,800		

- a) Increase is due to the addition of nine Special Project Aide to Commissioner positions (\$140,000).
- b) Increase is due to the calculation for Social Security and Medicare as a percentage of salaries.

**11000 BOARD OF COMMISSIONERS**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7110	Legislative	Cost	\$ 2,721,899	\$ 3,113,600	\$ 3,251,200	a)
7210	Treasury Activities	Cost	\$ 605,866	\$ 735,300	\$ 701,400	
7316	OPEB Trust Management and Report Preparation	Cost	\$ 115,511	\$ 137,800	\$ 141,000	
7601	Capital Financing Program and Other Related Costs	Cost	\$ 216,784	\$ 352,600	\$ 317,700	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 68,500	\$ 85,000	b)
		Totals	\$ 3,660,060	\$ 4,407,800	\$ 4,496,300	

- a) Increase is due to the addition of nine Special Project Aide to Commissioner positions (\$140,000).
- b) Increase is due to the calculation for Social Security and Medicare as a percentage of salaries.

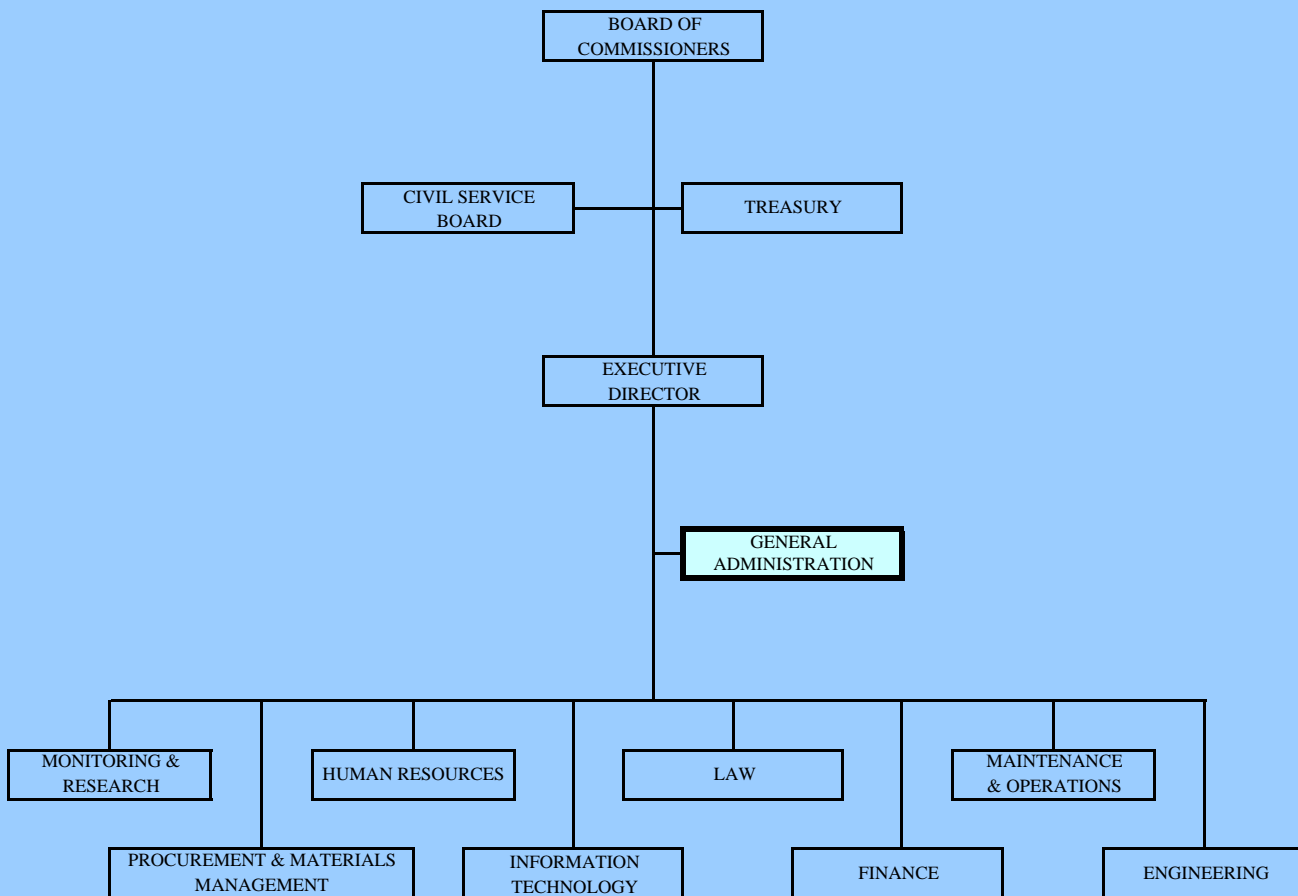
101 11000	Fund: Corporate Department: Board of Commissioners Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 3,161,070	\$ 3,633,800	\$ 3,600,800	\$ 3,600,800	\$ 3,635,800	\$ 3,635,800	\$ 3,621,200
601060	Compensation Plan Adjustments	14,469	28,700	47,700	46,000	34,400	34,400	34,500
601070	Social Security and Medicare Contributions	-	68,500	72,500	72,500	85,000	85,000	85,000
601100	Tuition and Training Payments	3,917	10,000	20,000	20,000	20,000	20,000	20,000
601170	Payments for Professional Services	179,558	-	-	-	-	-	-
601300	Personal Services, N.O.C.	247,024	288,000	288,000	270,700	428,000	428,000	428,000
100	TOTAL PERSONAL SERVICES	3,606,039	4,029,000	4,029,000	4,010,000	4,203,200	4,203,200	4,188,700
612010	Travel	5,880	10,000	10,000	10,000	10,000	10,000	10,000
612030	Meals and Lodging	12,236	15,000	27,000	16,100	20,000	20,000	20,000
612050	Compensation for Personally-Owned Automobiles	70	-	-	-	-	-	-
612280	Subscriptions and Membership Dues	30,899	35,000	35,000	35,000	36,100	36,100	36,100
612430	Payments for Professional Services	-	310,000	298,000	124,300	230,500	230,500	230,500
612490	Contractual Services, N.O.C.	-	700	700	700	1,000	1,000	1,000
200	TOTAL CONTRACTUAL SERVICES	49,085	370,700	370,700	186,100	297,600	297,600	297,600
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	4,926	8,000	8,000	8,000	10,000	10,000	10,000
623990	Materials and Supplies, N.O.C.	11	100	100	-	-	-	-
300	TOTAL MATERIALS AND SUPPLIES	4,937	8,100	8,100	8,000	10,000	10,000	10,000
TOTAL BOARD OF COMMISSIONERS		\$ 3,660,060	\$ 4,407,800	\$ 4,407,800	\$ 4,204,100	\$ 4,510,800	\$ 4,510,800	\$ 4,496,300

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).



Fund: Corporate Dept: Board of Commissioners Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>012</b>	<b>Legislative Section</b>					
EX22	President	1	1		1	
EX21	Vice President	1	1		1	
EX01	Commissioner (Chairman, Committee on Finance)	1	1		1	
EX02	Commissioner	6	6		6	
EX03	Administrative Aide to President	1	1		1	
EX04	Administrative Assistant to Commissioner (Secretary)	21	21		21	
TOTAL	Legislative Section	31	31	2,723,620.90	31	2,708,502.77
<b>013</b>	<b>Treasury Section</b>					
EX05	Treasurer	1	1		1	
HP20	Assistant Treasurer	1	1		1	
HP18	Accounting Manager	-	1		1	
HP16	Financial Analyst	3	3		3	
EX06	Secretary to Officer	1	1		1	
TOTAL	Treasury Section	6	7	928,418.40	7	930,774.97
TOTAL	Board of Commissioners	37	38	3,652,039.30	38	3,639,277.74

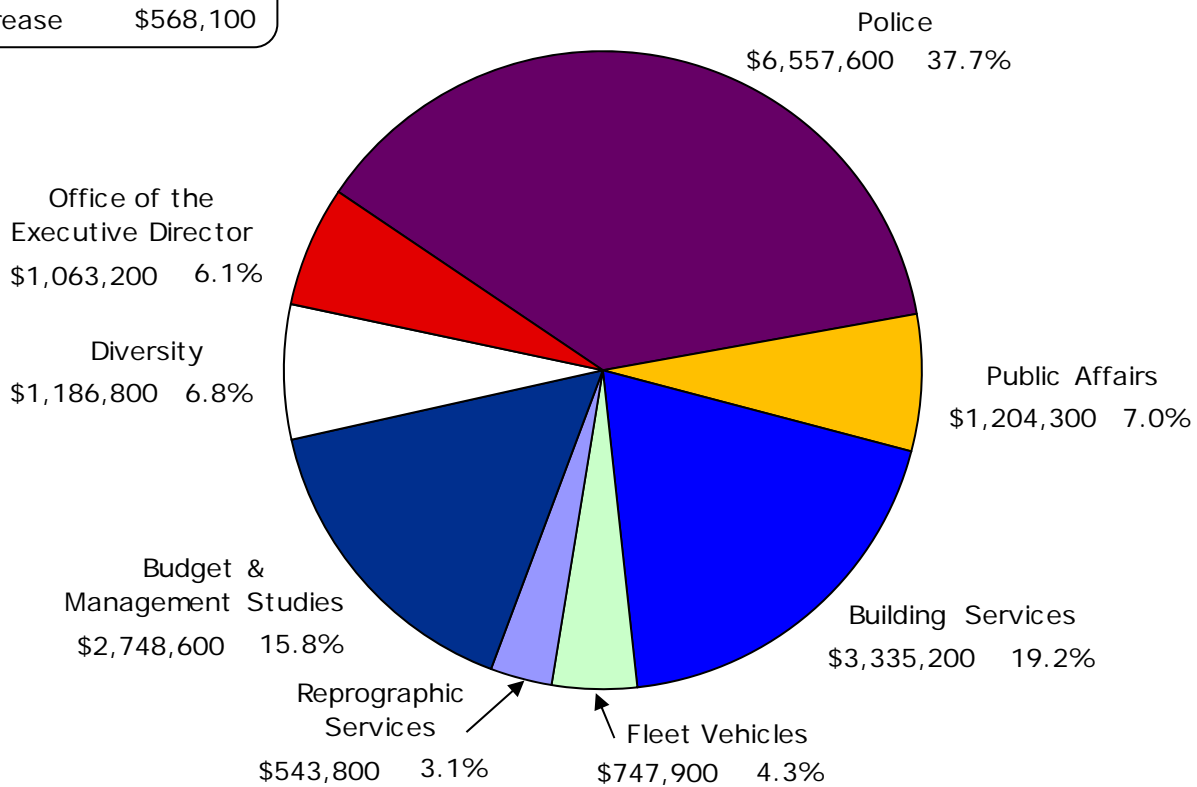
NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.



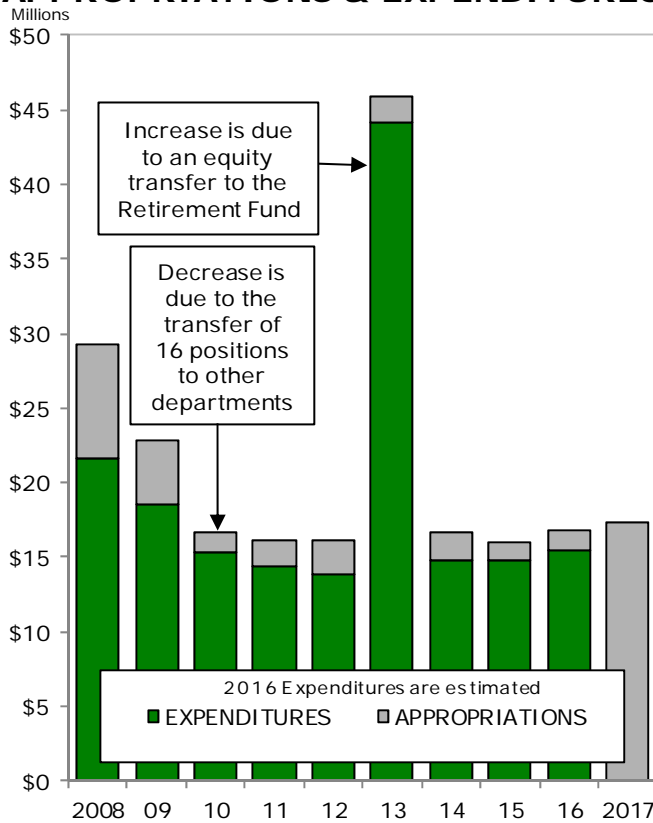
# GENERAL ADMINISTRATION

2017	\$17,387,400
2016	\$16,819,300
Increase	\$568,100

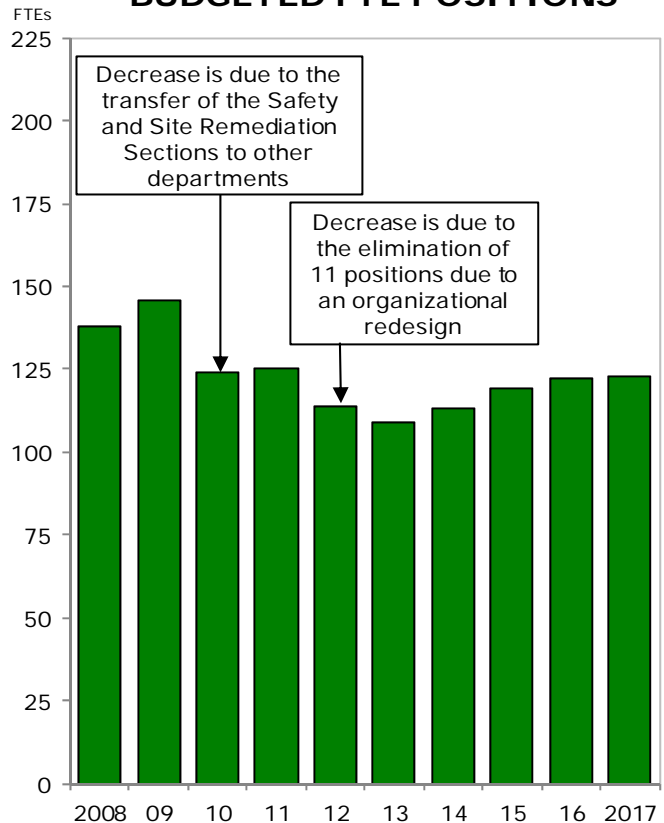
## FUNCTIONS



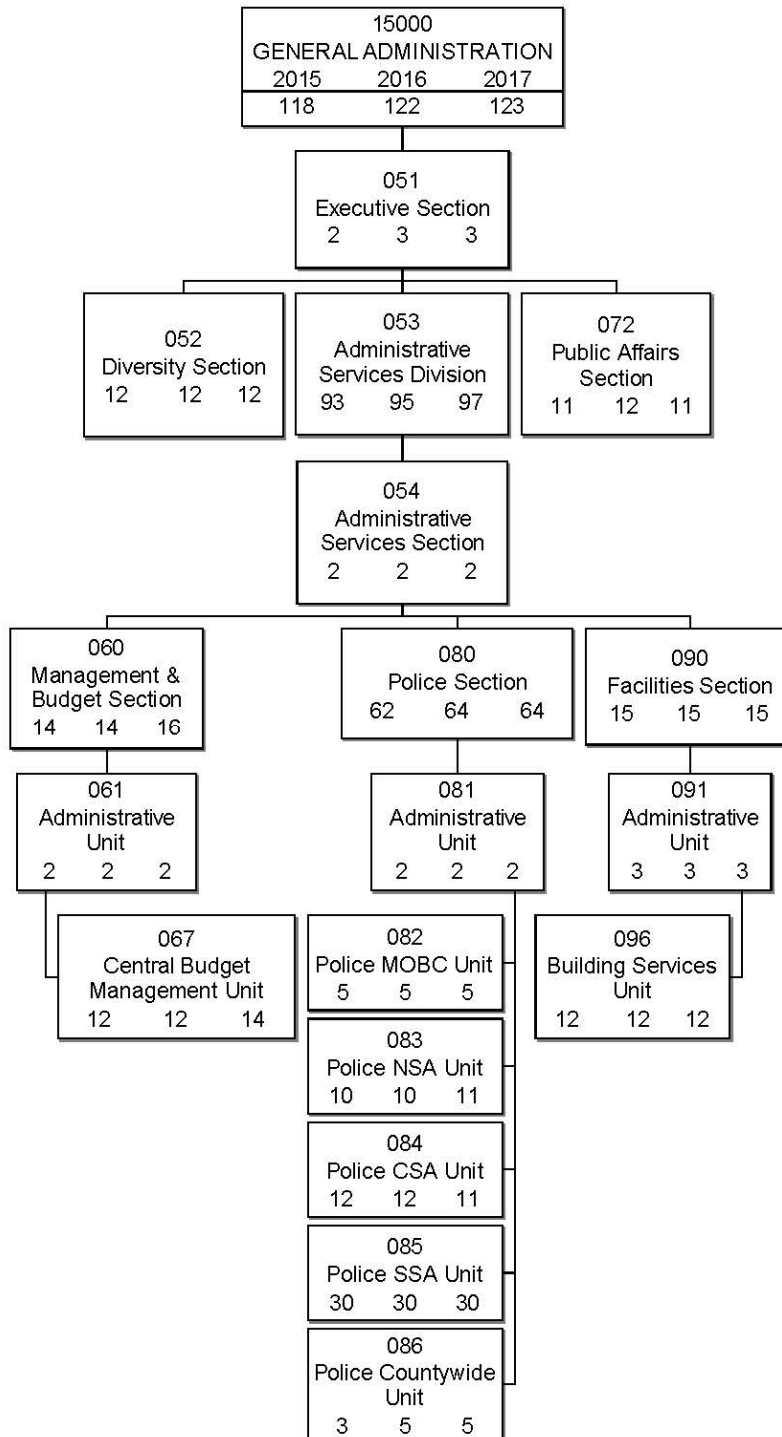
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# GENERAL ADMINISTRATION



## GENERAL ADMINISTRATION

**The mission of the Administrative Services Division is to prepare and administer the annual budget, provide a secure work environment for all employees, visitors, contractors, and citizens, and provide support services to maintain the Main Office Building Complex (MOBC).**

**The mission of the Diversity Section is to ensure that minority (MBE), women (WBE), and small business (SBE) enterprises are given equal opportunity to participate in the performance of the District's construction program and professional service contracts in excess of \$100,000, in accordance with case law and the District's policies.**

**The mission of the Public Affairs Section is to promote a broader understanding and appreciation of the District and the valuable services it provides, present clear and accurate information about the work of the District and its areas of responsibility, cultivate relationships and facilitate communication with all stakeholders, and plan and implement targeted promotional efforts and social marketing campaigns.**

### Departmental Summary

General Administration supports the office of the Executive Director in implementing Board policies. General Administration includes the Office of the Executive Director, the Administrative Services Division, the Diversity Section, and the Public Affairs Section.

### Summary of 2016 Accomplishments

- The 2016 Budget received the 32nd consecutive Distinguished Budget Presentation Award from the Government Finance Officers Association (GFOA), receiving Special Performance Measures Recognition;
- Trained in-house staff on several topics intended to increase the efficiency of the budgeting process;
- Coordinated a District-wide review of budget coding to simplify the classification of budget requests;
- Increased the number of Protected Class Enterprise vendors included on the District's vendor list;
- Received a 2016 Outstanding Advocate Award from the Federation of Women Contractors;
- Participated in the United States Drug Enforcement Administration's National Drug Take Back Day Initiative twice at three water reclamation plants and headquarters downtown;
- Implemented a drug collection program with the Cook County Sheriff's Office to expand drug collection initiatives;
- Completed the carpet replacement and painting project on the 3rd floor of the Main Office Building (MOB), replaced the mixed air heating unit in the Main Office Building Annex (MOBA), installed an additional heating unit and reconfigured ductwork (MOBA), and replaced an electric water heater (MOBA);
- Expanded the Building Automation System in the MOBC to achieve greater energy efficiency;
- Implemented the "Restore the Canopy, Plant a Tree" program to replenish Cook County's urban tree canopy, distributing more than 10,000 oak tree saplings in two months;
- Produced the "Recovering Resources, Transforming Water" video;
- Hosted the District's African American History Celebration, honoring African American grassroots organizations;
- Hosted 200 tours/open houses with over 8,000 visitors, attended over 160 outreach events impacting more than 50,000 people, and visited over 90 schools and other organizations to educate more than 6,000 people;
- Accommodated hundreds of media requests, reached over 453,000 people through 600 posts on Facebook, and reached over one million impressions through more than 500 Tweets.

### Budget Highlights

The 2017 appropriation for General Administration is \$17,387,400, an increase of \$568,100, or 3.4 percent, from 2016. The staffing level has increased from 122 to 123 positions, which includes the addition of a Budget and Management Analyst, a Police Officer, and the transfer in of a Budget and Management Analyst and a Management Analyst III, offset by the drop of a Facilities Administrator, an Administrative Specialist, and a Police Officer #1. Further position changes include the reclassification of the Administrative Services Manager to Administrative Services Officer, an Administrative Assistant to a Secretary to Officer, and the reclassification of one Motor Vehicle Dispatcher Supervisor and two Motor Vehicle Dispatchers.

Significant features of the 2017 budget are:

- Major projects for the MOB include roof maintenance and the rehabilitation of two elevators;
- Continue the reduction of fleet inventory and the replacement of vehicles at 10 years or 100,000 miles. Vehicles not meeting the minimum usage criteria may be designated as pool vehicles for better utilization;
- Continue the management of the District's positive public image through proactive communications and by hosting ribbon cutting ceremonies as major projects are completed.

## **2017 Administrative Services Division Initiatives in Support of the Strategic Business Plan Include the Following:**

The Administrative Services Division is comprised of three distinct support service functions, consisting of the Management & Budget, Police, and Facilities Sections. It is focused on the goals established in the Strategic Business Plan and is committed to continuous improvement in 2017.

### **• Add Value**

The Administrative Services Division will provide efficient and cost-effective business services to all departments in support of the overall District mission.

The Management & Budget Section will continue to plan and monitor revenues and expenditures to ensure compliance with tax cap limitations, facilitate sound financial management, and identify and implement efficiencies in the budget process. The section continually strives to improve points of communication and increase transparency for our constituents.

The Police Section will continue to patrol plants and property, interact with employees, visitors, contractors, the public, and other police agencies in a professional and service-oriented manner.

The Facilities Section will continue to provide a professional, clean, safe, and comfortable environment for employees, contractors, visitors, and the general public.

### **• Excellence**

The Management & Budget Section continually strives to produce a budget that provides transparency to the public. The section's goals include earning Special Capital Recognition and Special Performance Measures Recognition from the GFOA.

The Police Section protects employees, contractors, visitors, and the District's assets through access control and patrolling and monitoring District land and facilities in a professional and service-oriented manner.

The Facilities Section is responsible for the maintenance and operations of the MOBC, which includes building operations, automotive fleet services, mailroom, and print services. It is committed to providing a functional and cost-effective office environment for staff and delivering efficient and cost-effective automotive fleet services, mailroom, and print services. The Facilities Section will continue to support the MOBC through the careful management of our physical assets and staff services.

### **• Resource Recovery**

The Administrative Services Division will support and provide the necessary services for the District's resource recovery initiatives by providing a corporate office environment for staff, facilitating the financial plan needed to move forward as quickly as possible, and protecting the infrastructure and assets used to recover resources.

The Police Section established its own Drug Take Back Program at four permanent locations and will continue to participate in the Federal Drug Administration's Drug Take Back program. The programs together, prevent and reduce the accidental contamination of streams, rivers, and lakes by disposing of pharmaceuticals in an environmentally friendly manner.

The Facilities Section will continue the ongoing dual-stream recycling program at the MOBC, reducing waste by removing recyclable materials and containers from the waste stream. Moreover, in 2017, the food waste for compost recycling produced by the MOB cafeteria will continue. The program, started in January of 2013, includes separating organic waste from all other wastes into separate waste streams by depositing it in biodegradable bags and transferring it to a compost-producing facility.

### **• Develop Employees**

The Administrative Services Division will continue to develop employees through participation in training seminars and conferences to increase professional knowledge and skills. In-house training, webinars, and eLearning opportunities are utilized whenever possible to extend training to multiple employees in a cost-effective manner.

### **• Leading Partnerships**

The Administrative Services Division will foster partnerships and develop strategic relationships with organizations and agencies in our community in support of the District's mission.

The Management & Budget Section will work with the GFOA, the Civic Federation, and other agencies to promote best practices and continuous improvement in our budget document.

The Police Section will participate as a member of the Law Enforcement Mutual Aid Agreement, and work with other agencies and municipalities to protect people and assets.

The Facilities Section will work closely with our neighbors, especially when street closures are necessary for building maintenance.

### **• Technology**

The Administrative Services Division will continue to use technology effectively to provide transparency in budgeting, financial support, communications, and to provide useful data and information necessary to make good decisions.

**2017 Diversity Section Initiatives in Support of the Strategic Business Plan Include the Following:**

The Diversity Section will continue to fulfill its role in support of the District’s Strategic Business Plan.

**• Add Value**

The Diversity Section will continue to fulfill its community leadership role regarding contract and employment diversity in the District’s service communities by establishing and monitoring goals for construction-related projects, as well as participating in and hosting vendor outreach activities, including trade shows, conferences, and contractor training sessions covering District business practices. These activities directly impact the development of MBE, WBE, and SBE vendors.

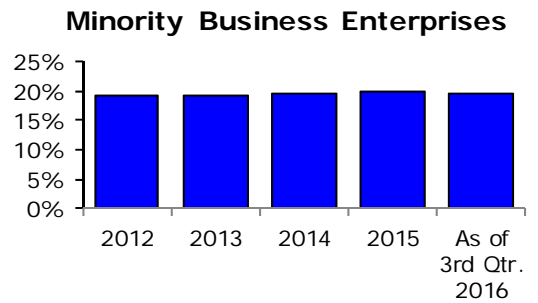
Construction & Consulting Contracts	2012	2013	2014**	2015	As of 3rd Qtr. 2016
Minority Business Enterprises	\$25,801,878	\$42,692,505	\$75,053,441	\$23,292,180	\$37,300,915
Women Business Enterprises	\$14,903,225	\$22,032,830	\$39,870,628	\$10,855,589	\$26,120,129
Small Business Enterprises *	\$2,202,104	\$2,549,686	\$857,220	\$375,118	\$0
Total Contracts Awarded	\$135,299,419	\$222,211,307	\$386,198,534	\$116,523,512	\$192,405,850

\* SBE contract award amount only includes non-MBEs and non-WBEs.

\*\* \$236 million contract awarded in 2014 for 04-128-3P, Westside Primary Settling Tanks at the Stickney Water Reclamation Plant.

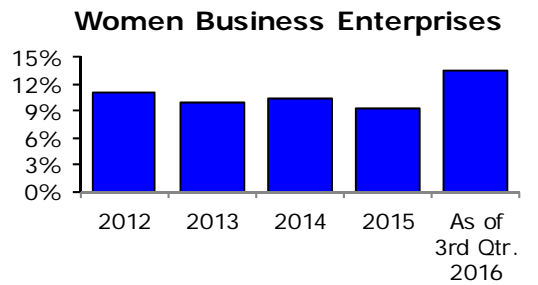
**• Excellence**

The Diversity Section, in cooperation with the Law, Procurement & Materials Management, Maintenance & Operations, and Engineering Departments worked to complete the Disparity Study to provide a legal foundation for maintaining racial and gender diversity in District contracting. Also in 2016, the Diversity Section implemented the recommendations and changes resulting from the study. By meeting or exceeding the participation targets, the diversity program will ensure that bona fide minority, women, and small business enterprises are given an equal and increasing opportunity to participate in the performance of District construction and consultant contracts.



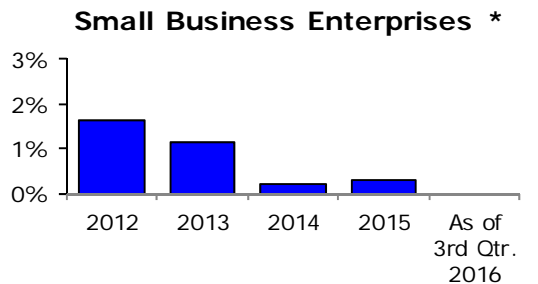
**• Develop Employees**

The Diversity Section will continue the development of performance management metrics to better measure the performance of staff. In 2016, the Diversity staff was trained in contract compliance through the American Contractor Compliance Association. Also, in 2016, the Diversity staff was trained in business writing skills. In 2017, the Diversity staff will be trained in teambuilding techniques. These skills are vital to the continued success of the section.



**• Leading Partnerships**

The Diversity Section will continue to partner with the District’s sister government agencies to discover more efficient methods to help vendors become successful government contractors, and develop sustainable relationships with prime contractors and financial institutions. Staff will continue to co-host workshops and other meetings with sister agencies to train their members on how to do business with the District and provide information on new District contract opportunities.



**• Technology**

In 2016, the Diversity Section continued development of the District’s subcontracting database in the Affirmative Action Compliance Software System, PRISM, which provides accountability, greater public transparency, and accuracy in reporting on MBE, WBE, and SBE participation in District contracting. In 2017, the Diversity Section will complete and present PRISM to the public, and include information from PRISM on the District’s website. Staff will also change the website created to support the Disparity Study to accommodate any changes resulting from the study, improve the eLibrary forms and documents on the District’s website, and update the MBE, WBE, and SBE vendor list smart-search database to make it more user-friendly.

\*2012 – 2016 SBE contract award percentage only includes non-MBEs and non-WBEs

## **2017 Public Affairs Section Initiatives in Support of the Strategic Business Plan Include the Following:**

The Office of Public Affairs has embraced the goals established in the Strategic Business Plan and is committed to maintaining the District's public image as we forge a new path in 2017.

### **• Add Value**

Public Affairs staff will work to inform the public about the value the District adds to our community and stakeholders. Public Affairs will continue to produce fact sheets, talking points, photos, videos, press releases, and other materials that will help staff educate the public about the value of the District's work and areas of responsibility. PowerPoint presentations, exhibits, and displays provided by Public Affairs will continue to enhance speaking engagements, while press releases researched and prepared by Public Affairs will be distributed to stakeholders and media members. The Office of Public Affairs utilizes social media, participates in and supports community events with presenters and handouts, hosts tours and open houses, and provides photos and imagery to targeted audiences that help to educate the public on the value and importance of the District's work. Public Affairs will also add value to the scholars and reporters interested in past and present imagery by making photo files and imagery freely available, and promote its real estate portfolio by publicizing properties and their varied uses. The Public Affairs Section will also continue to oversee the distribution of thousands of oak tree saplings in addition to several programs promoting the District's stormwater management mission.

### **• Excellence**

The Public Affairs Section exhibits a sense of urgency in all activities. The Public Affairs staff are determined to enthusiastically achieve excellence in all work products and through interactions with colleagues, stakeholders, reporters, and members of the public. Quality communications will continue to feature professionally written and designed materials that reflect the organization's important role and history of excellence. The Public Affairs Section will strive to produce deliverables that reflect professional quality in all forms of media.

### **• Resource Recovery**

The Public Affairs Section will educate and inform the public about the District's resource recovery work by producing targeted, audience-appropriate materials that clearly explain this subject. The completion of the phosphorus recovery facility offered the opportunity to educate the public about the impact phosphorus has on the waterways and the positive impact the new facility will have on improving our water environment locally as well as nationally. The Public Affairs Section will also continue to support biosolids marketing efforts, stormwater management, disinfection and other water quality improvements, and developments in the Tunnel and Reservoir Plan.

### **• Develop Employees**

Public Affairs staff will continue to learn new skills and techniques in order to keep up-to-date with current communication practices and technology. Staff will be encouraged to pursue classroom training, online training, webinars, and to read industry publications and books. Public Affairs staff will also continue to keep abreast of changes and new developments within the District and the current trends in water treatment industry reported on throughout the world. The Public Affairs Section is aware that all employees influence the public image of the District. Therefore, the Public Affairs Section will continue to produce resources, such as fact sheets, that will help educate staff about the District's work and areas of responsibility. The Public Affairs Section will continue to send out daily "MWRD in the News" emails that help all employees remain knowledgeable about new developments at the District and in the water industry. These daily reminders also help cultivate a sense of urgency and immediacy among staff.

### **• Leading Partnerships**

The Public Affairs Section will foster partnerships and engage with organizations, communities, and individuals who share in the commitment to the water environment, and an interest in District work and areas of responsibility. The Office of Public Affairs will develop strategic relationships with the public through participation in local events, by development of communication materials, and by providing requested resources, such as photos and brochures.

### **• Technology**

The Public Affairs Section will continue to use technology to efficiently and effectively educate the public and the District's stakeholders about the value and importance of our work. We will continue to use technology both as a tool for creating communications by using appropriate and up-to-date software, hardware, and technical processes, and as a medium of communication, using social media, email, and databases. Public Affairs staff will update the District's website with fresh, current information, utilize social media as an interactive communications tool, continue to update and send e-mail blasts and mailings to targeted officials, stakeholders, and the media, produce a bi-monthly employee newsletter, maintain electronic message signs at water reclamation plants, and develop a user-friendly online photo archive which will include current photos and scanned historical imagery.



**15000 GENERAL ADMINISTRATION**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Physically protect and secure District personnel, facilities, and outlying properties through access control, police patrol, and proactive crime prevention.	\$ 6,557,600	37.7%
2. Carry out policies established by the elected Board of Commissioners for the protection of the water environment of the District.	\$ 1,063,200	6.1%
3. Reach participation goals established by the Board of Commissioners for Minority Business Enterprise, Women Business Enterprise, and Small Business Enterprise for construction and professional services contracts.	\$ 1,186,800	6.8%
4. Prepare and administer the District's annual budget to be used as a policy, financial, operations, and communications plan in the furtherance of the District's mission and statutory requirements.	\$ 2,433,200	14.0%
5. Operate and maintain the Main Office Building Complex to provide a functional and cost-effective office environment for staff, contractors, and visitors.	\$ 3,335,200	19.2%
6. Provide public understanding of District functions and activities through media, publications, and tours.	\$ 1,204,300	7.0%
7. Provide fleet management services by administering the operation, maintenance, repair, and procurement of the District's fleet.	\$ 747,900	4.3%
8. Reproduce and distribute materials used for the District's internal and external communications and records purposes in a timely, efficient, and cost-effective manner.	\$ 543,800	3.1%
9. Perform organization and management research studies and compliance audits to evaluate the District's various business activities for cost-saving opportunities, compliance with legal mandates, and policies established by the Board of Commissioners.	\$ 315,400	1.8%
<b>Total</b>	<b>\$ 17,387,400</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Actual	2017 Proposed
1. Receive the Government Finance Officers Association Distinguished Budget Presentation Award annually.	Yes	Yes	Yes
2. Increase public awareness of the District and its mission through growth in social media followers of at least 10 percent per year among the principal social media sites including Facebook, Twitter, and LinkedIn.			

Year	Facebook		Twitter		LinkedIn	
	Number of Followers	Percent Increase from Previous Year	Number of Followers	Percent Increase from Previous Year	Number of Followers	Percent Increase from Previous Year
2017 - Proposed	2,400	11%	1,865	19%	1,697	22%
2016 - Actual	2,170	17%	1,565	21%	1,397	17%
2015 - Actual	1,851	85%	1,298	16%	1,194	18%

**15000 GENERAL ADMINISTRATION**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actual	Budgeted		Change			
Number	Name		FTEs	Dollars	Dollars	Percent		
7100	Office of the Executive Director	\$ 419,465	2017	3	\$ 499,100	\$ 77,000	18.2	a)
			2016	3	\$ 422,100			
7110	Legislative	\$ 620,292	2017	-	\$ 564,100	\$ (56,900)	(9.2)	
			2016	-	\$ 621,000			
7220	Reprographic Services	\$ 455,978	2017	2	\$ 543,800	\$ (32,900)	(5.7)	
			2016	3	\$ 576,700			
7240	Public Affairs	\$ 978,355	2017	11	\$ 1,204,300	\$ 26,900	2.3	
			2016	12	\$ 1,177,400			
7251	Corporate Budget Preparation, Monitoring, and Administration	\$ 1,573,564	2017	14	\$ 2,335,300	\$ 385,200	19.8	b)
			2016	12	\$ 1,950,100			
7252	Management and Organization Studies	\$ 213,346	2017	3	\$ 315,400	\$ 84,000	36.3	c)
			2016	2	\$ 231,400			
7254	Enterprise Systems	\$ 90,738	2017	1	\$ 97,900	\$ 2,800	2.9	
			2016	1	\$ 95,100			
7340	Security of Plants and Properties	\$ 5,792,119	2017	64	\$ 6,407,800	\$ 72,400	1.1	
			2016	64	\$ 6,335,400			
7460	Main Office Building Complex Services	\$ 3,021,279	2017	11	\$ 3,335,200	\$ (118,800)	(3.4)	d)
			2016	11	\$ 3,454,000			
7470	Contract Diversity	\$ 1,012,808	2017	12	\$ 1,186,800	\$ 24,100	2.1	
			2016	12	\$ 1,162,700			
7490	Automotive Fleet Operations	\$ 622,346	2017	2	\$ 747,900	\$ 102,000	15.8	e)
			2016	2	\$ 645,900			
7604	Social Security and Medicare Contributions	\$ -	2017	-	\$ 149,800	\$ 2,300	1.6	
			2016	-	\$ 147,500			
Totals		\$ 14,800,290	2017	123	\$ 17,387,400	\$ 568,100	3.4%	
			2016	122	\$ 16,819,300			

- a) Increase is due to the reallocation of salaries to more accurately reflect current activities (\$88,000), offset by a decrease in the need for external studies (\$10,000).
- b) Increase is due to the transfer in of a Budget and Management Analyst position and a Management Analyst III position (\$217,300), and a new request for membership to "Current" (\$200,000), offset by the salary reallocation for a Senior Budget and Management Analyst position due to a section transfer (\$43,900).
- c) Increase is due to the addition of one Budget and Management Analyst position (\$78,800).
- d) Decrease is due to a reduced need for building repair projects at the Main Office Building (\$35,000) and an anticipated reduction in postage usage (\$19,500).
- e) Increase is due to the expansion of the fleet vehicle location system (\$53,000) and increased fleet maintenance costs due to an aging fleet (\$45,000).

**15000 GENERAL ADMINISTRATION**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7100	Office of the Executive Director	Cost	\$ 419,465	\$ 422,100	\$ 499,100	a)
7110	Legislative	Cost	\$ 620,292	\$ 621,000	\$ 564,100	
7220	Reprographic Services					
7221	Copy and Print	# of Impressions	3,047,601	6,500,000	3,500,000	
		Cost	\$ 433,616	\$ 546,400	\$ 529,000	
		Cost/Impression	\$ 0.14	\$ 0.08	\$ 0.15	
7224	Consult, Design, and Prepare Graphics	Cost	\$ 22,362	\$ 30,300	\$ 14,800	b)
7240	Public Affairs					
7247	Internal Public Affairs					
	Inter-Departmental Support	Cost	\$ 245,913	\$ 294,500	\$ 306,800	
7248	External Public Affairs					
	Respond to Public Inquiries and Furnish Public Information Pamphlets	# of Responses	40,000	44,000	46,000	
		Cost	\$ 244,524	\$ 294,754	\$ 299,628	
		Cost/Response	\$ 6.11	\$ 6.70	\$ 6.51	
	Coordinate District Communications with Public, Civic, and Social Groups	# of Contacts	20,154	22,169	23,000	
		Cost	\$ 133,609	\$ 161,055	\$ 163,718	
		Cost/Contact	\$ 6.63	\$ 7.26	\$ 7.12	
	Monitor Public Hearings, Board Meetings, Internet, Media, and Issue Press Releases	Cost	\$ 172,516	\$ 207,954	\$ 211,393	
	Special Public Events	Cost	\$ 181,793	\$ 219,137	\$ 222,761	
7250	Budget Preparation and Management Studies					
7251	Corporate Budget Preparation, Monitoring, and Administration	Cost	\$ 1,573,564	\$ 1,950,100	\$ 2,335,300	c)
7252	Management and Organization Studies	Cost	\$ 213,346	\$ 231,400	\$ 315,400	d)
7254	Enterprise Systems	Cost	\$ 90,738	\$ 95,100	\$ 97,900	

- a) Increase is due to the reallocation of salaries to more accurately reflect current activities (\$88,000), offset by a decrease in the need for external studies (\$10,000).
- b) Decrease is due to the drop of the Facilities Administrator position (\$12,600).
- c) Increase is due to the transfer in of a Budget and Management Analyst position and a Management Analyst III position (\$217,300), and a new request for membership to "Current" (\$200,000), offset by the salary reallocation for a Senior Budget and Management Analyst position due to a section transfer (\$43,900).
- d) Increase is due to the addition of one Budget and Management Analyst position (\$78,800).

**15000 GENERAL ADMINISTRATION**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7340	Security of Plants and Properties					
	Patrol of District Facilities	# of Miles	110,382	106,362	113,694	
		Cost	\$ 1,121,278	\$ 1,226,450	\$ 1,240,466	
		Cost/Mile	\$ 10.16	\$ 11.53	\$ 10.91	
	Patrol of District Real Estate	# of Miles	214,270	206,468	220,698	
		Cost	\$ 3,170,782	\$ 3,468,190	\$ 3,507,824	
		Cost/Mile	\$ 14.80	\$ 16.80	\$ 15.89	
	Access Control to Facilities	# of Hours	52,008	48,611	48,611	
		Cost	\$ 1,500,059	\$ 1,640,760	\$ 1,659,510	
		Cost/Hour	\$ 28.84	\$ 33.75	\$ 34.14	
7460	Main Office Building Complex Services					
7461	Annual Operation and Maintenance (Cost per square foot per year)	Area (Sq. Ft.)	198,901	198,901	198,901	
		Cost	\$ 2,627,954	\$ 2,994,100	\$ 2,942,900	
		Cost/Sq. Ft.	\$ 13.21	\$ 15.05	\$ 14.80	
7463	Collect and Distribute Mail	# of Pieces	889,491	1,100,000	1,013,009	e)
		Cost	\$ 289,323	\$ 349,500	\$ 295,500	
		Cost/Piece	\$ 0.33	\$ 0.32	\$ 0.29	
7464	Telephone Switchboard Operations at Main Office Building Complex	Cost	\$ 104,002	\$ 110,400	\$ 96,800	
7470	Contract Diversity					
7471	Contract Compliance	Cost	\$ 470,790	\$ 509,600	\$ 536,800	
7472	Community Activity	Cost	\$ 322,175	\$ 379,700	\$ 387,300	
7473	Contract Diversity Support	Cost	\$ 219,843	\$ 273,400	\$ 262,700	
7490	Automotive Fleet Operations					
7491	Automotive Fleet Procurement	Cost	\$ 6,616	\$ 7,900	\$ 8,400	
7496	Automotive Fleet Disposal	Cost	\$ 6,435	\$ 7,200	\$ 7,000	
7499	Automotive Fleet Operations	Cost	\$ 609,295	\$ 630,800	\$ 732,500	f)
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 147,500	\$ 149,800	
Totals			\$ 14,800,290	\$ 16,819,300	\$ 17,387,400	

e) Decrease is due to an anticipated reduction in postage usage (\$19,500).

f) Increase is due to the expansion of the fleet vehicle location system (\$53,000) and increased fleet maintenance costs due to an aging fleet (\$45,000).

101 15000	Fund: Corporate Department: General Administration Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 9,148,164	\$ 10,393,700	\$ 10,369,700	\$ 9,830,000	\$ 10,795,800	\$ 10,795,800	\$ 10,854,800
601060	Compensation Plan Adjustments	1,207,452	1,006,400	1,006,400	842,000	948,300	948,300	950,700
601070	Social Security and Medicare Contributions	-	147,500	151,500	151,500	149,800	149,800	149,800
601080	Salaries of Nonbudgeted Employees	-	-	20,000	19,400	-	-	-
601100	Tuition and Training Payments	30,965	125,000	125,000	30,000	97,600	97,600	97,600
601170	Payments for Professional Services	610,000	-	-	-	-	-	-
601270	General Salary Adjustments	-	-	-	-	1,233,100	1,233,100	-
100	TOTAL PERSONAL SERVICES	10,996,582	11,672,600	11,672,600	10,872,900	13,224,600	13,224,600	12,052,900
612010	Travel	7,542	15,000	15,000	12,100	10,000	10,000	10,000
612030	Meals and Lodging	13,766	17,500	17,500	11,300	17,000	17,000	17,000
612040	Postage, Freight, and Delivery Charges	84,426	115,000	115,000	109,800	95,500	95,500	95,500
612050	Compensation for Personally-Owned Automobiles	5,351	5,900	5,900	3,500	4,100	4,100	4,100
612080	Motor Vehicle Operating Services	63,626	77,000	63,000	51,400	83,500	83,500	83,500
612090	Reprographic Services	17,963	118,500	114,400	40,000	120,600	120,600	120,600
612150	Electrical Energy	362,903	365,000	365,000	333,500	365,000	365,000	365,000
612160	Natural Gas	26,402	38,000	38,000	20,000	35,000	35,000	35,000
612170	Water and Water Services	4,865	5,500	5,500	5,000	5,500	5,500	5,500
612210	Communication Services	3,000	3,000	3,000	3,000	3,000	3,000	3,000
612280	Subscriptions and Membership Dues	509,733	537,300	746,300	736,400	777,700	777,700	777,700
612330	Rental Charges	18,372	21,900	21,900	19,100	17,900	17,900	17,900
612360	Advertising	14,012	10,000	10,000	10,000	13,000	13,000	13,000
612370	Administration Building Operation	933,188	1,120,500	1,063,400	1,043,700	1,118,900	1,118,900	1,118,900
612390	Administration Building Mc Pav Operation	655,270	750,000	820,400	689,000	738,800	738,800	738,800
612430	Payments for Professional Services	-	623,600	601,300	524,000	556,600	556,600	570,400
612490	Contractual Services, N.O.C.	238,275	355,800	355,800	198,000	340,000	340,000	340,000
612680	Repairs to Buildings	113,282	100,000	94,700	45,000	65,000	65,000	65,000
612800	Repairs to Office Furniture and Equipment	77,661	100,000	107,400	61,900	110,000	110,000	110,000
612840	Communications Equipment Maintenance (Includes Software)	15,960	17,800	17,800	17,800	17,800	17,800	17,800

101 15000	Fund: Corporate Department: General Administration Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
612860	Repairs to Vehicle Equipment	432,623	440,000	454,000	400,000	538,000	538,000	538,000
200	TOTAL CONTRACTUAL SERVICES	3,598,220	4,837,300	5,035,300	4,334,500	5,032,900	5,032,900	5,046,700
623070	Electrical Parts and Supplies	6,944	15,000	15,000	13,500	17,000	17,000	17,000
623090	Plumbing Accessories and Supplies	13,994	13,400	10,200	10,000	30,000	30,000	30,000
623110	Hardware	13,824	15,700	15,700	15,700	17,000	17,000	17,000
623250	Vehicle Parts and Supplies	7,926	-	-	-	-	-	-
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	108,774	165,500	154,000	105,000	132,300	132,300	132,300
623660	Cleaning Supplies	1,290	1,500	1,500	1,300	2,000	2,000	2,000
623700	Wearing Apparel	21,580	36,900	36,900	36,000	30,000	30,000	30,000
623720	Books, Maps, and Charts	109	4,000	2,000	800	500	500	500
623800	Computer Software	-	-	8,700	5,000	-	-	-
623810	Computer Supplies	-	-	3,300	3,000	-	-	-
623990	Materials and Supplies, N.O.C.	31,047	47,400	64,100	54,900	59,000	59,000	59,000
300	TOTAL MATERIALS AND SUPPLIES	205,489	299,400	311,400	245,200	287,800	287,800	287,800
634990	Machinery and Equipment, N.O.C.	-	10,000	-	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	-	10,000	-	-	-	-	-
<b>TOTAL GENERAL ADMINISTRATION</b>		<b>\$ 14,800,290</b>	<b>\$ 16,819,300</b>	<b>\$ 17,019,300</b>	<b>\$ 15,452,600</b>	<b>\$ 18,545,300</b>	<b>\$ 18,545,300</b>	<b>\$ 17,387,400</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: General Administration Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>051</b>	<b>Executive Section</b>					
EX07	Executive Director	1	1		1	
EX06	Secretary to Officer	1	2		2	
TOTAL	Executive Section	2	3	460,127.98	3	478,176.48
<b>052</b>	<b>Diversity Section</b>					
HP18	Diversity Administrator	1	1		1	
HP16	Senior Diversity Officer	2	2		2	
HP15	Compliance Officer #2 (Diversity Officer) (New Grade HP14)	5	4		3	
HP14	Diversity Officer	1	2		3	
HP11	Administrative Specialist	2	2		2	
HP09	Administrative Clerk	1	1		1	
TOTAL	Diversity Section	12	12	1,066,479.96	12	1,087,755.37
<b>053</b>	<b>Administrative Services Division</b>					
<b>054</b>	<b>Administrative Services Section</b>					
EX19	Administrative Services Officer	-	-		1	
HP22	Administrative Services Manager	1	1		-	
EX06	Secretary to Officer	-	-		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
TOTAL	Administrative Services Section	2	2	309,352.16	2	297,268.70
<b>060</b>	<b>Management &amp; Budget Section</b>					
<b>061</b>	<b>Administrative Unit</b>					
HP20	Budget Officer	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	-	1		-	
HP11	Administrative Specialist	1	-		1	
TOTAL	Administrative Unit	2	2	229,038.16	2	208,555.60
<b>067</b>	<b>Central Budget Management Unit</b>					
HP18	Supervising Budget & Management Analyst	1	1		1	

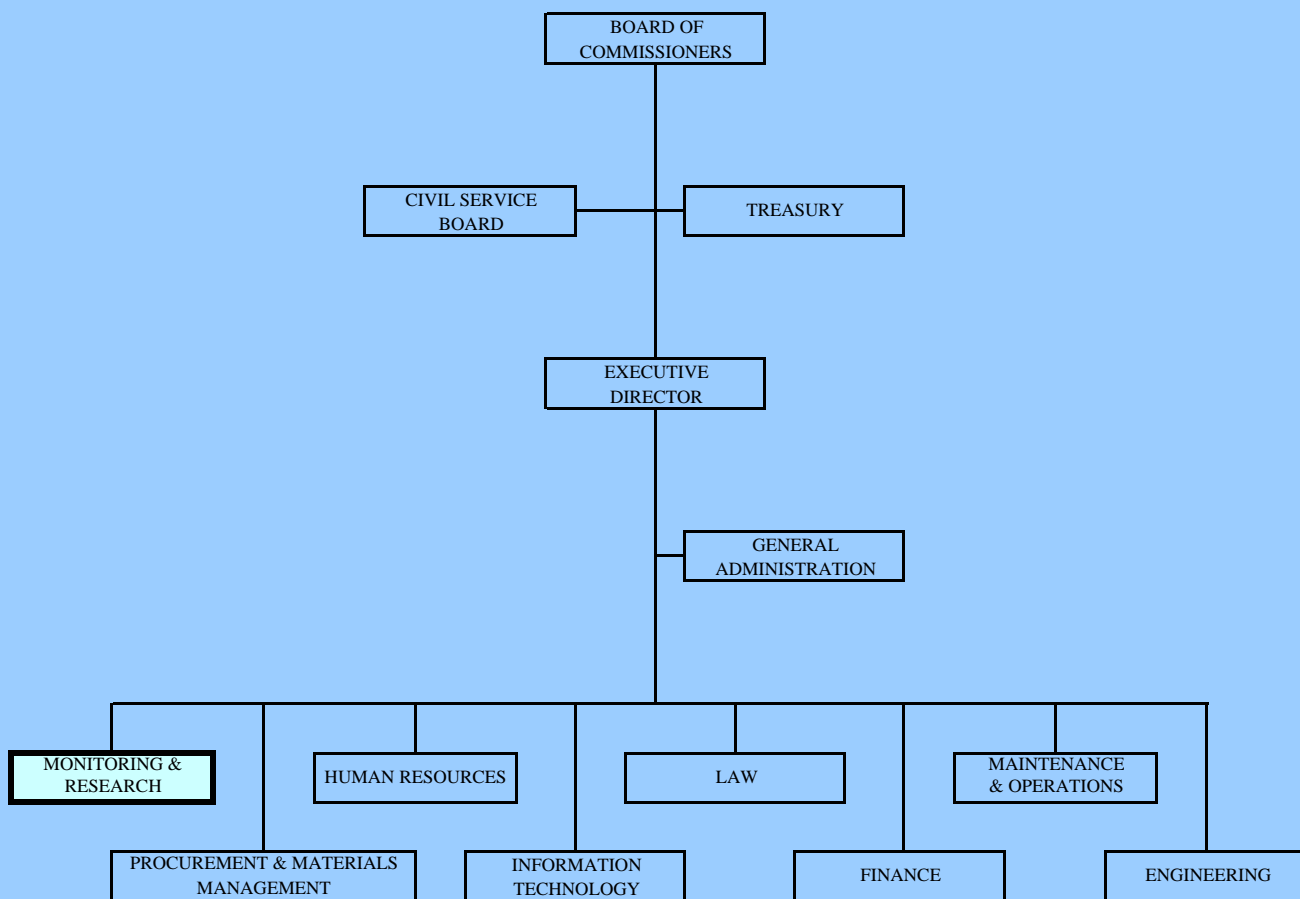
Fund: Corporate Dept: General Administration Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	2	-		1	
HP16	Senior Budget & Management Analyst	2	4		3	
HP14	Budget & Management Analyst	6	6		8	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	-	1		1	
TOTAL	Central Budget Management Unit	12	12	1,107,544.36	14	1,342,892.50
TOTAL	Management & Budget Section	14	14	1,336,582.52	16	1,551,448.10
<b>080</b>	<b>Police Section</b>					
<b>081</b>	<b>Administrative Unit</b>					
HP18	Chief of Police	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	Administrative Unit	2	2	232,466.26	2	236,825.81
<b>082</b>	<b>Police Main Office Building Complex Unit</b>					
NR2483	Police Officer	5	5		5	
TOTAL	Police Main Office Building Complex Unit	5	5	393,640.00	5	405,496.00
<b>083</b>	<b>Police North Service Area Unit</b>					
HP14	Police Sergeant	1	1		1	
NR2483	Police Officer	9	9		10	
TOTAL	Police North Service Area Unit	10	10	805,449.32	11	908,858.29
<b>084</b>	<b>Police Calumet Service Area Unit</b>					
HP14	Police Sergeant	1	1		1	
NR2483	Police Officer	10	10		10	
NR2483	Police Officer #1	1	1		-	
TOTAL	Police Calumet Service Area Unit	12	12	967,624.32	11	913,624.48
<b>085</b>	<b>Police Stickney Service Area Unit</b>					
HP16	Police Lieutenant	2	2		2	
HP14	Police Sergeant	5	5		5	
NR2483	Police Officer	23	23		22	



Fund: Corporate Dept: General Administration Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR2483	Police Officer #1	-	-		1	
TOTAL	Police Stickney Service Area Unit	30	30	2,516,919.60	30	2,597,580.57
	<b>086 Police Countywide Unit</b>					
NR2483	Police Officer	3	5		5	
TOTAL	Police Countywide Unit	3	5	393,640.00	5	405,496.00
TOTAL	Police Section	62	64	5,309,739.50	64	5,467,881.15
	<b>090 Facilities Section</b>					
	<b>091 Administrative Unit</b>					
HP17	Facilities Administrator	1	1		-	
HP16	Senior Budget & Management Analyst	-	-		1	
HP11	Administrative Specialist	2	2		2	
TOTAL	Administrative Unit	3	3	255,049.34	3	233,573.77
	<b>096 Building Services Unit</b>					
HP15	Management Analyst II #2 (Budget & Management Analyst) (New Grade HP14)	1	-		-	
HP14	Budget & Management Analyst	-	1		1	
HP14	Chief Printing Press Operator	1	1		1	
HP12	Printing Press Operator	1	1		1	
HP11	Motor Vehicle Dispatcher Supervisor	1	1		-	
HP11	Administrative Specialist	2	2		2	
HP09	Motor Vehicle Dispatcher	2	2		-	
HP09	Administrative Clerk	4	4		3	
HP09	Administrative Clerk #1	-	-		1	
NR8661	Motor Vehicle Dispatcher Supervisor	-	-		1	
NR8660	Motor Vehicle Dispatcher	-	-		2	
TOTAL	Building Services Unit	12	12	747,827.08	12	754,499.51
TOTAL	Facilities Section	15	15	1,002,876.42	15	988,073.28
TOTAL	Administrative Services Division	93	95	7,958,550.60	97	8,304,671.23

Fund: Corporate Dept: General Administration Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>072</b>	<b>Public Affairs Section</b>					
EX18	Public & Intergovernmental Affairs Officer	1	1		1	
EX06	Secretary to Officer	-	1		1	
HP17	Senior Public Affairs Specialist	1	-		-	
HP17	Senior Public Affairs Specialist #2 (New Grade HP16)	-	1		1	
HP15	Community Education Specialist #2 (Public Affairs Specialist) (New Grade HP14)	1	1		1	
HP15	Public Affairs Specialist	3	-		-	
HP15	Public Affairs Specialist #2 (New Grade HP14)	-	3		3	
HP13	Assistant Public Affairs Specialist #2 (Senior Administrative Specialist)	1	-		-	
HP13	Senior Administrative Specialist	-	1		1	
HP13	Graphic Artist	2	2		2	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	-	1		-	
HP09	Administrative Clerk	1	1		1	
<b>TOTAL</b>	<b>Public Affairs Section</b>	<b>11</b>	<b>12</b>	<b>1,031,208.10</b>	<b>11</b>	<b>1,036,098.28</b>
<b>TOTAL</b>	<b>General Administration</b>	<b>118</b>	<b>122</b>	<b>10,516,366.64</b>	<b>123</b>	<b>10,906,701.36</b>

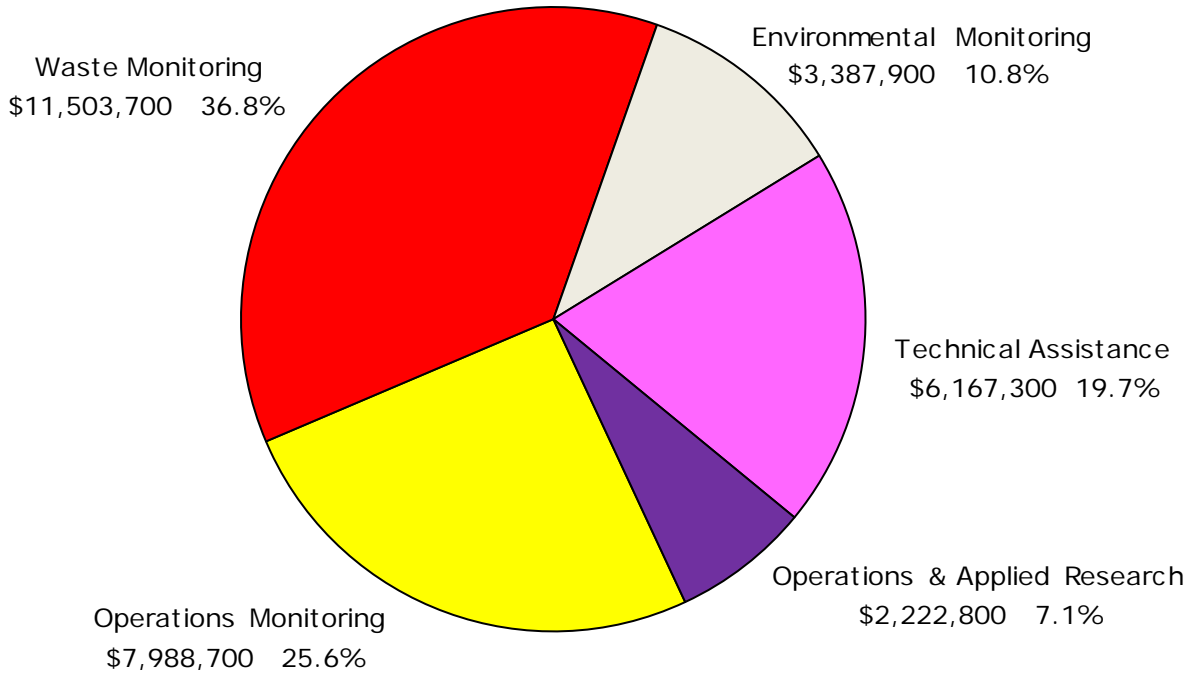
NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.



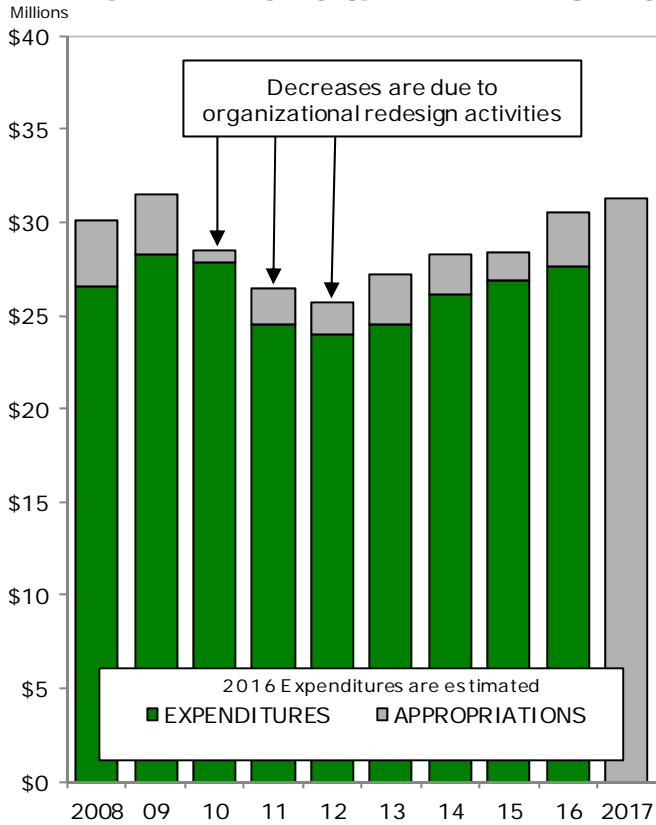
# MONITORING & RESEARCH

2017	\$31,270,400
2016	\$30,523,200
Increase	\$747,200

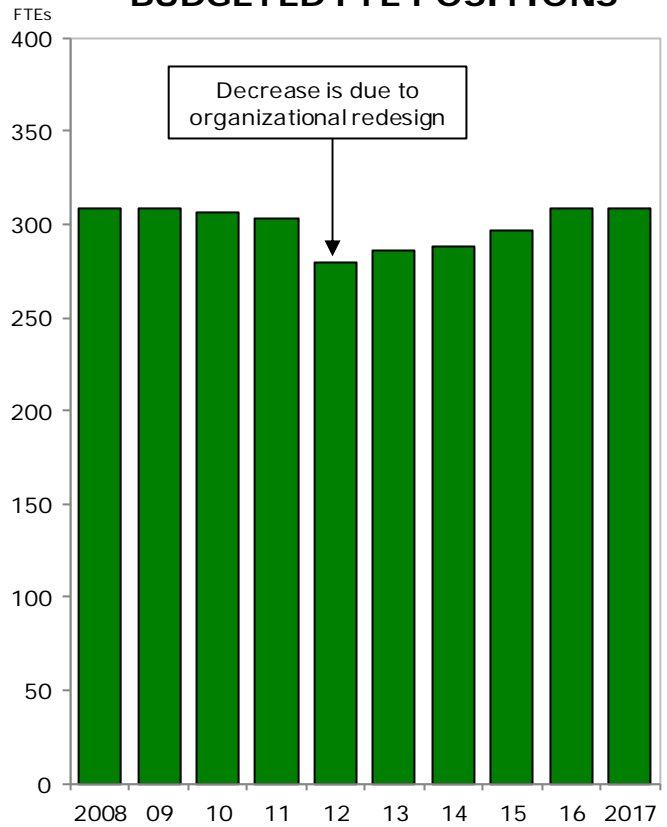
## FUNCTIONS



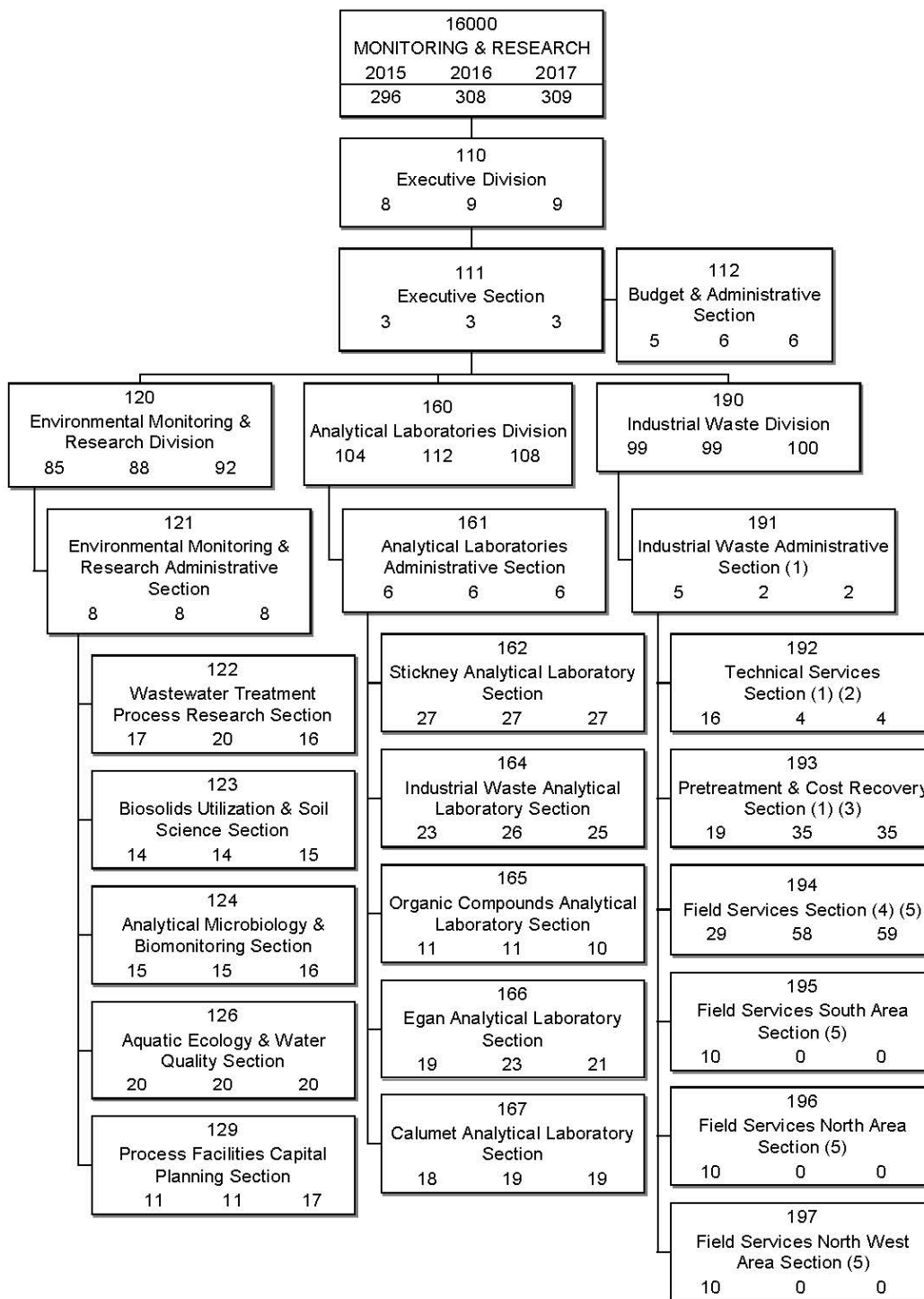
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# MONITORING & RESEARCH



- (1) Effective 01/01/16, four positions from Section 191 and 14 positions from Section 192 were transferred to Section 193.
- (2) Effective 01/01/16, Section 192 Enforcement was retitled Technical Services.
- (3) Effective 01/01/16, Section 193 User Charge & Technical Services was retitled Pretreatment & Cost Recovery.
- (4) Effective 01/01/16, Section 194 Field Services Central Area was retitled Field Services.
- (5) Effective 01/01/16, Sections 195, 196, and 197 were merged with Section 194.

## MONITORING & RESEARCH

**The Monitoring & Research (M&R) Department's mission is to dependably provide industrial waste program ordinance administration, cost-effective monitoring and surveillance, high quality analytical data, technical support, long-term planning, and research to protect and improve District facilities, operations, and the environment.**

### Departmental Summary

The department's primary responsibilities include:

- Monitoring liquid and solids process trains for operational control, regulatory compliance, and odor emissions;
- Administering the Pretreatment and User Charge Programs in compliance with federal regulations;
- Monitoring improvements in water quality of area rivers, canals, and groundwater to document regulatory compliance;
- Process facility capital planning and technical assistance to address operational challenges and regulatory issues;
- Conducting applied research to improve and reduce the cost of District operations and to improve water quality.

### Summary of 2016 Accomplishments

- Redesigned the Laboratory Technician series, to promote cross-training, interchangeability, and operational efficiency;
- Developed an operational optimization plan for Lake Michigan discretionary diversion and aeration stations to meet water quality objectives in the Chicago Area Waterway System (CAWS);
- Completed the 2016 iteration of Long-Term Capital Planning for the District's process facilities to ensure that improvement plans are aligned with the District's Strategic Business Plan;
- Partnered with the City of Chicago and dozens of suburban entities for local beneficial use of 15,000 dry tons of biosolids;
- Continued phosphorus removal at five water reclamation plants (WRPs) for the purpose of meeting pending regulatory effluent concentration phosphorus limits at these WRPs;
- Screened and tested 20 high strength organic wastes to determine their suitability for acceptance under the Resource Recovery Program;
- Established four partnerships on field research initiative at the Fulton County site aimed to develop partnerships on implementing best management practices to reduce nutrient loss from agricultural land;
- Completed hydraulic and process modeling of the Calumet WRP to obtain information for planning capital improvements.

### Budget Highlights

The 2017 appropriation for M&R is \$31,270,400, an increase of \$747,200, or 2.4 percent, from the 2016 request. The staffing level has increased from 308 to 309 positions. Various offsetting position changes occurred, as follows: One Aquatic Biologist, four Environmental Chemists, one Assistant Environmental Chemist, one Environmental Microbiologist, and one Laboratory Technician II were added. One Associate Civil Engineer, one Associate Electrical Engineer, two Associate Mechanical Engineers, and one Senior Mechanical Engineer were transferred into M&R from the Stickney Service Area of the Maintenance & Operations (M&O) Department. One Administrative Specialist, nine Laboratory Technician Is, and two Laboratory Technician IIs were dropped. Most Assistant Environmental Chemist and Associate Environmental Chemist positions will assume the new Environmental Chemist title as part of the redesign of the Environmental Chemist series.

Significant features of the 2017 budget include:

- Lead the Phosphorus Task Force to study and implement biological phosphorus removal at five WRPs;
- Continue implementation of a District-wide Odor Reduction Strategy and complete the strategy for the O'Brien WRP;
- Conduct hydraulic and process modeling of the O'Brien WRP to obtain information for planning capital improvements;
- Continue to develop a District-wide Biosolids Strategy addressing final product utilization;
- Conduct the fifth year of a seven-year microbial source tracking study to determine the sources and distribution of microbes in primary contact reaches of the CAWS;
- Continue to lead the Mainstream Shortcut Biological Nitrogen Removal Task Force to study four approaches until the end of 2020 for potential implementation at District facilities;
- Redesign of the Environmental and Instrumentation Chemist series, to promote cross-training and reconfigure a technical support group to respond to increasing requests for analytical support for innovation projects;
- Continue to lead and develop the Resource Recovery Program, including evaluation of organic materials as a source of revenue, and a method of supporting the District's energy recovery, phosphorus removal, and biosolids composting initiatives.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

• **Add Value**

M&R has continuously sought to make improvements to its business practices and to maintain a clear focus on its mission, while striving to decrease the number of budgeted positions in an increasingly complex environment. This was completed while maintaining all essential technical support, analytical laboratory, and industrial waste program ordinance administration functions. This is a testament to M&R’s highly skilled, professional, and dedicated staff.

M&R generates an important revenue stream through the recovery of operations, maintenance, and replacement costs incurred from treating discharges from Commercial/Industrial and Tax-Exempt Users of the sewerage system and the costs of administering the District’s Pretreatment and User Charge Programs. The User Charge Program assesses charges to recover operations, maintenance, and replacement costs incurred by the District, beyond those recovered through payment of ad valorem property taxes, based on the volume and the biochemical oxygen demand and suspended solids concentrations of wastewater discharged. Estimated 2017 User Charge revenue, based on 2016 rates and a five-year (2011-2015) average of user clearing data, is \$47 million. The User Charge rates take into account the costs budgeted in the Corporate Fund for operations and maintenance, as well as in the Construction Fund for the required replacement of District facilities.

**Five-Year Trend in User Charge Revenue**

Year	User Charge Receipts
2013	\$53,801,653
2014	\$44,964,848
2015	\$48,476,512
2016 Estimated	\$47,500,000
2017 Projected	\$47,000,000

In 2017, M&R will administer approximately 1,000 accounts who are required to submit annual reports as part of its User Charge and Pretreatment Programs. For these accounts, M&R will conduct approximately 1,000 inspections and sampling events, and anticipates processing about 2,600 reports and filings to reconcile User Charge liabilities. Another 2,800 accounts will be administered via an automatic review and billing process in a continuing effort to simplify the administrative process and reduce its administrative costs, as allowed under the District’s User Charge Ordinance. M&R will continue to encourage users who are eligible for reduced reporting and self-monitoring to migrate to this automated process. Finally, M&R remains vigilant in identifying and classifying new users, and in 2017, has a goal of identifying and classifying 50 new users to be administered under the User Charge Program to recover the costs associated with treating those users’ wastewater. In addition, M&R has a goal to identify 30 new User accounts, considered to be Small Commercial/Industrial Users, who are not required to be administered under the User Charge or Pretreatment Programs, but required higher scrutiny to safeguard the treatment plants and local waterways.

M&R will continue to implement some of the approved findings from the interdepartmental, long-term, process facility capital planning process. The review includes District business initiatives, anticipated regulatory requirements, and community service level expectations. In addition, the District’s capital plan was updated over a 20-year time frame. In 2017, M&R will continue to address issues associated with competing interests, as well as reducing the gaps in knowledge necessary to move forward with the approved planning strategy. Knowledge gaps to be addressed include updating the plant process and hydraulic models, as well as incorporating findings from the ongoing development of the District’s Biosolids Strategy and Odor Reduction Strategy.

M&R will continue a collaborative research project with Argonne National Laboratory to develop microbial source tracking tools, methodologies, and assessments for the reaches of the CAWS that have been designated for primary contact recreation use by the Illinois Pollution Control Board. This multi-year project is budgeted for \$288,500 in the Construction Fund in 2017.

During 2017, M&R will implement the Thornton Composite Reservoir Post-Construction Monitoring Plan in the Calumet River System. Analysis of surface water quality during wet and dry conditions will demonstrate the benefits of additional Tunnel and Reservoir Plan (TARP) storage capacity and reduced combined sewer overflows.

The Biosolids Strategy focuses on reviewing the current operations and practices for sustainable biosolids management that is within the best interest of the District and its constituents and continues to be developed. M&R will continue to provide technical support to M&O in 2017 with the full-scale production of a value-added product by co-composting biosolids with wood chips and other vegetative wastes to produce exceptional quality biosolids compost for utilization in the Chicago metropolitan area. The production of compost will potentially reduce the cost of managing biosolids, increase public acceptance, and will have a greater economic value compared to air-dried, exceptional quality biosolids currently distributed under the Controlled Solids Distribution Program. M&R will conduct public outreach and marketing for utilization of the composted biosolids product. Markets will continue to be explored to reduce hauling cost to utilization sites and to generate revenue. M&R will also evaluate options to reduce biosolids production and operating costs, and increase digester gas production.

**• Excellence**

M&R is committed to automating and streamlining its business practices. Staff from M&R and the Information Technology Department have worked together to further improve the Laboratory Information Management System to increase data processing and reporting and to enhance data acquisition from automated instruments. M&R will seek to further streamline operations by consolidating staffing and analyses. This is made possible in large part by reductions in discretionary monitoring of WRP processes, industrial users, and environmental impacts of District operations through a series of service level agreements between M&R and other departments and permitting authorities.

M&R is also committed to stopping pollution at its source by operating an effective Industrial Waste Pretreatment Program in full compliance with all federal and state statutes. During 2017, the administration of the District’s Industrial Waste Pretreatment Program will require the issuance or renewal of Discharge Authorizations for approximately 70 Significant Industrial Users and the review of approximately 700 Continued Compliance Reports and 20 Spill Prevention, Containment, and Countermeasure Plans. During 2017, M&R will conduct approximately 6,400 inspections associated with administering the District’s Sewage and Waste Control Ordinance and will randomly sample and analyze at least 50 percent of the anticipated 1,800 chemical toilet disposals at the Stickney WRP. During 2017, M&R is not anticipating any substantial variation in the number of enforcement activities. As a result of the District’s Industrial Waste Pretreatment Program, during 2017, all of the biosolids produced by the District are expected to meet the highest quality criteria in the United States Environmental Protection Agency (USEPA) Biosolids Rule (40 CFR Part 503) and the WRP effluents are expected to meet all National Pollutant Discharge Elimination System (NPDES) permit limits for regulated industrial pollutants.

M&R provides first-response services for hazardous materials emergencies and complaints of pollution and will conduct approximately 180 investigations in response to requests from federal, state, and local agencies, municipalities, private citizens, self-reported industrial activities, and requests from the M&O Department in 2017.

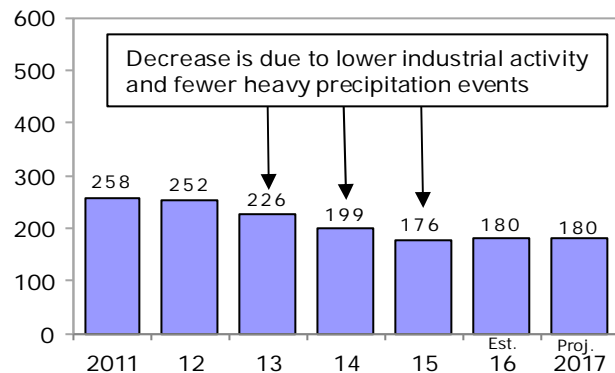
In 2017, M&R will collect and analyze approximately 1,300 samples from 164 TARP groundwater monitoring wells and two reservoirs and will compile six annual monitoring reports for the four TARP tunnel systems, including the Mainstream, Calumet, Des Plaines (below Weller Creek), and Upper Des Plaines (above Weller Creek – O’Hare) systems and two reservoirs, the Gloria Alitto Majewski Reservoir and the Thornton Composite Reservoir, to meet the operating permit requirements of these facilities. M&R will also conduct groundwater monitoring at six biosolids management facilities, including the Hanover Park Fischer Farm, in accordance with permits issued by the Illinois Environmental Protection Agency (IEPA). In 2017, a total of 32 monitoring reports will be submitted to the IEPA.

M&R monitors the liquid and solids process trains daily at multiple critical control points at each of the seven WRPs to inform process control and to improve operations and the quality of effluents and biosolids, which will generate 596,560 projected tests in 2017. This includes chemical, biological, and microbiological monitoring, such as characterization of changes in microbial communities associated with operations and performance metrics to assess process stability and provide early warning of process upset such as the appearance of excess filamentous bacteria in mixed liquor. Whole effluent toxicity tests with fish (*Pimephales promelas*) and daphnids (*Ceriodaphnia dubia*) and fecal bacteria indicator analysis will be conducted as

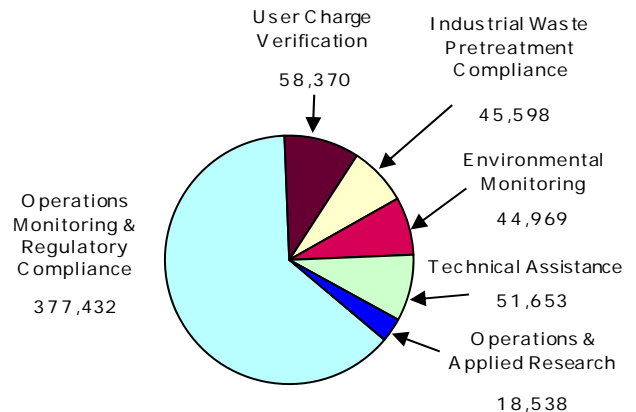
**Five-Year Trend in Enforcement Activities**

Year	Cease and Desist Orders
2013	90
2014	75
2015	71
2016 Estimated	80
2017 Projected	80

**Number of Emergency Responses**



**2017 Projected Laboratory Analyses by Program**





required by NPDES permits and federal regulations. M&R provides support to M&O by making non-proprietary reagents that are needed to operate online ammonia and chlorine analysis systems.

M&R will continue to collaborate with academic partners on National Science Foundation grant-funded research to assess impacts of effluent disinfection at the O'Brien and Calumet WRPs on endocrine active compounds and aquatic endpoints in receiving streams.

- **Resource Recovery**

In 2017, M&R will continue to implement plant-specific monitoring plans to evaluate the aeration requirement and nitrification capacity of each plant's batteries in an effort to identify areas where energy and cost savings could be achieved.

Nutrient enrichment of the water environment has become a national concern. M&R is leading the District's Phosphorus Removal and Recovery Task Force that will assist the M&O Department in optimizing Enhanced Biological Phosphorus Removal at the Stickney, Calumet, O'Brien, Kirie, and Hanover Park WRPs. The District is working with various industries to investigate using high strength waste at the Calumet and Stickney WRPs to improve biological phosphorus removal. M&R is in the preliminary stages of investigating technologies to reduce energy costs such as mainstream shortcut biological nitrogen removal, membrane aerated bioreactors, ammonia aeration control, co-digestion, and an anoxic zone in the aeration process. Additionally, M&R began demonstration testing of Enhanced Biological Phosphorus Removal at the Kirie and Hanover Park WRPs. In collaboration with Northwestern University and the University of Illinois at Urbana-Champaign, the M&R Department is also evaluating and developing molecular methods for monitoring nutrient removal processes. M&R will also continue work with the Engineering and M&O Departments to evaluate phycoremediation (algae-based) strategies to reduce nutrients in the O'Brien WRP's effluent and to reduce the District's energy footprint.

The long-term, process facility capital planning effort incorporates the District's long-term financial model to help ensure that the District is addressing its goals with a financially responsible approach. The development of a long-term plan allows the District to focus on synergies using data-driven solutions, while providing time to concentrate on reducing knowledge gaps.

As part of its efforts to promote the use of biosolids within Cook County and by all the communities serviced by the District, M&R has been increasing its biosolids marketing activities by hosting an annual sustainability workshop.

- **Develop Employees**

M&R is committed to providing continuing education and professional development to all of its employees. M&R conducts a monthly environmental issues and research seminar series at the Lue-Hing Research and Development Complex which is video conferenced to more than five other facilities and is archived in streaming online video format through the web portal. The seminar series is approved by the Illinois Society of Professional Engineers for professional development credits and is available to all employees and the local community. Based on the 2,081 attendees in 2016, it is anticipated that attendance throughout the facilities for 2017 will be approximately 2,000.

M&R employees benefit from participation at local, regional, and national professional society meetings and workshops as speakers, session chairs and moderators, or committee chairs or members. M&R economizes where possible by providing its employees access to webinars which are presented by the Water Environment Federation, Water Environment Research Foundation, USEPA, National Environmental Laboratory Accreditation Conference Institute, American Chemical Society, and others. In 2017, M&R will continue to encourage professional staff to attend relevant conferences and view webinars to promote professional growth and request all staff to utilize the District's eLearning resources to enhance working knowledge and job skills. In addition, M&R continues to develop employees through cross-training and job shadowing opportunities.

M&R emphasizes employee safety in their working environment. M&R maintains a Chemical Hygiene Plan to ensure employee safety at its laboratories and conducts monthly safety training. Also, M&R plans to have its quality assurance staff, the Chemical Hygiene Officer, and Assistant Chemist Hygiene Officers attend Occupational Safety and Health Administration seminars.

- **Leading Partnerships**

The District conducts an Odor Monitoring Program to minimize or eliminate nuisance odors in the communities surrounding its facilities. In 2017, M&R will continue to lead the development of a District-wide Odor Reduction Strategy for the District's facilities, collection systems, and biosolids drying areas to target odor problem areas and reduce odors that may affect the communities that the District serves. Current efforts are focused on addressing known odorous processes and facilities and developing designs to address the issues that are prioritized to responsibly improve our operations.

The District has developed a sound biosolids Controlled Solids Distribution Program under a permit issued by the IEPA. Under this program, exceptional quality air-dried biosolids and composted biosolids are used as a soil amendment and fertilizer in the Chicago metropolitan area. This program reduces landscape management costs for local park districts and school districts that participate. M&R will continue the promotion of biosolids, sustainability practices, and biosolids beneficial reuse awards to improve public awareness of the benefits of utilizing biosolids as a fertilizer and soil amendment through a sustainability workshop and other public events.

M&R will work with Public Affairs to develop fact sheets regarding important issues on water quality in the area waterways, public health risks of recreation on the waterways, risk of exposure to pathogens in wastewater-to-wastewater treatment plant operations, and utilizing biosolids for land application. M&R provides support to outreach activities such as school science fair projects, District laboratory tours, local public meetings, and parades.

M&R has been providing assistance to oversight agencies studying and controlling the migration of invasive aquatic species for decades. In 2017, M&R will continue to assist the United States Fish and Wildlife Service and the Army Corps of Engineers with surveillance for the presence of Asian carp (*Hypophthalmichthys spp.*) in the CAWS and the Great Lakes and Mississippi River Interbasin Study, respectively.

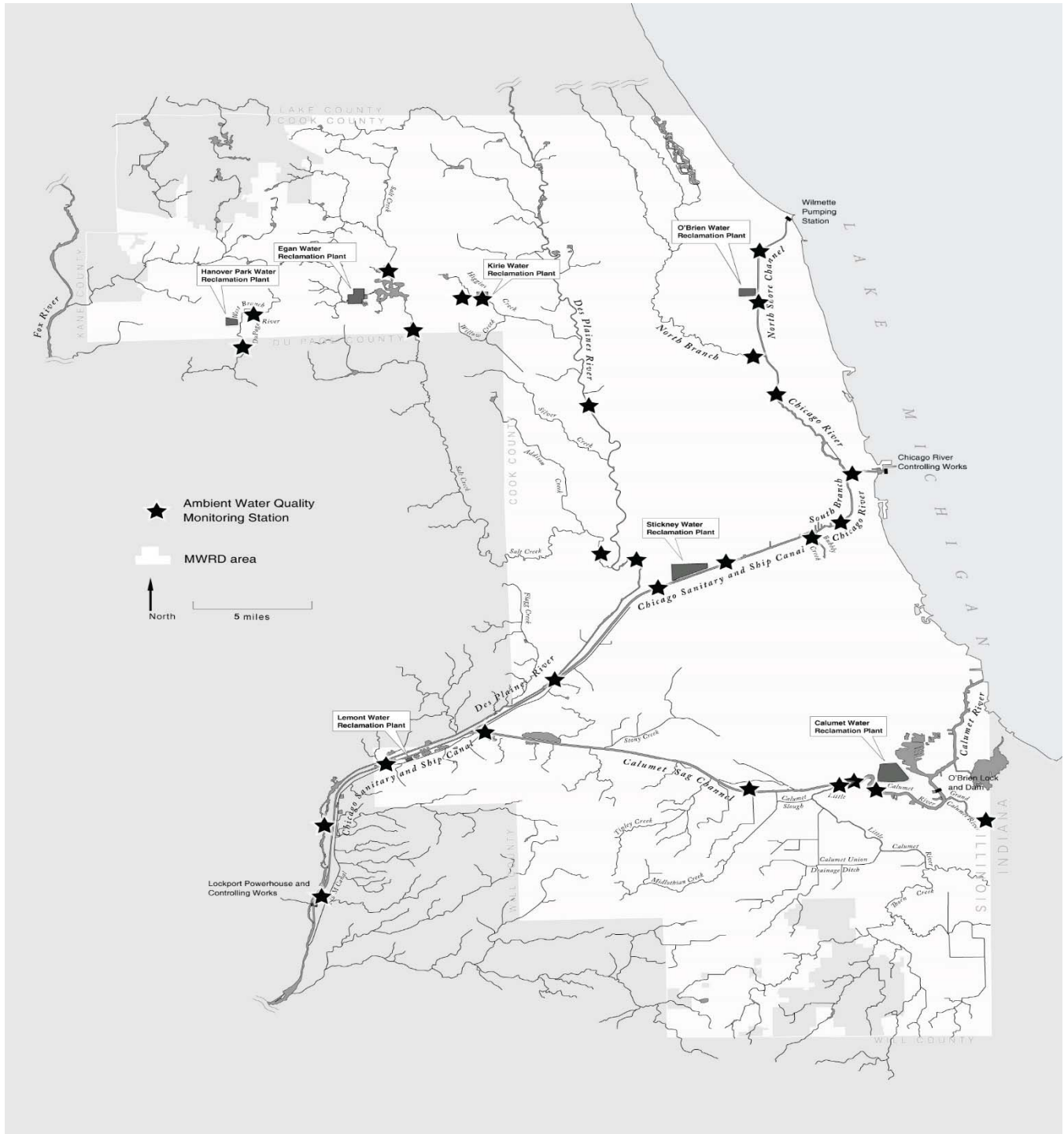
M&R provides support to the IEPA in 2017 by participating in various working groups for implementing the Illinois Nutrient Reduction Strategy and developing nutrient water quality standards for Illinois. M&R is also continuing to work through the Illinois Association of Wastewater Agencies in 2017 to partner with a consortium of agricultural industry organizations to investigate watershed approaches to improving water quality in the Illinois River basin. The activities under this partnership will include research and demonstration projects at the District's Fulton County site, collaborations under the United States Department of Agriculture's Regional Conservation Partnership Program, and collaboration with other utilities to implement practices to reduce nutrient loss from biosolids applied to farmland.

- **Technology**

The internet-based Publicly owned treatment works Administration and Compliance System (iPACS) is used to monitor Commercial/Industrial User compliance with USEPA regulations. A new version of iPACS, completed in 2014, has increased staff efficiency and maintains all Industrial Waste Pretreatment Program data in a single database. In 2017, more enhancements to iPACS will allow M&R to continue implementing electronic management of assignment scheduling and reporting, as well as Industrial User self-reporting. In 2017, M&R and the Information Technology Department will continue to use consultants and in-house expertise to make enhancements to the Laboratory Information Management System V10 upgrade that will support the continued attainment of laboratory accreditation.

# Monitoring & Research

## Waterways Monitoring Program 4672 – Waterways Monitoring Stations



Operations of the District meet stringent standards contained in NPDES permits issued for each WRP. Processing and utilization of solids are regulated by IEPA permits and federal regulations. M&R monitors ambient water quality at 28 sampling locations, and operates 19 continuous dissolved oxygen monitoring stations in the shallow and deep-draft waterways within the District’s service area. The environmental information is used to demonstrate compliance with water quality standards and the beneficial effects of the District’s operational improvements on instream water quality. Fish sampling in the District service area is also conducted at 28 locations to characterize the ecological integrity of the waterways.

**16000 MONITORING & RESEARCH**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:		Cost	Percent
1. PLANT OPERATIONS MONITORING: Monitor the District's collection, treatment, and disposal operations to ensure compliance with National Pollutant Discharge Elimination System, Illinois Environmental Protection Agency, and other regulations.	Liquid Process Analyses	\$ 5,192,200	16.6%
	Solid Process Analyses	\$ 2,612,000	8.4%
	Air Quality Monitoring	\$ 184,500	0.6%
		<b>\$ 7,988,700</b>	<b>25.6%</b>
2. INDUSTRIAL WASTE PROGRAMS: Administer the Sewage and Waste Control Ordinance (Pretreatment Program), User Charge Ordinance (User Charge Program), Environmental Remediation Wastewater Ordinance, and Chemical Toilet Wastes Disposal Ordinance.  * Note: "SIUs" refers to Significant Industrial Users.	Residential Users	\$ 154,400	0.5%
	Tax-Exempt Users	\$ 1,384,900	4.4%
	Large Commercial/Industrial Users	\$ 3,551,400	11.4%
	Environmental Remediation	\$ 129,700	0.4%
	Chemical Toilet Waste	\$ 60,400	0.2%
	SIUs* - Pretreatment Program	\$ 3,456,700	11.1%
	SIUs* - Extraordinary Monitoring/Enforcement	\$ 1,776,900	5.7%
	Other Industrial Users	\$ 612,000	2.0%
	All Other - General	\$ 377,300	1.1%
		<b>\$ 11,503,700</b>	<b>36.8%</b>
3. ENVIRONMENTAL MONITORING: Monitor the quality of Lake Michigan and the waterways in order to detect and reduce the incidence of pollution.	Lake Michigan Monitoring	\$ 85,200	0.2%
	Waterways Monitoring	\$ 2,372,100	7.6%
	Inspection Events	\$ 246,900	0.8%
	Groundwater Monitoring	\$ 683,700	2.2%
		<b>\$ 3,387,900</b>	<b>10.8%</b>
4. TECHNICAL ASSISTANCE: Conduct a program of independent review of plant operations and regular consultation and assistance for the solution of operating problems, provide technical assistance to other agencies upon request, provide review and response to proposed regulations issued by federal, state, and local governments, and provide long-term facility planning.	M&O Assistance	\$ 2,079,900	6.7%
	General Assistance	\$ 668,400	2.1%
	Regulatory Review and Response	\$ 837,400	2.7%
	Engineering Process Design Support	\$ 1,307,600	4.2%
	Regulatory Compliance Reporting	\$ 292,900	0.9%
	Facility Capital Planning	\$ 981,100	3.1%
		<b>\$ 6,167,300</b>	<b>19.7%</b>
5. OPERATIONS AND APPLIED RESEARCH: Conduct operations and applied research for process improvement and cost reduction in District operations.		\$ 2,222,800	7.1%
	<b>Total</b>	<b>\$ 31,270,400</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Submit all required environmental monitoring reports on time.	100%	100%	100%
2. Maintain laboratory accreditation.	100%	100%	100%
3. Continue a seven-year microbiome microbial source monitoring study of the Chicago Area Waterways. 2017 is the 5th year of this study.	40%	50%	70%
4. Provide sample data for Illinois Environmental Protection Agency monitoring compliance reports by the 13th of the following month 100 percent on time.	100%	100%	100%
5. Provide sample data for industrial surveillance and User Charge and Technical Services Section by the 15th of the following month 100 percent on time.	100%	100%	100%
6. Provide water quality sample data by the 15th of the following month 100 percent on time.	100%	100%	100%

**16000 MONITORING & RESEARCH**

**OBJECTIVES AND PROGRAM SUMMARY**

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
7. Issue Discharge Authorizations in response to all Significant Industrial User requests and enforcement actions within the timeframes established under the Sewage and Waste Control Ordinance.	100%	100%	100%
8. Process User Charge Annual Certified Statements submitted by Commercial/Industrial Users by September 30th.	100%	100%	100%
9. Respond to emergency assistance requests from fire and police departments, citizens, state and federal agencies, municipalities, industries, and the District.	176	180	180

PROGRAMS BY PRIORITY:		2015 Actual	Budgeted		Change	
Number	Name		FTEs	Dollars	Dollars	Percent
4650	Operations Monitoring	\$ 6,760,403	2017 80	\$ 7,988,700	\$ 326,900	4.3
			2016 81	\$ 7,661,800		
4660	Waste Monitoring	\$ 10,292,402	2017 115	\$ 11,126,400	\$ (104,200)	(0.9)
			2016 116	\$ 11,230,600		
4670	Environmental Monitoring	\$ 2,530,070	2017 31	\$ 3,387,900	\$ (126,900)	(3.6)
			2016 31	\$ 3,514,800		
4680	Technical Assistance	\$ 5,195,019	2017 60	\$ 6,167,300	\$ 744,800	13.7
			2016 56	\$ 5,422,500		
4690	Operations and Applied Research	\$ 2,114,481	2017 23	\$ 2,222,800	\$ (129,700)	(5.5)
			2016 24	\$ 2,352,500		
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 377,300	\$ 36,300	10.6
			2016 -	\$ 341,000		
Totals		\$ 26,892,375	2017 309	\$ 31,270,400	\$ 747,200	2.4%
			2016 308	\$ 30,523,200		

- a) Increase is due to the creation of a Research Associate Program (\$150,000), funding for an Inductively Coupled Plasma System (\$150,000), and higher vehicle costs for the Analytical Laboratories Division (\$18,000).
- b) Decrease is due to the purchase of an Automatic Chemical Oxygen Demand System (\$70,000) and a Hexachrome Ion Chromatograph System (\$55,000) in 2016, offset by reduced requirements for the replacement of huts for the Industrial Waste Division (\$22,000).
- c) Decrease is due to the reduced need for Tunnel and Reservoir Plan well sampling (\$95,500), collaboration with the agricultural sector (\$9,700), pH meters for Tunnel and Reservoir Plan and ambient water quality monitoring (\$1,000), and the service and repair of small boats (\$14,900).
- d) Increase is due to the addition of two Associate Mechanical Engineer positions (\$211,800), one Associate Electrical Engineer position (\$105,900), one Associate Civil Engineer position (\$105,900), one Senior Mechanical Engineer position (\$133,000), reallocation of personnel from other M&R programs (\$129,100) to support the Capital Planning Section, and funding for equipment for the Odor Monitoring Program (\$46,000).
- e) Decrease is due to the reassignment of personnel to other programs (\$73,100) and reduced need for sampling equipment for Fulton County (\$45,000).

**16000 MONITORING & RESEARCH**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4650	Operations Monitoring: Monitoring of treatment plant operations to inform operations and comply with permits and regulations					
4652	Liquid Monitoring	Liquid Process Analyses	530,475	-	-	
		Cost	\$ 4,500,143	\$ -	\$ -	
		Cost/Analysis	\$ 8.48	\$ -	\$ -	
	- Liquid Process Treatment Analyses by Location:	North Service Area Lab	302,842	-	-	
		Stickney Lab	84,630	-	-	
		Calumet Lab	143,003	-	-	
	Liquid Monitoring: Monitoring of the District's liquid process trains (primarily effluent) to inform operations and comply with permits and regulations	Liquid Process Analyses	-	234,122	254,716	
		Program Cost	\$ -	\$ 4,906,800	\$ 5,192,200	a)
		Program Cost/Analysis	\$ -	\$ 20.96	\$ 20.38	
4653	Solids Monitoring	Solids Process Analyses	109,111	-	-	
		Cost	\$ 2,260,260	\$ -	\$ -	
		Cost/Analysis	\$ 20.72	\$ -	\$ -	
	- Solids Process Treatment Analyses by Location:	North Service Area Lab	25,167	-	-	
		Stickney Lab	51,188	-	-	
		Calumet Lab	32,756	-	-	
	Solids Monitoring: Monitoring of the District's sludge and biosolids generated from the wastewater treatment process to inform operations and comply with permits and regulations	Number of Analyses	-	91,194	122,716	b)
		Program Cost	\$ -	\$ 2,579,500	\$ 2,612,000	
		Program Cost/Analysis	\$ -	\$ 28.29	\$ 21.28	
4654	Air Monitoring: Air quality monitoring at the District's WRPs and solids management areas to comply with regulations, and identify odors affecting surrounding areas resulting in citizen complaints	Number of Analyses	-	8,580	400	c)
		Sampling Events	-	2,860	30	c)
		Program Cost	\$ -	\$ 175,500	\$ 184,500	
		Program Cost/Analysis	\$ -	\$ 20.45	\$ 461.25	
4660	Waste Monitoring: Activities associated with sampling, analysis, enforcement, and administration of Users so classified below to monitor compliance with the User Charge and Pretreatment Programs					
4661	User Charge Ordinance - Residential and Small Non-Residential Commercial/Industrial Users (6,028 Small Nonresidential Commercial/Industrial Users)	Administration Costs	\$ 146,333	\$ -	\$ -	
		Number of Users	6,201	6,300	6,300	
	User Charge Ordinance - Residential and Small Non-Residential Commercial/Industrial Users	Program Cost	\$ -	\$ 147,700	\$ 154,400	
		Program Cost/User	\$ -	\$ 23.44	\$ 24.51	

- a) Increase is due to the creation of a Research Associate Program (\$150,000), vehicle costs for the Analytical Laboratories Division (\$18,000), consulting services to analyze high strength organic waste (\$25,000), and a Fat, Oil, and Grease Solid-Phase Extraction System (\$91,000).
- b) Increase in the number of analyses is based on the actual data collected for the first half of 2016.
- c) Decrease in the number of analyses and sampling events is based on the actual data collected for the first half of 2016.

**16000 MONITORING & RESEARCH**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated			
4662	User Charge Ordinance - Tax-Exempt Users	Administration Costs	\$ 1,242,888	\$ -	\$ -			
		Number of Users	3,074	-	-			
		Revenue	\$ 18,421,075	\$ -	\$ -			
		Revenue/User	\$ 5,992.54	\$ -	\$ -			
		Number of Users	-	3,082	3,120			
		Program Cost	\$ -	\$ 1,413,800	\$ 1,384,900			
	User Charge Ordinance - Tax-Exempt Users	Program Cost/User	\$ -	\$ 458.73	\$ 443.88			
		Revenue	\$ -	\$ 18,800,000	\$ 17,860,000	d)		
		Revenue/User	\$ -	\$ 6,099.94	\$ 5,724.36			
		4663	User Charge Ordinance - Large Commercial/Industrial Users	Number of Users	676	-	-	
				Waste Monitoring Analyses	59,087	-	-	
				Revenue	\$ 30,055,437	\$ -	\$ -	
Monitoring Cost	\$ 3,280,508			\$ -	\$ -			
Revenue/User	\$ 44,460.71			\$ -	\$ -			
Monitoring Cost/User	\$ 4,852.82			\$ -	\$ -			
	User Charge Ordinance - Large Commercial/Industrial Users	Accounts	3,780	-	-			
		Number of Users	-	686	680			
		Program Cost	\$ -	\$ 3,690,600	\$ 3,551,400	e)		
		Program Cost/User	\$ -	\$ 5,379.88	\$ 5,222.65			
		Revenue	\$ -	\$ 30,200,000	\$ 29,140,000	d)		
		Revenue/User	\$ -	\$ 44,023.32	\$ 42,852.94			
	User Charge Ordinance - Large Commercial/Industrial Users	Industrial Waste Monitoring Analyses	-	58,378	58,370			
		Program Cost/Analysis	\$ -	\$ 63.22	\$ 60.84			
		4664	Environmental Remediation	Permits	8	-	-	
				Cost	\$ 29,129	\$ -	\$ -	
				Cost/Permit	\$ 3,641.13	\$ -	\$ -	
			Environmental Remediation Wastewater Ordinance	Permits Issued	-	15	15	
Program Cost	\$ -			\$ 107,600	\$ 129,700	f)		
Program Cost/Permit	\$ -			\$ 7,173.33	\$ 8,646.67			
4665	Septic Tank and Chemical Toilet Wastes Administration	Permits	3	-	-			
		Cost	\$ 43,487	\$ -	\$ -			
		Cost/Permit	\$ 14,495.67	\$ -	\$ -			
	Chemical Toilet Wastes Disposal Ordinance	Permits Issued	-	3	3			
		Program Cost	\$ -	\$ 60,400	\$ 60,400			
		Program Cost/Permit	\$ -	\$ 20,133.33	\$ 20,133.33			

- d) Decrease is due to the reduced billing rates for biochemical oxygen demand and suspended solids loading.
- e) Decrease is due to the purchase of an Automatic Chemical Oxygen Demand System (\$70,000), the purchase of a Hexachrome Ion Chromatograph System (\$55,000), and the purchase of an ice machine for the Stickney WRP (\$9,000) in 2016.
- f) Increase is due to the reassignment of personnel from other programs (\$22,100).

**16000 MONITORING & RESEARCH**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4666	Sewage and Waste Control Ordinance - SIU Minimum Regulatory Requirement Activities	Administration Costs	\$ 3,223,505	\$ -	\$ -	
		Number of SIUs	360	-	-	
		Cost/SIU	\$ 8,954.18	\$ -	\$ -	
	Sewage and Waste Control Ordinance - SIU Minimum Regulatory Requirement Activities: Annual sampling and inspection of SIU facilities, as required by federal regulation	Waste Monitoring Analyses	36,364	-	-	
		Number of SIUs	-	360	355	
		Waste Monitoring Analyses	-	43,552	45,598	
		Program Cost	\$ -	\$ 3,492,700	\$ 3,456,700	
		Program Cost/Analysis	\$ -	\$ 80.20	\$ 75.81	
		Program Cost/SIU	\$ -	\$ 9,701.94	\$ 9,737.18	
4667	Sewage and Waste Control Ordinance - SIU Extraordinary Monitoring and Enforcement Activities	Administration Costs	\$ 1,697,185	\$ -	\$ -	
		Number of SIUs	128	-	-	
		Cost/SIU	\$ 13,259.26	\$ -	\$ -	
	Sewage and Waste Control Ordinance - SIU Extraordinary Monitoring and Enforcement Activities: of SIUs that have been the subject of violation-related enforcement actions to verify compliance through inspection and/or sampling	Number of SIUs	-	120	120	
		Program Cost	\$ -	\$ 1,714,400	\$ 1,776,900	
	Program Cost/SIU	\$ -	\$ 14,286.67	\$ 14,807.50		
4668	Other Industrial Users	Administration Costs	\$ 590,225	\$ -	\$ -	
		Number of IUs	320	-	-	
		Cost/IU	\$ 1,844.45	\$ -	\$ -	
	Sewage and Waste Control Ordinance - Other Industrial Users: Inspection and/or sampling for surveillance	Number of IUs	-	326	326	
		Program Cost	\$ -	\$ 603,400	\$ 612,000	
	Program Cost/IU	\$ -	\$ 1,850.92	\$ 1,877.30		
4669	Waste Monitoring - All Other - General	Administration Costs	\$ 39,142	\$ -	\$ -	
4670	Environmental Monitoring: Regulatory required monitoring or discretionary sampling and analysis to address or evaluate the impact of wastewater conveyance, treatment, and discharge of treated effluent on local surface water and groundwater					
4671	Lake Michigan Monitoring	Sampling Events	110	-	-	
		Environmental Analyses	80	-	-	
		Cost	\$ 85,061	\$ -	\$ -	
	Lake Michigan Monitoring: Sampling and analysis to determine the impact of Combined Sewer Overflow backflow, due to storm events, on the water quality of Lake Michigan	Sampling Events	-	140	-	g)
		Environmental Analyses	-	93	115	
		Number of Backflows	-	5	-	g)
		Program Cost	\$ -	\$ 85,300	\$ 85,200	
		Program Cost/Analysis	\$ -	\$ 917.20	\$ 740.87	

g) Sampling events are based on the actual occurrences of backflows, which are not predictable occurrences. Therefore, the actual data pertaining to occurrences for 2016 will be determined in 2017, and data for 2017 will be determined in 2018.





**16000 MONITORING & RESEARCH**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4682	General Assistance to All Other Departments	Number of Responses	237	-	-	
		Number of Analyses	11,144	-	-	
		Number of Sampling Events	524	-	-	
		Cost	\$ 651,137	\$ -	\$ -	
	General Assistance to All Other Departments: Technical assistance based on requests, primarily to the Law Department	Responses Completed	-	278	74	k)
		Number of Analyses	-	6,089	2,950	k)
		Sampling Events	-	40	2	k)
		Program Cost	\$ -	\$ 612,200	\$ 668,400	
		Program Cost/Analysis	\$ -	\$ 100.54	\$ 226.58	
		Program Cost/Sampling Event	\$ -	\$ 15,305.00	\$ 334,200.00	
4683	Regulatory Review and Response	Number of Responses	213	-	-	
		Sampling Events	-	-	-	
		Cost	\$ 857,130	\$ -	\$ -	
	Regulatory Review and Response: Review of current or pending federal, state, and local regulations to determine the impact and cost on District operations	Responses Completed	-	222	330	l)
	Program Cost	\$ -	\$ 888,800	\$ 837,400		
4684	Engineering Process Design Support	Number of Analyses	34,449	-	-	
		Number of Responses	210	-	-	
		Sampling Events	314	-	-	
		Cost	\$ 1,300,162	\$ -	\$ -	
		Cost/Analysis	\$ 37.74	\$ -	\$ -	
	Engineering Process Design Support: Technical assistance to the Engineering Department to improve District facilities and optimize process design	Number of Analyses	-	34,682	22,576	m)
		Responses Completed	-	176	191	
		Sampling Events	-	270	270	
		Program Cost	\$ -	\$ 1,284,100	\$ 1,307,600	
		Program Cost/Analysis	\$ -	\$ 37.02	\$ 57.92	
4685	Regulatory Compliance Reporting	Reports	56	-	-	
		Number of Analyses	413	-	-	
		Cost	\$ 350,930	\$ -	\$ -	
		Cost/Analysis	\$ 849.71	\$ -	\$ -	
	Regulatory Compliance Reporting: Preparation of reports and letters required by regulatory agencies, such as USEPA and IEPA, to comply with permits and other regulatory requirements or to justify modifications of regulatory requirements	Reports/ Data Transmittal Letters	-	65	65	
		Number of Analyses	-	7	12	n)
		Program Cost	\$ -	\$ 262,300	\$ 292,900	
		Program Cost/Analysis	\$ -	\$ 37,471.43	\$ 24,408.33	

k) Decrease in the number of responses is based on the actual requests for assistance received for the first half of 2016. Decrease in the number of analyses is based on the actual data collected for the first half of 2016. Decrease in the number of sampling events is based on requests received during the first half of 2016.

l) Increase in the number of responses is based on the actual requests for reviews received during the first half of 2016.

m) Decrease in the number of analyses is due to the analyses being conducted primarily under the Solids Monitoring program.

n) Increase in the number of analyses is based on the anticipated need for special reporting.

**16000 MONITORING & RESEARCH**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4686	Facility Capital Planning and Capital/Maintenance Project Evaluations	Cost	\$ 294,947	\$ -	\$ -	
	Facility Capital Planning and Capital/Maintenance Project Evaluations: Activities to develop, facilitate, rank, and document the District's capital plan alternatives to improve the District's treatment plant processes and infrastructure	Program Cost	\$ -	\$ 625,200	\$ 981,100	o)
4690	Operations and Applied Research	Research Projects	421	-	-	
		Laboratory Analyses	18,380	-	-	
		Cost	\$ 2,114,481	\$ -	\$ -	
		Sampling Events	1,747	800	1,831	p)
	Operations and Applied Research: Basic and applied research to generate information to improve District operations, evaluate the impact of District activities on the environment, and to address the potential impact of regulations on District operations	Research Projects	-	160	450	p)
		Laboratory Analyses	-	13,956	18,538	p)
		Program Cost	\$ -	\$ 2,352,500	\$ 2,222,800	p)
		Program Cost/Analysis	\$ -	\$ 168.57	\$ 119.91	
7604	Social Security and Medicare Contributions	Program Cost	\$ -	\$ 341,000	\$ 377,300	
<b>Totals</b>			<b>\$ 26,892,375</b>	<b>\$ 30,523,200</b>	<b>\$ 31,270,400</b>	

- o) Increase is due to the addition of one Senior Mechanical Engineer position (\$26,600), two Associate Mechanical Engineer positions (\$63,500), one Associate Electrical Engineer position (\$42,400), one Associate Civil Engineer position (\$84,700), and the reallocation of M&R personnel from other programs (\$138,700) to support the Capital Planning Section.
- p) Increase in the number of sampling events, research projects, and laboratory analyses is based on the actual data collected during the first half of 2016. Decrease in program cost is due to the reassignment of personnel to other programs (\$73,100), and reduced need for collaboration with local institutions (\$11,500), and sampling equipment for Fulton County (\$45,000).

101 16000	Fund: Corporate Department: Monitoring & Research Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 24,596,325	\$ 26,703,000	\$ 26,687,000	\$ 25,078,100	\$ 27,522,600	\$ 27,522,600	\$ 27,752,300
601060	Compensation Plan Adjustments	715,704	970,900	968,900	650,300	677,400	677,400	687,700
601070	Social Security and Medicare Contributions	-	341,000	357,000	357,000	377,300	377,300	377,300
601080	Salaries of Nonbudgeted Employees	28,346	-	2,000	2,000	4,500	4,500	4,500
601100	Tuition and Training Payments	49,501	50,000	50,000	38,800	55,000	55,000	55,000
601170	Payments for Professional Services	54,930	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	25,444,807	28,064,900	28,064,900	26,126,200	28,636,800	28,636,800	28,876,800
612010	Travel	8,476	15,000	15,000	12,400	15,000	15,000	15,000
612030	Meals and Lodging	29,733	30,000	40,000	36,000	29,200	29,200	29,200
612040	Postage, Freight, and Delivery Charges	4,576	5,500	5,500	5,000	4,900	4,900	4,900
612050	Compensation for Personally-Owned Automobiles	28,446	30,000	30,000	29,000	25,000	25,000	25,000
612080	Motor Vehicle Operating Services	570	1,200	1,200	1,000	600	600	600
612090	Reprographic Services	539	900	900	800	600	600	600
612170	Water and Water Services	405	500	500	500	500	500	500
612330	Rental Charges	2,161	5,000	5,000	3,000	3,600	3,600	3,600
612410	Governmental Service Charges	17,000	17,000	17,000	17,000	17,000	17,000	17,000
612430	Payments for Professional Services	-	163,500	163,500	82,800	330,100	330,100	330,100
612490	Contractual Services, N.O.C.	234,930	828,000	780,500	191,200	520,100	520,100	515,400
612790	Repairs to Marine Equipment	20,299	65,400	65,400	50,000	50,800	50,800	50,800
612970	Repairs to Testing and Laboratory Equipment	391,158	444,100	444,100	325,000	416,400	416,400	421,100
200	TOTAL CONTRACTUAL SERVICES	738,294	1,606,100	1,568,600	753,700	1,413,800	1,413,800	1,413,800
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	24,995	37,700	37,700	27,900	25,600	25,600	25,600
623530	Farming Supplies	22,894	24,700	37,800	27,000	34,000	34,000	34,000
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	313,375	350,000	374,400	300,000	349,600	349,600	405,600
623700	Wearing Apparel	15,677	22,900	22,900	15,000	16,100	16,100	16,100
623720	Books, Maps, and Charts	161	2,000	2,000	1,800	900	900	900
623810	Computer Supplies	2,246	3,000	6,000	4,500	2,200	2,200	2,200

101 16000		Fund: Corporate Department: Monitoring & Research Division:	LINE ITEM ANALYSIS					
			2015	2016		2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623820	Fuel	10,547	21,600	21,600	11,000	14,800	14,800	14,800
623990	Materials and Supplies, N.O.C.	53,310	50,300	47,300	45,000	57,600	57,600	57,600
300	TOTAL MATERIALS AND SUPPLIES	443,206	512,200	549,700	432,200	500,800	500,800	556,800
634970	Testing and Laboratory Equipment	266,068	340,000	340,000	280,000	479,000	479,000	423,000
400	TOTAL MACHINERY AND EQUIPMENT	266,068	340,000	340,000	280,000	479,000	479,000	423,000
<b>TOTAL MONITORING &amp; RESEARCH</b>		<b>\$ 26,892,375</b>	<b>\$ 30,523,200</b>	<b>\$ 30,523,200</b>	<b>\$ 27,592,100</b>	<b>\$ 31,030,400</b>	<b>\$ 31,030,400</b>	<b>\$ 31,270,400</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>110</b>	<b>Executive Division</b>					
<b>111</b>	<b>Executive Section</b>					
EX11	Director of Monitoring & Research	1	1		1	
EX06	Secretary to Officer	1	1		1	
HP11	Administrative Specialist	1	1		1	
TOTAL	Executive Section	3	3	410,483.58	3	412,464.50
<b>112</b>	<b>Budget &amp; Administrative Section</b>					
HP23	Deputy Director of Monitoring & Research	-	-		1	
HP22	Deputy Director of Monitoring & Research	-	1		-	
HP18	Supervising Budget & Management Analyst	1	1		1	
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	1	1		1	
HP14	Budget & Management Analyst	2	2		2	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
HP11	Administrative Specialist	-	-		1	
TOTAL	Budget & Administrative Section	5	6	721,141.20	6	769,109.75
TOTAL	Executive Division	8	9	1,131,624.78	9	1,181,574.25
<b>120</b>	<b>Environmental Monitoring &amp; Research Division</b>					
<b>121</b>	<b>Environmental Monitoring &amp; Research Administrative Section</b>					
HP22	Assistant Director of Monitoring & Research	-	-		1	
HP21	Assistant Director of Monitoring & Research	1	1		-	
HP20	Environmental Monitoring & Research Manager	1	1		1	
HP20	Managing Civil Engineer	1	1		1	
HP18	Biostatistician	1	1		1	
HP17	Senior Environmental Research Scientist	1	1		-	
HP15	Associate Civil Engineer	-	-		1	
HP13	Senior Administrative Specialist	1	1		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		-	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	1	1		2	
TOTAL	Environmental Monitoring & Research Administrative Section	8	8	1,052,772.76	8	1,039,567.74
	<b>122 Wastewater Treatment Process Research Section</b>					
HP18	Supervising Environmental Research Scientist	1	1		1	
HP17	Senior Environmental Research Scientist	3	3		3	
HP15	Associate Environmental Research Scientist	4	4		-	
HP15	Environmental Research Scientist	-	-		3	
HP13	Senior Environmental Research Technician	-	1		1	
HP11	Administrative Specialist	1	1		1	
HP11	Environmental Research Technician	-	1		2	
HP11	Laboratory Technician II	2	1		3	
HP11	Laboratory Technician II #1	-	1		-	
HP11	Laboratory Technician II #2 (Environmental Research Technician)	-	1		1	
HP10	Laboratory Technician I	5	3		1	
HP10	Laboratory Technician I #1	-	2		-	
HP10	Laboratory Technician I #4	1	1		-	
TOTAL	Wastewater Treatment Process Research Section	17	20	1,633,459.36	16	1,376,256.12
	<b>123 Biosolids Utilization &amp; Soil Science Section</b>					
HP18	Supervising Environmental Soil Scientist	1	1		1	
HP17	Senior Environmental Soil Scientist	2	2		2	
HP15	Associate Environmental Soil Scientist	3	3		-	
HP15	Environmental Soil Scientist	-	-		3	
HP15	Environmental Chemist	-	-		1	
HP14	Assistant Environmental Chemist	1	1		-	
HP14	Assistant Environmental Chemist #1	-	-		1	
HP11	Administrative Specialist	1	1		1	
HP11	Field & Laboratory Technician	2	-		-	
HP11	Environmental Research Technician	-	2		3	
HP11	Laboratory Technician II	2	-		1	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Laboratory Technician II #2 (Environmental Research Technician)	-	2		1	
HP10	Laboratory Technician I	1	1		-	
HP09	Laboratory Assistant	1	1		1	
TOTAL	Biosolids Utilization & Soil Science Section	14	14	1,180,568.22	15	1,260,564.59
	<b>124 Analytical Microbiology &amp; Biomonitoring Section</b>					
HP18	Supervising Environmental Microbiologist	1	1		1	
HP17	Senior Environmental Microbiologist	1	1		1	
HP16	Associate Environmental Microbiologist	1	1		-	
HP16	Associate Environmental Microbiologist #2 (Environmental Microbiologist) (New Grade HP15)	-	-		1	
HP15	Environmental Microbiologist	-	-		1	
HP14	Assistant Environmental Microbiologist	1	1		-	
HP14	Assistant Environmental Microbiologist #1	-	-		1	
HP13	Senior Laboratory Technician	-	1		1	
HP11	Administrative Specialist	1	1		1	
HP11	Laboratory Technician II	2	1		5	
HP11	Laboratory Technician II #4	2	2		2	
HP10	Laboratory Technician I	4	4		-	
HP09	Laboratory Assistant	2	2		2	
TOTAL	Analytical Microbiology & Biomonitoring Section	15	15	1,101,863.36	16	1,190,865.26
	<b>126 Aquatic Ecology &amp; Water Quality Section</b>					
HP18	Supervising Aquatic Biologist	1	1		1	
HP17	Senior Aquatic Biologist	1	1		1	
HP16	Associate Aquatic Biologist	2	2		-	
HP16	Associate Aquatic Biologist #2 (Aquatic Biologist) (New Grade HP15)	-	-		2	
HP15	Aquatic Biologist	-	-		1	
HP14	Assistant Aquatic Biologist	1	1		-	
HP14	Assistant Aquatic Biologist #1	-	-		1	
HP13	Senior Environmental Research Technician	-	1		1	



Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Environmental Research Technician	-	1		1	
HP11	Laboratory Technician II	4	-		2	
HP11	Laboratory Technician II #1	-	1		-	
HP11	Laboratory Technician II #2 (Environmental Research Technician)	-	2		2	
HP10	Laboratory Technician I	2	2		-	
NR6441	Patrol Boat Operator	3	2		2	
NR3642	Pollution Control Technician II	2	2		2	
NR3641	Pollution Control Technician I	4	4		4	
TOTAL	Aquatic Ecology & Water Quality Section	20	20	1,543,784.58	20	1,627,950.23
<b>129</b>	<b>Process Facilities Capital Planning Section</b>					
HP18	Principal Civil Engineer	1	1		1	
HP17	Senior Civil Engineer	2	2		2	
HP17	Senior Electrical Engineer	1	1		1	
HP17	Senior Environmental Research Scientist	1	1		2	
HP17	Senior Mechanical Engineer	1	1		2	
HP15	Associate Civil Engineer	2	2		2	
HP15	Associate Electrical Engineer	1	1		2	
HP15	Associate Environmental Research Scientist	1	1		-	
HP15	Environmental Research Scientist	-	-		2	
HP15	Associate Mechanical Engineer	1	1		3	
TOTAL	Process Facilities Capital Planning Section	11	11	1,259,362.52	17	1,926,934.95
TOTAL	Environmental Monitoring & Research Division	85	88	7,771,810.80	92	8,422,138.89
<b>160</b>	<b>Analytical Laboratories Division</b>					
<b>161</b>	<b>Analytical Laboratories Administrative Section</b>					
HP22	Assistant Director of Monitoring & Research	-	-		1	
HP21	Assistant Director of Monitoring & Research	1	1		-	
HP18	Supervising Environmental Chemist	-	-		1	
HP17	Quality Assurance Coordinator	1	1		-	
HP17	Senior Environmental Chemist	1	1		1	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP15	Associate Environmental Chemist	1	1		-	
HP15	Environmental Chemist	-	-		1	
HP13	Senior Administrative Specialist	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	Analytical Laboratories Administrative Section	6	6	709,249.58	6	744,156.40
<b>162 Stickney Analytical Laboratory Section</b>						
HP18	Supervising Environmental Chemist	1	1		1	
HP17	Senior Environmental Chemist	1	1		1	
HP15	Associate Environmental Chemist	2	2		-	
HP15	Environmental Chemist	-	-		6	
HP14	Assistant Environmental Chemist	4	4		-	
HP14	Assistant Environmental Chemist #1	-	-		1	
HP13	Laboratory Technician III	2	-		-	
HP13	Senior Laboratory Technician	-	3		3	
HP11	Administrative Specialist	1	1		1	
HP11	Laboratory Technician II	5	4		9	
HP10	Laboratory Technician I	9	8		2	
HP09	Laboratory Assistant	2	3		3	
TOTAL	Stickney Analytical Laboratory Section	27	27	1,986,660.00	27	2,007,477.77
<b>164 Industrial Waste Analytical Laboratory Section</b>						
HP18	Supervising Environmental Chemist	1	1		1	
HP17	Senior Environmental Chemist	1	1		1	
HP15	Associate Environmental Chemist	2	2		-	
HP15	Environmental Chemist	-	-		5	
HP14	Assistant Environmental Chemist	3	3		-	
HP14	Assistant Environmental Chemist #1	-	-		1	
HP13	Laboratory Technician III	2	-		-	
HP13	Senior Laboratory Technician	-	3		3	
HP11	Administrative Specialist	1	1		-	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Laboratory Technician II	7	8		13	
HP10	Laboratory Technician I	6	4		-	
HP10	Laboratory Technician I #1	-	2		-	
HP09	Laboratory Assistant	-	1		1	
TOTAL	Industrial Waste Analytical Laboratory Section	23	26	2,000,186.24	25	1,919,364.92
<b>165</b>	<b>Organic Compounds Analytical Laboratory Section</b>					
HP18	Instrumentation Chemist IV	1	1		-	
HP18	Supervising Instrumentation Chemist	-	-		1	
HP17	Instrumentation Chemist III	2	2		-	
HP17	Senior Instrumentation Chemist	-	-		2	
HP16	Instrumentation Chemist II	2	2		-	
HP16	Instrumentation Chemist II #2 (Instrumentation Chemist) (New Grade HP15)	-	-		2	
HP15	Instrumentation Chemist I	2	2		-	
HP15	Instrumentation Chemist	-	-		2	
HP13	Senior Laboratory Technician	-	1		1	
HP11	Administrative Specialist	1	1		-	
HP11	Laboratory Technician II	3	2		2	
TOTAL	Organic Compounds Analytical Laboratory Section	11	11	1,160,947.32	10	1,102,382.21
<b>166</b>	<b>Egan Analytical Laboratory Section</b>					
HP18	Supervising Environmental Chemist	1	1		1	
HP17	Senior Environmental Chemist	1	1		1	
HP15	Associate Environmental Chemist	1	1		-	
HP15	Environmental Chemist	-	-		4	
HP14	Assistant Environmental Chemist	3	3		-	
HP14	Assistant Environmental Chemist #1	-	-		2	
HP13	Senior Laboratory Technician	-	2		2	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	-	1		1	
HP11	Administrative Specialist	1	-		-	

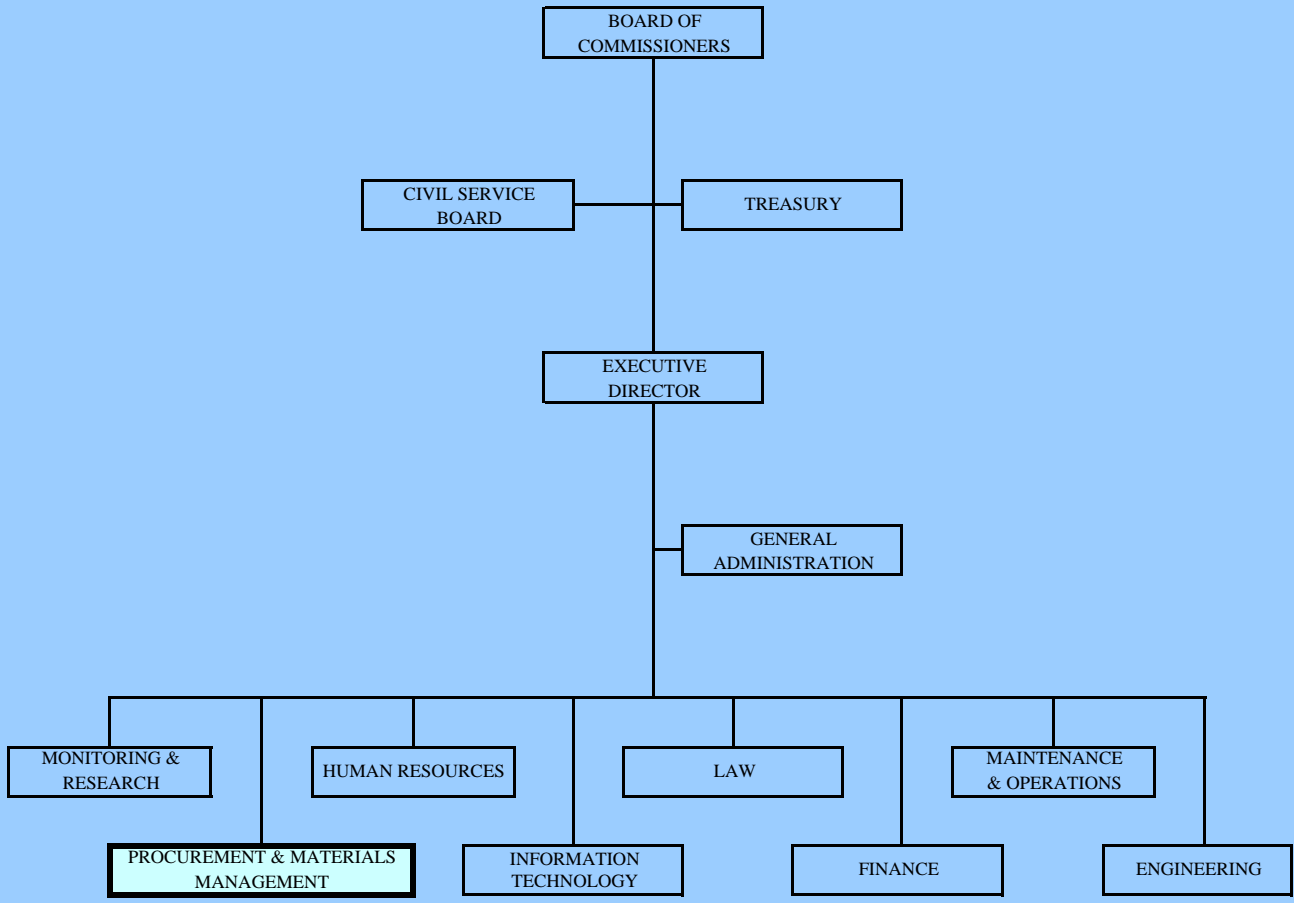
Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Laboratory Technician II	2	4		6	
HP11	Laboratory Technician II #4	1	1		1	
HP10	Laboratory Technician I	7	3		1	
HP10	Laboratory Technician I #1	-	4		-	
HP09	Laboratory Assistant	2	2		2	
TOTAL	Egan Analytical Laboratory Section	19	23	1,753,982.36	21	1,682,562.54
<b>167</b>	<b>Calumet Analytical Laboratory Section</b>					
HP18	Supervising Environmental Chemist	1	1		1	
HP17	Senior Environmental Chemist	1	1		1	
HP15	Associate Environmental Chemist	1	1		-	
HP15	Environmental Chemist	-	-		4	
HP14	Assistant Environmental Chemist	3	3		-	
HP13	Laboratory Technician III	1	-		-	
HP13	Senior Laboratory Technician	-	2		2	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	-	-		1	
HP11	Administrative Specialist	1	1		-	
HP11	Laboratory Technician II	3	3		7	
HP10	Laboratory Technician I	5	4		-	
HP10	Laboratory Technician I #1	-	1		1	
HP09	Laboratory Assistant	1	2		2	
HP09	Laboratory Assistant #1	1	-		-	
TOTAL	Calumet Analytical Laboratory Section	18	19	1,427,306.92	19	1,434,357.98
TOTAL	Analytical Laboratories Division	104	112	9,038,332.42	108	8,890,301.82
<b>190</b>	<b>Industrial Waste Division</b>					
<b>191</b>	<b>Industrial Waste Administrative Section</b>					
HP22	Assistant Director of Monitoring & Research	-	-		1	
HP21	Assistant Director of Monitoring & Research	1	1		-	
HP17	Senior Environmental Specialist	1	-		-	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP15	Environmental Specialist	2	-		-	
HP11	Administrative Specialist	1	1		1	
TOTAL	Industrial Waste Administrative Section	5	2	264,511.00	2	295,237.51
<b>192</b>	<b>Technical Services Section (formerly Enforcement Section)</b>					
HP18	Supervising Environmental Specialist	1	1		1	
HP17	Senior Civil Engineer	1	-		-	
HP17	Senior Environmental Specialist	1	1		1	
HP15	Associate Civil Engineer	4	-		-	
HP15	Environmental Specialist	6	2		2	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	1	-		-	
HP09	Administrative Clerk	1	-		-	
TOTAL	Technical Services Section (formerly Enforcement Section)	16	4	463,122.14	4	456,118.08
<b>193</b>	<b>Pretreatment &amp; Cost Recovery Section (formerly User Charge &amp; Technical Services Section)</b>					
HP18	Supervising Environmental Specialist	1	2		2	
HP17	Senior Civil Engineer	-	1		1	
HP17	Senior Environmental Specialist	2	3		3	
HP15	Associate Civil Engineer	4	8		7	
HP15	Associate Mechanical Engineer #2 (Associate Civil Engineer)	-	-		1	
HP15	Environmental Specialist	10	16		16	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	-	1		1	
HP11	Administrative Specialist	1	2		2	
HP09	Administrative Clerk	1	2		2	
TOTAL	Pretreatment & Cost Recovery Section (formerly User Charge & Technical Services Section)	19	35	3,434,062.32	35	3,601,619.97
<b>194</b>	<b>Field Services Section (formerly Field Services Central Area Section)</b>					
HP18	Supervising Environmental Specialist	1	1		1	
HP17	Senior Environmental Specialist	2	5		5	
HP15	Environmental Specialist	14	29		29	

Fund: Corporate Dept: Monitoring & Research Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP13	Senior Administrative Specialist	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	-	-		1	
NR3642	Pollution Control Technician II	1	1		1	
NR3641	Pollution Control Technician I	9	21		21	
TOTAL	Field Services Section (formerly Field Services Central Area Section)	29	58	5,336,582.42	59	5,336,089.47
<b>195</b>	<b>Field Services South Area Section</b>					
HP17	Senior Environmental Specialist	1	-		-	
HP15	Environmental Specialist	5	-		-	
NR3641	Pollution Control Technician I	4	-		-	
TOTAL	Field Services South Area Section	10	-	-	-	-
<b>196</b>	<b>Field Services North Area Section</b>					
HP17	Senior Environmental Specialist	1	-		-	
HP15	Environmental Specialist	5	-		-	
NR3641	Pollution Control Technician I	4	-		-	
TOTAL	Field Services North Area Section	10	-	-	-	-
<b>197</b>	<b>Field Services North West Area Section</b>					
HP17	Senior Environmental Specialist	1	-		-	
HP15	Environmental Specialist	5	-		-	
NR3641	Pollution Control Technician I	4	-		-	
TOTAL	Field Services North West Area Section	10	-	-	-	-
TOTAL	Industrial Waste Division	99	99	9,498,277.88	100	9,689,065.03
TOTAL	Monitoring & Research	296	308	27,440,045.88	309	28,183,079.99

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

**NOTE PAGE**

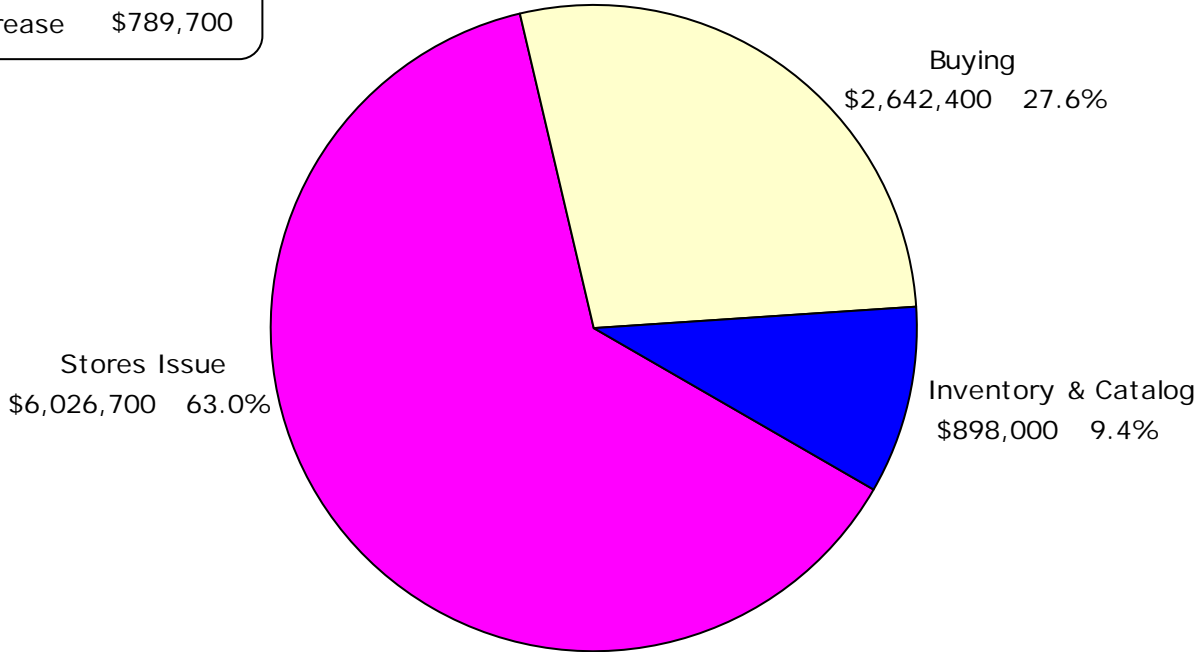




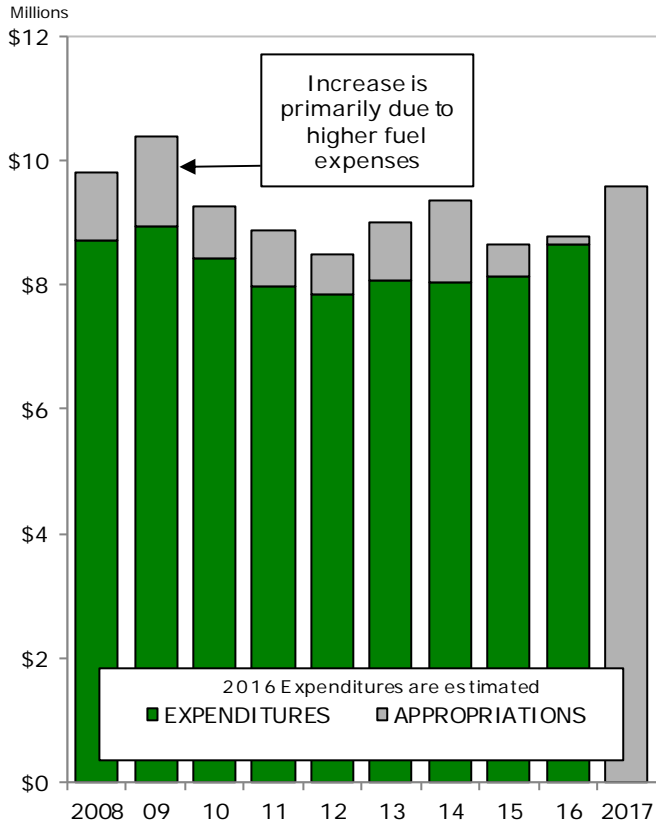
# PROCUREMENT & MATERIALS MANAGEMENT

2017	\$9,567,100
2016	\$8,777,400
Increase	\$789,700

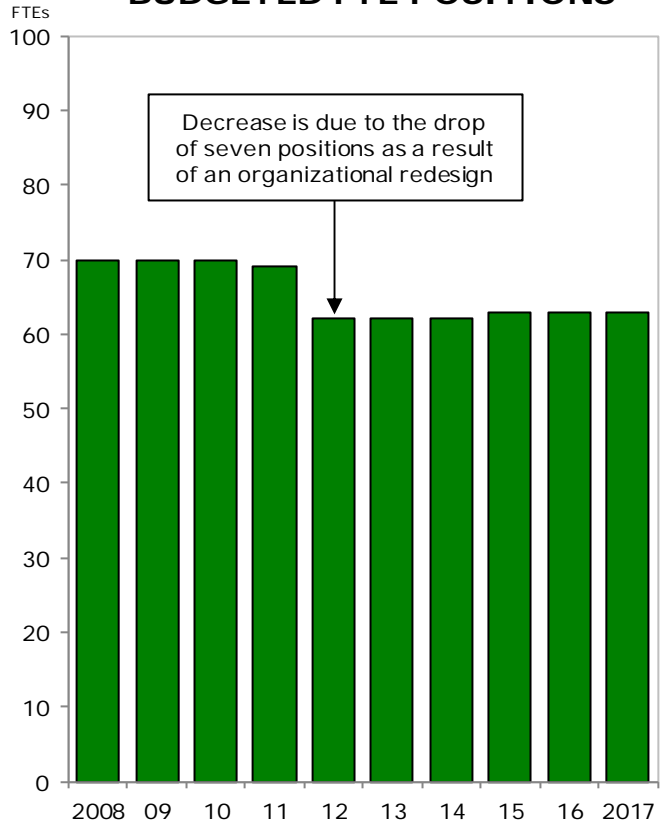
## FUNCTIONS



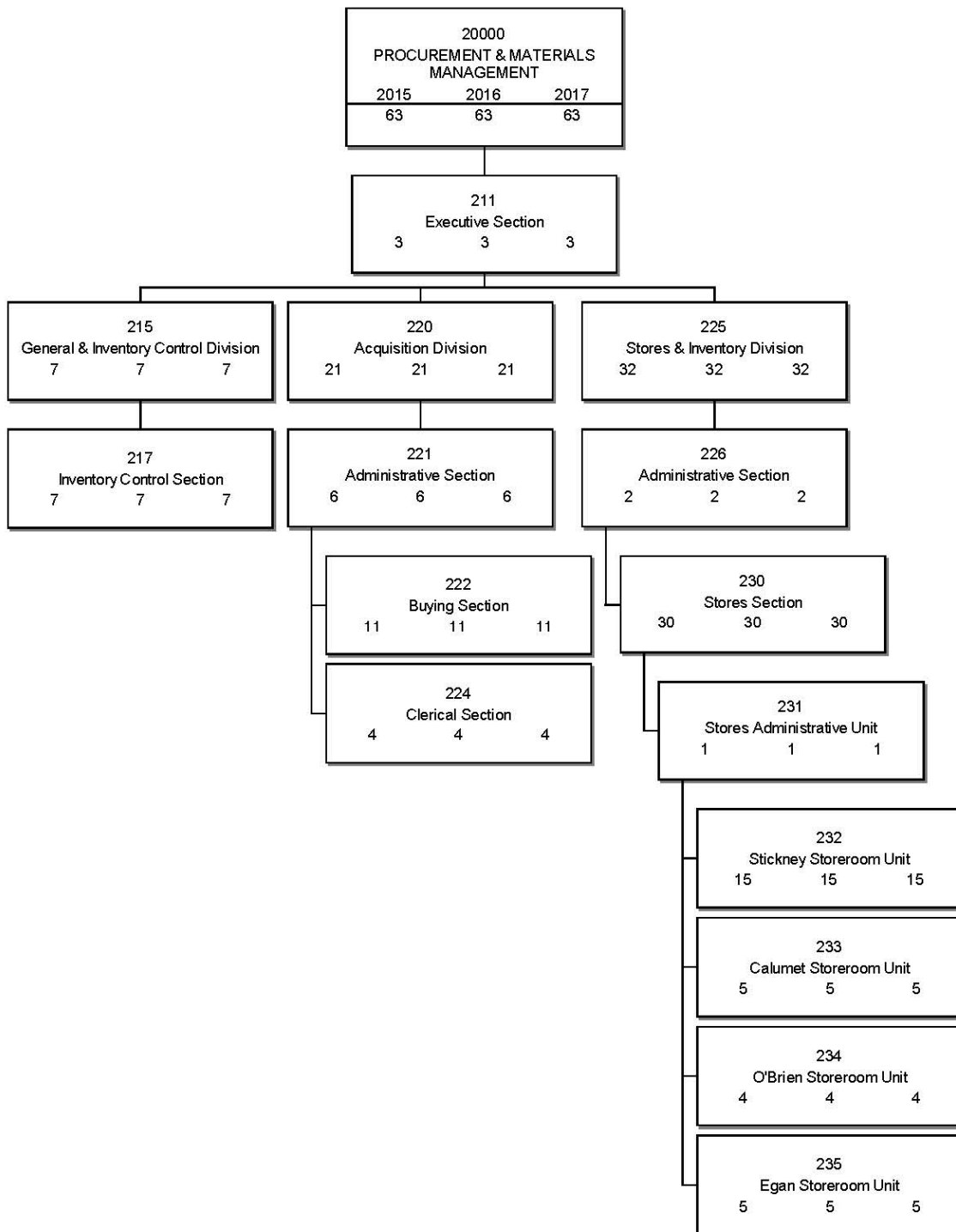
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# PROCUREMENT & MATERIALS MANAGEMENT



# PROCUREMENT & MATERIALS MANAGEMENT

**The mission of the Procurement & Materials Management Department (P&MM) is to procure goods and services required for District operations in compliance with the Purchasing Act.**

## Departmental Summary

P&MM is charged with the responsibility of procuring all of the materials and services that are used by the District. The Purchasing Act for the District delineates both the authority and operating regulations. This Act outlines the duties and responsibilities of the Director of Procurement & Materials Management in the various areas of purchasing supplies and services, requesting and receiving bids, determining control and operation of the storerooms, disposing of obsolete, surplus, and unusable materials, and verifying quality and testing of materials.

## Summary of 2016 Accomplishments

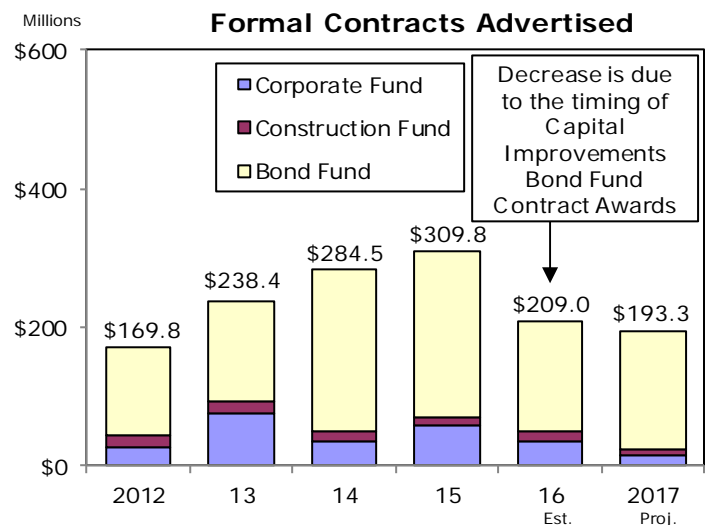
- Redesigned several processes for the receipt and issuance of materials and supplies from the storerooms to ensure that the Maintenance & Operations Department (M&O) has the material in a timely manner;
- Consolidated several standard contract documents that required individual signatures into one document that requires only one signature;
- Created enhancements to the District portal allowing the ability to post online fillable Adobe PDFs, Microsoft Word documents, and Microsoft Excel files. These enhancements directly benefitted the Engineering and Human Resources Departments and Treasury Section when bidding their requests for proposals;
- Reviewed the modifications implemented in 2015 for the processing of requisitions under \$25,000 for materials and supplies, and under \$10,000 for services, to ensure that a reduction of the turnaround time to five days was achieved or any additional modifications were needed;
- Reviewed and adjusted the organizational structure of the department to support succession planning;
- Collaborated with M&O to issue a request for proposal for soliciting proposals to assist the District in becoming a Pennsylvania-New Jersey-Maryland Interconnection (PJM) service provider to market electricity generation capacity at the Lockport Powerhouse and to maximize return on investment to the District;
- Continued efforts to simplify the SAP procurement process to increase utilization;
- Purchased recyclable plastic pallets for the storerooms.

## Budget Highlights

The 2017 appropriation for P&MM is \$9,567,100, an increase of \$789,700, or 9.0 percent, from 2016. The staffing level remains unchanged at 63 positions.

Significant features of the 2017 Budget are:

- In collaboration with M&O, ensure that 100 percent of materials and supplies required for preventive maintenance work orders are available in the storerooms;
- Develop and implement a schedule for recurring contracts to ensure the replacement contract is in place before the end of the current contract;
- Collaborate with M&O to award a contract for assisting the District in becoming a PJM service provider to market electricity generation capacity at the Lockport Powerhouse and to maximize return on investment to the District;
- Continue efforts to simplify the SAP procurement process to increase utilization;
- Continue to purchase recyclable plastic pallets for the storerooms.



**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

• **Add Value**

In 2016, P&MM redesigned several processes for the receipt and issuance of materials and supplies from the storerooms. These processes included: (a) the issuance of material through the storeroom; (b) the transfer of material from plant to plant; (c) the receipt of the purchase order for engineering spare parts. These process modifications allow M&O to obtain materials and supplies in a timely manner.

In 2017, P&MM will develop and implement a schedule for recurring contracts to ensure the replacement contract is in place before the end of the current contract. This effort will eliminate the use of a change order for that gap period.

The 2017 initiatives will continue to focus on improving P&MM’s level of services to our internal and external customers. In 2015, P&MM reviewed the processing of requisitions under \$25,000 for materials and supplies, and under \$10,000 for services, to reduce the turnaround time to five days. Modifications were made to the process in 2016. Every six months we will review the data to determine if other modifications need to be implemented in order to reach the goal of a five-day turnaround time from requisition to purchase order.

• **Excellence**

P&MM plans a green initiative project as part of their budget. This year’s green initiative project is to continue to replace wooden pallets, as needed, with plastic pallets in the District’s storerooms. These pallets, made from recycled content material, follow the District’s commitment to protect the quality of the water supply source (Lake Michigan). The wooden pallets have a useful life of five years while the plastic pallets have a useful life of 20 years. This replacement process is in its second year of a three-year project.

• **Resource Recovery**

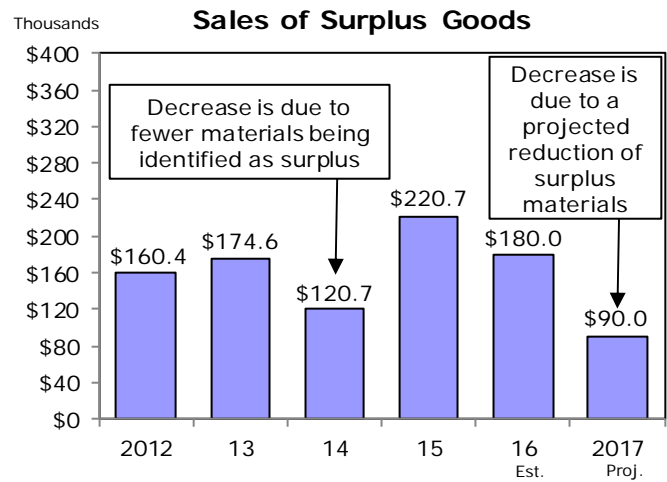
In collaboration with M&O, P&MM will award a contract to assist the District in becoming a PJM service provider to market electricity generating capacity at the Lockport Powerhouse, to buy and sell electrical energy and renewable energy credits on the wholesale market for the District.

P&MM will continue to monitor the prices for electricity for 2019 in efforts to obtain a price that is equal to or less than the 2018 price.

• **Develop Employees**

The development of employees is important to P&MM. Due to promotions and retirements, P&MM reevaluated the organizational structure of the department. In 2016, we reclassified a Senior Buyer to a Head Buyer which will support P&MM’s succession plan. By 2017, we should have completed the staffing of the department.

As always, P&MM is committed to supporting the strategic business plan.



**20000 PROCUREMENT & MATERIALS MANAGEMENT**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Provide purchasing services for all outside labor, materials, services, and equipment through contracts and purchase orders with an estimated value of \$223,339,200. The estimated number of contracts and purchase orders is 134 and 5,000, respectively. Maximize participation in District purchases by administering the Minority, Small, and Women-Owned Business programs. Support for the department's budget preparation.	\$ 2,642,400	27.6%
2. Service the District's user departments' material and supply requirements by operating and maintaining an effective and economical storeroom function by ordering, receiving, storing, and issuing inventory valued at \$34,400,000.	\$ 6,026,700	63.0%
3. Support the material and supply requirements of the District by planning, monitoring, cataloging, and controlling \$34,400,000 of inventory consisting of 64,500 items.	\$ 898,000	9.4%
<b>Total</b>	<b>\$ 9,567,100</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Process all requisitions and issue related purchase orders within 25 days.			
Percent of Purchase Orders Processed within 25 days	71%	92%	92%
Percent of Purchase Orders Processed within 10 days	37%	65%	65%
Percent of Purchase Orders (Board approved) Processed within 120 days	100%	100%	100%
2. Maintain an inventory level of at least 97 percent for operating supplies and engineering material in stock.			
Total Inventory (Number of stock items at all storerooms)	63,272	64,000	64,500
Total Stock-outs (Storeroom stock items only)	533	475	425
Total Issue Slips	13,721	14,800	14,800
Total Number of Items Issued	1,206,207	1,384,000	1,390,000
Total Items Issued and Stock Transports	53,430	57,900	58,000
Percent of Stock-outs (Maintain a level below three percent)	1.0%	0.8%	0.7%
3. Achieve inventory accuracy of 98 percent of operating supplies.			
Total Cycle Count	49,641	43,000	46,300
Total Errors	289	270	265
Percent Accuracy	99.4%	99.4%	99.4%
4. Maximize participation in District purchases under \$10,000 by pursuing Minority, Small, and Women-Owned Business solicitation initiatives.			
Minority Business Enterprises Solicited	3.3%	6.0%	6.0%
Women-Owned Business Enterprises Solicited	4.7%	6.0%	6.0%
Small Business Enterprises Solicited	0.1%	1.0%	1.0%
Total Percent Solicited	8.1%	13.0%	13.0%

**20000 PROCUREMENT & MATERIALS MANAGEMENT**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent	
7253	Department Budget Preparation	\$ -	2017 -	\$ 39,800	\$ 2,700	7.3	
			2016 -	\$ 37,100			
7260	Buying Procedures	\$ 2,198,173	2017 23	\$ 2,602,600	\$ 141,700	5.8	a)
			2016 23	\$ 2,460,900			
7270	Inventory and Cataloging	\$ 815,897	2017 9	\$ 898,000	\$ 31,300	3.6	
			2016 9	\$ 866,700			
7280	Stores Operation and Issue	\$ 5,125,204	2017 31	\$ 5,947,300	\$ 604,800	11.3	b)
			2016 31	\$ 5,342,500			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 79,400	\$ 9,200	13.1	
			2016 -	\$ 70,200			
Totals		\$ 8,139,274	2017 63	\$ 9,567,100	\$ 789,700	9.0%	
			2016 63	\$ 8,777,400			

a) Increase is due to payments for two retirements anticipated in 2017 (\$64,800).

b) Increase is due to projected material usage (\$186,500), the conversion of Maintenance & Operations spare parts to storeroom parts in 2016 (\$152,300), the purchase of recyclable plastic pallets as part of a green initiative (\$95,000), wooden pallets (\$45,000) and plastic bags (\$22,000) for the phosphorus removal project, and sensors for safety gas calibration (\$43,200).

**20000 PROCUREMENT & MATERIALS MANAGEMENT**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7253	Department Budget Preparation	Cost	\$ -	\$ 37,100	\$ 39,800	
7260	Buying Procedures					
7261	Prepare, Issue, and Maintain Purchase Orders to Appropriate Suppliers	Purchase Orders	4,538	5,500	5,000	
		Cost	\$ 549,936	\$ 528,200	\$ 536,700	
		Cost/Purchase Order	\$ 121.18	\$ 96.04	\$ 107.34	
7262	Process Requisition Requirements into Inquiries for Competitive Purchases	Requisitions	6,559	8,000	7,500	
		Cost	\$ 211,976	\$ 247,300	\$ 251,800	
		Cost/Requisition	\$ 32.32	\$ 30.91	\$ 33.57	
7263	Purchase all Labor, Materials, Services, and Equipment through Formal Contracts	Contracts Advertised	143	157	150	
		Cost	\$ 815,877	\$ 905,900	\$ 929,300	
		Cost/Contract	\$ 5,705.43	\$ 5,770.06	\$ 6,195.33	
7264	Prepare, Receive, and Evaluate Quotations from Various Suppliers	Inquiries	30,729	34,000	34,000	
		Cost	\$ 288,740	\$ 334,600	\$ 341,300	
		Cost/Inquiry	\$ 9.40	\$ 9.84	\$ 10.04	
7265	Advertise, Evaluate Bids, and Award the Sale of Scrap, Surplus Materials, and Document Fees	Revenue	\$ 220,722	\$ 160,000	\$ 90,000	a)
		Cost	\$ 13,449	\$ 13,800	\$ 14,100	
		Cost/\$1,000 Revenue	\$ 60.93	\$ 86.25	\$ 156.67	
7269	General Buying Procedures	Cost	\$ 318,195	\$ 431,100	\$ 529,400	b)
7270	Inventory and Cataloging					
	Plan and Control Inventory to Support Material and Supply Requirements of the District					
7271	Accurately Identify, Classify, Code, and Maintain Catalog for Equipment, Materials, and Supplies in District Storerooms	Inventory	\$ 37,680,479	\$ 38,500,000	\$ 34,400,000	c)
		Cost	\$ 152,575	\$ 186,400	\$ 195,800	
		Cost/Million	\$ 4,049.18	\$ 4,841.56	\$ 5,691.86	
7272	Plan and Control Systems to Ensure Optimum Levels of Inventory and Accountability of District Stock	Inventory	\$ 37,680,479	\$ 38,500,000	\$ 34,400,000	c)
		Cost	\$ 389,517	\$ 383,700	\$ 401,300	
		Cost/Million	\$ 10,337.37	\$ 9,966.23	\$ 11,665.70	
7273	Requirement Planning, Controlling, Monitoring, and Analyzing Commodity Index Coded Items from a Central Location	Cost	\$ 114,515	\$ 153,900	\$ 161,400	
7279	General Inventory Procedures	Cost	\$ 159,290	\$ 142,700	\$ 139,500	

- a) Decrease is due to projected lower sales of obsolete materials (including automobiles) on iBid and the deflated value of scrap metal sales.
- b) Increase is due to payments for two retirements anticipated in 2017 (\$64,800).
- c) Decrease is due to anticipated inventory reductions of Maintenance & Operations spare parts for 2017.

**20000 PROCUREMENT & MATERIALS MANAGEMENT**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7280	Stores Operation and Issue					
	Operate and Maintain an Effective and Economical Storeroom Function					
7282	Initiate and Prepare Requisitions in Accordance with Established Policies and Rules	Requisitions	6,570	6,700	6,700	
		Cost	\$ 272,916	\$ 274,800	\$ 290,900	
		Cost/Requisition	\$ 41.54	\$ 41.01	\$ 43.42	
7283	Receive, Inspect, and Move Purchased Materials, Both Stock and Non-Stock Items, to Ensure Compliance with Quantity and Quality Specifications of Purchase Orders	Receipts	14,613	14,500	14,500	
		Cost	\$ 740,114	\$ 761,200	\$ 795,400	
		Cost/Receipt	\$ 50.65	\$ 52.50	\$ 54.86	
7284	Provide for the Proper Storage Facilities, People, and Equipment to Effectively Store Materials and Supplies to Protect Against Damage, Malfunction or Loss, and to Move Materials in a Safe and Economical Manner	Inventory	\$ 37,680,479	\$ 38,500,000	\$ 34,400,000	d)
		Cost	\$ 748,790	\$ 615,500	\$ 624,000	
		Cost/Million	\$ 19,872.09	\$ 15,987.01	\$ 18,139.53	
7285	Provide Controlled Disbursement of Stored Materials and Supplies to Requesting Departments	Issue Slips	13,721	14,800	14,800	
		Cost	\$ 605,924	\$ 624,100	\$ 644,700	
		Cost/Issue Slip	\$ 44.16	\$ 42.17	\$ 43.56	
7286	General Stores Operations and Issue	Cost	\$ 91,033	\$ 85,900	\$ 86,500	
7289	Inventory Purchases	Cost	\$ 2,666,427	\$ 2,981,000	\$ 3,505,800	e)
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 70,200	\$ 79,400	
		Total	\$ 8,139,274	\$ 8,777,400	\$ 9,567,100	

d) Decrease is due to anticipated inventory reductions of Maintenance & Operations spare parts for 2017.

e) Increase is due to projected material usage (\$186,500), the conversion of Maintenance & Operations spare parts to storeroom parts in 2016 (\$152,300), the purchase of recyclable plastic pallets as part of a green initiative (\$95,000), wooden pallets (\$45,000) and plastic bags (\$22,000) for the phosphorus removal project, and sensors for safety gas calibration (\$43,200).



101 20000	Fund: Corporate Department: Procurement & Materials Management Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 5,026,894	\$ 5,393,200	\$ 5,390,200	\$ 5,143,200	\$ 5,520,800	\$ 5,520,800	\$ 5,555,300
601060	Compensation Plan Adjustments	114,545	69,500	69,500	59,500	142,400	142,400	141,000
601070	Social Security and Medicare Contributions	-	70,200	73,200	73,200	79,400	79,400	79,400
601100	Tuition and Training Payments	705	4,000	4,000	2,000	4,500	4,500	4,500
100	TOTAL PERSONAL SERVICES	5,142,144	5,536,900	5,536,900	5,277,900	5,747,100	5,747,100	5,780,200
612010	Travel	-	1,400	1,400	200	3,000	3,000	3,000
612030	Meals and Lodging	215	2,500	2,500	400	3,000	3,000	3,000
612050	Compensation for Personally-Owned Automobiles	2,521	2,200	2,200	2,200	2,300	2,300	2,300
612080	Motor Vehicle Operating Services	35	100	100	100	-	-	-
612360	Advertising	129,797	127,000	127,000	120,800	130,000	130,000	130,000
612490	Contractual Services, N.O.C.	350	-	-	-	-	-	-
612680	Repairs to Buildings	1,924	4,800	4,800	4,300	3,800	3,800	3,800
612800	Repairs to Office Furniture and Equipment	3,230	2,100	2,100	2,100	2,200	2,200	2,200
612820	Computer Software Maintenance	2,358	2,900	2,900	2,800	-	-	-
612860	Repairs to Vehicle Equipment	7,479	10,000	10,000	9,000	7,700	7,700	7,700
612990	Repairs, N.O.C.	-	40,000	40,000	40,000	-	-	-
200	TOTAL CONTRACTUAL SERVICES	147,910	193,000	193,000	181,900	152,000	152,000	152,000
623030	Metals	94,760	125,000	96,200	96,200	150,000	150,000	150,000
623070	Electrical Parts and Supplies	310,143	311,400	314,400	314,400	350,000	350,000	350,000
623090	Plumbing Accessories and Supplies	216,449	309,400	347,800	345,000	382,400	382,400	382,400
623110	Hardware	39,748	42,900	80,200	80,200	85,000	85,000	85,000
623130	Buildings, Grounds, Paving Materials, and Supplies	108,200	124,800	265,200	259,200	350,000	350,000	350,000
623170	Fiber, Paper, and Insulation Materials	39,376	39,200	42,200	42,200	45,000	45,000	45,000
623190	Paints, Solvents, and Related Materials	39,202	42,000	52,000	52,000	55,000	55,000	55,000
623250	Vehicle Parts and Supplies	9,740	10,100	15,300	15,300	10,000	10,000	10,000
623270	Mechanical Repair Parts	118,943	126,300	165,400	165,400	160,000	160,000	160,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	19,467	16,800	16,900	16,900	17,400	17,400	17,400

101 20000		Fund: Corporate Department: Procurement & Materials Management Division:	LINE ITEM ANALYSIS					
			2015	2016		2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	594,502	583,800	609,300	609,300	590,000	590,000	590,000
623660	Cleaning Supplies	241,271	244,400	273,400	273,400	300,000	300,000	300,000
623680	Tools and Supplies	65,230	72,100	73,300	73,300	80,000	80,000	80,000
623700	Wearing Apparel	130,590	127,700	163,800	163,800	173,000	173,000	173,000
623780	Safety and Medical Supplies	59,809	85,000	85,200	85,200	90,000	90,000	90,000
623810	Computer Supplies	74,704	85,000	50,400	50,400	76,600	76,600	76,600
623820	Fuel	220,944	351,100	186,000	186,000	270,300	270,300	270,300
623840	Gases	67,318	45,000	69,500	59,500	65,000	65,000	65,000
623850	Communications Supplies	7,857	10,000	10,000	10,000	8,100	8,100	8,100
623860	Lubricants	237,882	240,000	238,700	237,000	260,000	260,000	260,000
623990	Materials and Supplies, N.O.C.	78,696	55,500	55,500	55,500	117,100	117,100	117,100
300	TOTAL MATERIALS AND SUPPLIES	2,774,832	3,047,500	3,210,700	3,190,200	3,634,900	3,634,900	3,634,900
634990	Machinery and Equipment, N.O.C.	74,388	-	-	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	74,388	-	-	-	-	-	-
<b>TOTAL PROCUREMENT &amp; MATERIALS MGMT</b>		<b>\$ 8,139,274</b>	<b>\$ 8,777,400</b>	<b>\$ 8,940,600</b>	<b>\$ 8,650,000</b>	<b>\$ 9,534,000</b>	<b>\$ 9,534,000</b>	<b>\$ 9,567,100</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.

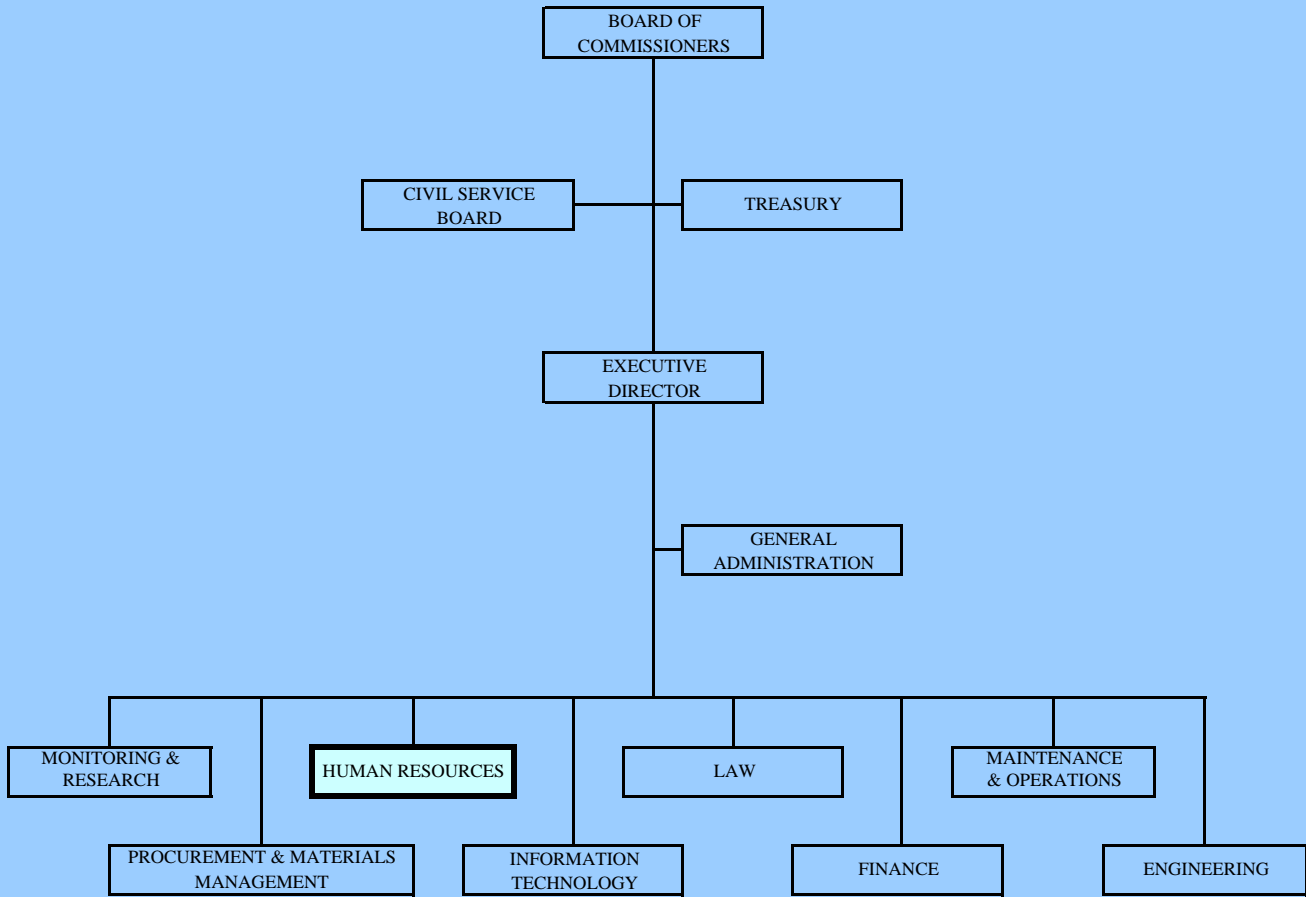
Fund: Corporate Dept: Procurement & Materials Management Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>211</b>	<b>Executive Section</b>					
EX08	Director of Procurement & Materials Management	1	1		1	
EX06	Secretary to Officer	2	2		2	
TOTAL	Executive Section	3	3	429,119.60	3	433,410.80
<b>215</b>	<b>General &amp; Inventory Control Division</b>					
<b>217</b>	<b>Inventory Control Section</b>					
HP17	Supervising Stores Specialist	1	-		-	
HP17	Supervising Stores Specialist #2 (New Grade HP16)	-	1		1	
HP16	Materials Planning Supervisor #2 (Senior Stores Specialist) (New Grade HP15)	1	1		1	
HP12	Stores Specialist	5	5		5	
TOTAL	Inventory Control Section	7	7	538,677.10	7	566,411.13
TOTAL	General & Inventory Control Division	7	7	538,677.10	7	566,411.13
<b>220</b>	<b>Acquisition Division</b>					
<b>221</b>	<b>Administrative Section</b>					
HP20	Assistant Director of Procurement & Materials Management	1	1		1	
HP14	Budget & Management Analyst	1	1		1	
HP13	Senior Administrative Specialist	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	2	1		1	
HP11	Administrative Specialist	1	2		2	
TOTAL	Administrative Section	6	6	537,451.72	6	558,677.56
<b>222</b>	<b>Buying Section</b>					
HP18	Head Buyer	1	2		2	
HP17	Buyer III #2 (Senior Buyer) (New Grade HP16)	2	1		1	
HP16	Senior Buyer	4	4		4	
HP14	Buyer	4	4		4	
TOTAL	Buying Section	11	11	1,195,314.12	11	1,218,037.25
<b>224</b>	<b>Clerical Section</b>					
HP11	Administrative Specialist	2	2		2	

Fund: Corporate Dept: Procurement & Materials Management Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP09	Administrative Clerk	2	2		2	
TOTAL	Clerical Section	4	4	221,046.80	4	225,707.59
TOTAL	Acquisition Division	21	21	1,953,812.64	21	2,002,422.40
<b>225</b>	<b>Stores &amp; Inventory Division</b>					
<b>226</b>	<b>Administrative Section</b>					
HP19	Stores & Inventory Manager	1	-		-	
HP19	Stores & Inventory Manager #2 (New Grade HP18)	-	1		1	
HP15	Senior Stores Specialist	1	-		-	
HP15	Senior Stores Specialist #2 (New Grade HP14)	-	1		1	
TOTAL	Administrative Section	2	2	256,397.18	2	263,937.16
<b>230</b>	<b>Stores Section</b>					
<b>231</b>	<b>Stores Administrative Unit</b>					
HP17	Supervising Stores Specialist	1	-		-	
HP17	Supervising Stores Specialist #2 (New Grade HP16)	-	1		1	
TOTAL	Stores Administrative Unit	1	1	126,148.88	1	127,410.36
<b>232</b>	<b>Stickney Storeroom Unit</b>					
HP11	Administrative Specialist	1	1		1	
HP09	Administrative Clerk	2	2		2	
NR1857	Principal Storekeeper	2	2		2	
NR1853	Storekeeper	8	8		8	
NR8651	Maintenance Laborer Class A	1	1		1	
NR1835	Materials Handler Laborer #1	1	1		1	
TOTAL	Stickney Storeroom Unit	15	15	1,120,067.26	15	1,158,399.01
<b>233</b>	<b>Calumet Storeroom Unit</b>					
HP09	Administrative Clerk	1	1		1	
NR1857	Principal Storekeeper	1	1		1	
NR1853	Storekeeper	2	2		2	
NR8651	Maintenance Laborer Class A	1	1		1	
TOTAL	Calumet Storeroom Unit	5	5	360,805.90	5	373,206.20

Fund: Corporate Dept: Procurement & Materials Management Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>234</b>	<b>O'Brien Storeroom Unit</b>					
HP09	Administrative Clerk	1	1		1	
NR1857	Principal Storekeeper	1	1		1	
NR1853	Storekeeper	1	1		1	
NR8651	Maintenance Laborer Class A	1	1		1	
TOTAL	O'Brien Storeroom Unit	4	4	277,224.74	4	287,205.57
<b>235</b>	<b>Egan Storeroom Unit</b>					
HP09	Administrative Clerk	1	1		1	
NR1857	Principal Storekeeper	1	1		1	
NR1853	Storekeeper	2	2		2	
NR8651	Maintenance Laborer Class A	1	1		1	
TOTAL	Egan Storeroom Unit	5	5	358,379.06	5	370,755.88
TOTAL	Stores Section	30	30	2,242,625.84	30	2,316,977.02
TOTAL	Stores & Inventory Division	32	32	2,499,023.02	32	2,580,914.18
TOTAL	Procurement & Materials Management	63	63	5,420,632.36	63	5,583,158.51

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

**NOTE PAGE**

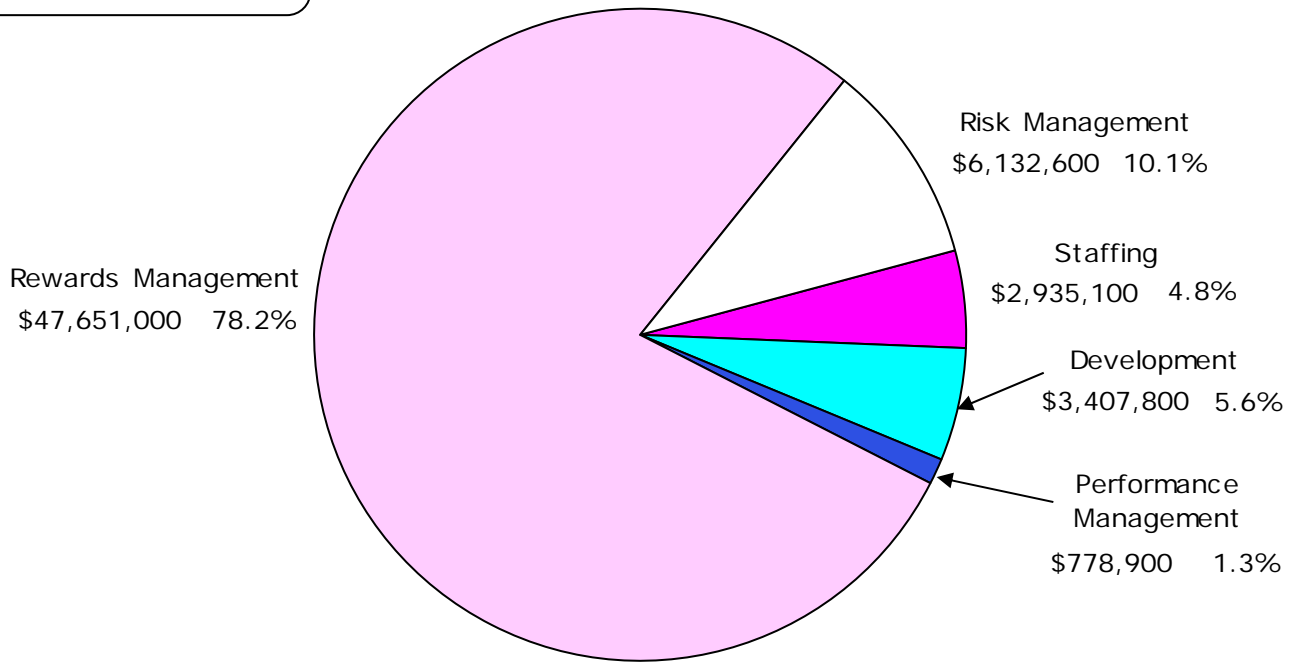


HUMAN RESOURCES

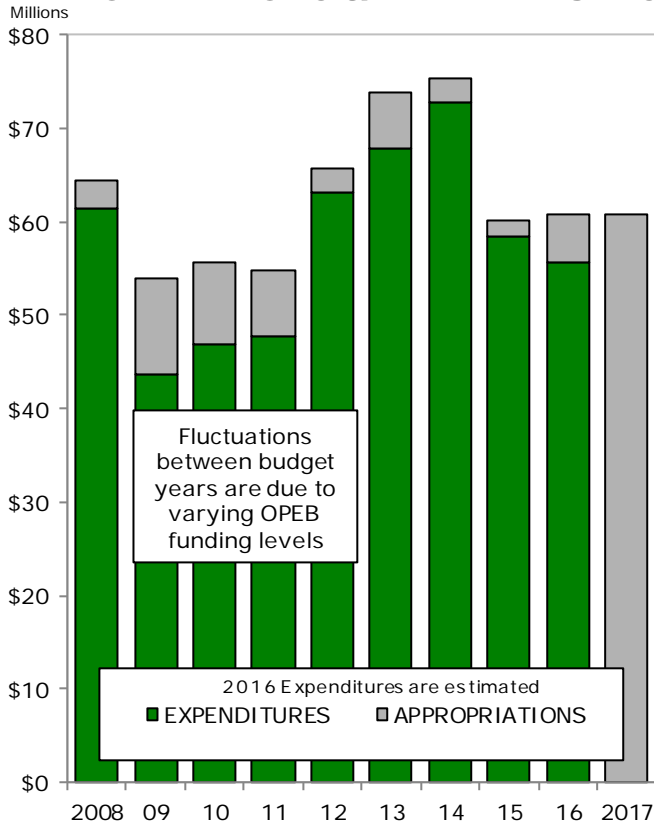
# HUMAN RESOURCES

2017	\$60,905,400
2016	\$60,816,800
Increase	\$88,600

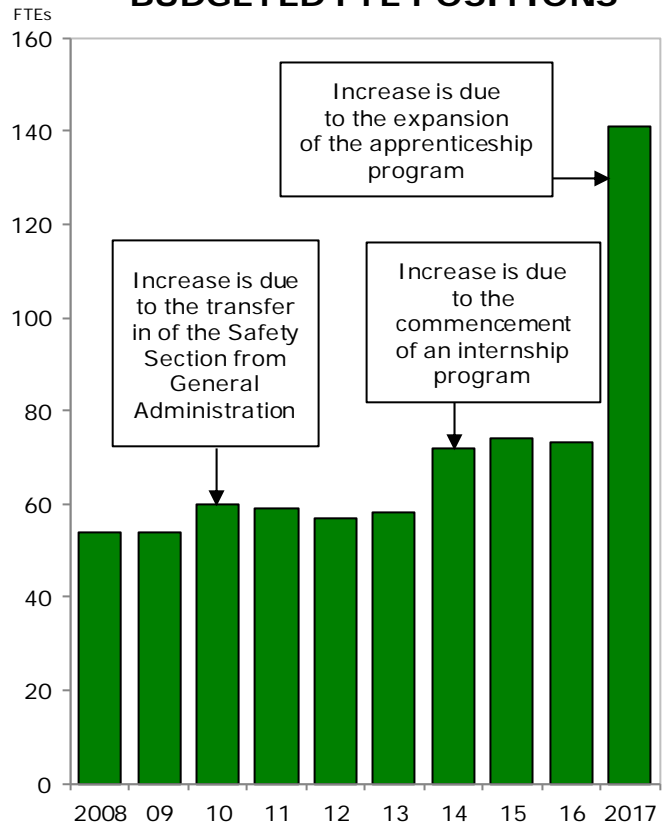
## FUNCTIONS



## APPROPRIATIONS & EXPENDITURES

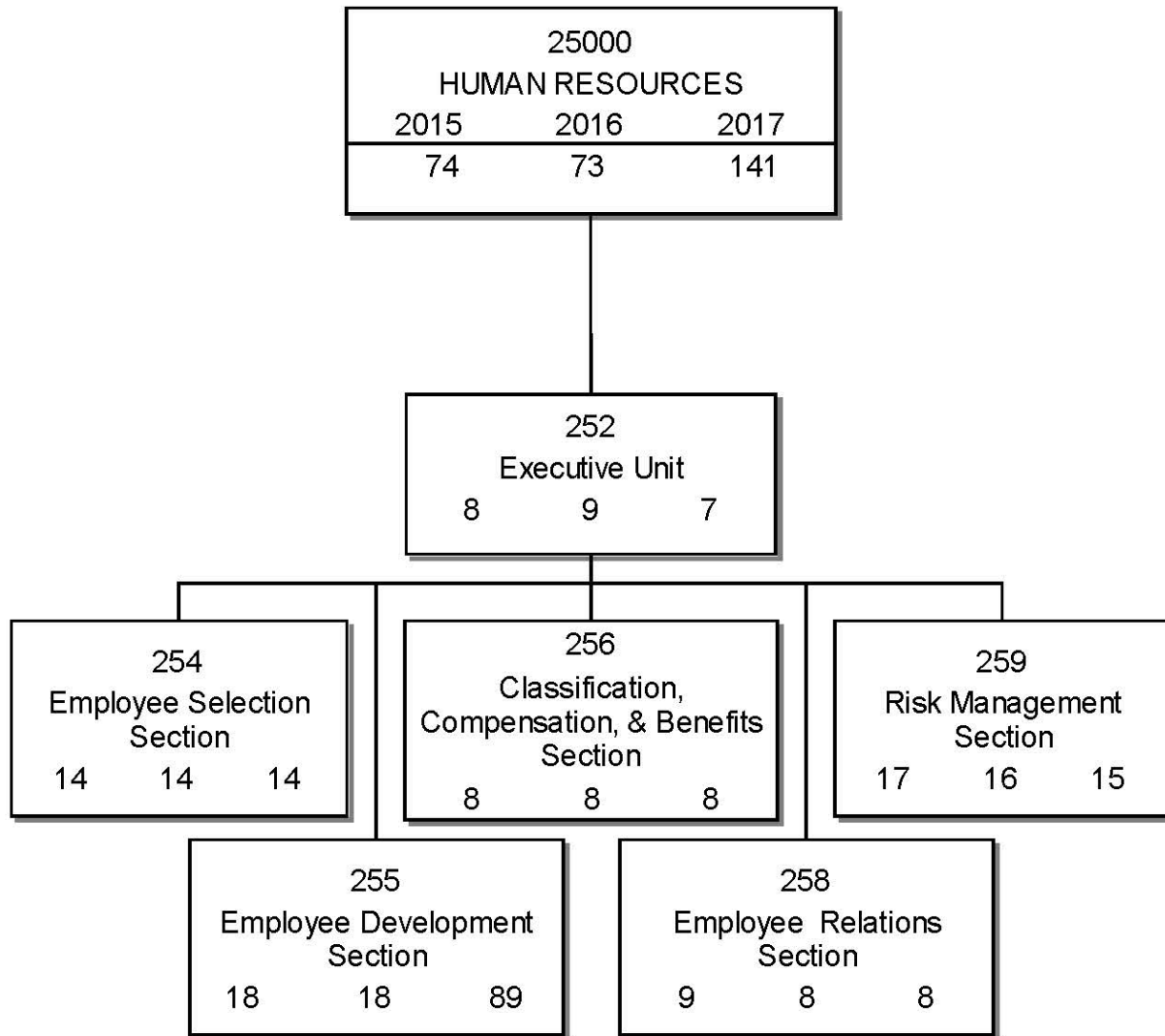


## BUDGETED FTE POSITIONS





# HUMAN RESOURCES



## HUMAN RESOURCES

**Through strategic partnerships, the Human Resources Department develops and delivers innovative, efficient, and cost effective programs and services that are aligned with the District's core business strategies.**

### Departmental Summary

The department's primary responsibilities include:

- Staffing: ensure that the District plans for recruiting, hiring, and retaining the diverse talent needed to meet its organizational goals;
- Development: guide staff in acquiring and maintaining the skills needed to properly perform their roles within the organization;
- Performance Management: assist managers and employees by developing and implementing a performance management system that supports the goals of the organization;
- Rewards Management: develop and implement appropriate incentives to aid in recruiting and retaining the highest quality staff;
- Risk Management: develop and administer a comprehensive risk management program that protects the assets of the District and the safety of employees.

### Summary of 2016 Accomplishments

- The District's Emergency Operations Plan was updated and successfully tested in a tabletop exercise for senior and plant management;
- The District's first formal Business Continuity Plan was developed to address business disruptions that affect mission critical services and support functions for an extended period, with further development in process;
- The District's Return-to-Work Program was further strengthened by the implementation of trades based eLearning which provides trade and industry specific training options for injured workers;
- The Safety staff continued to work with Maintenance & Operations to implement the District's revised Lockout/Tagout procedures to ensure practices are more closely aligned with Occupational Safety and Health Administration regulations and ensure safe operations for employees;
- The Safety staff conducted approximately 1,200 Occupational Safety and Health Administration focused training sessions to ensure that employees are prepared to perform their jobs safely within their work environment;
- The Safety staff continued to supply safety content for electronic billboard signs at four of the District's largest plants to promote safety culture through messaging and reminders;
- The internship program continued to provide meaningful educational training experiences for students interested in wastewater management and District operations and the program was extended to include two interns from Denmark;
- Over 300 supervisors received training on conducting employee investigations and correcting employee behavior;
- A pilot training program was launched for specific job classifications to provide new hires with job readiness skills and an introduction to District core values and ethics;
- Civil Service examinations were administered for 50 classifications;
- A request for proposal was issued for an applicant tracking system and an employee onboarding system. The system manages all activity related to the District's recruitment, examination, eligible list certification, and requisition processes for employee hiring, and is more user-friendly, accessible to mobile devices, and capable of posting jobs to social media platforms;
- A three-day training program on professional development was provided to approximately 20 Executive Assistants. In 2017, the program will be extended to include additional levels of administrative staff.

### Budget Highlights

The 2017 Human Resources Department appropriation is \$60,905,400, an increase of \$88,600, or 0.1 percent, from 2016. The staffing level has increased from 73 to 141 positions with the addition of 70 Apprentice positions and the addition of one Human Resources Analyst position, offset by the drop of one Assistant Director of Human Resources position and one Human Resources Analyst position, and the transfer of one Budget and Management Analyst position to General Administration. The number of employees budgeted in the Human Resources Department includes 12 full-time equivalent Interns and three Civil Service Board members. The expansion of the apprenticeship program will assist in promoting diversity in the trades within the District's service area.

## 2017 Initiatives in Support of the Strategic Business Plan Include the Following:

### • Add Value

In 2017, the Risk Management Section will continue its focus on the development of a comprehensive and sustainable risk management program. Key areas of focus include use of the risk management information system for risk analysis and enhanced communication on risk issues across the organization and further development of key programs, including return-to-work, emergency operations, and continuity of operations.

Working within the Risk Management Section, the Safety staff will continue to focus on safe work procedures, a safe work environment, preventive health measures, life protection, accident prevention and investigations, and record keeping. There will be a continued reinforcement of Arc Flash and Electrical Safety programs. Increased emphasis will be placed on targeting programs to address the District's key cost drivers. The emphasis will be on walking and working surfaces in order to reduce slips and falls. Additionally, back safety classes will take place in 2017 in an effort to reduce back injuries. The Safety staff will work more closely with the Claims staff to reduce overall workers' compensation costs for the District.

The Human Resources Department's merit-based selection practices provide the District with a pool of candidates who have demonstrated the essential job-related knowledge, skills, and abilities to perform effectively. The Human Resources Department plans to administer 55 examinations in 2017. All employment applications are received online.

### • Excellence

The District's benefits program plays an integral part in its ability to attract and retain a high quality work force. The District offers health care benefits to employees and eligible dependents, as well as approximately 1,965 retirees. The core components of the program are a Participating Provider Option and Health Maintenance Organization medical plan, prescription drug coverage, dental coverage, and an integrated vision benefit.

Health Plan Contribution Rates					
	2013	2014	2015	2016	2017
Represented Employees	13%	14%	14%	14%	14%
Non-Represented Employees	15%	16%	14%	14%	14%
Retirees	30.0%	32.5%	35.0%	37.5%	40.0%

The cost of health benefits is partially offset by employee and retiree contributions. In 2011, the Board of Commissioners approved a contribution rate policy incrementally increasing retiree contribution rates over a 10-year period to help control the cost of retiree health care. The contribution rates over a five-year period for employees and retirees are shown in the table above. Employee and retiree contributions to health care benefits are projected to be \$13.4 million in 2017.

The District is currently developing a multi-year benefits strategy for its employee health care benefits. It continues its focus on a long-term strategy for its retiree health care plans with the approval of a Medicare Advantage Prescription Drug Plan to be implemented on January 1, 2017. This plan will maintain the current level of coverage for Medicare-eligible retirees at an estimated cost savings of \$4.7 million in 2017. The goal of both of these strategies is to develop programs that will allow the District to continue offering high quality health care benefits to both employees and retirees at an affordable cost.

The employee benefits strategy will also continue the District's commitment to building a culture of health as another means of controlling health care costs. Annual on-site health fairs will continue to be conducted at each of the District locations. These events include a free biometric screening and flu shot for participating employees. The 5K walk/run will continue to be held as part of the employee picnic activities. In 2016, the District conducted an organizational wellness assessment with the assistance of wellness consultants from the Blue Cross Blue Shield Association. This assessment will drive employee wellness initiatives in 2017. Initiatives under consideration include the installation of walking paths, the purchase of standing workstations, and discounted health club memberships. The goal of the wellness strategy is to build a work environment that promotes health and wellness for all District employees.

The District continues to monitor its potential exposure to the Patient Protection and Affordable Care Act excise (Cadillac) tax coming online in 2020.

The Labor Management Committee on Health Care continues to meet semiannually with union leadership to discuss health care utilization, cost trends, and cost containment strategies. This creates a forum for open communication between the District and the unions on important health care issues. The goal is to develop strategies to contain future health care costs, while continuing to provide affordable health care benefits to employees.

### • Develop Employees

The District provides its employees with training and development opportunities through tuition reimbursement, seminars and conferences, in-house training, and online eLearning courses.

<b>Employee Development Participation</b>			
	<b>Tuition Reimbursement *</b>	<b>In-House Training</b>	<b>eLearning Courses Accessed</b>
<b>2014</b>	55	2,227	2,089
<b>2015</b>	58	3,854	3,912
<b>Estimated 2016</b>	50	2,400	2,112
<b>Projected 2017</b>	50	2,300	2,200

\*Number of participants who were reimbursed.

To ensure the ongoing professional development of all District employees in 2017, the Human Resources Department will continue to offer in-house training programs in areas such as business and technical writing and financial management, and will provide specialized training as requested by departments. Other training programs will address competencies identified by class series that will help employees in their career development. The Human Resources Department will continue to develop competency-based job classifications and build new measures of employee performance, while providing a basis for individual development plans. Executive coaching services will continue to be used for succession planning and to conduct individual assessments of employee talents, skills, and career objectives that will help identify developmental needs to prepare employees for leadership roles.

The Human Resources Department administers collective bargaining agreements for the District's approximately 830 represented employees, and provides advice and counseling to managers and supervisors regarding investigations and disciplinary matters for both represented and non-represented employees. All six collective bargaining agreements will expire on June 30, 2017. Human Resources staff will meet with the Executive Director and representatives from the departments to discuss contract issues, objectives and priorities, and to develop a strategy for negotiating successor agreements. The Human Resources Department will continue to promote the use of proactive and timely discussions between managers, employees, and their representatives to address grievance and complaint activity.

The Human Resources Department also ensures the District's compliance with the Family and Medical Leave Act and the Americans with Disabilities Act, and is responsible for receiving and investigating complaints of workplace violence, discrimination, sexual harassment, and other types of harassment and complaints.

### • Leading Partnerships

As of October 1, 2013, the District began using the revised external labor rates for females and minorities, based on published data from the 2010 census. The District's minority workforce representation, as of November 30, 2016, was 41 percent, which compares favorably with the Cook County minority labor force availability rate of 36 percent. The District's female workforce representation as of November 30, 2016, was 26 percent, compared to the Cook County female labor force availability rate of 41 percent, when adjusted for District-specific occupations.

<b>Percentage of District Employees Who Are Minorities or Females</b>							<b>2000 Census External Availability</b>	<b>2010 Census External Availability</b>
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 Proj.</b>		
Minorities	39.0%	40.0%	40.0%	40.0%	41.0%	41.0%	33.0%	36.0%
Females	27.0%	27.0%	26.0%	26.0%	26.0%	26.0%	25.0%	41.0%

It is important to note that a majority of the District's job categories include classifications that are nontraditional for women. Nontraditional occupations, as defined by the United States Department of Labor, are those occupations wherein 25 percent or fewer women have the requisite skills or work in that occupation. Consequently, the external female labor force rates are adjusted for District-specific occupations. They include only job classifications found at the District, and exclude occupations such as teachers, registered nurses, and social workers.

The Human Resources Department coordinates the District-wide recruitment program. Ongoing advertising in print and electronic media assists the District in attracting a diverse and qualified applicant pool for current and future examinations. In 2017, the District will target its recruitment efforts on increasing minority and female representation in specific job categories in which they are underrepresented. A large part of the public image of the District is dependent on employee behaviors and interactions with the public. To assist employees in representing the District well, various training programs will continue. Uniform application of disciplinary processes and the Civil Service Board forum will provide unambiguous expectations of employees and will assure employees that good work is rewarded.

**25000 HUMAN RESOURCES**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Review employment applications and develop and administer 55 examinations to meet Civil Service requirements and current operational needs. Oversee the certification process to fill positions. Develop and maintain a targeted advertising program necessary to establish recruitment resources, administer college and campus recruitment activities, and administer diversity outreach activities.	\$ 1,706,000	2.8%
2. Develop and administer a comprehensive risk management program and provide a safe work environment for District employees through training, accident prevention initiatives, and workplace monitoring.	\$ 6,132,600	10.1%
3. Maintain comparative wage and salary data, administer non-represented and management compensation systems, and recommend changes to the Civil Service Board and the Board of Commissioners in order to ensure internal pay equity and external competitiveness. Establish a highly competitive employee benefits package, including health, life, and dental insurance, a vision plan, and a deferred compensation plan, as well as administer other related benefit programs, such as Employee Assistance Program services, a flexible spending account plan, and voluntary insurance products.	\$ 29,351,200	48.2%
4. Administer six collective bargaining agreements, covering 830 employees, and manage employee relations programs, which include investigation of employee complaints and performance rating reviews on behalf of the Director of Human Resources, and administer the unemployment compensation and performance management programs.	\$ 778,900	1.3%
5. Provide health insurance benefits and administration for retirees and annuitants, which include Other Postemployment Benefits pre-funding for retiree health care expenses.	\$ 18,299,800	30.0%
6. Implement the District's equal employment opportunity and affirmative action objectives through targeted recruitment, counseling, and complaint investigation.	\$ 339,300	0.6%
7. Provide the necessary administrative support to the District and Human Resources Department sections by maintaining centralized files on all employees; overseeing the hiring, promotion, transfer, termination, return-to-work, or any other action affecting an employee's status; and managing computerized information to perform departmental functions with greater efficiency at a lower cost. Comply with state Civil Service statutes by arranging for hearing of complaints from employees or other persons, the hearing of charges against employees for discharge, and the ratification of amendments to the Personnel Rules and the compensation and classification plan.	\$ 889,800	1.4%
8. Provide educational opportunities for employees through professional development, technical training, and tuition reimbursement.	\$ 3,407,800	5.6%
<b>Total</b>	<b>\$ 60,905,400</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Minimize the number of days between an original entrance appointment and the start date for the new employee.	32	30	29
2. Reduce the number of workers' compensation claims per 100 employees.	6.75	4.70	4.50
3. Reduce the number of lost time claims per 100 employees.	2.09	1.33	1.25

**25000 HUMAN RESOURCES**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actual	Budgeted		Change			
Number	Name		FTEs	Dollars	Dollars	Percent		
7290	Examinations and Employment Activities	\$ 1,768,334	2017	13	\$ 1,706,000	\$ (10,500)	(0.6)	
			2016	13	\$ 1,716,500			
7295	Equal Employment Opportunity Activities	\$ 401,628	2017	3	\$ 339,300	\$ (41,300)	(10.9)	
			2016	3	\$ 380,600			
7310	Training and Development Activities	\$ 1,278,696	2017	89	\$ 3,407,800	\$ 2,011,500	144.1	a)
			2016	18	\$ 1,396,300			
7315	Retiree Benefits	\$ 13,369,511	2017	1	\$ 13,299,800	\$ (1,308,800)	(9.0)	b)
			2016	1	\$ 14,608,600			
7316	Other Postemployment Benefits Trust Management and Report Preparations	\$ 5,000,000	2017	-	\$ 5,000,000	\$ -	-	
			2016	-	\$ 5,000,000			
7320	Employee Benefits	\$ 26,613,668	2017	4	\$ 29,250,000	\$ (399,500)	(1.3)	c)
			2016	4	\$ 29,649,500			
7325	Labor and Employee Relations	\$ 714,360	2017	7	\$ 778,900	\$ (19,400)	(2.4)	
			2016	7	\$ 798,300			
7330	Human Resources Administration	\$ 887,033	2017	9	\$ 889,800	\$ (226,200)	(20.3)	d)
			2016	11	\$ 1,116,000			
7480	Safety Program	\$ 1,589,218	2017	11	\$ 1,565,300	\$ 56,800	3.8	
			2016	11	\$ 1,508,500			
7500	Risk Management Operations	\$ 4,172,165	2017	4	\$ 4,567,300	\$ 13,600	0.3	
			2016	5	\$ 4,553,700			
7604	Social Security and Medicare Contributions	\$ 2,631,404	2017	-	\$ 101,200	\$ 12,400	14.0	
			2016	-	\$ 88,800			
Totals		\$ 58,426,017	2017	141	\$ 60,905,400	\$ 88,600	0.1%	
			2016	73	\$ 60,816,800			

- a) Increase is due to the addition of 70 Apprentice positions (\$1,686,800), Apprentice training and text books (\$141,800), District-wide employee training (\$123,400), management and leadership development (\$27,000), and increases to the internship program (\$20,000).
- b) Decrease is due to anticipated cost savings as a result of the Medicare Advantage Prescription Drug Plan for retirees (\$1,278,400).
- c) Decrease reflects current projections for employee medical benefits, primarily Participating Provider Option premiums (\$413,800).
- d) Decrease is due to the elimination of an Assistant Director of Human Resources position (\$127,900) and the transfer of a Budget and Management Analyst position to General Administration (\$104,800).

**25000 HUMAN RESOURCES**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7290	Examination and Employment Activities					
		Candidates	2,800	3,000	3,000	
		Examinations	50	45	55	
		Applications	6,478	7,000	6,000	
		Requisitions	271	315	230	
		Cost	\$ 1,627,995	\$ 1,578,900	\$ 1,588,400	
	Recruitment and Marketing Activities					
	Diversity/Outreach Recruitment	Cost	\$ 82,269	\$ 71,500	\$ 60,900	
	Campus Recruitment	Cost	\$ 58,070	\$ 66,100	\$ 56,700	
7295	Equal Employment Opportunity Activities					
	Provide Counseling and Investigate Complaints	Actions	1,000	1,000	1,000	
		Cost	\$ 401,628	\$ 380,600	\$ 339,300	
		Cost/Action	\$ 401.63	\$ 380.60	\$ 339.30	
7310	Training and Development Activities					
	In-House Training and Professional Development	Courses	3,854	2,300	2,300	
		Cost	\$ 764,642	\$ 747,200	\$ 1,044,200	a)
		Cost/Course	\$ 198.40	\$ 324.87	\$ 454.00	
	Seminars and Conferences Costs	Cost	\$ 7,100	\$ 6,600	\$ 10,500	b)
	eLearning	Courses	3,912	2,200	2,200	
		Cost	\$ 31,254	\$ 20,000	\$ 20,000	
		Cost/Course	\$ 7.99	\$ 9.09	\$ 9.09	
	Apprenticeship Program	Cost	\$ 64,507	\$ 58,100	\$ 1,768,300	c)
	Administer and Finance the Tuition Reimbursement Program for the Entire District	Participants	58	60	50	
		Cost	\$ 308,740	\$ 333,600	\$ 314,000	
		Cost/Participant	\$ 5,323.10	\$ 5,560.00	\$ 6,280.00	
	Internship Program	Cost	\$ 102,453	\$ 230,800	\$ 250,800	
7315	Retiree Benefits					
	Health Insurance - Corporate Fund Retirees	Retirees	1,961	1,955	1,975	
		Cost	\$ 8,674,007	\$ 9,593,300	\$ 8,740,200	d)
		Cost/Retiree	\$ 4,423.26	\$ 4,907.06	\$ 4,425.42	
	Prescription Drug Retirees	Participants	1,961	1,950	1,975	
		Cost	\$ 4,695,504	\$ 5,015,300	\$ 4,559,600	e)
		Cost/Participant	\$ 2,394.44	\$ 2,571.95	\$ 2,308.66	

- a) Increase is due to the addition of training and text books for 70 Apprentices (\$141,800), the addition of District-wide employee training (\$123,400), and management and leadership development (\$27,000).
- b) Increase reflects the plan for greater employee participation in conferences and seminars.
- c) Increase is due to the addition of 70 Apprentice positions (\$1,686,800).
- d) Decrease is due to anticipated cost savings for retiree health insurance (\$822,700).
- e) Decrease is due to anticipated cost savings for retiree pharmacy benefits.

**25000 HUMAN RESOURCES**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7316	Other Postemployment Benefits Trust Management and Report Preparations	Cost	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	
7320	Employee Benefits					
	Health Insurance - Corporate Fund Employees (includes vision care) <sup>1</sup>	Participants	1,739	1,760	1,755	
		Cost	\$ 19,971,095	\$ 22,402,900	\$ 21,596,400	f)
		Cost/Participant	\$ 11,484.24	\$ 12,728.92	\$ 12,305.64	
	Prescription Drugs <sup>1</sup>	Participants	1,739	1,760	1,755	
		Cost	\$ 5,066,226	\$ 5,495,300	\$ 5,924,100	g)
		Cost/Participant	\$ 2,913.30	\$ 3,122.33	\$ 3,375.56	
	Dental Insurance - Corporate Fund Employees <sup>1</sup>	Participants	1,729	1,750	1,750	
		Cost	\$ 1,226,810	\$ 1,408,700	\$ 1,364,500	
		Cost/Participant	\$ 709.55	\$ 804.97	\$ 779.71	
	Life Insurance - Corporate Fund Employees <sup>1</sup>	Employees	1,828	1,840	1,835	
		Cost	\$ 85,340	\$ 85,700	\$ 92,500	
		Cost/Employee	\$ 46.68	\$ 46.58	\$ 50.41	
	Deferred Compensation Administration	Cost	\$ 38,730	\$ 37,500	\$ 40,000	
	Other Benefits					
	Employee Assistance Program	Cost	\$ 66,924	\$ 72,000	\$ 67,500	
	Flexible Spending Accounts Program	Cost	\$ 36,743	\$ 35,000	\$ 37,400	
	Compensation and Classification Activities	Cost	\$ 121,800	\$ 112,400	\$ 127,600	
7325	Labor and Employee Relations					
	Labor and Employee Relations Activities	Employees	1,962	1,976	2,042	
		Cost	\$ 576,885	\$ 640,400	\$ 618,400	
	Compliance with Unemployment Compensation Requirements	Claims	14	10	15	
		Cost	\$ 37,475	\$ 47,900	\$ 58,500	h)
		Cost/Claim	\$ 2,676.79	\$ 4,790.00	\$ 3,900.00	
	Employee Performance Management	Cost	\$ 100,000	\$ 110,000	\$ 102,000	
7330	Human Resources Administration					
	Personnel Activity Administration	Employees Served	1,962	1,976	2,042	
		Cost	\$ 720,101	\$ 783,600	\$ 729,800	
		Cost/Employee	\$ 367.02	\$ 396.56	\$ 357.39	
	Medical Services Payments and Record Maintenance	Examinations	500	500	500	
		Cost	\$ 56,732	\$ 167,400	\$ 62,200	i)
		Cost/Examination	\$ 113.46	\$ 334.80	\$ 124.40	

f) Decrease reflects the current projections for employee medical benefits (\$622,600) and severance and retirements (\$121,100).

g) Increase is due to an anticipated rise in employee pharmacy claims.

h) Increase is due to an upward trend for unemployment compensation (\$12,300).

i) Decrease is due to the transfer of a Budget and Management Analyst position to General Administration (\$104,800).

<sup>1</sup> Additional funds are budgeted in the Stormwater Management Fund.



**25000 HUMAN RESOURCES**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
	Civil Service Board Procedures					
	Hear and Render Decisions on Appeals from Employees,	Actions	45	38	40	
	Ratify Amendments to the Personnel Rules, Hear and	Cost	\$ 110,200	\$ 165,000	\$ 97,800	j)
	Render Decisions on Discharges	Cost/Action	\$ 2,448.89	\$ 4,342.11	\$ 2,445.00	
7480	Safety Program					
	Occupational Safety and Health Administration (OSHA) Compliance, OSHA Inspections, Reporting, Accident Investigation	Cost	\$ 620,776	\$ 646,116	\$ 630,700	
	Contract Review for Compliance with Safety Standards	# of Reviews	28	30	30	
		Cost	\$ 6,720	\$ 7,200	\$ 7,200	
		Cost/Review	\$ 240.00	\$ 240.00	\$ 240.00	
	Safety Equipment					
	New/Rental	Cost	\$ 42,739	\$ 72,000	\$ 140,700	k)
	Replacement	Cost	\$ 255,744	\$ 20,000	\$ 22,500	
	Maintenance	Cost	\$ 21,118	\$ 17,600	\$ 38,000	l)
	Medical Health Surveillance					
	First Aid Assistance	Cost	\$ 35,000	\$ 35,000	\$ 35,000	
	Hearing Tests	People Tested	317	450	450	
		Cost	\$ 7,056	\$ 9,500	\$ 9,500	
		Cost/Test	\$ 22.26	\$ 21.11	\$ 21.11	
	Spirometry Tests	People Tested	58	54	60	
		Cost	\$ 9,100	\$ 7,500	\$ 5,000	m)
		Cost/Test	\$ 156.90	\$ 138.89	\$ 83.33	
	Safety Training					
	CPR and First Aid	People Trained	242	400	250	
		Cost	\$ 45,700	\$ 46,100	\$ 46,100	
		Cost/Trainee	\$ 188.84	\$ 115.25	\$ 184.40	
	Confined Spaces	People Trained	92	150	100	
		Cost	\$ 10,380	\$ 10,380	\$ 10,400	
		Cost/Trainee	\$ 112.83	\$ 69.20	\$ 104.00	
	Lockout/Tagout	People Trained	20	200	500	n)
		Cost	\$ 4,240	\$ 4,240	\$ 4,800	
		Cost/Trainee	\$ 212.00	\$ 21.20	\$ 9.60	
	General Safety	People Trained	6,768	10,340	7,500	
		Cost	\$ 313,436	\$ 434,434	\$ 432,200	
		Cost/Trainee	\$ 46.31	\$ 42.01	\$ 57.63	

j) Decrease is due to the reallocation of administrative support services for Civil Service Board activities to the Law Department.

k) Increase reflects the purchase cycle for Arc Flash and Lockout/Tagout equipment (\$40,000), eye and hand washing stations (\$15,000), and safety signage (\$10,000).

l) Increase reflects the maintenance cycle for tripods and winches (\$8,000), various safety equipment (\$3,600), escape packs (\$3,500), AED maintenance (\$2,300), and air masks (\$1,500).

m) Decrease is due to a cost reevaluation of spirometry tests to more accurately reflect current expenditures (\$4,900).

n) This program was completely rewritten in 2016 and will require the training of all staff who would use this in their work. This training is one-time, with additional ad hoc training as needed for new hires.

**25000 HUMAN RESOURCES**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
	Professional Safety	Cost	\$ 19,800	\$ 19,800	\$ 19,800	
	Industrial Hygiene/Right to Know	People Trained	617	800	650	
		Cost	\$ 29,430	\$ 29,430	\$ 29,400	
		Cost/Trainee	\$ 47.70	\$ 36.79	\$ 45.23	
	Fire Prevention and Protection	Cost	\$ 86,952	\$ 35,200	\$ 20,000	o)
	Hazardous Materials Abatement	Cost	\$ 81,027	\$ 114,000	\$ 114,000	
7500	Risk Management Operations					
	Administration	Cost	\$ 475,873	\$ 518,100	\$ 443,800	
	Asset Appraisal and Other Services	Cost	\$ 337,931	\$ 300,000	\$ 386,700	p)
	Broker Services	Cost	\$ 229,100	\$ 235,000	\$ 236,200	
	Insurance Premiums (such as property insurance)	Cost	\$ 3,129,261	\$ 3,500,600	\$ 3,500,600	
7604	Social Security and Medicare Contributions	Cost	\$ 2,631,404	\$ 88,800	\$ 101,200	
	<b>Total</b>		<b>\$ 58,426,017</b>	<b>\$ 60,816,800</b>	<b>\$ 60,905,400</b>	

- o) Decrease reflects the maintenance cycle for fire extinguishers (\$13,200).
- p) Increase reflects the projected rise in settlement of workers' compensation cases (\$100,000).

101 25000	Fund: Corporate Department: Human Resources Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 5,744,731	\$ 6,114,600	\$ 6,100,100	\$ 5,783,500	\$ 5,766,400	\$ 5,766,400	\$ 7,491,500
601060	Compensation Plan Adjustments	148,894	314,000	314,000	295,100	232,200	232,200	238,400
601070	Social Security and Medicare Contributions	2,631,404	88,800	103,300	103,300	101,200	101,200	101,200
601080	Salaries of Nonbudgeted Employees	1,621	-	-	-	-	-	-
601090	Employee Claims	37,475	47,900	47,900	47,900	60,200	60,200	60,200
601100	Tuition and Training Payments	510,266	440,800	440,800	366,200	600,000	600,000	741,800
601170	Payments for Professional Services	1,210,497	-	-	-	-	-	-
601250	Health and Life Insurance Premiums	44,187,178	48,226,600	48,226,600	43,950,300	46,705,100	46,705,100	46,705,100
601300	Personal Services, N.O.C.	102,453	230,800	230,800	219,500	250,800	250,800	250,800
100	TOTAL PERSONAL SERVICES	54,574,520	55,463,500	55,463,500	50,765,800	53,715,900	53,715,900	55,589,000
612010	Travel	3,449	7,000	7,000	4,500	5,000	5,000	5,000
612030	Meals and Lodging	9,531	12,000	12,000	10,500	12,000	12,000	12,000
612040	Postage, Freight, and Delivery Charges	464	1,000	1,000	300	200	200	200
612050	Compensation for Personally-Owned Automobiles	5,550	5,000	5,000	4,400	4,400	4,400	4,400
612080	Motor Vehicle Operating Services	30	100	100	100	100	100	100
612250	Court Reporting Services	11,529	15,600	15,600	13,600	14,000	14,000	14,000
612260	Medical Services	123,656	180,000	180,000	150,700	123,700	123,700	123,700
612280	Subscriptions and Membership Dues	1,989	-	-	-	-	-	-
612290	Insurance Premiums	3,129,261	3,500,600	3,500,600	3,351,100	3,500,600	3,500,600	3,500,600
612330	Rental Charges	18,703	30,000	30,000	26,500	23,500	23,500	23,500
612430	Payments for Professional Services	-	1,205,700	1,205,700	1,135,700	1,139,100	1,139,100	1,139,100
612490	Contractual Services, N.O.C.	48,555	50,700	50,700	46,300	62,900	62,900	62,900
612780	Safety Repairs and Services	188,442	165,200	165,200	126,000	172,000	172,000	172,000
612820	Computer Software Maintenance	12,054	20,000	20,000	19,200	20,000	20,000	20,000
200	TOTAL CONTRACTUAL SERVICES	3,553,214	5,192,900	5,192,900	4,888,900	5,077,500	5,077,500	5,077,500
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	12,916	20,000	20,000	18,200	58,500	58,500	58,500
623720	Books, Maps, and Charts	5,922	5,000	5,000	4,600	3,500	3,500	3,500
623780	Safety and Medical Supplies	256,017	131,500	131,500	91,000	173,000	173,000	173,000

101 25000		Fund: Corporate Department: Human Resources Division:		LINE ITEM ANALYSIS				
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623990	Materials and Supplies, N.O.C.	4,229	3,900	3,900	3,800	3,900	3,900	3,900
300	TOTAL MATERIALS AND SUPPLIES	279,083	160,400	160,400	117,600	238,900	238,900	238,900
634820	Computer Software	19,200	-	-	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	19,200	-	-	-	-	-	-
<b>TOTAL HUMAN RESOURCES</b>		<b>\$ 58,426,017</b>	<b>\$ 60,816,800</b>	<b>\$ 60,816,800</b>	<b>\$ 55,772,300</b>	<b>\$ 59,032,300</b>	<b>\$ 59,032,300</b>	<b>\$ 60,905,400</b>

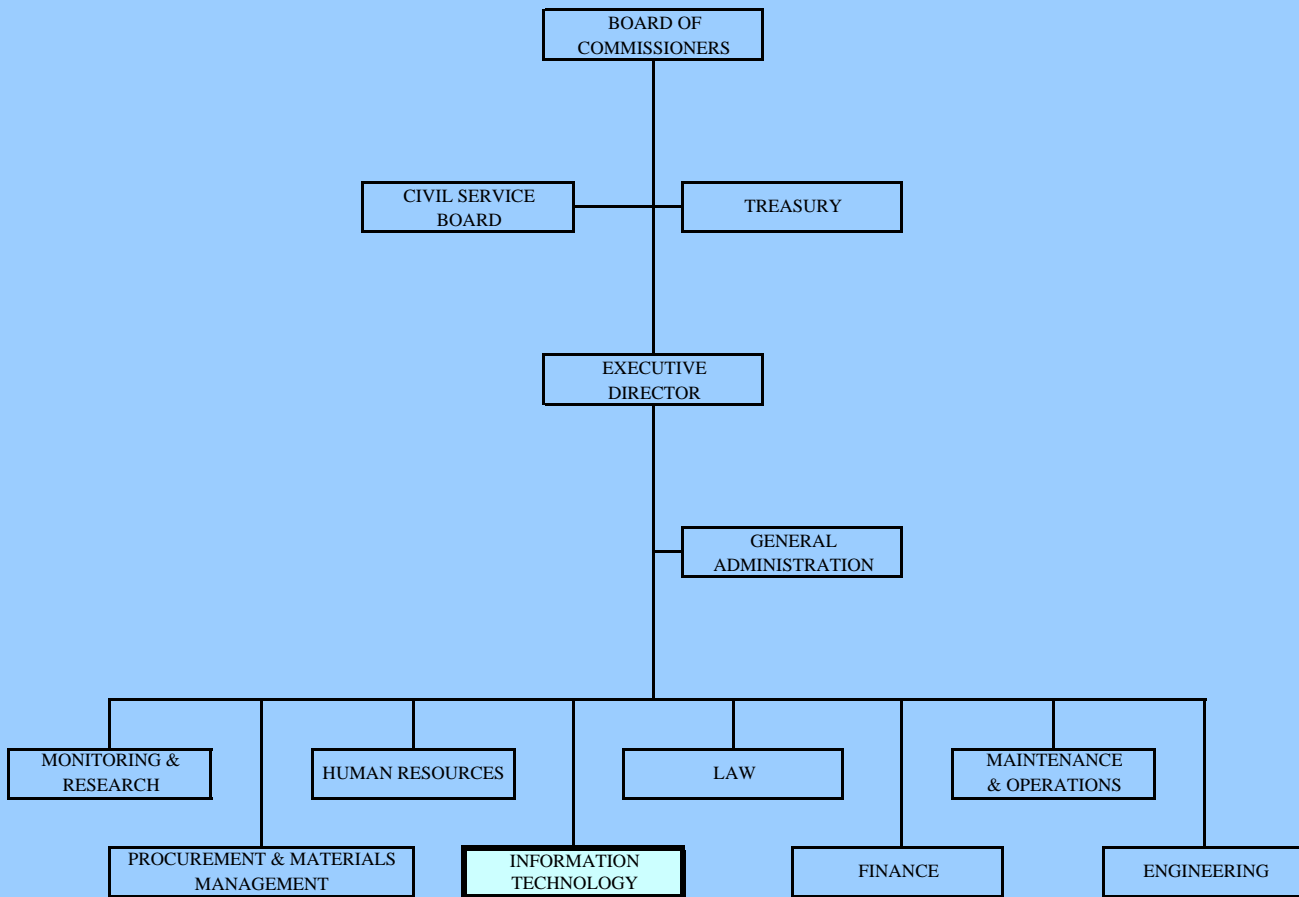
NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Human Resources Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>252</b>	<b>Executive Unit</b>					
EX10	Director of Human Resources	1	1		1	
HP20	Assistant Director of Human Resources	2	2		1	
EX06	Secretary to Officer	1	1		1	
EX16	Civil Service Board Chairman	1	1		1	
EX09	Civil Service Board Member	2	2		2	
HP15	Management Analyst II #2 (Budget & Management Analyst) (New Grade HP14)	1	1		-	
HP11	Administrative Specialist	-	1		1	
TOTAL	Executive Unit	8	9	879,534.24	7	605,236.30
<b>254</b>	<b>Employee Selection Section</b>					
HP19	Human Resources Manager	1	-		-	
HP19	Human Resources Manager #2 (New Grade HP18)	-	1		1	
HP17	Senior Human Resources Analyst	2	-		-	
HP17	Senior Human Resources Analyst #2 (New Grade HP16)	-	2		1	
HP16	Senior Human Resources Analyst	-	-		1	
HP16	Senior Human Resources Analyst #2 (Human Resources Analyst) (New Grade HP14)	-	1		1	
HP15	Associate Human Resources Analyst #2 (Human Resources Analyst) (New Grade HP14)	1	1		1	
HP14	Human Resources Analyst	5	4		4	
HP13	Senior Administrative Specialist	2	2		2	
HP11	Administrative Specialist	3	3		3	
TOTAL	Employee Selection Section	14	14	1,357,067.66	14	1,337,882.65
<b>255</b>	<b>Employee Development Section</b>					
HP19	Human Resources Manager	1	-		-	
HP19	Human Resources Manager #2 (New Grade HP18)	-	1		1	
HP17	Senior Human Resources Analyst	1	-		-	
HP17	Senior Human Resources Analyst #2 (New Grade HP16)	-	1		1	
HP14	Human Resources Analyst	1	1		2	

Fund: Corporate Dept: Human Resources Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP12	Human Resources Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
HP11	Administrative Specialist	1	1		1	
TM01	Intern	12	12		12	
PR1025	Apprentice	1	1		71	
TOTAL	Employee Development Section	18	18	943,044.18	89	4,751,317.27
<b>256</b>	<b>Classification, Compensation, &amp; Benefits Section</b>					
HP19	Human Resources Manager	1	-		-	
HP19	Human Resources Manager #2 (New Grade HP18)	-	1		1	
HP17	Senior Human Resources Analyst	2	-		-	
HP17	Senior Human Resources Analyst #2 (New Grade HP16)	-	2		2	
HP15	Associate Human Resources Analyst #2 (Human Resources Analyst) (New Grade HP14)	1	1		1	
HP14	Human Resources Analyst	2	2		2	
HP11	Administrative Specialist	2	2		1	
HP11	Administrative Specialist #4	-	-		1	
TOTAL	Classification, Compensation, & Benefits Section	8	8	830,524.24	8	855,151.13
<b>258</b>	<b>Employee Relations Section</b>					
HP19	Human Resources Manager	1	-		-	
HP19	Human Resources Manager #2 (New Grade HP18)	-	1		-	
HP18	Human Resources Manager	-	-		1	
HP17	Senior Human Resources Analyst	2	-		-	
HP17	Senior Human Resources Analyst #2 (New Grade HP16)	-	2		-	
HP16	Senior Human Resources Analyst	-	-		2	
HP15	Associate Human Resources Analyst #2 (Human Resources Analyst) (New Grade HP14)	1	1		1	
HP14	Human Resources Analyst	2	2		2	
HP11	Administrative Specialist	2	2		2	
HP09	Administrative Clerk	1	-		-	
TOTAL	Employee Relations Section	9	8	862,598.36	8	780,137.86

Fund: Corporate Dept: Human Resources Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>259</b>	<b>Risk Management Section</b>					
HP19	Risk Manager	1	-		-	
HP19	Risk Manager #2 (New Grade HP18)	-	1		1	
HP17	Claims Administrator	1	-		-	
HP17	Claims Administrator #2 (New Grade HP16)	-	1		1	
HP17	Senior Risk Analyst	1	-		-	
HP17	Senior Risk Analyst #2 (New Grade HP16)	-	1		1	
HP17	Senior Safety Specialist	1	-		-	
HP17	Senior Safety Specialist #2 (New Grade HP16)	-	1		1	
HP15	Safety Coordinator #2 (Safety Specialist) (New Grade HP14)	4	4		4	
HP14	Human Resources Analyst	1	1		-	
HP14	Safety Specialist	5	5		5	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	2	2		2	
TOTAL	Risk Management Section	17	16	1,596,938.98	15	1,540,083.71
TOTAL	Human Resources	74	73	6,469,707.66	141	9,869,808.92

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.



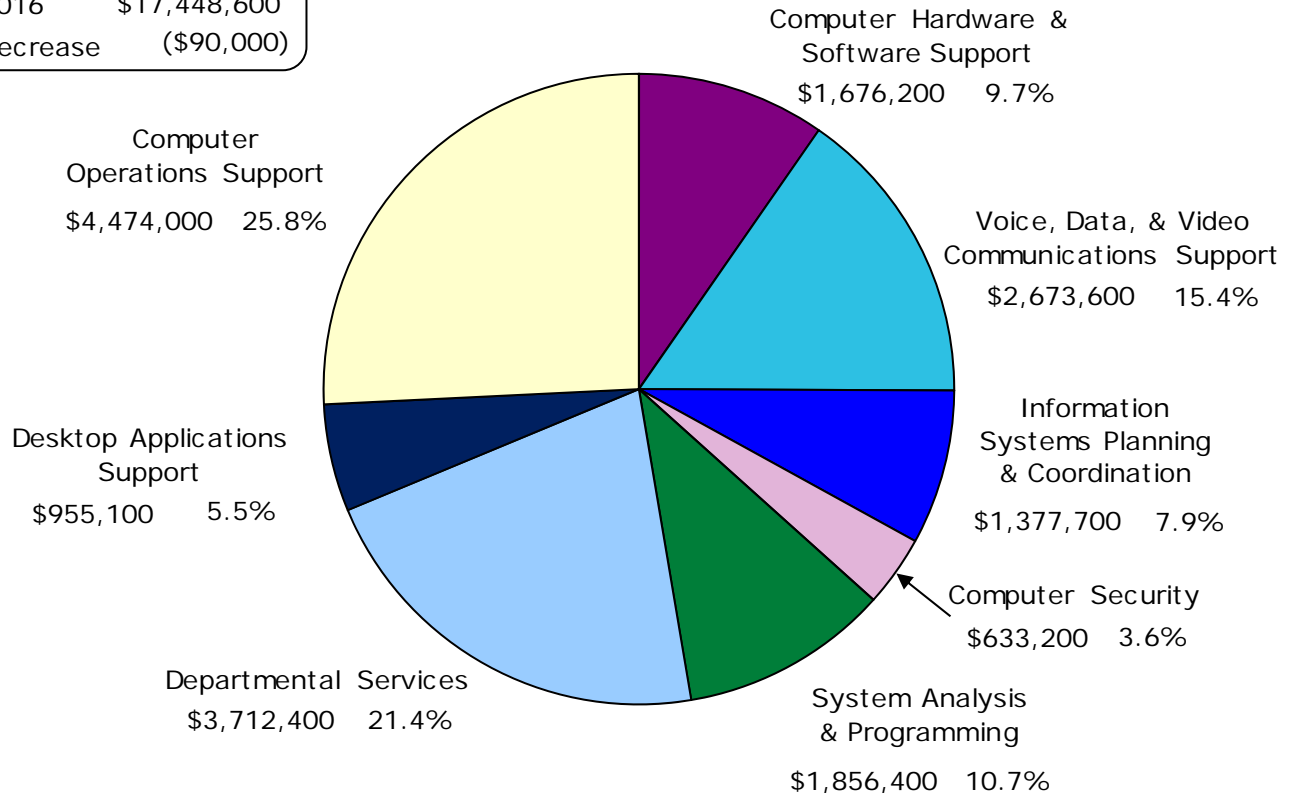
INFORMATION  
TECHNOLOGY



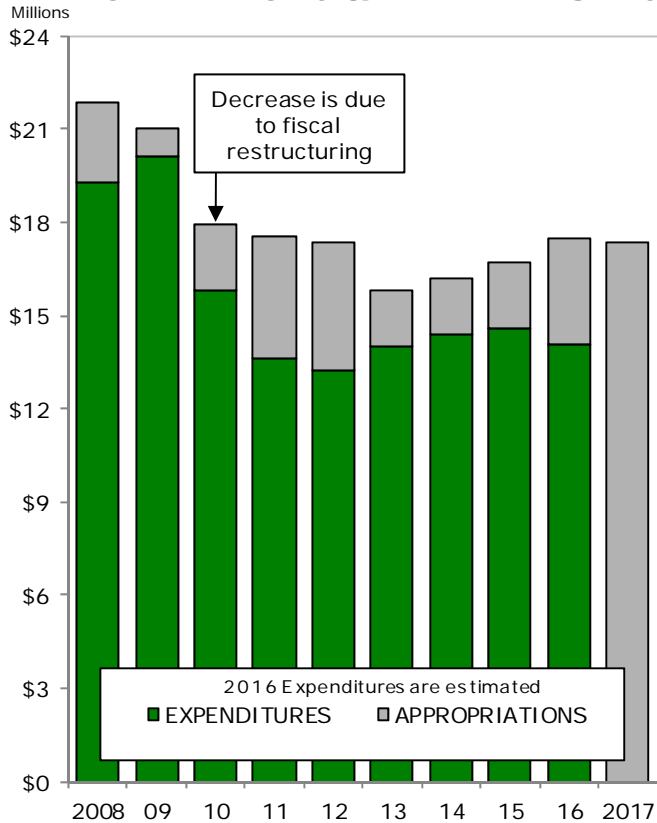
# INFORMATION TECHNOLOGY

2017	\$17,358,600
2016	\$17,448,600
Decrease	(\$90,000)

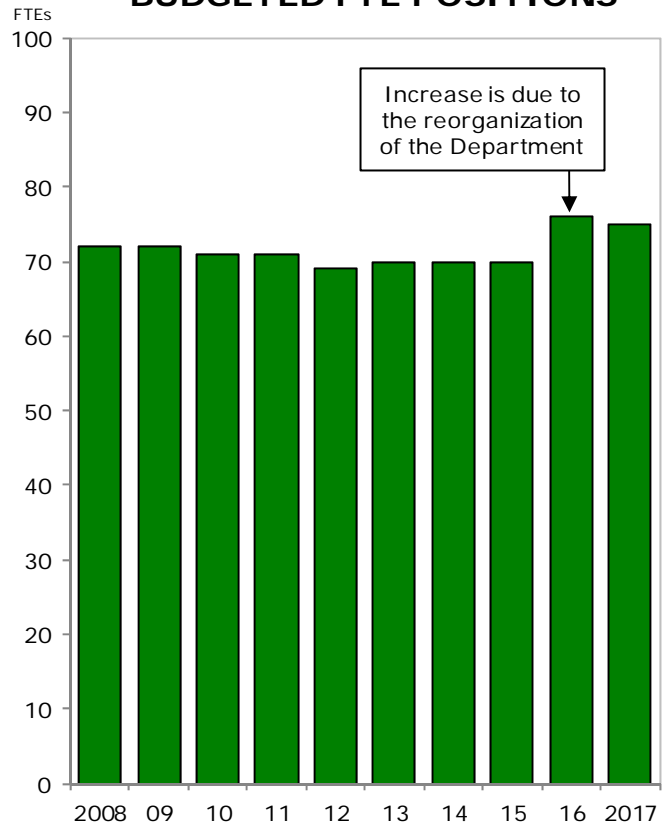
## FUNCTIONS



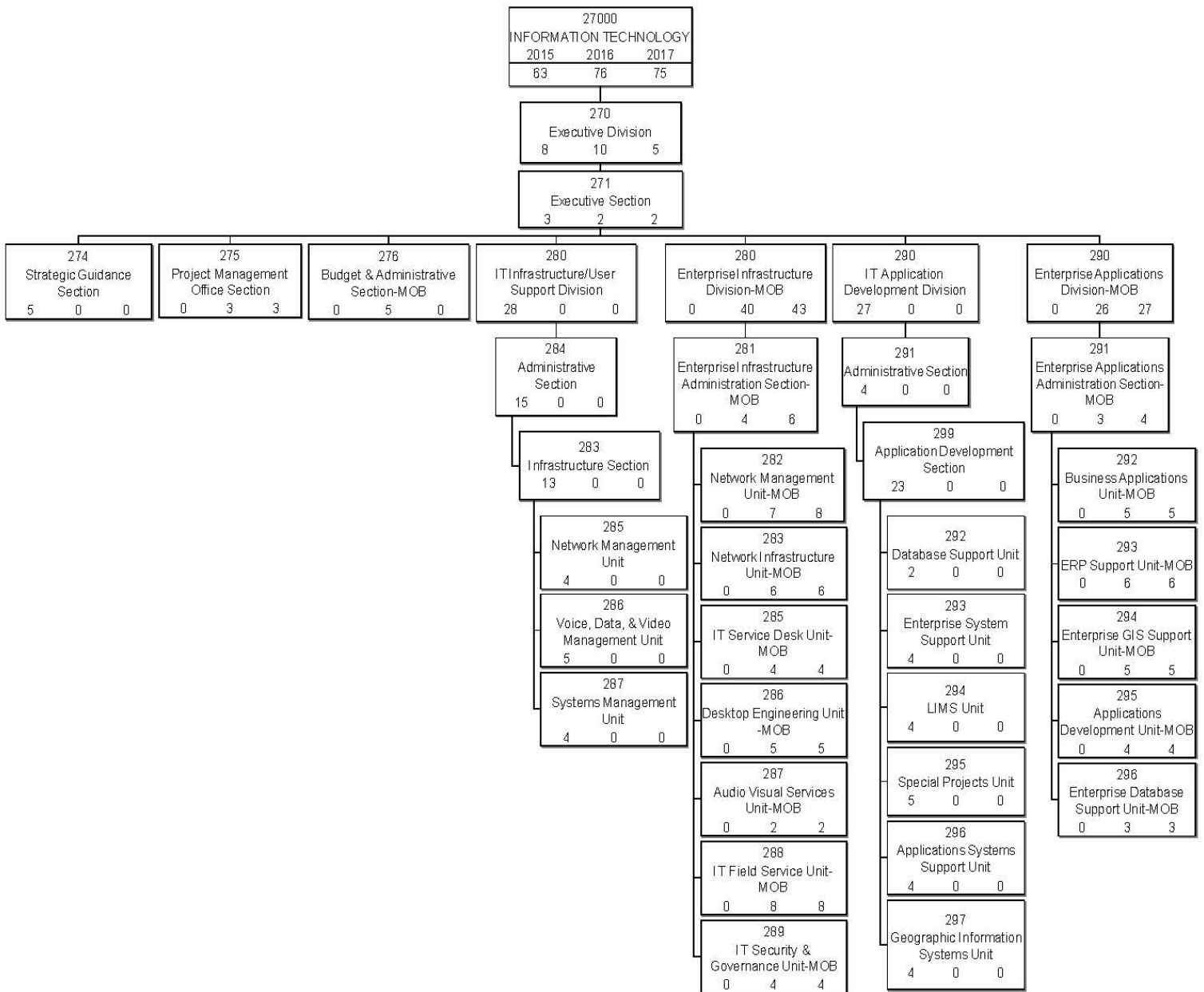
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# INFORMATION TECHNOLOGY



Effective 01/01/2016, the Information Technology Department was reorganized.

## INFORMATION TECHNOLOGY

**The mission of the Information Technology Department (ITD) is to promote successful achievement of the District's Strategic Business Plan through targeted information technology (IT) investments and services and to maintain technology infrastructures and architectures at levels that promote efficacy, efficiency, and sustainable practices throughout the District.**

### Departmental Summary

In pursuit of its mission, the ITD coordinates the planning and implementation of IT throughout the District. The ITD establishes District-wide computer standards and provides services in the following key areas: IT planning and program management, design and implementation, applications development and support, infrastructure operations and maintenance, user support, security, and disaster recovery.

### Summary of 2016 Accomplishments

- Completed the relocation of the District's offsite data center;
- Continued the implementation of a new Real Estate/Geographic Information System (GIS) for the Law Department to manage leases and property;
- Continued the implementation of the IT Infrastructure Strategy, including upgraded firewalls and the implementation of continuous threat prevention and mobile device management platforms;
- Completed the upgrade/replacement of unreliable wide area network connections at the Lawndale Avenue Solids Management Area;
- Completed the installation of wireless networks at the Main Office Building Complex and conference rooms at various water reclamation plants;
- Upgraded videoconference infrastructure, including Polycom-based desktop and mobile device client capabilities, allowing video conferencing from desktops and mobile devices;
- Initiated the implementation of a new agile application development platform, which will lead to more rapid application development and deployment;
- Initiated the implementation of a new Information Technology Service Management solution to enhance help desk services, resulting in improved customer satisfaction;
- Implemented a project to move disparate databases to a single database platform;
- Continued the deployment of personal computers to replace outdated thin client devices;
- Initiated the implementation of a concise Information Technology Service Catalog;
- Implemented a new Citrix environment to provide more reliable access to applications.

### Budget Highlights

The 2017 appropriation for the ITD is \$17,358,600, a decrease of \$90,000, or 0.5 percent, from 2016. The staffing level has decreased from 76 to 75 positions. One Systems Administrator position was added, one Administrative Specialist position was dropped, and one Management Analyst III position was transferred to General Administration.

Significant features of the 2017 budget are:

- Continue the evaluation and alignment of ITD's existing strategic plan to promote the achievement of the District's Strategic Business Plan;
- Expand the use of GIS applications and continue implementation of the Real Estate Portfolio Management System, performance dashboards, and the SAP enterprise system evaluation to increase business efficiencies;
- Develop agile applications, reducing the time to market for in-house developed applications;
- Continue the development of the ITD's Project Management Office Section;
- Continue the implementation of a standardized project management methodology for all ITD-related projects;
- Start to develop a center of excellence within the ITD to help align ITD priorities with overall District priorities through continuous review of projects and implementations, enhancing customer satisfaction;
- Complete the implementation of the Information Technology Service Management solution;
- Complete the implementation of the Information Technology Service Catalog;
- Complete the deployment of personal computers to replace outdated thin client devices, reducing the overall data load on the District's systems and enhancing the user experience.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:****• Add Value**

The ITD supports the various systems that are used by the departments to implement their strategies. Among these are the internet-based Publicly owned treatment works Administration and Compliance System, the Laboratory Information Management System, the Combined Sewer Overflow Notification System, the Small Streams Maintenance Reporting System, the Metropolitan Water Reclamation District Incident Reporting System, the Stormwater Inundation Mapping Application, and the Stormwater Management Reporting Application.

The ITD will continue to pursue green initiatives, both in its own support environment and by assisting with other departments' initiatives. The ITD will provide conference calls, online meetings, and integrated messaging using Microsoft Office 365. This supports the District's green initiative by allowing individuals to schedule online meetings utilizing screen sharing and conference call management, thus providing savings in travel time and travel expenses.

**• Excellence**

The development and implementation of performance management dashboards will continue during 2017. This project will provide executives and managers with the ability to monitor the performance of various key business performance indicators.

The ITD will continue to assist the Office of Public Affairs in improving the delivery and maintenance of the District's website content located at [mwrdr.org](http://mwrdr.org), to provide easy and transparent access to reports and data, and clear, consistent, accurate, and accessible information about the District and our areas of responsibility.

The development and use of current technologies, such as mobile applications, will facilitate interaction with the public and deliver reliable and useful information. The first District-developed mobile application, the Metropolitan Water Reclamation District Citizen Incident Reporting System, available at [mwrdr.org](http://mwrdr.org), was developed in 2014 for use by the public to report odor, water pollution, waterway blockage, or other incidents.

**• Resource Recovery**

The ITD supports systems that are used by the departments to implement their strategies to pursue the recovery of natural resources. Among these are the internet-based Publicly owned treatment works Administration and Compliance System, the Laboratory Information Management System, and the Scales application. In addition, the ITD is committed to maintaining a reliable and flexible technology infrastructure to support new initiatives as they are introduced.

**• Develop Employees**

The ITD will continue to develop a culture that encourages a collaborative environment, where the contributions of every employee are recognized. The ITD will continue to develop process- and people-focused skill sets to meet the challenges of the changing demands of user departments and current technology platforms. When projects require highly specialized subject matter expertise, the department may partner with outside resources. Management will work with staff to develop competency-based individual development plans and ensure that employees recognize and understand their accountabilities.

The ITD will continue to facilitate the overall development of the District's employees by providing the audio and video infrastructure to prepare in-house training sessions, which will be available to all employees via the District's portal. The portal supports other training materials as well.

The ITD will continue to support the use of videoconferencing technologies and webinars to facilitate meetings and on-site training. Infrastructure improvements will facilitate the anticipated increased use of web-based training, managed by the Human Resources Department, from employee workstations.

**• Leading Partnerships**

The ITD will continue to maintain its relationship with the Water and Wastewater Chief Information Officer Forum<sup>sm</sup>, which is the only water and wastewater agency-focused organization for IT executives in the industry. The Water and Wastewater Chief Information Officer Forum<sup>sm</sup> provides its members with the unique opportunity to discuss specific IT leadership challenges and solutions with their industry counterparts. It also provides an opportunity for members to engage with industry leaders from global technology companies regarding the future state of systems relevant to the District.

ITD staff will continue to attend the Water Environment Federation's Annual Technical Exhibition and Conference to stay abreast of IT developments in water quality.

**• Technology**

The ITD will continue efforts to simplify the SAP enterprise system to increase utilization and maximize effectiveness by reducing the amount of customization and leveraging standard built-in functionality. The formalized SAP Evaluation Project includes an evaluation of the SAP enterprise system with the Total Cost of Operations initiative. This initiative will result in a roadmap to cost reduction, release of capacity, and budgets for innovation, while maintaining business continuity and consolidation of the SAP enterprise system landscape for the future, leveraging on premise and/or cloud computing. The

roadmap will be used to update the SAP enterprise system to provide a simplified, user-friendly system that maximizes the use of the capabilities offered in the core system.

The GIS program will continue to grow via data development, application development, and continued systems integration. Application and data development will continue to focus on providing District staff with the richest geographic information available while integrating it with the current business systems to support various business decisions. Also in 2017, the GIS program will continue to deliver data and applications to District field staff via mobile devices providing them with a more streamlined and efficient mechanism to enter data at the point of origin.

The ITD will continue to upgrade technology infrastructure, such as storage area networks, servers, VMware, Citrix, and desktops, which will provide higher reliability and availability, as well as reduce power and cooling requirements. Completion is scheduled for the end of 2018.

The ITD will continue to pursue opportunities for enterprise solutions to ensure that efforts can be shared across agency resources. Efforts are currently underway in the areas of document management, project management, and the use of Microsoft Office 365. The move to the use of Microsoft Office 365 will not only provide employees with the latest versions of Microsoft Office software, but will also move them into the mobile workspace, by providing access to District email and documents on up to five different devices (including Windows Phone, iOS, and Android devices). The ITD expects considerable savings over time in infrastructure, administration, and licensing costs due to the Microsoft Office 365 implementation.

**27000 INFORMATION TECHNOLOGY**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. <b>COMPUTER HARDWARE AND SOFTWARE SUPPORT:</b> The Information Technology Department (ITD) provides maintenance and operations of all hardware, including SAP servers, storage area networks/thin client central computer hardware, and software for nine major locations.	\$ 1,676,200	9.7%
2. <b>VOICE, DATA, AND VIDEO COMMUNICATIONS SUPPORT:</b> The Enterprise Infrastructure Division maintains the District's wide area network as well as the Main Office Building Complex local area networks. Staff is responsible for planning, installing, and maintaining of voice, data, and video communications for the entire District.	\$ 2,673,600	15.4%
3. <b>INFORMATION SYSTEMS PLANNING AND COORDINATION:</b> Provides a strategic perspective used to align the ITD with the stated goals and objectives of the District and its departments. The staff is responsible for services such as strategic planning of technology and communications as well as disaster recovery planning.	\$ 1,377,700	7.9%
4. <b>SYSTEMS ANALYSIS AND PROGRAMMING:</b> The Enterprise Applications Division will be responsible for the system management of the Enterprise Financial System applications which includes ongoing database maintenance, system configuration, and enhancement using Advanced Business Application Programming techniques. Internet/Intranet services will continue to expand to meet the District's needs.	\$ 1,856,400	10.7%
5. <b>COMPUTER OPERATIONS SUPPORT:</b> The ITD operates two computer rooms which house the District's Sun and ALPHA systems, storage area networks, network servers, and ancillary equipment.	\$ 4,474,000	25.8%
6. <b>DEPARTMENTAL SERVICES:</b> The ITD provides direct consulting, planning, and maintenance assistance to all departments as well as the administration of storage area networks/thin clients and necessary networking. Additional services include support of department-specific software such as Laboratory Information Management System, Maintenance Management System, and the internet-based Publicly owned treatment works Administration and Compliance System, along with Treasury Section and real estate applications.	\$ 3,712,400	21.4%
7. <b>COMPUTER SECURITY:</b> The ITD is responsible for the security of all District information systems, disaster recovery system, and data, which includes monitoring and enforcing compliance with software licensing agreements, District security directives, and the disaster recovery plan. The staff is also responsible for auditing remaining workstations to verify compliance.	\$ 633,200	3.6%
8. <b>DESKTOP APPLICATIONS SUPPORT:</b> The assigned staff will continue to provide applications and technical support to approximately 2,000 computer system users.	\$ 955,100	5.5%
<b>Total</b>	<b>\$ 17,358,600</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Call Center - Timeframe: Response time to call center requests for assistance.	< 24 Hrs.	< 24 Hrs.	< 24 Hrs.
2. Call Center - Total Repeats: Reduce number of repeat calls for service.	Reduced 10%	Reduce 20%	Reduce 20%
3. Project Schedule: Ensure project completion consistent with Request For Proposal/Budget requests.	On Time	On Time	On Time
4. Project Budget: Ensure the completion of ITD projects at or below budget.	At Budget	Below Budget	At Budget
5. Customer Satisfaction: Ensure user satisfaction with ITD systems, applications, and infrastructure. On a scale of one to five, where five is the highest.	3	4	4

**27000 INFORMATION TECHNOLOGY**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change		
Number	Name	Actual		FTEs	Dollars	Dollars	Percent	
7381	Systems Analysis and Programming	\$ 2,052,783	2017	17	\$ 1,856,400	\$ (14,300)	(0.8)	
			2016	17	\$ 1,870,700			
7382	Desktop Applications Support	\$ 424,151	2017	6	\$ 955,100	\$ (88,700)	(8.5)	
			2016	6	\$ 1,043,800			
7383	Voice, Data, and Video Communications Support	\$ 2,769,151	2017	9	\$ 2,673,600	\$ 208,900	8.5	a)
			2016	9	\$ 2,464,700			
7384	Central Computer Hardware and Proprietary Software Support	\$ 2,648,088	2017	8	\$ 1,676,200	\$ (173,600)	(9.4)	b)
			2016	8	\$ 1,849,800			
7385	Computer Operations, Maintenance, and Support	\$ 1,583,085	2017	8	\$ 4,474,000	\$ (76,600)	(1.7)	
			2016	8	\$ 4,550,600			
7387	Computer Security	\$ 283,928	2017	4	\$ 633,200	\$ 102,400	19.3	c)
			2016	4	\$ 530,800			
7388	Information Systems Planning	\$ 533,805	2017	6	\$ 770,800	\$ (10,200)	(1.3)	
			2016	6	\$ 781,000			
7389	Information Systems Coordination	\$ 817,494	2017	3	\$ 606,900	\$ (174,200)	(22.3)	d)
			2016	4	\$ 781,100			
7800	Information Technology Services	\$ 3,462,104	2017	14	\$ 3,605,700	\$ 135,800	3.9	e)
			2016	14	\$ 3,469,900			
7604	Social Security and Medicare Contributions	\$ -	2017	-	\$ 106,700	\$ 500	0.5	
			2016	-	\$ 106,200			
Totals		\$ 14,574,589	2017	75	\$ 17,358,600	\$ (90,000)	(0.5%)	
			2016	76	\$ 17,448,600			

- a) Increase is due to the CommVault Systems upgrade (\$160,000), data center services (\$100,000), and Polycom Sharing Suite (\$30,000), offset by the deferment of the Telecom data center appliance replacements (\$80,000).
- b) Decrease is due to the reduced need for Enterprise Resource Planning consulting services (\$125,000) and the completed purchases of VMWare software (\$45,000) and Storage Area Network servers (\$10,000).
- c) Increase is due to the planned purchases of a Cisco Firewall system (\$38,000), Acquia security software service (\$30,500), and Hewlett-Packard 3PAR storage cards (\$30,000).
- d) Decrease is due to the transfer of a Management Analyst III position to General Administration (\$137,100) and the completion of the cyber security assessment (\$75,000), offset by IT management training (\$25,500).
- e) Increase is due to the new request for e-Builder software maintenance (\$247,000), offset by the decreased need for AutoCAD software maintenance (\$107,400).

**27000 INFORMATION TECHNOLOGY**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7380	Information Technology and Telecommunications					
7381	Acquire, Develop, and Maintain Computer Programs and Systems	Application Modules Supported	80	90	90	
		Cost	\$ 2,052,783	\$ 1,870,700	\$ 1,856,400	
		Cost/Module	\$ 25,659.79	\$ 20,785.56	\$ 20,626.67	
7382	Desktop Applications Support	# of Service Calls	12,126	13,002	13,002	
		Cost	\$ 424,151	\$ 1,043,800	\$ 955,100	
		Cost/Service Call	\$ 34.98	\$ 80.28	\$ 73.46	
7383	Voice, Data, and Video Communications Support	Cost	\$ 2,769,151	\$ 2,464,700	\$ 2,673,600	a)
7384	Central Computer Hardware and Proprietary Software Support	Cost	\$ 2,648,088	\$ 1,849,800	\$ 1,676,200	b)
7385	Computer Operations, Maintenance, and Support	Cost	\$ 1,583,085	\$ 4,550,600	\$ 4,474,000	
7387	Computer Security	Cost	\$ 283,928	\$ 530,800	\$ 633,200	c)
7388	Information Systems Planning	Cost	\$ 533,805	\$ 781,000	\$ 770,800	
7389	Information Systems Coordination	Cost	\$ 817,494	\$ 781,100	\$ 606,900	d)
7800	Information Technology Services	# of Users	1,976	2,000	2,000	
		Cost	\$ 3,462,104	\$ 3,469,900	\$ 3,605,700	e)
		Cost/User	\$ 1,752.08	\$ 1,734.95	\$ 1,802.85	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 106,200	\$ 106,700	
		Total	\$ 14,574,589	\$ 17,448,600	\$ 17,358,600	

- a) Increase is due to the CommVault Systems upgrade (\$160,000), data center services (\$100,000), and Polycom Sharing Suite (\$30,000), offset by the deferment of the Telecom data center appliance replacements (\$80,000).
- b) Decrease is due to the reduced need for Enterprise Resource Planning consulting services (\$125,000) and the completed purchases of VMWare software (\$45,000) and Storage Area Network servers (\$10,000).
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- d) Decrease is due to the transfer of a Management Analyst III position to General Administration (\$137,100) and the completion of the cyber security assessment (\$75,000), offset by IT management training (\$25,500).
- e) Increase is due to the new request for e-Builder software maintenance (\$247,000), offset by the decreased need for AutoCAD software maintenance (\$107,400).



101 27000	Fund: Corporate Department: Information Technology Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 7,017,017	\$ 8,686,300	\$ 8,686,300	\$ 6,795,300	\$ 8,518,700	\$ 8,518,700	\$ 8,588,300
601060	Compensation Plan Adjustments	286,491	186,300	186,300	90,000	230,000	230,000	235,800
601070	Social Security and Medicare Contributions	-	106,200	106,200	106,200	106,700	106,700	106,700
601100	Tuition and Training Payments	78,419	90,000	90,000	44,300	86,700	86,700	86,700
601170	Payments for Professional Services	219,460	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	7,601,387	9,068,800	9,068,800	7,035,800	8,942,100	8,942,100	9,017,500
612010	Travel	401	1,500	1,500	500	400	400	400
612030	Meals and Lodging	1,474	2,000	2,000	1,300	1,500	1,500	1,500
612040	Postage, Freight, and Delivery Charges	-	-	1,000	500	-	-	-
612050	Compensation for Personally-Owned Automobiles	4,539	5,100	5,100	3,000	4,700	4,700	4,700
612080	Motor Vehicle Operating Services	-	100	100	-	-	-	-
612210	Communication Services	1,140,572	1,304,400	1,304,400	1,031,900	1,422,400	1,422,400	1,422,400
612330	Rental Charges	266,486	310,000	337,000	277,000	325,500	325,500	325,500
612430	Payments for Professional Services	-	640,300	639,300	505,000	357,400	357,400	357,400
612490	Contractual Services, N.O.C.	451	2,700	2,700	2,500	20,000	20,000	20,000
612810	Computer Equipment Maintenance	510,287	651,000	610,000	479,900	376,100	376,100	376,100
612820	Computer Software Maintenance	3,464,107	3,650,200	3,650,200	3,135,000	4,057,600	4,057,600	4,057,600
612840	Communications Equipment Maintenance (Includes Software)	652,111	788,000	788,000	760,900	796,400	796,400	796,400
200	TOTAL CONTRACTUAL SERVICES	6,040,430	7,355,300	7,341,300	6,197,500	7,362,000	7,362,000	7,362,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	22,584	19,100	19,100	8,500	17,000	17,000	17,000
623720	Books, Maps, and Charts	343	400	400	400	-	-	-
623800	Computer Software	158,976	250,700	225,700	135,900	331,900	331,900	331,900
623810	Computer Supplies	546,455	485,200	490,200	485,100	423,500	423,500	423,500
623850	Communications Supplies	84,863	122,300	156,300	114,900	131,700	131,700	131,700
300	TOTAL MATERIALS AND SUPPLIES	813,221	877,700	891,700	744,800	904,100	904,100	904,100
634810	Computer Equipment	24,770	20,000	20,000	19,500	45,000	45,000	45,000
634820	Computer Software	15,134	14,800	14,800	13,000	30,000	30,000	30,000

101 27000 Fund: Corporate Department: Information Technology Division:		LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
634840	Communications Equipment (Includes Software)	79,647	112,000	112,000	45,000	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	119,551	146,800	146,800	77,500	75,000	75,000	75,000
TOTAL INFORMATION TECHNOLOGY		\$ 14,574,589	\$ 17,448,600	\$ 17,448,600	\$ 14,055,600	\$ 17,283,200	\$ 17,283,200	\$ 17,358,600

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>270</b>	<b>Executive Division</b>					
<b>271</b>	<b>Executive Section</b>					
EX17	Director of Information Technology	1	1		1	
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	1	-		-	
EX06	Secretary to Officer	1	1		1	
TOTAL	Executive Section	3	2	329,826.90	2	333,125.16
<b>274</b>	<b>Strategic Guidance Section</b>					
HP19	Computer Technology Supervisor	1	-		-	
HP18	Computer Security Analyst	1	-		-	
HP18	Senior Network Analyst	1	-		-	
HP17	Computer Systems Administrator	1	-		-	
HP11	Word Processing Coordinator #2 (Administrative Specialist)	1	-		-	
TOTAL	Strategic Guidance Section	5	-	-	-	-
<b>275</b>	<b>Project Management Office Section</b>					
HP19	Project Management Office Manager	-	1		1	
HP17	Senior Business Analyst #2 (New Grade HP16)	-	1		-	
HP16	Senior Business Analyst	-	-		1	
HP15	Business Analyst #2 (New Grade HP14)	-	1		-	
HP14	Business Analyst	-	-		1	
TOTAL	Project Management Office Section	-	3	320,746.66	3	273,692.48
<b>276</b>	<b>Budget &amp; Administrative Section - MOB</b>					
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	-	1		-	
HP11	Administrative Specialist	-	3		-	
HP11	Administrative Specialist #4	-	1		-	
TOTAL	Budget & Administrative Section - MOB	-	5	435,184.10	-	-
TOTAL	Executive Division	8	10	1,085,757.66	5	606,817.64

Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>280</b>	<b>Enterprise Infrastructure Division - MOB (formerly IT Infrastructure / User Support Division)</b>					
<b>281</b>	<b>Enterprise Infrastructure Administration Section - MOB</b>					
HP20	Assistant Director of Information Technology	-	1		1	
HP19	Information Technology Manager	-	3		3	
HP11	Administrative Specialist	-	-		2	
TOTAL	Enterprise Infrastructure Administration Section - MOB	-	4	520,033.02	6	653,448.84
<b>282</b>	<b>Network Management Unit - MOB</b>					
HP18	Senior Network Engineer #1	-	1		1	
HP18	Senior Systems Administrator	-	1		1	
HP18	Senior Systems Administrator #1	-	1		1	
HP17	Computer Systems Administrator #2 (Systems Administrator) (New Grade HP16)	-	3		3	
HP17	Senior Systems Programmer #2 (Systems Administrator) (New Grade HP16)	-	1		1	
HP16	Systems Administrator	-	-		1	
TOTAL	Network Management Unit - MOB	-	7	946,998.78	8	1,062,391.64
<b>283</b>	<b>Network Infrastructure Unit - MOB</b>					
HP18	Senior Network Engineer	-	1		1	
HP16	Network Engineer	-	4		4	
NR1541	Telecommunications Specialist	-	1		1	
TOTAL	Network Infrastructure Unit - MOB	-	6	659,744.02	6	679,019.76
<b>285</b>	<b>IT Service Desk Unit - MOB</b>					
HP15	IT Support Coordinator	-	1		1	
HP12	Systems Support Specialist II #2 (IT Support Analyst I) (New Grade HP11)	-	1		1	
HP11	IT Support Analyst I	-	2		2	
TOTAL	IT Service Desk Unit - MOB	-	4	299,873.86	4	302,872.61
<b>286</b>	<b>Desktop Engineering Unit - MOB</b>					
HP18	Senior Desktop Engineer	-	1		1	
HP17	Computer Systems Administrator #2 (Desktop Engineer) (New Grade HP16)	-	3		3	

Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP15	Computer Systems Coordinator #2 (Desktop Analyst) (New Grade HP14)	-	1		1	
TOTAL	Desktop Engineering Unit - MOB	-	5	629,358.60	5	641,189.89
<b>287</b>	<b>Audio Visual Services Unit - MOB</b>					
HP16	A/V Administrator	-	1		1	
HP14	A/V Analyst	-	1		1	
TOTAL	Audio Visual Services Unit - MOB	-	2	192,660.78	2	194,587.38
<b>288</b>	<b>IT Field Service Unit - MOB</b>					
HP18	Senior Computer Systems Administrator #2 (IT Support Coordinator) (New Grade HP15)	-	1		1	
HP17	Computer Systems Administrator #2 (IT Support Analyst II) (New Grade HP13)	-	3		3	
HP15	Computer Systems Coordinator #2 (IT Support Analyst II) (New Grade HP13)	-	1		1	
HP15	Computer Systems Coordinator #2 (IT Support Analyst I) (New Grade HP11)	-	2		1	
HP11	IT Support Analyst I	-	1		2	
TOTAL	IT Field Service Unit - MOB	-	8	902,252.52	8	910,783.72
<b>289</b>	<b>IT Security &amp; Governance Unit - MOB</b>					
HP18	Senior IT Security Administrator	-	1		1	
HP17	Computer Systems Administrator #2 (IT Security Analyst) (New Grade HP14)	-	1		1	
HP17	IT Security Administrator #2 (New Grade HP16)	-	1		-	
HP16	IT Security Administrator	-	-		1	
HP14	IT Security Analyst	-	1		1	
TOTAL	IT Security & Governance Unit - MOB	-	4	470,717.78	4	465,011.29
<b>284</b>	<b>Administrative Section</b>					
HP20	Assistant Director of Information Technology	1	-		-	
HP18	Senior Computer Systems Administrator	1	-		-	
HP17	Computer Systems Administrator	5	-		-	
HP15	Computer Systems Coordinator	3	-		-	
HP12	Systems Support Specialist II	1	-		-	
HP11	Systems Support Specialist I	2	-		-	

Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	2	-		-	
TOTAL	Administrative Section	15	-	-	-	-
	<b>283 Infrastructure Section</b>					
	<b>285 Network Management Unit</b>					
HP18	Senior Network Analyst	1	-		-	
HP16	Network Analyst	3	-		-	
TOTAL	Network Management Unit	4	-	-	-	-
	<b>286 Voice, Data, &amp; Video Management Unit</b>					
HP18	Senior Computer Systems Administrator	1	-		-	
HP17	Computer Systems Administrator	2	-		-	
HP16	Senior Telecommunications Specialist	1	-		-	
NR1541	Telecommunications Specialist	1	-		-	
TOTAL	Voice, Data, & Video Management Unit	5	-	-	-	-
	<b>287 Systems Management Unit</b>					
HP18	Senior Network Analyst	1	-		-	
HP17	Computer Systems Administrator	2	-		-	
HP15	Computer Systems Coordinator	1	-		-	
TOTAL	Systems Management Unit	4	-	-	-	-
TOTAL	Infrastructure Section	13	-	-	-	-
TOTAL	Enterprise Infrastructure Division - MOB (formerly IT Infrastructure / User Support Division)	28	40	4,621,639.36	43	4,909,305.13
	<b>290 Enterprise Applications Division - MOB (formerly IT Application Development Division)</b>					
	<b>291 Enterprise Applications Administration Section - MOB</b>					
HP20	Assistant Director of Information Technology	-	1		1	
HP19	Information Technology Manager	-	2		2	
HP11	Administrative Specialist	-	-		1	
TOTAL	Enterprise Applications Administration Section - MOB	-	3	442,526.50	4	503,790.22
	<b>292 Business Applications Unit - MOB</b>					
HP18	Senior Applications Administrator	-	1		1	

Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP17	Webmaster #1	-	1		1	
HP16	Applications Administrator	-	2		2	
HP14	Applications Analyst	-	1		1	
TOTAL	Business Applications Unit - MOB	-	5	585,625.30	5	591,481.56
<b>293</b>	<b>ERP Support Unit - MOB</b>					
HP18	Senior Applications Administrator	-	1		1	
HP17	Senior Systems Programmer #1	-	2		2	
HP16	Applications Administrator	-	1		1	
HP14	Applications Analyst	-	2		2	
TOTAL	ERP Support Unit - MOB	-	6	688,143.82	6	700,562.95
<b>294</b>	<b>Enterprise GIS Support Unit - MOB</b>					
HP18	Senior Applications Administrator	-	1		1	
HP16	Applications Administrator #2 (GIS Analyst) (New Grade HP14)	-	2		2	
HP14	GIS Analyst	-	2		2	
TOTAL	Enterprise GIS Support Unit - MOB	-	5	553,971.60	5	559,511.31
<b>295</b>	<b>Applications Development Unit - MOB</b>					
HP18	Senior Applications Developer	-	1		1	
HP16	Applications Administrator	-	1		1	
HP16	Applications Developer	-	1		1	
HP14	Applications Analyst	-	1		1	
TOTAL	Applications Development Unit - MOB	-	4	382,190.12	4	386,012.01
<b>296</b>	<b>Enterprise Database Support Unit - MOB</b>					
HP18	Senior Database Administrator	-	1		1	
HP16	Data Base Analyst II	-	2		-	
HP16	Database Administrator	-	-		2	
TOTAL	Enterprise Database Support Unit - MOB	-	3	370,265.22	3	373,967.88
<b>291</b>	<b>Administrative Section</b>					
HP20	Assistant Director of Information Technology	1	-		-	
HP18	Systems Analyst	2	-		-	

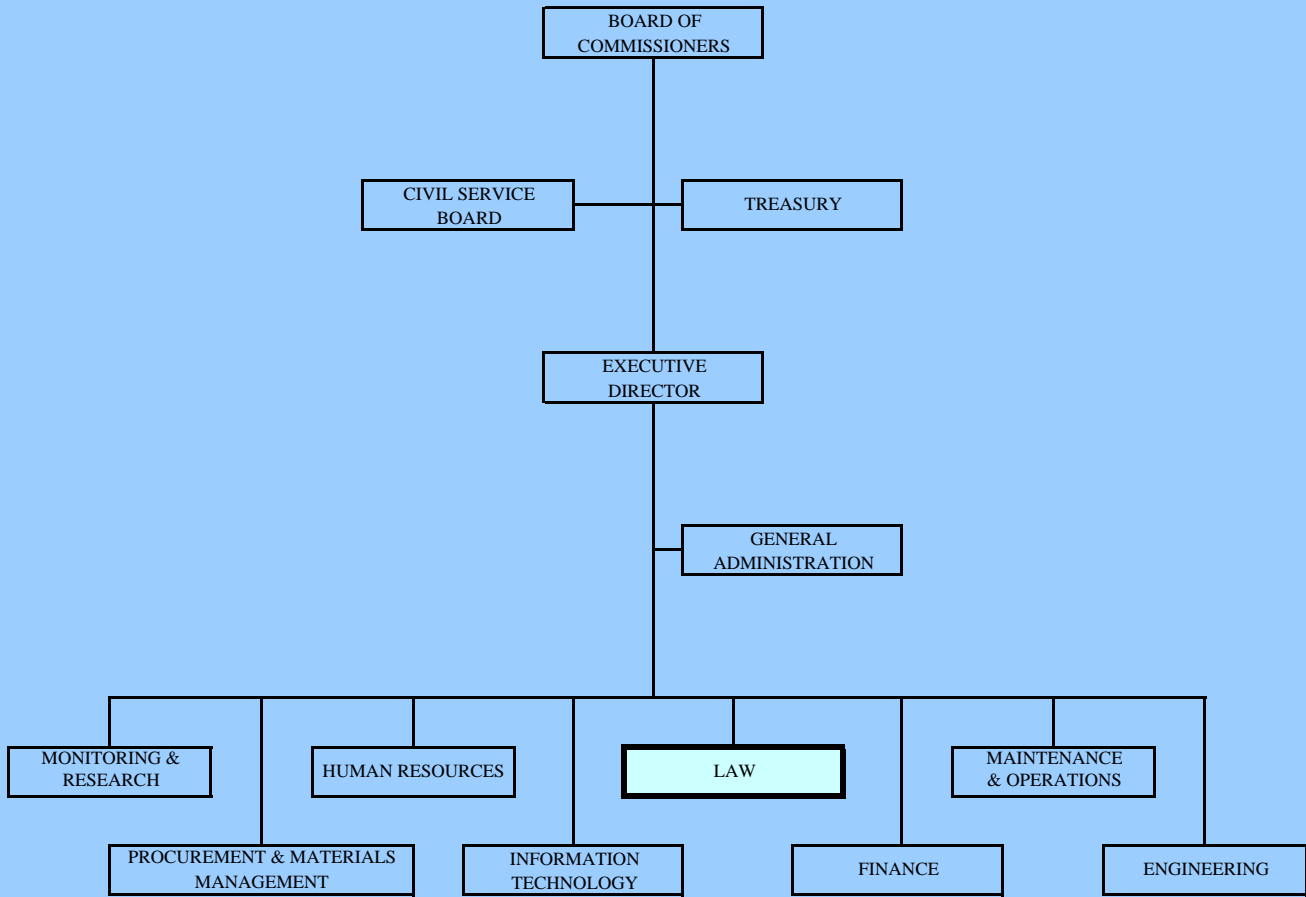
Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	1	-		-	
TOTAL	Administrative Section	4	-	-	-	-
	<b>299 Application Development Section</b>					
	<b>292 Database Support Unit</b>					
HP16	Database Analyst	1	-		-	
HP14	Programmer	1	-		-	
TOTAL	Database Support Unit	2	-	-	-	-
	<b>293 Enterprise System Support Unit</b>					
HP18	Systems Analyst	1	-		-	
HP17	Webmaster	1	-		-	
HP16	Senior Programmer Analyst	1	-		-	
HP14	Programmer	1	-		-	
TOTAL	Enterprise System Support Unit	4	-	-	-	-
	<b>294 LIMS Unit</b>					
HP16	Database Analyst	1	-		-	
HP16	Senior Programmer Analyst	2	-		-	
HP14	Programmer	1	-		-	
TOTAL	LIMS Unit	4	-	-	-	-
	<b>295 Special Projects Unit</b>					
HP19	Supervising Systems Analyst	1	-		-	
HP18	Systems Analyst	1	-		-	
HP16	Senior Programmer Analyst	3	-		-	
TOTAL	Special Projects Unit	5	-	-	-	-
	<b>296 Applications Systems Support Unit</b>					
HP18	Senior Computer Systems Administrator	1	-		-	
HP17	Senior Systems Programmer	3	-		-	
TOTAL	Applications Systems Support Unit	4	-	-	-	-
	<b>297 Geographic Information Systems Unit</b>					
HP18	Systems Analyst	1	-		-	



Fund: Corporate Dept: Information Technology Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP17	Computer Systems Administrator	1	-		-	
HP16	Senior Programmer Analyst	1	-		-	
HP14	Programmer	1	-		-	
TOTAL	Geographic Information Systems Unit	4	-	-	-	-
TOTAL	Application Development Section	23	-	-	-	-
TOTAL	Enterprise Applications Division - MOB (formerly IT Application Development Division)	27	26	3,022,722.56	27	3,115,325.93
TOTAL	Information Technology	63	76	8,730,119.58	75	8,631,448.70

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

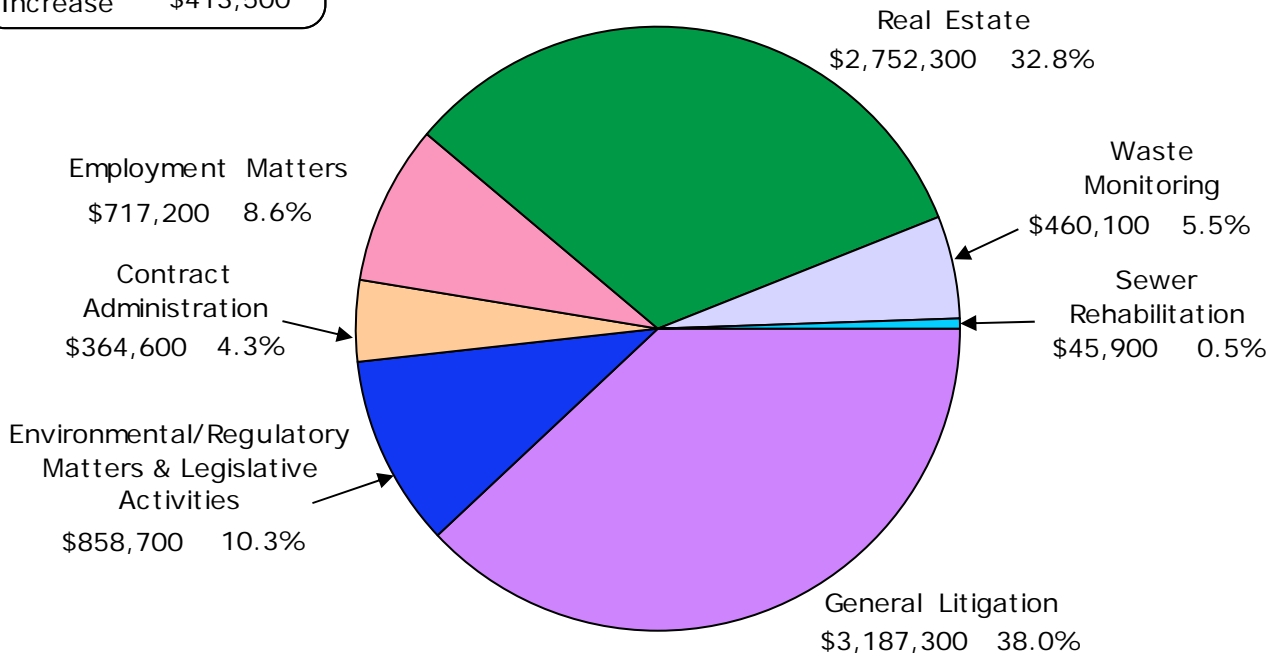
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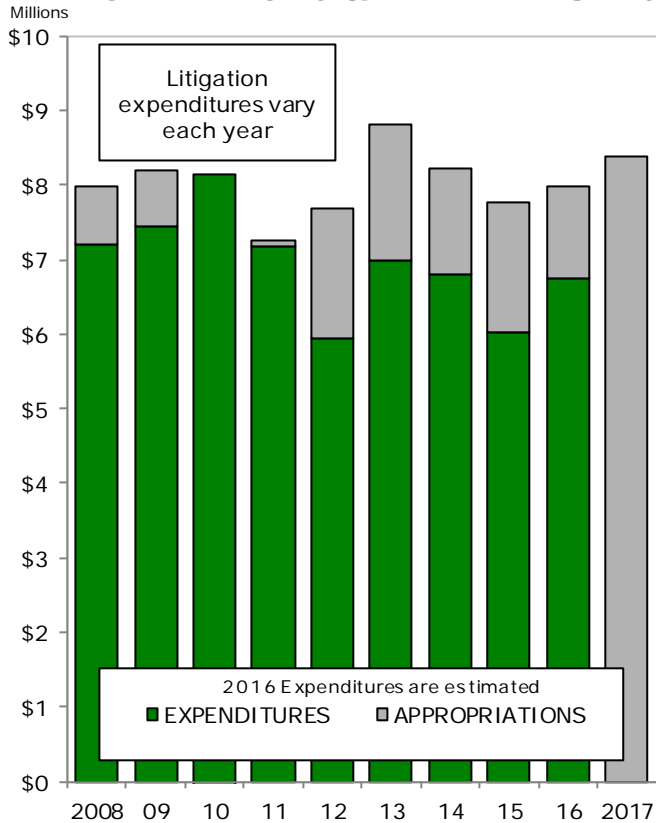
# LAW

## FUNCTIONS

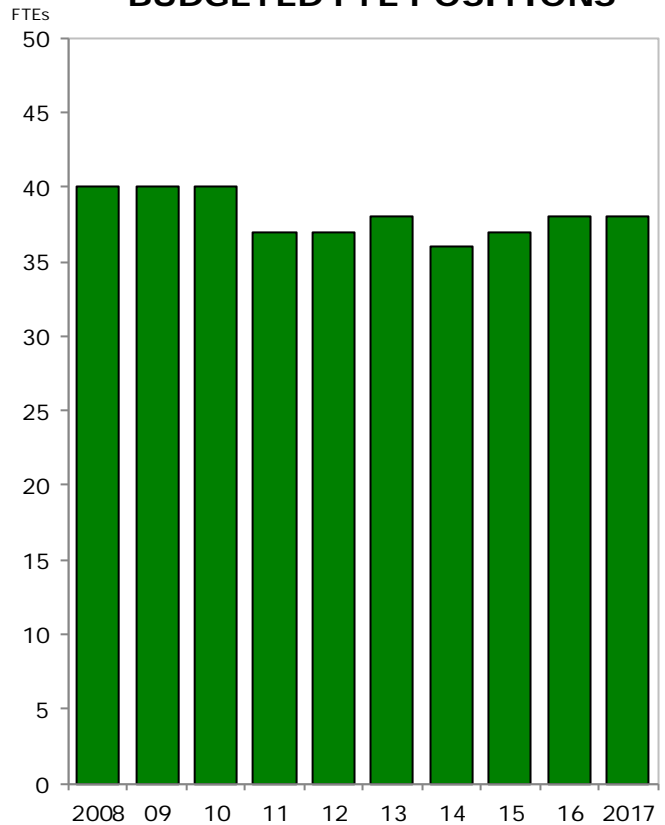
2017	\$8,386,100
2016	\$7,972,600
Increase	\$413,500



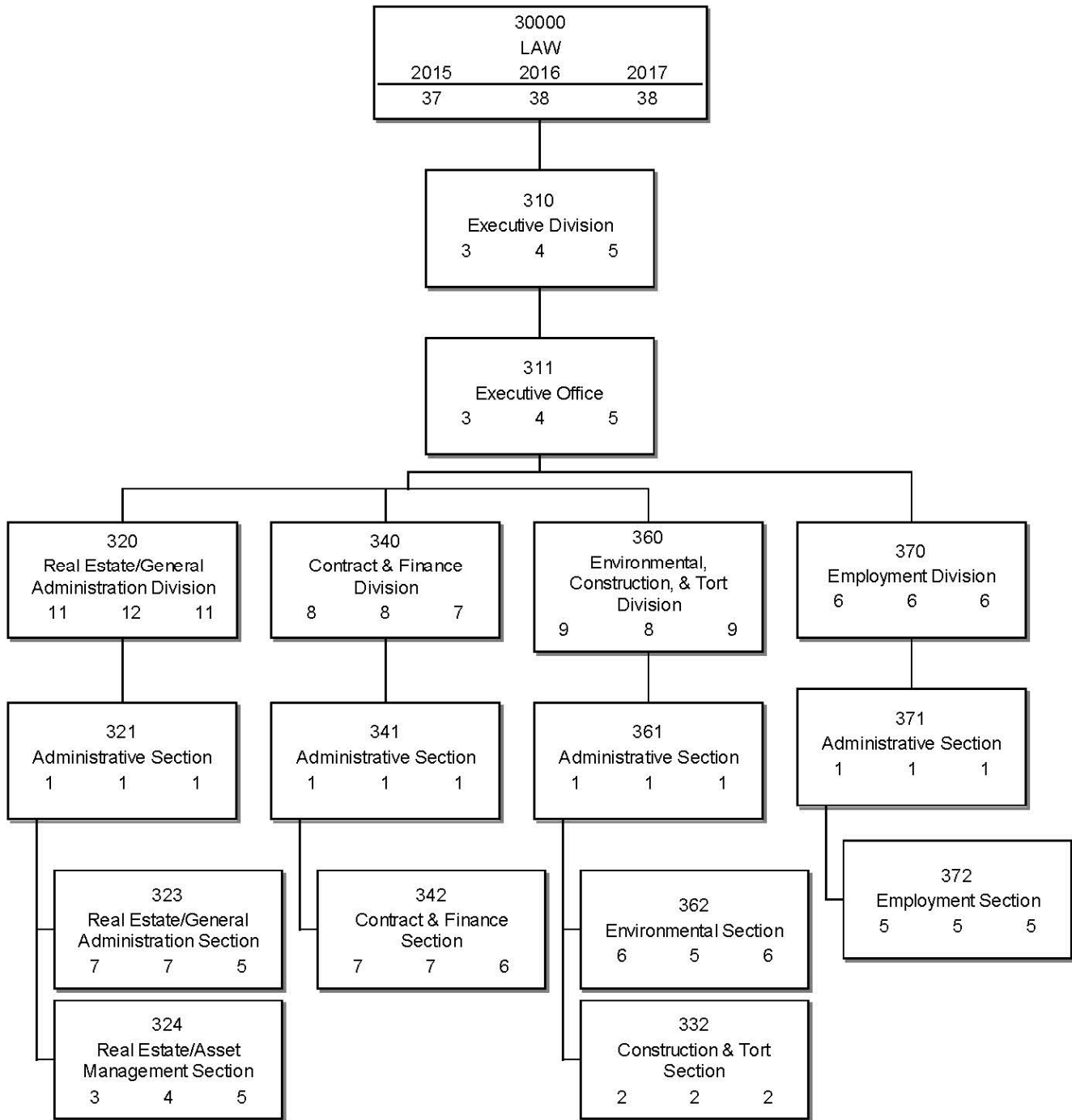
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# LAW



## LAW

**The mission of the Law Department is to provide high quality cost-effective legal counsel, representation, litigation and transactional services, and real estate administration services to the District.**

### Departmental Summary

The department's primary responsibilities include:

- Providing legal counsel to the Board of Commissioners, Executive Director, and department heads;
- Working with other departments to implement initiatives;
- Ensuring compliance with laws, regulations, and ordinances applicable to the District;
- Performing all necessary legal actions regarding environmental, tort, contractual, financial, employment, municipal, and real estate matters, including litigation;
- Representing the District in administrative hearings, arbitration, and litigation at the trial and appellate levels in state and federal courts;
- Administering approximately 24,000 acres of District real estate.

### Summary of 2016 Accomplishments

- Processed 492 Freedom of Information Act requests;
- Successfully implemented the Rain Barrel Program involving partnerships with multiple municipalities and non-governmental organizations that resulted in achieving compliance with a key component of green infrastructure requirements of Consent Decree, including negotiating 70 Intergovernmental Agreements and Memoranda of Understanding in 2016;
- Provided extensive legal counsel in connection with the implementation of numerous stormwater management projects under the District's Watershed Management Ordinance and Flood-Prone Property Acquisition policy, including the negotiation of 30 agreements;
- Persuaded the Illinois Supreme Court to reverse the Illinois Appellate Court's answer to a certified question under the Takings Clause of the Illinois Constitution, overturning the decisions of both the trial and appellate courts and providing much needed guidance as to the elements necessary for temporary flooding to be considered compensable under the Illinois Takings Clause;
- Successfully negotiated an Intergovernmental Agreement with the Cook County Sheriff's Office to expand the network of sites in the District where residents can dispose of unused pharmaceutical drugs, in an effort to reduce the risk of contamination of the Chicago Area Waterway System in a safe and environmentally sound manner;
- Worked with the Maintenance & Operations and Procurement & Materials Management Departments to enhance the District's progressive approach to energy management, including procuring an aggressive curtailment program in which the District will be compensated for its cooperation in stabilizing the grid and the competitive sale of renewable energy credits generated at Lockport Powerhouse;
- Participated in and provided legal services to the Treasury Section in the 2016 bond sale that achieved savings in excess of \$120 million of future debt service;
- Assisted the Human Resources Department in improving the Tuition Reimbursement Program by implementing recommended policy and procedural amendments;
- Drafted and worked to obtain passage of a comprehensive new Resource Recovery Ordinance, which provides the legal framework for the District's resource recovery initiatives;
- Completed a Land Acquisition Manual to establish a uniform procedure for land acquisition by the District, including allied functions such as preparation of right-of-ways and relocation assistance.

### Budget Highlights

The 2017 appropriation for the Law Department is \$8,386,100, an increase of \$413,500, or 5.2 percent, from 2016. The staffing level remains at 38 positions which includes the addition of one Head Assistant Attorney position and two Assistant Attorney positions offset by a drop of two Legal Assistant positions and one Administrative Specialist position. The two Assistant Attorney positions will only be filled in the event that funding becomes available.

Significant features of the 2017 budget are:

- Develop a partnership with the City of Chicago to implement a pilot program to study and test the effectiveness of various residential basement backup protection devices;
- Increase real estate lease and easement income to approximately \$19,000,000;
- Continue to enhance efficiency and transparency of Civil Service Board proceedings by developing a proposed Standing Order regarding case procedures.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

**• Add Value**

The Law Department will administer a cost-effective real estate program. The Real Estate/General Administration Division has continued to pursue a multi-pronged approach to the administration of District lands not currently required for its corporate purposes. This balanced program seeks to maximize rental income in those instances where District land is made available for private use in accordance with state law, incorporate green infrastructure into leases whenever possible, improve the aesthetics of and create greater opportunity for public access and use of District land located along its waterways, and ensure the protection of District lands including, but not limited to, environmental remediation.

The District’s rental revenues continue to increase, while efforts to re-lease expired and remediated leaseholds at higher rentals continue. While maximizing rentals from private use of District land, the Real Estate/General Administration Division has remained committed to improving the aesthetics, public access, and public recreational opportunities along its waterways. Toward that end, the District continues to lease some of its land, for a nominal fee, to local park districts, the Forest Preserve District, and municipalities for the specific purpose of providing the general public with greater access to recreational opportunities along the waterways.

The Law Department evaluates a variety of contracts and agreements for the acquisition of equipment, labor, software, construction, and professional services. The different categories include sole source, furnish and deliver, emergency matters, as well as maintenance. The dollar amounts of the agreements reviewed range from the thousands to the hundreds of millions. The agreements also vary in complexity. The Contract Division reviews approximately 100 agreements per year. The average number of workdays to review all contracts, from the fairly routine to the more complex, is approximately eight workdays. While the overall goal is to review and comment on all contracts within the time frame requested by the operating department, the Law Department is striving to further reduce the average turnaround time.

**• Excellence**

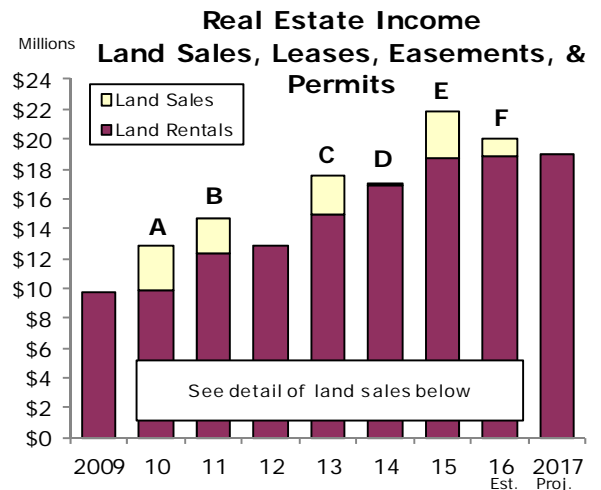
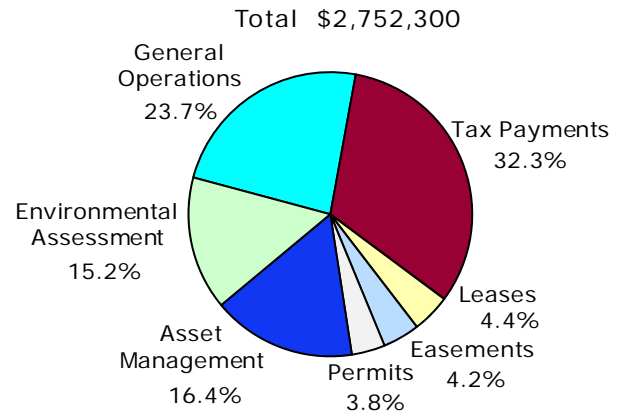
The Law Department employs multiple-tactic strategies to achieve optimal results for the District in the legal arena. First, by making sure the District maintains compliance with all applicable laws, we keep claim filings low. We continually counsel, train, and advise management as to best practices. When potential claims do arise, we assess the potential liability and costs and recommend actions to resolve them or maximize the District’s position. If litigation cannot be avoided, we use all tools at our disposal to obtain dismissal or summary judgment, negotiate favorable settlements, or if necessary, to prevail at trial. If necessary, we will pursue our cases all the way to the Supreme Court. Our careful preparation, skill, resource management, risk management, and determination allow the District to take the most advantageous route to accomplish its goals at the lowest possible cost.

**• Resource Recovery**

In 2017, the Law Department will continue the implementation of the District’s Resource Recovery Plan by assisting the technical departments in the administration of the District’s new Resource Recovery Ordinance. The ordinance outlines the District’s program to sell or otherwise dispose of recovered resources or renewable energy resources resulting from the operation of District facilities. The Law Department will provide counsel and continuous support to the District’s Board of Commissioners, technical, and financial professionals in connection with various exciting renewable energy initiatives that will enable the District to achieve its goal of energy neutrality by 2023.

One example of a specific resource recovery effort for which the Law Department will provide legal oversight is the Biogas Renewable Energy Project at the Calumet Water Reclamation Plant, for the design and construction of facilities for the

**2017 Real Estate Program Budget**



A	60.0 acres sold in Will County
B	315.26 acres sold in Will County
C	326.4 acres sold in Will County
D	5.9 acres sold in Cook County
E	4.2 acres sold to the IL State Toll Authority
F	4.4 acres sold to the City of Chicago

beneficial use of digester gas. This project seeks to maximize the production of clean biogas (methane) for eventual sale to a natural gas utility. Through this legally complex resource recovery initiative, naturally occurring byproducts of the District's anaerobic digestion process will be utilized in the creation of a renewable energy resource that is economically beneficial, energy efficient, and environmentally responsible.

Another component of this effort is negotiation by the Law Department of an agreement with an organic waste supply manager who will furnish and deliver sufficient quantities of high strength liquid waste to the District to be utilized in the District's Biogas Renewable Energy Project, as well as negotiating an agreement to furnish and deliver sufficient quantities of a liquid carbon product to aid in the biological removal of phosphorus from the District's effluent water.

The Law Department will also support the District's efforts to beneficially reuse biosolids that are a byproduct of the District's wastewater treatment operations. Specifically, the Law Department will assist the technical departments in taking steps towards transforming biosolids into a marketable soil amendment that can be sold in Illinois.

### • **Develop Employees**

The Law Department encourages employees to attend professional development conferences and seminars, as well as to complete eLearning courses and wellness programs that are beneficial to the District. In addition, access to continuing legal education webinars is offered through an economical subscription package. The Law Department will continue to support the Human Resources Department in the legal aspects of the Tuition Reimbursement Program policy and procedures. Internally, the Law Department will enhance its onboarding procedure and develop orientation materials for staff new to the department, including the professional competency training plan it has established. We will also resume our intradepartmental seminar series to further enhance employee development.

### • **Leading Partnerships**

In 2017, the Law Department will work with numerous local governments and non-governmental organizations and community groups in Cook County to draft, review, and negotiate various types of Intergovernmental Agreements for projects that fulfill the District's stormwater management and flood control legislative mandate, including both regional and local stormwater management capital projects, green infrastructure, and the acquisition and removal of repetitive loss flood-prone properties. Additionally, in order to continue implementation of the Resource Recovery Act in 2017, significant cooperation with State of Illinois regulators, such as the Illinois Environmental Protection Agency, the Illinois Pollution Control Board, and the Illinois Department of Natural Resources will be required. The Law Department will partner with the technical departments and the state agencies in the development of such rules and regulations.

The Local Governmental Law Consortium that the Law Department established in 2015 provides a professional network with other local government in-house counsel in Cook County. Regular semi-annual meetings have been conducted and the Local Government Law Consortium is currently comprised of sixteen public bodies, including eight Cook County municipalities, the City of Chicago Corporation Counsel, City of Chicago Department of Water Management, City Colleges, Chicago Housing Authority, Forest Preserve District of Cook County, Metropolitan Pier and Exposition Authority, and the Public Building Commission of Chicago. The Law Department will continue its leadership role in the organization through active participation in planning meetings, giving presentations on various legal topics, and ongoing recruitment of new members.

### • **Technology**

The mapping portion of the Geographic Information System (GIS) was completed in December 2016 and is now online on the District's website. When the remainder of the system is finished, it will provide a complete real estate inventory, information, and tracking system for District-owned real estate. It will include pertinent data and visuals for every parcel of real estate owned by the District, along with information concerning occupancy agreements, such as leases, easements, and permits. The GIS will enable staff to efficiently track work assignments and compliance with the terms of occupancy agreements and will enhance the Finance Department's ability to collect rents. The remaining portion of GIS is anticipated to be brought online at the end of the first quarter of 2017.

The Law Department will continue to utilize electronic filing options before both the federal and state courts and the newly expanded electronic filing options available before the Equal Employment Opportunity Commission and the Illinois Pollution Control Board. In accordance with our goals to become paperless and efficient, we will continue to monitor and stay abreast of additional electronic filing options currently being developed by the Circuit Court of Cook County and other state and local agencies to be able to utilize them as they become available.

Additionally, all the Law Department's claims data is now tracked electronically within our Legal Files Document Management System and can be readily reported on-demand to the Human Resources Department. This year the Law Department's electronic claims data report will be able to be directly utilized and imported by the Human Resources Department's Origami Risk Management System. The Risk Management Information System (RMIS) will integrate relevant case data tracked by the Law Department in our case management software, specifically for RMIS purposes. This RMIS information being tracked by the Law Department's case management software will be an essential component used to analyze and report on risk and exposure data arising from the litigation of claims.



**30000 LAW**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Provide prosecution, defense, and appellate services in litigation. Provide other direct legal services and counseling, as necessary, to the Board of Commissioners, the Executive Director, and the Officers of the District to further the corporate purposes and protect the interests of the District.	\$ 3,187,300	38.0%
2. Handle all environmental matters and monitor all state legislation and legislative activities.	\$ 858,700	10.3%
3. Work with other departments to manage legal aspects of employment-related matters and litigation before the Civil Service Board and in the state and federal courts.	\$ 717,200	8.6%
4. Provide for the administration of all vacant and unoccupied District real estate; administer the leasing and disposition or other use of District real estate when not presently needed for its corporate purposes; assist in and administer the acquisition of right-of-way for District construction and capital improvement projects and other corporate uses; administer environmental and remediation activities; supervise real estate tax litigation; provide assistance in developing and processing the real estate agenda for meetings of the Board of Commissioners.		
Through its leasing and easement grant activities, the Real Estate Division will generate approximately \$19 million in income in 2017.	\$ 2,752,300	32.8%
5. Provide legal services to ensure the proper disposal of wastes through the sewer systems in the Chicagoland area; oversee the diversion of water from Lake Michigan for water quality services; provide legal representation, counseling, and administrative support in connection with enforcement of the Sewage and Waste Control Ordinance, Watershed Management Ordinance, and User Charge Ordinance of the District.	\$ 460,100	5.5%
6. Review proposed contracts, execute awarded contracts, review bond surety and insurance matters, and process Freedom of Information Act requests.	\$ 364,600	4.3%
7. Sewer Rehabilitation. Upon referral from the Engineering Department, the Law Department conducts administrative hearings to enforce compliance with the Watershed Management Ordinance.	\$ 45,900	0.5%
<b>Total</b>	<b>\$ 8,386,100</b>	<b>100.0%</b>

**MEASURABLE GOALS:**

	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. Revise lease procedures and policies to enhance the marketability of District real estate while increasing the use of green infrastructure.	Millions	\$18.7	\$18.8	\$19.0
2. Conduct training for managers and supervisors at four District locations on legal issues including record keeping and attorney-client privilege.	Training Sessions	5	2	2
3. Implement the Geographic Information Systems for Real Estate Inventory, Information, and Tracking.		Phase II	Mapping Portion Completed	Total GIS Completed
4. Complete the acquisition of approximately 175 properties for proposed channel improvements along Addison Creek in the municipalities of Northlake, Melrose Park, Stone Park, Bellwood, and Broadview.	Percentage	-	25%	75%

**30000 LAW**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent	
1571	Local Sewer Rehabilitation Ordinance Enforcement Activity	\$ 44,402	2017 1	\$ 45,900	\$ 500	1.1	
			2016 1	\$ 45,400			
4660	Waste Monitoring	\$ 490,073	2017 3	\$ 460,100	\$ (140,800)	(23.4)	a)
			2016 4	\$ 600,900			
7350	General Litigation	\$ 3,288,031	2017 21	\$ 5,061,400	\$ 448,500	9.7	b)
			2016 20	\$ 4,612,900			
7360	Real Estate Operations	\$ 2,195,729	2017 13	\$ 2,752,300	\$ 104,100	3.9	c)
			2016 13	\$ 2,648,200			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 66,400	\$ 1,200	1.8	
			2016 -	\$ 65,200			
Totals		\$ 6,018,235	2017 38	\$ 8,386,100	\$ 413,500	5.2%	
			2016 38	\$ 7,972,600			

- a) Decrease is due to the reallocation of salaries to more accurately reflect current activities (\$124,700).
- b) Increase is due to the optimization of outside professional services of special counsel for environmental matters (\$365,300), the addition of one Head Assistant Attorney position (\$172,500), anticipated payments for retirements (\$62,000), and an increase in court reporting services (\$40,000), offset by the reduction of outside professional services of legal counsel for employment matters (\$165,300) and court exhibits copying costs (\$15,000).
- c) Increase is due to an increase in real estate taxes (\$70,000) and anticipated payments for severance and retirements (\$34,000).

**30000 LAW**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1571	Local Sewer Rehabilitation Ordinance Enforcement Activity	Cases	19	19	19	
		Cost	\$ 44,402	\$ 45,400	\$ 45,900	
		Cost/Case	\$ 2,336.95	\$ 2,389.47	\$ 2,415.79	
4660	Waste Monitoring					
	Provide Legal Representation and Administrative Support for:					
4662	User Charge Ordinance - Tax-Exempt Users	Cases	7	6	7	
		Cost	\$ 10,774	\$ 48,400	\$ 51,200	
		Cost/Case	\$ 1,539.14	\$ 8,066.67	\$ 7,314.29	
4663	User Charge - Large Commercial/Industrial Users	Cases	28	20	20	
		Cost	\$ 241,394	\$ 262,600	\$ 226,500	
		Cost/Case	\$ 8,621.21	\$ 13,130.00	\$ 11,325.00	
4667	Sewage and Waste Control Ordinance - Significant Industrial Users (SIUs)	Cases	4	8	8	
		Cost	\$ 237,905	\$ 289,900	\$ 182,400	a)
		Cost/Case	\$ 59,476.25	\$ 36,237.50	\$ 22,800.00	
7350	General Litigation					
	Provide Prosecution and Defense Services to Protect the Interests of the District:					
7351	Legislative	Cost	\$ 98,915	\$ 104,100	\$ 175,200	b)
7352	Financial Matters	Cost	\$ 100,385	\$ 101,600	\$ 154,100	b)
7353	Environmental and Regulatory Matters	Cost	\$ 489,061	\$ 541,800	\$ 683,500	b)
7354	Contract Administration	Cost	\$ 496,650	\$ 403,400	\$ 364,600	
7355	Litigation	Cost	\$ 819,494	\$ 1,761,100	\$ 2,138,500	c)
7356	Employment Matters	Cost	\$ 589,164	\$ 893,300	\$ 717,200	d)
7359	General Legal Services	Cost	\$ 694,362	\$ 807,600	\$ 828,300	

- a) Decrease is due to the reallocation of salaries to more accurately reflect current activities (\$108,300).
- b) Increase is due to the addition of one Head Assistant Attorney position (\$172,500) and the reallocation of salaries to more accurately reflect current activities (\$92,800).
- c) Increase is due to the optimization of outside professional services of special counsel for environmental matters (\$365,300) and an increase in court reporting services (\$50,000), offset by the reduction of court exhibits copying costs (\$15,000).
- d) Decrease is due to the reduction of outside professional services of legal counsel for employment matters (\$165,300) and the reduction of court reporting services (\$10,000).

**30000 LAW**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7360	Real Estate Operations					
	Provide Administration of All District Land:					
7361	Real Estate Leases - Administration of Leases and Granting of Leases	Leases	166	176	176	
		Cost	\$ 114,197	\$ 148,700	\$ 120,200	e)
		Cost/Lease	\$ 687.93	\$ 844.89	\$ 682.95	
7362	Real Estate Easements - Administration of Easements and Granting of New Easements	Easements	369	369	371	
		Cost	\$ 130,213	\$ 152,400	\$ 115,500	e)
		Cost/Easement	\$ 352.88	\$ 413.01	\$ 311.32	
7363	Real Estate Permits - Administration of Permits and Granting of New Permits	Permits	78	80	80	
		Cost	\$ 124,443	\$ 150,200	\$ 104,500	e)
		Cost/Permit	\$ 1,595.42	\$ 1,877.50	\$ 1,306.25	
7367	Real Estate Asset Management - Administer Plan to Increase Revenue by Lease/Sale of Real Estate Holdings	Cost	\$ 402,789	\$ 437,900	\$ 450,200	
7368	Real Estate Environmental Assessment - Administer Activities Related to Environmental Assessment and Remediation of Real Estate Holdings	Cost	\$ 200,120	\$ 346,900	\$ 419,800	f)
7369	Other Real Estate Operations, Including Development of Agenda, Providing Information, Tax Litigation, and Support Services to the Board of Commissioners	Cost	\$ 481,281	\$ 592,100	\$ 652,100	
	Payment of Real Estate Taxes	Cost	\$ 742,686	\$ 820,000	\$ 890,000	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 65,200	\$ 66,400	
		Total	\$ 6,018,235	\$ 7,972,600	\$ 8,386,100	

e) Decrease is due to the reallocation of salaries to more accurately reflect current activities.

f) Increase is due to the reallocation of salaries to more accurately reflect current activities.

101 30000	Fund: Corporate Department: Law Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 4,455,446	\$ 5,025,500	\$ 5,023,500	\$ 4,650,000	\$ 5,124,600	\$ 5,124,600	\$ 5,044,700
601060	Compensation Plan Adjustments	12,175	47,500	47,500	33,800	101,900	101,900	142,600
601070	Social Security and Medicare Contributions	-	65,200	67,200	67,200	66,400	66,400	66,400
601100	Tuition and Training Payments	12,218	14,000	14,000	13,000	14,000	14,000	14,000
601170	Payments for Professional Services	687,892	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	5,167,731	5,152,200	5,152,200	4,764,000	5,306,900	5,306,900	5,267,700
612010	Travel	3,510	6,000	6,000	5,000	6,000	6,000	6,000
612030	Meals and Lodging	3,197	7,500	7,500	6,500	7,500	7,500	7,500
612040	Postage, Freight, and Delivery Charges	1,272	1,000	1,000	1,000	1,000	1,000	1,000
612050	Compensation for Personally-Owned Automobiles	1,191	1,200	1,200	1,100	1,200	1,200	1,200
612090	Reprographic Services	1,102	40,000	40,000	25,000	25,000	25,000	25,000
612250	Court Reporting Services	3,508	40,000	40,000	25,000	30,000	30,000	80,000
612430	Payments for Professional Services	-	1,800,000	1,800,000	1,025,000	2,000,000	2,000,000	2,000,000
612490	Contractual Services, N.O.C.	79,467	80,000	80,000	79,000	90,000	90,000	90,000
200	TOTAL CONTRACTUAL SERVICES	93,247	1,975,700	1,975,700	1,167,600	2,160,700	2,160,700	2,210,700
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	4,786	7,000	7,000	5,500	5,000	5,000	5,000
623720	Books, Maps, and Charts	9,219	17,000	17,000	13,700	12,000	12,000	12,000
623990	Materials and Supplies, N.O.C.	566	700	700	700	700	700	700
300	TOTAL MATERIALS AND SUPPLIES	14,571	24,700	24,700	19,900	17,700	17,700	17,700
667130	Taxes on Real Estate	742,686	820,000	820,000	800,000	890,000	890,000	890,000
700	TOTAL FIXED AND OTHER CHARGES	742,686	820,000	820,000	800,000	890,000	890,000	890,000
<b>TOTAL LAW</b>		<b>\$ 6,018,235</b>	<b>\$ 7,972,600</b>	<b>\$ 7,972,600</b>	<b>\$ 6,751,500</b>	<b>\$ 8,375,300</b>	<b>\$ 8,375,300</b>	<b>\$ 8,386,100</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Law Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>310</b>	<b>Executive Division</b>					
<b>311</b>	<b>Executive Office</b>					
EX12	General Counsel	1	1		1	
HP23	Deputy General Counsel	-	1		1	
HP22	Head Assistant Attorney	-	-		1	
EX06	Secretary to Officer	1	1		1	
HP13	Senior Administrative Specialist	1	1		1	
TOTAL	Executive Office	3	4	629,474.56	5	812,762.76
TOTAL	Executive Division	3	4	629,474.56	5	812,762.76
<b>320</b>	<b>Real Estate / General Administration Division</b>					
<b>321</b>	<b>Administrative Section</b>					
HP22	Head Assistant Attorney	1	1		1	
TOTAL	Administrative Section	1	1	216,990.80	1	219,160.71
<b>323</b>	<b>Real Estate / General Administration Section</b>					
HP18	Senior Attorney	1	1		1	
HP15	Senior Legal Assistant	2	2		2	
HP13	Legal Assistant	1	2		-	
HP13	Investigator #2 (Legal Assistant)	1	1		1	
HP11	Administrative Specialist	2	1		1	
TOTAL	Real Estate / General Administration Section	7	7	641,637.10	5	502,483.25
<b>324</b>	<b>Real Estate / Asset Management Section</b>					
HP20	Principal Attorney	1	1		1	
HP18	Senior Attorney	1	1		1	
HP16	Assistant Attorney	-	-		1	
HP13	Legal Assistant	-	1		1	
HP13	Senior Administrative Specialist	1	1		1	
TOTAL	Real Estate / Asset Management Section	3	4	475,192.90	5	583,757.17
TOTAL	Real Estate / General Administration Division	11	12	1,333,820.80	11	1,305,401.13

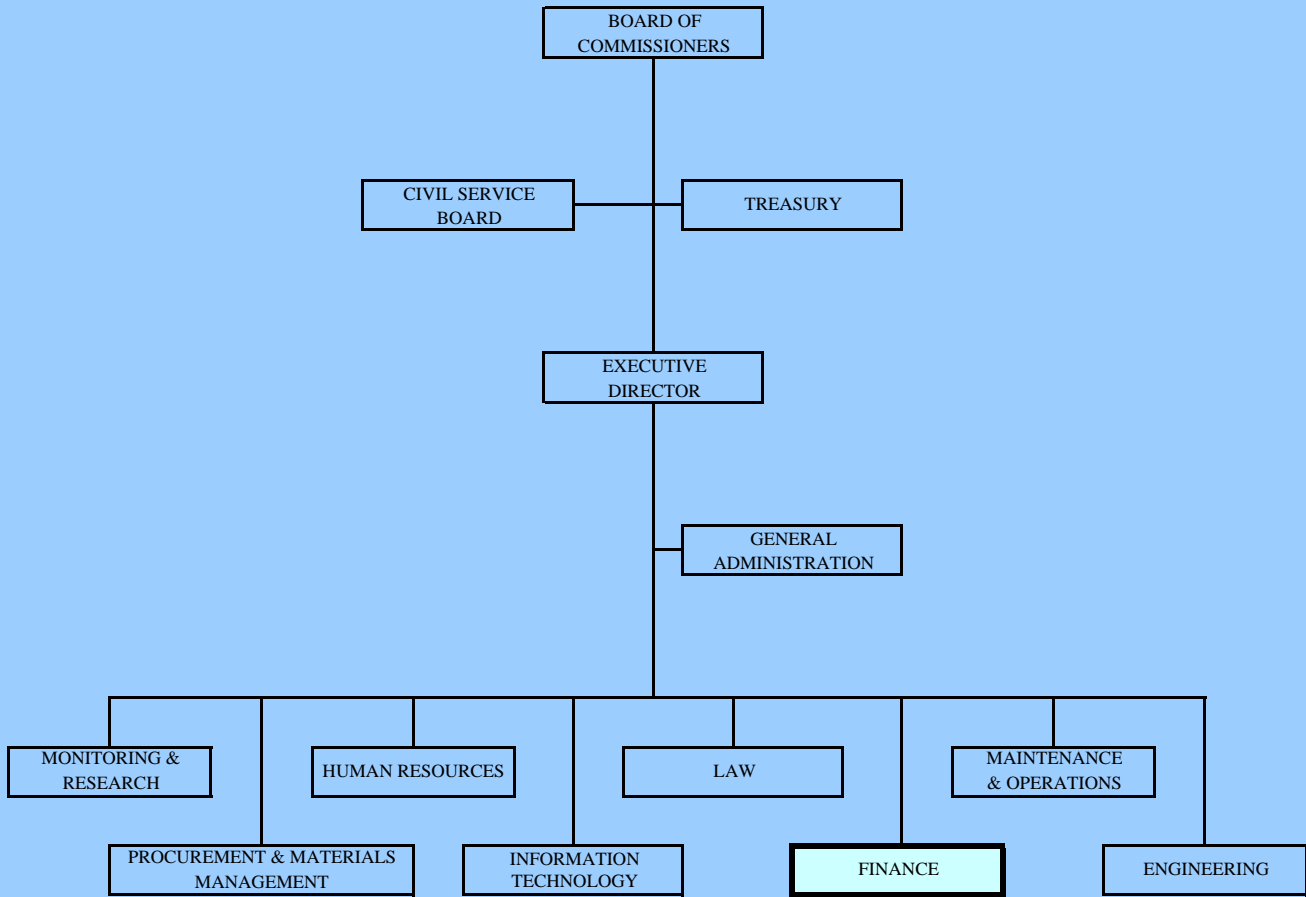
Fund: Corporate Dept: Law Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>340</b>	<b>Contract &amp; Finance Division</b>					
<b>341</b>	<b>Administrative Section</b>					
HP22	Head Assistant Attorney	1	1		1	
TOTAL	Administrative Section	1	1	226,228.86	1	228,491.15
<b>342</b>	<b>Contract &amp; Finance Section</b>					
HP20	Principal Attorney	1	1		1	
HP18	Senior Attorney	2	2		2	
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	1	1		1	
HP15	Senior Legal Assistant	1	1		1	
HP14	Public Affairs Specialist	-	1		1	
HP13	Assistant Public Affairs Specialist #2 (Senior Administrative Specialist)	1	-		-	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
TOTAL	Contract & Finance Section	7	7	869,644.36	6	801,186.53
TOTAL	Contract & Finance Division	8	8	1,095,873.22	7	1,029,677.68
<b>360</b>	<b>Environmental, Construction, &amp; Tort Division</b>					
<b>361</b>	<b>Administrative Section</b>					
HP22	Head Assistant Attorney	1	1		1	
TOTAL	Administrative Section	1	1	226,228.86	1	228,491.15
<b>362</b>	<b>Environmental Section</b>					
HP20	Principal Attorney	1	1		1	
HP18	Senior Attorney	2	2		2	
HP16	Assistant Attorney	-	-		1	
HP13	Legal Assistant	2	1		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	Environmental Section	6	5	585,755.04	6	700,555.59

Fund: Corporate Dept: Law Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>332</b>	<b>Construction &amp; Tort Section</b>					
HP20	Principal Attorney	2	2		2	
TOTAL	Construction & Tort Section	2	2	357,269.38	2	369,041.50
TOTAL	Environmental, Construction, & Tort Division	9	8	1,169,253.28	9	1,298,088.24
<b>370</b>	<b>Employment Division</b>					
<b>371</b>	<b>Administrative Section</b>					
HP22	Head Assistant Attorney	1	1		1	
TOTAL	Administrative Section	1	1	226,228.86	1	228,491.15
<b>372</b>	<b>Employment Section</b>					
HP20	Principal Attorney	1	1		1	
HP18	Senior Attorney	2	2		2	
HP13	Legal Assistant	1	1		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
HP11	Administrative Specialist	-	-		1	
TOTAL	Employment Section	5	5	596,157.64	5	583,489.05
TOTAL	Employment Division	6	6	822,386.50	6	811,980.20
TOTAL	Law	37	38	5,050,808.36	38	5,257,910.01

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.



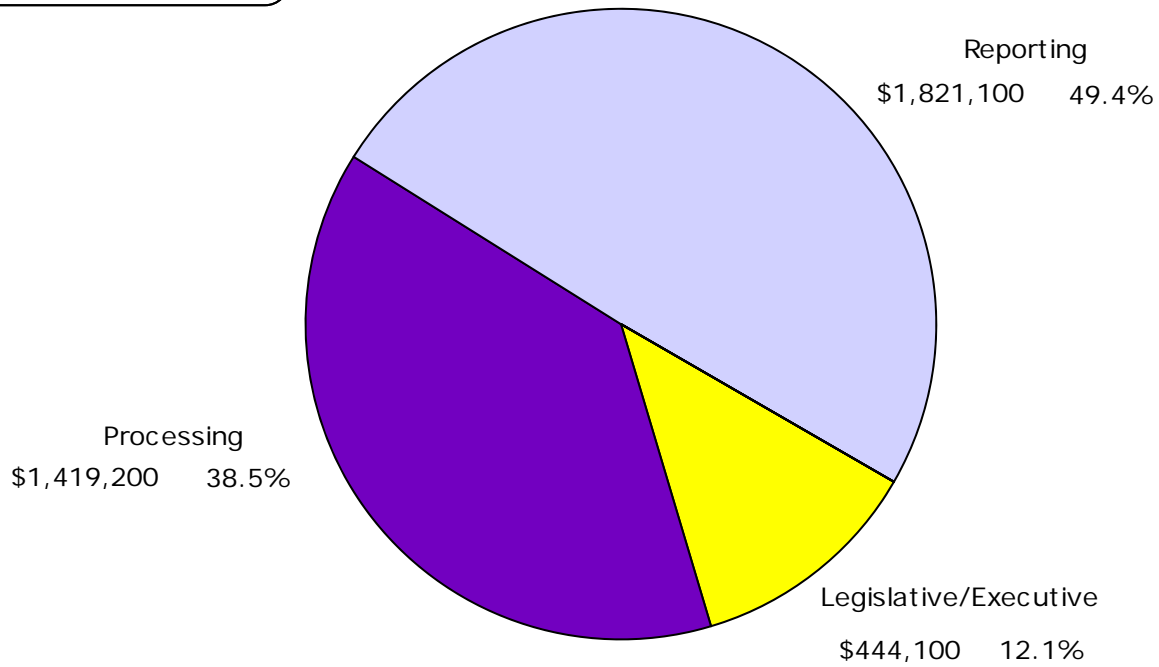
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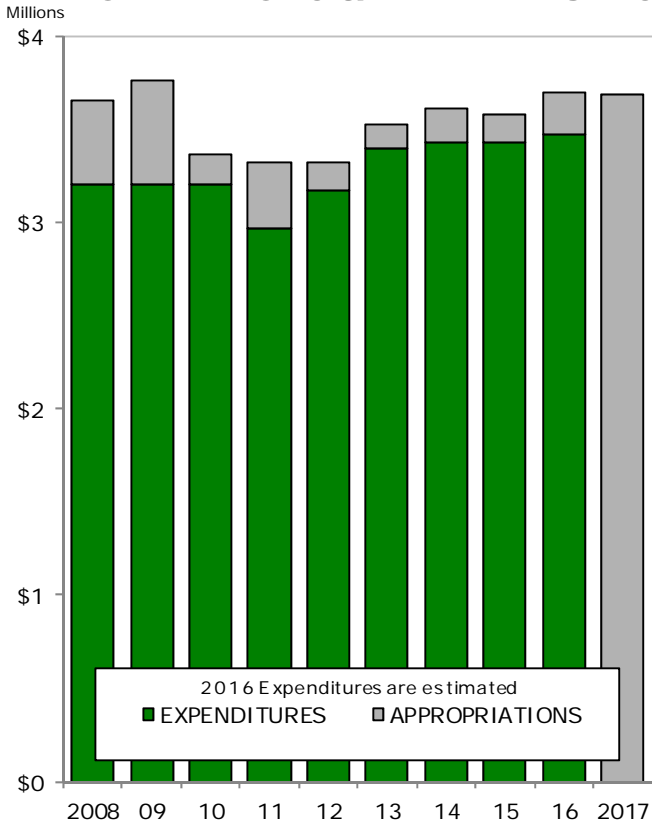
# FINANCE

## FUNCTIONS

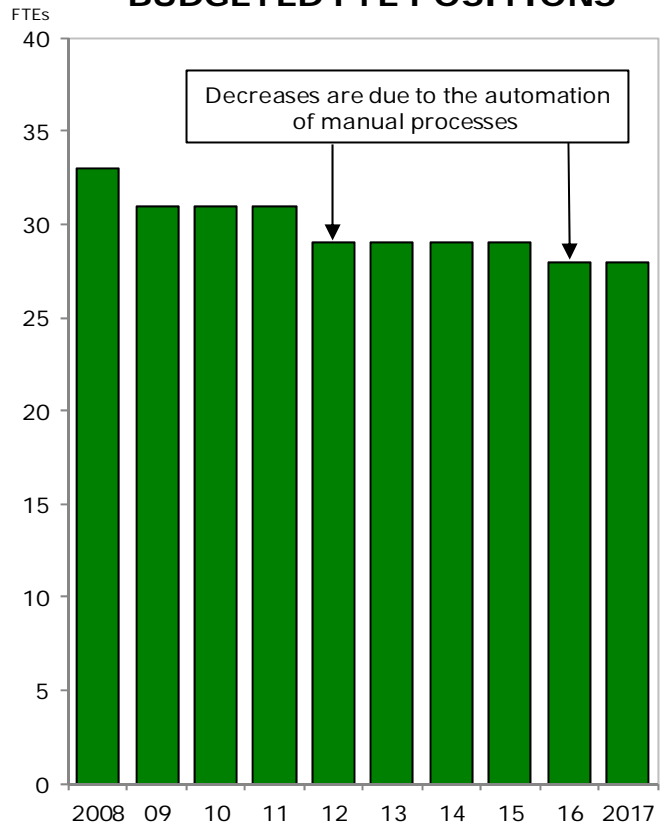
2017	\$3,684,400
2016	\$3,696,300
Decrease	(\$11,900)



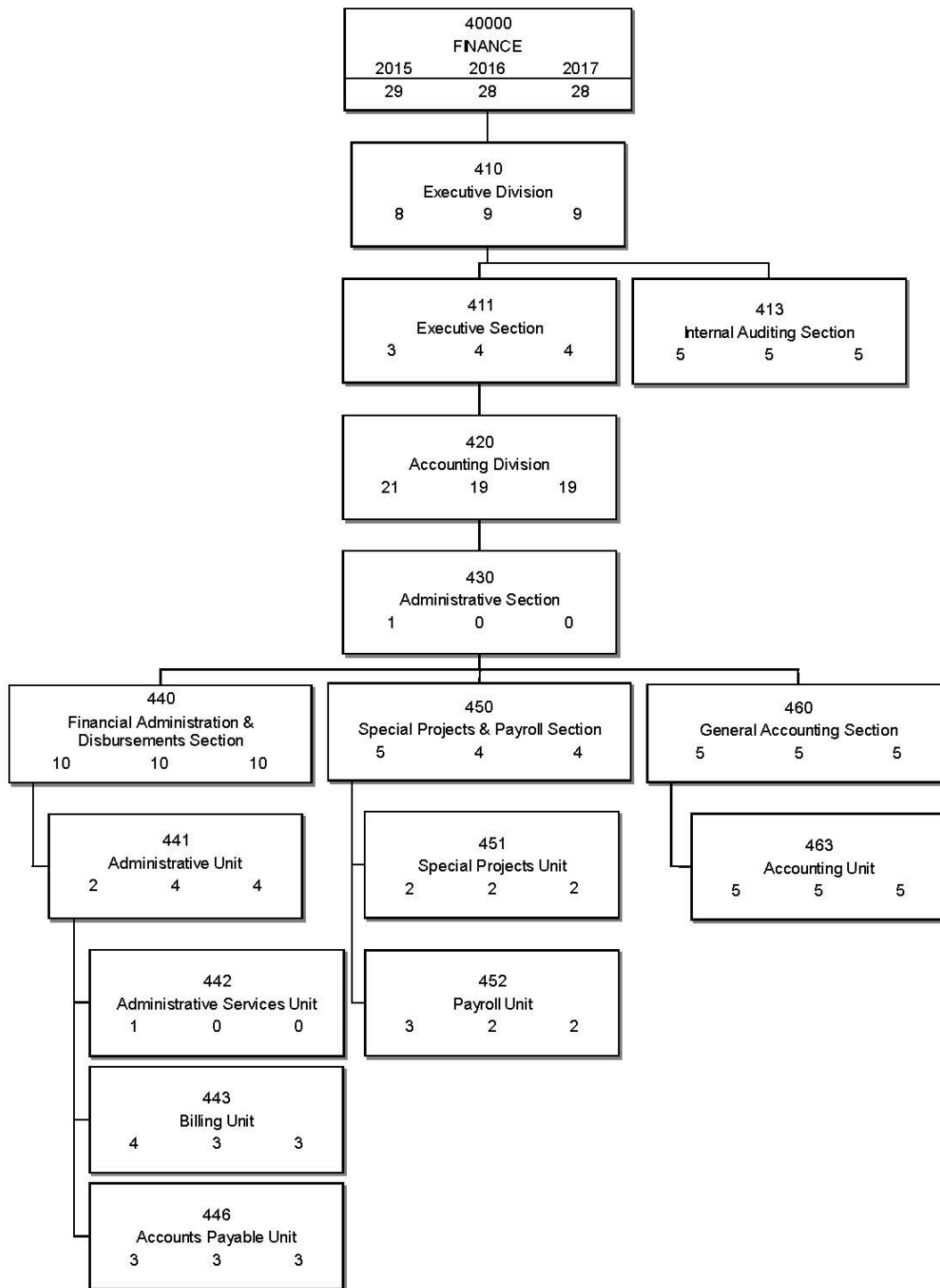
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# FINANCE



## FINANCE

**The mission of the Finance Department is to provide leadership in developing cost saving strategies for transaction processing, optimize operations, provide reliable financial reports, and ensure compliance with all applicable statutes, regulations, professional standards, and policies for the benefit of District stakeholders.**

### Departmental Summary

The Finance Department's primary responsibilities include:

- Audit and report the District's financial information;
- Perform audits of operational performance, compliance, and internal controls;
- Process the District's financial transactions including vendor payments, payroll, billing, and collection activities;
- Create the Board of Commissioners' agendas and minutes and maintain official records of the Board's legislative actions.

Central to the Finance Department's activities is the financial reporting function which enables diverse users to readily assess the District's financial position and the results of its operations. Excellent bond ratings, external auditors' unmodified opinions, and Certificates of Achievement for Excellence in Financial Reporting demonstrate the effectiveness of District fiscal management and financial reporting excellence.

### Summary of 2016 Accomplishments

- The District was presented with the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for the 2015 Comprehensive Annual Financial Report for the 41st consecutive year;
- The District received an unmodified opinion on the fair presentation, in all material aspects, of the District's 2015 financial statements from external auditors. This achievement aids in maintaining the District's excellent bond credit rating;
- Implemented Governmental Accounting Standards Board pronouncement 68, which improved the District's reporting of the pension liability;
- Completed nine planned internal audit projects and four unplanned audits. Internal audits included reviews of the iBid sale process, use of clock override in WorkForce, the procurement questions and answers process, P-Card purchases, permit fees, payroll procedures, whistleblower hotline procedures, and Comprehensive Annual Financial Report internal controls. The audits provided assurance of continued compliance, operating efficiencies, and cost-saving solutions;
- Upgraded the automated time management system to the newest cloud version, which provides the ability to apply system updates directly as well as easier end-user navigation;
- Upgraded the ReadSoft system for processing vendor invoices, which enables supplier-level straight-through processing, greater control over business rules, user-friendly screens, and improved approval workflow notices;
- Assisted the Law Department in the implementation of the new real estate system;
- Continued to improve reporting and financial analysis by implementing analytical tools that track the Finance Department's key performance metrics;
- Continued to administer the District's whistleblower hotline service that is used to improve accountability and transparency for District management, officials, staff, and taxpayers;
- The Finance Department created a series of training seminars to develop employees on various transaction processes and report development. The training seminars help to cross-train and provide employees with broader perspectives.

### Budget Highlights

The 2017 appropriation for the Finance Department is \$3,684,400, a decrease of \$11,900, or 0.3 percent, from 2016. The staffing level remains unchanged at 28 positions.

Significant features of the 2017 Budget are:

- Continue working towards implementation of the SAP accounts receivable module and provide the Treasury Section with a platform for billing, collection, and reporting for the Local Government Assistance Program;
- Assist the Monitoring & Research Department to improve efficiency by enhancing the internet-based Publicly owned treatment works Administration and Compliance System with the addition of the eSurcharge module;
- Pursue safeguarding of the District's legislative permanent records and continue a project to convert approximately 100,000 records to electronic images.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:****• Add Value**

The Finance Department will focus on adding value at every level within the department to improve its interactions with customers and establish interdepartmental service-level agreements. The department plans to develop dashboard reports to provide key statistical data on transaction processing, monitor performance measures, ensure compliance with the Prompt Payment Act for District vendor payments, and ensure timely payment of payroll and other employee expenses.

**• Excellence**

The Finance Department will continue to focus on excellence in delivering services and achieving compliance. The department will continue to obtain an unmodified audit opinion on the District's financial statements, earn the Certificate of Excellence in Financial Reporting from the GFOA, and ensure that all applicable Governmental Accounting Standards Board pronouncements are implemented.

**• Develop Employees**

Employee recognition for excellence will be an ongoing focus for the Finance Department. The department will continue to develop a workforce that is competent, motivated, and adaptive to change. The Finance Department will continue its newly-developed seminar series for cross-training all levels of employees. Institutional knowledge is retained and improved through ongoing training, the utilization of eLearning, the encouragement of tuition reimbursement programs, and the expansion of webinar opportunities.

**• Leading Partnerships**

The Finance Department stays current with government accounting and financial reporting standards by actively participating in GFOA conferences and training, as well as various employees' memberships in the Institute of Internal Auditors and the Certified Public Accountants Society. The department remains current with enterprise and other financial systems by attending SAP conferences and other related webinars. It is equally important for the Finance Department to work closely with the operating departments to understand the changes in processes to meet the reporting needs of operations. Employees are encouraged to attend the Water Environment Federation Technical Exhibition and Conference and partner with operating departments to support the District's mission.

**• Technology**

The Finance Department will continue to embrace technology to reduce transaction processing costs and optimize operations. Plans are underway for the following initiatives:

- Develop quarterly performance measures and dashboard reports;
- Implement the SAP accounts receivable module;
- Enhance the internet-based Publicly owned treatment works Administration and Compliance System and eSurcharge modules to allow users to make payments, file RD-925 forms, and file permit applications online;
- Improve reporting through utilization of the Excel add-on tool for simplification of analyzing and reporting system data.

**40000 FINANCE**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Provide for the processing of all District expenditures, which consist of vendor payments, employee wages, expenses, and fringe benefits. Vendor payments are made in compliance with the Prompt Payment Act. Provide for the accounting, billing and collection of all revenue such as user charge, State Revolving Fund, real estate, and other miscellaneous billings.	\$ 1,419,200	38.5%
2. Provide for the external audit, general accounting, and reporting of financial information (financial statement preparation, fixed assets, cost accounting analysis, general ledger maintenance, and bank account reconciliation). Provide for the independent appraisal and analysis of departmental internal activities approved for internal audit by the Audit Committee.	\$ 1,821,100	49.4%
3. Provide for the preparation of Board meeting agendas and minutes reports and for the documentation, retention, and retrieval of all official records of the Board of Commissioners.	\$ 444,100	12.1%
<b>Total</b>	<b>\$ 3,684,400</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Maintain 100 percent compliance with the Prompt Payment Act.	100%	100%	100%
2. Maintain a 95 percent or better collection rate for user charge and other fees.	95%	95%	95%
3. Complete 95 percent of audits proposed by the Audit Committee.	98%	95%	95%
4. Maintain an unmodified audit opinion on Financial and Single Audit statements and submit all required filings by June 30.	100%	100%	100%

**40000 FINANCE**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
7391	Accounts Payable	\$ 291,172	2017 -	\$ -	\$ (369,700)	(100.0)	a)
			2016 4	\$ 369,700			
7392	Payroll and Employee Expense	\$ 471,571	2017 -	\$ -	\$ (418,800)	(100.0)	b)
			2016 4	\$ 418,800			
7393	Billing and Collections	\$ 304,648	2017 -	\$ -	\$ (380,400)	(100.0)	c)
			2016 4	\$ 380,400			
7394	Transaction Processing	\$ -	2017 14	\$ 1,419,200	\$ 1,419,200	100.0	d)
			2016 -	\$ -			
7399	Accounting and Financial Reporting	\$ 1,030,120	2017 -	\$ -	\$ (1,065,900)	(100.0)	e)
			2016 6	\$ 1,065,900			
7405	Financial System Development	\$ 265,428	2017 -	\$ -	\$ (310,200)	(100.0)	f)
			2016 2	\$ 310,200			
7395	Internal Auditing	\$ 608,771	2017 -	\$ -	\$ (615,300)	(100.0)	g)
			2016 5	\$ 615,300			
7396	Reporting	\$ -	2017 11	\$ 1,770,500	\$ 1,770,500	100.0	h)
			2016 -	\$ -			
7398	Legislative/Executive	\$ 454,413	2017 3	\$ 444,100	\$ (47,500)	(9.7)	
			2016 3	\$ 491,600			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 50,600	\$ 6,200	14.0	
			2016 -	\$ 44,400			
Totals		\$ 3,426,123	2017 28	\$ 3,684,400	\$ (11,900)	(0.3%)	
			2016 28	\$ 3,696,300			

- a) Decrease is due to the transfer of Program Number 7391, Invoices Audited and Processed for Payment, to Program Number 7394, Transaction Processing.
- b) Decrease is due to the transfer of Program Number 7392, Payroll and Expense Accounting, Auditing, and Check Processing Operations, to Program Number 7394, Transaction Processing.
- c) Decrease is due to the transfer of Program Number 7393, Billing and Collections, to Program Number 7394, Transaction Processing.
- d) Increase is due to the transfer of Program Numbers 7391, 7392, and 7393 to the new consolidated Program Number 7394, Transaction Processing.
- e) Decrease is due to the transfer of Program Number 7399, Accounting and Financial Reporting, to Program Number 7396, Reporting.
- f) Decrease is due to the transfer of Program Number 7405, Financial System Development, to Program Number 7396, Reporting.
- g) Decrease is due to the transfer of Program Number 7395, Internal Auditing, to Program Number 7396, Reporting.
- h) Increase is due to the transfer of Program Numbers 7395, 7399, and 7405 to the new consolidated Program Number 7396, Reporting.



**40000 FINANCE**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
7390	Accounting and Auditing					
7391	Invoices Audited and Processed for Payment	Invoices	19,540	24,100	-	a)
		Cost	\$ 291,172	\$ 369,700	\$ -	a)
		Cost/Invoice	\$ 14.90	\$ 15.34	\$ -	a)
7392	Payroll and Expense Accounting, Auditing, and Check Processing Operations	Checks	47,670	47,700	-	b)
		Cost	\$ 471,571	\$ 418,800	\$ -	b)
		Cost/Check	\$ 9.89	\$ 8.78	\$ -	b)
7393	Billing and Collections	Billings	5,600	5,880	-	c)
		Cost	\$ 304,648	\$ 380,400	\$ -	c)
		Cost/Billing	\$ 54.40	\$ 64.69	\$ -	c)
7394	Transaction Processing	Transactions	-	-	73,680	d)
		Cost	\$ -	\$ -	\$ 1,419,200	d)
		Cost/Transaction	\$ -	\$ -	\$ 19.26	d)
7399	Accounting and Financial Reporting	Cost	\$ 1,030,120	\$ 1,065,900	\$ -	e)
7405	Financial System Development	Cost	\$ 265,428	\$ 310,200	\$ -	f)
7395	Internal Auditing	Cost	\$ 608,771	\$ 615,300	\$ -	g)
7396	Reporting	Cost	\$ -	\$ -	\$ 1,770,500	h)
7398	Legislative/Executive	Cost	\$ 454,413	\$ 491,600	\$ 444,100	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 44,400	\$ 50,600	
		Total	\$ 3,426,123	\$ 3,696,300	\$ 3,684,400	

- a) Decrease is due to the transfer of Program Number 7391, Invoices Audited and Processed for Payment, to Program Number 7394, Transaction Processing.
- b) Decrease is due to the transfer of Program Number 7392, Payroll and Expense Accounting, Auditing, and Check Processing Operations, to Program Number 7394, Transaction Processing.
- c) Decrease is due to the transfer of Program Number 7393, Billing and Collections, to Program Number 7394, Transaction Processing.
- d) Increase is due to the transfer of Program Numbers 7391, 7392, and 7393 to the new consolidated Program Number 7394, Transaction Processing.
- e) Decrease is due to the transfer of Program Number 7399, Accounting and Financial Reporting, to Program Number 7396, Reporting.
- f) Decrease is due to the transfer of Program Number 7405, Financial System Development, to Program Number 7396, Reporting.
- g) Decrease is due to the transfer of Program Number 7395, Internal Auditing, to Program Number 7396, Reporting.
- h) Increase is due to the transfer of Program Numbers 7395, 7399, and 7405 to the new consolidated Program Number 7396, Reporting.

101 40000	Fund: Corporate Department: Finance Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 3,008,434	\$ 3,146,400	\$ 3,123,900	\$ 2,970,100	\$ 3,109,600	\$ 3,109,600	\$ 3,133,000
601060	Compensation Plan Adjustments	20,530	61,400	82,900	82,900	57,000	57,000	60,600
601070	Social Security and Medicare Contributions	-	44,400	45,400	45,400	50,600	50,600	50,600
601100	Tuition and Training Payments	27,724	22,700	22,700	22,200	26,000	26,000	26,000
601170	Payments for Professional Services	289,298	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	3,345,986	3,274,900	3,274,900	3,120,600	3,243,200	3,243,200	3,270,200
612010	Travel	1,859	3,100	3,100	3,100	4,100	4,100	4,100
612030	Meals and Lodging	5,567	4,300	4,300	3,600	5,300	5,300	5,300
612040	Postage, Freight, and Delivery Charges	248	3,400	3,400	300	200	200	200
612050	Compensation for Personally-Owned Automobiles	612	600	600	200	600	600	600
612090	Reprographic Services	2,170	1,900	2,300	2,300	2,300	2,300	2,300
612250	Court Reporting Services	40,511	47,800	47,800	47,800	50,000	50,000	50,000
612340	Discount Loss	-	-	-	-	-	-	1,500
612430	Payments for Professional Services	-	321,400	321,400	274,900	324,100	324,100	324,100
612490	Contractual Services, N.O.C.	12,945	25,900	17,400	1,100	1,100	1,100	1,100
612800	Repairs to Office Furniture and Equipment	5,195	5,200	5,300	5,300	5,400	5,400	5,400
200	TOTAL CONTRACTUAL SERVICES	69,106	413,600	405,600	338,600	393,100	393,100	394,600
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	9,709	7,200	13,200	13,200	18,400	18,400	18,400
623720	Books, Maps, and Charts	1,232	600	600	600	1,000	1,000	1,000
623800	Computer Software	-	-	2,000	2,000	-	-	-
623990	Materials and Supplies, N.O.C.	90	-	-	-	200	200	200
300	TOTAL MATERIALS AND SUPPLIES	11,030	7,800	15,800	15,800	19,600	19,600	19,600
TOTAL FINANCE		\$ 3,426,123	\$ 3,696,300	\$ 3,696,300	\$ 3,475,000	\$ 3,655,900	\$ 3,655,900	\$ 3,684,400

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

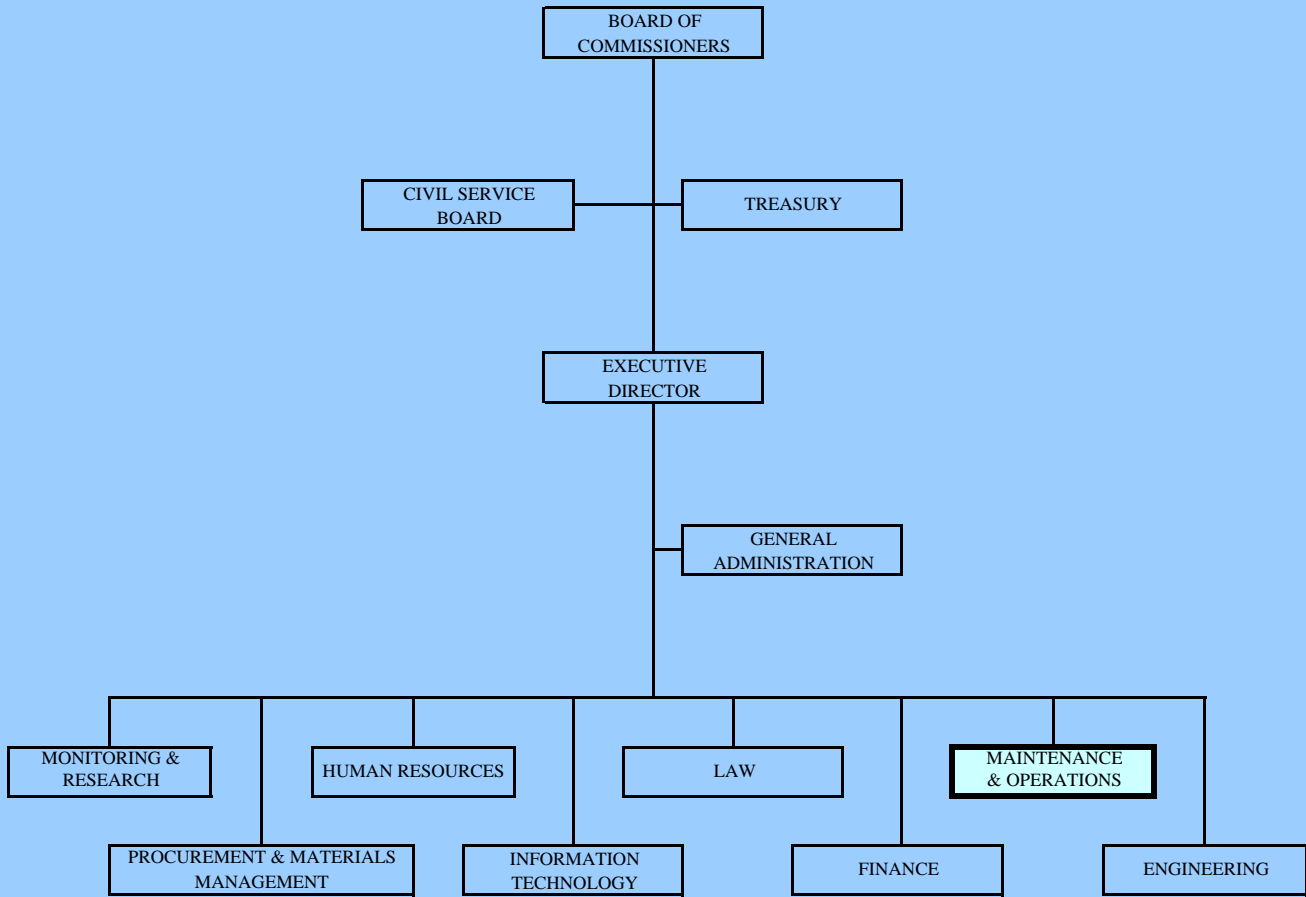
Fund: Corporate Dept: Finance Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>410</b>	<b>Executive Division</b>					
<b>411</b>	<b>Executive Section</b>					
EX13	Clerk/Director of Finance	1	1		1	
HP21	Comptroller #4	-	1		1	
EX06	Secretary to Officer	2	2		2	
TOTAL	Executive Section	3	4	634,648.30	4	645,475.01
<b>413</b>	<b>Internal Auditing Section</b>					
HP19	Accounting Manager	1	-		-	
HP19	Accounting Manager #2 (New Grade HP18)	-	1		1	
HP17	Supervising Accountant #2 (Financial Analyst) (New Grade HP16)	1	2		1	
HP16	Financial Analyst	2	1		2	
HP12	Accounting Associate	1	1		1	
TOTAL	Internal Auditing Section	5	5	598,904.28	5	581,120.93
TOTAL	Executive Division	8	9	1,233,552.58	9	1,226,595.94
<b>420</b>	<b>Accounting Division</b>					
<b>430</b>	<b>Administrative Section</b>					
HP21	Comptroller #4	1	-		-	
TOTAL	Administrative Section	1	-	-	-	-
<b>440</b>	<b>Financial Administration &amp; Disbursements Section</b>					
<b>441</b>	<b>Administrative Unit</b>					
HP19	Accounting Manager	1	-		-	
HP19	Accounting Manager #2 (New Grade HP18)	-	1		1	
HP17	Supervising Accountant #2 (Financial Analyst) (New Grade HP16)	1	2		2	
HP13	Senior Administrative Specialist	-	1		1	
TOTAL	Administrative Unit	2	4	482,509.82	4	499,207.58
<b>442</b>	<b>Administrative Services Unit</b>					
HP13	Senior Administrative Specialist	1	-		-	
TOTAL	Administrative Services Unit	1	-	-	-	-

Fund: Corporate Dept: Finance Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>443</b>	<b>Billing Unit</b>					
HP16	Financial Analyst	1	-		-	
HP13	Accounting Clerk III #2 (Accounting Associate) (New Grade HP12)	1	1		-	
HP12	Accounting Associate	2	2		3	
TOTAL	Billing Unit	4	3	237,557.32	3	209,406.43
<b>446</b>	<b>Accounts Payable Unit</b>					
HP13	Accounting Clerk III #2 (Accounting Associate) (New Grade HP12)	1	1		1	
HP12	Accounting Associate	2	2		2	
TOTAL	Accounts Payable Unit	3	3	212,779.58	3	223,248.07
TOTAL	Financial Administration & Disbursements Section	10	10	932,846.72	10	931,862.08
<b>450</b>	<b>Special Projects &amp; Payroll Section</b>					
<b>451</b>	<b>Special Projects Unit</b>					
HP19	Accounting Manager	1	-		-	
HP19	Accounting Manager #2 (New Grade HP18)	-	1		1	
HP17	Supervising Accountant #2 (Financial Analyst) (New Grade HP16)	1	-		-	
HP16	Financial Analyst	-	1		1	
TOTAL	Special Projects Unit	2	2	255,581.56	2	263,370.20
<b>452</b>	<b>Payroll Unit</b>					
HP16	Financial Analyst	1	1		1	
HP13	Accounting Clerk III #2 (Accounting Associate) (New Grade HP12)	1	-		-	
HP12	Accounting Associate	1	1		1	
TOTAL	Payroll Unit	3	2	180,011.00	2	177,952.21
TOTAL	Special Projects & Payroll Section	5	4	435,592.56	4	441,322.41
<b>460</b>	<b>General Accounting Section</b>					
<b>463</b>	<b>Accounting Unit</b>					
HP19	Accounting Manager	1	-		-	
HP19	Accounting Manager #2 (New Grade HP18)	-	1		1	
HP17	Supervising Accountant #2 (Financial Analyst) (New Grade HP16)	1	-		-	

Fund: Corporate Dept: Finance Division:		POSITION ANALYSIS				
		2015		2016		2017
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP16	Financial Analyst	1	2		2	
HP13	Accounting Clerk III #2 (Accounting Associate) (New Grade HP12)	2	2		1	
HP12	Accounting Associate	-	-		1	
TOTAL	Accounting Unit	5	5	560,323.66	5	548,975.28
TOTAL	General Accounting Section	5	5	560,323.66	5	548,975.28
TOTAL	Accounting Division	21	19	1,928,762.94	19	1,922,159.77
TOTAL	Finance	29	28	3,162,315.52	28	3,148,755.71

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

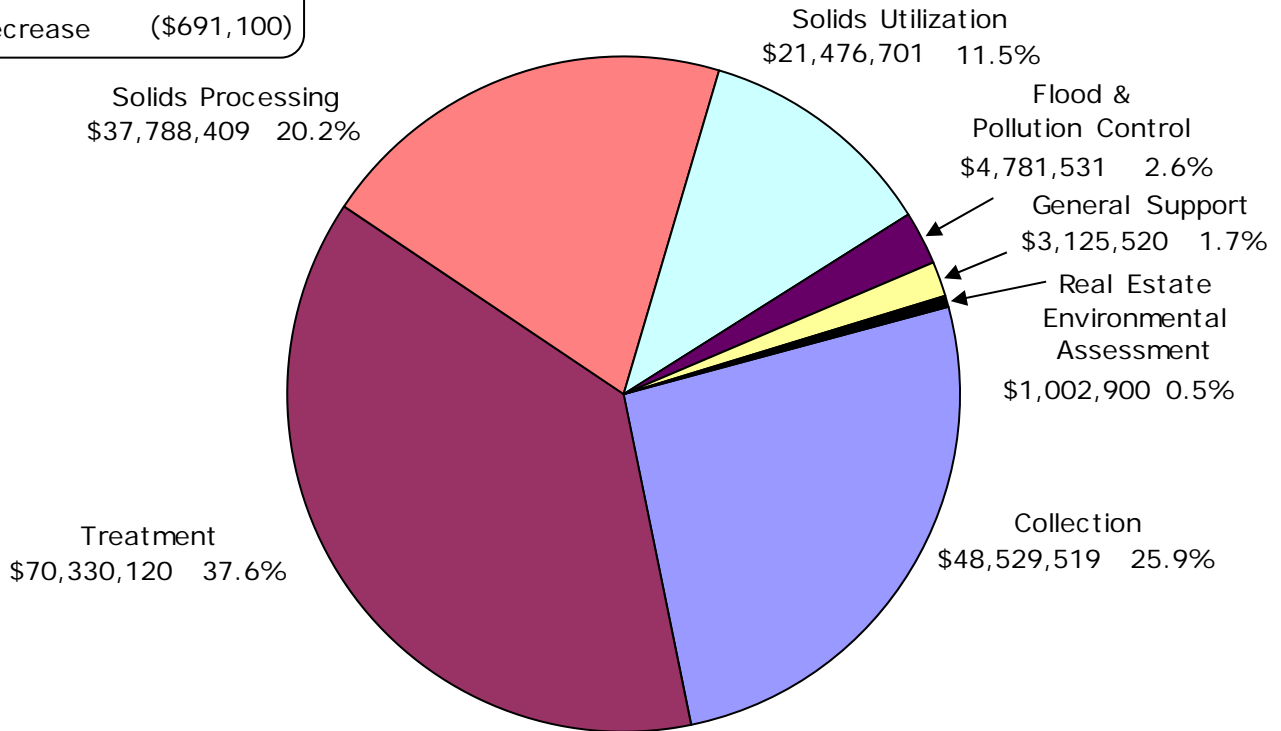
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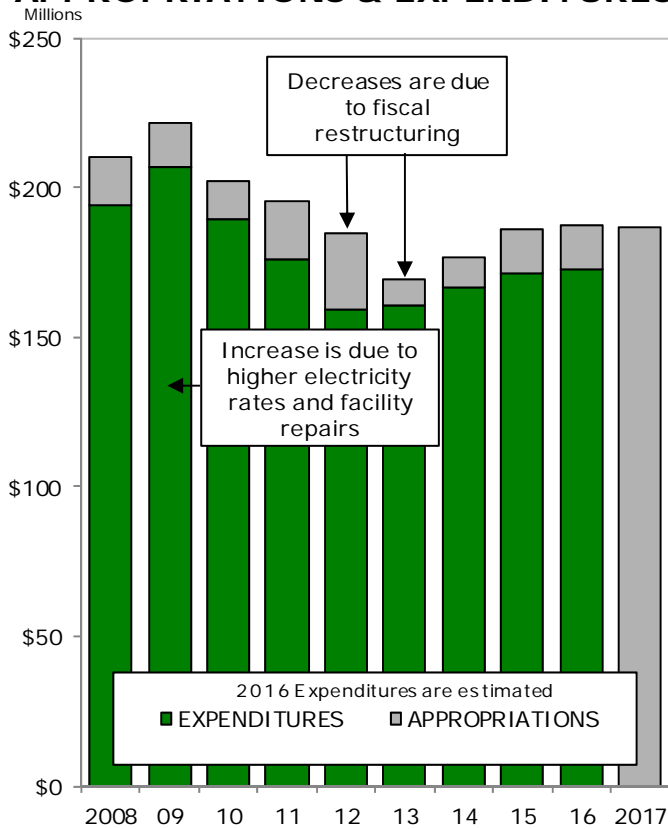
# MAINTENANCE & OPERATIONS – ALL DIVISIONS

2017	\$187,034,700
2016	\$187,725,800
Decrease	(\$691,100)

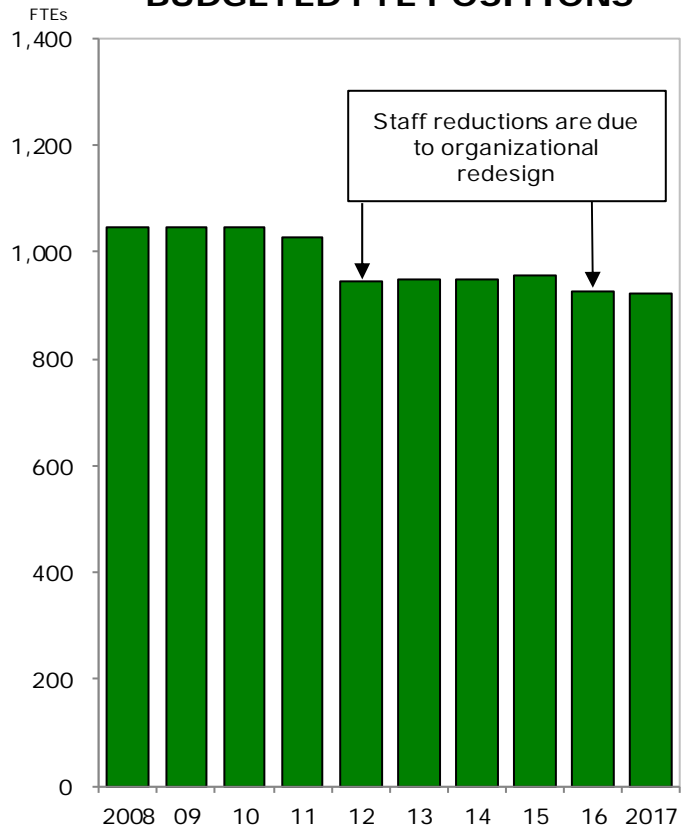
## FUNCTIONS



## APPROPRIATIONS & EXPENDITURES

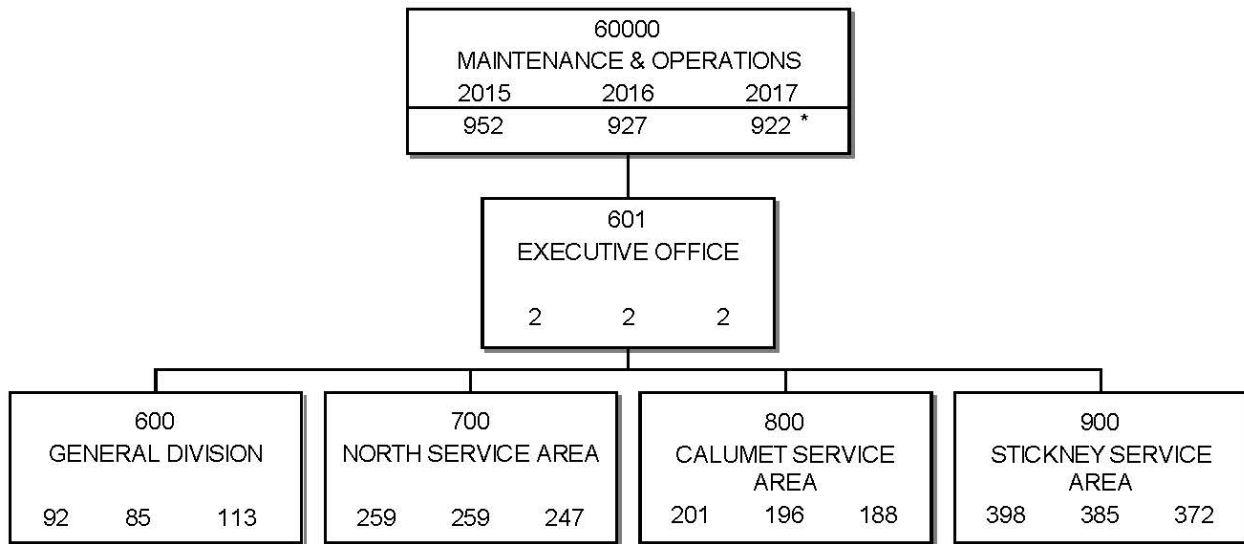


## BUDGETED FTE POSITIONS





## MAINTENANCE & OPERATIONS – ALL DIVISIONS



\* The 2017 position total for the Maintenance & Operations Department is 951. There are an additional 29 positions funded by the Stormwater Management Fund, while the operations remain in the Maintenance & Operations Department.

## MAINTENANCE & OPERATIONS

**The mission of the Maintenance & Operations Department (M&O) is to maintain and operate the District's facilities at an optimal level, to protect our environment by collecting and treating wastewater, minimizing flooding, maintaining our waterways free of pollution, producing and beneficially reusing high-quality biosolids, and providing environmental remediation for District-owned real estate in the most economical and environmentally sustainable manner.**

### Departmental Summary

M&O consists of four divisions that maintain and operate the collection systems and treatment plants within the District's 882.1 square mile service area. Additionally, M&O maintains and operates the Lockport Powerhouse, the waterways, the collection systems, and three biosolids handling facilities. The department's primary responsibilities include:

- Collecting and treating approximately 480.1 billion gallons of wastewater annually by operating seven wastewater treatment plants and through a contract agreement with the Fox River Water Reclamation District, a 560 mile network of intercepting sewers, 109.4 miles of the Tunnel and Reservoir Plan tunnels, and two ancillary reservoirs;
- Improving the quality of water in the area waterways by maintaining and operating five sidestream elevated pool aeration stations and two instream aeration stations;
- Providing flood relief to Cook County by maintaining 532 miles of small streams and rivers and 36 detention reservoirs, of which 34 are dedicated solely to Stormwater retention;
- Processing high-quality biosolids for beneficial reuse, the byproduct of wastewater treatment, by operating three biosolids handling facilities.

### Summary of 2016 Accomplishments

- Achieved a 99.98 percent overall compliance rate with the requirements of the National Pollutant Discharge Elimination System permits in 2015, resulting in five Platinum and two Gold Awards from the National Association of Clean Water Agencies. M&O anticipates similar results in 2016;
- Completed the renewal applications for Illinois Environmental Protection Agency Operating Permits, including the Egan Backup Solids Drying Area, the Hanover Park Fischer Farm, and the General National Pollutant Discharge Elimination System Permit for Pesticide Application Point Source Discharges;
- Implemented the ultraviolet (UV) disinfection process at the O'Brien Water Reclamation Plant (WRP). UV disinfection is a physical process that neutralizes microorganisms as they pass by UV lamps in the effluent. It is safe, cost effective, and environmentally friendly;
- Launched the Ostara Nutrient Recovery Facility at the Stickney WRP. The facility, which was developed in partnership with Ostara Nutrient Recovery Technologies and Black & Veatch, is an example of how progressive technology can be adopted to transform a wastewater treatment facility into a resource recovery center. The system is designed to capture phosphorus for environmentally friendly reuse, improve the quality of watercourses, and provide an additional revenue stream for the District;
- Implemented an online system allowing the public to easily file incident reports, which are then assigned to operations staff for immediate investigation and action, thereby furthering a customer service-oriented business approach. With the system's mapping function, odor complaints can be tracked to identify and analyze hot spots and clusters. With such high-quality data, the odors can be mitigated and customer satisfaction improved. It is estimated that operations staff responded to approximately 270 odor complaints in 2016;
- In 2015, the District generated 41,595,703 kilowatt hours and received \$1.24 million in revenue from ComEd. Projected generation for 2016 is 40.9 million kWh, with a projected value of approximately \$1.17 million, and for 2017 is 41.5 million kWh, with a projected value of approximately \$1.00 million.

### Budget Highlights

The 2017 M&O Corporate Fund appropriation of \$187,034,700 reflects a decrease of \$691,100, or 0.4 percent, from the 2016 appropriation. In 2017, the General Division's new Asset Management Section, composed of electrical and mechanical engineers, will oversee and centralize the department's maintenance function. The new section will allow for greater prioritization, coordination, and efficient allocation of work. In addition to the Corporate Fund, M&O will implement the Construction Fund capital projects, which will allow technical staff to focus on upgrading, rehabilitating, and rebuilding critical infrastructure.

The Corporate Fund staffing level has decreased from 927 to 922 positions. The staffing changes are part of an organizational plan to align human resources with goals and strategies, which includes dropping redundant positions as they become vacant and transferring positions based on operational priorities. An additional 29 positions are funded in the Stormwater Management Fund, an increase of two positions from 2016. As a result of adding 17 positions, transferring in one position, dropping 11 positions, and transferring out 10 positions, the total 2017 position count is 951, compared to the total 2016 position count of 954.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

• **Add Value**

The District has embarked on an ambitious campaign to “Restore the Canopy, Plant a Tree” of Chicagoland, which seeks to address Cook County’s declining tree population, decimated in recent years by the emerald ash borer infestation and extreme weather. In support of that goal, the District plans to begin construction in 2017 of an 8.2 acre native plant and tree nursery at the Hanover Park WRP. Once complete, the native plant and tree nursery will provide value by using the land to its full potential, educating the nursery industry and the community about the benefits of using biosolids-based compost, and serving as a worldwide example of the value and viability of biosolids.

M&O understands that value can be provided by creating a strong commercial market for biosolids and biosolids-based products. To accomplish that, M&O plans to create a sustainable market within the District’s service area to develop ongoing relationships with interested parties, such as landscapers and local communities, who understand the value of beneficially reusing biosolids, and expand the direct pickup program by 25 percent annually, from 2016 to 2018. The value and viability of the District’s biosolids program was recognized by the Illinois Environmental Protection Agency when, with accompanying legislation signed by the Governor on July 20, 2015, they rated the District’s biosolids product as a commercially viable fertilizer. With the legislation now enacted, Class A biosolids can be used as fertilizer on farms and vegetable gardens and can be sold to home owners as compost or fertilizer. Under the District’s Resource Recovery Ordinance, which was adopted by the Board of Commissioners on September 1, 2016, the District will be accepting delivery of vegetative material at a cost of \$20/ton. The material will in turn be used to produce composted biosolids, which will be sold to residents and landscapers at a cost of \$30/yard. As the program develops, so too will a reliable revenue source.

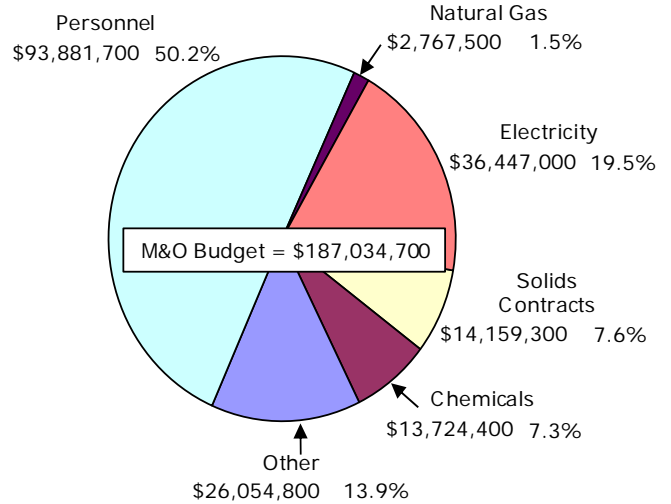
In 2015, the Board of Commissioners selected EnergyConnect, Inc., to provide a voluntary energy curtailment program for a three-year period. The District is expected to receive a \$1.5 million rebate for the 2016-2017 period. The program requests participants to reduce energy use voluntarily, when the region’s electricity grid is on the verge of a brownout or blackout due to high electricity usage.

• **Excellence**

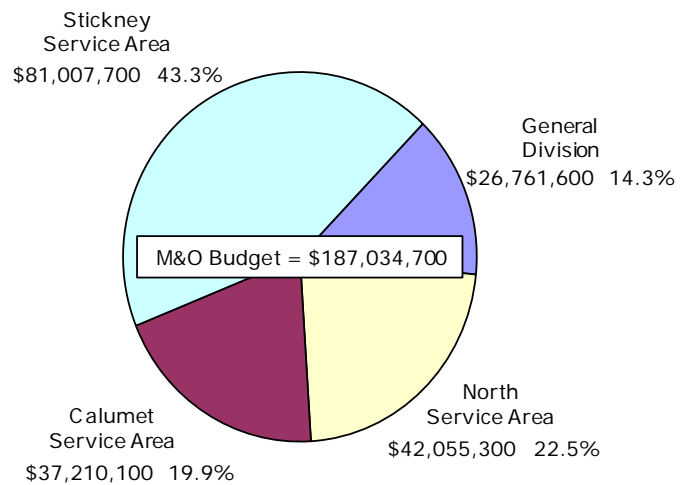
Achieving energy neutrality by 2023 remains an important goal, particularly as energy accounts for approximately 20 percent of the department’s total budget. However, going forward, disinfection and increasingly stringent effluent requirements will only serve to amplify total energy consumption and costs. To counterbalance these increases, the department is aggressively pursuing energy efficiencies, especially in energy-intensive areas of the treatment process, such as aeration. To that end, the department continues to refine its air usage reduction program, which includes the installation of ammonia probes for aeration control at all of the large plants, the installation of better performing equipment, the creation of key performance indicators to monitor energy consumption, and the reduction of dissolved oxygen set points while still complying with permit requirements. For instance, when the dissolved oxygen content becomes too high or higher than necessary, costly energy is wasted and expensive aeration equipment sustains unnecessary wear. The goal is to reduce energy consumption by providing only the optimal amount of air to achieve the necessary performance. The Stickney WRP alone is estimating annual energy savings of approximately \$880,000 due to the newly installed Blower No. 2 motor, with an acquisition cost of \$3.2 million and a payback period of less than four years. For 2017, the electrical budget for blowers and air mains has been reduced by \$1,579,800, or 12.5 percent, department-wide.

M&O is also exploring ways to increase revenue from electrical production at the Lockport Powerhouse. One of the more promising options is to become a sub-member of the Pennsylvania-New Jersey-Maryland Interconnection, a regional electrical transmission organization, which will allow the District to buy and sell electricity, capacity, and Renewable Energy Credits on the wholesale market. A request for proposal for the procurement of such energy advisory services will be issued in 2017.

**2017 Appropriations by Major Line Item**



**2017 Appropriations by Service Area**



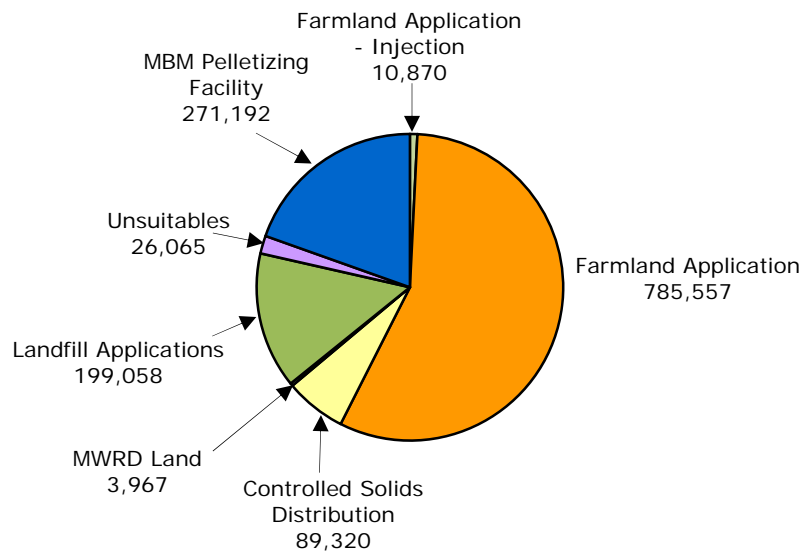
**• Resource Recovery**

M&O recognizes the tremendous resource potential residing in wastewater and biosolids. With several new projects, the District is working to extract that potential. At the Stickney WRP, for instance, Ostara technology is now in operation. This technology, called the Pearl® System, extracts phosphorus and ammonia from the waste stream by adding magnesium to cause a precipitation reaction. The result is fertilizer pellets rich in phosphorus, nitrogen, and magnesium. Regulations regarding the amount of phosphorus contained in treated effluent have become increasingly stringent. While too much phosphorus in water can cause algae to bloom, depleting the oxygen supply and killing other aquatic life, phosphorus is also essential to plant growth and is a key ingredient in agricultural fertilizer. This innovative technology addresses both the negative and positive aspects of phosphorus as it occurs in a wastewater treatment plant. It will allow the waste stream to be disposed of in an efficient way, while recovering phosphorus in a slow-release fertilizer for environmentally friendly reuse.

The nutrient recovery facility is an example of how progressive technology can be implemented to transform a wastewater treatment facility into a resource recovery center, providing significant environmental benefits to the Chicago Area Waterway System and downstream to the Mississippi River and the Gulf of Mexico. Moreover, it serves as an example of the District’s commitment to evaluating projects along multiple dimensions: financial, societal, and environmental. One of the financial benefits to be derived from the process is the revenue stream that will be generated from the sale of the fertilizer-rich crystalline pellets back to Ostara. Following the commercial start-up of the facility in 2016, the District plans to implement waste activated sludge stripping to remove internal phosphorus (WASSTRIP®) in late 2017. WASSTRIP® will accelerate the nutrient recovery process and increase the amount of phosphorus recovered (the phosphorus will be removed before it reaches the digesters). Initial estimates call for the production of seven tons of crystalline pellets per day through late 2017, at which time WASSTRIP® will be initiated with production expected to increase to 21 tons of pellets per day. In 2017, revenue is estimated at \$1 million. This is an example that proves wastewater is not waste.

Another initiative related to resource recovery is the planned operation of a gas turbine at the Stickney WRP (a two-year contract to rehabilitate the turbine was awarded in 2016). During the summer months, the turbine will operate using digester gas, a byproduct of the treatment process, to power equipment, such as pumps and aeration blowers. The digester gas will be consumed in the combustor of a three megawatt electric generator. The generated electricity will, in turn, be delivered back to the grid and distributed throughout the plant, thereby reducing total electrical demand. By April 2018, with the addition of the new primary tanks, there should be sufficient digester gas to operate the turbine regularly and realize annual savings in electrical costs of approximately \$1 million. With projects like this, M&O is linking plant functions, energy management, and resource recovery.

**Resource Recovery: Biosolids Reuse (in Dry Tons)  
2006 - 2015**



**Total: 1,386,029 Dry Tons**

- **Develop Employees**

Understanding that a skilled workforce creates a strong organization, M&O is committed to providing training opportunities to all of its employees. Illustrating that point, a Treatment Plant Operator I from the Kirie WRP traveled to Denmark in 2016 to visit the water treatment facility of Aarhus Vand, an independent regional waste and wastewater enterprise located in southern Denmark that is owned by the municipality of Aarhus. The Danish facility is in the process of expanding and renovating to become 150 percent energy self-sufficient. It is also implementing a deammonification process. Given that the District is implementing a similar process at the Egan WRP, plans to become energy neutral within the next decade, and is redefining itself as a resource recovery utility, the knowledge and experience gained by the employee is of great value.

A strong training program is also increasingly important as M&O continues to reduce its reliance on maintenance outsourcing, while retaining a consistent number of in-house skilled trades. In order to perform the maintenance function well, employees must be adequately trained. In 2017, staff will attend conferences and training sessions on a variety of topics, including electrical troubleshooting, generators and emergency power, pump repair, and programmable logic controllers.

- **Leading Partnerships**

The District is partnering with the City of Chicago in an innovative program that uses tree debris provided by the city as a bulking agent for composting biosolids. The program was formalized through an Intergovernmental Agreement that runs through 2017. Under the program, an estimated 50,000 tons of composted biosolids are expected to be produced in 2017. The composting process raises the temperature of the biosolids and wood chip mixture, which kills off pathogens to create a Class A product. Composting will reduce the footprint needed to process biosolids, create a value-added product with a variety of beneficial applications, and generate an additional revenue stream for the District.

- **Technology**

M&O will continue to pursue innovative, high-efficiency technologies to meet its regulatory and compliance needs and to optimize its treatment processes, particularly aeration. Aeration, the addition of oxygen to wastewater, is the biggest energy consumer in the treatment process. At the Egan WRP, the innovative ANITA™ Mox system, which treats effluents with a high ammonia concentration, became operational in 2016. The advantages of this system, as compared to conventional ammonia removal processes, are reduced oxygen and energy requirements and a smaller carbon footprint. Improvements such as this will help the department achieve new benchmarks in quality and performance.

M&O is also using the Capital Improvements Bond Fund to implement several energy efficiency projects recommended to the District by the Public Building Commission of Chicago. The projects, valued at \$4.25 million, include modernizing interior lighting to utilize light-emitting diode technology, controlling lights with occupancy sensors, upgrading HVAC controls, and installing custom, blanket insulation on existing District steam piping and fittings. It is estimated that these energy conservation measures will result in annual utility savings of approximately \$273,000, along with a one-time rebate from the Department of Commerce and Economic Opportunity of approximately \$557,400.

**60000 M&O - ALL DIVISIONS**

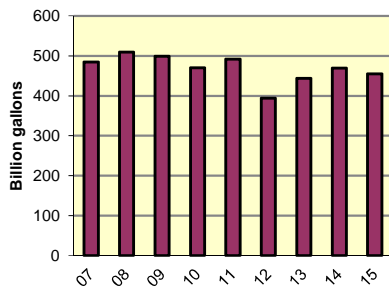
**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:

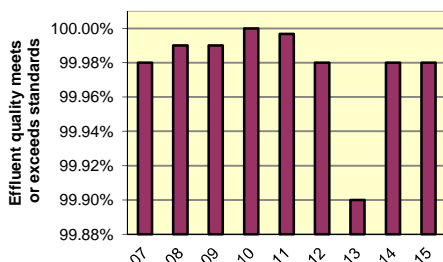
	Cost	Percent
1. <b>COLLECTION &amp; TREATMENT:</b> The M&O Department will collect and treat approximately 480.1 billion gallons of wastewater through its seven treatment facilities and through a contract agreement with the Fox River Water Reclamation District.	\$ 118,859,639	63.5%
2. <b>SOLIDS PROCESSING:</b> The M&O Department will remove and process approximately 183,500 dry tons of concentrated sewage through various systems, including heated digestion, centrifuging, concentration, and aging low solids sludge and centrifuge cake in lagoons.	\$ 37,788,409	20.2%
3. <b>SOLIDS UTILIZATION:</b> The M&O Department will utilize approximately 90,000 dry tons of biosolids for application at final utilization sites, such as farm applications and daily and final cover at sanitary landfills.	\$ 21,476,701	11.5%
4. <b>FLOOD &amp; POLLUTION CONTROL:</b> The M&O Department, in cooperation with local communities, will strive to minimize local area flooding and pollution of Lake Michigan through continuous control of the water levels in 76 miles of canals and 532 miles of small streams and rivers, of which 34 are dedicated solely to stormwater retention, and through the operation of 36 detention reservoirs. It will also work to maintain the quality of the waterways system and associated District properties through the activities of the debris boats and the channel maintenance crews.	\$ 4,781,531	2.6%
5. <b>GENERAL SUPPORT:</b> The M&O Department provides technical and administrative support for other departments indirectly related to the operational activities of Collection & Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization.	\$ 3,125,520	1.7%
6. <b>REAL ESTATE ENVIRONMENTAL ASSESSMENT:</b> Inspect and evaluate District properties for compliance with the United States Environmental Protection Agency and the Illinois Environmental Protection Agency requirements.	\$ 1,002,900	0.5%

Total \$ 187,034,700 100.0%

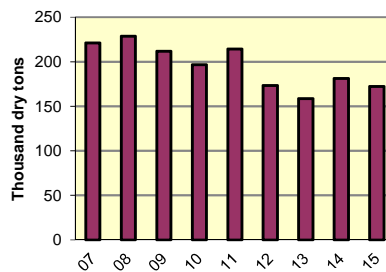
**Collection & Treatment**



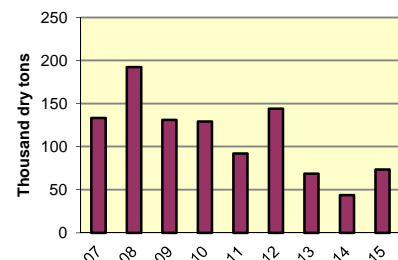
**NPDES Permit Compliance**



**Solids Processing**



**Solids Utilization**



**60000 M&O - ALL DIVISIONS**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change	
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
1000	Collection	\$ 41,690,204	2017 237	\$ 48,529,519	\$ 718,968	1.5	
			2016 239	\$ 47,810,551			
1100	Surface Interceptor Systems	\$ 3,825,816	2017 29	\$ 3,919,800	\$ (221,200)	(5.3)	
			2016 30	\$ 4,141,000			
1200	Tunnel and Reservoir System	\$ 9,908,516	2017 39	\$ 10,656,300	\$ 334,100	3.2	
			2016 39	\$ 10,322,200			
1300	Pumping Station Facilities	\$ 11,170,395	2017 67	\$ 15,905,800	\$ 452,300	2.9	
			2016 68	\$ 15,453,500			
1900	Collection - Indirect Costs	\$ 16,785,477	2017 102	\$ 18,047,619	\$ 153,768	0.9	
			2016 102	\$ 17,893,851			
2000	Treatment	\$ 65,905,646	2017 382	\$ 69,102,120	\$ (1,932,537)	(2.7)	
			2016 384	\$ 71,034,657			
2000	Pre-Treatment	\$ 3,739,449	2017 32	\$ 3,735,900	\$ (76,900)	(2.0)	
			2016 33	\$ 3,812,800			
2100	Primary Treatment	\$ 3,448,937	2017 39	\$ 3,468,700	\$ (38,100)	(1.1)	
			2016 39	\$ 3,506,800			
2200	Secondary Treatment	\$ 24,655,986	2017 97	\$ 20,946,100	\$ (1,076,000)	(4.9)	
			2016 96	\$ 22,022,100			
2300	Tertiary Treatment	\$ 1,473,640	2017 13	\$ 5,334,800	\$ (49,500)	(0.9)	
			2016 12	\$ 5,384,300			
2900	Treatment - Indirect Costs	\$ 32,587,634	2017 201	\$ 35,616,620	\$ (692,037)	(1.9)	
			2016 204	\$ 36,308,657			
3000	Solids Processing	\$ 34,214,689	2017 212	\$ 37,788,409	\$ 1,905,108	5.3	
			2016 210	\$ 35,883,301			
3100	Thickening	\$ 6,068,584	2017 42	\$ 6,428,600	\$ 303,500	5.0	
			2016 40	\$ 6,125,100			
3200	Stabilization	\$ 6,095,978	2017 44	\$ 6,084,300	\$ 145,500	2.5	
			2016 44	\$ 5,938,800			
3300	Dewatering	\$ 10,656,247	2017 42	\$ 12,558,100	\$ 1,473,800	13.3	
			2016 41	\$ 11,084,300			
3900	Solids Processing - Indirect Costs	\$ 11,393,880	2017 84	\$ 12,717,409	\$ (17,692)	(0.1)	
			2016 85	\$ 12,735,101			

Note: Explanations of significant changes are provided by individual division.

**60000 M&O - ALL DIVISIONS**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change	
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
4000	Flood & Pollution Control	\$ 4,492,814	2017 24	\$ 4,781,531	\$ 37,182	0.8	
			2016 24	\$ 4,744,349			
4200	Waterways Control and Stormwater Reservoirs	\$ 2,517,688	2017 15	\$ 2,302,300	\$ 40,100	1.8	
			2016 15	\$ 2,262,200			
4210	Maintenance of Waterways	\$ -	2017 1	\$ 171,900	\$ (29,000)	(14.4)	
			2016 1	\$ 200,900			
4300	Stormwater Management	\$ 147,449	2017 2	\$ 167,900	\$ 6,300	3.9	
			2016 2	\$ 161,600			
4400	Aeration Facilities	\$ 1,107,229	2017 2	\$ 1,082,100	\$ (38,900)	(3.5)	
			2016 3	\$ 1,121,000			
4900	Flood & Pollution Control - Indirect Costs	\$ 720,448	2017 4	\$ 1,057,331	\$ 58,682	5.9	
			2016 3	\$ 998,649			
5000	Solids Utilization	\$ 21,037,721	2017 42	\$ 21,476,701	\$ (1,303,461)	(5.7)	
			2016 45	\$ 22,780,162			
5100	Solids Drying	\$ 6,161,512	2017 7	\$ 5,894,300	\$ 163,700	2.9	
			2016 8	\$ 5,730,600			
5200	Solids Distribution	\$ 9,945,522	2017 8	\$ 10,149,400	\$ (1,664,500)	(14.1)	
			2016 9	\$ 11,813,900			
5900	Solids Utilization - Indirect Costs	\$ 4,930,687	2017 27	\$ 5,433,001	\$ 197,339	3.8	
			2016 28	\$ 5,235,662			
7000	General Support (excluding program numbers 7368 & 7604)	\$ 3,048,287	2017 22	\$ 3,125,520	\$ (8,260)	(0.3)	
			2016 22	\$ 3,133,780			
7368	Real Estate Environmental Assessment	\$ 750,140	2017 3	\$ 1,002,900	\$ (27,600)	(2.7)	
			2016 3	\$ 1,030,500			
7604	Social Security and Medicare Contribution	\$ -	2017 -	\$ 1,228,000	\$ (80,500)	(6.2)	
			2016 -	\$ 1,308,500			
	<b>Totals</b>	<b>\$ 171,139,501</b>	2017 922	\$ 187,034,700	\$ (691,100)	(0.4%)	*
			2016 927	\$ 187,725,800			

\* The 2017 position total for the M&O Department is 951, which includes 29 positions funded by the Stormwater Management Fund. For 2017, 12 Maintenance Laborer Class A Shift positions (day shift) were added to transition non-day shift positions to day shift positions. The salaries for these added positions were offset by vacancy adjustments applied to 12 existing Maintenance Laborer Class A Shift #1 positions (non-day shift), which will be dropped as they are vacated.

Note: Explanations of significant changes are provided by individual division.



**60000 M&O - ALL DIVISIONS**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated
1000-2900	Collection & Treatment				
	Collect and Treat Wastewater at Seven Treatment Facilities and Through a Contract Agreement with the Fox River Water Reclamation District	Mil. Gallons Cost Cost/Mil. Gallons	454,916 \$ 107,595,850 \$ 236.52	486,258 \$ 118,845,208 \$ 244.41	480,100 \$ 117,631,639 \$ 245.01
3000	Solids Processing				
	Remove and Process Solids from Concentrated Sewage Using Systems Including Heated Digestion, Centrifuging, Concentration, and Aging Low Solids Sludge and Centrifuge Cake in Lagoons	Dry Tons Cost Cost/Dry Ton	172,260 \$ 34,214,689 \$ 198.62	190,500 \$ 35,883,301 \$ 188.36	183,500 \$ 37,788,409 \$ 205.93
4000	Flood & Pollution Control				
	Operation and Maintenance of the Waterways to Minimize Area Flooding and Pollution				
4200	Minimize Area Flooding and Pollution of Lake Michigan Through the Continuous Control of Water Levels in Major Rivers and Canals	Cost	\$ 629,748	\$ 770,600	\$ 821,500
	Minimize Diversion of Lake Michigan Water in Accordance with the U.S. Supreme Court Decree	Mil. Gal./Year Diversion Cost Cost/Mil. Gal./Year	59,840 \$ 447,393 \$ 7.48	23,825 \$ 290,300 \$ 12.18	61,500 \$ 300,300 \$ 4.88
	Operation of Detention Reservoirs	Reservoirs Cost Cost/Reservoir	35 \$ 884,998 \$ 25,285.66	35 \$ 871,500 \$ 24,900.00	36 \$ 859,100 \$ 23,863.89
	Generate Electricity at Lockport Powerhouse to Obtain Approximately \$1.0 million in Revenue	kWh Cost Cost/kWh <i>* Revenue Generated</i>	41,595,703 \$ 555,549 \$ 0.0134 \$ 1,236,698	36,856,400 \$ 329,800 \$ 0.0089 \$ 1,191,700	41,500,000 \$ 321,400 \$ 0.0077 \$ 1,000,000
4210	Maintenance of the Waterways and Canal Banks Within the Jurisdiction of the District. Activities Include Debris Removal, Insect and Rodent Control, Bridge Repairs, and Aeration Costs.	Cost	\$ -	\$ 200,900	\$ 171,900
4300	Stormwater Management	Cost	\$ 147,449	\$ 161,600	\$ 167,900
4400	Aeration Facilities	Cost	\$ 1,107,229	\$ 1,121,000	\$ 1,082,100
4900	Flood & Pollution Control - Indirect Costs	Cost	\$ 720,448	\$ 998,649	\$ 1,057,331
5000	Solids Drying/Utilization				
	Utilize Biosolids for Application at Final Utilization Sites Such as the Land Reclamation Fields in Fulton County, the Fischer Farm, Daily and Final Cover at Sanitary Landfills, and Other Farm Applications	Dry Tons Cost Cost/Dry Ton	73,257 \$ 16,716,963 \$ 228.20	90,100 \$ 17,145,262 \$ 190.29	90,000 \$ 17,587,301 \$ 195.41
5271	Pelletizer Disposal Control Management and Disposal of Solids by Private Contracts	Dry Tons Cost Cost/Dry Ton	36,672 \$ 4,320,758 \$ 117.82	45,000 \$ 5,634,900 \$ 125.22	40,000 \$ 3,889,400 \$ 97.24
7000	General Support (excluding program numbers 7368 & 7604) Technical and Administrative Support for Other Departments' Activities Indirectly Related to the Operational Activities of Collection & Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization	Cost	\$ 3,048,287	\$ 3,133,780	\$ 3,125,520
7368	Real Estate Environmental Assessment	Cost	\$ 750,140	\$ 1,030,500	\$ 1,002,900
7604	Social Security and Medicare Contribution	Cost	\$ -	\$ 1,308,500	\$ 1,228,000
	<b>Departmental Total</b>		<b>\$ 171,139,501</b>	<b>\$ 187,725,800</b>	<b>\$ 187,034,700</b>

Note: Explanations of significant changes are provided by individual division.

\* Revenue generated not included in total costs.

101 60000	Fund: Corporate Department: Maintenance & Operations Division: All Divisions	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 83,833,350	\$ 87,771,800	\$ 87,336,800	\$ 84,211,400	\$ 87,648,900	\$ 87,648,900	\$ 87,956,500
601060	Compensation Plan Adjustments	4,641,953	4,310,300	4,745,300	4,692,400	4,641,100	4,641,100	4,662,400
601070	Social Security and Medicare Contributions	-	1,308,500	1,308,500	1,290,300	1,228,000	1,228,000	1,228,000
601080	Salaries of Nonbudgeted Employees	30,601	23,400	23,400	1,600	34,800	34,800	34,800
601100	Tuition and Training Payments	169,768	323,700	323,700	219,800	265,500	265,500	265,500
601170	Payments for Professional Services	506,118	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	89,181,790	93,737,700	93,737,700	90,415,500	93,818,300	93,818,300	94,147,200
612010	Travel	11,122	50,100	50,100	38,700	34,700	34,700	34,700
612030	Meals and Lodging	41,016	100,000	100,000	83,500	70,000	70,000	70,000
612050	Compensation for Personally-Owned Automobiles	173,217	187,000	187,000	168,200	150,000	150,000	150,000
612080	Motor Vehicle Operating Services	714	1,800	1,800	1,200	1,700	1,700	1,700
612150	Electrical Energy	34,856,050	36,238,400	36,238,400	34,035,200	36,776,000	36,447,000	36,447,000
612160	Natural Gas	1,962,108	2,825,200	2,615,200	2,513,400	2,789,800	2,767,500	2,767,500
612170	Water and Water Services	1,659,353	1,729,400	1,915,400	1,730,300	1,740,600	1,740,600	1,740,600
612210	Communication Services	409,219	647,500	818,500	708,600	604,700	604,700	604,700
612240	Testing and Inspection Services	182,692	181,400	181,400	145,000	170,200	170,200	170,200
612330	Rental Charges	152,495	196,800	191,800	179,800	170,600	170,600	180,400
612410	Governmental Service Charges	3,206,284	3,223,500	3,223,500	3,213,300	3,300,200	3,300,200	3,300,200
612420	Maintenance of Grounds and Pavements	1,540,133	1,049,900	913,900	851,000	923,300	968,300	968,300
612430	Payments for Professional Services	-	810,700	810,700	308,200	650,000	720,000	720,000
612490	Contractual Services, N.O.C.	542,876	601,000	601,000	537,200	311,400	570,400	570,400
612520	Waste Material Disposal Charges	10,355,660	10,659,800	10,659,800	9,294,000	11,000,000	10,955,000	10,955,000
612530	Farming Services	29,600	29,600	29,600	29,000	33,200	33,200	233,200
612590	Sludge Disposal	3,604,252	5,000,000	5,000,000	4,000,000	3,204,300	3,204,300	3,204,300
612600	Repairs to Collection Facilities	2,893,165	3,796,000	3,590,000	3,175,100	3,332,900	3,332,900	3,332,900
612620	Repairs to Waterway Facilities	14,986	88,600	79,600	41,000	50,000	50,000	50,000
612650	Repairs to Process Facilities	5,985,400	5,643,700	5,639,700	4,979,200	4,963,500	4,975,800	4,975,800
612670	Repairs to Railroads	263,900	478,700	482,700	321,300	302,600	302,600	302,600

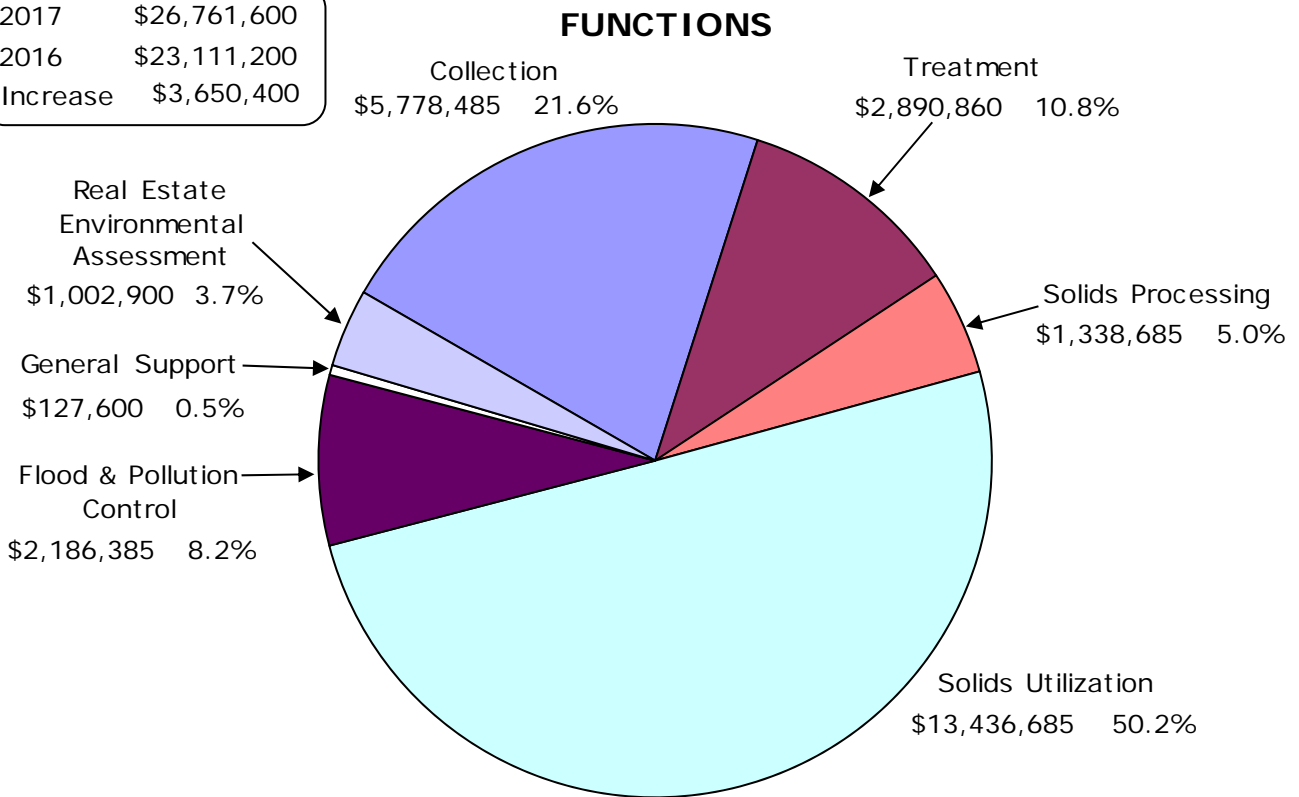
101 60000	Fund: Corporate Department: Maintenance & Operations Division: All Divisions	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
612680	Repairs to Buildings	805,173	1,230,600	1,230,600	770,000	1,050,200	1,050,200	1,050,200
612760	Repairs to Material Handling and Farming Equipment	364,127	315,200	315,200	297,200	304,000	304,000	304,000
612780	Safety Repairs and Services	124,893	200,100	200,100	146,800	368,000	368,000	368,000
612790	Repairs to Marine Equipment	53,142	53,000	62,000	62,000	60,000	60,000	60,000
612820	Computer Software Maintenance	2,920	5,200	5,200	5,200	5,400	5,400	5,400
612840	Communications Equipment Maintenance (Includes Software)	-	15,000	15,000	-	-	-	-
612860	Repairs to Vehicle Equipment	85,342	109,500	109,500	94,300	100,000	100,000	100,000
612990	Repairs, N.O.C.	4,894	20,900	20,900	17,100	20,000	20,000	20,000
200	TOTAL CONTRACTUAL SERVICES	69,324,733	75,488,600	75,288,600	67,745,800	72,487,300	72,477,300	72,687,100
623030	Metals	39,076	40,000	40,000	30,400	35,000	35,000	35,000
623070	Electrical Parts and Supplies	1,250,248	1,423,200	1,580,200	1,535,200	1,800,000	1,800,000	1,800,000
623090	Plumbing Accessories and Supplies	592,994	732,400	700,000	606,200	652,000	652,000	652,000
623110	Hardware	21,545	25,000	22,700	20,700	20,000	20,000	20,000
623130	Buildings, Grounds, Paving Materials, and Supplies	135,646	191,500	191,500	178,300	190,000	192,500	192,500
623170	Fiber, Paper, and Insulation Materials	8,837	15,000	15,000	10,000	14,100	14,100	14,100
623190	Paints, Solvents, and Related Materials	4,826	10,000	10,000	7,500	7,000	7,000	7,000
623250	Vehicle Parts and Supplies	82,732	176,300	176,300	160,900	200,100	200,100	200,100
623270	Mechanical Repair Parts	2,107,261	2,137,700	1,938,600	1,520,000	2,288,000	2,288,000	2,288,000
623300	Manhole Materials	9,863	10,600	10,600	9,500	11,000	11,000	11,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	50,464	58,600	58,500	50,400	49,600	49,600	49,600
623530	Farming Supplies	4,949	5,000	5,000	4,700	5,000	5,000	5,000
623560	Processing Chemicals	7,472,970	12,448,900	12,438,400	9,751,200	13,734,200	13,734,200	13,724,400
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	16,487	22,600	32,600	32,600	25,000	25,000	25,000
623660	Cleaning Supplies	2,141	5,000	5,000	4,000	5,000	5,000	5,000
623680	Tools and Supplies	201,011	231,400	230,200	209,100	500,000	500,000	500,000
623700	Wearing Apparel	1,618	1,500	1,500	900	2,400	2,400	2,400

101 60000	Fund: Corporate Department: Maintenance & Operations Division: All Divisions	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623720	Books, Maps, and Charts	-	200	200	100	-	-	-
623780	Safety and Medical Supplies	77,941	149,400	149,200	104,400	60,300	60,300	60,300
623800	Computer Software	5,634	6,000	6,000	3,700	7,500	7,500	7,500
623810	Computer Supplies	15,010	18,800	18,400	17,400	17,100	17,100	17,100
623820	Fuel	223,822	435,800	351,800	229,900	300,000	300,000	300,000
623840	Gases	3,504	8,000	8,000	7,100	5,000	5,000	5,000
623850	Communications Supplies	1,683	3,000	3,000	1,100	900	900	900
623860	Lubricants	15,134	25,200	25,200	21,100	5,000	5,000	5,000
623990	Materials and Supplies, N.O.C.	56,526	94,400	94,400	83,800	100,000	107,500	107,500
300	TOTAL MATERIALS AND SUPPLIES	12,401,922	18,275,500	18,112,300	14,600,200	20,034,200	20,044,200	20,034,400
634600	Equipment for Collection Facilities	80,936	50,000	50,000	47,100	50,000	50,000	50,000
634650	Equipment for Process Facilities	140,237	161,000	161,000	144,200	100,000	100,000	100,000
634760	Material Handling and Farming Equipment	4,487	-	-	-	-	-	-
634860	Vehicle Equipment	-	7,000	7,000	5,600	10,000	10,000	10,000
634970	Testing and Laboratory Equipment	5,395	6,000	6,000	-	6,000	6,000	6,000
400	TOTAL MACHINERY AND EQUIPMENT	231,056	224,000	224,000	196,900	166,000	166,000	166,000
<b>TOTAL MAINTENANCE &amp; OPERATIONS</b>		<b>\$171,139,501</b>	<b>\$187,725,800</b>	<b>\$187,362,600</b>	<b>\$172,958,400</b>	<b>\$186,505,800</b>	<b>\$186,505,800</b>	<b>\$187,034,700</b>

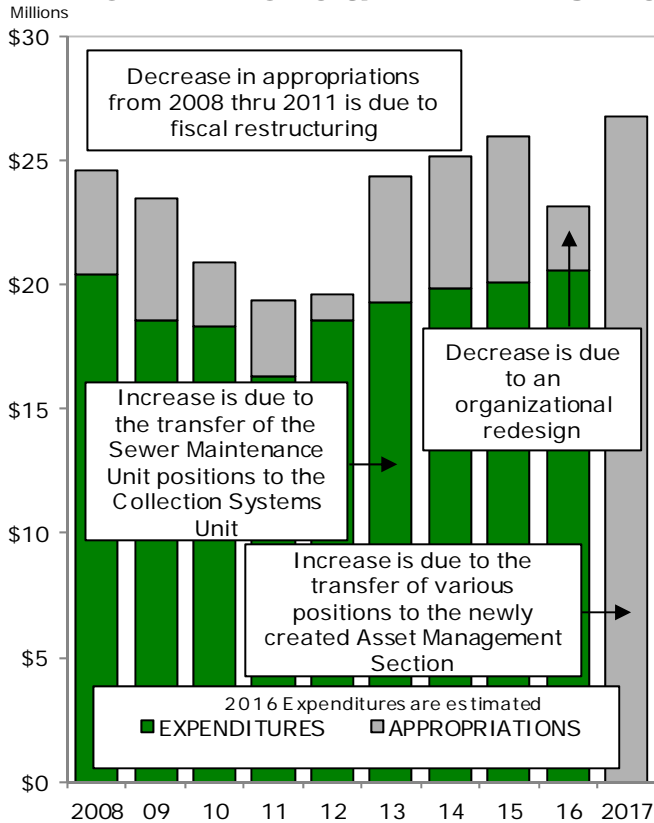
NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

# MAINTENANCE & OPERATIONS – GENERAL DIVISION

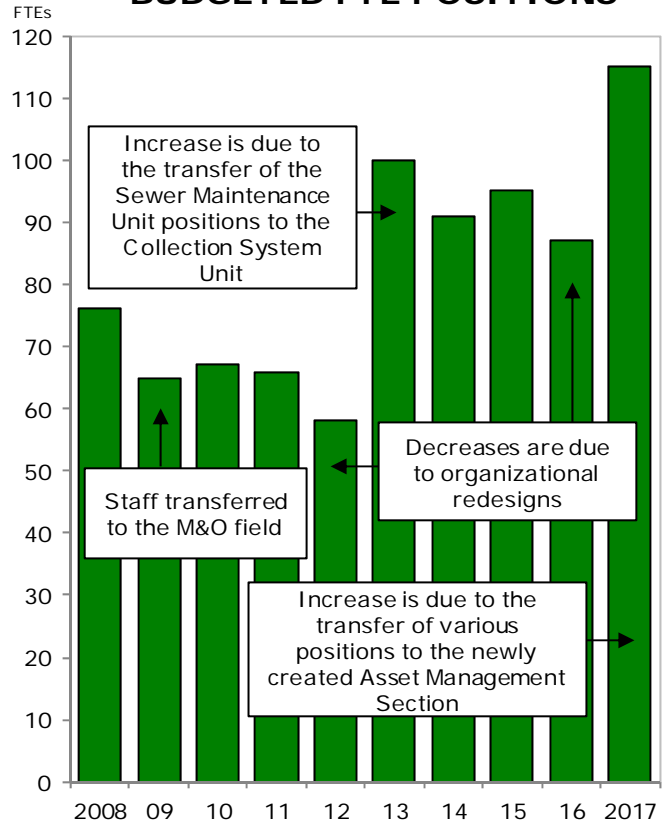
2017	\$26,761,600
2016	\$23,111,200
Increase	\$3,650,400



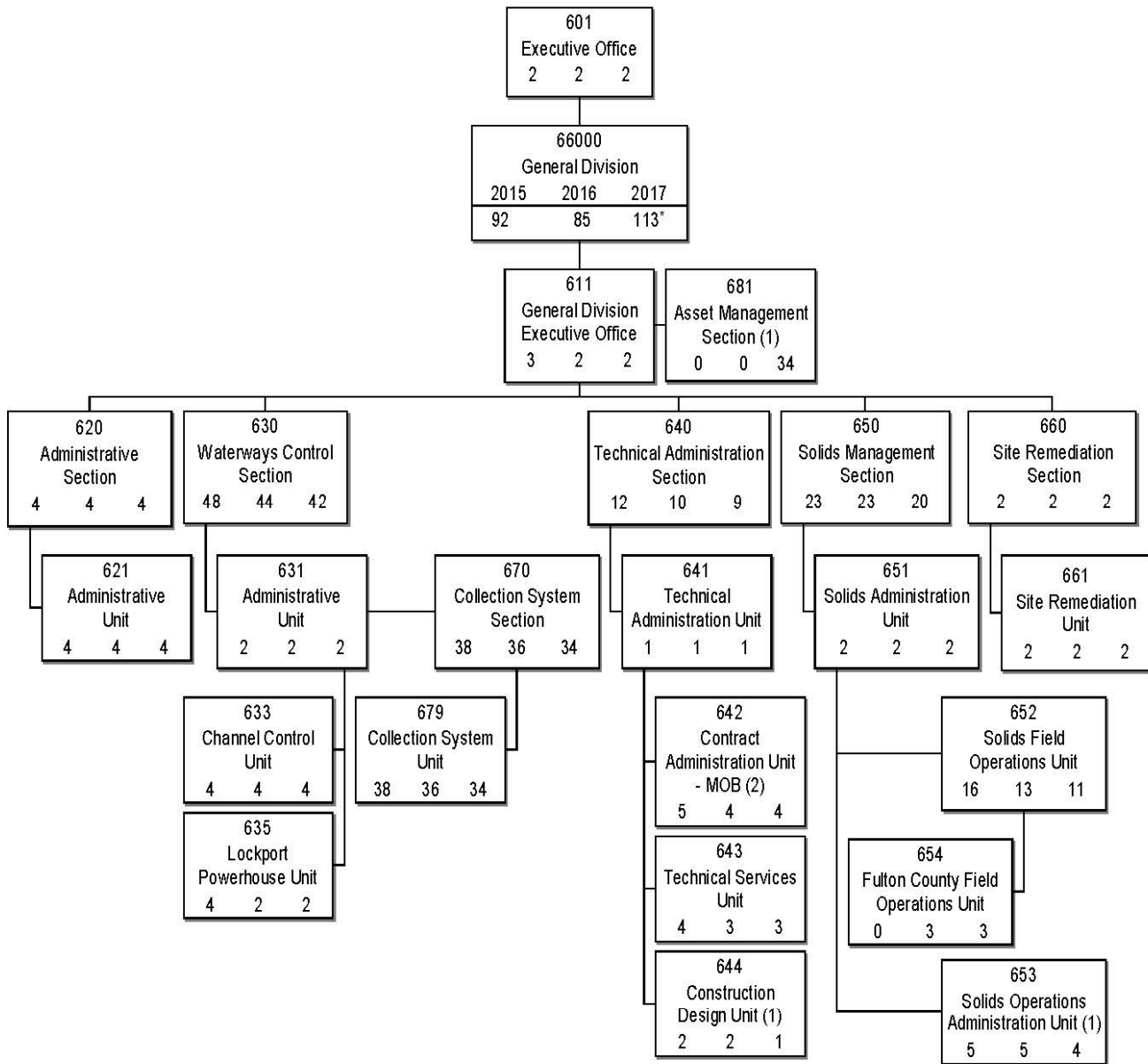
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# MAINTENANCE & OPERATIONS – GENERAL DIVISION



\* In 2017, 18 positions in the General Division are funded by the Stormwater Management Fund while the operations remain in the Maintenance & Operations Department: two in Unit 634, six in Unit 636, four in Unit 639, and six in Unit 679.

(1) Effective 01/01/2017, 33 positions were transferred into Section 681 from Units 644, 653, 721, 722, 723, 754, 794, 822, 823, 922, and 923 with one position added for a total of 34 positions.

(2) Effective 01/01/2016, Section 642 Contract Preparation Unit was retitled Contract Administration Unit – MOB.

## MAINTENANCE & OPERATIONS – GENERAL DIVISION

The General Division supports the District’s mission to protect the quality of the water supply and the health and safety of the public, to improve the quality of water in canals, rivers, and streams, to protect businesses and homes from flood damage, and to manage water as a vital resource.

### General Division Summary

**The Waterways Control Section** is responsible for the waterways, collection facilities, small streams, and rivers throughout the District. The Waterways Control Center continuously receives meteorological data, radar patterns, and other vital information from precipitation stations and water gauges. This information is used to provide control of the 76.1 miles of the District’s navigable inland waterways. The Lockport Powerhouse is integral to managing the Chicago Area Waterway System and reducing the risk of flooding throughout our service area. It also provides financial benefits from its hydroelectric power generation. The Collection System Unit inspects, cleans, and maintains the District’s sewers. This unit is also responsible for the Chicago River Controlling Works, the Lockport Controlling Works, the Centennial Fountain, and six bridges over the North Shore Channel. Besides its Corporate Fund responsibilities, the section oversees programs and operations in the Stormwater Management Fund, including the Small Streams Maintenance Program, which reduces flooding in urbanized areas by removing debris from 532 miles of small streams and rivers in Cook County, and the Channel Maintenance Unit, which removes debris from the 76.1 miles of navigable waterways in Cook County.

**The Solids Management Section** manages, on a District-wide basis, the processing and utilization of biosolids, the final byproduct of the wastewater treatment process. It maintains and operates the Lawndale Avenue and Calumet Solids Management Areas and Fulton County.

**The Site Remediation Section** assesses the environmental condition of various District-owned property and works with the Law Department to remediate environmental contamination found on leased District-owned property and to make vacant District-owned property available for lease. The Site Remediation Section also assists in resolving site contamination, environmental compliance, hazardous waste handling, and disposal issues that arise at various District facilities and projects.

**The Technical Administration Section** provides all contract procurement services for the department, acts as the department’s liaison for technical, legal, and financial issues, handles all regulatory communications with agencies such as the Illinois Environmental Protection Agency, and manages all environmental permits including: National Pollutant Discharge Elimination System, Federally Enforceable State Operating Permit, Clean Air Act Permit Program (Title V), Biosolids, Operating, and Stormwater. The section coordinates reporting requirements for permits and Combined Sewer Overflow, supplies technical information for plant personnel and other departments and agencies, reviews and comments on reports and contracts from other departments, reviews and comments on proposed regulatory requirements and their effects on District operations, and coordinates Government Accounting Standards Board Statement 34 evaluations of District facilities.

**The Administrative Section** provides financial and budgetary services, develops and implements an annual budget, and reviews and processes requisitions and payments for goods and services in conformance with the Prompt Payment Act and other statutes. It prepares studies, reports, and correspondence to support the department’s progress towards its goals and strategies.

**The Asset Management Section** manages the maintenance of critical plant assets and infrastructure on a District-wide basis. It is composed of Electrical and Mechanical Engineers and serves to centralize the department’s maintenance function.

### Summary of 2016 Accomplishments

- Distributed 90,000 rain barrels to satisfy the requirements of the Consent Decree;
- Initiated the “Restore the Canopy, Plant a Tree” oak tree sapling distribution program in order to address Cook County’s declining tree population and thereby revive the depleted green infrastructure, which absorbs stormwater and reduces flooding.

### Budget Highlights

The 2017 appropriation for the General Division is \$26,761,600, an increase of \$3,650,400, or 15.8 percent, from 2016. The Corporate Fund staffing level has increased from 87 to 115 positions due to the following changes: the transfer in of 31 positions from the other Maintenance & Operations divisions and the addition of one Managing Engineer to staff the new Asset Management Section, the transfer in of one Engineering Technician IV from the Engineering Department and one Administrative Specialist from the Calumet Service Area, the transfer out of two Associate Civil Engineers to the Engineering Department and one Secretary to the Calumet Service Area, and the drop of two Associate Civil Engineers and one Assistant Civil Engineer. The total General Division position count is 133 due to an additional 18 positions, which are budgeted in the Stormwater Management Fund and managed by the Maintenance & Operations Department.

The General Division budget achieves the District’s strategic goals as follows: Add Value by marketing the Lockport Powerhouse’s electrical capacity; Excellence via measurable odor control strategies; Resource Recovery via biosolids composting to create a Class A land applicable product; Develop Employees by emphasizing training which leads to reduced outsourcing of specialized work; Leading Partnerships by developing relationships with municipalities, such as the City of Chicago, to utilize tree-based yard waste as bulking material in the creation of a biosolids compost blend; and Technology through the development of nutrient control processes and systems at Fulton County.

**66000 M&O - GENERAL DIVISION**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. COLLECTION & TREATMENT: The General Division provides technical and administrative support to the Maintenance & Operations Department's seven treatment facilities. It provides management and coordination of the collection system related activities.	\$ 8,669,345	32.4%
2. SOLIDS PROCESSING: The General Division provides technical and administrative support for the removal and processing of solids from concentrated sewage through various systems including heated digestion, centrifuging, air drying, and conditioning of low solids sludge and centrifuge cake in lagoons.	\$ 1,338,685	5.0%
3. SOLIDS UTILIZATION: The General Division provides management and coordination of biosolids processing and utilization of District-wide activities.	\$ 13,436,685	50.2%
4. FLOOD & POLLUTION CONTROL: The Waterways Control Section minimizes flooding and pollution of Lake Michigan through continuous control of the water levels of major rivers and canals, while limiting diversion of water from the lake in accordance with the U.S. Supreme Court Decree of 1967. In addition, the Waterways Control Section operates the Lockport Powerhouse and will generate an estimated 41.5 million kWh of electricity resulting in approximately \$1.0 million in revenue.	\$ 2,186,385	8.2%
5. GENERAL SUPPORT: The General Division provides technical and administrative support for other departments not directly related to the operational activities of Collection & Treatment, Solids Processing, Solids Utilization, and Flood & Pollution Control.	\$ 127,600	0.5%
6. REAL ESTATE ENVIRONMENTAL ASSESSMENT: Inspect and evaluate District properties for compliance with the United States Environmental Protection Agency and the Illinois Environmental Protection Agency requirements.	\$ 1,002,900	3.7%
<b>Total</b>	<b>\$ 26,761,600</b>	<b>100.0%</b>

**MEASURABLE GOALS:**

	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. Operation of the Lockport Powerhouse to generate the equivalent of \$1.0 million worth of electricity in 2017.	kWh generated	41,595,703	40,900,000	41,500,000
	<i>* Revenue generated</i>	<i>\$ 1,236,698</i>	<i>\$ 1,165,000</i>	<i>\$ 1,000,000</i>
2. General Division will minimize diversion of Lake Michigan water in accordance with U.S. Supreme Court Decree, through control of water levels.	mil. gal./yr. diversion	59,840	61,500	61,500
3. The Solids Management Section will oversee the utilization of 89,000 dry tons of biosolids in 2017. (North Service Area's 1,000 dry tons of solids remain in that division.)	Dry Tons	72,258	89,100	89,000

*\* Revenue generated not included in total costs.*



**66000 M&O - GENERAL DIVISION**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actuals	Budgeted		Change		
Number	Name		FTEs	Dollars	Dollars	Percent	
1000	Collection	\$ 4,063,712	2017 43	\$ 5,778,485	\$ 716,655	14.2	
			2016 35	\$ 5,061,830			
1100	Surface Interceptor Systems	\$ 2,480,557	2017 20	\$ 2,601,700	\$ (208,300)	(7.4)	a)
			2016 21	\$ 2,810,000			
1200	Tunnel and Reservoir System	\$ 726,724	2017 9	\$ 1,058,900	\$ 210,600	24.8	b)
			2016 8	\$ 848,300			
1300	Pumping Station Facilities	\$ 29,066	2017 4	\$ 468,700	\$ 449,100	2,291.3	b)
			2016 -	\$ 19,600			
1900	Collection - Indirect Costs	\$ 827,365	2017 10	\$ 1,649,185	\$ 265,255	19.2	c)
			2016 6	\$ 1,383,930			
2000	Treatment	\$ 905,304	2017 21	\$ 2,769,360	\$ 1,849,180	201.0	
			2016 6	\$ 920,180			
2000	Pre-Treatment	\$ -	2017 1	\$ 104,100	\$ 104,100	100.0	b)
			2016 -	\$ -			
2100	Primary Treatment	\$ -	2017 1	\$ 125,000	\$ 125,000	100.0	b)
			2016 -	\$ -			
2200	Secondary Treatment	\$ -	2017 3	\$ 339,700	\$ 339,700	100.0	b)
			2016 -	\$ -			
2300	Tertiary Treatment	\$ 19,677	2017 1	\$ 70,200	\$ 62,400	800.0	b)
			2016 -	\$ 7,800			
2900	Treatment - Indirect Costs	\$ 885,627	2017 15	\$ 2,130,360	\$ 1,217,980	133.5	d)
			2016 6	\$ 912,380			
3000	Solids Processing	\$ 613,514	2017 11	\$ 1,338,685	\$ 671,555	100.7	
			2016 5	\$ 667,130			
3100	Thickening	\$ -	2017 2	\$ 221,200	\$ 221,200	100.0	b)
			2016 -	\$ -			
3200	Stabilization	\$ -	2017 1	\$ 83,700	\$ 83,700	100.0	b)
			2016 -	\$ -			
3300	Processing Tertiary Solids	\$ 70,548	2017 1	\$ 93,200	\$ 27,600	42.1	e)
			2016 1	\$ 65,600			
3900	Solids Processing - Indirect Costs	\$ 542,966	2017 7	\$ 940,585	\$ 339,055	56.4	f)
			2016 4	\$ 601,530			

- a) Decrease is due to the reduced need for 15-655-11, Manhole and Infrastructure repairs (\$115,000) and the drop of one FTE position (\$93,500).
- b) Increase is due to the transfer of various positions into the newly created Asset Management Section (AMS) in the M&O General Division.
- c) Increase is due to the net addition of four FTE positions (\$567,100), offset by reduced need for replacement biofilter media at the Upper Des Plaines Pumping Station (\$175,000) and the reduced need for REACT Services (\$130,000).
- d) Increase is due to the transfer of various positions into the newly created AMS (\$1,067,800) and sub-membership in the 16-RFP-28, Pennsylvania-New Jersey-Maryland Interconnection (\$70,000).
- e) Increase is due to the transfer of various positions into the newly created AMS (\$67,000), offset by the transfer of an Associate Civil Engineer position to Engineering (\$39,700).
- f) Increase is due to the transfer of various positions into the newly created AMS (\$314,500).

**66000 M&O - GENERAL DIVISION**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change	
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
4000	Flood & Pollution Control	\$ 2,076,597	2017 14	\$ 2,186,385	\$ 107,555	5.2	
			2016 13	\$ 2,078,830			
4200	Waterways Control and Stormwater Reservoirs	\$ 1,632,690	2017 8	\$ 1,443,200	\$ 52,500	3.8	
			2016 8	\$ 1,390,700			
4210	Maintenance of Waterways	\$ -	2017 1	\$ 171,900	\$ (29,000)	(14.4)	
			2016 1	\$ 200,900			
4300	Stormwater Management	\$ 147,449	2017 2	\$ 167,900	\$ 6,300	3.9	
			2016 2	\$ 161,600			
4400	Aeration Facilities	\$ 79,084	2017 1	\$ 124,400	\$ 47,200	61.1	g)
			2016 1	\$ 77,200			
4900	Flood & Pollution Control - Indirect Costs	\$ 217,374	2017 2	\$ 278,985	\$ 30,555	12.3	
			2016 1	\$ 248,430			
5000	Solids Utilization	\$ 11,547,463	2017 22	\$ 13,436,685	\$ 338,755	2.6	
			2016 24	\$ 13,097,930			
5100	Solids Drying	\$ 5,920,978	2017 4	\$ 5,640,300	\$ 157,200	2.9	h)
			2016 5	\$ 5,483,100			
5200	Solids Distribution	\$ 4,114,273	2017 6	\$ 5,850,900	\$ 127,800	2.2	i)
			2016 6	\$ 5,723,100			
5900	Solids Utilization - Indirect Costs	\$ 1,512,212	2017 12	\$ 1,945,485	\$ 53,755	2.8	
			2016 13	\$ 1,891,730			
7000	General Support (excludes program numbers 7368 and 7604)	\$ 152,051	2017 1	\$ 127,600	\$ 5,200	4.2	
			2016 1	\$ 122,400			
7368	Real Estate Environmental Assessment	\$ 750,140	2017 3	\$ 1,002,900	\$ (27,600)	(2.7)	
			2016 3	\$ 1,030,500			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 121,500	\$ (10,900)	(8.2)	
			2016 -	\$ 132,400			
Totals		\$ 20,108,781	2017 115	\$ 26,761,600	\$ 3,650,400	15.8%	
			2016 87	\$ 23,111,200			

- g) Increase is due to the transfer of various positions into the newly created AMS (\$82,500), offset by the drop of an Assistant Civil Engineer position (\$36,500).
- h) Increase is due to a higher demand for 15-699-11, Heavy Equipment Rental (\$200,000), offset by the reduced need for 16-691-11, Truck Hauling of Biosolids (\$37,600).
- i) Increase is due to a higher demand for 14-692-12, Biosolids Utilization (\$321,000), offset by reduced demand for 14-690-11, Beneficial Reuse of Biosolids (\$140,500) and the drop of an Associate Civil Engineer position (\$39,700).

\* The 2017 position total for the General Division is 115, with 18 positions budgeted in the Stormwater Management Fund.

**66000 M&O - GENERAL DIVISION**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1000-2900	Collection & Treatment					
	Technical and Administrative Support for Collection and Treatment Activities	Cost	\$ 4,969,016	\$ 5,982,010	\$ 8,547,845	a)
3000	Solids Processing					
	Technical and Administrative Support for Solids Removal and Processing	Cost	\$ 613,514	\$ 667,130	\$ 1,338,685	b)
4000	Flood & Pollution Control					
4200	Operation and Maintenance of the Waterways to Minimize Area Flooding and Pollution	Cost	\$ 629,748	\$ 770,600	\$ 821,500	
	Minimize Diversion of Lake Michigan Water in Accordance with the U.S. Supreme Court Decree	Mil. Gal./Year Diversion	59,840	23,825	61,500	c)
		Cost	\$ 447,393	\$ 290,300	\$ 300,300	
		Cost/Mil. Gal./Year	\$ 7.48	\$ 12.18	\$ 4.88	
	Generate Electricity at Lockport Powerhouse to Obtain Approximately \$1.0 million in Revenue	kWh	41,595,703	36,856,400	41,500,000	
		Cost	\$ 555,549	\$ 329,800	\$ 321,400	
		Cost/kWh	\$ 0.0134	\$ 0.0089	\$ 0.0077	
		* Revenue Generated	\$ 1,236,698	\$ 1,191,700	\$ 1,000,000	
4210	Maintenance of the Waterways and Canal Banks Within the Jurisdiction of the District. Activities Include Debris Removal, Insect and Rodent Control, Bridge Repairs and Aeration Costs	Cost	\$ -	\$ 200,900	\$ 171,900	
4300	Stormwater Management	Cost	\$ 147,449	\$ 161,600	\$ 167,900	
4400	Aeration Facilities	Cost	\$ 79,084	\$ 77,200	\$ 124,400	d)
4900	Flood & Pollution Control - Indirect Costs	Cost	\$ 217,374	\$ 248,430	\$ 278,985	
5000	Solids Drying/Utilization					
	Management and Coordination of the Solids Utilization Program	Dry Tons	72,258	89,100	89,000	
		Cost	\$ 11,547,463	\$ 13,097,930	\$ 13,436,685	e)
		Cost/Dry Ton	\$ 159.81	\$ 147.00	\$ 150.97	
7000	General Support (excludes program numbers 7368 and 7604) Technical and Administrative Support for Other Departments' Activities Indirectly Related to the Operational Activities of Collection & Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization	Cost	\$ 152,051	\$ 122,400	\$ 127,600	
7368	Real Estate Environmental Assessment	Cost	\$ 750,140	\$ 1,030,500	\$ 1,002,900	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 132,400	\$ 121,500	
	<b>Division Total</b>		<b>\$ 20,108,781</b>	<b>\$ 23,111,200</b>	<b>\$ 26,761,600</b>	

- a) Increase is due to position changes associated with the newly created AMS (\$2,907,000), offset by the reduced need for replacement biofilter media at the Upper Des Plaines Pumping Station (\$175,000), REACT Services (\$130,000), and 15-655-11, Manhole and Infrastructure repairs (\$115,000).
- b) Increase is due to the transfer of various positions into the newly created AMS (\$686,300), offset by the transfer of one FTE position to Engineering (\$56,800).
- c) Increase is due to the Illinois Department of Natural Resources permit, which provides for an adjustment to the legal limit for Lake Michigan diversion.
- d) Increase is due to the transfer of various positions into the newly created AMS (\$82,500), offset by the elimination of one FTE position (\$36,500).
- e) Increase is due to a higher demand for 14-692-11, Biosolids Utilization (\$321,000).

\* Revenue generated not included in total costs.

101 66000	Fund: Corporate Department: Maintenance & Operations Division: General	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 8,272,161	\$ 8,877,500	\$ 8,852,500	\$ 8,315,700	\$ 12,330,600	\$ 12,330,600	\$ 12,422,700
601060	Compensation Plan Adjustments	589,831	402,700	542,700	542,700	504,700	504,700	505,800
601070	Social Security and Medicare Contributions	-	132,400	132,400	126,000	121,500	121,500	121,500
601080	Salaries of Nonbudgeted Employees	11,371	23,400	21,800	-	19,700	19,700	19,700
601100	Tuition and Training Payments	22,930	20,000	20,000	17,200	15,700	15,700	15,700
601170	Payments for Professional Services	354,726	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	9,251,019	9,456,000	9,569,400	9,001,600	12,992,200	12,992,200	13,085,400
612010	Travel	4,528	5,000	4,500	3,000	2,100	2,100	2,100
612030	Meals and Lodging	10,226	11,500	11,500	11,000	5,500	5,500	5,500
612050	Compensation for Personally-Owned Automobiles	7,023	9,000	9,000	4,200	9,400	9,400	9,400
612080	Motor Vehicle Operating Services	103	200	400	400	400	400	400
612150	Electrical Energy	53,473	86,300	86,300	77,000	77,700	77,700	77,700
612160	Natural Gas	2,563	6,900	6,900	6,700	8,100	8,100	8,100
612170	Water and Water Services	35,734	32,400	68,400	68,000	33,600	33,600	33,600
612210	Communication Services	130,633	210,000	276,000	206,500	200,700	200,700	200,700
612240	Testing and Inspection Services	4,014	16,300	16,300	14,000	14,100	14,100	14,100
612330	Rental Charges	8,952	7,600	8,500	7,600	10,900	10,900	10,900
612410	Governmental Service Charges	16,872	22,500	24,700	23,400	21,000	21,000	21,000
612420	Maintenance of Grounds and Pavements	21,963	657,300	659,600	630,800	653,200	698,200	698,200
612430	Payments for Professional Services	-	792,700	792,500	290,000	632,000	702,000	702,000
612490	Contractual Services, N.O.C.	90,892	190,200	192,800	181,700	213,300	213,300	213,300
612520	Waste Material Disposal Charges	8,875,612	9,027,600	9,054,600	7,983,600	9,417,500	9,372,500	9,372,500
612600	Repairs to Collection Facilities	656,939	1,110,000	1,110,000	1,000,000	949,100	949,100	949,100
612620	Repairs to Waterway Facilities	-	85,600	76,600	38,000	40,000	40,000	40,000
612650	Repairs to Process Facilities	15,267	25,500	25,500	15,400	31,500	31,500	31,500
612680	Repairs to Buildings	66,131	31,000	25,100	13,000	39,400	39,400	39,400
612760	Repairs to Material Handling and Farming Equipment	306,991	226,000	226,000	222,000	226,000	226,000	226,000

101 66000	Fund: Corporate Department: Maintenance & Operations Division: General	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
612780	Safety Repairs and Services	5,718	12,500	20,300	16,800	12,900	12,900	12,900
612790	Repairs to Marine Equipment	53,142	53,000	62,000	62,000	60,000	60,000	60,000
612820	Computer Software Maintenance	2,920	5,200	5,200	5,200	5,400	5,400	5,400
612860	Repairs to Vehicle Equipment	19,839	38,100	38,100	26,000	30,500	30,500	30,500
612990	Repairs, N.O.C.	800	2,900	2,900	2,400	3,400	3,400	3,400
200	TOTAL CONTRACTUAL SERVICES	10,390,335	12,665,300	12,803,700	10,908,700	12,697,700	12,767,700	12,767,700
623070	Electrical Parts and Supplies	14,453	19,400	19,400	19,400	15,000	15,000	15,000
623090	Plumbing Accessories and Supplies	8,682	5,500	12,500	9,000	10,000	10,000	10,000
623110	Hardware	1,142	4,100	4,100	3,500	4,100	4,100	4,100
623130	Buildings, Grounds, Paving Materials, and Supplies	12,893	42,800	39,700	37,300	56,000	56,000	56,000
623250	Vehicle Parts and Supplies	30,867	74,900	74,900	67,100	114,500	114,500	114,500
623270	Mechanical Repair Parts	92,124	102,600	87,600	51,000	117,300	117,300	117,300
623300	Manhole Materials	-	10,600	2,100	1,100	11,000	11,000	11,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	7,019	7,500	7,600	6,500	7,500	7,500	7,500
623530	Farming Supplies	-	5,000	5,000	4,700	5,000	5,000	5,000
623560	Processing Chemicals	131,044	405,000	230,000	202,500	359,000	359,000	359,000
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	2,546	-	20,200	20,200	-	-	-
623660	Cleaning Supplies	-	1,300	1,300	1,200	2,200	2,200	2,200
623680	Tools and Supplies	19,184	24,000	18,300	16,100	19,500	19,500	19,500
623700	Wearing Apparel	1,618	1,000	1,000	800	1,500	1,500	1,500
623780	Safety and Medical Supplies	6,323	8,000	45,700	40,600	6,500	6,500	6,500
623800	Computer Software	-	2,000	300	-	1,000	1,000	1,000
623810	Computer Supplies	-	600	600	500	2,000	2,000	2,000
623820	Fuel	111,971	253,100	208,100	124,900	157,000	157,000	157,000
623860	Lubricants	-	2,500	2,500	2,200	500	500	500
623990	Materials and Supplies, N.O.C.	27,561	20,000	52,500	44,700	18,900	18,900	18,900
300	TOTAL MATERIALS AND SUPPLIES	467,427	989,900	833,400	653,300	908,500	908,500	908,500

101 66000	Fund: Corporate Department: Maintenance & Operations Division: General	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
TOTAL GENERAL DIVISION		\$ 20,108,781	\$ 23,111,200	\$ 23,206,500	\$ 20,563,600	\$ 26,598,400	\$ 26,668,400	\$ 26,761,600

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation for a specific division as funding is controlled at the M&O Overall department-level or when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>601</b>	<b>Executive Office</b>					
EX14	Director of Maintenance & Operations	1	1		1	
EX06	Secretary to Officer	1	1		1	
TOTAL	Executive Office	2	2	354,207.88	2	362,230.15
<b>611</b>	<b>General Division Executive Office</b>					
HP22	Assistant Director of Maintenance & Operations	1	1		1	
HP20	Managing Engineer	1	-		-	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
HP11	Administrative Specialist	-	-		1	
TOTAL	General Division Executive Office	3	2	313,172.86	2	272,696.98
<b>620</b>	<b>Administrative Section</b>					
<b>621</b>	<b>Administrative Unit</b>					
HP18	Supervising Budget & Management Analyst	1	1		1	
HP16	Senior Budget & Management Analyst	1	1		1	
HP15	Management Analyst II #2 (Budget & Management Analyst) (New Grade HP14)	1	-		-	
HP14	Budget & Management Analyst	1	2		2	
TOTAL	Administrative Unit	4	4	429,707.98	4	439,898.87
TOTAL	Administrative Section	4	4	429,707.98	4	439,898.87
<b>630</b>	<b>Waterways Control Section</b>					
<b>631</b>	<b>Administrative Unit</b>					
HP20	Managing Civil Engineer	1	1		1	
HP11	Administrative Specialist	1	1		1	
TOTAL	Administrative Unit	2	2	255,318.96	2	257,872.15
<b>633</b>	<b>Channel Control Unit</b>					
NR6271	Systems Dispatcher	4	4		4	
TOTAL	Channel Control Unit	4	4	446,201.60	4	459,596.80
<b>634</b>	<b>Channel Maintenance Unit</b>					
(* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)						
HP17	Senior Civil Engineer	-	-		-	
		(*1)	(*1)		(*1)	

Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP15	Associate Civil Engineer	-	-		-	
		(*1)	(*1)		(*1)	
TOTAL	Channel Maintenance Unit	-	-	-	-	-
TOTAL	Stormwater Management Fund Positions	(*2)	(*2)		(*2)	
<b>635</b>	<b>Lockport Powerhouse Unit</b>					
HP14	Assistant Civil Engineer	1	-		-	
HP14	Engineering Technician V	1	-		-	
NR7394	Powerhouse Mechanic Leadman	1	1		1	
NR7393	Powerhouse Mechanic	1	1		1	
TOTAL	Lockport Powerhouse Unit	4	2	231,171.20	2	238,097.60
<b>636</b>	<b>Boat Operations Unit</b>					
	(* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)					
HP14	Engineering Technician V	-	-		-	
		(*1)	(*1)		(*1)	
HP14	Engineering Technician V #4	-	-		-	
		(*1)	(*1)		(*1)	
HP12	Engineering Technician IV	-	-		-	
		(*1)	(*1)		(*1)	
HP12	Engineering Technician IV #4	-	-		-	
		(*1)	(*1)		(*1)	
NR8650	Maintenance Laborer Class A Shift	-	-		-	
		(*2)	(*2)		(*2)	
TOTAL	Boat Operations Unit	-	-	-	-	-
TOTAL	Stormwater Management Fund Positions	(*6)	(*6)		(*6)	
<b>639</b>	<b>Channel Maintenance Unit</b>					
	(* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)					
HP14	Engineering Technician V	-	-		-	
		(*1)	(*1)		(*1)	
HP14	Engineering Technician V #4	-	-		-	
		(*1)	(*1)		(*1)	
NR8650	Maintenance Laborer Class A Shift	-	-		-	
		(*2)	(*2)		(*2)	
TOTAL	Channel Maintenance Unit	-	-	-	-	-
TOTAL	Stormwater Management Fund Positions	(*4)	(*4)		(*4)	
<b>670</b>	<b>Collection System Section</b>					
<b>679</b>	<b>Collection System Unit</b>					
	(* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)					
HP17	Senior Civil Engineer	2	1		1	
HP15	Associate Civil Engineer	2	2		1	



Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP14	Assistant Civil Engineer	1	1		-	
HP14	Engineering Technician V	4	4		4	
HP12	Engineering Technician IV	1	1		1	
HP12	Engineering Technician IV #1	1	-		-	
HP11	Engineering Technician III	1	1		1	
NR8331	Laborer Foreman	6	6		6	
		(*1)	(*1)		(*1)	
NR8650	Maintenance Laborer Class A Shift	14	14		14	
		(*4)	(*4)		(*4)	
PR6473	Truck Driver	6	6		6	
		(*1)	(*1)		(*1)	
TOTAL	Collection System Unit	38	36	3,057,082.86	34	2,922,122.06
TOTAL	Stormwater Management Fund Positions	(*6)	(*6)		(*6)	
TOTAL	Collection System Section	38	36	3,057,082.86	34	2,922,122.06
TOTAL	Stormwater Management Fund Positions	(*6)	(*6)		(*6)	
TOTAL	Waterways Control Section	48	44	3,989,774.62	42	3,877,688.61
TOTAL	Stormwater Management Fund Positions	(*18)	(*18)		(*18)	
<b>640</b>	<b>Technical Administration Section</b>					
<b>641</b>	<b>Technical Administration Unit</b>					
HP20	Managing Civil Engineer	1	1		1	
TOTAL	Technical Administration Unit	1	1	190,814.00	1	192,722.14
<b>642</b>	<b>Contract Administration Unit - MOB (formerly Contract Preparation Unit)</b>					
HP18	Principal Civil Engineer	1	1		1	
HP17	Senior Mechanical Engineer	1	1		1	
HP15	Associate Civil Engineer	1	1		1	
HP15	Associate Mechanical Engineer	1	-		-	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	Contract Administration Unit (formerly Contract Preparation Unit)	5	4	480,248.86	4	485,051.36
<b>643</b>	<b>Technical Services Unit</b>					
HP18	Principal Civil Engineer	1	-		-	
HP17	Senior Civil Engineer	1	1		1	
HP15	Associate Civil Engineer	1	1		1	

Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	1	1		1	
TOTAL	Technical Services Unit	4	3	306,876.70	3	309,945.48
<b>644</b>	<b>Construction Design Unit</b>					
HP18	Principal Civil Engineer	1	1		1	
HP18	Principal Electrical Engineer	1	1		-	
TOTAL	Construction Design Unit	2	2	296,879.96	1	146,977.48
TOTAL	Technical Administration Section	12	10	1,274,819.52	9	1,134,696.46
<b>650</b>	<b>Solids Management Section</b>					
<b>651</b>	<b>Solids Administration Unit</b>					
HP20	Managing Civil Engineer	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	-	1		1	
HP11	Administrative Specialist	1	-		-	
TOTAL	Solids Administration Unit	2	2	270,115.04	2	272,816.19
<b>652</b>	<b>Solids Field Operations Unit</b>					
HP18	Principal Engineer	-	1		1	
HP17	Senior Civil Engineer	1	1		1	
HP15	Associate Civil Engineer	3	3		-	
HP14	Assistant Civil Engineer	1	-		-	
HP14	Engineering Technician V	3	3		3	
HP14	Engineering Technician V #4	2	2		2	
HP12	Engineering Technician IV	5	2		3	
HP11	Engineering Technician III	1	1		1	
TOTAL	Solids Field Operations Unit	16	13	1,368,666.78	11	1,111,098.15
<b>653</b>	<b>Solids Operations Administration Unit</b>					
HP17	Senior Civil Engineer	1	1		1	
HP15	Associate Civil Engineer	2	1		1	
HP12	Engineering Technician IV #4	1	1		1	

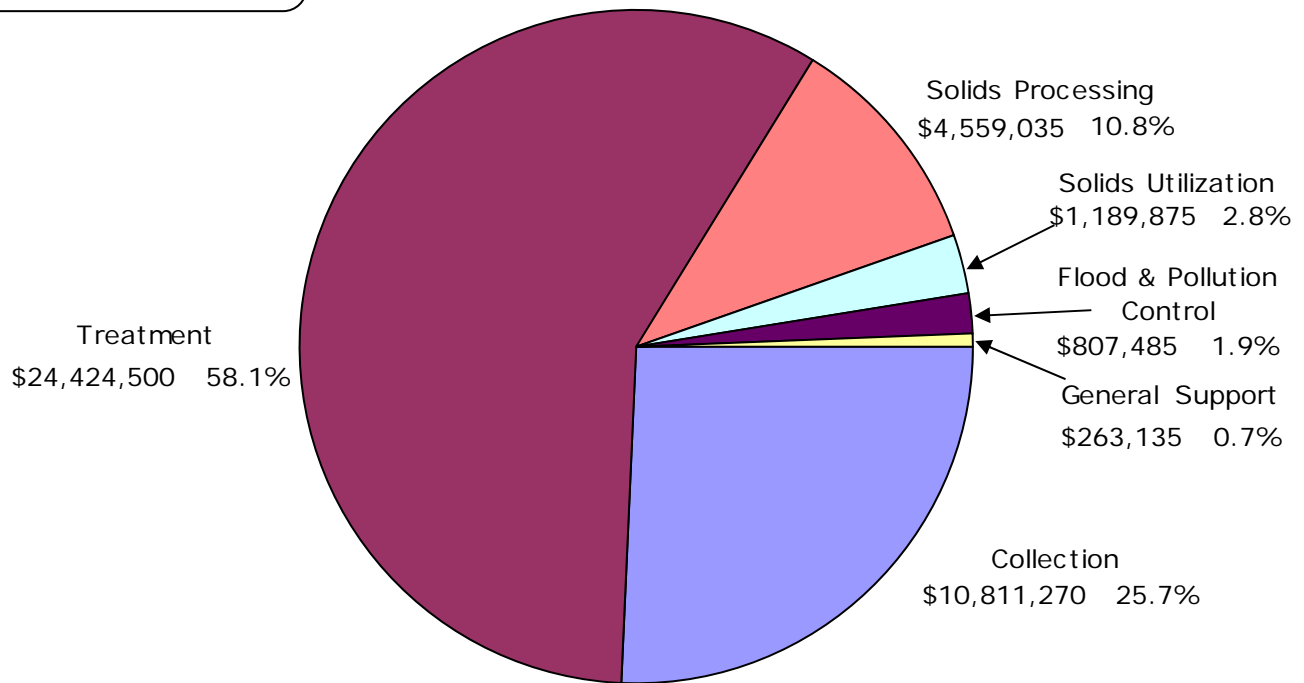
Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	-	1		-	
NR8652	Maintenance Laborer Class B	1	1		1	
TOTAL	Solids Operations Administration Unit	5	5	442,901.42	4	391,529.26
<b>654</b>	<b>Fulton County Field Operations Unit</b>					
HP12	Agricultural Technician II	-	1		1	
HP11	Agricultural Technician I	-	1		1	
HP11	Administrative Specialist	-	1		1	
TOTAL	Fulton County Field Operations Unit	-	3	214,741.28	3	216,888.68
TOTAL	Solids Management Section	23	23	2,296,424.52	20	1,992,332.28
<b>660</b>	<b>Site Remediation Section</b>					
<b>661</b>	<b>Site Remediation Unit</b>					
HP20	Engineer of Site Remediation	1	1		1	
HP17	Site Remediation Specialist	1	1		1	
TOTAL	Site Remediation Unit	2	2	308,842.56	2	317,468.70
TOTAL	Site Remediation Section	2	2	308,842.56	2	317,468.70
<b>681</b>	<b>Asset Management Section</b>					
HP20	Managing Engineer	-	-		1	
HP18	Principal Electrical Engineer	-	-		3	
HP18	Principal Mechanical Engineer	-	-		3	
HP17	Senior Electrical Engineer	-	-		6	
HP17	Senior Mechanical Engineer	-	-		4	
HP15	Associate Electrical Engineer	-	-		6	
HP15	Associate Mechanical Engineer	-	-		3	
HP15	Associate Process Control Engineer	-	-		3	
HP14	Assistant Electrical Engineer	-	-		1	
HP14	Assistant Mechanical Engineer	-	-		2	
HP14	Assistant Mechanical Engineer #2 (Engineering Technician IV) (New Grade HP12)	-	-		1	

Fund: Corporate Dept: Maintenance & Operations Division: General		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP11	Administrative Specialist	-	-		1	
TOTAL	Asset Management Section	-	-		34	4,088,006.58
TOTAL	Maintenance & Operations General Division	94	87	8,966,949.94	115	12,485,018.63
TOTAL	Stormwater Management Fund Positions	(*18)	(*18)		(*18)	
Note: Eighteen positions budgeted in Sections 634, 636, 639, and 679 are funded by the Stormwater Management Fund, while the operations remain in the Maintenance & Operations Department.						
NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.						

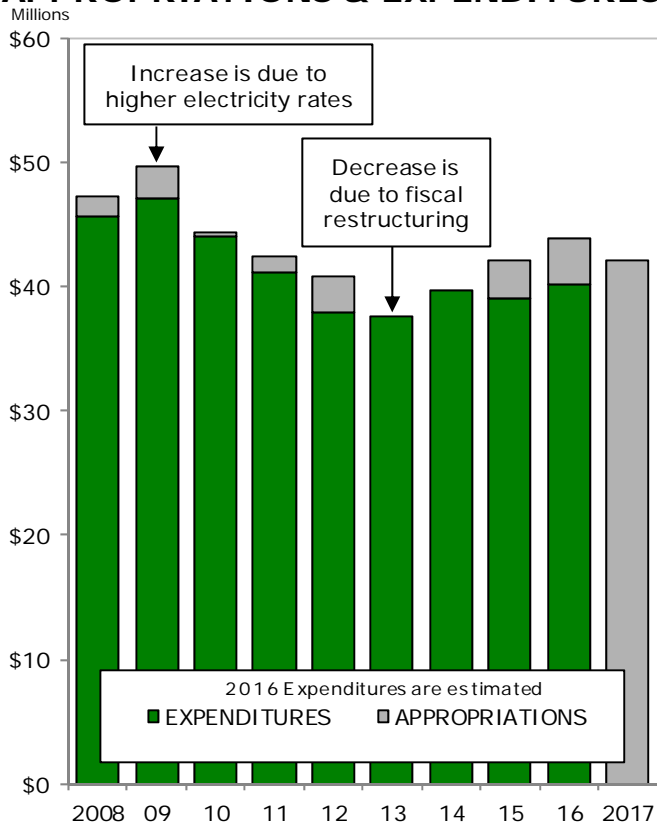
# MAINTENANCE & OPERATIONS – NORTH SERVICE AREA

2017	\$42,055,300
2016	\$43,830,100
Decrease	(\$1,774,800)

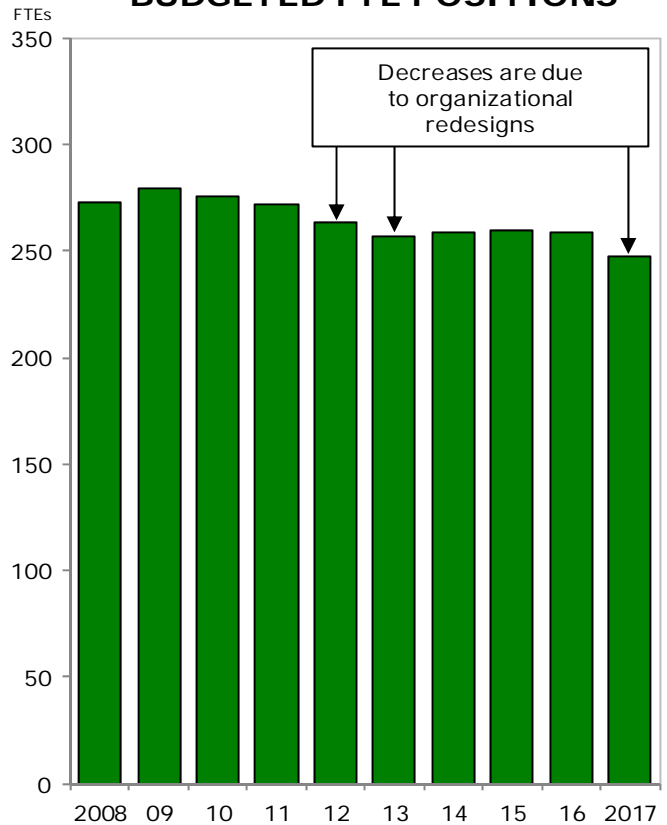
## FUNCTIONS



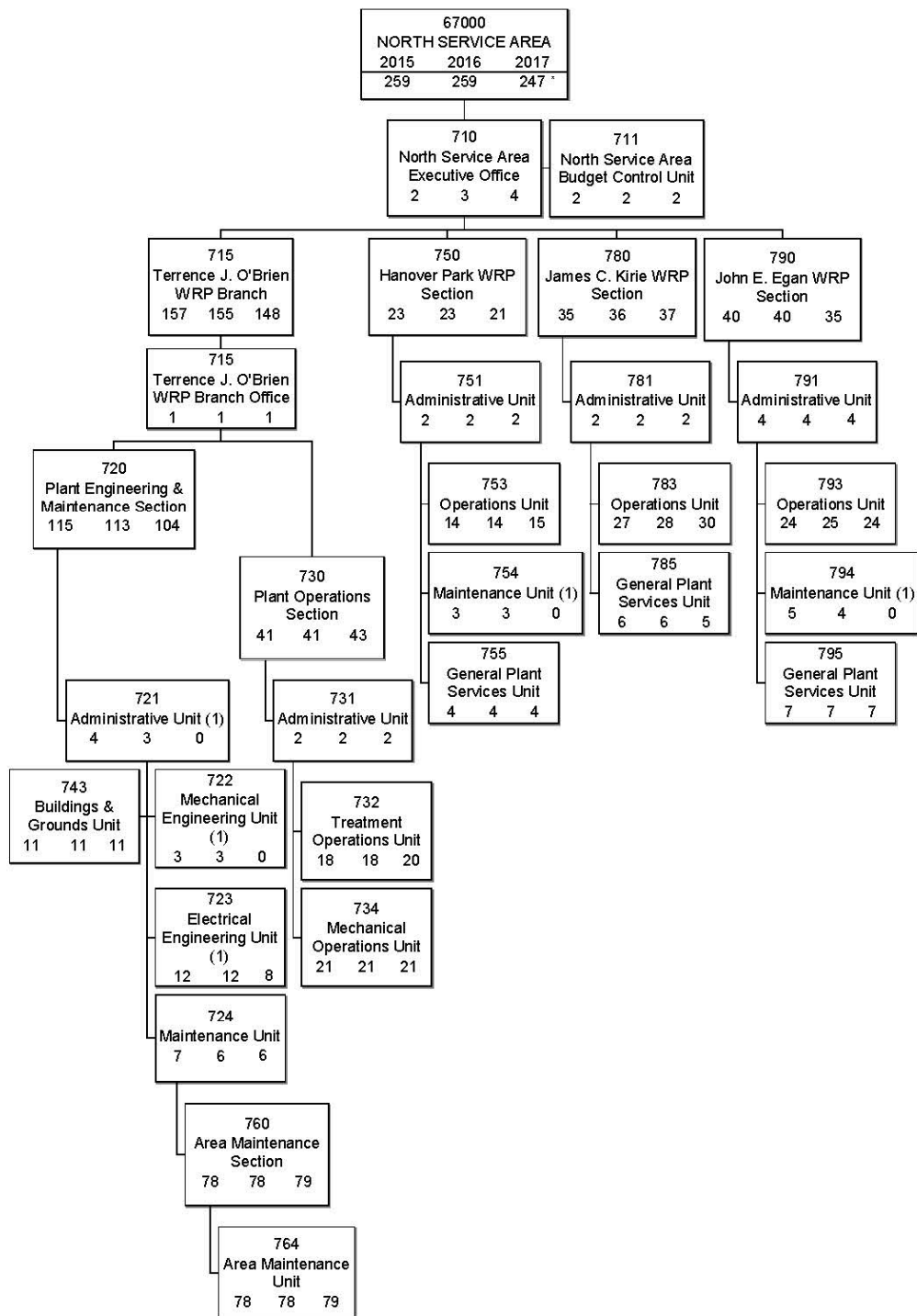
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# MAINTENANCE & OPERATIONS – NORTH SERVICE AREA



\* In 2017, there are no positions funded by the Stormwater Management Fund.

(1) Effective 01/01/2017, a total of 14 positions were transferred from Units 721, 722, 723, 754, and 794 into Section 681.

## MAINTENANCE & OPERATIONS – NORTH SERVICE AREA

The North Service Area (NSA) supports the District's mission to protect the quality of the water supply and the health and safety of the public, to improve the quality of water in canals, rivers, and streams, to protect businesses and homes from flood damage, and to manage water as a vital resource.

### Service Area Summary

The NSA collects wastewater discharges from a population equivalent of 1,885,874 people in an area of 297.5 square miles, treating approximately 119.1 billion gallons of wastewater annually at four water reclamation plants (WRPs): O'Brien, Hanover Park, Egan, and Kirie. In order to achieve its mission, the NSA is organized as follows:

**The Area Offices for the Four WRPs** provide leadership in developing long-term capital improvement, operation, and maintenance plans in compliance with National Pollutant Discharge Elimination System (NPDES) and other permit requirements, ensuring continuous improvements. Area offices also operate facilities in a cost-effective manner that ensures the integrity of all facilities, the safety and security of all employees, workers, and the public, and presents a positive and professional image of the District.

**The Plant Engineering & Maintenance Sections** maintain all equipment at the plants and their outlying facilities in compliance with NPDES and other permit requirements. These sections implement asset management based on Government Accounting Standards Board Statement 34 condition evaluations. They also coordinate and direct repairs, maintenance, and alterations for treatment plants, pumping stations, and outlying facilities in the NSA.

**The Plant Operations Sections** operate all equipment and processes at the plants and their outlying facilities in compliance with NPDES and other permit requirements. These sections ensure the operational integrity of all facilities at all times, as well as the safety of employees, contract workers, and the public.

**The Plant Services Sections** maintain buildings and grounds at the plants and their outlying facilities in compliance with NPDES and other permit requirements and ensure their availability, cleanliness, and safety.

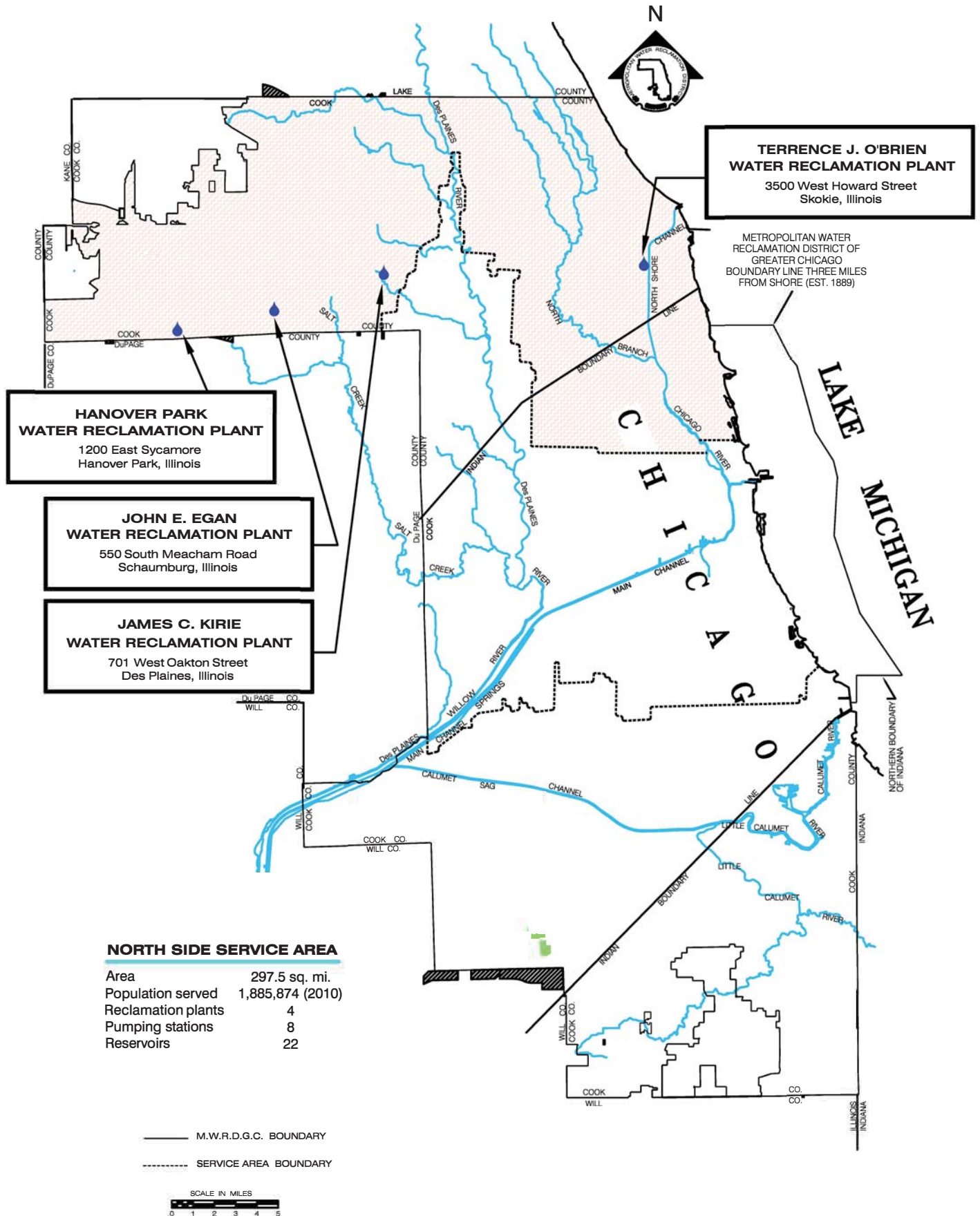
### Summary of 2016 Accomplishments

- Achieved 100 percent compliance with NPDES and other permit requirements in 2015 at all four WRPs in the NSA;
- Continued infrastructure improvement, rehabilitation, and replacement with a combination of Engineering and Maintenance & Operations Department contracts and use of the Construction Fund for capital projects;
- Optimized the automation of chemical dosing systems in order to reduce excess chemical usage of sodium hypochlorite and sodium bisulfite;
- Continued maintenance plan and schedule adjustments to increase the use of in-house trades to perform maintenance work previously performed by contract personnel to reduce the level of outsourcing;
- Rehabilitation of Chiller No. 1 at the Egan WRP was completed to increase cooling capacity and improve reliability;
- Ultraviolet disinfection at the O'Brien WRP came online to treat effluent prior to its release back into the waterways;
- ANITA™ Mox treatment at the Egan WRP came online to treat effluent, containing a high ammonia concentration, for the removal of nitrogen.

### Budget Highlights

The 2017 appropriation for the NSA is \$42,055,300, a decrease of \$1,774,800, or 4.0 percent, from 2016. The staffing level has decreased from 259 to 247 positions. Two Assistant Civil Engineers and one Laborer Foreman were dropped, one Associate Mechanical Engineer was transferred to the Engineering Department, and one Assistant Engineer of Treatment Plant Operations II was transferred to the Stickney Service Area, offset by the transfer in of one Engineering Technician V from the Stickney Service Area, the addition of one Truck Driver, one Treatment Plant Operator II, and the addition of four Maintenance Laborer Class A Shift positions to Mechanical Operations. The following positions were transferred to the newly created Asset Management Section in the Maintenance & Operations General Division: one Assistant Electrical Engineer, one Assistant Mechanical Engineer, two Associate Electrical Engineers, one Associate Mechanical Engineer, two Associate Process Control Engineers, one Principal Electrical Engineer, one Principal Mechanical Engineer, three Senior Electrical Engineers, and two Senior Mechanical Engineers.

The NSA will continue to work with other departments to develop a strategy for compliance with the phosphorus concentration limits for the O'Brien WRP effluent. Some of the initiatives being developed are final tank enhancements, phosphorus source control through the Industrial Waste Pretreatment Program, the use of algae to recover phosphorus, sidestream phosphorus recovery systems, biological phosphorus removal processes, and aeration control through ammonium management. Process automation, energy conservation, disinfection, and implementation of new treatment processes without a significant increase to the budget remain a high priority.





**67000 M&O - NORTH SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. COLLECTION & TREATMENT: The North Service Area will collect and treat approximately 119.1 billion gallons of wastewater through its treatment facilities and a contract agreement with the Fox River Water Reclamation District.	\$ 35,235,770	83.8%
Design: Flows ^    CBOD *    SS *		
Terrence J. O'Brien Water Reclamation Plant (WRP)	333 MGD	10 mg/1    12 mg/1
John E. Egan Water Reclamation Plant	30 MGD	10 mg/1    12 mg/1
Hanover Park Water Reclamation Plant	12 MGD	10 mg/1    12 mg/1
James C. Kirie Water Reclamation Plant	52 MGD	4 mg/1    5 mg/1
Fox River Water Reclamation District	4 MGD	-    -
^ In millions of gallons per day (MGD).		
* National Pollutant Discharge Elimination System monthly effluent quality standards: CBOD - Carbonaceous Biochemical Oxygen Demand SS - Suspended Solids		
2. SOLIDS PROCESSING: The North Service Area will remove 53,500 dry tons and process 13,500 dry tons of concentrated sewage through various systems including heated digestion, centrifuging, concentration, and centrifuge cake in lagoons at CALSMA** and LASMA**.	\$ 4,559,035	10.8%
3. SOLIDS UTILIZATION: The North Service Area will provide support to utilize 1,000 dry tons of biosolids for the Fischer Farm in Hanover Park and other agricultural applications.	\$ 1,189,875	2.8%
4. FLOOD & POLLUTION CONTROL: The North Service Area will work to prevent local area flooding and control diversion of water from Lake Michigan through the operation of 22 detention reservoirs in cooperation with local communities and by assisting in the operation of the Wilmette Controlling Works and the North Shore Channel. The North Service Area will also work to maintain the quality of the waterways system and associated District property by utilizing debris boats and channel maintenance crews.	\$ 807,485	1.9%
5. GENERAL SUPPORT: The North Service Area will provide technical and administrative support for other departments not directly related to the operational activities of Collection & Treatment, Solids Processing, Solids Utilization, and Flood & Pollution Control.	\$ 263,135	0.7%
<b>Total</b>	<b>\$ 42,055,300</b>	<b>100.0%</b>
**CALSMA - Calumet Solids Management Area and LASMA - Lawndale Avenue Solids Management Area		

**MEASURABLE GOALS:**

	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. The North Service Area will collect and treat approximately 119.1 billion gallons of wastewater in 2017.	Billion Gallons	112.7	119.1	119.1
2. The North Service Area will remove 53,500 dry tons and process 13,500 dry tons of concentrated sewage.	Dry Tons Process Solids	13,174	13,500	13,500
3. The North Service Area will obtain 100 percent permit compliance in 2017 for National Pollutant Discharge Elimination System effluent limits.	Percent	100.00%	100.00%	100.00%
4. The North Service Area will provide support to utilize 1,000 dry tons of biosolids in 2017.	Dry Tons	999	1,000	1,000

**67000 M&O - NORTH SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent		
1000	Collection	\$ 10,692,881	2017 65	\$ 10,811,270	\$ (610,090)	(5.3)		
			2016 69	\$ 11,421,360				
1100	Surface Interceptor Systems	\$ 338,672	2017 3	\$ 310,400	\$ 6,400	2.1		
			2016 3	\$ 304,000				
1200	Tunnel and Reservoir System	\$ 1,433,384	2017 9	\$ 979,500	\$ (296,300)	(23.2)	a)	
			2016 9	\$ 1,275,800				
1300	Pumping Station Facilities	\$ 4,455,603	2017 25	\$ 5,033,800	\$ 80,000	1.6		
			2016 27	\$ 4,953,800				
1900	Collection - Indirect Costs	\$ 4,465,222	2017 28	\$ 4,487,570	\$ (400,190)	(8.2)	b)	
			2016 30	\$ 4,887,760				
2000	Treatment	\$ 22,710,415	2017 154	\$ 24,085,700	\$ (1,262,545)	(5.0)		
			2016 160	\$ 25,348,245				
2000	Pre-Treatment	\$ 833,143	2017 6	\$ 794,600	\$ (43,400)	(5.2)		
			2016 7	\$ 838,000				
2100	Primary Treatment	\$ 667,393	2017 7	\$ 625,600	\$ (53,800)	(7.9)		
			2016 7	\$ 679,400				
2200	Secondary Treatment	\$ 7,690,353	2017 44	\$ 7,823,100	\$ (350,500)	(4.3)	c)	
			2016 44	\$ 8,173,600				
2300	Tertiary Treatment	\$ 1,391,958	2017 12	\$ 1,824,400	\$ (212,600)	(10.4)	d)	
			2016 12	\$ 2,037,000				
2900	Treatment - Indirect Costs	\$ 12,127,568	2017 85	\$ 13,018,000	\$ (602,245)	(4.4)	e)	
			2016 90	\$ 13,620,245				

- a) Decrease is due to the reduced demand for electricity for the Tunnel and Reservoir Plan pumping station and control structures at the Kirie WRP (\$264,500).
- b) Decrease is due to the transfer of two FTE positions to the newly created Asset Management Section (AMS) in the Maintenance & Operations (M&O) General Division (\$320,400), the reduced need for services to repair collection facilities (\$120,000), and the reallocation of salaries to more accurately reflect current activities (\$57,600), offset by an increased need for pumps and equipment for pumping stations to support the use of in-house trades for equipment repair and replacement (\$40,300), an anticipated increase in electrical energy costs for collection systems and subsystems at the Egan and O'Brien WRPs (\$38,500), and an increase in fees to the Fox River Water Reclamation District (\$20,100).
- c) Decrease is due to the reduced need for electricity attributed to the decreased use of blowers resulting from reduced aeration needs at the Egan, Kirie, and O'Brien WRPs (\$539,400), offset by the reallocation and increased demand for electricity at the Hanover Park WRP from Program Number 3221 to better reflect operational needs (\$84,700), materials and supplies for the new ultraviolet disinfection process (\$50,000), sodium hypochlorite for odor control at the O'Brien WRP (\$39,300), and polyaluminum chloride at the Egan WRP, previously allocated to Program Number 2331 (\$25,000).
- d) Decrease is due to a revised estimate for electricity costs for ultraviolet disinfection at the O'Brien WRP based on historical data collected since its implementation in 2016 (\$109,400) and the reduction and reallocation of costs for polyaluminum chloride to Program Number 2211 due to a revised estimation of need to reduce filament blockage associated with the new ANITA™ Mox process at the Egan WRP (\$75,700).
- e) Decrease is due to the transfer of four FTE positions to the newly created AMS in the M&O General Division (\$501,900) and the transfer of an Assistant Engineer of Treatment Plant Operations II to the M&O Stickney Service Area (\$100,400).

**67000 M&O - NORTH SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent		
3000	Solids Processing	\$ 3,804,321	2017 22	\$ 4,559,035	\$ (70,205)	(1.5)		
			2016 24	\$ 4,629,240				
3100	Thickening	\$ 703,515	2017 5	\$ 866,700	\$ 73,100	9.2		
			2016 5	\$ 793,600				
3200	Stabilization	\$ 830,277	2017 5	\$ 743,400	\$ (150,300)	(16.8)	f)	
			2016 6	\$ 893,700				
3300	Dewatering	\$ 730,519	2017 6	\$ 1,335,200	\$ 14,500	1.1		
			2016 6	\$ 1,320,700				
3900	Solids Processing - Indirect Costs	\$ 1,540,010	2017 6	\$ 1,613,735	\$ (7,505)	(0.5)		
			2016 7	\$ 1,621,240				
4000	Flood & Pollution Control	\$ 754,606	2017 4	\$ 807,485	\$ 4,645	0.6		
			2016 4	\$ 802,840				
4200	Waterways Control and Stormwater Reservoirs	\$ 442,244	2017 4	\$ 466,800	\$ (26,300)	(5.3)		
			2016 4	\$ 493,100				
4400	Aeration Facilities	\$ 248,346	2017 -	\$ 227,400	\$ 29,000	14.6		
			2016 -	\$ 198,400				
4900	Flood & Pollution Control - Indirect Costs	\$ 64,016	2017 -	\$ 113,285	\$ 1,945	1.7		
			2016 -	\$ 111,340				
5000	Solids Utilization	\$ 956,352	2017 1	\$ 1,189,875	\$ 211,800	21.7		
			2016 1	\$ 978,075				
5200	Solids Distribution	\$ 186,689	2017 -	\$ 205,900	\$ 5,200	2.6		
			2016 -	\$ 200,700				
5900	Solids Utilization - Indirect Costs	\$ 769,663	2017 1	\$ 983,975	\$ 206,600	26.6	g)	
			2016 1	\$ 777,375				
7000	General Support (excluding program number 7604)	\$ 195,881	2017 1	\$ 263,135	\$ (39,205)	(13.0)		
			2016 1	\$ 302,340				
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 338,800	\$ (9,200)	(2.6)		
			2016 -	\$ 348,000				
Totals		\$ 39,114,456	2017 247	\$ 42,055,300	\$ (1,774,800)	(4.0%)	*	
			2016 259	\$ 43,830,100				

f) Decrease is due to the reallocation of electricity at the Hanover Park WRP to program number 2212 to better reflect operational needs (\$49,900) and a reduction in demand for natural gas due to the recycling of digester gas for energy needs throughout the heated digestion process at the Hanover Park WRP (\$38,500).

g) Increase is due to the anticipated operational costs for the new Fischer Farm Horticultural Center (\$200,000).

\* The 2017 position total for the North Service Area is 247, with no positions budgeted in the Stormwater Management Fund. For 2017, four Maintenance Laborer Class A Shift positions (day shift) were added to transition non-day shift positions to day shift positions. The salaries for these added positions were offset by vacancy adjustments applied to four existing Maintenance Laborer Class A Shift #1 positions (non-day shift), which will be dropped as they are vacated.

**67000 M&O - NORTH SERVICE AREA**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1000-2900	Collection & Treatment					
	Collect and Treat Wastewater at Treatment Facilities and Through a Contract Agreement with the Fox River Water Reclamation District					
	Terrence J. O'Brien Water Reclamation Plant	Mil. Gallons	84,824	89,000	89,000	
		Cost	\$ 17,696,544	\$ 19,896,905	\$ 19,202,620	a)
		Cost/Mil. Gallons	\$ 208.63	\$ 223.56	\$ 215.76	
	John E. Egan Water Reclamation Plant	Mil. Gallons	8,765	10,200	10,200	
		Cost	\$ 5,908,582	\$ 6,358,350	\$ 5,872,400	b)
		Cost/Mil. Gallons	\$ 674.11	\$ 623.37	\$ 575.73	
	Hanover Park Water Reclamation Plant	Mil. Gallons	3,540	3,500	3,500	
		Cost	\$ 2,768,723	\$ 2,603,600	\$ 2,599,100	
		Cost/Mil. Gallons	\$ 782.13	\$ 743.89	\$ 742.60	
	James C. Kirie Water Reclamation Plant	Mil. Gallons	13,373	15,558	14,400	
		Cost	\$ 5,651,375	\$ 6,535,950	\$ 5,807,850	c)
		Cost/Mil. Gallons	\$ 422.60	\$ 420.10	\$ 403.32	
	Fox River Water Reclamation District	Mil. Gallons	2,168	2,000	2,000	
		Cost	\$ 1,378,072	\$ 1,374,800	\$ 1,415,000	
		Cost/Mil. Gallons	\$ 635.64	\$ 687.40	\$ 707.50	
3000	Solids Processing					
	Remove 53,500 Dry Tons of Solids, Transfer 40,000 Dry Tons to the Stickney WRP and Process 13,500 Dry Tons from Concentrated Sewage Through Various Systems	Dry Tons	13,174	15,500	13,500	
		Cost	\$ 3,804,321	\$ 4,629,240	\$ 4,559,035	
		Cost/Dry Ton	\$ 288.77	\$ 298.66	\$ 337.71	
	<p>a) Decrease is due to the transfer of eight FTE positions to the newly created AMS in the M&amp;O General Division (\$872,100), an Assistant Engineer of Treatment Plant Operations II to the M&amp;O Stickney Service Area (\$167,300), the reduced need for services to repair collection facilities (\$120,000), and an Associate Mechanical Engineer to the Engineering Department (\$103,200), offset by the increased demand for electricity for dry weather pumps (\$420,400), materials and supplies for the new ultraviolet disinfection process (\$50,000), and sodium hypochlorite for odor control (\$39,300).</p> <p>b) Decrease is due to the transfer of three FTE positions to the newly created AMS in the M&amp;O General Division (\$329,600), the reduced demand for electricity for pumps and blowers (\$164,700), and the drop of an Assistant Civil Engineer (\$57,600), offset by the increased need for specialized parts to repair the distributed control system (\$24,700).</p> <p>c) Decrease is due to the reduced demand for electricity for pumps and blowers (\$506,700) and reduced salary costs associated with the drop of an Assistant Civil Engineer (\$105,300) and a Laborer Foreman (\$83,100).</p>					

**67000 M&O - NORTH SERVICE AREA**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4000	Flood & Pollution Control					
	Operation and Maintenance of the Waterways to Minimize Area Flooding and Pollution					
4200	Minimize Area Flooding and Pollution of Lake Michigan Through the Continuous Control of Water Levels in Major Rivers and Canals and the Operation of Detention Reservoirs	Reservoirs	22	22	22	
		Cost	\$ 442,244	\$ 493,100	\$ 466,800	
		Cost/Reservoir	\$ 20,102.00	\$ 22,413.64	\$ 21,218.18	
4400	Aeration Facilities	Cost	\$ 248,346	\$ 198,400	\$ 227,400	
4900	Flood & Pollution Control - Indirect Costs	Cost	\$ 64,016	\$ 111,340	\$ 113,285	
5000	Solids Utilization					
	Utilize Biosolids for Application at Final Utilization Sites Such as Fischer Farm at Hanover Park and Other Farm Application Sites	Dry Tons	999	1,000	1,000	
		Cost	\$ 956,352	\$ 978,075	\$ 1,189,875	d)
		Cost/Dry Ton	\$ 957.31	\$ 978.08	\$ 1,189.88	
7000	General Support (excluding program number 7604)					
	Technical and Administrative Support for Other Departments' Activities Indirectly Related to the Operational Activities of Collection & Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization	Cost	\$ 195,881	\$ 302,340	\$ 263,135	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 348,000	\$ 338,800	
		Division Total	\$ 39,114,456	\$ 43,830,100	\$ 42,055,300	

d) Increase is due to the anticipated operational costs for the new Fischer Farm Horticultural Center (\$200,000).

101 67000	Fund: Corporate Department: Maintenance & Operations Division: North Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 23,496,825	\$ 24,676,400	\$ 24,506,400	\$ 23,600,000	\$ 23,061,800	\$ 23,061,800	\$ 23,246,300
601060	Compensation Plan Adjustments	1,186,643	1,167,900	1,302,800	1,300,000	1,195,300	1,195,300	1,205,800
601070	Social Security and Medicare Contributions	-	348,000	348,000	348,000	338,800	338,800	338,800
601100	Tuition and Training Payments	36,246	44,800	44,800	41,300	20,000	20,000	20,000
100	TOTAL PERSONAL SERVICES	24,719,714	26,237,100	26,202,000	25,289,300	24,615,900	24,615,900	24,810,900
612010	Travel	3,657	5,500	11,200	9,700	3,700	3,700	3,700
612030	Meals and Lodging	9,267	12,900	17,600	20,200	14,200	14,200	14,200
612050	Compensation for Personally-Owned Automobiles	35,059	35,800	31,800	31,000	30,800	30,800	30,800
612080	Motor Vehicle Operating Services	260	200	200	200	200	200	200
612150	Electrical Energy	7,497,283	8,428,900	8,428,900	7,336,600	8,305,600	8,278,600	8,278,600
612160	Natural Gas	455,698	692,100	482,100	482,100	589,800	567,500	567,500
612170	Water and Water Services	53,301	57,200	64,200	58,000	53,900	53,900	53,900
612210	Communication Services	106,829	148,400	167,600	165,000	135,000	135,000	135,000
612240	Testing and Inspection Services	22,977	38,900	38,900	27,100	31,700	31,700	31,700
612330	Rental Charges	22,451	40,700	9,400	7,000	12,900	12,900	12,900
612410	Governmental Service Charges	2,999,663	3,006,100	3,003,500	3,000,000	3,086,500	3,086,500	3,086,500
612420	Maintenance of Grounds and Pavements	31,552	59,900	66,400	47,700	35,000	35,000	35,000
612430	Payments for Professional Services	-	-	100	100	-	-	-
612490	Contractual Services, N.O.C.	361	8,000	8,000	3,400	4,200	4,200	4,200
612520	Waste Material Disposal Charges	508,152	534,400	507,400	345,000	537,400	537,400	537,400
612530	Farming Services	29,600	29,600	29,600	29,000	33,200	33,200	233,200
612600	Repairs to Collection Facilities	15,411	160,000	63,400	43,900	32,400	32,400	32,400
612650	Repairs to Process Facilities	733,349	1,183,700	1,181,400	876,000	1,086,900	1,099,200	1,099,200
612680	Repairs to Buildings	153,120	229,100	355,100	180,000	178,300	178,300	178,300
612760	Repairs to Material Handling and Farming Equipment	3,210	13,900	13,900	9,200	28,000	28,000	28,000
612780	Safety Repairs and Services	-	-	-	-	55,800	55,800	55,800
612860	Repairs to Vehicle Equipment	8,299	6,200	6,200	5,700	22,900	22,900	22,900
200	TOTAL CONTRACTUAL SERVICES	12,689,500	14,691,500	14,486,900	12,676,900	14,278,400	14,241,400	14,441,400
623030	Metals	3,485	10,000	10,900	10,000	7,000	7,000	7,000
623070	Electrical Parts and Supplies	250,944	442,300	554,300	541,300	457,200	457,200	457,200

101 67000	Fund: Corporate Department: Maintenance & Operations Division: North Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623090	Plumbing Accessories and Supplies	138,897	148,200	179,700	184,100	172,400	172,400	172,400
623110	Hardware	14,274	10,600	9,600	9,100	10,600	10,600	10,600
623130	Buildings, Grounds, Paving Materials, and Supplies	26,584	37,600	39,400	34,500	27,800	30,300	30,300
623190	Paints, Solvents, and Related Materials	516	2,600	2,600	2,600	2,600	2,600	2,600
623250	Vehicle Parts and Supplies	5,236	7,500	12,900	11,800	7,500	7,500	7,500
623270	Mechanical Repair Parts	432,727	580,700	448,700	404,000	380,800	380,800	380,800
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	18,492	21,000	21,000	19,600	18,500	18,500	18,500
623560	Processing Chemicals	490,960	1,371,600	1,201,100	700,000	1,393,800	1,393,800	1,393,800
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	13,941	22,600	12,300	12,300	25,000	25,000	25,000
623660	Cleaning Supplies	86	200	200	100	100	100	100
623680	Tools and Supplies	52,059	50,700	51,600	45,000	125,100	125,100	125,100
623720	Books, Maps, and Charts	-	-	100	100	-	-	-
623780	Safety and Medical Supplies	27,745	23,500	23,500	19,500	22,900	22,900	22,900
623800	Computer Software	-	-	1,700	1,700	700	700	700
623810	Computer Supplies	1,418	7,800	8,500	7,800	1,500	1,500	1,500
623820	Fuel	9,557	16,200	16,200	10,000	8,800	8,800	8,800
623840	Gases	689	1,100	1,100	600	500	500	500
623860	Lubricants	1,007	3,600	4,400	4,200	500	500	500
623990	Materials and Supplies, N.O.C.	1,933	1,700	1,600	1,600	1,700	9,200	9,200
300	TOTAL MATERIALS AND SUPPLIES	1,490,549	2,759,500	2,601,400	2,019,900	2,665,000	2,675,000	2,675,000
634600	Equipment for Collection Facilities	80,936	50,000	50,000	47,100	50,000	50,000	50,000
634650	Equipment for Process Facilities	133,757	92,000	105,500	98,800	72,000	72,000	72,000
634970	Testing and Laboratory Equipment	-	-	-	-	6,000	6,000	6,000
400	TOTAL MACHINERY AND EQUIPMENT	214,693	142,000	155,500	145,900	128,000	128,000	128,000
<b>TOTAL NORTH SERVICE AREA</b>		<b>\$ 39,114,456</b>	<b>\$ 43,830,100</b>	<b>\$ 43,445,800</b>	<b>\$ 40,132,000</b>	<b>\$ 41,687,300</b>	<b>\$ 41,660,300</b>	<b>\$ 42,055,300</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation for a specific division as funding is controlled at the M&O Overall department-level or when transfers of funds are anticipated.

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>710</b>	<b>North Service Area Executive Office</b>					
HP22	Assistant Director of Maintenance & Operations	1	1		1	
HP20	Managing Engineer	-	1		1	
HP14	Engineering Technician V	-	-		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	North Service Area Executive Office	2	3	479,628.24	4	595,256.44
<b>711</b>	<b>North Service Area Budget Control Unit</b>					
HP15	Management Analyst II #2 (Budget & Management Analyst) (New Grade HP14)	1	-		-	
HP14	Budget & Management Analyst	1	2		2	
TOTAL	North Service Area Budget Control Unit	2	2	179,641.80	2	186,204.41
<b>715</b>	<b>Terrence J. O'Brien Water Reclamation Plant Branch</b>					
<b>715</b>	<b>Terrence J. O'Brien Water Reclamation Plant Branch Office</b>					
HP21	Engineer of Treatment Plant Operations I #2 (Managing Engineer) (New Grade HP20)	1	1		1	
TOTAL	Terrence J. O'Brien Water Reclamation Plant Branch Office	1	1	207,059.32	1	209,129.91
<b>720</b>	<b>Plant Engineering &amp; Maintenance Section</b>					
<b>721</b>	<b>Administrative Unit</b>					
HP19	Assistant Engineer of Treatment Plant Operations II #2 (Principal Engineer) (New Grade HP18)	1	1		-	
HP18	Principal Engineer	1	-		-	
HP17	Senior Electrical Engineer	1	1		-	
HP15	Associate Mechanical Engineer	1	1		-	
TOTAL	Administrative Unit	4	3	410,429.76	-	-
<b>743</b>	<b>Buildings &amp; Grounds Unit</b>					
HP14	Engineering Technician V	1	1		1	
HP09	Administrative Clerk	1	1		1	
NR8331	Laborer Foreman	1	1		1	
NR8651	Maintenance Laborer Class A	3	3		3	
NR8652	Maintenance Laborer Class B	5	5		5	
TOTAL	Buildings & Grounds Unit	11	11	702,090.22	11	725,230.63



Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>722</b>	<b>Mechanical Engineering Unit</b>					
HP18	Principal Mechanical Engineer	1	1		-	
HP15	Associate Mechanical Engineer	1	1		-	
HP14	Assistant Mechanical Engineer	1	1		-	
TOTAL	Mechanical Engineering Unit	3	3	341,416.66	-	-
<b>723</b>	<b>Electrical Engineering Unit</b>					
HP18	Principal Electrical Engineer	1	1		-	
HP17	Senior Electrical Engineer	1	1		-	
HP15	Associate Electrical Engineer	1	1		-	
HP15	Associate Process Control Engineer	1	1		-	
NR6251	Chief Electrical Operator	1	1		1	
NR6233	Electrical Operator II	5	5		5	
NR6232	Electrical Operator I	2	2		2	
TOTAL	Electrical Engineering Unit	12	12	1,228,380.14	8	793,312.00
<b>724</b>	<b>Maintenance Unit</b>					
HP19	Master Mechanic II	-	1		1	
HP18	Master Mechanic I	1	-		-	
HP17	Assistant Master Mechanic	-	4		4	
HP16	Assistant Master Mechanic	4	-		-	
HP12	Engineering Technician IV	1	-		-	
HP09	Administrative Clerk	1	1		1	
TOTAL	Maintenance Unit	7	6	749,077.94	6	762,107.23
<b>760</b>	<b>Area Maintenance Section</b>					
<b>764</b>	<b>Area Maintenance Unit</b>					
PR5933	Architectural Ironworker	2	2		2	
PR5353	Bricklayer	1	1		1	
PR5153	Carpenter	2	2		2	
PR7425	Electrical Instrument & Testing Mechanic Foreman	1	1		1	

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
PR7424	Electrical Instrument & Testing Mechanic Leadman	1	1		1	
PR7423	Electrical Instrument & Testing Mechanic	12	12		12	
PR7347	Electrical Mechanic Foreman	1	1		1	
PR7349	Electrical Mechanic Sub-Foreman	1	1		1	
PR7343	Electrical Mechanic	13	13		13	
PR6453	Hoisting Engineer	1	1		1	
PR7579	Machinist Foreman	1	1		1	
PR7575	Machinist Leadman	1	1		1	
PR7573	Machinist	16	16		16	
PR5553	Painter	2	2		2	
PR7779	Pipefitter Foreman	1	1		1	
PR7775	Pipefitter Leadman	1	1		1	
PR7773	Pipefitter	12	12		12	
PR5753	Plumber	2	2		2	
PR5975	Structural Ironworker Leadman	1	1		1	
PR5973	Structural Ironworker	2	2		2	
PR6473	Truck Driver	4	4		5	
TOTAL	Area Maintenance Unit	78	78	7,445,984.00	79	7,687,742.40
TOTAL	Area Maintenance Section	78	78	7,445,984.00	79	7,687,742.40
TOTAL	Plant Engineering & Maintenance Section	115	113	10,877,378.72	104	9,968,392.26
<b>730</b>	<b>Plant Operations Section</b>					
<b>731</b>	<b>Administrative Unit</b>					
HP19	Assistant Engineer of Treatment Plant Operations II #2 (Principal Engineer) (New Grade HP18)	1	1		1	
HP12	Engineering Technician IV	1	1		1	
TOTAL	Administrative Unit	2	2	238,245.28	2	240,627.72
<b>732</b>	<b>Treatment Operations Unit</b>					
HP16	Treatment Plant Operator III	1	1		1	

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP14	Treatment Plant Operator II	5	5		6	
HP14	Treatment Plant Operator II #4	2	2		2	
HP12	Treatment Plant Operator I	4	4		4	
NR8650	Maintenance Laborer Class A Shift	4	4		4	
NR8650	Maintenance Laborer Class A Shift #1	-	-		1	
NR8651	Maintenance Laborer Class A	2	2		2	
TOTAL	Treatment Operations Unit	18	18	1,549,735.72	20	1,779,399.63
<b>734</b>	<b>Mechanical Operations Unit</b>					
HP17	Chief Operating Engineer I	1	1		1	
HP16	Assistant Chief Operating Engineer	1	1		1	
NR6810	Fireman-Oiler	6	6		6	
NR6832	Operating Engineer II	8	8		8	
NR6831	Operating Engineer I	5	5		5	
TOTAL	Mechanical Operations Unit	21	21	2,039,908.00	21	2,095,797.92
TOTAL	Plant Operations Section	41	41	3,827,889.00	43	4,115,825.27
TOTAL	Terrence J. O'Brien Water Reclamation Plant Branch	157	155	14,912,327.04	148	14,293,347.44
<b>750</b>	<b>Hanover Park Water Reclamation Plant Section</b>					
<b>751</b>	<b>Administrative Unit</b>					
HP19	Assistant Engineer of Treatment Plant Operations II #2 (Principal Engineer) (New Grade HP18)	1	1		1	
HP11	Administrative Specialist	1	1		1	
TOTAL	Administrative Unit	2	2	238,394.00	2	240,777.93
<b>753</b>	<b>Operations Unit</b>					
HP17	Senior Civil Engineer	1	1		1	
HP16	Treatment Plant Operator III	1	1		1	
HP14	Treatment Plant Operator II	5	6		6	
HP14	Treatment Plant Operator II #4	2	1		1	
HP12	Treatment Plant Operator I	5	5		5	

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR6810	Fireman-Oiler	-	-		1	
TOTAL	Operations Unit	14	14	1,292,005.78	15	1,387,746.60
<b>754</b>	<b>Maintenance Unit</b>					
HP17	Senior Mechanical Engineer	1	1		-	
HP15	Associate Electrical Engineer	1	1		-	
NR6810	Fireman-Oiler	1	1		-	
TOTAL	Maintenance Unit	3	3	318,770.92	-	-
<b>755</b>	<b>General Plant Services Unit</b>					
HP14	Engineering Technician V	1	1		1	
NR8651	Maintenance Laborer Class A	1	1		1	
NR8651	Maintenance Laborer Class A #2 (Maintenance Laborer Class B) (New Grade NR8652)	1	1		-	
NR8652	Maintenance Laborer Class B	1	1		2	
TOTAL	General Plant Services Unit	4	4	303,813.12	4	287,502.89
TOTAL	Hanover Park Water Reclamation Plant Section	23	23	2,152,983.82	21	1,916,027.42
<b>780</b>	<b>James C. Kirie Water Reclamation Plant Section</b>					
<b>781</b>	<b>Administrative Unit</b>					
HP20	Managing Engineer	1	1		1	
HP11	Administrative Specialist	1	1		1	
TOTAL	Administrative Unit	2	2	256,899.50	2	233,157.82
<b>783</b>	<b>Operations Unit</b>					
HP18	Principal Engineer	1	2		1	
HP17	Senior Civil Engineer	-	-		1	
HP16	Assistant Chief Operating Engineer	1	1		1	
HP16	Treatment Plant Operator III	1	1		1	
HP14	Assistant Civil Engineer	1	1		-	
HP14	Treatment Plant Operator II	5	5		5	
HP14	Treatment Plant Operator II #4	2	2		2	

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP12	Treatment Plant Operator I	4	4		4	
NR6810	Fireman-Oiler	2	2		2	
NR8650	Maintenance Laborer Class A Shift	4	4		4	
NR8650	Maintenance Laborer Class A Shift #1	-	-		3	
NR6831	Operating Engineer I	6	6		6	
TOTAL	Operations Unit	27	28	2,669,008.42	30	2,815,842.75
<b>785</b>	<b>General Plant Services Unit</b>					
HP14	Engineering Technician V	-	1		-	
HP14	Engineering Technician V #4	1	-		1	
NR8331	Laborer Foreman	1	1		-	
NR8651	Maintenance Laborer Class A	3	3		3	
NR8651	Maintenance Laborer Class A #2 (Maintenance Laborer Class B) (New Grade NR8652)	1	-		-	
NR8652	Maintenance Laborer Class B	-	1		1	
TOTAL	General Plant Services Unit	6	6	439,134.28	5	395,439.49
TOTAL	James C. Kirie Water Reclamation Plant Section	35	36	3,365,042.20	37	3,444,440.06
<b>790</b>	<b>John E. Egan Water Reclamation Plant Section</b>					
<b>791</b>	<b>Administrative Unit</b>					
HP20	Managing Engineer	1	1		1	
HP18	Principal Engineer	2	2		2	
HP11	Administrative Specialist	1	1		1	
TOTAL	Administrative Unit	4	4	543,969.66	4	559,317.26
<b>793</b>	<b>Operations Unit</b>					
HP16	Assistant Chief Operating Engineer	1	1		1	
HP16	Treatment Plant Operator III #4	1	1		1	
HP14	Assistant Civil Engineer	1	1		-	
HP14	Treatment Plant Operator II	5	7		7	
HP14	Treatment Plant Operator II #4	2	-		-	

Fund: Corporate Dept: Maintenance & Operations Division: North Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP12	Treatment Plant Operator I	4	4		4	
NR6810	Fireman-Oiler	2	3		3	
NR8651	Maintenance Laborer Class A	1	1		1	
NR6832	Operating Engineer II	1	1		1	
NR6831	Operating Engineer I	6	6		6	
TOTAL	Operations Unit	24	25	2,271,735.70	24	2,164,834.71
<b>794</b>	<b>Maintenance Unit</b>					
HP17	Senior Electrical Engineer	1	1		-	
HP17	Senior Mechanical Engineer	1	1		-	
HP15	Associate Process Control Engineer	1	1		-	
HP14	Assistant Electrical Engineer	1	1		-	
HP14	Assistant Mechanical Engineer	1	-		-	
TOTAL	Maintenance Unit	5	4	475,958.08	-	-
<b>795</b>	<b>General Plant Services Unit</b>					
HP14	Engineering Technician V	-	-		1	
HP14	Engineering Technician V #4	1	1		-	
NR8331	Laborer Foreman	1	1		1	
NR8651	Maintenance Laborer Class A	4	4		4	
NR8652	Maintenance Laborer Class B	1	1		1	
TOTAL	General Plant Services Unit	7	7	544,963.38	7	527,940.13
TOTAL	John E. Egan Water Reclamation Plant Section	40	40	3,836,626.82	35	3,252,092.10
TOTAL	Maintenance & Operations North Service Area	259	259	24,926,249.92	247	23,687,367.87

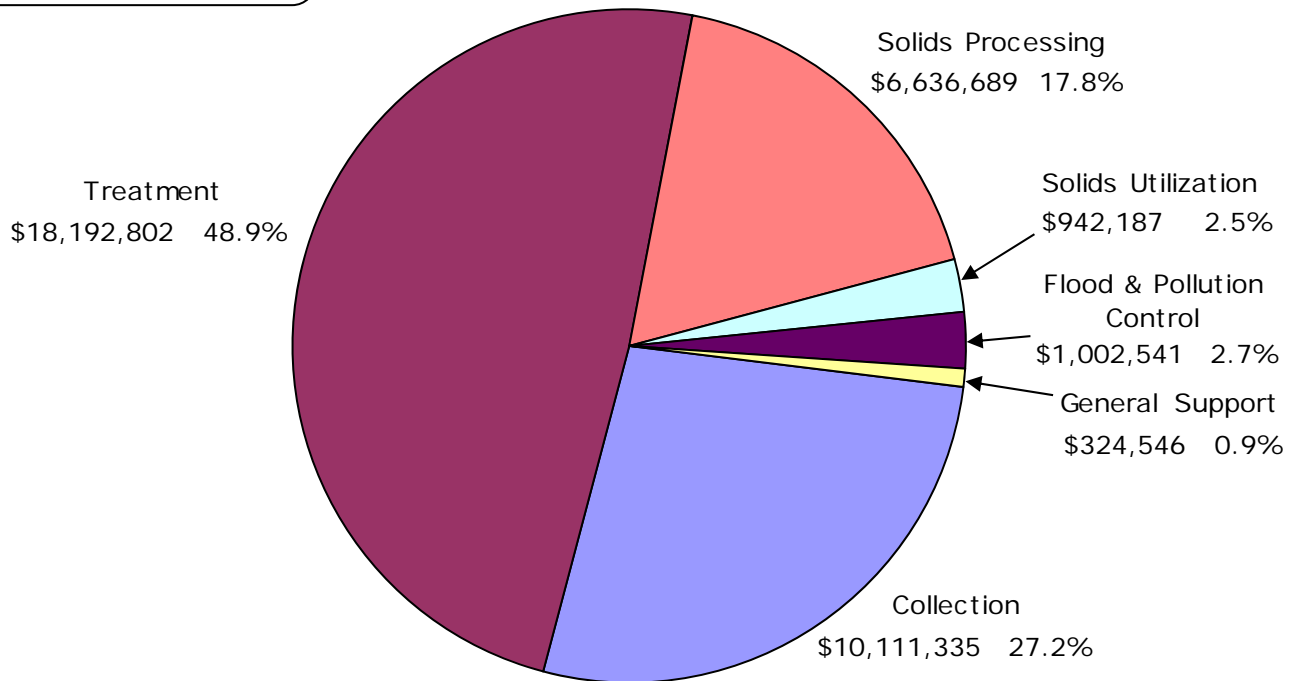
Note: There are no positions budgeted for the Stormwater Management Fund for 2017.

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

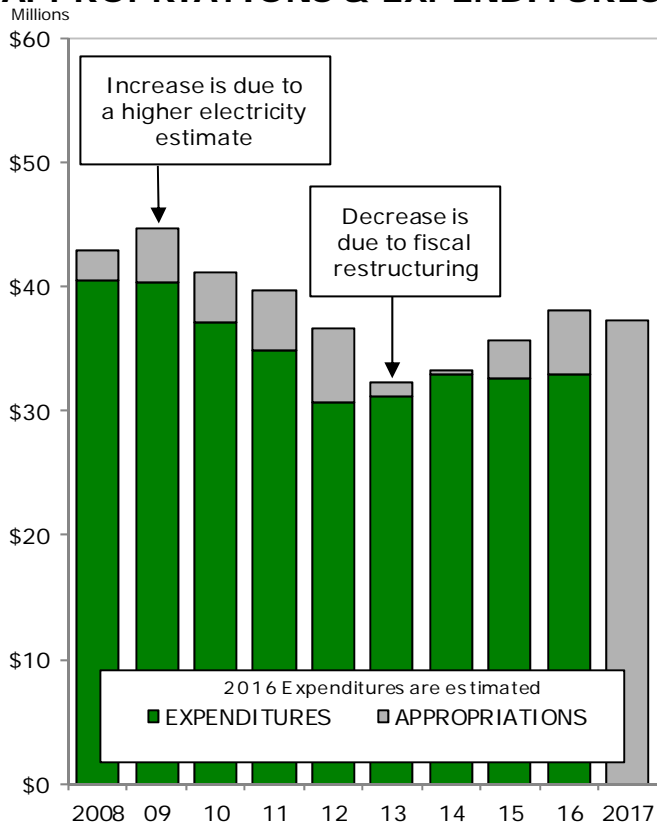
# MAINTENANCE & OPERATIONS – CALUMET SERVICE AREA

2017	\$37,210,100
2016	\$38,039,500
Decrease	(\$829,400)

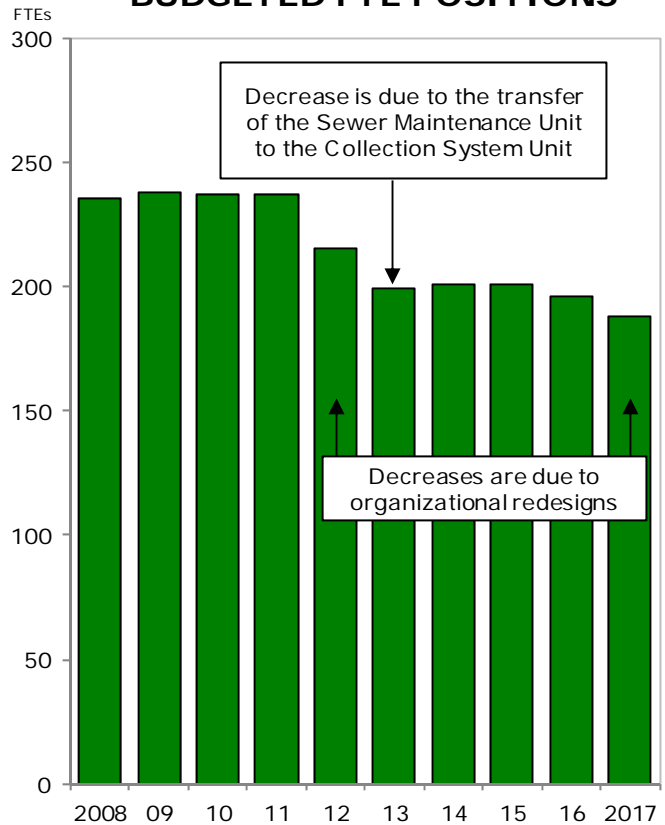
## FUNCTIONS



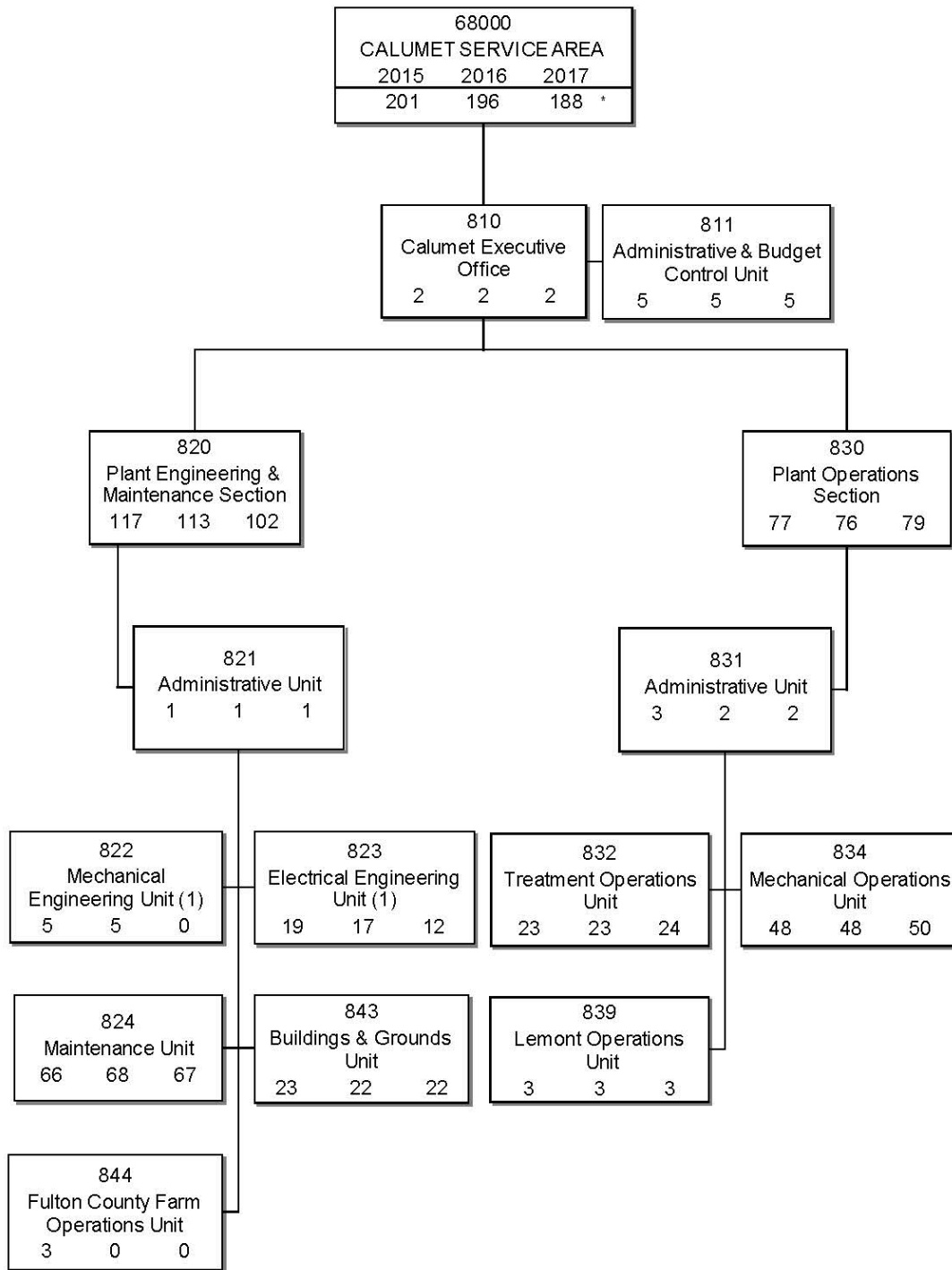
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# MAINTENANCE & OPERATIONS – CALUMET SERVICE AREA



\* In 2017, there are no positions funded by the Stormwater Management Fund.

(1) Effective 01/01/2017, a total of eight positions will be transferred from Units 822 and 823 into Section 681.



## MAINTENANCE & OPERATIONS – CALUMET SERVICE AREA

**The Calumet Service Area (CSA) supports the District’s mission to protect the quality of the water supply and the health and safety of the public, to improve the quality of water in canals, rivers, and streams, to protect businesses and homes from flood damage, and to manage water as a vital resource.**

### Service Area Summary

The CSA collects wastewater discharges from a population equivalent of 1,026,983 people in an area of 324.8 square miles, treating approximately 101 billion gallons of wastewater annually through the Calumet Water Reclamation Plant (WRP) and the Lemont WRP. In order to achieve its mission, the CSA is organized as follows:

**The Calumet Executive Office** provides direction for the entirety of maintenance and operations for the CSA.

**The Plant Engineering & Maintenance Section** is comprised of the Administrative, Electrical Engineering, Maintenance, and Buildings & Grounds Units. It is responsible for ensuring that the collection and process facilities that comprise the CSA perform in an efficient and cost-effective manner and for providing manpower and facility maintenance for solids utilization support. This is achieved by either using CSA trades personnel to perform maintenance and repairs or by using the services of outside contractors.

**The Plant Operations Section** is comprised of the Administrative, Treatment Operations, Mechanical Operations, and Lemont Operations Units. It is responsible for the operation of the collection and process facilities that comprise the CSA, ensuring that the facilities are manned and operated in the most efficient and cost-effective manner possible and that all National Pollutant Discharge Elimination System permit requirements are met.

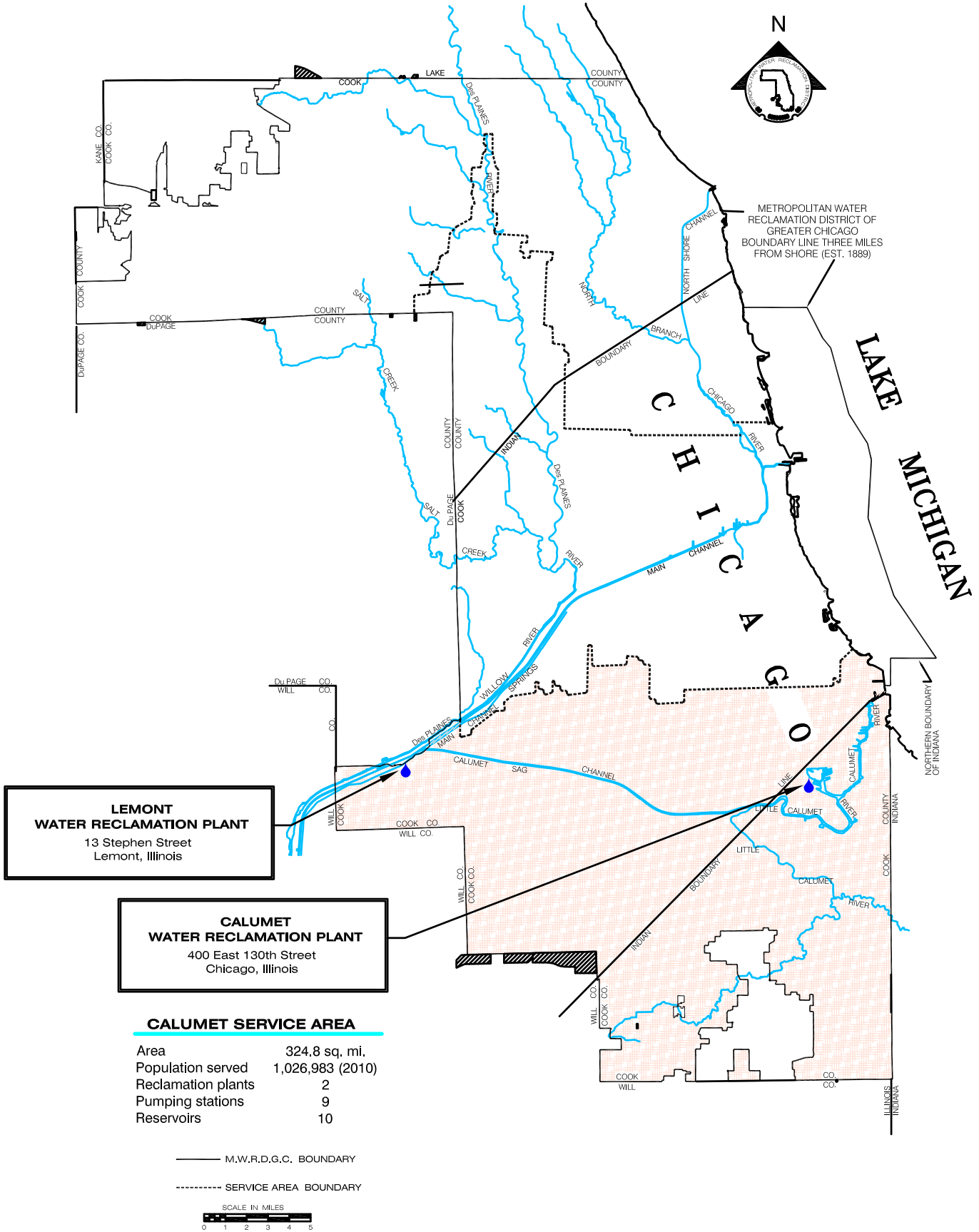
### Summary of 2016 Accomplishments

- Achieved 100 percent National Pollutant Discharge Elimination System permit compliance. Both the Calumet and Lemont WRPs have met 100 percent of all permit requirements for the past 25 and 20 years, respectively;
- Completed the installation of an ammonia control system for the aeration batteries at the Calumet WRP;
- Began first full season of disinfection of effluent at the Calumet WRP;
- Installed dissolved oxygen control for Sidestream Elevated Pool Aeration Stations;
- Initiated operations of the Lemont Wet Weather Treatment Facility and Reservoir, which was awarded Project of the Year by the Construction Industry Service Corporation;
- Began rehabilitation of the hydraulic operator at the Tunnel and Reservoir Plan Gate Structure No. 1;
- Placed the Thornton Composite Reservoir in service, which will provide more than \$40 million per year in benefits to 556,000 people in 15 communities. This project was also awarded Project of the Year by the National American Public Works Association;
- Upgraded the Foxboro Distributed Control System throughout the plant and outlying stations;
- Adjusted the maintenance plans and schedules to increase the use of in-house trades to perform maintenance work previously performed by contract personnel to reduce the level of outsourcing;
- Continued work to furnish, deliver, and install new tank drives at the Lemont WRP.

### Budget Highlights

The 2017 appropriation for the CSA is \$37,210,100, a decrease of \$829,400, or 2.2 percent, from 2016. The staffing level has decreased from 196 to 188 positions. One Assistant Electrical Engineer, one Associate Mechanical Engineer, and one Pipefitter were dropped upon vacancy, offset by the addition of three Maintenance Laborer Class A Shift positions. One Administrative Specialist was transferred to the General Division, offset by the transfer in of one Secretary from the General Division. One Managing Engineer was transferred to the Stickney Division, offset by the transfer in of one Engineer of Treatment Plant Operations I. The following positions were transferred to the newly created Asset Management Section in the M&O General Division: one Assistant Mechanical Engineer, two Associate Electrical Engineers, one Associate Mechanical Engineer, one Associate Process Control Engineer, one Principal Mechanical Engineer, one Senior Electrical Engineer, and one Senior Mechanical Engineer.

During 2017, the Calumet WRP will install a new conveyor for sludge screenings, replace six grit pumps at the aerated grit tanks, paint the Battery C final tanks, improve heating, ventilation, and air conditioning for various computer and control rooms, complete the installation of one gear box at Sidestream Elevated Pool Aeration Station No. 4, and install a turbo blower and tank drives at the Lemont WRP.



**68000 M&O - CALUMET SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. COLLECTION & TREATMENT: The Calumet Service Area will collect and treat approximately 101 billion gallons of wastewater through its Calumet and Lemont treatment facilities.	\$ 28,304,137	76.1%
Design: Flows ^    CBOD *    SS *		
Calumet Water Reclamation Plant	354 MGD	10 mg/l    15 mg/l
Lemont Water Reclamation Plant	2.3 MGD	20 mg/l    25 mg/l
<p>^ In millions of gallons per day (MGD).                      * National Pollutant Discharge Elimination System monthly effluent quality standards:                      CBOD - Carbonaceous Biochemical Oxygen Demand                      SS - Suspended Solids</p>		
2. SOLIDS PROCESSING: The Calumet Service Area will remove and process 40,000 dry tons of concentrated sewage through various systems including heated digestion, centrifuging, concentration, and aging low solids sludge and centrifuge cake in lagoons.	\$ 6,636,689	17.8%
3. SOLIDS UTILIZATION: The Calumet Service Area will provide support to the Solids Management Section to utilize approximately 29,000 dry tons of biosolids for application at final utilization sites such as daily and final cover in sanitary landfills.	\$ 942,187	2.5%
4. FLOOD & POLLUTION CONTROL: The Calumet Service Area will work to prevent local area flooding through the operation of 10 detention reservoirs, in cooperation with local communities. It will also work to maintain the quality of the waterways system and associated District property, in cooperation with the channel maintenance and debris boat crews.	\$ 1,002,541	2.7%
5. GENERAL SUPPORT: The Calumet Service Area will provide technical and administrative support for other departments not directly related to the operational activities of Collection & Treatment, Solids Processing, Solids Utilization, and Flood & Pollution Control.	\$ 324,546	0.9%
<b>Total</b>	<b>\$ 37,210,100</b>	<b>100.0%</b>

MEASURABLE GOALS:	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. The Calumet Service Area will collect and treat approximately 101 billion gallons of wastewater in 2017.	Billion Gallons	85	101	101
2. The Calumet Service Area will remove and process solids from 40,000 dry tons of concentrated sewage.	Dry Tons Process Solids	30,309	40,000	40,000
3. The Calumet Service Area will obtain 100 percent permit compliance in 2017 for National Pollutant Discharge Elimination System effluent limits.	Percent	100.00%	100.00%	100.00%
4. The Calumet Service Area will provide support to utilize 29,000 dry tons of biosolids in 2017.	Dry Tons	16,366	29,000	29,000

**68000 M&O - CALUMET SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent		
1000	Collection	\$ 9,382,464	2017 49	\$ 10,111,335	\$ (763,102)	(7.0)		
			2016 52	\$ 10,874,437				
1100	Surface Interceptor Systems	\$ 555,479	2017 4	\$ 604,200	\$ (15,800)	(2.5)		
			2016 4	\$ 620,000				
1200	Tunnel and Reservoir System	\$ 3,028,753	2017 9	\$ 2,967,100	\$ (299,600)	(9.2)	a)	
			2016 10	\$ 3,266,700				
1300	Pumping Station Facilities	\$ 2,462,313	2017 13	\$ 3,255,200	\$ (233,400)	(6.7)	b)	
			2016 14	\$ 3,488,600				
1900	Collection - Indirect Costs	\$ 3,335,919	2017 23	\$ 3,284,835	\$ (214,302)	(6.1)	c)	
			2016 24	\$ 3,499,137				
2000	Treatment	\$ 13,865,609	2017 81	\$ 17,933,802	\$ 89,993	0.5		
			2016 85	\$ 17,843,809				
2000	Pre-Treatment	\$ 683,424	2017 6	\$ 689,000	\$ 36,200	5.5		
			2016 6	\$ 652,800				
2100	Primary Treatment	\$ 782,465	2017 10	\$ 835,600	\$ (8,000)	(0.9)		
			2016 10	\$ 843,600				
2200	Secondary Treatment	\$ 5,483,512	2017 22	\$ 5,446,200	\$ 592,400	12.2	d)	
			2016 23	\$ 4,853,800				
2300	Tertiary Treatment	\$ 18,557	2017 -	\$ 3,396,400	\$ 99,800	3.0		
			2016 -	\$ 3,296,600				
2900	Treatment - Indirect Costs	\$ 6,897,651	2017 43	\$ 7,566,602	\$ (630,407)	(7.7)	e)	
			2016 46	\$ 8,197,009				

- a) Decrease is due to the completion of the Tunnel and Reservoir Plan (TARP) coarse screen cleaning (\$185,900), reduced salary costs associated with the transfer of one FTE position to the newly created Asset Management Section (AMS) in the M&O General Division (\$94,800), and the reduced demand for electricity for TARP pumping stations (\$86,600), offset by Rockwell remote terminal unit maintenance for TARP control structures (\$23,000).
- b) Decrease is due to the reduced demand for electricity for dry weather pumps (\$103,100), reduced salary costs associated with the transfer of one FTE position to the newly created AMS in the M&O General Division (\$68,200), the completion of a one-time battery replacement at the 125th Street Pumping Station (\$44,000), and the reduced need for electrical parts for pumps (\$21,500).
- c) Decrease is due to reduced salary costs associated with the transfer of one FTE position to the newly created AMS in the M&O General Division (\$108,100) and the reduced need for boiler, safety valve, and portable gas detection parts (\$84,750).
- d) Increase is due to additional electrical utility needs for blower and air mains (\$612,700) and the increased need for valve operator parts and service for first-stage aeration (\$45,000), offset by reduced salary costs associated with the transfer of one FTE position to the newly created AMS in the M&O General Division (\$79,100).
- e) Decrease is due to reduced salary costs associated with the transfer of three FTE positions to the newly created AMS in the M&O General Division (\$298,400) and a reduction in the man-hours contract (\$292,000).

**68000 M&O - CALUMET SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actuals	Budgeted		Change		
Number	Name		FTEs	Dollars	Dollars	Percent	
3000	Solids Processing	\$ 6,001,129	2017 48	\$ 6,636,689	\$ 5,832	0.1	
			2016 48	\$ 6,630,857			
3100	Thickening	\$ 835,827	2017 9	\$ 1,182,200	\$ (13,900)	(1.2)	
			2016 9	\$ 1,196,100			
3200	Stabilization	\$ 1,843,047	2017 11	\$ 1,788,700	\$ 104,100	6.2	f)
			2016 12	\$ 1,684,600			
3300	Dewatering	\$ 396,080	2017 5	\$ 364,500	\$ (55,300)	(13.2)	
			2016 5	\$ 419,800			
3900	Solids Processing - Indirect Costs	\$ 2,926,175	2017 23	\$ 3,301,289	\$ (29,068)	(0.9)	
			2016 22	\$ 3,330,357			
4000	Flood & Pollution Control	\$ 1,081,975	2017 2	\$ 1,002,541	\$ (137,210)	(12.0)	
			2016 3	\$ 1,139,751			
4200	Waterways Control and Stormwater Reservoirs	\$ 230,273	2017 1	\$ 168,900	\$ (24,000)	(12.4)	
			2016 1	\$ 192,900			
4400	Aeration Facilities	\$ 779,799	2017 1	\$ 730,300	\$ (115,100)	(13.6)	g)
			2016 2	\$ 845,400			
4900	Flood & Pollution Control - Indirect Costs	\$ 71,903	2017 -	\$ 103,341	\$ 1,890	1.9	
			2016 -	\$ 101,451			
5000	Solids Utilization	\$ 1,854,389	2017 6	\$ 942,187	\$ 13,946	1.5	
			2016 6	\$ 928,241			
5100	Solids Drying	\$ 58,838	2017 1	\$ 101,600	\$ 2,600	2.6	
			2016 1	\$ 99,000			
5200	Solids Distribution	\$ 1,146,878	2017 1	\$ 101,600	\$ 2,600	2.6	
			2016 1	\$ 99,000			
5900	Solids Utilization - Indirect Costs	\$ 648,673	2017 4	\$ 738,987	\$ 8,746	1.2	
			2016 4	\$ 730,241			
7000	General Support (excluding program number 7604)	\$ 370,214	2017 2	\$ 324,546	\$ (24,559)	(7.0)	
			2016 2	\$ 349,105			
7604	Social Security and Medicare Contribution	\$ -	2017 -	\$ 259,000	\$ (14,300)	(5.2)	
			2016 -	\$ 273,300			
Totals		\$ 32,555,780	2017 188	\$ 37,210,100	\$ (829,400)	(2.2%)	*
			2016 196	\$ 38,039,500			

f) Increase is due to additional electrical utility needs for heated digestion (\$130,700), offset by an overall drop in salary costs primarily associated with the reduction of one FTE (\$26,100).

g) Decrease is due to reduced salary costs associated with the transfer of one FTE position to the newly created AMS in the M&O General Division (\$79,700), the reduced demand for electricity at Sidestream Elevated Pool Aeration (SEPA) stations (\$28,100), and the reduced need for electrical parts for SEPA stations and outlying facilities (\$10,000).

\* The 2017 position total for the Calumet Service Area is 188, with no positions budgeted in the Stormwater Management Fund. For 2017, three Maintenance Laborer Class A Shift positions (day shift) were added to transition non-day shift positions to day shift positions. The salaries for these added positions were offset by vacancy adjustments applied to three existing Maintenance Laborer Class A Shift #1 positions (non-day shift), which will be dropped as they are vacated.

**68000 M&O - CALUMET SERVICE AREA**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1000-2900	Collection & Treatment					
	Collect and Treat Wastewater at the Calumet and Lemont Water Reclamation Plants					
	Calumet Water Reclamation Plant	Mil. Gallons	84,097	100,000	100,000	
		Cost	\$ 22,701,840	\$ 28,272,692	\$ 27,597,813	a)
		Cost/Mil. Gallons	\$ 269.95	\$ 282.73	\$ 275.98	
	Lemont Water Reclamation Plant	Mil. Gallons	935	1,000	1,000	
		Cost	\$ 546,233	\$ 445,554	\$ 447,324	
		Cost/Mil. Gallons	\$ 584.21	\$ 445.55	\$ 447.32	
3000	Solids Processing					
	Remove and Process Solids from Concentrated Sewage Through Various Systems Including Heated Digestion, Centrifuging, Concentration, and Aging Low Solids Sludge and Centrifuge Cake in Lagoons	Dry Tons	30,309	40,000	40,000	
		Cost	\$ 6,001,129	\$ 6,630,857	\$ 6,636,689	
		Cost/Dry Ton	\$ 198.00	\$ 165.77	\$ 165.92	
4000	Flood & Pollution Control					
	Operation and Maintenance of the Waterways to Minimize Area Flooding and Pollution					
4200	Minimize Area Flooding and Pollution of Lake Michigan Through the Continuous Control of Water Levels in Major Rivers and Canals and the Operation of Detention Reservoirs	Reservoirs	9	9	10	
		Cost	\$ 230,273	\$ 192,900	\$ 168,900	
		Cost/Reservoir	\$ 25,585.89	\$ 21,433.33	\$ 16,890.00	
4400	Aeration Facilities	Cost	\$ 779,799	\$ 845,400	\$ 730,300	b)
4900	Flood & Pollution Control - Indirect Costs	Cost	\$ 71,903	\$ 101,451	\$ 103,341	
5000	Solids Utilization					
	Utilize Biosolids for Application at Final Utilization Sites, such as for Daily and Final Cover in Sanitary Landfills	Dry Tons	16,366	29,100	29,000	
		Cost	\$ 1,854,389	\$ 928,241	\$ 942,187	
		Cost/Dry Ton	\$ 113.31	\$ 31.90	\$ 32.49	
7000	General Support (excluding program number 7604)					
	Technical and Administrative Support for Other Departments' Activities Indirectly Related to the Operational Activities of Collection and Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization	Cost	\$ 370,214	\$ 349,105	\$ 324,546	
7604	Social Security and Medicare Contribution	Cost	\$ -	\$ 273,300	\$259,000	
	Division Total		\$ 32,555,780	\$ 38,039,500	\$ 37,210,100	

- a) Decrease is due to reduced salary costs primarily associated with the transfer of six FTE positions to the newly created AMS in the M&O General Division (\$678,200) and the reduced demand for electricity for TARP pumping stations (\$86,600), offset by the increased need for valve operator parts and service for first-stage aeration (\$45,000).
- b) Decrease is due to reduced salary costs associated with the transfer of one FTE position to the newly created AMS in the M&O General Division (\$79,700) and the reduced demand for electricity (\$28,100) and electrical parts (\$10,000) for SEPA stations and outlying facilities.

101 68000	Fund: Corporate Department: Maintenance & Operations Division: Calumet Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 17,304,031	\$ 17,981,300	\$ 17,981,300	\$ 17,162,200	\$ 17,306,100	\$ 17,306,100	\$ 17,339,500
601060	Compensation Plan Adjustments	834,720	824,100	800,100	750,000	825,600	825,600	829,600
601070	Social Security and Medicare Contributions	-	273,300	273,300	262,300	259,000	259,000	259,000
601080	Salaries of Nonbudgeted Employees	14,664	-	1,600	1,600	4,900	4,900	4,900
601100	Tuition and Training Payments	19,389	110,900	110,900	26,300	52,800	52,800	52,800
601170	Payments for Professional Services	53,433	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	18,226,237	19,189,600	19,167,200	18,202,400	18,448,400	18,448,400	18,485,800
612010	Travel	11	26,300	21,100	20,000	13,900	13,900	13,900
612030	Meals and Lodging	8,024	47,600	42,900	35,300	32,300	32,300	32,300
612050	Compensation for Personally-Owned Automobiles	53,413	57,500	63,500	61,000	45,700	45,700	45,700
612080	Motor Vehicle Operating Services	136	700	700	300	100	100	100
612150	Electrical Energy	8,835,887	9,102,100	9,102,100	8,321,600	9,759,500	9,724,500	9,724,500
612160	Natural Gas	346,132	626,200	626,200	524,600	626,200	626,200	626,200
612170	Water and Water Services	385,783	397,600	424,600	389,300	398,400	398,400	398,400
612210	Communication Services	96,711	162,000	232,200	223,000	152,000	152,000	152,000
612240	Testing and Inspection Services	25,285	70,700	70,700	50,900	62,900	62,900	62,900
612330	Rental Charges	440	19,700	9,700	1,200	300	300	10,100
612410	Governmental Service Charges	99,869	105,400	105,400	100,000	103,000	103,000	103,000
612420	Maintenance of Grounds and Pavements	613,998	20,000	13,500	2,500	20,000	20,000	20,000
612430	Payments for Professional Services	-	-	100	100	-	-	-
612490	Contractual Services, N.O.C.	106,599	21,300	21,300	12,100	12,300	12,300	12,300
612520	Waste Material Disposal Charges	408,171	417,800	417,800	385,400	438,600	438,600	438,600
612600	Repairs to Collection Facilities	261,761	399,900	327,700	301,200	145,100	145,100	145,100
612650	Repairs to Process Facilities	1,800,309	1,690,800	1,693,100	1,587,800	1,349,900	1,349,900	1,349,900
612680	Repairs to Buildings	242,058	395,200	344,900	227,000	285,000	285,000	285,000
612760	Repairs to Material Handling and Farming Equipment	41,518	40,700	40,700	36,000	50,000	50,000	50,000
612780	Safety Repairs and Services	19,122	20,900	20,900	20,000	16,300	16,300	16,300
612860	Repairs to Vehicle Equipment	47,985	39,600	39,600	39,600	30,900	30,900	30,900
612990	Repairs, N.O.C.	3,088	7,300	7,300	4,800	4,800	4,800	4,800
200	TOTAL CONTRACTUAL SERVICES	13,396,299	13,669,300	13,626,000	12,343,700	13,547,200	13,512,200	13,522,000

101 68000	Fund: Corporate Department: Maintenance & Operations Division: Calumet Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623030	Metals	9,840	15,900	15,700	9,900	10,100	10,100	10,100
623070	Electrical Parts and Supplies	199,558	334,400	341,400	309,400	254,500	254,500	254,500
623090	Plumbing Accessories and Supplies	147,406	241,100	176,200	163,100	198,000	198,000	198,000
623110	Hardware	3,682	4,300	4,300	3,600	2,800	2,800	2,800
623130	Buildings, Grounds, Paving Materials, and Supplies	45,335	47,400	44,200	41,500	42,000	42,000	42,000
623190	Paints, Solvents, and Related Materials	2,413	3,000	3,000	2,900	2,500	2,500	2,500
623250	Vehicle Parts and Supplies	27,376	29,800	29,800	27,000	29,800	29,800	29,800
623270	Mechanical Repair Parts	303,088	550,900	446,800	250,000	645,800	645,800	645,800
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	8,110	16,200	16,200	14,300	7,900	7,900	7,900
623530	Farming Supplies	4,949	-	-	-	-	-	-
623560	Processing Chemicals	41,880	3,713,500	3,043,300	1,450,000	3,811,800	3,811,800	3,802,000
623660	Cleaning Supplies	1,439	2,300	2,300	2,000	1,400	1,400	1,400
623680	Tools and Supplies	41,135	52,500	43,000	38,000	111,400	111,400	111,400
623720	Books, Maps, and Charts	-	200	100	-	-	-	-
623780	Safety and Medical Supplies	30,298	53,500	53,500	30,800	17,000	17,000	17,000
623810	Computer Supplies	581	400	400	400	300	300	300
623820	Fuel	46,496	41,500	41,500	26,000	27,200	27,200	27,200
623860	Lubricants	11,493	14,900	14,100	13,700	3,500	3,500	3,500
623990	Materials and Supplies, N.O.C.	8,165	23,800	17,600	16,500	13,100	13,100	13,100
300	TOTAL MATERIALS AND SUPPLIES	933,243	5,145,600	4,293,400	2,399,100	5,179,100	5,179,100	5,169,300
634650	Equipment for Process Facilities	-	28,000	28,000	23,200	28,000	28,000	28,000
634860	Vehicle Equipment	-	7,000	7,000	5,600	5,000	5,000	5,000
400	TOTAL MACHINERY AND EQUIPMENT	-	35,000	35,000	28,800	33,000	33,000	33,000
TOTAL CALUMET SERVICE AREA		\$ 32,555,780	\$ 38,039,500	\$ 37,121,600	\$ 32,974,000	\$ 37,207,700	\$ 37,172,700	\$ 37,210,100

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation for a specific division as funding is controlled at the M&O Overall department-level or when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).



Fund: Corporate Dept: Maintenance & Operations Division: Calumet Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>810</b>	<b>Calumet Executive Office</b>					
HP22	Assistant Director of Maintenance & Operations	1	1		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		-	
HP11	Administrative Specialist	-	-		1	
TOTAL	Calumet Executive Office	2	2	301,709.46	2	298,539.43
<b>811</b>	<b>Administrative &amp; Budget Control Unit</b>					
HP14	Budget & Management Analyst	2	2		2	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	-	-		1	
HP11	Administrative Specialist	2	2		1	
HP09	Administrative Clerk	1	1		1	
TOTAL	Administrative & Budget Control Unit	5	5	383,483.36	5	376,355.96
<b>820</b>	<b>Plant Engineering &amp; Maintenance Section</b>					
<b>821</b>	<b>Administrative Unit</b>					
HP20	Managing Engineer	1	1		1	
TOTAL	Administrative Unit	1	1	182,693.68	1	184,520.60
<b>822</b>	<b>Mechanical Engineering Unit</b>					
HP18	Principal Mechanical Engineer	1	1		-	
HP17	Senior Mechanical Engineer	1	1		-	
HP15	Associate Mechanical Engineer	2	2		-	
HP14	Assistant Mechanical Engineer #2 (Engineering Technician IV) (New Grade HP12)	1	1		-	
TOTAL	Mechanical Engineering Unit	5	5	557,274.38	-	-
<b>823</b>	<b>Electrical Engineering Unit</b>					
HP19	Assistant Engineer of Treatment Plant Operations II #2 (Principal Engineer) (New Grade HP18)	1	-		-	
HP17	Senior Electrical Engineer	1	1		-	
HP15	Associate Electrical Engineer	2	2		-	
HP15	Associate Process Control Engineer	1	1		-	
HP14	Assistant Electrical Engineer	1	1		-	
HP12	Engineering Technician IV	1	-		-	

Fund: Corporate Dept: Maintenance & Operations Division: Calumet Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR6251	Chief Electrical Operator	1	1		1	
NR6233	Electrical Operator II	5	5		5	
NR6232	Electrical Operator I	6	6		6	
TOTAL	Electrical Engineering Unit	19	17	1,662,475.10	12	1,168,044.80
<b>824</b>	<b>Maintenance Unit</b>					
HP18	Master Mechanic I	1	1		1	
HP17	Assistant Master Mechanic	-	3		3	
HP16	Assistant Master Mechanic	3	-		-	
PR5353	Bricklayer	1	1		1	
PR5155	Carpenter Leadman	1	1		1	
PR5153	Carpenter	2	2		2	
PR7425	Electrical Instrument & Testing Mechanic Foreman	1	1		1	
PR7423	Electrical Instrument & Testing Mechanic	7	7		7	
PR7347	Electrical Mechanic Foreman	1	1		1	
PR7349	Electrical Mechanic Sub-Foreman	1	1		1	
PR7343	Electrical Mechanic	9	9		9	
PR6453	Hoisting Engineer	3	3		3	
PR6453	Hoisting Engineer #1	-	1		1	
PR7579	Machinist Foreman	1	1		1	
PR7573	Machinist	10	10		10	
PR5553	Painter	2	2		2	
PR7779	Pipefitter Foreman	1	1		1	
PR7773	Pipefitter	9	9		9	
PR7773	Pipefitter #1	-	1		-	
PR5753	Plumber	2	2		2	
PR5975	Structural Ironworker Leadman	1	1		1	
PR5973	Structural Ironworker	5	5		5	
PR6479	Truck Driver Foreman	1	1		1	

Fund: Corporate Dept: Maintenance & Operations Division: Calumet Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
PR6473	Truck Driver	4	4		4	
TOTAL	Maintenance Unit	66	68	6,587,637.42	67	6,646,368.96
	<b>843 Buildings &amp; Grounds Unit</b>					
HP17	Senior Civil Engineer	1	-		-	
HP14	Engineering Technician V	1	-		-	
HP12	Engineering Technician IV	1	2		2	
NR8331	Laborer Foreman	2	2		2	
NR8651	Maintenance Laborer Class A	8	8		8	
NR8652	Maintenance Laborer Class B	10	10		10	
TOTAL	Buildings & Grounds Unit	23	22	1,441,266.58	22	1,485,241.44
	<b>844 Fulton County Farm Operations Unit</b>					
HP12	Agricultural Technician II	1	-		-	
HP11	Agricultural Technician I	1	-		-	
HP11	Administrative Specialist	1	-		-	
TOTAL	Fulton County Farm Operations Unit	3	-	-	-	-
TOTAL	Plant Engineering & Maintenance Section	117	113	10,431,347.16	102	9,484,175.80
	<b>830 Plant Operations Section</b>					
	<b>831 Administrative Unit</b>					
HP21	Engineer of Treatment Plant Operations I #2 (Managing Engineer) (New Grade HP20)	-	-		1	
HP20	Managing Engineer	1	1		-	
HP18	Principal Engineer	1	1		1	
HP14	Assistant Civil Engineer	1	-		-	
TOTAL	Administrative Unit	3	2	342,171.70	2	362,001.18
	<b>832 Treatment Operations Unit</b>					
HP16	Treatment Plant Operator III	1	1		1	
HP14	Treatment Plant Operator II	7	7		7	
HP14	Treatment Plant Operator II #4	1	1		1	
HP12	Treatment Plant Operator I	5	5		5	

Fund: Corporate Dept: Maintenance & Operations Division: Calumet Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR8650	Maintenance Laborer Class A Shift	8	8		8	
NR8650	Maintenance Laborer Class A Shift #1	-	-		1	
NR8651	Maintenance Laborer Class A	1	1		1	
TOTAL	Treatment Operations Unit	23	23	1,948,651.12	24	2,095,040.62
<b>834</b>	<b>Mechanical Operations Unit</b>					
HP17	Chief Operating Engineer I	1	1		1	
HP16	Assistant Chief Operating Engineer	2	2		2	
NR6810	Fireman-Oiler	5	5		5	
NR8650	Maintenance Laborer Class A Shift	7	7		7	
NR8650	Maintenance Laborer Class A Shift #1	-	-		2	
NR6832	Operating Engineer II	12	12		12	
NR6831	Operating Engineer I	18	18		18	
PR6473	Truck Driver	3	3		2	
PR6473	Truck Driver #1	-	-		1	
TOTAL	Mechanical Operations Unit	48	48	4,507,607.78	50	4,794,140.66
<b>839</b>	<b>Lemont Operations Unit</b>					
HP14	Treatment Plant Operator II	1	1		1	
HP12	Treatment Plant Operator I	2	2		2	
TOTAL	Lemont Operations Unit	3	3	247,856.70	3	258,961.94
TOTAL	Plant Operations Section	77	76	7,046,287.30	79	7,510,144.40
TOTAL	Maintenance & Operations Calumet Service Area	201	196	18,162,827.28	188	17,669,215.59

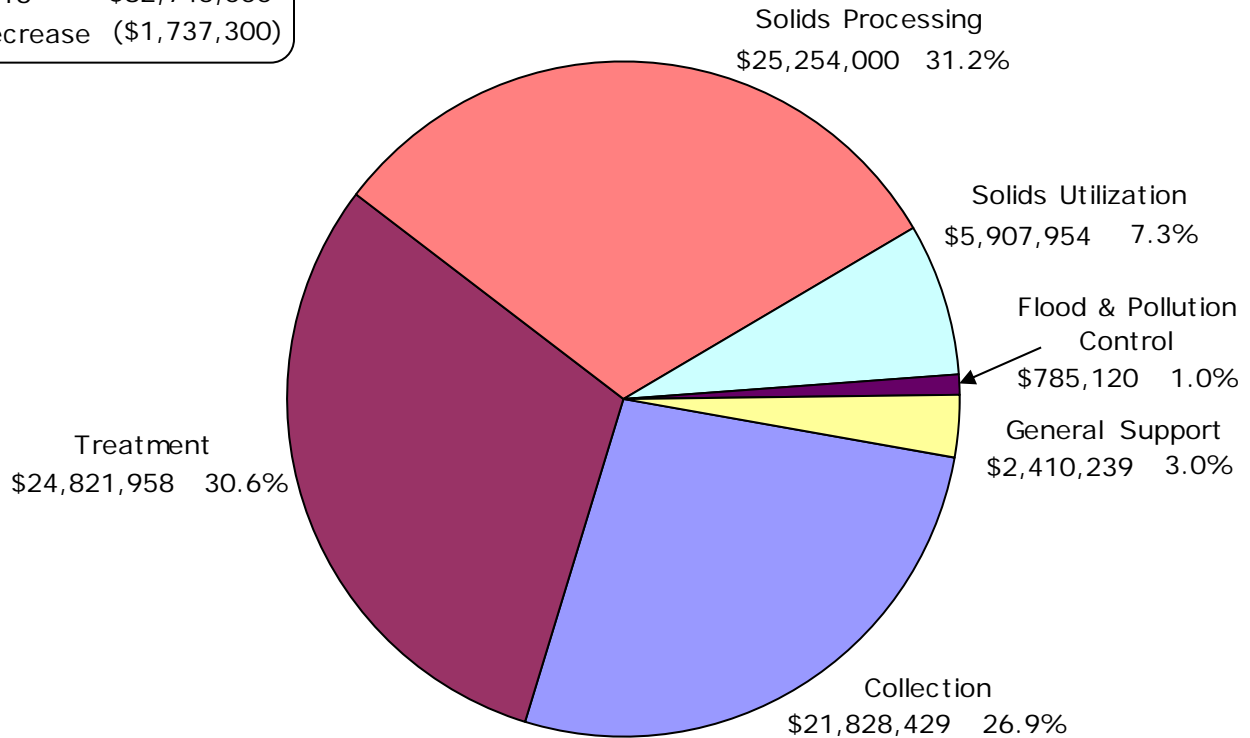
Note: There are no positions budgeted for the Stormwater Management Fund for 2017.

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

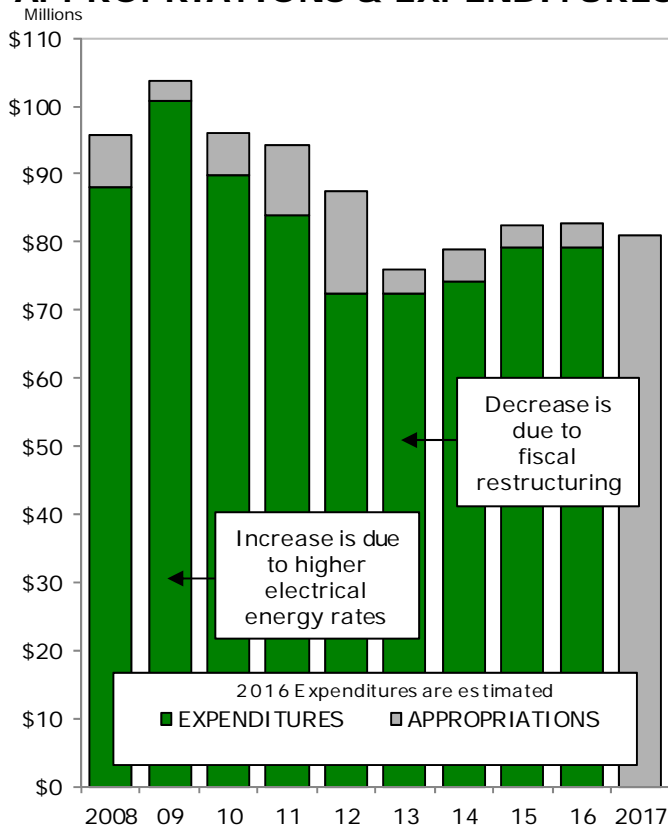
# MAINTENANCE & OPERATIONS – STICKNEY SERVICE AREA

2017	\$81,007,700
2016	\$82,745,000
Decrease	(\$1,737,300)

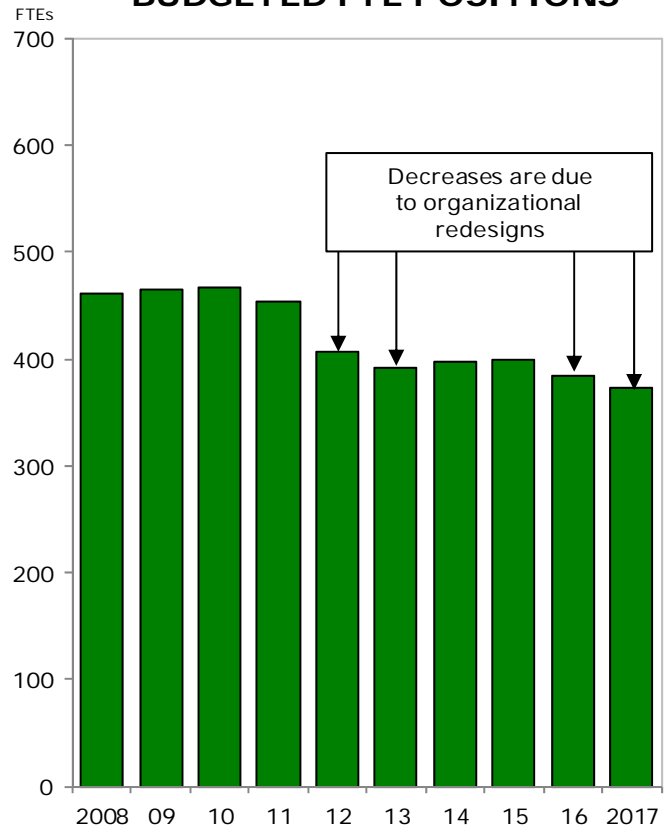
## FUNCTIONS



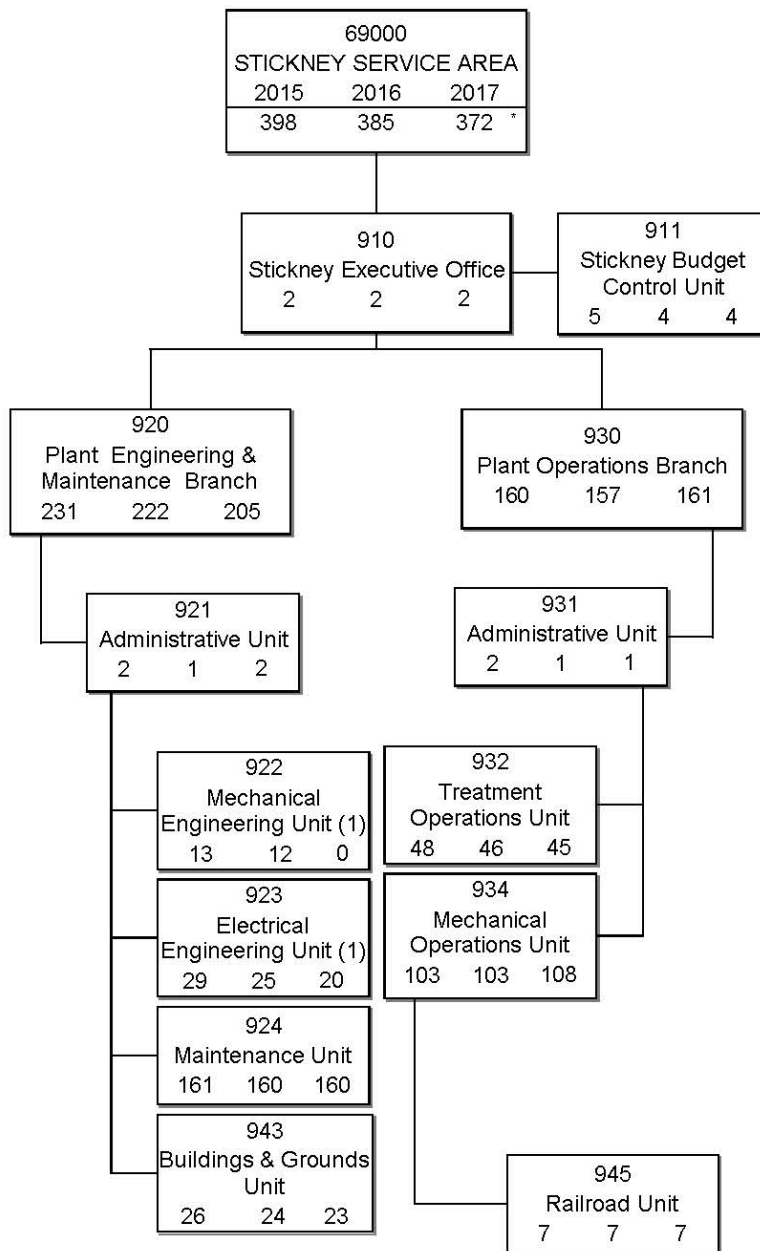
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# MAINTENANCE & OPERATIONS – STICKNEY SERVICE AREA



\* In 2017, 11 positions in the Stickney Service Area are funded by the Stormwater Management Fund while the operations remain in the Maintenance & Operations Department, one in Unit 924 and 10 in Unit 934.

(1) Effective 01/01/2017, a total of nine positions were transferred from Units 922 and 923 into Section 681.

## MAINTENANCE & OPERATIONS – STICKNEY SERVICE AREA

**The Stickney Service Area (SSA) supports the District’s mission to protect the quality of the water supply and the health and safety of the public, to improve the quality of water in the canals, rivers and streams, to protect businesses and homes from flood damage, and to manage water as a vital resource.**

### Service Area Summary

The SSA’s primary responsibilities include the operation of the largest water reclamation plant in the world, as well as two major pumping stations and four detention reservoirs. The SSA plans to collect and treat approximately 260 billion gallons of wastewater in 2017. In order to accomplish its mission, the SSA is organized as follows:

**The Stickney Executive Office** provides leadership and direction for the operation, maintenance, and development of capital improvement needs in the SSA, ensures adequate funding for ongoing compliance with National Pollutant Discharge Elimination System guidelines and other permit requirements, assesses risk management at the SSA level, and assists the Director of Maintenance & Operations in long-term planning and decision making.

**The Plant Engineering & Maintenance Branch** is comprised of the Administrative, Electrical Engineering, Maintenance, and Buildings & Grounds Units. This branch is responsible for ensuring that the collection and process facilities perform in an efficient and cost-effective manner. Maintenance and repairs are performed by a combination of in-house trades personnel and outside contractor services to provide cost-effective operations. The engineering and maintenance units maintain, operate, and repair SSA infrastructure and architectural and structural elements. The District-wide Buildings & Grounds Unit maintains buildings, roadways, parking lots, and landscaping, secures District property, provides labor support to other sections and/or departments, and participates in capital improvement development and implementation.

**The Plant Operations Branch** is comprised of the Administrative, Treatment Operations, Mechanical Operations, and Railroad Units. This branch is responsible for the physical operation of the collection and process facilities in the SSA. Efficient and effective operations are measured through daily reporting and permit compliance. Operational integrity and efficiency, as well as worker and public safety, are paramount. The size of the Stickney Water Reclamation Plant and the scope of its operations generate frequent requests for plant tours, which are conducted by operations staff in conjunction with the Public Affairs Section in General Administration. The Railroad Unit provides for the cost-effective transportation of centrifuged biosolids to the Lawndale Avenue Solids Management Area facility. All units utilize a combination of in-house staff and outside contractor services to provide for cost-effective operations.

### Summary of 2016 Accomplishments

- Awarded a contract to rehabilitate a three megawatt gas turbine, which will be utilized as an alternate energy source;
- Adjusted maintenance plans and schedules to increase the use of in-house trades and laborers to perform maintenance work previously performed by contract personnel to reduce the amount of outsourcing, including landscaping and heating, ventilating, and air conditioning work;
- Completed installation of ammonia probes to optimize aeration process efficiency;
- Installed Blower No. 2 motor, at a total cost of \$3.2 million, which will reduce annual electrical energy costs by approximately \$880,000, resulting in a payback period of four years or less;
- Initiated a phosphorus recovery process, which will produce up to seven tons of crystalline pellets per day;
- Replaced two 6,000,000 British Thermal Unit digester sludge heat exchangers and hot water convertor bundles.

### Budget Highlights

The 2017 appropriation for the SSA is \$81,007,700, a decrease of \$1,737,300, or 2.1 percent, from 2016. The Corporate Fund staffing level has decreased from 385 to 372 positions. The decrease results from the following changes: the drop of one Associate Civil Engineer and one Assistant Mechanical Engineer and the transfer out of two positions to the Engineering Department, nine positions to the Asset Management Section, five positions to the Monitoring & Research Department, and one Engineering Technician V to the North Service Area, offset by the transfer in of one Assistant Engineer of Treatment Plant Operations from the North Service Area and the addition of five Maintenance Laborer Class A Shift positions to Mechanical Operations. Eleven positions are funded by the Stormwater Management Fund.

The SSA budget achieves the District’s strategic goals as follows: Add Value via employee training and the resultant insourcing of work previously contracted; Excellence through energy-saving projects such as ammonia monitoring enhancements and new aeration controls to reduce blower operation costs; Resource Recovery via phosphorus capture and the rehabilitation of gas turbines to best use digester gas; Develop Employees as shown by Maintenance & Operations redesigned engineering work groups, structured to optimize employee performance and work distribution systems; Leading Partnerships through our work with Ostara Nutrient Recovery Technologies; and Technology as demonstrated by above mentioned projects and numerous smaller-scale initiatives.





**69000 M&O - STICKNEY SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. COLLECTION & TREATMENT: The Stickney Service Area will collect and treat approximately 260 billion gallons of wastewater through its treatment facilities.	\$ 46,650,387	57.5%
Design: Flows ^ CBOD * SS *		
Stickney Water Reclamation Plant 1,200 MGD 10 mg/l 12 mg/l		
^ In millions of gallons per day (MGD). * National Pollutant Discharge Elimination System monthly effluent quality standards: CBOD - Carbonaceous Biochemical Oxygen Demand SS - Suspended Solids		
2. SOLIDS PROCESSING: The Stickney Service Area will remove 90,000 dry tons and process solids from 130,000 dry tons of concentrated sewage (includes 40,000 dry tons from North Service Area) through various systems including heated digestion, centrifuging, concentration, and aging low solids sludge and centrifuge cake in lagoons.	\$ 25,254,000	31.2%
3. SOLIDS UTILIZATION: The Stickney Service Area will provide support to the Solids Management Section to utilize 60,000 dry tons of biosolids for application at final utilization sites, such as farm application, and as daily and final cover in sanitary landfills.	\$ 5,907,954	7.3%
4. FLOOD & POLLUTION CONTROL: The Stickney Service Area will work to prevent local area flooding through the operation of four detention reservoirs, in cooperation with local communities. It will also work to maintain the quality of the waterways system and associated District property, in cooperation with the debris boats and the channel maintenance and debris boat crews.	\$ 785,120	1.0%
5. GENERAL SUPPORT: The Stickney Service Area will provide technical and administrative support for other departments not directly related to the operational activities of Collection & Treatment, Solids Processing, Solids Utilization, and Flood & Pollution Control.	\$ 2,410,239	3.0%
<b>Total</b>	<b>\$ 81,007,700</b>	<b>100.0%</b>

MEASURABLE GOALS:	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. The Stickney Service Area will collect and treat approximately 260 billion gallons of wastewater in 2017.	Billion Gallons	257	265	260
2. The Stickney Service Area will remove and process solids from 130,000 dry tons of concentrated sewage, including 40,000 dry tons transferred from the North Service Area.	Dry Tons Process Solids	128,777	135,000	130,000
3. The Stickney Service Area will obtain 100 percent permit compliance in 2017 for National Pollutant Discharge Elimination System effluent limits.	Percent	99.94%	99.94%	100.00%
4. The Stickney Service Area will provide support to utilize 60,000 dry tons of biosolids in 2017 (does not include Pelletizer Facility Operations).	Dry Tons	55,892	60,000	60,000

**69000 M&O - STICKNEY SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
1000	Collection	\$ 17,551,147	2017 80	\$ 21,828,429	\$ 1,375,505	6.7	
			2016 83	\$ 20,452,924			
1100	Surface Interceptor Systems	\$ 451,108	2017 2	\$ 403,500	\$ (3,500)	(0.9)	
			2016 2	\$ 407,000			
1200	Tunnel and Reservoir System	\$ 4,719,655	2017 12	\$ 5,650,800	\$ 719,400	14.6	a)
			2016 12	\$ 4,931,400			
1300	Pumping Station Facilities	\$ 4,223,413	2017 25	\$ 7,148,100	\$ 156,600	2.2	b)
			2016 27	\$ 6,991,500			
1900	Collection - Indirect Costs	\$ 8,156,971	2017 41	\$ 8,626,029	\$ 503,005	6.2	c)
			2016 42	\$ 8,123,024			
2000	Treatment	\$ 28,424,318	2017 126	\$ 24,313,258	\$ (2,609,165)	(9.7)	
			2016 133	\$ 26,922,423			
2000	Pre-Treatment	\$ 2,222,882	2017 19	\$ 2,148,200	\$ (173,800)	(7.5)	d)
			2016 20	\$ 2,322,000			
2100	Primary Treatment	\$ 1,999,079	2017 21	\$ 1,882,500	\$ (101,300)	(5.1)	e)
			2016 22	\$ 1,983,800			
2200	Secondary Treatment	\$ 11,482,121	2017 28	\$ 7,337,100	\$ (1,657,600)	(18.4)	f)
			2016 29	\$ 8,994,700			
2300	Tertiary Treatment	\$ 43,448	2017 -	\$ 43,800	\$ 900	2.1	
			2016 -	\$ 42,900			
2900	Treatment - Indirect Costs	\$ 12,676,788	2017 58	\$ 12,901,658	\$ (677,365)	(5.0)	g)
			2016 62	\$ 13,579,023			

- a) Increase is due to higher electrical energy usage at the Mainstream Pumping Station (MSPS) and Tunnel and Reservoir Plan structures (\$775,000), offset by reductions in replacement parts for Tunnel and Reservoir Plan remote terminal unit (\$37,800), power distribution and control parts (\$15,000), and 16-656-11, Repairs to Rockwell Equipment (\$10,900).
- b) Increase is due to higher electrical energy usage at the Stickney Water Reclamation Plant pumping stations (\$299,100), offset by the transfer of two FTE positions to the newly created Asset Management Section in the Maintenance & Operations General Division (\$178,200).
- c) Increase is due to the replacement of electrical parts for the distributed control system (\$300,000), 16-611-11, Repairs and Alterations to Plant Facilities (\$117,200), increased demand for water services at MSPS (\$61,400), odor control system (\$42,000), fire detection system services (\$29,900), trades tools (\$22,200), replacement Hach parts (\$14,400), and screw conveyor parts (\$7,200), offset by a reduction to 13-970-11, Janitorial Services (\$91,000).
- d) Decrease is due to 15-613-11, Scavenger Services (\$96,500) and the transfer of one FTE position (\$83,000), offset by repair parts for grit chambers (\$17,500).
- e) Decrease is due to the transfer of one FTE position to the Monitoring & Research Department (\$96,100).
- f) Decrease is due to the reduced demand for electrical energy for aeration blowers (\$1,737,800), offset by an increase to immediate repair services (\$81,300).
- g) Decrease is due to the reduction of four FTE positions (\$555,400), 16-611-11, Repairs and Alterations to Plant Facilities (\$296,800), District-wide tree removal (\$100,000), offset by the reallocation of salaries to more accurately reflect current activities (\$117,900), natural gas for process and building heating (\$55,000), and services for fire protection system (\$36,930).

**69000 M&O - STICKNEY SERVICE AREA**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actuals	FTEs	Dollars	Dollars	Percent	
3000	Solids Processing	\$ 23,795,725	2017 131	\$ 25,254,000	\$ 1,297,926	5.4	
			2016 133	\$ 23,956,074			
3100	Thickening	\$ 4,529,242	2017 26	\$ 4,158,500	\$ 23,100	0.6	
			2016 26	\$ 4,135,400			
3200	Stabilization	\$ 3,422,654	2017 27	\$ 3,468,500	\$ 108,000	3.2	h)
			2016 26	\$ 3,360,500			
3300	Dewatering	\$ 9,459,100	2017 30	\$ 10,765,200	\$ 1,487,000	16.0	i)
			2016 29	\$ 9,278,200			
3900	Solids Processing - Indirect Costs	\$ 6,384,729	2017 48	\$ 6,861,800	\$ (320,174)	(4.5)	j)
			2016 52	\$ 7,181,974			
4000	Flood & Pollution Control	\$ 579,636	2017 4	\$ 785,120	\$ 62,192	8.6	
			2016 4	\$ 722,928			
4200	Waterways Control and Stormwater Reservoirs	\$ 212,481	2017 2	\$ 223,400	\$ 37,900	20.4	k)
			2016 2	\$ 185,500			
4900	Flood & Pollution Control - Indirect Costs	\$ 367,155	2017 2	\$ 561,720	\$ 24,292	4.5	
			2016 2	\$ 537,428			
5000	Solids Utilization	\$ 6,679,517	2017 13	\$ 5,907,954	\$ (1,867,962)	(24.0)	
			2016 14	\$ 7,775,916			
5100	Solids Drying	\$ 181,696	2017 2	\$ 152,400	\$ 3,900	2.6	
			2016 2	\$ 148,500			
5200	Solids Distribution	\$ 4,497,682	2017 1	\$ 3,991,000	\$ (1,800,100)	(31.1)	l)
			2016 2	\$ 5,791,100			
5900	Solids Utilization - Indirect Costs	\$ 2,000,139	2017 10	\$ 1,764,554	\$ (71,762)	(3.9)	
			2016 10	\$ 1,836,316			
7000	General Support (excluding program number 7604)	\$ 2,330,141	2017 18	\$ 2,410,239	\$ 50,304	2.1	
			2016 18	\$ 2,359,935			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 508,700	\$ (46,100)	(8.3)	
			2016 -	\$ 554,800			
	Totals	\$ 79,360,484	2017 372	\$ 81,007,700	\$ (1,737,300)	(2.1%)	*
			2016 385	\$ 82,745,000			

- h) Increase is due to the electrical energy demand for digesters (\$62,300), the reallocation of salaries to more accurately reflect current activities (\$15,800), plumbing supplies for solid process heat digesters (\$15,000), and electrical and mechanical repair parts for solid process heat digesters (\$15,000).
- i) Increase is due to the higher demand for various chemicals including 15-935-11, Sodium Hydroxide (\$460,000), 15-934-11, Magnesium Chloride (\$348,600), and 15-633-11, Polymer (\$337,100), parts for dewatering centrifuges (\$300,000), and electrical energy for post-digestion centrifuges (\$112,200), offset by reductions for Ostara project bags and pallets (\$28,000), parts for pumps for the phosphorus recovery system (\$20,000), and 16-656-11, Repairs to Rockwell Equipment (\$14,000).
- j) Decrease is due to the reduction of four FTE positions (\$448,400), offset by the reallocation of salaries to more accurately reflect current activities (\$98,400) and tools for trades (\$32,100).
- k) Increase is due to 16-654-11, Parts and Services for Limitorque Valve Actuators (\$62,000), offset by the reallocation of salaries to more accurately reflect current activities (\$23,000).
- l) Decrease is due to the reduced requests for services under 98-RFP-10, Maintain and Operate Pelletizer Facility (\$1,795,700).

\* The 2017 position total for the Stickney Service Area is 372, with an additional 11 positions budgeted in the Stormwater Management Fund. For 2017, five Maintenance Laborer Class A Shift positions (day shift) were added to transition non-day shift positions to day shift positions. The salaries for these added positions were offset by vacancy adjustments applied to five existing Maintenance Laborer Class A Shift #1 positions (non-day shift), which will be dropped as they are vacated.

**69000 M&O - STICKNEY SERVICE AREA**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1000-2900	Collection & Treatment					
	Collect and Treat Wastewater at the Stickney Water Reclamation Plant	Mil. Gallons Cost Cost/Mil. Gallons	257,214 \$ 45,975,465 \$ 178.74	265,000 \$ 47,375,347 \$ 178.77	260,000 \$ 46,141,687 \$ 177.47	a)
3000	Solids Processing					
	Remove 90,000 Dry Tons of Solids and Process 130,000 Dry Tons of Solids (Includes 40,000 Dry Tons from North Service Area) from Concentrated Sewage Through Various Systems Including Heated Digestion, Centrifuging, Concentration, and Aging Low Solids Sludge and Centrifuge Cake in Lagoons	Dry Tons Cost Cost/Dry Ton	128,777 \$ 23,795,725 \$ 184.78	135,000 \$ 23,956,074 \$ 177.45	130,000 \$ 25,254,000 \$ 194.26	b)
4000	Flood & Pollution Control					
	Operation and Maintenance of the Waterways to Minimize Area Flooding and Pollution					
4200	Minimize Area Flooding and Pollution of Lake Michigan Through the Continuous Control of Water Levels in Major Rivers and Canals and the Operation of Detention Reservoirs	Reservoirs Cost Cost/Reservoir	4 \$ 212,481 \$ 53,120.25	4 \$ 185,500 \$ 46,375.00	4 \$ 223,400 \$ 55,850.00	c)
4900	Flood & Pollution Control - Indirect Costs	Cost	\$ 367,155	\$ 537,428	\$ 561,720	
5000	Solids Utilization					
	Utilize Biosolids for Application at Final Utilization Sites Such as Daily Cover for Chicago Industrial Dump Landfill, Final Cover of Landfills, and Farm/Land Application	Dry Tons Cost Cost/Dry Ton	55,892 \$ 2,358,759 \$ 42.20	60,000 \$ 2,141,016 \$ 35.68	60,000 \$ 2,018,554 \$ 33.64	d)
5271	Pelletizer Disposal Control Management and Disposal of Solids by Private Contracts	Dry Tons Cost Cost/Dry Ton	36,672 \$ 4,320,758 \$ 117.82	45,000 \$ 5,634,900 \$ 125.22	40,000 \$ 3,889,400 \$ 97.24	e)
7000	General Support (excluding program number 7604)					
	Technical and Administrative Support for Other Departments' Activities Indirectly Related to the Operational Activities of Collection and Treatment, Solids Processing, Flood & Pollution Control, and Solids Utilization	Cost	\$ 2,330,141	\$ 2,359,935	\$ 2,410,239	
7604	Social Security and Medicare Contributions		\$ -	\$ 554,800	\$ 508,700	
Division Total			\$ 79,360,484	\$ 82,745,000	\$81,007,700	

- a) Decrease is due to the reduction of 10 FTE positions (\$1,103,400), 16-611-11, Repairs and Alterations to Plant Facilities (\$179,600), and District-wide tree removal and grounds services (\$100,000), offset by an increased demand for water services at the MSPS (\$61,400), odor control system and solution (\$45,500), and mechanical and electrical parts (\$38,500).
- b) Increase is due to the higher demand for various chemicals including 15-935-11, Sodium Hydroxide (\$460,000), 15-633-11, Polymer (\$399,700), 15-934-11, Magnesium Chloride (\$348,600), parts for dewatering centrifuges (\$300,000), and electric energy at the Stickney Water Reclamation Plant (\$280,300), offset by various position changes (\$462,000).
- c) Increase is due to higher demand for 16-654-11, Parts and Services for Limitorque Valve Actuators (\$62,000), offset by the reallocation of salaries to more accurately reflect current activities (\$23,000).
- d) Decrease is due to the completion of 16-971-11, Locomotive #4 Axle Repair (\$90,000), and reduced requests for water service related to the Harlem Avenue Solids Management Area (\$50,000), offset by the increase to 14-986-11, Locomotive Preventive Maintenance and Repairs (\$25,000).
- e) Decrease is due to reduced requests for services for 98-RFP-10, Maintain and Operate Pelletizer Facility (\$1,795,700).

101 69000	Fund: Corporate Department: Maintenance & Operations Division: Stickney Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 34,760,334	\$ 36,236,600	\$ 35,996,600	\$ 35,133,500	\$ 34,950,400	\$ 34,950,400	\$ 34,948,000
601060	Compensation Plan Adjustments	2,030,760	1,915,600	2,099,700	2,099,700	2,115,500	2,115,500	2,121,200
601070	Social Security and Medicare Contributions	-	554,800	554,800	554,000	508,700	508,700	508,700
601080	Salaries of Nonbudgeted Employees	4,566	-	-	-	10,200	10,200	10,200
601100	Tuition and Training Payments	91,203	148,000	148,000	135,000	177,000	177,000	177,000
601170	Payments for Professional Services	97,959	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	36,984,821	38,855,000	38,799,100	37,922,200	37,761,800	37,761,800	37,765,100
612010	Travel	2,926	13,300	13,300	6,000	15,000	15,000	15,000
612030	Meals and Lodging	13,499	28,000	28,000	17,000	18,000	18,000	18,000
612050	Compensation for Personally-Owned Automobiles	77,721	84,700	82,700	72,000	64,100	64,100	64,100
612080	Motor Vehicle Operating Services	216	700	500	300	1,000	1,000	1,000
612150	Electrical Energy	18,469,408	18,621,100	18,621,100	18,300,000	18,633,200	18,366,200	18,366,200
612160	Natural Gas	1,157,716	1,500,000	1,500,000	1,500,000	1,565,700	1,565,700	1,565,700
612170	Water and Water Services	1,184,534	1,242,200	1,358,200	1,215,000	1,254,700	1,254,700	1,254,700
612210	Communication Services	75,045	127,100	142,700	114,100	117,000	117,000	117,000
612240	Testing and Inspection Services	130,416	55,500	55,500	53,000	61,500	61,500	61,500
612330	Rental Charges	120,652	128,800	164,200	164,000	146,500	146,500	146,500
612410	Governmental Service Charges	89,880	89,500	89,900	89,900	89,700	89,700	89,700
612420	Maintenance of Grounds and Pavements	872,620	312,700	174,400	170,000	215,100	215,100	215,100
612430	Payments for Professional Services	-	18,000	18,000	18,000	18,000	18,000	18,000
612490	Contractual Services, N.O.C.	345,024	381,500	378,900	340,000	81,600	340,600	340,600
612520	Waste Material Disposal Charges	563,725	680,000	680,000	580,000	606,500	606,500	606,500
612590	Sludge Disposal	3,604,252	5,000,000	5,000,000	4,000,000	3,204,300	3,204,300	3,204,300
612600	Repairs to Collection Facilities	1,959,053	2,126,100	2,088,900	1,830,000	2,206,300	2,206,300	2,206,300
612620	Repairs to Waterway Facilities	14,986	3,000	3,000	3,000	10,000	10,000	10,000
612650	Repairs to Process Facilities	3,436,475	2,743,700	2,739,700	2,500,000	2,495,200	2,495,200	2,495,200
612670	Repairs to Railroads	263,900	478,700	482,700	321,300	302,600	302,600	302,600
612680	Repairs to Buildings	343,865	575,300	505,500	350,000	547,500	547,500	547,500

101 69000	Fund: Corporate Department: Maintenance & Operations Division: Stickney Service Area	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
612760	Repairs to Material Handling and Farming Equipment	12,407	34,600	34,600	30,000	-	-	-
612780	Safety Repairs and Services	100,053	166,700	158,900	110,000	283,000	283,000	283,000
612840	Communications Equipment Maintenance (Includes Software)	-	15,000	15,000	-	-	-	-
612860	Repairs to Vehicle Equipment	9,220	25,600	25,600	23,000	15,700	15,700	15,700
612990	Repairs, N.O.C.	1,006	10,700	10,700	9,900	11,800	11,800	11,800
200	TOTAL CONTRACTUAL SERVICES	32,848,599	34,462,500	34,372,000	31,816,500	31,964,000	31,956,000	31,956,000
623030	Metals	25,751	14,100	13,400	10,500	17,900	17,900	17,900
623070	Electrical Parts and Supplies	785,293	627,100	665,100	665,100	1,073,300	1,073,300	1,073,300
623090	Plumbing Accessories and Supplies	298,009	337,600	331,600	250,000	271,600	271,600	271,600
623110	Hardware	2,447	6,000	4,700	4,500	2,500	2,500	2,500
623130	Buildings, Grounds, Paving Materials, and Supplies	50,835	63,700	68,200	65,000	64,200	64,200	64,200
623170	Fiber, Paper, and Insulation Materials	8,837	15,000	15,000	10,000	14,100	14,100	14,100
623190	Paints, Solvents, and Related Materials	1,897	4,400	4,400	2,000	1,900	1,900	1,900
623250	Vehicle Parts and Supplies	19,253	64,100	58,700	55,000	48,300	48,300	48,300
623270	Mechanical Repair Parts	1,279,322	903,500	955,500	815,000	1,144,100	1,144,100	1,144,100
623300	Manhole Materials	9,863	-	8,500	8,400	-	-	-
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	16,843	13,900	13,700	10,000	15,700	15,700	15,700
623560	Processing Chemicals	6,809,087	6,958,800	7,964,000	7,398,700	8,169,600	8,169,600	8,169,600
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	-	-	100	100	-	-	-
623660	Cleaning Supplies	617	1,200	1,200	700	1,300	1,300	1,300
623680	Tools and Supplies	88,634	104,200	117,300	110,000	244,000	244,000	244,000
623700	Wearing Apparel	-	500	500	100	900	900	900
623780	Safety and Medical Supplies	13,575	64,400	26,500	13,500	13,900	13,900	13,900
623800	Computer Software	5,634	4,000	4,000	2,000	5,800	5,800	5,800
623810	Computer Supplies	13,010	10,000	8,900	8,700	13,300	13,300	13,300
623820	Fuel	55,798	125,000	86,000	69,000	107,000	107,000	107,000

101 69000		Fund: Corporate Department: Maintenance & Operations Division: Stickney Service Area	LINE ITEM ANALYSIS					
			2015	2016		2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623840	Gases	2,815	6,900	6,900	6,500	4,500	4,500	4,500
623850	Communications Supplies	1,683	3,000	3,000	1,100	900	900	900
623860	Lubricants	2,633	4,200	4,200	1,000	500	500	500
623990	Materials and Supplies, N.O.C.	18,867	48,900	22,700	21,000	66,300	66,300	66,300
300	TOTAL MATERIALS AND SUPPLIES	9,510,702	9,380,500	10,384,100	9,527,900	11,281,600	11,281,600	11,281,600
634650	Equipment for Process Facilities	6,480	41,000	27,500	22,200	-	-	-
634760	Material Handling and Farming Equipment	4,487	-	-	-	-	-	-
634860	Vehicle Equipment	-	-	-	-	5,000	5,000	5,000
634970	Testing and Laboratory Equipment	5,395	6,000	6,000	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	16,362	47,000	33,500	22,200	5,000	5,000	5,000
TOTAL STICKNEY SERVICE AREA		\$ 79,360,484	\$ 82,745,000	\$ 83,588,700	\$ 79,288,800	\$ 81,012,400	\$ 81,004,400	\$ 81,007,700

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation for a specific division as funding is controlled at the M&O Overall department-level or when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Maintenance & Operations Division: Stickney Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>910</b>	<b>Stickney Executive Office</b>					
HP23	Deputy Director of Maintenance & Operations #2 (Assistant Director of Maintenance & Operations) (New Grade HP22)	1	1		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
TOTAL	Stickney Executive Office	2	2	329,506.58	2	332,801.64
<b>911</b>	<b>Stickney Budget Control Unit</b>					
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	1	1		1	
HP14	Budget & Management Analyst	2	2		2	
HP11	Administrative Specialist	2	1		1	
TOTAL	Stickney Budget Control Unit	5	4	390,828.62	4	394,736.92
<b>920</b>	<b>Plant Engineering &amp; Maintenance Branch</b>					
<b>921</b>	<b>Administrative Unit</b>					
HP21	Engineer of Treatment Plant Operations I #2 (Managing Engineer) (New Grade HP20)	1	1		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	-	-		1	
TOTAL	Administrative Unit	2	1	207,059.32	2	275,876.26
<b>922</b>	<b>Mechanical Engineering Unit</b>					
HP20	Managing Mechanical Engineer	1	1		-	
HP18	Principal Mechanical Engineer	1	1		-	
HP17	Senior Mechanical Engineer	3	2		-	
HP15	Associate Mechanical Engineer	3	3		-	
HP14	Assistant Mechanical Engineer	2	2		-	
HP14	Engineering Technician V	1	1		-	
HP12	Engineering Technician IV	1	1		-	
HP11	Administrative Specialist	1	1		-	
TOTAL	Mechanical Engineering Unit	13	12	1,366,630.72	-	-
<b>923</b>	<b>Electrical Engineering Unit</b>					
HP18	Principal Electrical Engineer	2	1		-	



Fund: Corporate Dept: Maintenance & Operations Division: Stickney Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP17	Senior Electrical Engineer	3	2		-	
HP15	Associate Electrical Engineer	4	3		-	
HP15	Associate Process Control Engineer	1	-		-	
HP14	Engineering Technician V	1	2		3	
HP14	Engineering Technician V #4	1	1		-	
HP12	Engineering Technician IV	-	-		1	
HP11	Administrative Specialist	1	-		-	
NR6275	Chief Powerhouse Dispatcher I	1	1		1	
NR6272	Powerhouse Dispatcher	4	4		4	
NR6233	Electrical Operator II	11	11		11	
TOTAL	Electrical Engineering Unit	29	25	2,624,879.40	20	1,995,028.74
<b>924</b>	<b>Maintenance Unit</b> (* Number of positions budgeted and funded by the Stormwater Management Fund appear below position count)					
HP19	Master Mechanic II	1	1		1	
HP17	Assistant Master Mechanic	-	5		5	
HP16	Assistant Master Mechanic	4	-		-	
HP16	Assistant Master Mechanic #4	1	-		-	
HP14	Engineering Technician V	1	1		1	
HP12	Engineering Technician IV	1	-		-	
HP11	Administrative Specialist	1	1		1	
PR5935	Architectural Ironworker Leadman	1	1		1	
PR5933	Architectural Ironworker	3	3		3	
PR5933	Architectural Ironworker #1	1	1		1	
PR5353	Bricklayer	1	1		1	
PR5159	Carpenter Foreman	1	1		1	
PR5155	Carpenter Leadman	1	1		1	
PR5153	Carpenter	6	6		6	
PR7425	Electrical Instrument & Testing Mechanic Foreman	1	1		1	
PR7424	Electrical Instrument & Testing Mechanic Leadman	1	1		1	
PR7423	Electrical Instrument & Testing Mechanic	13	13		13	

Fund: Corporate Dept: Maintenance & Operations Division: Stickney Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
PR7347	Electrical Mechanic Foreman	1	1		1	
PR7349	Electrical Mechanic Sub-Foreman	2	2		2	
PR7343	Electrical Mechanic	18	18		18	
PR6459	Hoisting Engineer Foreman	1	1		1	
PR6453	Hoisting Engineer	10	10		10	
PR5989	Ironworker Foreman	1	1		1	
PR5973	Structural Ironworker	9	9		9	
PR7579	Machinist Foreman	1	1		1	
PR7575	Machinist Leadman	2	2		2	
PR7573	Machinist	25	25		25	
PR5555	Painter Leadman	1	1		1	
PR5553	Painter	3	3		3	
PR7743	Pipcoverer	2	2		2	
PR7779	Pipefitter Foreman	1	1		1	
PR7775	Pipefitter Leadman	2	2		2	
PR7773	Pipefitter	23	23		23	
PR5759	Plumber Foreman	(*1)	(*1)		(*1)	
PR5753	Plumber	4	4		4	
PR5955	Sheet Metal Worker Leadman	1	1		1	
PR5953	Sheet Metal Worker	6	6		6	
PR6479	Truck Driver Foreman	1	1		1	
PR6473	Truck Driver	8	8		8	
TOTAL	Maintenance Unit	161	160	15,380,416.74	160	15,690,765.32
TOTAL	Stormwater Management Fund Positions	(*1)	(*1)		(*1)	
<b>943</b>	<b>Buildings &amp; Grounds Unit</b>					
HP18	Principal Mechanical Engineer	1	1		1	
HP17	Senior Civil Engineer	1	-		-	
HP15	Associate Civil Engineer	2	2		1	
HP14	Engineering Technician V	2	2		2	
HP09	Administrative Clerk	1	1		1	

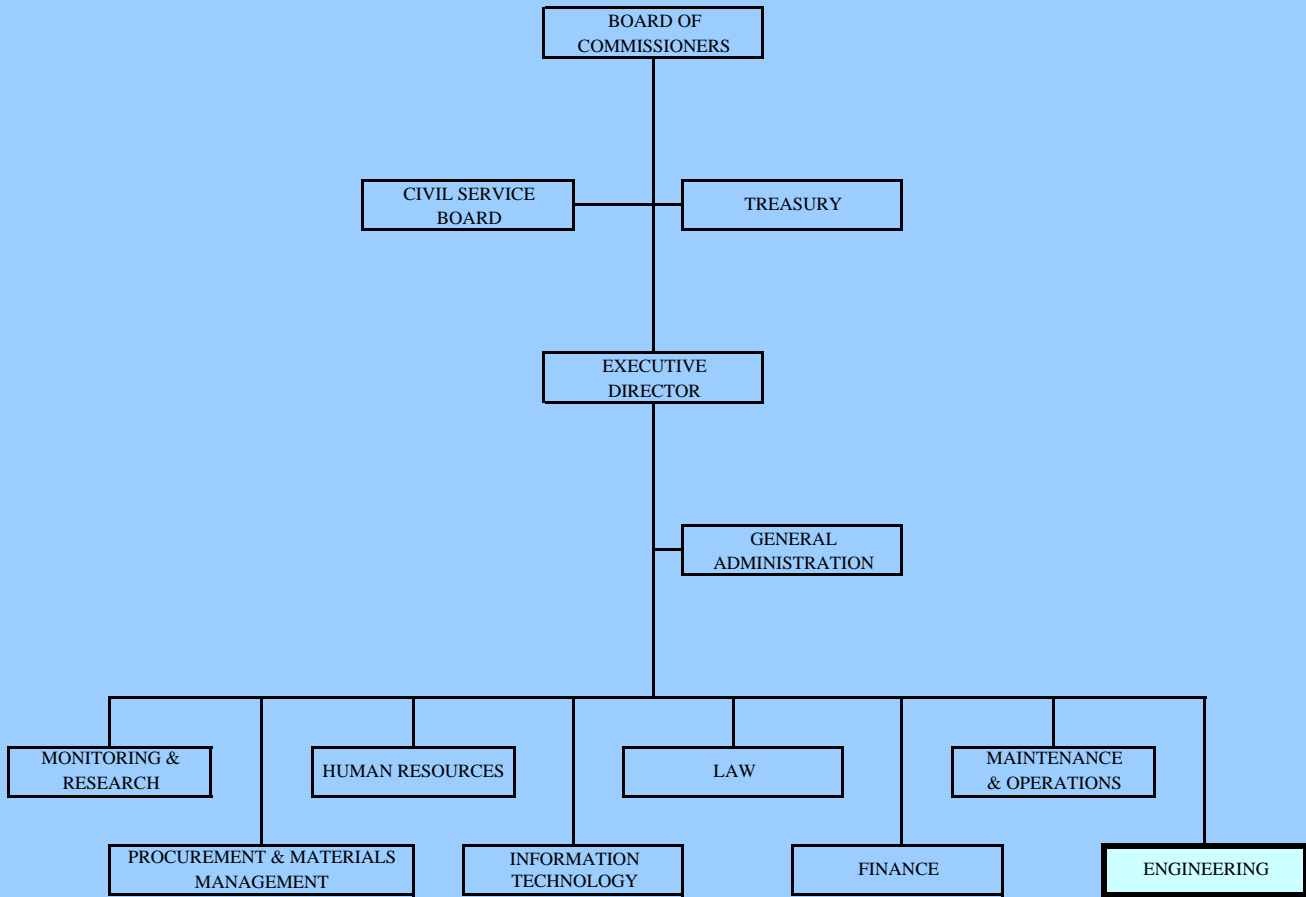
Fund: Corporate Dept: Maintenance & Operations Division: Stickney Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR8331	Laborer Foreman	2	2		2	
NR8651	Maintenance Laborer Class A	7	7		7	
NR8651	Maintenance Laborer Class A #1	1	-		-	
NR8652	Maintenance Laborer Class B	9	9		9	
TOTAL	Buildings & Grounds Unit	26	24	1,776,754.72	23	1,711,808.06
TOTAL	Plant Engineering & Maintenance Branch	231	222	21,355,740.90	205	19,673,478.38
TOTAL	Stormwater Management Fund Positions	(*1)	(*1)		(*1)	
<b>930</b>	<b>Plant Operations Branch</b>					
<b>931</b>	<b>Administrative Unit</b>					
HP21	Engineer of Treatment Plant Operations I #2 (Managing Engineer) (New Grade HP20)	1	1		-	
HP20	Managing Engineer	-	-		1	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
TOTAL	Administrative Unit	2	1	207,059.32	1	168,119.93
<b>932</b>	<b>Treatment Operations Unit</b>					
HP19	Assistant Engineer of Treatment Plant Operations II #2 (Principal Engineer) (New Grade HP18)	-	-		1	
HP18	Principal Engineer	2	1		-	
HP17	Senior Civil Engineer	-	-		1	
HP16	Treatment Plant Operator III	5	5		6	
HP16	Treatment Plant Operator III #4	1	1		-	
HP15	Associate Civil Engineer	1	1		-	
HP14	Assistant Civil Engineer	1	-		-	
HP14	Assistant Mechanical Engineer	1	1		-	
HP14	Treatment Plant Operator II	7	8		8	
HP14	Treatment Plant Operator II #4	2	1		1	
HP12	Treatment Plant Operator I	6	6		6	
HP11	Administrative Specialist	1	1		1	
NR8331	Laborer Foreman	1	1		1	

Fund: Corporate Dept: Maintenance & Operations Division: Stickney Service Area		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR8650	Maintenance Laborer Class A Shift	15	15		15	
NR8651	Maintenance Laborer Class A	5	5		5	
TOTAL	Treatment Operations Unit	48	46	4,067,261.12	45	4,010,880.32
<b>934</b>	<b>Mechanical Operations Unit</b> (* Number of positions budgeted and funded by the Stormwater Management Fund appear below position count)					
HP18	Chief Operating Engineer II	1	1		1	
HP17	Chief Operating Engineer I	2	2		2	
HP16	Assistant Chief Operating Engineer	6	6		6	
NR6810	Fireman-Oiler	10	10		10	
NR8650	Maintenance Laborer Class A Shift	20	20		20	
		(*4)	(*4)		(*4)	
NR8650	Maintenance Laborer Class A Shift #1	-	-		5	
					(*2)	
NR8651	Maintenance Laborer Class A	4	4		4	
NR6832	Operating Engineer II	34	34		34	
NR6831	Operating Engineer I	26	26		26	
		(*4)	(*4)		(*4)	
TOTAL	Mechanical Operations Unit	103	103	9,720,852.18	108	10,401,130.50
TOTAL	Stormwater Management Fund Positions	(*8)	(*8)		(*10)	
<b>945</b>	<b>Railroad Unit</b>					
HP11	Engineering Technician III	1	1		1	
NR8331	Laborer Foreman	1	1		1	
NR8650	Maintenance Laborer Class A Shift	5	5		5	
TOTAL	Railroad Unit	7	7	530,595.00	7	548,800.06
TOTAL	Plant Operations Branch	160	157	14,525,767.62	161	15,128,930.81
TOTAL	Stormwater Management Fund Positions	(*8)	(*8)		(*10)	
TOTAL	Maintenance & Operations Stickney Service Area	398	385	36,601,843.72	372	35,529,947.75
TOTAL	Stormwater Management Fund Positions	(*9)	(*9)		(*11)	

Note: Eleven positions budgeted in Sections 924 and 934 are funded by the Stormwater Management Fund while the operations remain in the Maintenance & Operations Department.

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

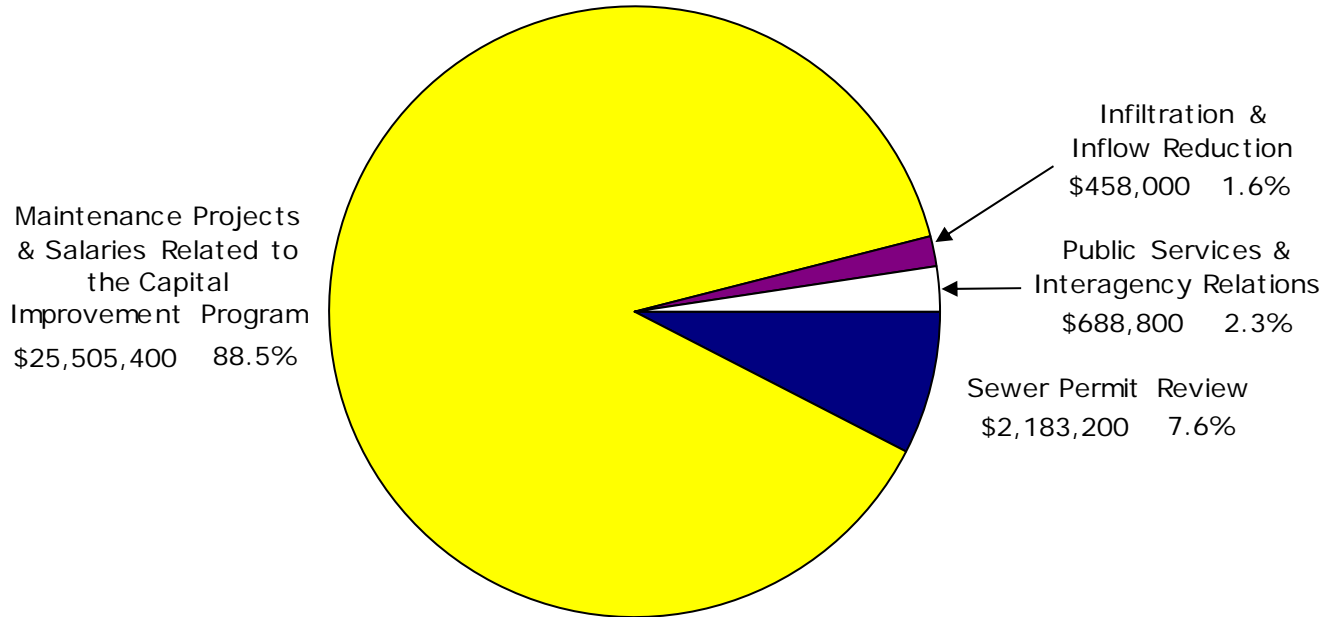
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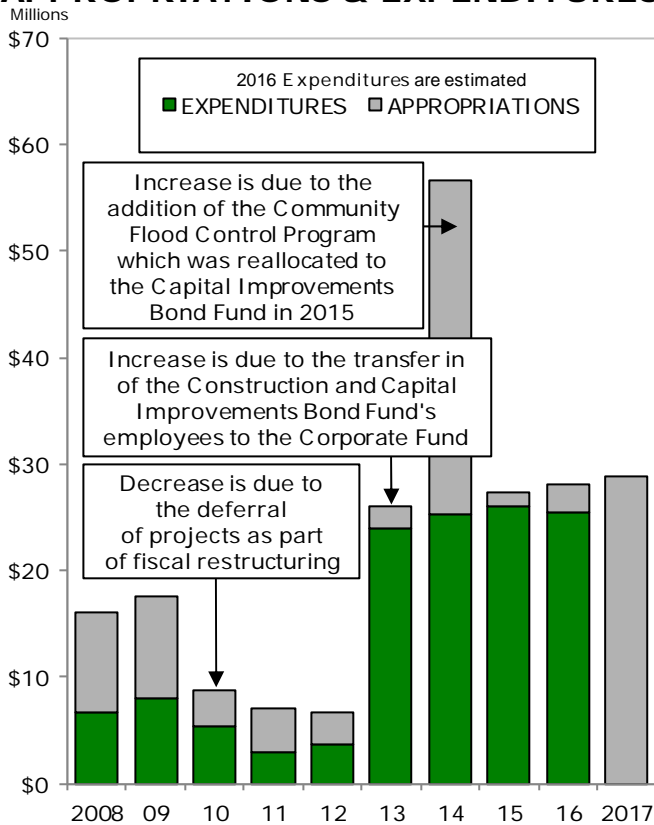
# ENGINEERING – CORPORATE FUND

2017	\$28,835,400
2016	\$28,072,900
Increase	\$762,500

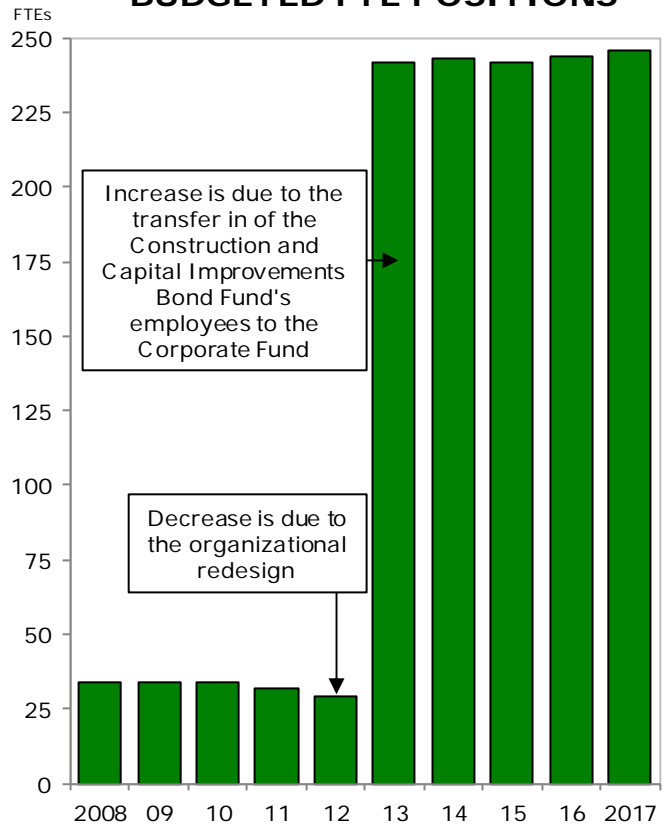
## FUNCTIONS



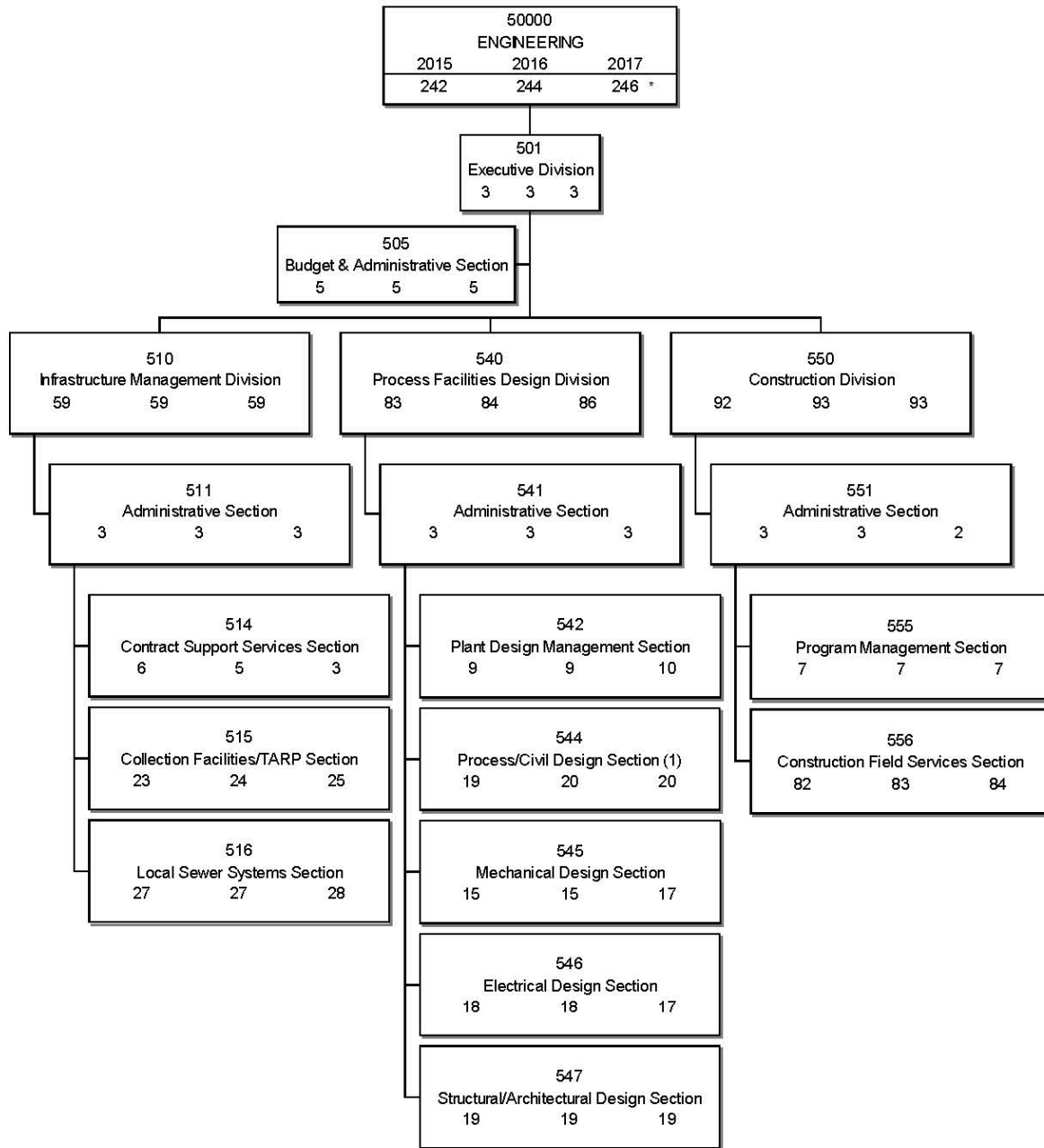
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# ENGINEERING



\* The 2017 position total for Engineering – Corporate Fund is 246. There are an additional 30 positions funded by the Stormwater Management Fund while the operations remain in the Engineering Department.

(1) Effective 01/01/17, Section 544 Process Design Section was retitled Process/Civil Design Section.



## ENGINEERING CORPORATE FUND

**The mission of the Engineering Department is to plan, design, and construct projects prioritized in the Capital Improvement Program, and regulate the construction and maintenance of local sewers, which are tributary to the District's intercepting sewer system.**

### Departmental Summary

The programs of the Engineering Department are described in three sections of the budget. Most Engineering Department positions and many of the activities of the Local Sewer Systems Section (LSSS) are financed by the Corporate Fund, which is described below. The Capital Budget, which highlights the accomplishments of the Infrastructure Management Division, Process Facilities Design Division, and Construction Division, is described in Section V and the Stormwater Management budget is described in Section VI.

The department's primary responsibilities include:

- Plan, develop, and implement a Capital Improvement Program that meets the District's statutory responsibilities, is compliant with applicable state and federal regulations and requirements, and is responsive to the needs of the District's residents as directed through the policies put forth by its Board of Commissioners in the areas of sewage treatment, stormwater management, resource recovery, and pollution control;
- Provide requested and required engineering assistance to other departments within the District in support of their missions. The Engineering Department engages internal staff for all intercepting sewer rehabilitation design, all construction management, and roughly half of the District's process facilities design. Employing a rigorous qualifications-based selection process, the balance of design work is completed by engineering consulting firms. By blending District staff design expertise with design expertise of highly qualified outside firms, the Engineering Department is able to ensure that our plant upgrade, rehabilitation, and resource recovery projects are state of the art.

The Corporate Fund supports the work of the LSSS, whose responsibility is the enforcement of the Watershed Management Ordinance (WMO). The WMO became effective on May 1, 2014, replacing the Sewer Permit Ordinance (SPO). The WMO establishes uniform, countywide stormwater management regulations, sewer construction standards, and requires compliance with the Infiltration/Inflow (I/I) Control Program.

The Corporate Fund budget is also used for repair and maintenance projects not eligible for capital improvements funding.

### Summary of 2016 Accomplishments

- As a result of WMO enforcement, the following has been accomplished in 2016:
  - Approximately eight million gallons of volume control storage;
  - Approximately 10 million gallons of compensatory storage;
  - Approximately 134 million gallons of locally-provided stormwater detention;
- Received revenue of approximately \$1.6 million from sewer service agreements;
- Conducted an advisory committee meeting to consider ordinance changes;
- Updated permit forms to condense and simplify reporting;
- Attended and presented WMO requirements at two conferences to offer outreach and compliance information to the design community;
- Reviewed and issued permits in an adjusted average of 41 working days from the initial submittal to permit issuance;
- Conducted internal training events to enhance the permit review process;
- Reviewed the I/I Control Program annual summary reports to ensure that local municipalities are maintaining and rehabilitating their sewer systems.

### Budget Highlights

The 2017 appropriation for the Engineering – Corporate Fund is \$28,835,400, an increase of \$762,500, or 2.7 percent, from 2016. The staffing level has increased from 244 to 246 positions, resulting from the addition of five positions and the transfer in of five positions from the Maintenance & Operations Department, offset by the drop of eight positions. Added positions include an Assistant Director of Engineering, a Senior Mechanical Engineer, an Associate Mechanical Engineer, an Engineering Technician IV, and an Engineering Technician III. Dropped positions include a Managing Civil Engineer, two Assistant Civil Engineers, an Assistant Electrical Engineer, and four Administrative Specialists. Positions transferred in include a Managing Mechanical Engineer, an Associate Mechanical Engineer, an Assistant Mechanical Engineer, and two Associate Civil Engineers.

Significant features of the 2017 budget for the Engineering Department include the following:

- Continue the implementation of the I/I Control Program to reduce sanitary sewer overflows and basement backups;
- Amend the WMO to include clarifications that will best serve the District and its constituents for future enforcement;
- Additional development of the Technical Guidance Manual (TGM) to add guidance for compliance with the amended WMO.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

• **Add Value**

The Engineering staff look for opportunities to add value in all endeavors. For example, during the permitting process, staff follow up with consulting engineers who have submitted permit applications to ensure that the permit process does not impede development. Staff also worked to establish a WMO fee schedule that would be the least costly of all urbanized collar counties. This fee structure was developed based on the following information: (1) current review fees for the collar counties, (2) past review fees under the SPO, and (3) estimated review times under the WMO. The base fee is \$1,100.00 plus a charge of \$5.00 per linear foot of sewer that is tributary to District facilities. Additional fees are collected for stormwater detention, impact on flood protection areas, and for further submittals that require review. Fees will be evaluated on an annual basis and are set to recover the salaries of District employees in the LSSS who work on permit issuance and field inspection. Additionally, it should be noted that the District has received \$750,000 from extraterritorial impact fees, which are administered to recuperate capital costs when areas historically located outside the District boundary are annexed for service by the District.

• **Excellence**

Planning, design, permit review, and permit approval are conducted with the goal of excellence in mind. Work is completed timely and accurately the first time, and with consideration given to the service to our regulated community. Through excellence, we plan to find opportunities for efficiency gains with a disciplined methodology, which is deeply rooted in a culture of innovation and continuous improvement.

• **Develop Employees**

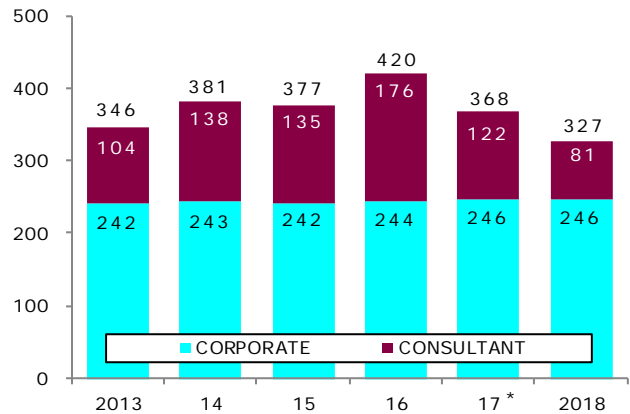
The Engineering staff includes engineers and technicians who must remain current with developments in sewer construction, site development, construction inspection, sewer rehabilitation, and flow monitoring. The 2017 budget includes funds for continuing education opportunities, and attendance at conferences, webinars, and local seminars. The Engineering Department Staffing and Consultants exhibit to the right illustrates budgeted positions until 2018.

• **Leading Partnerships**

The WMO was developed in partnership with all key stakeholders. The LSSS responds to questions and requests from the public and local communities regarding District ordinances. Inquiries related to the WMO include topics such as permit requirements, stormwater management, floodplains, special construction problems, preliminary engineering reviews, permit fees, the Illinois Environmental Protection Agency permit application certifications, requests for field and violation investigations, engineering standards, availability of District facilities, proposed projects, review of proposed local ordinances, and interpretation of District ordinances. Thousands of telephone and written inquiries will be received and addressed in 2017, as shown in the Public Services exhibit.

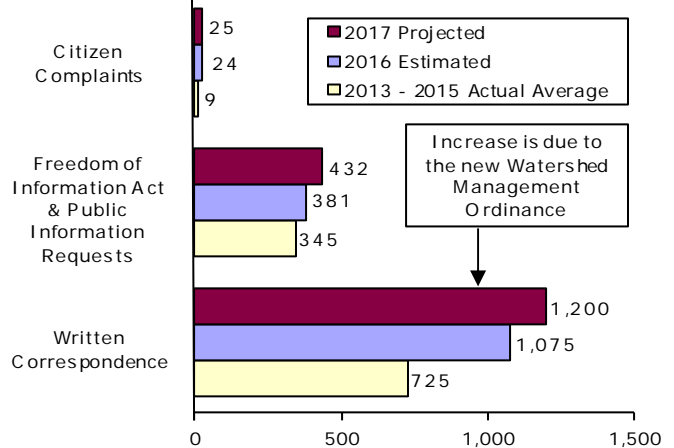
Field investigations will be undertaken to resolve sewerage and drainage questions and complaints. The complaints arise from sewage backup and surcharges, flooding, and other unsanitary or unsafe conditions detrimental to the health and welfare of the public. As a result of investigating these matters and contacts made with local officials, the District has been instrumental in achieving a satisfactory resolution to the majority of the complaints. The LSSS coordinates activities with other governmental agencies to resolve multi-jurisdictional problems and evaluates new stormwater management practices and sewer construction procedures and products. The LSSS anticipates an increase in Freedom of Information Act and public information requests due to the complexities of the new WMO.

**Engineering Department Staffing & Consultants**



\*An additional 30 positions are funded by the Stormwater Management Fund (see Section VI), while the operations remain in the Engineering Department.

**Public Services**



Through the administration of the WMO, the LSSS protects public health and the environment by ensuring that the minimum standards for land development and sewer construction are enforced throughout the District’s service area. The reduction of excessive I/I also facilitates the operation of the District’s treatment plants during wet weather within National Pollutant Discharge Elimination System (NPDES) permit limits. Stormwater management, which is required in conjunction with many permits, helps reduce flooding along waterways, and places the responsibility for the construction of a development’s flood control facilities with the developer, rather than with the public.

**LOCAL SEWER SYSTEMS SECTION  
PERMIT ADMINISTRATION**

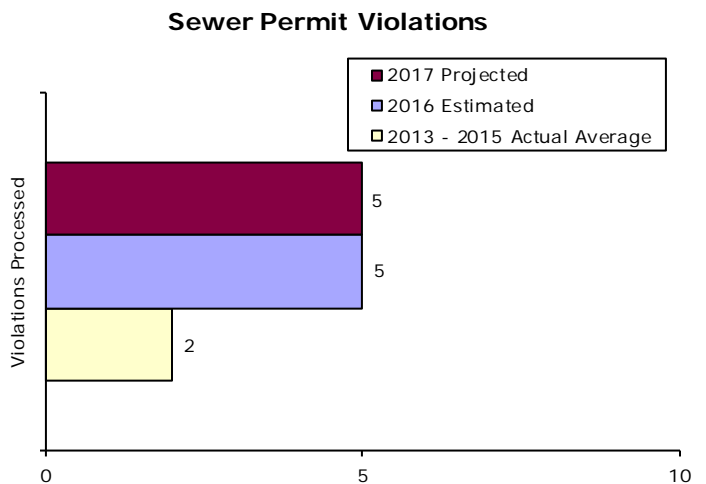
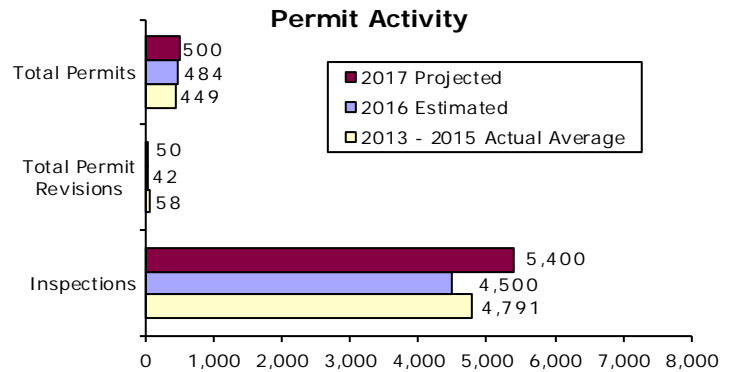
The LSSS administers the WMO within Cook County, excluding the City of Chicago, through the review and approval of WMO permit applications. The WMO establishes uniform, minimum stormwater management design requirements for new land development and redevelopment. The WMO also regulates the design, construction, operation, and maintenance of local public and private sewer connections for residential, commercial, institutional, governmental, and industrial developments, public sewerage systems, and treatment facilities, which discharge directly or indirectly into District collection and treatment facilities, or to waters within the boundaries of the District. The WMO requires that special attention be given to construction within floodplains, wetlands, and riparian environments. The District requires stormwater management as part of land development to ensure that runoff from new developments and redevelopments, exceeding certain acreage limits, do not exacerbate existing runoff and flooding conditions.

The TGM is a companion guide to the WMO and provides a reference on how best to apply and meet the regulations for project design and project implementation. The TGM identifies when a permit is needed, the information required to support a WMO permit application, clarification of WMO requirements, and examples to demonstrate standard compliance. The TGM is expected to evolve as WMO compliance lessons are learned.

The LSSS reviews and issues several types of permits under the WMO. Those permits include the following:

- Standard WMO Permits;
- Notification and Request for Inspection Sewer Construction Permits: This is a short form permit regulating sanitary sewer rehabilitation work for the reconstruction or replacement in kind of existing sewers or minor sewer work that involves less than 25 linear feet of new sewer;
- Facility Connection Authorization: This is utilized to approve connections to District-owned property, facilities, and waterways, including Lake Michigan, within the City of Chicago;
- Single-Family Home Permits: These are short form permits, applicable to the development and redevelopment of single-family homes that impact special flood hazard areas such as a floodplain or riparian environment;
- Authorized Municipality Permits: These are applicable for projects that take place within municipalities that are authorized to administer and issue WMO permits. The authorized municipality reviews the stormwater management requirements and LSSS reviews qualified sewer construction, existing stormwater detention, and new outfalls.

The WMO requires the timely review of permit applications. Initial review and response is required within 15 working days for developments not involving flood protection areas, 30 working days for developments involving flood protection areas, and 10 working days for re-submittals. In 2016, the average review and response time for an initial submittal was 10 days and the average re-submittal response time was six days. As illustrated in the Permit Activity exhibit, LSSS will issue an estimated 484 total permits in 2016, with an estimated average time from initial submittal to permit issuance of 41 working days. The number of total permits issued has averaged 449 for the last three years. The Permit Activity exhibit also illustrates total permit revisions and inspections completed by the LSSS Field Office. On the Sewer Permit Violations exhibit, a total of five sewer permit violations are estimated to be processed in 2016 as well as in 2017.



While the District's service area is almost fully developed, many of the remaining development opportunities involve marginal, low-lying land, and the redevelopment of challenging, high-density areas. These types of permits are generally more complex to analyze and review. Any existing stormwater requirements and existing facilities must first be reassessed for impacts from the proposed development. Limited space and site constraints, common for in-fill redevelopment, offer further challenges to meeting the latest requirements, often necessitating retrofits to existing stormwater systems to achieve permit compliance.

### **INFILTRATION/INFLOW CONTROL PROGRAM ADMINISTRATION**

The LSSS also administers the District's I/I Control Program, which replaced the existing program under the SPO. The purpose of the program is to provide a framework for asset management of separate sewer systems to meet the following goals:

- Maintain infrastructure to prevent sanitary sewer overflows and basement backups due to sewer surcharging and other adverse sewer system conditions;
- Comply with the District's NPDES permits and all other applicable federal, state, and local laws and regulations;
- Minimize extraneous flows transported to the District's facilities due to defective system components or illegal connections.

The District implements the I/I Control Program due to special conditions imposed by the Illinois Environmental Protection Agency in the District's NPDES permits for the water reclamation plants. In addition to adopting a Capacity, Management, Operation, and Maintenance Program for the conveyance and treatment facilities, the District is required to take action to reduce excessive I/I within the local sewers systems.

The I/I Control Program requires all satellite entities (sewer system owners) within the District's separate sewer area, that discharge directly or indirectly into District facilities, to identify and address I/I sources within the public and private sewer systems. This will be accomplished by the individual satellite entities performing ongoing inspections and conducting maintenance and rehabilitation work on the sewer system. All satellite entities must annually report work completed to meet the goals of the I/I Control Program to the District.

**50000 ENGINEERING**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Protect public health by administering the Watershed Management Ordinance (WMO) to regulate local sewer connections to local treatment plants, discharges to District waters, and migration of runoff from new developments and redevelopments.	\$ 2,183,200	7.6%
2. Provide information to the public and local communities regarding District ordinances, coordinate solutions to regional problems with other governmental agencies, and review and evaluate new cost-effective sewer construction procedures and products.	\$ 688,800	2.3%
3. Reduce treatment costs by eliminating excessive infiltration/inflow (I/I) of stormwater into sanitary sewers through a comprehensive rehabilitation program of the local sewer systems.	\$ 458,000	1.6%
4. Ongoing maintenance projects, salaries, and employee expenses related to the Capital Improvement Program.	\$ 25,505,400	88.5%
<b>Total</b>	<b>\$ 28,835,400</b>	<b>100.0%</b>

MEASURABLE GOALS:	2015 Actual	2016 Estimated	2017 Proposed
1. Reduction of avoidable I/I by promoting repair and rehabilitation of the 125 local sanitary sewer systems under the Sewer Permit Ordinance (SPO) and Manual of Procedures (MOP) for Administration of the Sewer Permit Ordinance.			
Number of agencies that have achieved compliance	125	-	-
Percentage complete	100%	-	-
All agencies have achieved compliance with the District's old I/I control program under the SPO and the MOP.			
2. Reduction of avoidable I/I by promoting repair and rehabilitation of the 115 local sanitary sewer systems under the WMO.			
Number of agencies that have completed their Short-Term Requirements	-	-	10
Percentage complete	-	-	8%
<p>The WMO requires compliance with the I/I Control Program. Measurable goals are being evaluated for the new program. Due to mergers, takeovers, and annexations, etc., the number of agencies that require compliance has been reduced from 125 under the SPO and MOP to 115 under the WMO. Agencies will submit annual reports detailing the progress made during the reporting period. While some agencies may complete their Short-Term Requirements within one year, it is anticipated that most agencies will complete them in 2019.</p>			

**50000 ENGINEERING**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent	
1000	Collection	\$ 6,872,563	2017 64	\$ 7,453,900	\$ 225,700	3.1	
			2016 64	\$ 7,228,200			
1530	Local Sewer Permit Activity	\$ 1,823,310	2017 21	\$ 2,183,200	\$ 195,600	9.8	a)
			2016 20	\$ 1,987,600			
1560	Local Sewer Public Service Coordination	\$ 688,988	2017 6	\$ 688,800	\$ (12,400)	(1.8)	
			2016 7	\$ 701,200			
1571	Local Sewer Rehabilitation Ordinance Enforcement Activity	\$ 470,384	2017 3	\$ 458,000	\$ (173,500)	(27.5)	b)
			2016 3	\$ 631,500			
1700	Collection System Design	\$ 1,155,261	2017 9	\$ 1,365,300	\$ 190,400	16.2	c)
			2016 9	\$ 1,174,900			
1800	Collection Construction	\$ 2,734,620	2017 25	\$ 2,758,600	\$ 25,600	0.9	
			2016 25	\$ 2,733,000			
2000	Treatment	\$ 8,728,077	2017 77	\$ 8,832,600	\$ (156,300)	(1.7)	
			2016 80	\$ 8,988,900			
2700	Treatment Design	\$ 3,169,867	2017 27	\$ 3,311,000	\$ 44,300	1.4	
			2016 27	\$ 3,266,700			
2800	Treatment Construction	\$ 5,558,210	2017 50	\$ 5,521,600	\$ (200,600)	(3.5)	d)
			2016 53	\$ 5,722,200			
3000	Solids Processing	\$ 4,674,599	2017 53	\$ 6,369,700	\$ 562,000	9.7	
			2016 49	\$ 5,807,700			
3700	Solids Processing Design	\$ 2,340,711	2017 25	\$ 3,162,300	\$ 197,800	6.7	e)
			2016 24	\$ 2,964,500			
3800	Solids Processing Construction	\$ 2,333,888	2017 28	\$ 3,207,400	\$ 364,200	12.8	f)
			2016 25	\$ 2,843,200			

- a) Increase is due to the transfer in of an Associate Civil Engineer from the Maintenance & Operations (M&O) Department (\$115,800), an increased request for in-house training to enhance employee development (\$30,000), and the reallocation of salaries to more accurately reflect current activities (\$34,900).
- b) Decrease is due to the reduced request for flow monitoring services based on anticipated utilization (\$105,000) and the reduced request for 14-815-1S, Sewer Flow Metering Services, based on the scheduled contract payments (\$85,000), offset by the reallocation of salaries to more accurately reflect current activities (\$16,500).
- c) Increase is due to the addition of a Senior Mechanical Engineer (\$21,100), the transfer in of an Associate Civil Engineer from the M&O Department (\$29,000), increased estimates for paid overtime and sick leave incentive payments (\$103,900), and the reallocation of salaries to more accurately reflect current activities (\$28,300).
- d) Decrease is due to the reallocation of salaries to more accurately reflect current activities (\$274,400) and the drop of one Assistant Civil Engineer (\$78,000) and one Administrative Specialist (\$18,700), offset by the transfer in of a Managing Mechanical Engineer, an Associate Civil Engineer, and an Associate Mechanical Engineer from the M&O Department (\$85,400), and the addition of an Assistant Director of Engineering and two Mechanical Engineers (\$81,400).
- e) Increase is due to the reallocation of salaries to more accurately reflect current activities (\$100,400) and transfer in of one FTE (\$63,900).
- f) Increase is due to the transfer in of an Associate Mechanical Engineer from the M&O Department (\$55,400) and the reallocation of salaries to more accurately reflect current activities (\$292,900).

**50000 ENGINEERING**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted			Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent		
4000	Flood and Pollution Control	\$ 3,390,168	2017 30	\$ 3,415,700	\$ 81,300	2.4		
			2016 29	\$ 3,334,400				
4216	Bridge and Road Maintenance	\$ 75,364	2017 -	\$ 75,300	\$ (18,300)	(19.6)	g)	
			2016 -	\$ 93,600				
4322	Storm and Flood Ordinance Development	\$ 30,867	2017 -	\$ 16,700	\$ 200	1.2		
			2016 -	\$ 16,500				
4341	Planning/Design	\$ 61,299	2017 -	\$ 62,200	\$ 700	1.1		
			2016 -	\$ 61,500				
4342	Contract Administration	\$ 98,641	2017 1	\$ 103,900	\$ 3,500	3.5		
			2016 1	\$ 100,400				
4343	Construction	\$ 80,041	2017 1	\$ 97,000	\$ (19,900)	(17.0)	h)	
			2016 1	\$ 116,900				
4700	Flood and Pollution Control Design	\$ 699,302	2017 6	\$ 657,900	\$ 49,400	8.1		
			2016 5	\$ 608,500				
4800	Flood and Pollution Control Construction	\$ 2,344,654	2017 22	\$ 2,402,700	\$ 65,700	2.8		
			2016 22	\$ 2,337,000				
5000	Solids Disposal	\$ 347,878	2017 3	\$ 370,200	\$ 13,900	3.9		
			2016 3	\$ 356,300				
5700	Solids Disposal Design	\$ 20,282	2017 -	\$ 10,000	\$ 400	4.2		
			2016 -	\$ 9,600				
5800	Solids Disposal Construction	\$ 327,596	2017 3	\$ 360,200	\$ 13,500	3.9		
			2016 3	\$ 346,700				
7000	General Support (excluding program number 7604)	\$ 1,948,341	2017 19	\$ 2,018,600	\$ 31,400	1.6		
			2016 19	\$ 1,987,200				
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 374,700	\$ 4,500	1.2		
			2016 -	\$ 370,200				
<b>Totals</b>		<b>\$ 25,961,626</b>	2017 246	<b>\$ 28,835,400</b>	<b>\$ 762,500</b>	<b>2.7%</b>		
			2016 244	<b>\$ 28,072,900</b>				

g) Decrease is due to the reduced request for 13-059-1D, Biennial Bridge Inspection, based on scheduled contract payments.

h) Decrease is due to the reallocation of green infrastructure funding to the Stormwater Management Fund (\$21,300), offset by the reallocation of salaries to more accurately reflect current activities (\$1,400).

**50000 ENGINEERING**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1500	Local Sewer - Engineering Activity					
1530	Local Sewer Permit Activity					
1531	Review/Issuance of MWRD Sewer Permits (includes standard permits and notification and request for inspection permits.)	Permits Cost Cost/Permit	549 \$ 851,353 \$ 1,550.73	570 \$ 1,062,200 \$ 1,863.51	550 \$ 1,095,800 \$ 1,992.36	
1533	Review of Other Permits	Cost	\$ 150,494	\$ 136,700	\$ 145,900	
1535	Local Sewer Construction Surveillance/Enforcement	Inspections Cost Cost/Inspection	4,536 \$ 683,186 \$ 150.61	5,400 \$ 718,500 \$ 133.06	5,400 \$ 857,300 \$ 158.76	a)
1537	Permit Revision	Cost	\$ 138,277	\$ 70,200	\$ 84,200	b)
1560	Local Sewer - Public Service Coordination					
1561	Public Service	Requests Cost Cost/Request	1,169 \$ 466,173 \$ 398.78	1,734 \$ 467,000 \$ 269.32	1,632 \$ 450,400 \$ 275.98	
1563	Interagency Coordination	Cost	\$ 222,815	\$ 234,200	\$ 238,400	
1571	Local Sewer Rehabilitation Ordinance Enforcement Activity	Systems Cost Cost/System	250 \$ 470,384 \$ 1,881.54	280 \$ 631,500 \$ 2,255.36	250 \$ 458,000 \$ 1,832.00	c)
1700	Collection System Design	Cost	\$ 1,155,261	\$ 1,174,900	\$ 1,365,300	d)
1800	Collection Construction	Cost	\$ 2,734,620	\$ 2,733,000	\$ 2,758,600	
2700	Treatment Design	Cost	\$ 3,169,867	\$ 3,266,700	\$3,311,000	
2800	Treatment Construction	Cost	\$ 5,558,210	\$ 5,722,200	\$ 5,521,600	e)
3700	Solids Processing Design	Cost	\$ 2,340,711	\$ 2,964,500	\$ 3,162,300	f)
3800	Solids Processing Construction	Cost	\$ 2,333,888	\$ 2,843,200	\$ 3,207,400	g)

- a) Increase is due to the transfer in of an Associate Civil Engineer from the Maintenance & Operations (M&O) Department (\$115,800) and an increased request for in-house training to enhance employee development (\$30,000), offset by the reallocation of salaries to more accurately reflect current activities (\$6,800).
- b) Increase is due to the reallocation of salaries to more accurately reflect current activities.
- c) Decrease is due to the reduced request for flow monitoring services based on anticipated utilization (\$105,000) and the reduced request for 14-815-1S, Sewer Flow Monitoring Services, based on scheduled contract payments (\$85,000), offset by the reallocation of salaries to more accurately reflect current activities (\$16,500).
- d) Increase is due to the increased estimates for paid overtime and sick leave incentive payments (\$103,900), the transfer in of an Associate Civil Engineer from the M&O Department (\$29,000), the reallocation of salaries to more accurately reflect current activities (\$28,300), and the addition of a Senior Mechanical Engineer (\$21,100).
- e) Decrease is due to the reallocation of salaries to more accurately reflect current activities (\$274,400) and the drop of one Assistant Civil Engineer (\$78,000) and one Administrative Specialist (\$18,700), offset by the transfer in of a Managing Mechanical Engineer, an Associate Civil Engineer, and an Associate Mechanical Engineer from the M&O Department (\$85,400), and the addition of an Assistant Director of Engineering and two Mechanical Engineers (\$81,400).
- f) Increase is due to the reallocation of salaries to more accurately reflect current activities (\$100,400).
- g) Increase is due to the transfer in of an Associate Mechanical Engineer from the M&O Department (\$55,400) and the reallocation of salaries to more accurately reflect current activities (\$292,900).



**50000 ENGINEERING**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4200	Waterways Control and Stormwater Detention Reservoirs	Cost	\$75,364	\$93,600	\$75,300	h)
4300	Stormwater Management	Cost	\$ 270,848	\$ 295,300	\$ 279,800	
4700	Flood and Pollution Control Design	Cost	\$ 699,302	\$ 608,500	\$ 657,900	
4800	Flood and Pollution Control Construction	Cost	\$2,344,654	\$ 2,337,000	\$ 2,402,700	
5700	Solids Disposal Design	Cost	\$ 20,282	\$ 9,600	\$ 10,000	
5800	Solids Disposal Construction	Cost	\$ 327,596	\$ 346,700	\$ 360,200	
7000	General Support (excluding program number 7604)	Cost	\$ 1,948,341	\$ 1,987,200	\$ 2,018,600	
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 370,200	\$ 374,700	
		Total	\$ 25,961,626	\$ 28,072,900	\$ 28,835,400	

h) Decrease is due to the reduced request for 13-059-1D, Biennial Bridge Inspection, based on scheduled contract payments.

101 50000	Fund: Corporate Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 24,340,374	\$ 26,420,800	\$ 26,420,800	\$ 24,335,000	\$ 26,934,500	\$ 26,934,500	\$ 27,176,500
601060	Compensation Plan Adjustments	419,027	409,200	408,800	259,600	586,600	586,600	591,000
601070	Social Security and Medicare Contributions	-	370,200	370,200	362,800	374,700	374,700	374,700
601100	Tuition and Training Payments	113,151	100,000	100,400	100,400	150,000	150,000	150,000
601170	Payments for Professional Services	453,485	-	-	-	-	-	-
601410	Personal Services Exp for Prelim Engineering Rpts and Studies	100,001	-	-	-	-	-	-
100	<b>TOTAL PERSONAL SERVICES</b>	<b>25,426,037</b>	<b>27,300,200</b>	<b>27,300,200</b>	<b>25,057,800</b>	<b>28,045,800</b>	<b>28,045,800</b>	<b>28,292,200</b>
612010	Travel	9,338	15,000	15,000	13,500	12,000	12,000	12,000
612030	Meals and Lodging	19,021	20,000	36,000	36,000	25,000	25,000	25,000
612040	Postage, Freight, and Delivery Charges	1,993	2,000	3,000	3,000	2,500	2,500	2,500
612050	Compensation for Personally-Owned Automobiles	24,424	30,000	30,000	18,000	15,000	15,000	15,000
612080	Motor Vehicle Operating Services	360	900	900	600	1,000	1,000	1,000
612090	Reprographic Services	4,048	6,200	5,200	4,500	5,000	5,000	5,000
612170	Water and Water Services	3,053	3,200	3,200	3,100	3,200	3,200	3,200
612330	Rental Charges	4,426	3,700	3,700	500	500	500	500
612430	Payments for Professional Services	-	442,600	398,000	200,900	244,300	239,300	239,300
612440	Preliminary Engineering Reports and Studies	-	40,000	65,000	40,000	22,000	27,000	27,000
612490	Contractual Services, N.O.C.	78,651	100,000	83,600	78,600	85,000	85,000	85,000
612620	Repairs to Waterway Facilities	9,628	9,700	29,700	9,700	43,200	43,200	43,200
612970	Repairs to Testing and Laboratory Equipment	1,123	4,000	4,000	3,500	4,500	4,500	4,500
612990	Repairs, N.O.C.	7,848	11,900	11,900	10,200	9,800	9,800	9,800
200	<b>TOTAL CONTRACTUAL SERVICES</b>	<b>163,914</b>	<b>689,200</b>	<b>689,200</b>	<b>422,100</b>	<b>473,000</b>	<b>473,000</b>	<b>473,000</b>
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	30,851	58,000	52,500	46,500	40,500	40,500	40,500
623680	Tools and Supplies	-	-	4,800	-	10,000	10,000	10,000
623700	Wearing Apparel	5,424	7,500	7,100	6,900	7,500	7,500	7,500
623720	Books, Maps, and Charts	6,873	8,100	8,700	8,200	7,200	7,200	7,200

101 50000	Fund: Corporate Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
623990	Materials and Supplies, N.O.C.	2,346	9,900	10,400	9,700	5,000	5,000	5,000
300	TOTAL MATERIALS AND SUPPLIES	45,494	83,500	83,500	71,300	70,200	70,200	70,200
656010	Land	326,181	-	-	-	-	-	-
600	TOTAL LAND	326,181	-	-	-	-	-	-
<b>TOTAL ENGINEERING</b>		<b>\$ 25,961,626</b>	<b>\$ 28,072,900</b>	<b>\$ 28,072,900</b>	<b>\$ 25,551,200</b>	<b>\$ 28,589,000</b>	<b>\$ 28,589,000</b>	<b>\$ 28,835,400</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>501</b>	<b>Executive Division</b>					
EX15	Director of Engineering	1	1		1	
HP22	Assistant Director of Engineering	1	1		1	
EX06	Secretary to Officer	1	1		1	
TOTAL	Executive Division	3	3	580,436.74	3	590,721.34
<b>505</b>	<b>Budget &amp; Administrative Section</b>					
HP18	Supervising Budget & Management Analyst	1	1		1	
HP17	Management Analyst III #2 (Senior Budget & Management Analyst) (New Grade HP16)	1	1		1	
HP15	Management Analyst II #2 (Budget & Management Analyst) (New Grade HP14)	1	1		1	
HP14	Budget & Management Analyst	1	1		1	
HP13	Senior Administrative Specialist	1	1		1	
TOTAL	Budget & Administrative Section	5	5	584,427.48	5	595,037.16
<b>510</b>	<b>Infrastructure Management Division</b>					
<b>511</b>	<b>Administrative Section</b>					
HP22	Assistant Director of Engineering	1	1		1	
HP20	Managing Civil Engineer	1	1		1	
HP11	Administrative Specialist	1	1		1	
TOTAL	Administrative Section	3	3	484,816.80	3	489,664.97
<b>514</b>	<b>Contract Support Services Section</b>					
HP20	Managing Civil Engineer	1	1		-	
HP14	Engineering Technician V #4	1	1		1	
HP12	Engineering Technician IV	1	1		1	
HP11	Administrative Specialist	1	1		-	
HP11	Engineering Technician III	1	-		-	
HP09	Administrative Clerk	1	1		1	
TOTAL	Contract Support Services Section	6	5	440,809.98	3	237,406.95
<b>515</b>	<b>Collection Facilities / TARP Section</b>					
HP20	Managing Civil Engineer	1	1		1	

Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP18	Principal Civil Engineer	3	3		3	
HP17	Senior Civil Engineer	5	6		6	
HP15	Associate Civil Engineer	5	4		3	
HP14	Assistant Civil Engineer	2	2		3	
HP14	Engineering Technician V	1	1		1	
HP14	Engineering Technician V #4	1	1		1	
HP13	Engineering Draftsman III	1	1		1	
HP12	Engineering Technician IV	2	2		3	
HP11	Engineering Technician III	2	3		3	
TOTAL	Collection Facilities / TARP Section	23	24	2,580,667.44	25	2,645,903.23
<b>516</b>	<b>Local Sewer Systems Section</b> (* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)					
HP18	Principal Civil Engineer	2	2		2	
		(*1)	(*1)		(*1)	
HP17	Senior Civil Engineer	7	7		7	
		(*1)	(*2)		(*2)	
HP15	Associate Civil Engineer	5	5		6	
		(*2)	(*3)		(*3)	
HP14	Assistant Civil Engineer	3	3		2	
		(*2)	(*2)		(*2)	
HP14	Assistant Mechanical Engineer	-	-		1	
HP14	Engineering Technician V	2	2		3	
HP14	Engineering Technician V #4	1	1		-	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP12	Engineering Technician IV	2	2		2	
		(*1)	(*2)		(*1)	
HP12	Engineering Technician IV #4	1	1		1	
HP11	Administrative Specialist	-	1		1	
HP11	Engineering Technician III	1	1		1	
HP09	Administrative Clerk	2	2		2	
TOTAL	Local Sewer Systems Section	27	27	2,677,172.42	28	2,835,504.13
TOTAL	Stormwater Management Fund Positions	(*7)	(*10)		(*9)	
TOTAL	Infrastructure Management Division	59	59	6,183,466.64	59	6,208,479.28
TOTAL	Stormwater Management Fund Positions	(*7)	(*10)		(*9)	

Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>522</b>	<b>Stormwater Management Section</b> (* Number of positions budgeted and funded by the Stormwater Management Fund appears below position count)					
HP20	Managing Civil Engineer	-	-		-	
		(*1)	(*1)		(*1)	
HP18	Principal Civil Engineer	-	-		-	
		(*3)	(*3)		(*3)	
HP17	Senior Civil Engineer	-	-		-	
		(*7)	(*7)		(*7)	
HP15	Associate Civil Engineer	-	-		-	
		(*5)	(*6)		(*6)	
HP14	Assistant Civil Engineer	-	-		-	
		(*4)	(*4)		(*3)	
HP11	Administrative Specialist	-	-		-	
		(*1)	(*1)		(*1)	
TOTAL	Stormwater Management Section	-	-	-	-	-
TOTAL	Stormwater Management Fund Positions	(*21)	(*22)		(*21)	
<b>540</b>	<b>Process Facilities Design Division</b>					
<b>541</b>	<b>Administrative Section</b>					
HP22	Assistant Director of Engineering	-	-		1	
HP12	Secretary #2 (Administrative Specialist) (New Grade HP11)	1	-		-	
HP11	Administrative Specialist	2	3		2	
TOTAL	Administrative Section	3	3	181,906.14	3	296,095.70
<b>542</b>	<b>Plant Design Management Section</b>					
HP20	Managing Civil Engineer	1	1		1	
HP18	Principal Civil Engineer	2	2		2	
HP17	Senior Civil Engineer	2	2		3	
HP16	Computer Aided Drafting and Design Administrator	1	1		1	
HP15	Associate Civil Engineer	2	2		2	
HP12	Engineering Technician IV	1	1		1	
TOTAL	Plant Design Management Section	9	9	1,123,785.26	10	1,236,437.38
<b>544</b>	<b>Process / Civil Design Section (formerly Process Design Section)</b>					
HP20	Managing Civil Engineer	1	1		1	
HP18	Principal Civil Engineer	3	3		3	
HP17	Senior Civil Engineer	7	7		7	
HP17	Senior Process Control Engineer	1	1		1	

Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP15	Associate Civil Engineer	2	2		2	
HP15	Associate Process Control Engineer	-	1		1	
HP14	Assistant Civil Engineer	2	2		2	
HP13	Engineering Draftsman III #4	1	1		1	
HP12	Engineering Draftsman II	1	1		1	
HP12	Engineering Draftsman II #4	1	1		1	
TOTAL	Process / Civil Design Section (formerly Process Design Section)	19	20	2,352,857.78	20	2,365,311.49
	<b>545 Mechanical Design Section</b>					
HP20	Managing Mechanical Engineer	1	1		2	
HP18	Principal Mechanical Engineer	2	2		2	
HP17	Senior Mechanical Engineer	4	4		5	
HP15	Associate Mechanical Engineer	4	4		4	
HP14	Assistant Mechanical Engineer	1	1		1	
HP13	Engineering Draftsman III	1	1		1	
HP12	Engineering Draftsman II	1	1		1	
HP12	Engineering Draftsman II #4	1	1		1	
TOTAL	Mechanical Design Section	15	15	1,753,194.30	17	2,019,504.59
	<b>546 Electrical Design Section</b>					
HP20	Managing Electrical Engineer	1	1		1	
HP18	Principal Electrical Engineer	2	2		2	
HP17	Senior Electrical Engineer	5	5		5	
HP15	Associate Electrical Engineer	5	5		5	
HP14	Assistant Electrical Engineer	2	2		1	
HP13	Engineering Draftsman III	-	-		1	
HP13	Engineering Draftsman III #4	1	1		-	
HP12	Engineering Draftsman II	2	2		2	
TOTAL	Electrical Design Section	18	18	2,076,145.50	17	2,002,549.50
	<b>547 Structural / Architectural Design Section</b>					
HP20	Managing Structural Engineer	1	1		1	

Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP18	Principal Architect	1	1		1	
HP18	Principal Structural Engineer	2	2		2	
HP17	Senior Architect	2	2		2	
HP17	Senior Structural Engineer	3	3		3	
HP15	Associate Architect	3	3		3	
HP15	Associate Structural Engineer	2	2		2	
HP14	Assistant Structural Engineer	3	3		3	
HP13	Engineering Draftsman III	1	1		1	
HP12	Engineering Draftsman II #4	1	1		1	
TOTAL	Structural / Architectural Design Section	19	19	2,170,722.32	19	2,149,368.69
TOTAL	Process Facilities Design Division	83	84	9,658,611.30	86	10,069,267.35
<b>550</b>	<b>Construction Division</b>					
<b>551</b>	<b>Administrative Section</b>					
HP22	Assistant Director of Engineering	1	1		1	
HP11	Administrative Specialist	2	2		1	
TOTAL	Administrative Section	3	3	364,939.12	2	295,237.50
<b>555</b>	<b>Program Management Section</b>					
HP20	Managing Civil Engineer	1	1		1	
HP17	Senior Civil Engineer	1	1		-	
HP17	Senior Electrical Engineer	1	1		1	
HP15	Associate Civil Engineer	1	1		2	
HP14	Assistant Civil Engineer	1	1		1	
HP14	Assistant Mechanical Engineer	1	1		1	
HP13	Senior Administrative Specialist	1	1		1	
TOTAL	Program Management Section	7	7	768,742.26	7	815,304.96
<b>556</b>	<b>Construction Field Services Section</b>					
HP20	Managing Civil Engineer	1	1		1	
HP18	Principal Civil Engineer	3	4		4	
HP18	Principal Electrical Engineer	3	3		3	



Fund: Corporate Dept: Engineering Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
HP18	Principal Engineer	1	-		-	
HP17	Senior Civil Engineer	10	10		10	
HP17	Senior Electrical Engineer	3	3		3	
HP17	Senior Mechanical Engineer	2	2		2	
HP15	Associate Civil Engineer	11	11		11	
HP15	Associate Civil Engineer #2 (Engineering Technician V) (New Grade HP14)	-	-		1	
HP15	Associate Electrical Engineer	3	3		3	
HP15	Associate Mechanical Engineer	2	2		4	
HP15	Associate Structural Engineer	1	1		1	
HP14	Assistant Civil Engineer	7	7		5	
HP14	Assistant Electrical Engineer	2	2		2	
HP14	Assistant Mechanical Engineer	1	1		1	
HP14	Engineering Technician V	11	12		12	
HP14	Engineering Technician V #4	4	3		3	
HP12	Administrative Assistant #2 (Administrative Specialist) (New Grade HP11)	1	1		1	
HP12	Engineering Technician IV	8	9		9	
HP12	Engineering Technician IV #4	2	1		1	
HP11	Administrative Specialist	-	1		-	
HP11	Engineering Technician III	6	6		7	
TOTAL	Construction Field Services Section	82	83	8,414,026.66	84	8,738,414.36
TOTAL	Construction Division	92	93	9,547,708.04	93	9,848,956.82
TOTAL	Engineering	242	244	26,554,650.20	246	27,312,461.95
TOTAL	Stormwater Management Fund Positions	(*28)	(*32)		(*30)	

Note: Thirty positions budgeted in Sections 516 and 522 are funded by the Stormwater Management Fund, while the operations remain in the Engineering Department.

NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.

**NOTE PAGE**

# SECTION V

## CAPITAL BUDGET

The Capital Improvement Program is the District's plan for the construction, rehabilitation, and modernization of District-owned and operated infrastructure. It includes plans to protect Lake Michigan from pollution, to clean up 532 miles of small streams and rivers within the District's jurisdiction to meet federal and state standards, and to reduce the level of flooding which has persistently plagued many municipalities within the District's jurisdiction.

The Capital Budget includes the Construction Fund and the Capital Improvements Bond Fund. To understand the Capital Budget, it is necessary to visualize existing facilities as well as the program for the next year and the long-term plan.

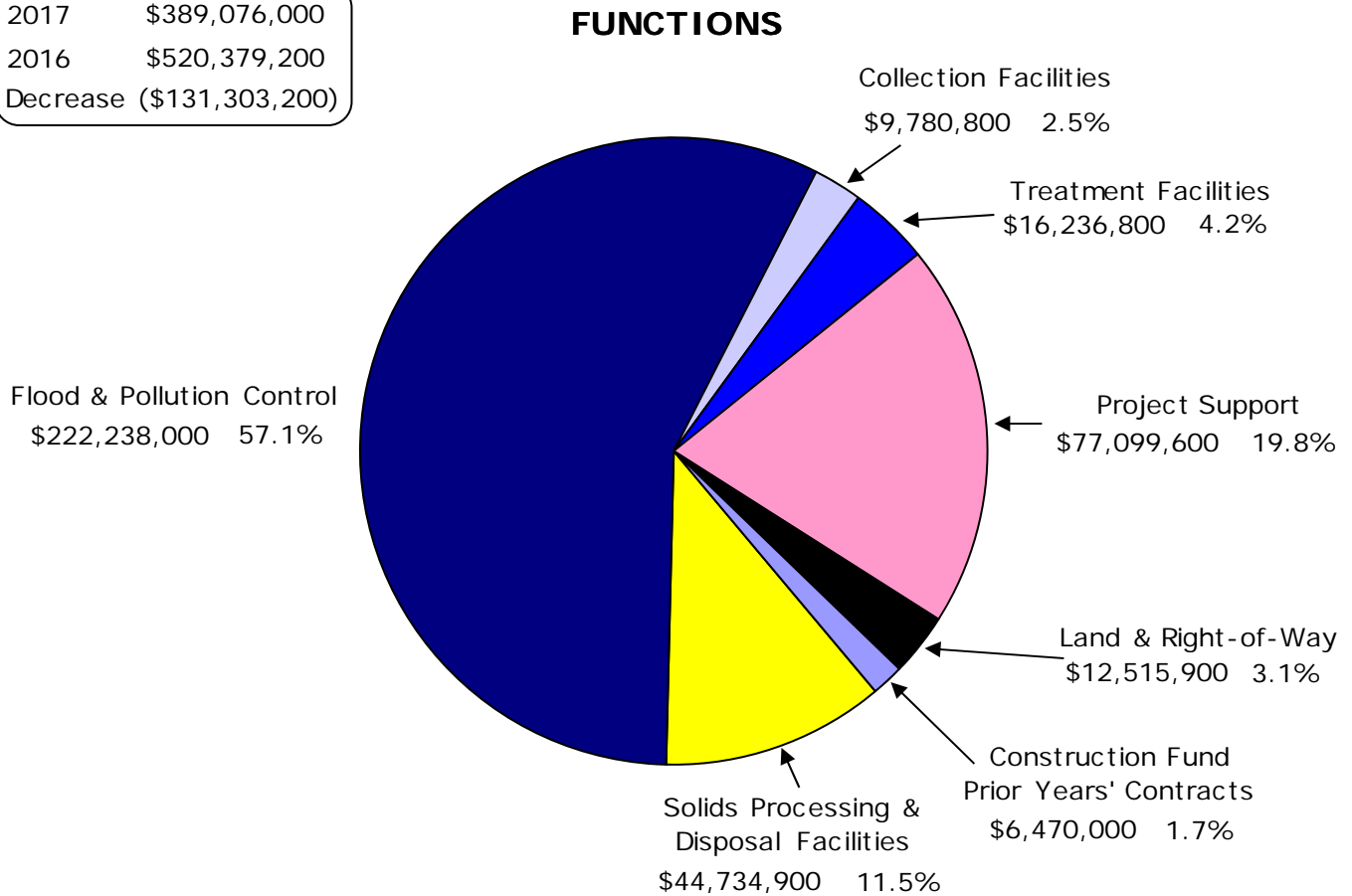
The type of funding for each fund corresponds to the estimated useful life of the project and statutory restrictions on bond sales. The Tax Cap Law imposes restrictions on the non-referendum bonding authority of the District. There are exceptions in the Tax Cap Law to allow non-referendum bonds to be sold to finance certain District projects. Bonds or long-term debt are only utilized to finance projects with useful lives beyond 20 years. Capital projects not eligible for bond financing, or with shorter useful lives, are funded on a pay-as-you-go basis and financed primarily by property taxes. The Capital Improvements Bond Fund receives most of its resources from bond sales, State Revolving Fund loans, and federal and state grants. It provides for major plant and sewer construction, flood control facilities, and land acquisition. The Construction Fund is financed primarily through a property tax levy and provides for much of the District's infrastructure rehabilitation and modernization.

The narrative discussion of the District's 2017 Capital Improvement Program places the 2017 program within the context of our long-range plan. Information is provided on the levels of funding in 2017 and in the future. The graphs, charts, figures, and descriptions of the Construction Fund and Capital Improvements Bond Fund Program within this section aid the reader in understanding this component of the Budget. The impact on operating costs associated with capital projects scheduled for award in 2017 is presented in the Capital Improvement Program narrative.

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# CAPITAL IMPROVEMENT PROGRAM CONSTRUCTION AND CAPITAL IMPROVEMENTS BOND FUNDS

2017	\$389,076,000
2016	\$520,379,200
Decrease	(\$131,303,200)



A comprehensive Capital Improvement Program narrative appears on the following pages. The District utilizes the Construction and Capital Improvements Bond Funds for the Capital Improvement Program. Capital improvements comprise all new facilities and projects that preserve the useful life of District facilities or increase the capacity or efficiency of these facilities. The project support activities of the Construction and Capital Improvements Bond Funds consist of planning, designing, and constructing District infrastructure, acting as a liaison to the United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency, and pursuing funding for capital projects from the Army Corps of Engineers.

**Budget Highlights**

The 2017 Capital Improvement Program (Construction and Capital Improvements Bond Funds) totals \$389,076,000, a decrease of \$131,303,200, or 25.2 percent, from 2016. The decrease is primarily due to a decrease in the total value of capital projects budgeted in 2017. A total of 153 projects funded by the Construction or Capital Improvements Bond Funds will be under planning, design, or construction in 2017. There are 11 flood control and streambank stabilization projects, three reservoir projects, two flood-prone property acquisitions, and one pilot study planned for award in 2017 under the Stormwater Management Program.

**The mission of the Capital Improvement Program is to plan, develop, and implement projects for new facilities, preserve the useful life of facilities, or increase the capacity or efficiency of facilities to ensure that the District complies with our statutory responsibilities in the areas of sewage treatment and pollution control.**

### **Capital Improvement Program Policy**

The District's Capital Improvement Program consists of those projects identified as necessary to ensure safe and uninterrupted operation of our facilities, meet existing and new statutory and regulatory requirements, and maintain efficiency in a cost-effective manner. Projects are identified based on asset management audits, Governmental Accounting Standards Board Statement 34 inspections, and need, such as regulatory requirements or long-term strategic planning. Following identification, projects must be justified and vetted by an interdepartmental review panel. Projects are prioritized using an evaluation and scoring system. Projects are then added to the Capital Improvement Program and scheduled for award according to priority and resource availability.

Governmental Accounting Standards Board Statement 34 became effective in 2003. By adopting the modified approach for reporting infrastructure assets, the District agrees to perform condition assessments of our facilities, establish service levels for our infrastructure, and appropriate funds to maintain these high standards, thus protecting the environment and avoiding the detrimental impacts of deferred maintenance. The results of these assessments are reported in the Comprehensive Annual Financial Report.

### **Beneficial Impacts of Capital Projects**

Through proper operation, maintenance, repair, and replacement of equipment and facilities, the District ensures continued efficient, reliable service, protects our investment and infrastructure, and meets National Pollutant Discharge Elimination System permit requirements. The Capital Improvement Program identifies and prioritizes projects to upgrade and modernize obsolete equipment and facilities.

### **Program Funding**

Sources of funding for the Capital Improvement Program consist of capital improvement bond sales, general property tax revenues, State Revolving Fund loans, and federal and state grants.

### **Construction Fund**

Section 12 of "An ACT to create sanitary districts and to remove obstructions in the Des Plaines and Illinois Rivers," approved May 29, 1889, as amended, provides that the Board of Commissioners of the District can levy and collect taxes for construction purposes (which means the replacement, remodeling, completion, alteration, construction, and enlargement, which will add appreciably to the value, utility, or useful life of sewage treatment works or flood control facilities, and additions thereto, pumping stations, tunnels, conduits, and intercepting sewers connecting therewith, and outlet sewers together with the equipment and appurtenances necessary thereto, and for the acquisition of the sites and rights of way necessary thereto, and for engineering expenses of designing and supervising construction of the work above described) for the year 1985 and each year thereafter, which shall be at a rate not to exceed 0.10 percent of the assessed valuation of all taxable property within the District as equalized and determined for state and local taxes.

### **Capital Improvements Bond Fund**

Section 9.6(a) of "An ACT to create sanitary districts and to remove obstructions in the Des Plaines and Illinois Rivers," approved May 29, 1889, as amended, provides that the Board of Commissioners of the District is authorized to issue bonds for District purposes. The District issues bonds to provide funds to replace, remodel, complete, alter, construct, and enlarge sewage treatment or flood control facilities, to acquire air pollution control equipment, and to build or acquire sewers. The total allowable bond debt at any given time cannot exceed 3.35 percent of the last known equalized assessed valuation of all taxable property within the District. The ordinance authorizing the issuance of the bonds provides for the levy of a tax on all taxable property within the District adequate to pay principal and interest on the bonds when due, including a provision for loss in the collection of taxes.

Tax Cap laws enacted in Illinois have a significant impact on the funding of the District's Capital Improvement Program through bond sales. Under Public Act 89-1, the District's non-referendum bond authority is restricted to fund only projects initiated prior to October 1, 1991, which generally covers only Tunnel and Reservoir Plan (TARP) projects. However, Public Act 89-385 provided additional non-referendum authority to the District by authorizing the issuance of "limited bonds." These "limited bonds" allow the District to issue non-referendum debt for projects initiated after October 1, 1991. "Limited bonds" can be issued up to the debt service extension base established by the Act. This "limited bond" authority was expanded for the District by passage of Public Act 90-485 in the 1997 legislative session. This Act excludes debt associated with the TARP program from the "limited bond" limitation. The use of "limited bonds," in conjunction with the "unlimited bonds" authorized for TARP-related projects, positions the District's capital funding on firm ground.

## State Revolving Fund

The USEPA implemented the State Revolving Fund (SRF) to ensure that each state's program is designed and operated to continue to provide capital funding assistance for water pollution control activities in perpetuity, but preserves a high degree of flexibility for operating revolving funds in accordance with each state's unique needs and circumstances.

Funds in the SRF shall not be used to provide grants. SRF balances must be available in perpetuity and must be used solely to provide loans and other authorized forms of financial assistance:

- a. For municipalities, intermunicipal, interstate, or state agencies for the construction of publicly owned wastewater treatment works;
- b. For implementation of a new point source pollution control management program;
- c. For development and implementation of a conservation and management plan.

For many years, the major sources of funding for District projects were federal grants and the Build Illinois Compliance Grants, both of which were discontinued. Under the grant program, the District received approximately \$1.9 billion between 1973 and 1993, leaving 25 percent of the project cost to be borne by the District. The District continues to aggressively pursue federal and state funding to minimize the impact on our constituency. Low-interest SRF loans are an integral part of the District's capital improvements financing. SRF revenues are based on the award and construction schedule of specific projects. It is estimated the District will receive between \$180 to \$200 million annually in SRF loans through 2020.

## Operating Cost Impacts of Capital Improvement Projects

The annual maintenance and/or operating costs associated with new capital projects are an important part of the decision-making process for the selection of capital projects. In many cases, the District must build new or modify existing facilities to meet regulatory requirements, and increases in operating costs cannot be avoided. In other cases, operating costs can be significantly reduced based on the replacement of aging infrastructure or equipment. In all cases, the operating cost impacts of proposed capital projects are analyzed by design personnel, as well as operating staff, in order to implement a Capital Improvement Program that meets operating needs in the most cost-effective manner. For example, the aeration tanks air valves automation in batteries at the Stickney Water Reclamation Plant are cost effective improvements. Finer tune automation is required to enhance the biological phosphorus removal process. Implementation of finer tune automation also reduces air demand by 5.0 to 7.0 percent, saving approximately \$600,000 in electrical energy annually.

Specific tables are provided later in the narrative to show the estimated cost impacts on the operating budget of capital improvement projects under construction, scheduled for award, and under development.

The operating cost impact tables are designed to give a range of cost impacts on the most significant cost elements, specifically, manpower, energy, and chemicals. The cost impact ranges are defined as no impact, minor impact, or major impact. These estimated cost impacts are reviewed once the specific projects are completed to guide in the preparation of operating budgets and to evaluate if planned efficiencies are realized.

Included in the operating cost impact tables is a categorization of the justification for a particular capital project. As discussed above, projects must be built to meet regulatory requirements, but they may also be built to obtain operating efficiencies, provide a safer operating environment, or extend useful life. The specific categories used are capacity needs, useful life, economic benefit, and safety/regulatory. Projects are often justified by more than one criterion.

## Overall Capital Improvement Program Costs

The District's 2017 overall Capital Improvement Program includes 2017 project awards, program support, and projects under construction, with a total estimated construction cost of approximately \$968.6 million. A breakdown of these projects (in millions of dollars) is as follows:

2017 project awards	\$ 297.0
2017 program support (project support and land)	76.9
Projects currently under construction	<u>594.7</u>
Total	\$ 968.6
◆ A breakdown of projects scheduled for 2017 award by fund is as follows:	
Construction Fund projects	\$ 23.7
Capital Improvements Bond Fund projects	<u>273.3</u>
Total	\$ 297.0
◆ A breakdown of projects under construction by fund is as follows:	
Construction Fund projects	\$ 12.3
Capital Improvements Bond Fund projects	<u>582.4</u>
Total	\$ 594.7

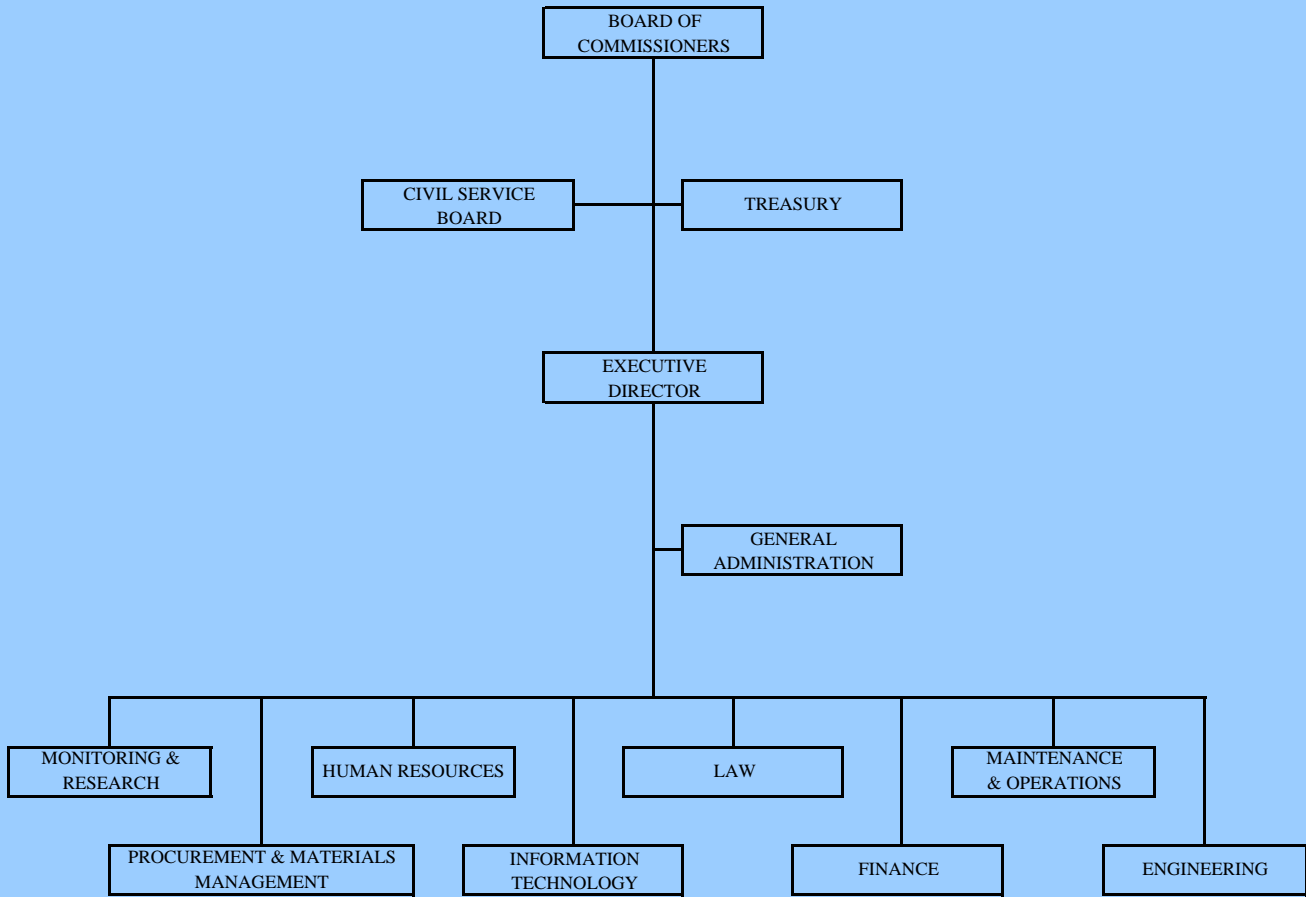
**10-YEAR CAPITAL IMPROVEMENT PROGRAM SUMMARY****2012 - 2021 CAPITAL PROJECT CONSTRUCTION COST**

	ACTUAL CASH DISBURSEMENTS					ESTIMATED CASH DISBURSEMENTS					TOTAL
	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	DISBURSE- MENTS
											2012-2021
<b>BY CATEGORY</b>											
Water Reclamation Plants and Solids Management	\$58.96	\$51.54	\$65.99	\$144.40	\$106.96	\$45.08	\$38.25	\$34.06	\$24.00	\$23.22	\$592.46
Replacement of Facilities	37.33	31.77	40.17	26.65	42.10	85.86	85.52	68.40	31.65	27.42	\$476.87
Collection Facilities	69.99	32.32	44.66	14.94	14.55	5.69	10.63	8.71	9.35	10.49	\$221.33
Stormwater Management	4.54	19.37	5.27	5.85	8.57	36.02	62.66	112.62	48.92	106.33	\$410.15
Tunnel and Reservoir Plan	29.36	35.99	37.49	75.18	62.42	47.18	39.98	38.14	15.61	4.59	\$385.94
<b>TOTAL</b>	<b>\$200.18</b>	<b>\$170.99</b>	<b>\$193.58</b>	<b>\$267.02</b>	<b>\$234.60</b>	<b>\$219.83</b>	<b>\$237.04</b>	<b>\$261.93</b>	<b>\$129.53</b>	<b>\$172.05</b>	<b>\$2,086.75</b>
<b>BY FUND</b>											
Stormwater Management Fund	\$4.54	\$19.37	\$5.27	\$5.00	\$6.83	\$4.07	\$9.39	\$18.83	\$15.40	\$11.87	\$100.57
Construction Fund	5.24	10.78	16.57	13.34	17.14	\$7.25	\$7.46	\$3.99	\$10.00	\$10.00	\$101.77
Capital Improvements Bond Fund	190.40	140.84	171.74	248.68	210.63	208.51	220.19	239.11	104.13	150.18	\$1,884.41
<b>TOTAL</b>	<b>\$200.18</b>	<b>\$170.99</b>	<b>\$193.58</b>	<b>\$267.02</b>	<b>\$234.60</b>	<b>\$219.83</b>	<b>\$237.04</b>	<b>\$261.93</b>	<b>\$129.53</b>	<b>\$172.05</b>	<b>\$2,086.75</b>

Notes: 1. All project costs are in millions of dollars.

2. Information regarding the distribution of funds between the sub-items in the Construction and Capital Improvements Bond Funds can be found in the Five-Year Financial Forecast.

\* PROJECTED CASH DISBURSEMENTS





## CONSTRUCTION FUND

### Fund Summary

The Construction Fund provides for the acquisition of infrastructure assets or the rehabilitation of existing structures that increase the efficiency or extend the useful life of the structure. The useful life of the asset generally will be less than five years and the cost of the project typically does not exceed \$500,000. The Construction Fund is a pay-as-you-go capital fund and is funded primarily by property taxes.

### Summary of 2016 Accomplishments

Significant accomplishments include:

- Completed the first year of a two-year upgrade of the Foxboro input/output modules for the distributed control system at the Calumet Water Reclamation Plant (WRP). The system is an integral component of the wastewater treatment process in the Calumet Service Area;
- Completed a contract for odor mitigation experts to assist in the development of a District Odor Master Plan;
- Awarded a contract to restore and preserve the 85-year-old Process Control Building at the O'Brien WRP;
- Procured a high-speed turbo blower for the process air blowers at the Hanover Park WRP, which will result in energy savings and reduce noise pollution;
- Installed two raw sewage pumps at the Kirie WRP in order to prevent costly equipment damage, flooding, and lengthy pump shutdowns;
- Entered into an agreement with Iowa State University for professional engineering services for the second phase of the project to evaluate the revolving algae biofilm system for nutrient recovery;
- Entered into an agreement with ReadSoft, Inc. to upgrade the Finance Department's electronic invoice processing software;
- Awarded a contract to perform gas analysis of odorous compounds, the data from which will be used to assist in the selection of appropriate odor mitigation technologies for District facilities;
- Awarded a contract to remodel the north half of the first floor of the General Administration Building at the Calumet WRP to accommodate the needs of the Industrial Waste Division in the Monitoring & Research Department and the Construction Division in the Engineering Department;
- Implemented a system as part of a project to demonstrate the recapture of nutrient runoff to enhance watershed health. In order to facilitate this project, two drainage water management systems and three denitrifying bioreactor systems were installed, covering 82 acres of farmland at the District's Prairie Plan Site in Fulton County;
- Awarded a contract to replace approximately 3,400 feet of conduit for the communications system (operation of gates, security cameras, two hydro generators, and control of channel levels) at the Lockport Powerhouse, which is critical infrastructure;
- As part of the District's Intergovernmental Agreement with the Illinois Department of Natural Resources, contributed to the Chi-Cal Rivers Fund for the purpose of providing grant money for green infrastructure projects throughout the District's service area;
- Began the energy conservation project for the installation of new boilers at the 125th Street Pumping Station in the Calumet Service Area;
- Began the project to renovate the existing parking lot at the Egan WRP with a new permeable parking lot. The permeable pavement will provide several green benefits, including improved water quality, ground water recharge, and delayed discharge of stormwater into the receiving waterway;
- Completed the renovation of the Laramie Avenue boat dock to provide safer boarding and loading of equipment for the Monitoring & Research Department's new research boat.

### Budget Highlights

The 2017 appropriation for the Construction Fund is \$34,450,400, a decrease of \$2,164,000 or 5.9 percent, from 2016. The 2017 value of the Construction Fund Program includes \$6,470,000 for projects under construction and \$16,917,000 for projects scheduled for award in 2017. An additional \$11,063,400 is appropriated for purposes not specifically associated with listed project costs, including \$4,839,900 for consulting services, \$3,289,800 for sole source agreements, including the upgrade to the distributed control system at the Calumet WRP and the installation of an odor monitoring system at the Stickney WRP, \$1,504,000 for the purchase of capital machinery and equipment, \$789,700 for contract contingencies, \$250,000 for in-development building improvement projects, \$190,000 for sewer support relocation services, \$100,000 for a contribution to the Chi-Cal Rivers Fund, a public-private partnership working to restore the health, vitality, and accessibility of the waterways in the Chicago and Calumet region, and \$100,000 for a contribution to DuPage County Stormwater Management for green infrastructure projects.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:****• Add Value**

- Increase the use of the in-house trades for the completion of rehabilitation projects;
- Continue to use the Construction Fund to execute the Asset Maintenance Plan, the purpose of which is to rehabilitate and maintain facilities to ensure the long-term viability of assets;
- Continue to implement the District's Odor Master Plan through the evaluation of the various technologies available for wastewater odor control and through the purchase of odor monitoring equipment;
- Provide funds for the Intergovernmental Agreement with DuPage County Stormwater Management to modify the Fawell Dam on the West Branch of the DuPage River for the purpose of increasing fish biodiversity upstream of the dam. Since the Hanover Park WRP's effluent discharges into the West Branch of the DuPage River, the District has been asked to support the project by sharing the construction costs, estimated at \$850,000, of which the District would contribute no more than \$425,000;
- Procure a volute dewatering press to determine its viability as a replacement for the centrifuges in the post-dewatering building at the Stickney WRP. Initial data shows that the volute can achieve the same dewatered product as the centrifuges at a fraction of the power consumption. Only 18 horsepower is needed for the volute as compared to 400 horsepower needed for the centrifuge.

**• Excellence**

- Continue to develop and refine the Asset Maintenance Plan with the goal of reducing emergency sewer collapses and sludge line breaks and the high costs associated with them;
- Continue to use District personnel to develop, design, and implement construction projects;
- Continue to pursue research programs focused on addressing impending or anticipated future regulatory actions, achieving energy neutrality and resource recovery, or generating cost savings.

**• Resource Recovery**

- Complete the rehabilitation of the digester gas turbine at the Stickney WRP. Digester gas will be consumed in the combustor of a three-megawatt electric generator, and the generated electricity will, in turn, be delivered back to the grid and distributed throughout the plant, resulting in reduced electrical demand;
- Award a two-year contract to furnish, deliver, and install boiler controls at the Stickney WRP. The new control system will enable full utilization of the available digester gas produced at the plant;
- Begin a research project utilizing algae technology for the recovery of phosphorus and nitrogen from wastewater, which includes the installation of a pilot-scale flow-through reactor with augmented artificial light sources. The District is conducting leading edge research in this field to drive the development of algae nutrient recovery technology as a practical and sustainable approach to nutrient management for urban wastewater treatment plants. The benefit of using algae to remove phosphorus from wastewater is that algae naturally absorbs phosphorus and nitrogen as key nutrients for growth. Algae can also be harvested and used in a variety of sustainable and economically beneficial applications across the agriculture, medical, nutraceutical, and cosmetic industries;
- Continue the development of a native prairie landscape and tree nursery at the Hanover Park WRP's Fischer Farm;
- Begin phosphorus removal feasibility studies for the Egan, Hanover Park, Lemont, and Kirie WRPs;
- Implement a pilot study at the Hanover Park WRP using membrane aerated biofilm technology to demonstrate its applicability for the biological removal process and its potential for energy savings;
- Install two drainage water management systems and three denitrifying bioreactor systems, covering 82 acres of farmland at the District's Prairie Plan Site in Fulton County, Illinois. The systems will be installed as part of a demonstration project for recapture of nutrient runoff to enhance watershed health.

**• Technology**

- In support of the District's goal to provide reliable and high quality information and systems, the Information Technology Department will continue the District-wide installation of upgraded infrastructure and the assessment of voice over internet protocol, information technology security, and document management systems.

**CAPITAL PROJECTS LISTED BY SERVICE AREA - CONSTRUCTION FUND**

The following is a list of capital projects within the District’s three major service areas. They are presented by their association with a water reclamation plant (WRP) and by their completion status: projects under construction and projects for 2017 award.

**STICKNEY  
SERVICE  
AREA (SSA)**



**Stickney Water Reclamation Plant (SWRP)**

**Projects Under Construction (with estimated completion dates)**

		<b>Estimated Construction Cost</b>
13-805-2S	Television Inspection and Recording of Sewer and Manholes, District-wide (9/2017)	\$ 1,496,000
15-913-21	Rehabilitate the Digester Gas Turbine, SWRP (9/2017)	2,038,000
15-914-21	F&D Services to Recondition Various Circuit Breakers, SSA (2/2017)	131,000
16-902-21	Pavement Rehabilitation, District-wide (12/2017)	1,147,000
16-RFP-02	Applicant Tracking (8/2017)	100,000
		<b>Total \$ 4,912,000</b>

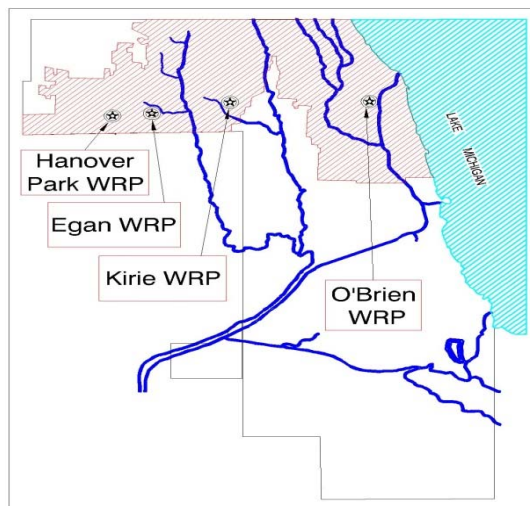
**Projects for 2017 Award**

13-806-2S	Television Inspection and Recording of Sewer and Manholes, District-wide	\$ 1,800,000
14-107-2J	Stickney Effluent Reuse Line, SSA	600,000
16-419-21	Rehabilitation of Elevators, MOB	550,000
16-602-21	F&D Telemetry Replacement for Single Point Data at Various Locations	249,000
16-612-21	F&D Bio-Phosphorus Control Equipment, CSA and SSA	150,000
16-901-21	FD&I Boiler Controls, SWRP	1,300,000
17-180-21	F&D One Volute Dewatering Press, SWRP	974,000
17-181-21	F&D Benchtop Fermenter System, SWRP	26,000
17-601-21	Painting of Final Tanks, District-wide	1,632,000
17-602-21	F&D Programmable Logic Controllers, Chicago River Controlling Works	90,000
17-603-21	F&D Windrow Turner, LASMA	650,000
17-604-21	FD&I Headrace Handrail, LPH	50,000
17-605-21	Cofferdam Services, LPH	375,000
17-606-21	F&D Telemetry Replacement for SCADA Control at Various Locations	645,000
17-607-21	F&D Utility Vehicles to Various Locations	867,000
17-901-21	F&D Interoperable Distributed Control System Workstations and TARP Controllers, Various Locations	125,000
17-902-21	FD&I Grit Screw Conveyors, SWRP	2,400,000
17-RFP-05	Voice Over Internet Protocol Assessment	100,000
17-RFP-06	SAP Simplification	100,000
17-RFP-07	Document Management System Assessment	50,000

**Stickney Water Reclamation Plant (SWRP)****Projects for 2017 Award (continued)****Estimated Construction Cost**

17-RFP-08	Automated CAFR and Budget Solution	\$	125,000
17-RFP-09	Local Sewer System Section Permit Database		50,000
J15090-064	Roof Life Extension, MOB		250,000
J15090-065	Replace Air Conditioning Unit at Waterways Control Center, MOB		20,000
J69943-029.A	Coarse Screen Area Beam Restoration, RAPS		100,000
MWD0000005IT	Information Technology Department Infrastructure Upgrades		163,000
MWD0000011IT	Backup and Retention Project		95,000
MWD0000012IT	Security Cameras, MOBC		16,000
MWD0000013IT	Avaya Telecom Project		235,000
MWD0000014IT	Database Consolidation Project		264,000
		Total	\$ <b>14,051,000</b>
		Stickney Service Area Grand Total	\$ <b>18,963,000</b>

# NORTH SERVICE AREA (NSA)



## Terrence J. O'Brien Water Reclamation Plant (OWRP)

### Projects Under Construction (with estimated completion dates)

15-711-21	Restoration of Process Control Building, OWRP (6/2017)	\$ 484,000
16-705-21	Rebuild Two Raw Sewage Pump Rotating Assemblies, OWRP (3/2017)	219,000
		<b>Total \$ 703,000</b>

### Projects for 2017 Award

15-074-2D	Installation of Baffle Plates in Final Settling Tanks, OWRP	\$ 1,600,000
16-078-2J	Algae Biomass Nutrient Recovery Demonstration Project Installation, OWRP	500,000
16-704-21	FD&I Upgraded Coarse Screen Conveyor System at the North Branch Pumping Station, NSA	150,000
17-701-21	F&D Storm Pump for the Deerfield Reservoir, NSA	100,000
17-703-21	F&D Stake Body Truck and Dump Truck, NSA	275,000
17-707-21	Re-pipe Devon Avenue Instream Aeration Station Air Main, OWRP	1,500,000
		<b>Total \$ 4,125,000</b>

## John E. Egan Water Reclamation Plant (EWRP)

### Project Under Construction (with estimated completion dates)

14-714-21	Parking Lot Replacement, EWRP (1/2017)	\$ 1,462,000
		<b>Total \$ 1,462,000</b>

### Projects for 2017 Award

16-412-2M	Pump Rehabilitation and Diverter Gate Installation, EWRP	\$ 150,000
17-704-21	F&D Air Lift Blower, EWRP	100,000
17-711-21	F&D Rider Sweeper, EWRP	30,000
		<b>Total \$ 280,000</b>

## James C. Kirie Water Reclamation Plant (KWRP)

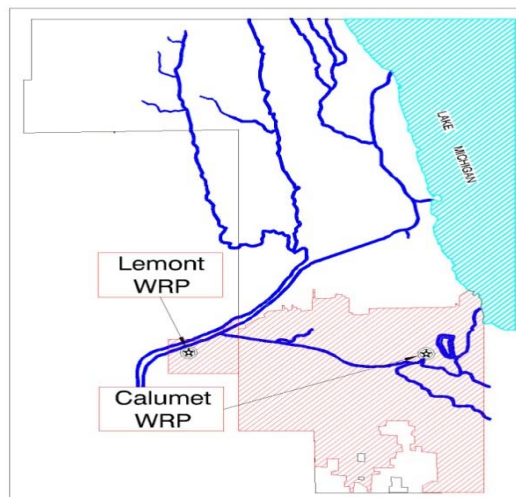
### Projects for 2017 Award

16-708-21	Rehabilitate Gloria Alitto Majewski Reservoir, KWRP	\$ 223,000
17-705-21	Touhy Avenue Reservoir Rehabilitation, NSA	283,000
17-709-21	F&D Bar Screens, KWRP	300,000
17-710-21	Overhaul Motor and Magnetic Drive for Raw Sewage Pump #3, KWRP	120,000
		<b>Total \$ 926,000</b>

**Hanover Park Water Reclamation Plant (HPWRP)****Projects for 2017 Award****Estimated Construction Cost**

15-534-2C	Procurement of Membrane Aerated Biofilm Reactor Cassettes for Pilot Plant, HPWRP	\$	800,000
15-534-2J	Membrane Aerated Biofilm Reactor Pilot Plant, HPWRP		500,000
17-708-21	FD&I Disc Filters, HPWRP		1,500,000
		Total	\$ <u>2,800,000</u>
		North Service Area Grand Total	\$ <u><u>10,296,000</u></u>

## CALUMET SERVICE AREA (CSA)



### Calumet Water Reclamation Plant (CWRP)

#### Projects Under Construction (with estimated completion dates)

		Estimated Construction Cost
14-811-21	FD&I New Boilers at the 125th Street Pumping Station, CSA (7/2017)	\$ 379,000
15-802-21	Rehabilitation of Hydraulic Operator at TARP Gate Structure 1, CSA (5/2017)	1,324,000
16-268-2V	IWD and Construction Office Renovation, CWRP (7/2018)	2,546,000
	Total	<b>\$ 4,249,000</b>

#### Projects for 2017 Award

16-605-21	Installation of Drain Tiles and Bioreactors, Fulton County	\$ 150,000
16-608-21	F&D Concrete Erosion Control Block Mats to SEPA 4	80,000
16-802-21	FD&I Upgraded Sludge Concentration Conveyor, CWRP	250,000
16-803-21	HVAC Improvements, CWRP	180,000
16-805-21	FD&I Boiler for Equipment Garage, CWRP	240,000
16-806-21	FD&I Upgraded Vacuum System at the 95th Street Pumping Station, CSA	200,000
16-815-21	F&D Replacement Gearbox for SEPA 4, CSA	225,000
	Total	<b>\$ 1,325,000</b>

### Lemont Water Reclamation Plant (LWRP)

#### Project Under Construction (with estimated completion date)

14-806-21	FD&I New Tank Drives, LWRP (9/2017)	\$ 975,000
	Total	<b>\$ 975,000</b>

#### Project for 2017 Award

17-802-21	F&D Turbo Blower, LWRP	\$ 170,000
	Total	<b>\$ 170,000</b>

Calumet Service Area Grand Total **\$ 6,719,000**

Capital Projects Grand Total - All Service Areas **\$ 35,978,000**

## Construction Fund Program

<b><u>Projects Under Construction</u></b>			Est.	MWRD		Award
#	Project Name	Project Number	Construc- tion Cost	2017 Appro- piation	Dura- tion (days)	/ Est. Award Date
1	Television Inspection and Recording of Sewer and Manholes, District-wide	13-805-2S	\$ 1,496	\$ 157	1,096	Sep-14
2	FD&I New Tank Drives, LWRP	14-806-21	975	300	1,114	Sep-14
3	Parking Lot Replacement, EWRP	14-714-21	1,462	300	458	Oct-15
4	Rehabilitation of Hydraulic Operator at TARP Gate Structure 1, CSA	15-802-21	1,324	1,000	551	Nov-15
5	FD&I New Boilers at the 125th Street Pumping Station, CSA	14-811-21	379	374	578	Dec-15
6	Restoration of Process Control Building, OWRP	15-711-21	484	484	396	May-16
7	Rehabilitate the Digester Gas Turbine, SWRP	15-913-21	2,038	759	484	May-16
8	Rebuild Two Raw Sewage Pump Rotating Assemblies, OWRP	16-705-21	219	219	209	Aug-16
9	Pavement Rehabilitation, District-wide	16-902-21	1,147	697	487	Aug-16
10	F&D Services to Recondition Various Circuit Breakers, SSA	15-914-21	131	80	124	Oct-16
11	IWD and Construction Office Renovation, CWRP	16-268-2V	2,546	2,000	591	Nov-16
12	Applicant Tracking	16-RFP-02	100	100	287	Nov-16
Total Projects Under Construction			\$ 12,301	\$ 6,470		
<b><u>Awards in 2017</u></b>			Est.	MWRD		Est.
#	Project Name	Project Number	Construc- tion Cost	2017 Appro- piation	Dura- tion (days)	Award Date
1	F&D Telemetry Replacement for Single Point Data at Various Locations	16-602-21	\$ 249	\$ 249	120	Jan-17
2	F&D Bio-Phosphorus Control Equipment, CSA and SSA	16-612-21	150	150	119	Jan-17
3	F&D Windrow Turner, LASMA	17-603-21	650	650	59	Jan-17
4	F&D Utility Vehicles to Various Locations	17-607-21	867	867	364	Jan-17
5	FD&I Disc Filters, HPWRP	17-708-21	1,500	1,200	449	Jan-17
6	Roof Life Extension, MOB	J15090-064	250	250	364	Jan-17
7	Database Consolidation Project	MWD0000014IT	264	264	364	Jan-17
8	Stickney Effluent Reuse Line, SSA	14-107-2J	600	600	212	Feb-17
9	Installation of Baffle Plates in Final Settling Tanks, OWRP	15-074-2D	1,600	640	758	Feb-17
10	F&D Concrete Erosion Control Block Mats to SEPA 4	16-608-21	80	80	88	Feb-17
11	FD&I Upgraded Vacuum System at the 95th Street Pumping Station, CSA	16-806-21	200	200	333	Feb-17
12	F&D Replacement Gearbox for SEPA 4, CSA	16-815-21	225	225	333	Feb-17
13	F&D Benchtop Fermenter System, SWRP	17-181-21	26	26	123	Feb-17
14	F&D Storm Pump for the Deerfield Reservoir, NSA	17-701-21	100	100	179	Feb-17
15	F&D Turbo Blower, LWRP	17-802-21	170	170	255	Feb-17
16	Backup and Retention Project	MWD0000011IT	95	95	119	Feb-17
17	Rehabilitation of Elevators, MOB	16-419-21	550	550	153	Mar-17
18	Installation of Drain Tiles and Bioreactors, Fulton County	16-605-21	150	150	299	Mar-17
19	F&D One Volute Dewatering Press, SWRP	17-180-21	974	974	305	Mar-17



<b><u>Awards in 2017 (continued)</u></b>		Est.	MWRD		Est.	
#	Project Name	Project Number	Construc- tion Cost	2017 Appro- piation	Dura- tion (days)	Award Date
20	Painting of Final Tanks, District-wide	17-601-21	\$ 1,632	\$ 776	974	Mar-17
21	F&D Stake Body Truck and Dump Truck, NSA	17-703-21	275	275	305	Mar-17
22	F&D Air Lift Blower, EWRP	17-704-21	100	100	209	Mar-17
23	Re-pipe Devon Avenue Instream Aeration Station Air Main, OWRP	17-707-21	1,500	1,500	305	Mar-17
24	F&D Rider Sweeper, EWRP	17-711-21	30	30	182	Mar-17
25	SAP Simplification	17-RFP-06	100	100	273	Mar-17
26	Document Management System Assessment	17-RFP-07	50	50	275	Mar-17
27	Replace Air Conditioning Unit at Waterways Control Center, MOB	J15090-065	20	20	92	Mar-17
28	Information Technology Department Infrastructure Upgrades	MWD0000005IT	163	163	152	Mar-17
29	Rehabilitate Gloria Alitto Majewski Reservoir, KWRP	16-708-21	223	223	274	Apr-17
30	FD&I Headrace Handrail, LPH	17-604-21	50	50	91	Apr-17
31	Cofferdam Services, LPH	17-605-21	375	375	274	Apr-17
32	F&D Telemetry Replacement for SCADA Control at Various Locations	17-606-21	645	215	419	Apr-17
33	FD&I Grit Screw Conveyors, SWRP	17-902-21	2,400	600	1,272	Apr-17
34	Coarse Screen Area Beam Restoration, RAPS	J69943-029.A	100	100	182	Apr-17
35	Avaya Telecom Project	MWD0000013IT	235	71	486	Apr-17
36	FD&I Upgraded Coarse Screen Conveyor System at the North Branch Pumping Station, NSA	16-704-21	150	150	244	May-17
37	FD&I Boiler for Equipment Garage, CWRP	16-805-21	240	240	152	May-17
38	FD&I Boiler Controls, SWRP	16-901-21	1,300	650	606	May-17
39	Overhaul Motor and Magnetic Drive for Raw Sewage Pump #3, KWRP	17-710-21	120	120	122	May-17
40	Automated CAFR and Budget Solution	17-RFP-08	125	125	244	May-17
41	Pump Rehabilitation and Diverter Gate Installation, EWRP	16-412-2M	150	150	304	Jun-17
42	FD&I Upgraded Sludge Concentration Conveyor, CWRP	16-802-21	250	250	213	Jun-17
43	F&D Interoperable Distributed Control System Workstations and TARP Controllers, Various Locations	17-901-21	125	125	213	Jun-17
44	Security Cameras, MOBC	MWD0000012IT	16	16	121	Jun-17
45	HVAC Improvements, CWRP	16-803-21	180	180	152	Jul-17
46	F&D Programmable Logic Controllers, Chicago River Controlling Works	17-602-21	90	90	178	Jul-17
47	Touhy Avenue Reservoir Rehabilitation, NSA	17-705-21	283	283	153	Jul-17
48	Algae Biomass Nutrient Recovery Demonstration Project Installation, OWRP	16-078-2J	500	500	153	Aug-17
49	F&D Bar Screens, KWRP	17-709-21	300	300	122	Aug-17
50	Voice Over Internet Protocol Assessment	17-RFP-05	100	100	152	Aug-17
51	Television Inspection and Recording of Sewer and Manholes, District-wide	13-806-2S	1,800	600	1,096	Sep-17
52	Procurement of Membrane Aerated Biofilm Reactor Cassettes for Pilot Plant, HPWRP	15-534-2C	800	400	486	Sep-17
53	Membrane Aerated Biofilm Reactor Pilot Plant, HPWRP	15-534-2J	500	500	123	Oct-17

<b><u>Awards in 2017 (continued)</u></b>			Est.	MWRD		Est.
#	Project Name	Project Number	Construc- tion Cost	2017 Appro- piation	Dura- tion (days)	Award Date
54	Local Sewer System Section Permit Database	17-RFP-09	\$ 50	\$ 50	365	Nov-17
	Total 2017 Awards		\$ 23,677	\$ 16,917		
	Total Projects Under Construction and 2017 Awards		\$ 35,978	\$ 23,387		

**Non-Core Projects Under Development**

#	Project Name	Project Number	Est. Construc- tion Cost
55	Paint and Carpet Replacement, MOB	MWD0000014GA	\$ 425
56	Enhancement to Workforce System	MWD0000003FI	50
	Total Future Awards		\$ 475
	Cumulative Projects Under Construction, 2017 Awards, and Future Awards		\$ 36,453

**Note: All cost figures are in thousands of dollars.**

### Construction Fund Program Operating Impacts

#	Project Name	Project Number	Justification				Impact		
			Capacity Needs	Useful Life	Economic Benefit	Safety/Regulatory	Manpower	Energy	Chemical
<b><u>Projects Under Construction</u></b>									
1	Television Inspection and Recording of Sewer and Manholes, District-wide	13-805-2S		x		x	=	+	=
2	FD&I New Tank Drives, LWRP	14-806-21		x		x	=	+	=
3	Parking Lot Replacement, EWRP	14-714-21		x		x	=	=	=
4	Rehabilitation of Hydraulic Operator at TARP Gate Structure 1, CSA	15-802-21		x		x	=	=	=
5	FD&I New Boilers at the 125th Street Pumping Station, CSA	14-811-21		x	x	x	+	+	=
6	Restoration of Process Control Building, OWRP	15-711-21		x	x		=	+	=
7	Rehabilitate the Digester Gas Turbine, SWRP	15-913-21			x		=	++	=
8	Rebuild Two Raw Sewage Pump Rotating Assemblies, OWRP	16-705-21		x		x	=	=	=
9	Pavement Rehabilitation, District-wide	16-902-21		x			=	=	=
10	F&D Services to Recondition Various Circuit Breakers, SSA	15-914-21		x			=	=	=
11	IWD and Construction Office Renovation, CWRP	16-268-2V			x		=	=	=
12	Applicant Tracking	16-RFP-02			x		=	=	=
<b><u>Awards in 2017</u></b>									
1	F&D Telemetry Replacement for Single Point Data at Various Locations	16-602-21		x	x		=	=	=
2	F&D Bio-Phosphorus Control Equipment, CSA and SSA	16-612-21			x		=	+	=
3	F&D Windrow Turner, LASMA	17-603-21			x		--	--	=
4	F&D Utility Vehicles to Various Locations	17-607-21		x			=	=	=
5	FD&I Disc Filters, HPWRP	17-708-21	x				=	+	=
6	Roof Life Extension, MOB	J15090-064		x		x	=	=	=
7	Database Consolidation Project	MWD0000014IT			x		=	=	=
8	Stickney Effluent Reuse Line, SSA	14-107-2J			x		=	=	=
9	Installation of Baffle Plates in Final Settling Tanks, OWRP	15-074-2D				x	=	=	=
10	F&D Concrete Erosion Control Block Mats to SEPA 4	16-608-21		x			+	=	=
11	FD&I Upgraded Vacuum System at the 95th Street Pumping Station, CSA	16-806-21		x			=	=	=
12	F&D Replacement Gearbox for SEPA 4, CSA	16-815-21		x			=	=	=
13	F&D Benchtop Fermenter System, SWRP	17-181-21			x		=	=	=
14	F&D Storm Pump for the Deerfield Reservoir, NSA	17-701-21		x			=	=	=
15	F&D Turbo Blower, LWRP	17-802-21			x		=	=	=
16	Backup and Retention Project	MWD0000011IT	x	x			=	=	=
17	Rehabilitation of Elevators, MOB	16-419-21		x		x	=	+	=
18	Installation of Drain Tiles and Bioreactors, Fulton County	16-605-21		x			=	=	=
19	F&D One Volute Dewatering Press, SWRP	17-180-21			x		++	++	=

<b>Construction Fund Operating Impacts for Awards in 2017 (continued)</b>		Justification				Impact			
		Capacity Needs	Useful Life	Economic Benefit	Safety/Regulatory	Manpower	Energy	Chemical	
#	Project Name	Project Number							
20	Painting of Final Tanks, District-wide	17-601-21		x			=	=	=
21	F&D Stake Body Truck and Dump Truck, NSA	17-703-21		x			=	=	=
22	F&D Air Lift Blower, EWRP	17-704-21			x		=	+	=
23	Re-pipe Devon Avenue Instream Aeration Station Air Main, OWRP	17-707-21		x	x		=	+	=
24	F&D Rider Sweeper, EWRP	17-711-21		x			=	=	=
25	SAP Simplification	17-RFP-06	x	x			=	=	=
26	Document Management System Assessment	17-RFP-07			x		=	=	=
27	Replace Air Conditioning Unit at Waterways Control Center, MOB	J15090-065		x			+	+	=
28	Information Technology Department Infrastructure Upgrades	MWD000005IT	x	x			=	=	=
29	Rehabilitate Gloria Alitto Majewski Reservoir, KWRP	16-708-21	x				--	--	=
30	FD&I Headrace Handrail, LPH	17-604-21				x	=	=	=
31	Cofferdam Services, LPH	17-605-21		x			=	=	=
32	F&D Telemetry Replacement for SCADA Control at Various Locations	17-606-21			x		+	=	=
33	FD&I Grit Screw Conveyors, SWRP	17-902-21			x		+	=	=
34	Coarse Screen Area Beam Restoration, RAPS	J69943-029.A		x			=	=	=
35	Avaya Telecom Project	MWD0000013IT	x	x			=	=	=
36	FD&I Upgraded Coarse Screen Conveyor System at the North Branch Pumping Station, NSA	16-704-21		x			=	=	=
37	FD&I Boiler for Equipment Garage, CWRP	16-805-21		x			=	=	=
38	FD&I Boiler Controls, SWRP	16-901-21		x			=	=	=
39	Overhaul Motor and Magnetic Drive for Raw Sewage Pump #3, KWRP	17-710-21		x		x	=	=	=
40	Automated CAFR and Budget Solution	17-RFP-08			x		+	=	=
41	Pump Rehabilitation and Diverter Gate Installation, EWRP	16-412-2M		x			=	=	=
42	FD&I Upgraded Sludge Concentration Conveyor, CWRP	16-802-21	x		x	x	=	=	=
43	F&D Interoperable Distributed Control System Workstations and TARP Controllers, Various Locations	17-901-21		x			=	=	=
44	Security Cameras, MOBC	MWD0000012IT	x	x			=	=	=
45	HVAC Improvements, CWRP	16-803-21		x			=	=	=
46	F&D Programmable Logic Controllers, Chicago River Controlling Works	17-602-21		x			=	=	=
47	Touhy Avenue Reservoir Rehabilitation, NSA	17-705-21		x		x	=	=	=
48	Algae Biomass Nutrient Recovery Demonstration Project Installation, OWRP	16-078-2J				x	=	+	=
49	F&D Bar Screens, KWRP	17-709-21		x		x	=	=	=
50	Voice Over Internet Protocol Assessment	17-RFP-05		x	x		=	=	=
51	Television Inspection and Recording of Sewer and Manholes, District-wide	13-806-2S		x		x	=	=	=
52	Procurement of Membrane Aerated Biofilm Reactor Cassettes for Pilot Plant, HPWRP	15-534-2C				x	=	+	=
53	Membrane Aerated Biofilm Reactor Pilot Plant, HPWRP	15-534-2J				x	=	+	=

<b><u>Construction Fund Operating Impacts for Awards in 2017 (continued)</u></b>		<b>Justification</b>				<b>Impact</b>			
		<i>Capacity Needs</i>	<i>Useful Life</i>	<i>Economic Benefit</i>	<i>Safety/Regulatory</i>	<i>Manpower</i>	<i>Energy</i>	<i>Chemical</i>	
#	Project Name	Project Number							
54	Local Sewer System Section Permit Database	17-RFP-09		x	x	x	+	=	=
<b><u>Non-Core Projects Under Development</u></b>									
55	Paint and Carpet Replacement, MOB	MWD0000014GA		x			=	=	=
56	Enhancement to Workforce System	MWD0000003FI	x		x	x	=	=	=

<b>LEGEND</b>		
Under " <b>Justification</b> ," the marked columns note the categories of benefits expected from each project.		
	<b>Manpower</b>	
+ or -	Labor savings (+) or increases (-) expected to result in redirecting existing manpower away from or toward facility or process to other tasks with no net change in total position costs.	++ or -- Labor impact significant enough to ultimately result in reduction (++) or increase (--) in personnel. See additional cost details contained in the Project Fact Sheets.
	<b>Energy</b>	
+ or -	Minor energy savings (+) or costs (-) having a negligible impact on the District's overall energy budget.	++ or -- Major energy savings (++) or costs (--) expected to result in significant revisions to a facility's energy budget. See additional cost details contained in the Project Fact Sheets.
	<b>Chemical</b>	
+ or -	Chemical savings (+) or costs (-) having a negligible impact on the District's overall chemical costs.	++ or -- Major chemical savings (++) or costs (--) expected to result in significant revisions to the budgeted chemical expenditures for the associated process. See additional cost details contained in the Project Fact Sheets.
=	No budgetary impact expected.	

## Television Inspection and Recording of Sewer and Manholes, District-wide

**Project Number:** 13-805-2S

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** National Power Rodding Corporation

**Estimated Construction Cost:** \$1,496,000

**Contract Award Date:** September 2014

**Substantial Completion Date:** September 2017\*



**Project Description:** To provide the District with sewer inspection services of varying methods including: video inspection, water jetter system television inspection, zoom camera inspection, laser profiling, multi-sensor inspection, and manhole and Tunnel and Reservoir Plan drop shaft inspection. The contractor will also be responsible for cleaning, disposal, and hourly video inspection services.

**Project Justification:** The purpose of this contract is to determine and monitor the state of the District's existing collection systems infrastructure.

**Project Status:** In progress.

\*Information shown is estimated.

## Television Inspection and Recording of Sewer and Manholes, District-wide

**Project Number:** 13-806-2S

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,800,000

**Contract Award Date:** September 2017\*

**Substantial Completion Date:** September 2020\*



**Project Description:** To provide the District with sewer inspection services of varying methods including: video inspection, water jetter system television inspection, zoom camera inspection, laser profiling, multi-sensor inspection, and manhole and Tunnel and Reservoir Plan drop shaft inspection. The contractor will also be responsible for cleaning, disposal, and hourly video inspection services.

**Project Justification:** The purpose of this contract is to determine and monitor the state of the District's existing collection systems infrastructure.

**Project Status:** Design phase.

\*Information shown is estimated.

## Stickney Effluent Reuse Line, SSA

**Project Number:** 14-107-2J

**Service Area:** Stickney

**Location:** Stickney Township

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$600,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** September 2017\*



**Project Description:** This project consists of the installation of 2,000 linear feet of six-inch diameter pressure pipe by directional drilling and the installation of air relief, blow-off, and clean-out structures.

**Project Justification:** This project provides a source of treated effluent water for use in process applications in the immediate vicinity of the Stickney WRP and represents the first of the effluent water reuse opportunities to be constructed.

**Project Status:** Design phase.

\*Information shown is estimated.



## Parking Lot Replacement, EWRP

**Project Number:** 14-714-21

**Service Area:** North

**Location:** Egan WRP

**Engineering Consultant:** In-house design

**General Contractor:** Path Construction Company, Inc.

**Estimated Construction Cost:** \$1,462,000

**Contract Award Date:** October 2015

**Substantial Completion Date:** January 2017\*



**Project Description:** Demolition of the existing concrete parking lot, driveways, storm sewers, and other associated appurtenances. Installation of a new permeable paver parking lot, concrete driveways and walkways, underdrain system, bio-retention basin, landscaping, and energy-efficient parking lot lighting.

**Project Justification:** The existing 44-year-old concrete parking lot has deteriorated significantly, developed many potholes, and is failing very rapidly, thus creating driving and pedestrian hazards. The proposed permeable paver parking lot will provide green benefits by promoting stormwater infiltration and groundwater recharge, improving receiving waterway water quality, and contributing to compliance with the green infrastructure requirements of the District's Consent Decree.

**Project Status:** Under construction.

\*Information shown is estimated.

## Furnish, Deliver, and Install New Tank Drives, LWRP

**Project Number:** 14-806-21

**Service Area:** Calumet

**Location:** Lemont WRP

**Engineering Consultant:** In-house design

**General Contractor:** Independent Mechanical Industries, Inc.

**Estimated Construction Cost:** \$975,000

**Contract Award Date:** September 2014

**Substantial Completion Date:** September 2017\*



**Project Description:** Furnish, deliver, and install new clarifier drives on four final tanks and new mixers on one digester and one concentration tank. Refurbish and paint the structural steel members of six tanks. Refurbish two tanks per year.

**Project Justification:** The original tank drives are in poor condition and require excessive maintenance. The structural steel also requires replacement of miscellaneous members due to rust. Replacement of the tank drives will ensure the tanks are available to meet the operational needs of the plant.

**Project Status:** In progress.

\*Information shown is estimated.

## Furnish, Deliver & Install New Boilers at the 125th Street Pumping Station, CSA

**Project Number:** 14-811-21

**Service Area:** Calumet

**Location:** Chicago

**Engineering Consultant:** In-house design

**General Contractor:** NORESKO

**Estimated Construction Cost:** \$379,000

**Contract Award Date:** December 2015

**Substantial Completion Date:** July 2017\*



**Project Description:** Furnish, deliver, and install new boilers at the 125th Street Pumping Station.

**Project Justification:** In 2011, a consultant performed a vulnerability study of the District's large pumping stations. The final report submitted by the consultant, dated March 25, 2011, entitled "Pump Station Vulnerability and Risk Assessment Study," identified the boiler system at the 125th Street Pumping Station as "quite aged and in poor to fair condition." In addition, the report determined that "steam availability is unlikely to be reliable." The burner systems for the boilers, manufactured by North American Atlas Generator, are obsolete. The efficiency of the boiler system is poor. It takes hours (versus minutes) to start producing steam from a cold start, and the boilers must be run continuously to hold the low temperature set point needed to keep the pipes from freezing in the winter.

**Project Status:** In progress.

\*Information shown is estimated.

## Installation of Baffle Plates in Final Settling Tanks, OWRP

**Project Number:** 15-074-2D

**Service Area:** North

**Location:** O'Brien WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,600,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** March 2019\*



**Project Description:** The project will remove an existing steel and wood baffle plate in Final Settling Tank B-1. The contractor will also furnish and install circular, fiber reinforced plastic baffle plates and support framing under the bottoms of the influent wells in each of the converted final settling tanks.

**Project Justification:** A test baffle plate was installed in Final Settling Tank B-1 to see if the addition would improve the settling of solids in the tank. The test proved successful; therefore, installation of permanent baffle plates in the final settling tanks will improve the solids settling and removal process, which helps the District comply with its National Pollutant Discharge Elimination System limits.

**Project Status:** Design phase.

\*Information shown is estimated.

## Procurement of Membrane Aerated Biofilm Reactor Cassettes for Pilot Plant, HPWRP

**Project Number:** 15-534-2C

**Service Area:** North

**Location:** Hanover Park WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$800,000

**Contract Award Date:** September 2017\*

**Substantial Completion Date:** December 2018\*



**Project Description:** Purchase of five membrane aerated biofilm reactor (MABR) cassettes for a pilot plant installation at the Hanover Park WRP. The purpose of this project is to provide proof-of-concept for the application of MABR technology to improve the nitrification rate, increase reactor capacity for enhanced biological phosphorus removal, improving operations under stressed conditions, and reduce energy consumption in the activated sludge process. The project includes engineering support from the MABR manufacturer for design and installation.

**Project Justification:** This project is the second phase of a research project to determine the benefits of and to prove the performance of MABR technology. The O'Brien WRP will be required to meet total phosphorus limits. The plant does not have the reactor capacity to implement enhanced biological phosphorus removal and still meet the ammonia permit requirements. This technology has the potential to increase existing reactor capacity, while also reducing energy demand through reduced air consumption. A pilot test will be done at the Hanover Park WRP because it has the reactor-clarifier configuration needed for a small-scale pilot test.

**Project Status:** Under evaluation using the results of the sidestream research project at the O'Brien WRP.

\*Information shown is estimated.

## Membrane Aerated Biofilm Reactor Pilot Plant, HPWRP

**Project Number:** 15-534-2J

**Service Area:** North

**Location:** Hanover Park WRP

**Engineering Consultant:** In-house design

**General Contractor:** Meccor Industries, Ltd.

**Estimated Construction Cost:** \$500,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** February 2018\*



**Project Description:** Installation of a membrane aerated biofilm reactor (MABR) system in Tank 2 of Battery D for the purpose of conducting a performance test of MABR technology to enable the creation of an anaerobic zone for application of the enhanced biological phosphorus removal process. MABR cassettes will be procured under a separate contract with the manufacturer. This project involves the installation of the cassettes and ancillary equipment including piping, valves, air blowers, and instrumentation.

**Project Justification:** In order to implement enhanced biological phosphorus removal at the Hanover Park WRP, an anaerobic zone must be created within the existing aeration tank. This anaerobic zone takes away capacity for the nitrification process. The MABR technology has the ability to accomplish nitrification in a smaller volume of tank, thus permitting the installation of the anaerobic zone without impacting nitrification. This project is the second phase in the evaluation of the performance of MABR technology. The first phase was a sidestream pilot plant of one MABR cassette at the O'Brien WRP. This project will evaluate a full-scale deployment of the MABR technology in one aeration tank for the purpose of evaluating the performance of the MABR in an actual-scale installation. Results from the pilot test will be used to evaluate if this technology could provide necessary phosphorus reduction if installed in all aeration tanks.

**Project Status:** Preliminary design phase.

\*Information shown is estimated.

## Restoration of Process Control Building, OWRP

**Project Number:** 15-711-21

**Service Area:** North

**Location:** O'Brien WRP

**Engineering Consultant:** In-house design

**General Contractor:** Dardon's Roofing, Ltd.

**Estimated Construction Cost:** \$484,000

**Contract Award Date:** May 2016

**Substantial Completion Date:** June 2017\*



**Project Description:** This contract provides for the restoration of the Process Control Building at the O'Brien WRP. The scope of the project includes grinding and recaulking the capstones and limestone, tuckpointing the entire structure, removing and replacing the sealant on all the doors and windows, replacing all the windows and glass blocks, and removing and replacing the roof. This project is expected to have a life expectancy of over 20 years.

**Project Justification:** The building is 85 years old and the building envelope is in poor condition and beginning to fail. The structural steel in other buildings of the same age on the same site has begun to rust badly due to similar envelope issues. The condition of the building, if not addressed now, will deteriorate further. Delaying the restoration will likely result in more extensive and expensive repairs in the future.

**Project Status:** In progress.

\*Information shown is estimated.



## Rehabilitation of Hydraulic Operator at TARP Gate Structure 1, CSA

**Project Number:** 15-802-21

**Service Area:** Calumet

**Location:** TARP Gate Structure 1

**Engineering Consultant:** In-house design

**General Contractor:** Ornelas Construction Company

**Estimated Construction Cost:** \$1,324,000

**Contract Award Date:** November 2015

**Substantial Completion Date:** May 2017\*



**Project Description:** This project will include the removal, rehabilitation, and installation of the hydraulic operator on the Tunnel and Reservoir Plan (TARP) Gate Structure 1 (GS-1) in the Calumet Service Area.

**Project Justification:** TARP GS-1 is a critical roller gate in the Calumet Service Area that isolates the Torrence Avenue leg of the Calumet TARP System, protecting the service area from localized flooding events and providing a buffer to prevent combined sewer overflows into Lake Michigan. The gate is 16'x25' and is located 300 feet underground.

The hydraulic operator, installed in 2003, controls the operation of the gate. Corrosion of the rod on TARP GS-1 has damaged the packing, causing a hydraulic oil leak in the cylinder that cannot be repaired in the field. As a result, the gate could fail in the closed position, preventing the Torrence Avenue leg of the Calumet TARP System from being dewatered after a fill event. The rehabilitation of the hydraulic operator will include an upgraded rod designed to withstand the highly corrosive environment in the drop shaft.

**Project Status:** In progress.

\*Information shown is estimated.



## Rehabilitate the Digester Gas Turbine, SWRP

**Project Number:** 15-913-21

**Service Area:** Stickney

**Location:** Central Heat Facility

**Engineering Consultant:** In-house design

**General Contractor:** Electrical Systems, Inc.

**Estimated Construction Cost:** \$2,038,000

**Contract Award Date:** May 2016

**Substantial Completion Date:** September 2017\*



**Project Description:** Furnish, deliver, and install all equipment, materials, and appurtenances necessary to rehabilitate the 3.0 megawatt digester gas turbine at the Stickney WRP's central heat facility.

**Project Justification:** The purpose of the project is to rehabilitate the dormant digester gas turbine, as well as to install facility hazardous gas and fire detection systems. This project will contribute to the District's effort to achieve energy neutrality and help the District become more environmentally friendly by converting unused digester gas into useful energy.

**Project Status:** In progress.

\*Information shown is estimated.

## Furnish and Deliver Services to Recondition Various Circuit Breakers, SSA

**Project Number:** 15-914-21

**Service Area:** Stickney

**Location:** Various

**Engineering Consultant:** In-house design

**General Contractor:** Englewood Electrical Supply

**Estimated Construction Cost:** \$131,000

**Contract Award Date:** October 2016

**Substantial Completion Date:** February 2017\*



**Project Description:** The purpose of this project is to recondition various circuit breakers in the Stickney Service Area.

**Project Justification:** Provide labor, materials, and appurtenances to recondition, test, and warranty various circuit breakers in the Stickney Service Area. The reconditioning will ensure the electrical safety and reliability of the equipment during normal operating and fault conditions. The breakers will be overhauled and reconditioned to meet the original manufacturer specifications.

**Project Status:** In progress.

\*Information shown is estimated.

## Algae Biomass Nutrient Recovery Demonstration Project Installation, OWRP

**Project Number:** 16-078-2J

**Service Area:** North

**Location:** O'Brien WRP

**Engineering Consultant:** In-house design

**General Contractor:** Meccor Industries, Ltd.

**Estimated Construction Cost:** \$500,000

**Contract Award Date:** August 2017\*

**Substantial Completion Date:** January 2018\*



**Project Description:** Installation of a pilot-scale flow-through reactor with augmented artificial light sources to develop a process for growing algae biomass for the purpose of recovering phosphorus and nitrogen from the liquid stream of the treatment plant. The scope of work includes installation of a 10,000 gallon flow-through reactor, wavelength-specific LED lights, piping and pumps, power supply, harvesting and dewatering equipment installation, and site work. Working with the support of experts from the Illinois Sustainable Technology Center and the University of Illinois, District staff will work to optimize the performance of the flow-through reactor to maximize phosphorus uptake. In addition, various means for harvesting and processing the algae for ultimate beneficial use will be evaluated. The goal of this project is to develop a process that is robust and scalable for eventual full-scale application at the O'Brien WRP.

**Project Justification:** This project is being done in compliance with the special provisions of the O'Brien WRP's National Pollutant Discharge Elimination System permit and of the District's long-term plan for control of phosphorus discharge in the O'Brien WRP's effluent. The benefit of using algae to remove phosphorus from wastewater is that the algae naturally absorb phosphorus and nitrogen as key nutrients for growth, and the algae can be harvested and used in a variety of sustainable and economically beneficial ways, such as feedstock for bioplastics, biofuels, aquaculture feed, and industrial dyes. The concept of using algae to remove nutrients from wastewater is not new. Traditional approaches use large algal ponds, which are not practical in an urban environment where land is scarce. The District is conducting leading-edge research in this field to drive the development of algae nutrient recovery technology as a practical and sustainable approach to nutrient management for urban wastewater treatment plants.

**Project Status:** Preliminary design phase.

\*Information shown is estimated.

## Industrial Waste Division (IWD) and Construction Office Renovation, CWRP

**Project Number:** 16-268-2V

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** Path Construction Company, Inc.

**Estimated Construction Cost:** \$2,546,000

**Contract Award Date:** November 2016

**Substantial Completion Date:** July 2018\*



**Project Description:** The purpose of this contract is to remodel the north half of the first floor of the General Administration Building to accommodate the needs of the Monitoring & Research Department's Industrial Waste Division and the Engineering Department's Construction Division. A section of a basement storeroom will be used by the Construction Division to accommodate its Troxler Electronic Laboratories, Inc. equipment. The existing roof on the entire building has reached its useful life and will be replaced.

Six existing trailers with associated accessories will be physically removed because they have reached the end of their useful lives. Utilities to these trailers will be terminated upon their removal.

Existing fume hood exhaust valves will be replaced in the Monitoring & Research Department's Laboratory Building.

**Project Justification:** Industrial Waste Division and Construction Division staff require updated spaces. The abandoned laboratory areas are to be repurposed for other use.

**Project Status:** Under construction.

\*Information shown is estimated.

## Pump Rehabilitation and Diverter Gate Installation, EWRP

**Project Number:** 16-412-2M

**Service Area:** North

**Location:** Egan WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$150,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** April 2018\*



**Project Description:** The purpose of this project is to rehabilitate Raw Sewage Pumps 1 and 2 at the Egan WRP. The work includes the replacement of the pump and motor bearings, seals, and related parts to restore the equipment to like-new condition. Also, two old-style centrifuge diverter gates will be replaced with slide gates furnished by the Maintenance & Operations Department. Hopper modifications will be made, as necessary, to allow for the installation of the diverter gates.

A centrate valve will be electrically actuated to allow controlled diversion and increased operational control.

**Project Justification:** This project is being performed to restore the raw sewage pumps to full capacity and increase the operational flexibility of the plant. The slide gates are being replaced to improve control over the sludge loading process.

**Project Status:** To be advertised in March 2017.

\*Information shown is estimated.

## Rehabilitation of Elevators, MOB

**Project Number:** 16-419-21

**Service Area:** Stickney

**Location:** Chicago

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$550,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** August 2017\*



**Project Description:** Modernize two Main Office Building (MOB) elevators by replacing direct current motors on two machines with alternating current motors with variable frequency drives to ensure better, more reliable performance while achieving energy savings.

**Project Justification:** Elevator entrapments result in lost employee productivity, potentially leading to an increase in the number of workers' compensation claims. Modernization of the MOB elevators will address this risk by providing a more reliable vertical transportation system for District employees and visitors at the MOB. Visitors will have a better impression of the MOB while experiencing a smoother elevator ride. This is in line with the "Excellence" value of the District, as related to the operations of the MOB Complex facilities. Additionally, the parts obsolescence issue will be addressed. Energy savings due to installation of load-modulating variable frequency drives are expected.

**Project Status:** Pending advertisement.

\*Information shown is estimated.

## Furnish and Deliver Telemetry Replacement for Single Point Data at Various Locations

**Project Number:** 16-602-21

**Service Area:** Stickney

**Location:** Chicago

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$249,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** May 2017\*



**Project Description:** Furnish and deliver replacement data transmission equipment, signal conversion and conditioning equipment for the existing copper telemetry services dedicated to various digital levels, remote rain gauges, river elevation measurement devices, and remote signal measurement devices that transmit operational data to various receiving points throughout the District.

**Project Justification:** Elevation and rain gauges are critical to operating the Chicago Area Waterway System. Likewise, telemetry lines are critical to operating the gauges. Elevation gauges are used to maintain the navigable waterways within the limits required by federal regulations and to manage the waterways during storms. Rain gauges are used to adjust waterway operations based on real-time information and to provide data for Combined Sewer Overflow reporting, as required by the District's National Pollutant Discharge Elimination System permits. Under this project, the current wired technology will be replaced with a new technology, such as cellular, to lower telemetry costs without lowering reliability. An additional benefit provided by the new equipment is the ability to share data on the District's website.

**Project Status:** Pending award.

\*Information shown is estimated.



## Installation of Drain Tile and Bioreactors, Fulton County

**Project Number:** 16-605-21

**Service Area:** Calumet

**Location:** Prairie Plan Site, Fulton County

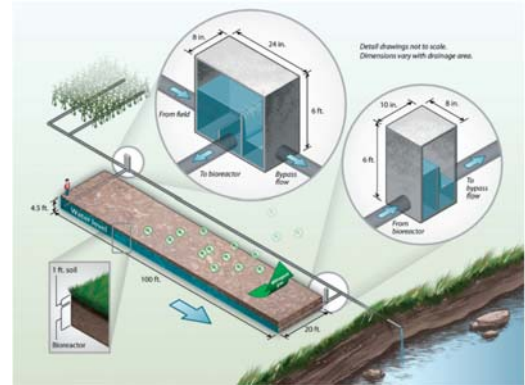
**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$150,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** During the non-growing season, patterned drain tile of the recommended size and depth will be installed throughout Fulton County's Field 106, which is approximately 80 acres in size. Bioreactors will also be installed to remove the nutrients in the runoff.

**Project Justification:** Bioreactors are a best management practice for reducing nitrogen runoff into surface waters. Bioreactors allow anaerobic conditions to develop, which in turn allows naturally occurring denitrifiers to flourish. This project supports the District's goal of adding value by leveraging our real estate and utilizing Fulton County property for nutrient-control technology. It is expected that additional projects of this type will be planned for the Fulton County property, potentially on a watershed basis.

The project will also benefit the agricultural use of the District's Fulton County land. Increased drainage will allow fields to be planted earlier in wet springs and assist in modeling agricultural methods in the Mississippi River Basin. Fulton County staff ranked the fields based on which agricultural land would most benefit from the installation of drainage tiles. Information was collected from our tenants, resulting in Field 106 being deemed the highest priority.

**Project Status:** Under review.

\*Information shown is estimated.



## Furnish and Deliver Concrete Erosion Control Block Mats to SEPA 4

**Project Number:** 16-608-21

**Service Area:** Calumet

**Location:** Sidestream Elevated Pool Aeration (SEPA) Station 4

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$80,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** April 2017\*



**Project Description:** Furnish and deliver an articulated concrete erosion control block mat system for the SEPA Station 4 pools.

**Project Justification:** The gabions along the 2,000 lineal feet of banks have failed and are falling into the pools. Replacement of the gabions is critical to ensure the banks remain intact and that they are aesthetically pleasing as this area is open to the public and a popular location for various photography events.

The concrete erosion control block mat system will be installed under the Small Streams Maintenance Program in the winter of 2017.

**Project Status:** Awaiting advertisement.

\*Information shown is estimated.

## Furnish and Deliver Bio-Phosphorus Control Equipment, CSA and SSA

**Project Number:** 16-612-21

**Service Area:** Stickney

**Location:** Stickney and Calumet WRPs

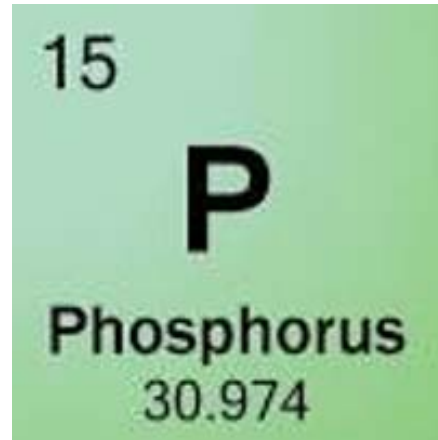
**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$150,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** April 2017\*



**Project Description:** The contractor shall furnish and deliver three new phosphorus probes/analyzers, two new organic carbon probes/analyzers, two new peristaltic metering pumps, two new relief valves, and two new flange heaters.

**Project Justification:** The purpose of this contract is to procure phosphorus and carbon instrumentation and appurtenances for use at the Stickney and Calumet Water Reclamation Plants. The probes are needed as part of the automation of high strength waste dosing to the aeration processes. Contributing high strength waste to the process stream will increase the amount of phosphorus recovered. This project will advance the District's nutrient removal goal.

**Project Status:** Awaiting advertisement.

\*Information shown is estimated.

## Furnish, Deliver, and Install Upgraded Coarse Screen Conveyor System at the North Branch Pumping Station, NSA

**Project Number:** 16-704-21

**Service Area:** North

**Location:** North Branch Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$150,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project will include work to furnish, deliver, and install an upgraded coarse screen conveyor system at the North Branch Pumping Station in the North Service Area.

**Project Justification:** The North Branch Pumping Station coarse screens remove debris from the incoming sewers to protect critical raw sewage pumps. The coarse screens utilize a conveyor system that was installed approximately 15 years ago to move the screenings to a dumpster. During severe rain events, the existing conveyor system becomes overloaded with debris. This condition, which has led to two drive failures in the past year, results in a build-up of debris, interferes with the operation of the coarse screens, and presents safety concerns as the screenings spill on the floor.

**Project Status:** Under review.

\*Information shown is estimated.

## Rebuild Two Raw Sewage Pump Rotating Assemblies, OWRP

**Project Number:** 16-705-21

**Service Area:** North

**Location:** O'Brien WRP

**Engineering Consultant:** In-house design

**General Contractor:** HydroAire Service, Inc.

**Estimated Construction Cost:** \$219,000

**Contract Award Date:** August 2016

**Substantial Completion Date:** March 2017\*



**Project Description:** This project will include the complete rebuild of two main sewage pump rotating assemblies at the O'Brien WRP. Rehabilitation work includes sandblasting, inspecting, machining, and welding repair of the impellers, as well as fabricating new components to replace typical wear items. This will include a new pump shaft, casing rings, impeller rings, shaft sleeves, and other parts for each rotating assembly. In addition, the contract work will require the reassembly and the balancing of the rotating assemblies to International Standards Organization Standard G6.3.

**Project Justification:** The O'Brien WRP has six main raw sewage pumps (RSPs) with various flow capabilities. RSPs #1 and #2 can each generate 97 million gallons per day (MGD), RSPs #3 and #4 can produce 65 MGD each, while RSPs #5 and #6 can each pump 130 MGD. During a rain event, five main sewage pumps are required to be in service to reach the maximum plant flow. Currently, the O'Brien WRP has one total spare rotating assembly for the 65 MGD pumps, but there are no spare rotating assemblies for the four larger capacity pumps.

Centrifugal pumps are designed to allow for sacrificial wear rings to thin over time and protect the costly impellers from damage. As the rings wear, the gap between the wear rings and the casing rings increases, allowing additional recirculation within the pump casing. As a result, the flow generated by the pump and the overall efficiency of the pump are decreased.

This contract will rebuild two worn rotating assemblies removed from the main sewage pumps at the O'Brien WRP, one 130 MGD rotating assembly, and one 97 MGD rotating assembly. Having spare rotating assemblies on hand significantly reduces the downtime required to replace a main sewage pump rotating assembly in case of failure.

**Project Status:** In progress.

\*Information shown is estimated.

## Rehabilitate Gloria Alitto Majewski Reservoir, KWRP

**Project Number:** 16-708-21

**Service Area:** North

**Location:** Gloria Alitto Majewski Reservoir

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$223,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Rehabilitation of the Gloria Alitto Majewski Reservoir.

**Project Justification:** In 2011, the Army Corps of Engineers inspection of the reservoir identified many deficiencies with the geo-membrane liner and under drainage system. The Engineering Department's Contract 06-363-3D implemented repairs based upon the 2011 inspection, and the repairs were completed in 2013. In 2015, a follow-up inspection by the District's Engineering Department determined that the drainage under liner south of the intake structure, the liner connection, the concrete toe block, and the roller compacted concrete are all in need of repair.

**Project Status:** In development.

\*Information shown is estimated.

## Furnish, Deliver, and Install Upgraded Sludge Concentration Conveyor, CWRP

**Project Number:** 16-802-21

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$250,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Demolish and remove existing sludge conveyor and furnish, deliver, and install an upgraded sludge concentration conveyor and washer compactor.

**Project Justification:** The current system does not dewater properly. The inability to dewater properly causes operational difficulties, hazards to surrounding equipment, and safety hazards. The current system has excess water carryover from the screenings, which fills the belt compartments and is transported to the dumpster box. The additional weight of the water wears out the rollers and drive system components prematurely. Excess water in the dumpster requires the dumpster to be replaced more frequently due to the additional weight and the possibility of spillage. The spillage frequently clogs floor drains and is a slipping hazard.

Upgrading the sludge concentration conveyor will decrease future maintenance costs, ensure efficient debris removal, and alleviate safety hazards by removing the excess water from the screenings.

**Project Status:** Preliminary planning.

\*Information shown is estimated.

## HVAC Improvements, CWRP

**Project Number:** 16-803-21

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$180,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** November 2017\*



**Project Description:** Demolish and remove five air conditioning systems and furnish, deliver, and install replacement systems. The systems include the Administration Building computer room HVAC and supplemental cooling, the Administration Building control room cooling, the digester control room cooling, and the Tunnel and Reservoir Plan (TARP) control room cooling.

**Project Justification:** The five air conditioning units control air temperature for the computer and control rooms, which protect electrical equipment from overheating and causing equipment failure. The electrical equipment in these rooms consists of process monitors, distributed control system computers, phone systems, information technology networks, HVAC controls, computer workstations, and control cabinet input/output modules. These systems have been in service for over 20 years and various repairs have been made over the past several years, including compressor replacements, coil leak repairs, repair and replacement of condenser fans and fan motors, repair and replacement of solenoid expansion valves, and pneumatic control repairs. The corrective maintenance on these units is extensive, and reliability has become progressively worse over the past few years. Due to the corrosive gases and harsh environment, the evaporator coils, condenser coils, steam coils, compressors, fan drive components, refrigerant piping, and controls have experienced significant deterioration. Currently, the cooling system for the digester control room is no longer functional, and it is not economically feasible to repair it. Furthermore, the TARP control room does not have backup cooling, so unit reliability is vital to ensure reliability of the electrical equipment in this area.

The project will minimize future maintenance and ensure increased reliability to protect District assets.

**Project Status:** Preliminary planning.

\*Information shown is estimated.



## Furnish, Deliver, and Install Boiler for Equipment Garage, CWRP

**Project Number:** 16-805-21

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$240,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** September 2017\*



**Project Description:** Furnish, deliver, and install a hot water boiler for the heavy equipment garage at the Calumet WRP.

**Project Justification:** The new heavy equipment garage at the Calumet WRP houses District equipment, such as snow plows, tractors, portable cranes, trailers, and excavators. The garage protects this equipment from inclement weather and freezing conditions, significantly increasing the longevity of the equipment and decreasing the maintenance costs. A boiler is needed to provide hot water for the radiant hydronic heat tubing incorporated into the building floor during construction.

The project will supply a cost-effective means to provide heating for the building and allow for the control of air temperature and relative humidity to protect District assets and increase their useful life.

The project will minimize future maintenance costs and ensure increased reliability to protect District assets.

**Project Status:** Preliminary planning.

\*Information shown is estimated.



## Furnish, Deliver, and Install Upgraded Vacuum System at the 95th Street Pumping Station, CSA

**Project Number:** 16-806-21

**Service Area:** Calumet

**Location:** 95th Street Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$200,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Replace problematic equipment and install modern technology to ensure increased dependability of the vacuum priming systems at the 95th Street Pumping Station and reduce the risk of flooding during rain events.

**Project Justification:** The wet-weather and dry-weather centrifugal pumps at the 95th Street Pumping Station require a functional vacuum system to raise the level of the wet well in order to initiate operation. The District has consistently followed the manufacturer's recommended maintenance schedule for the electrical equipment, motors, vacuum pumps, and control valves. Recently, however, the reliability of the vacuum systems has diminished and has caused significant operational difficulties during rain events.

**Project Status:** Under review.

\*Information shown is estimated.

## Furnish and Deliver Replacement Gearbox for SEPA 4, CSA

**Project Number:** 16-815-21

**Service Area:** Calumet

**Location:** Sidestream Elevated Pool Aeration (SEPA) 4

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$225,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project will furnish and deliver a replacement gearbox for SEPA Station #4 in the Calumet Service Area.

**Project Justification:** Due to changes in the permit that require average dissolved oxygen levels to be increased from 3.0 milligram per liter (mg/l) to 5.0 mg/l from March through July and 3.5 mg/l from August through February, normal operation may require all SEPA screw pumps to be operated.

The existing gearboxes at SEPA Station #4 have been in service for over 20 years. Two of the four existing gearboxes have failed due to broken gears within the last four years.

**Project Status:** Under review.

\*Information shown is estimated.

## Furnish, Deliver, and Install Boiler Controls, SWRP

**Project Number:** 16-901-21

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,300,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** December 2018\*



**Project Description:** This project will furnish, deliver, and install controls, programming, and other required appurtenances to provide a co-fire implementation of Boilers 3, 4, 5, and 7 using natural gas and digester gas through existing gas trains. Use of co-fire logic and technology will enable full utilization of available digester gas produced at the plant. Controls for Boilers 1 and 2 will be upgraded as well.

**Project Justification:** The existing control system is obsolete, and parts are no longer available from the manufacturer.

**Project Status:** Under review.

\*Information shown is estimated.

## Pavement Rehabilitation, District-wide

**Project Number:** 16-902-21

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** Pan-Oceanic Engineering Company, Inc.

**Estimated Construction Cost:** \$1,147,000

**Contract Award Date:** August 2016

**Substantial Completion Date:** December 2017\*



**Project Description:** The project encompasses the removal, replacement, and Illinois Department of Transportation Type B patch, overlay, and restoration of deteriorating concrete or asphalt pavements, curbs, gutters, and collapsed inlets in the North, Calumet, and Stickney Service Areas.

**Project Justification:** Roadway and parking lot pavements, some as much as 35 years old, show signs of deterioration in the North, Calumet, and Stickney Service Areas. Cracks are as wide as six inches, and potholes are noted at numerous locations in various facilities. Asphalt cold patch has been applied annually but will not last. Collapsed inlets are noted at each WRP as well. The poor condition of the pavement has a negative impact on District vehicles as well as employees' vehicles. This project will extend the useful life of the roadways and parking lots and provide safe driving conditions at the WRPs.

**Project Status:** In progress.

\*Information shown is estimated.

## Applicant Tracking

**Project Number:** 16-RFP-02

**Service Area:** Stickney

**Location:** MOBA

**Engineering Consultant:** In-house design

**General Contractor:** JobAps, Inc.

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** November 2016

**Substantial Completion Date:** August 2017\*



**Project Description:** Applicant tracking software is used to track and manage all activity related to the District’s recruitment, examination, eligible list certification and requisition processes for employee hiring. Job applicants use the system to view open jobs, create, update, and submit applications, and receive automatic email notices when a job opens in their desired job class. The system is also used to score examinations, create eligible lists, communicate with applicants, and manage the eligible list certification process.

**Project Justification:** The District’s current applicant tracking system is antiquated and will not be supported by the vendor after December 2016. The replacement software solution is compatible with current technology. In addition to the functionality described above, employment applications will display well on multiple platforms, including phones and tablets. The system will facilitate posting job information to social media sites and will automate the employment requisition and certification process.

**Project Status:** In progress.

\*Information shown is estimated.

## Furnish and Deliver One Volute Dewatering Press, SWRP

**Project Number:** 17-180-21

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$974,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Furnish and deliver one volute dewatering press for a full-scale test.

**Project Justification:** The District completed a small-scale pilot test at the Stickney WRP to test the volute dewatering press as a possible replacement for centrifuges in the post-dewatering building. Initial data shows that the volute dewatering press can achieve the same dewatered product as our current centrifuges at a fraction of the power consumption. Our current Sharples DS-706 centrifuges require 400 horsepower, and it is anticipated that the volute dewatering press will only require 18 horsepower. Initial data on the maintenance of the machines indicate that the volute dewatering press requires less maintenance. A full-scale test will confirm these facts and inform a decision to proceed. If successful, this improved process will help the District meet its energy neutrality goals.

**Project Status:** Design phase.

\*Information shown is estimated.

## F&D Benchtop Fermenter System, SWRP

**Project Number:** 17-181-21

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$26,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** June 2017\*



**Project Description:** This project is to purchase a benchtop fermenter system to simulate both full-scale fermentation and anaerobic digestion processes for design and operations support.

**Project Justification:** The District is currently in the process of reaching energy neutrality by 2023 and converting a number of WRPs to enhanced biological phosphorus removal processes to meet permit limits. A benchtop fermenter will allow experimentation of different feedstocks including high strength organic materials along with primary and activated sludge solids to understand potential methane and volatile fatty acid production to support both endeavors. Performance and operational information derived from the benchtop unit can be used for conceptual design and process control implementation at the plant level.

**Project Status:** In development

\*Information shown is estimated.

## Painting of Final Tanks, District-wide

**Project Number:** 17-601-21

**Service Area:** North, Calumet, and Stickney

**Location:** Calumet, O'Brien, and Stickney WRPs

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,632,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** October 2019\*



**Project Description:** Painting of final tanks, including rake arms and walkways, at the Calumet, O'Brien, and Stickney Water Reclamation Plants.

**Project Justification:** Paint is peeling and exposing the bare metal to rust, which would lead to repairs that would exceed painting costs.

**Project Status:** In development.

\*Information shown is estimated.



## Furnish and Deliver Programmable Logic Controllers, Chicago River Controlling Works

**Project Number:** 17-602-21

**Service Area:** Stickney

**Location:** Waterways

**Engineering Consultant:** In-house design

**General Contractor:** Emerson Process Management

**Estimated Construction Cost:** \$90,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Furnish and deliver programmable logic controllers for the Chicago River Controlling Works.

**Project Justification:** Furnish and deliver three new Emerson-Bristol ControlWave programmable logic controllers with local operator interface to replace the existing and outdated equipment. The distributed control system (DCS) group will provide all labor to perform the design/programming/integration of the existing logic into the new system and connect these units to the existing Waterways Control Section's Emerson DCS. District trades will perform the installation and testing with the DCS group.

**Project Status:** Under review.

\*Information shown is estimated.

## Furnish and Deliver Windrow Turner, LASMA

**Project Number:** 17-603-21

**Service Area:** Stickney

**Location:** LASMA

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$650,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** March 2017\*



**Project Description:** Furnish and deliver a Backhus A65 windrow turner, or approved equal.

**Project Justification:** Wood chips and/or yard waste are mixed with the biosolids using a windrow turner and then composted for use as a substitute for fertilizer, compost, and soil amendment. The composted biosolids are odor free and meet the United States Environmental Protection Agency's Exceptional Quality Designation, which is a term given to biosolids that meet Class A pathogen reduction requirements with the most stringent metal limits and vector attraction standards.

**Project Status:** Pending award.

\*Information shown is estimated.

## Furnish, Deliver, and Install Headrace Handrail, LPH

**Project Number:** 17-604-21

**Service Area:** Stickney

**Location:** Lockport Powerhouse

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$50,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** July 2017\*



**Project Description:** The project consists of replacing damaged handrails at the Lockport Powerhouse.

**Project Justification:** Various sections of handrails on the headrace are in need of replacement. The handrails have been removed and replaced multiple times in the past to accommodate construction projects at the site. The handrails have also been bent and damaged over time. The handrails, which are essential for safety, are in poor condition.

**Project Status:** Design phase.

\*Information shown is estimated.

## Cofferdam Services, LPH

**Project Number:** 17-605-21

**Service Area:** Stickney

**Location:** Lockport Powerhouse

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$375,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** The purpose of the project is to furnish and deliver a cofferdam to assist District trades with the rehabilitation of Gate 6 at the Lockport Powerhouse.

**Project Justification:** This project is to provide a bulkhead/cofferdam to isolate Gate 6 at the Lockport Powerhouse. Sluice Gate 6 needs to be isolated for in-house trades to overhaul the gate guides, which have deteriorated to the point where the gate has been rendered inoperable. The controlling work gates prevent the level of the Sanitary and Ship Canal from rising to flood levels.

**Project Status:** Preliminary planning.

\*Information shown is estimated.

## Furnish and Deliver Telemetry Replacement for SCADA Control at Various Locations

**Project Number:** 17-606-21

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** District Trades

**Estimated Construction Cost:** \$645,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** May 2018\*



**Project Description:** This project will furnish and deliver replacement supervisory control and data acquisition (SCADA) communications equipment and services for the existing copper phone lines that provide visibility and control of various District remote sites from their respective supervisory plant. The equipment selected will provide secure, bi-directional, real-time commands and readings over cellular radio link to the telecommunications provider's network, as well as the ability to retrieve diagnostic data of the networking equipment itself. The contractor will provide the required computers, software, and telecommunications equipment for the work, along with the following services: specialized system programming and support, system refinement and configuration, native and third-party product integration to ensure both local and telecommunications network security, and full commissioning. District trades will physically install equipment associated with the new telecommunications system into existing, operational panels in coordination with the contractor.

**Project Justification:** Existing point-to-point copper telemetry lines have been labeled as obsolete by AT&T, our current sole source service provider. Although the District has entered into a new two-year contract that includes these copper services, continued telemetry service beyond the end of the current contract is not guaranteed. AT&T has been reluctant to continue long-term contractual relationships for these point-to-point services. Additionally, it is expected that the operating costs for a new communications system will realize actual savings of more than 30 percent.

**Project Status:** In development.

\*Information shown is estimated.

## F&D Utility Vehicles to Various Locations

**Project Number:** 17-607-21

**Service Area:** North, Calumet, and Stickney

**Location:** Various

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$867,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project will furnish and deliver 57 replacement utility vehicles.

**Project Justification:** The utility vehicles will replace a like number of vehicles that have been taken out of service. These vehicles will be used by operators and trades personnel to transport hand tools to remote locations at District facilities.

**Project Status:** Pending award.

\*Information shown is estimated.

## Furnish and Deliver Storm Pump for the Deerfield Reservoir, NSA

**Project Number:** 17-701-21

**Service Area:** North

**Location:** Deerfield Reservoir

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** July 2017\*



**Project Description:** This project will include work to furnish and deliver one replacement storm pump for the Deerfield Reservoir in the North Service Area.

**Project Justification:** The Deerfield Reservoir in the North Service Area was completed in 1992 and protects the Village of Deerfield from flood damage during a rain event by controlling the elevation of the West Fork of the North Branch of the Chicago River. Once the rain event passes and the West Fork of the North Branch of the Chicago River returns to a normal elevation, the Deerfield Reservoir's storm pumps dewater the reservoir and pump the water back to the river. Recently, water infiltration into the motor has caused one of the storm pumps to fail.

The subject contract will replace the failed storm pump, ensuring the reservoir has maximum dewatering capabilities and reducing the risk of flooding during a rain event.

**Project Status:** Under review.

\*Information shown is estimated.

## Furnish and Deliver Stake Body Truck and Dump Truck, NSA

**Project Number:** 17-703-21

**Service Area:** North

**Location:** O'Brien and Egan WRPs

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$275,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Purchase one stake body truck with a lift gate for the Egan WRP and one dump truck with a snow plow and salt spreader for the O'Brien WRP.

**Project Justification:** This project is to replace the stake body truck at the Egan WRP and the dump truck at the O'Brien WRP. There are only two large stake body trucks and one dump truck in the North Service Area. The trucks provide in-plant and inter-plant transportation of equipment and material for all four North Service Area plants.

Current total maintenance costs are \$57,902, but these costs are anticipated to increase significantly due to the age of the vehicles.

**Project Status:** Design phase.

\*Information shown is estimated.



## Furnish and Deliver Air Lift Blower, EWRP

**Project Number:** 17-704-21

**Service Area:** North

**Location:** Egan WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** October 2017\*



**Project Description:** Furnish and deliver an air lift blower to the Egan WRP.

**Project Justification:** The purpose of this project is to purchase a dedicated air lift blower for the Egan WRP's air lifts. The air main currently operates at 8.9 pounds per square inch gauge. Air pressure is required to operate the air lifts for the south aeration battery. Based on calculations, if one small blower was installed and dedicated to operating the air lifts, the air main pressure could be reduced to 6.7 pounds per square inch gauge and still provide the desired dissolved oxygen in the aeration tanks. This would reduce operating costs by \$44,000 per year.

**Project Status:** Under review.

\*Information shown is estimated.

## Touhy Avenue Reservoir Rehabilitation, NSA

**Project Number:** 17-705-21

**Service Area:** North

**Location:** Touhy Avenue Reservoir

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$283,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Restore eroded slopes, spillways, outflow channels, gabions, damaged concrete, and joints at the Touhy Avenue Reservoir in accordance with 2011 to 2015 inspection reports and permit requirements.

**Project Justification:** Per the District's Dam and Reservoir Permit guidelines and per Section 3702.160 "Rules for Construction and Maintenance of Dams and Reservoirs," the District is required to properly maintain its dams and reservoirs. It is recommended that the District restore deficiencies to prevent accelerated deterioration of structural components.

**Project Status:** In development.

\*Information shown is estimated.

## Re-pipe Devon Avenue Instream Aeration Station Air Main, OWRP

**Project Number:** 17-707-21

**Service Area:** North

**Location:** Devon Instream Aeration Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,500,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Re-pipe the air main at the Devon Avenue Instream Aeration Station.

**Project Justification:** The Devon Avenue Instream Aeration Station is used to maintain the dissolved oxygen level in the North Shore Channel per the National Pollutant Discharge Elimination System Permit. The station is located at Devon Avenue and the North Shore Channel, two miles south of the O'Brien WRP. The original piping layout consisted of a 36-inch steel air main that ran from the station to a 36-inch downcomer. From the downcomer, a 24-inch steel line feeds an 18-inch steel main. From this line, 12 valves feed manifolds connected to eight aeration tubs each. Another 24-inch line runs underneath the channel to feed a similar arrangement on the east bank where it feeds 13 manifolds. The section of air main that runs from the station to the west side of the North Shore Channel was replaced in 2016. Upon excavating the existing riser, which connects the air to the aeration tubs on the east side, it was found that the riser was too corroded to connect the new pipe. Maintenance & Operations trades and engineers completed a temporary connection to feed the east bank.

**Project Status:** In development.

\*Information shown is estimated.

## Furnish, Deliver, and Install Disc Filters, HPWRP

**Project Number:** 17-708-21

**Service Area:** North

**Location:** Hanover Park WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,500,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** April 2018\*



**Project Description:** Furnish, deliver, and install disc filters at the Hanover Park WRP.

**Project Justification:** The designed maximum capacity of the secondary treatment is 22 million gallons per day (MGD). The maximum tertiary capacity is 17 MGD. Filter Beds 5 and 6 have a current capacity of 2.6 MGD, combined with a design capacity of 2.5 MGD each. The disc filters have a combined capacity of 12 MGD. The traveling bridge filters need to have their media replaced. The disc filters will reduce the filter backwash from eight percent to less than five percent. The enclosed disc filters will also reduce the flying insects in the filter building.

**Project Status:** Awaiting advertisement.

\*Information shown is estimated.

## Furnish and Deliver Bar Screens, KWRP

**Project Number:** 17-709-21

**Service Area:** North

**Location:** Kirie WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$300,000

**Contract Award Date:** August 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Furnish and deliver bar screens to the Kirie WRP.

**Project Justification:** The screens are 35 years old and screen capture has diminished. Switching to a smaller screen opening will reduce the amount of rags and debris in the return activated sludge (RAS) channel. This debris prevents the RAS butterfly valves from operating properly. Under this contract, one screen will be installed as a pilot test to determine if this will reduce the amount of the debris in the RAS channels.

**Project Status:** Design phase.

\*Information shown is estimated.

## Overhaul Motor and Magnetic Drive for Raw Sewage Pump #3, KWRP

**Project Number:** 17-710-21

**Service Area:** North

**Location:** Kirie WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$120,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** August 2017\*



**Project Description:** Overhaul of motor and magnetic drives for raw sewage pump (RSP) #3 at the Kirie WRP.

**Project Justification:** There is an overhaul needed for RSP #3. The motors/drives for RSP #1 and RSP #2 were overhauled in 2000, which was the first overhaul since they were put into operation in 1980; the overhaul of the motor/drive for RSP #3 was cancelled due to Contract 01-353-2M, in which only two of three pumps were overhauled. Recent vibration analysis shows higher vibrations associated with the RSP #3 system versus the RSP #1 and #2 systems. Brush attachments for RSP #3 appear to be original, which confirms that no overhaul was ever performed. Direct current power transfer to the RSP #3 clutch (magnetic drive) is impacted due to significant wear.

The overhaul of the RSP #3 motor/magnetic drive system would coincide with the installation of new RSPs #2 and #3. This would allow for improved accessibility during the installation of the pumps.

At this time, overhauling RSP #1 and RSP #2 is not recommended until additional numerical justification has been collected (both are similar since they were overhauled around 2000). Currently, new temperature and vibrations sensors are being installed on all three RSPs. The data from these will be used to justify future needs.

**Project Status:** Design phase.

\*Information shown is estimated.

## Furnish and Deliver Rider Sweeper, EWRP

**Project Number:** 17-711-21

**Service Area:** North

**Location:** Egan WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$30,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** August 2017\*



**Project Description:** Furnish and deliver one battery-powered riding sweeper with charging station to the Egan Water Reclamation Plant.

**Project Justification:** The sweeper will be used for the maintenance of the new permeable parking lot at the Egan Water Reclamation Plant. The permeable pavement system manual prescribes routine sweeping. Failure to sweep up trash, dust and organic material (grass clippings and leaves) will result in improper drainage, ponding water, and weed growth.

**Project Status:** Project initiation.

\*Information shown is estimated.



## Furnish and Deliver Turbo Blower, LWRP

**Project Number:** 17-802-21

**Service Area:** Calumet

**Location:** Lemont WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$170,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** November 2017\*



**Project Description:** Furnish and deliver a turbo blower to the Lemont WRP.

**Project Justification:** The Lemont WRP has three Hoffman centrifugal blowers for low pressure air. Two blowers are operated at a time. The cost to operate these two blowers is \$69,000 per year. One high-speed turbo blower will handle the plant needs at a cost of \$52,600 per year. This will reduce the electrical cost by approximately 25 percent. The turbo blower will replace one of the Hoffman blowers, providing 100 percent redundancy. Electrical modifications are minimal because the turbo blower has the same horsepower rating as the existing blowers. Piping modifications are also minimal. The blower will be installed by District trades personnel. The estimated return on investment is 11 years.

**Project Status:** Awaiting advertisement.

\*Information shown is estimated.



## Furnish and Deliver Interoperable Distributed Control System Workstations and TARP Controllers, Various Locations

**Project Number:** 17-901-21

**Service Area:** Stickney

**Location:** Mainstream and Racine Avenue Pumping Stations

**Engineering Consultant:** In-house design

**General Contractor:** Emerson Process Mangement

**Estimated Construction Cost:** \$125,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project will furnish and deliver two distributed control systems workstations for the control rooms at the Mainstream and Racine Avenue Pumping Stations. The addition of two workstations at each pumping station will enable interoperable control of the alternate pumping station or control of the Stickney WRP in the event of a catastrophic failure at a remote control room. District trades will install all equipment associated with the project. One mobile single channel autonomous trunking unit will also be provided for each pumping station to enable control of the Stickney Service Area Tunnel and Reservoir Plan structures should the control room lose function.

**Project Justification:** Concerns were raised in 2015 over the lack of alternate site control over each plant. These concerns led to an internal study of the interoperability of major District plants and pumping stations, particularly for a scenario where the loss of local control room facilities/functionality would require remote control from an alternate location. This project provides the equipment needed to enable plant and pumping station interoperability for the Stickney Service Area.

**Project Status:** Under development.

\*Information shown is estimated.

## Furnish, Deliver, and Install Grit Screw Conveyors, SWRP

**Project Number:** 17-902-21

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$2,400,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** October 2020\*



**Project Description:** Furnish, deliver, and install grit screw conveyors at the Stickney WRP.

**Project Justification:** The existing chain and flight collector system needs to be rebuilt every four to five years. The screw conveyor installed in the east end of Aerated Grit Tank #4 was initially converted in 1998 and then replaced in 2008. The average annual maintenance cost for the chain and flight tanks since 1998 is \$30,530. The average annual cost for the screw conveyor tank is \$22,800.

**Project Status:** In development.

\*Information shown is estimated.

## Voice Over Internet Protocol Assessment

**Project Number:** 17-RFP-05

**Service Area:** Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** August 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Voice over internet protocol (VOIP) is a communication method that involves telephone calls (voice) transmitting over internet systems (and wiring) versus the traditional phone systems (traditional telephone poles and wiring). The result is cost savings in paying traditional phone carriers for these services and their maintenance with the added benefit of improved sound quality and video capability that runs over internal network infrastructure. This platform also allows the District to take advantage of many integrated and modern communication features, including mobility. This project will evaluate our current telecommunication and supporting networking landscape to assess requirements and the feasibility of implementing VOIP phone systems at the District. This assessment includes a best practice approach and plan to implementing these systems over time in a cost-effective manner.

**Project Justification:** The District will realize significant cost savings in telecommunication services and operations over time. This will also bring collaboration and integration with the desktop computer, videoconferencing, and e-mail (receive voicemail to e-mail). Communication and networking has already converged and this moves the District in that direction.

**Project Status:** Project initiation.

\*Information shown is estimated.

## SAP Simplification

**Project Number:** 17-RFP-06

**Service Area:** Stickney

**Location:** Main Office Building

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** The SAP Simplification project is intended to increase the utilization of the District's current investment in SAP software. This project will obtain SAP consultants to help the District configure unused SAP functionality, such as the accounts receivable module and SAP's simplified user interface called Fiori.

**Project Justification:** This project is intended to streamline existing business processes by taking advantage of unused functionality in the District's current SAP software in order to address issues related to usability and obtaining information on a timely basis.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Document Management System Assessment

**Project Number:** 17-RFP-07

**Service Area:** Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$50,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project will obtain consulting resources necessary to conduct a document management system needs assessment and product evaluation.

**Project Justification:** A document management system will reduce unnecessary time spent searching for documents and keeping track of documents that are currently being routed for reviews or approvals. The District does not currently have an enterprise-wide document management solution.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Automated CAFR and Budget Solution

**Project Number:** 17-RFP-08

**Service Area:** Stickney

**Location:** Chicago

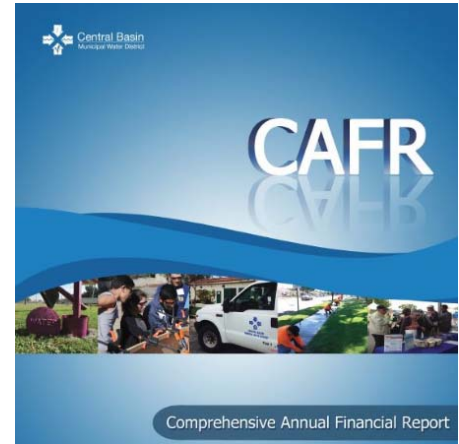
**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$125,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** The scope of the project is to procure a fully hosted web application to compile and publish two Comprehensive Annual Financial Reports (CAFRs), one for the Other Postemployment Benefit Trust and one for the District, and the budget document for the District. The solution will integrate to the enterprise resource management system (SAP) in order to automatically link financial data to the final published document and will use workflow so documents can be requested and submitted electronically between departments.

**Project Justification:** Currently, financial schedules and a variety of documents are requested and compiled either using Microsoft Word, Microsoft Excel, In-Design, or the Public Budget Formulation software. There have been significant improvements in publishing tools that will substantially automate the current manual processes of requesting, editing, and compiling documents and figures, and ultimately decrease the turnaround time to produce a final published document.

**Project Status:** This project is planned to be advertised as a request for proposal and completed in 2017.

\*Information shown is estimated.

## Local Sewer System Section Permit Database

**Project Number:** 17-RFP-09

**Service Area:** Stickney

**Location:** Chicago

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$50,000

**Contract Award Date:** November 2017\*

**Substantial Completion Date:** November 2018\*



**Project Description:** Replace the Local Sewer System Section's permit database software with an enhanced system to streamline and improve the permit review process. An improved system is more important than ever with the advent of the more complex Watershed Management Ordinance.

**Project Justification:** A new database will increase permit review and site inspection efficiency and accuracy and add value to our customer service interactions with public and private stakeholders.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Roof Life Extension, MOB

**Project Number:** J15090-064

**Service Area:** Stickney

**Location:** Main Office Building

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$250,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Rehabilitate the existing 21-year-old Main Office Building roof, which is showing signs of wear, in order to extend its service life at least five years.

**Project Justification:** The 21-year-old Main Office Building roof is no longer under warranty. However, rehabbing now will extend the life of the roof by five to 10 years.

**Project Status:** Project initiation.

\*Information shown is estimated.



## Replace Air Conditioning Unit at Waterways Control Center, MOB

**Project Number:** J15090-065

**Service Area:** Stickney

**Location:** Main Office Building

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$20,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** June 2017\*



**Project Description:** Upgrade the Main Office Building (MOB) cooling system by replacing the existing air conditioning unit with a new, energy efficient model of a similar size/cooling capacity. Some ductwork reconfiguration may be required as a part of the project to accommodate the new unit by integrating it with the existing MOB HVAC system. The new unit must be an energy efficient cooling unit.

**Project Justification:** The electric elements of the existing unit, installed in 1997, are failing, which may result in a fire hazard. Also, the Waterways Control Center houses mission critical operations on a 24-hour basis.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Coarse Screen Area Beam Restoration, RAPS

**Project Number:** J69943-029.A

**Service Area:** Stickney

**Location:** Racine Avenue Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** Meccor Industries, Ltd.

**Estimated Construction Cost:** \$100,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** September 2017\*



**Project Description:** Remove all loose, disintegrated, scaled, and spalled concrete with a lightweight, hand-held, and pneumatic, chipping hammer of 15 pounds or less. Concrete edges shall be saw cut for a minimum depth of 1/2 inch. Remove concrete around exposed rebar for a depth of one inch or more. Sandblast exposed rebar and concrete surfaces and sandblast steel to white metal. Double coat steel surface with Zincrich or approved equal coating. Splice rebars that have lost 15 percent or more of cross section area by corrosion. Install galvanic anodes per manufacturer's written recommendations. Provide shoring of beams and form work as required to support the existing structures under repair. Form and pour LA40, Sikacrete 211, or approved equal pre-bagged/pre-mixed concrete. Apply concrete sealant along repair patch perimeter.

**Project Justification:** Efflorescence, cracks, spalls, delamination, and discoloration due to corrosion were visually noticed at several isolated locations of the concrete slab and several beams. Delamination was also noticed around the previously repaired areas. The protective paint that covers the concrete beams and the underside of the slabs was observed to be disintegrated and debonded.

**Project Status:** In development.

\*Information shown is estimated.

## Information Technology Department Infrastructure Upgrades

**Project Number:** MWD0000005IT

**Service Area:** Stickney

**Location:** Chicago

**Engineering Consultant:** In-house design

**General Contractor:** CDW

**Estimated Construction Cost:** \$163,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** July 2017\*



**Project Description:** Upgrade outdated network equipment at the Main Office Building Complex. The purchase includes Cisco Local Area Network equipment, layer 3, Power over Ethernet equipment, supporting cables, mounting equipment, and power supplies for the equipment. Each District location/site will need to be upgraded in the next two years .

**Project Justification:** Current Cisco network hardware is over seven years old. The District requires access to core applications, files, and the Internet and requires upgraded network equipment to handle the volume, speed, and security to support the need. The upgrade will provide: 1) two times the speed of the current District intranet and the Internet, 2) a more secure and reliable network for new applications and systems dependent on the Internet and cloud-based services, 3) a robust, sustainable network platform to support data analytics & metrics, 4) an enterprise network optimized to provide a strong foundation for volume (storage), system performance (bandwidth), and accessibility (business continuity), 5) a foundation to expand mobile, remote, and wireless needs of District staff & guests, and 6) increased security network and reduction of old equipment maintenance costs.

Each District location/site will need to be upgraded in the next 2 years.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Backup and Retention Project

**Project Number:** MWD0000011IT

**Service Area:** Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** CDW

**Estimated Construction Cost:** \$95,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** May 2017\*



**Project Description:** The scope of the project includes the purchase of disk hardware and supporting equipment to accommodate current backup needs. It also reduces the District's use and maintenance of a tape environment for backup and restoration needs. The project involves the purchase of disk drives, which are significantly faster and allow for transmission across network computer systems for automation and better reliability.

**Project Justification:** The District currently holds 60-80 terabytes of data for all systems and uses older technology to maintain the District's electronic data. We have a combination of seven-year-old tape technology and a robust, yet expensive, measure of backups. There is a mandate to discontinue tape technology for backups. There is also a need for the District to develop a backup and retention policy that defines long-term backup and storage requirements. This project invests into disk-to-disk technology, eliminating the need for tapes, and develops a foundational infrastructure to scale and accommodate future growth and compliance needs.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Security Cameras, MOBC

**Project Number:** MWD0000012IT

**Service Area:** Stickney

**Location:** MOBC

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$16,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** September 2017\*



**Project Description:** The scope of this project includes the purchase of new Internet Protocol cameras, software licensing, and maintenance of new security cameras at the Main Office Building Complex (MOBC).

**Project Justification:** The District has over 100 older analog security cameras used by District police staff to monitor all sites and plant locations. There is newer security software that currently manages the cameras and recording activity on digital video recording systems. New physical cameras and associated software are needed to support the new system as cameras are replaced. The 2017 focus will be at the MOBC with subsequent upgrades planned in future years.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Avaya Telecom Project

**Project Number:** MWD0000013IT

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** In-house design

**General Contractor:** Avaya

**Estimated Construction Cost:** \$235,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** September 2018\*



**Project Description:** The scope of this project involves the upgrade of the District's voicemail hardware into a consolidated virtual environment. This will result in cost savings in terms of both equipment upgrades and overall maintenance, with the added benefit of management flexibility and scalability.

**Project Justification:** The District voicemail and supporting telecommunications infrastructure is over seven years old. The project will upgrade the old voicemail system and allow for the added benefit of more responsive redundancy in the design, a feature not available with a physical environment.

**Project Status:** Project initiation.

\*Information shown is estimated.

## Database Consolidation Project

**Project Number:** MWD0000014IT

**Service Area:** Stickney

**Location:** District-wide

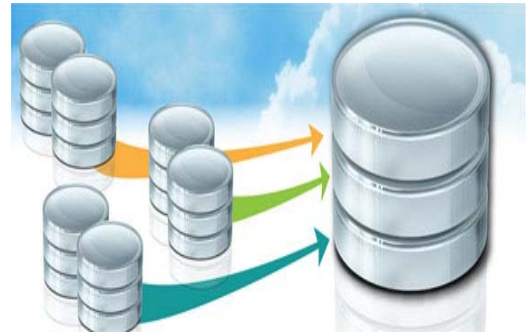
**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$264,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** The database consolidation project will combine standalone databases into a central database server. This project will also begin to standardize the database platform in use at the District. The standardized platform will be Microsoft SQL Server. The major systems that are included in this project are the Laboratory Information Management System, the Mainsaver Maintenance System, and the internet-based Publicly Owned Treatment Works Administration & Compliance System.

**Project Justification:** The database consolidation project will allow the Information Technology Department to focus its support efforts on a single standardized database platform. The current database environment requires staff with different skill sets to support each platform. By standardizing on a single database platform, standard operating procedures and training will be streamlined, enabling all database staff to have the skills necessary to support all District databases.

**Project Status:** Project initiation.

\*Information shown is estimated.

**50000 CONSTRUCTION FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. TREATMENT FACILITIES: Award projects, such as the procurement of a high-speed turbo blower for the Lemont Water Reclamation Plant (WRP), which will reduce operation and maintenance costs and/or provide facility improvements.	\$ 11,336,800	32.8%
2. COLLECTION FACILITIES: Award projects, such as the installation of a coarse screen conveyor system at the North Branch Pumping Station, which will reduce operation and maintenance costs and/or provide facility improvements.	\$ 2,850,800	8.3%
3. SOLIDS PROCESSING AND DISPOSAL FACILITIES: Award projects, such as the procurement of a windrow turner for the Solids Management Section, which will reduce costs and/or provide facility improvements.	\$ 3,234,900	9.4%
4. FLOOD AND POLLUTION CONTROL: Provide funding for construction projects addressing flood control.	\$ 2,736,000	7.9%
5. CONSTRUCTION FUND PROJECT COST: Provide funding for contracts awarded prior to 2017.	\$ 6,470,000	18.8%
6. PROJECT SUPPORT: Development, design, and administration of current and future contracts, funding support, construction materials, and utility support services.	\$ 7,821,900	22.8%
<b>Total</b>	<b>\$ 34,450,400</b>	<b>100.0%</b>

MEASURABLE GOAL:	2015 Actual	2016 Estimated	2017 Proposed
Award contracts for the continued implementation of the District's Capital Improvement Program.			
Number of projects proposed	33	39	54
Number of contracts awarded	24	27	54
Number of plans available for award	24	27	54
<p>The projects proposed for each year are based upon the requirements dictated by the Capital Improvement Program. The number of actual projects awarded may not, on face value, quantify performance. There are several factors that could either increase or decrease the number of projects awarded. Some of these factors are project size, project complexity, and unforeseen obstacles. The numbers are provided only as a general indicator of performance.</p>			



**50000 CONSTRUCTION FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actuals	Budgeted		Change		
Number	Name		Positions	Dollars	Dollars	Percent	
1110	Interceptor Systems	\$ 506,938	2017 -	\$ 757,400	\$ (15,200)	(2.0)	
			2016 -	\$ 772,600			
1300	Pumping Station Facilities	\$ 1,777,194	2017 -	\$ -	\$ (300,000)	(100.0)	a)
			2016 -	\$ 300,000			
1530	Local Sewer Permit Activity	\$ -	2017 -	\$ 50,000	\$ -	-	
			2016 -	\$ 50,000			
1700	Collection Design	\$ 119,953	2017 -	\$ -	\$ -	-	
			2016 -	\$ -			
1800	Collection Construction	\$ 1,855,439	2017 -	\$ 3,116,400	\$ 617,600	24.7	b)
			2016 -	\$ 2,498,800			
2211	Aeration Basin/Clarifiers	\$ 27,706	2017 -	\$ -	\$ -	-	
			2016 -	\$ -			
2700	Treatment Design	\$ 425,025	2017 -	\$ 400,000	\$ (1,855,000)	(82.3)	c)
			2016 -	\$ 2,255,000			
2800	Treatment Construction	\$ 6,446,955	2017 -	\$ 16,133,800	\$ 1,687,600	11.7	d)
			2016 -	\$ 14,446,200			
2900	Treatment Processes	\$ -	2017 -	\$ 100,000	\$ 100,000	100.0	e)
			2016 -	\$ -			
3700	Solids Processing Design	\$ 75,970	2017 -	\$ 1,912,000	\$ 562,400	41.7	f)
			2016 -	\$ 1,349,600			
3800	Solids Processing Construction	\$ 4,223,884	2017 -	\$ 522,900	\$ (4,322,800)	(89.2)	g)
			2016 -	\$ 4,845,700			
4600	Monitoring	\$ 1,785,353	2017 -	\$ 4,781,900	\$ 867,400	22.2	h)
			2016 -	\$ 3,914,500			

- a) Decrease is due to the 2016 completion of 14-821-21, FD&I Rotating Assemblies for 95th and 125th Street Pumping Stations.
- b) Increase is due to the addition of new collection construction projects, including 17-902-21, FD&I Grit Screw Conveyors, SWRP (\$600,000).
- c) Decrease is due to the 2016 completion of 15-073-2J, Algae Reactor System Pilot Plant, OWRP (\$1,400,000) and 15-119-2C, Sustainable Energy Management, SWRP (\$55,000), and reduced funding for 15-534-2C, Procurement of Membrane Aerated Biofilm, HPWRP (\$400,000).
- d) Increase is due to the addition of funding for 15-074-2D, Installation of Baffle Plates in Final Settling Tanks, OWRP (\$640,000), 17-601-21, Painting of Final Tanks, District-wide (\$362,700), 16-805-21, FD&I Boiler for Equipment Garage, CWRP (\$240,000), 17-703-21, F&D Stake Body and Dump Truck, NSA (\$275,000), and 17-802-21, F&D Turbo Blower, LWRP (\$170,000).
- e) Increase is due to the Intergovernmental Agreement with DuPage County Stormwater Management to modify the Fawell Dam on the West Branch of the DuPage River for the purpose of improving the aquatic ecosystem.
- f) Increase is due to additional funding for 14-250-3P, Digester Gas Utilization, CWRP (\$605,800), offset by reduced funding for 14-816-2P, Legal Advisor for Renewable Energy Projects (\$43,400).
- g) Decrease is due to reduced funding for 11-403-2P, Membrane Gas Holder Replacement and Digester Cleaning, EWRP (\$2,557,800), the deferral of 14-410-2P, Deammonification Pilot Study, EWRP (\$1,200,000), the 2016 completion of 12-932-21, Rehabilitation of Sludge Heat Exchangers, SWRP (\$460,000) and 16-907-21, FD&I Hot Water Converter Bundles, SWRP (\$100,000), and the cancellation of 16-906-21, FD&I Hot Water Tank, SWRP (\$55,000), offset by the addition of funding for 16-412-2M, Pump Rehabilitation and Diverter Gate Installation, EWRP (\$50,000).
- h) Increase is due to additional funding for Job Order Contracting projects to rehabilitate Monitoring & Research Department facilities (\$100,000) and professional services related to a number of initiatives, including nutrient removal (\$403,200), the mid-system hydrologic separation of the Great Lakes and Mississippi River Basin in the Chicago Area Waterways (\$316,400), and university master agreements (\$245,300), as well as new funding for a dewatering press to test its viability as a replacement for the centrifuges in the dewatering building at the Stickney WRP (\$974,000) and a laboratory fermentor (\$26,000), offset by reduced funding for the rehabilitation of the old laboratory building at the Calumet WRP (\$1,000,000) and professional services related to plant hydraulic modeling (\$160,000) and process development studies (\$50,000).

**50000 CONSTRUCTION FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actuals	Budgeted		Change		
Number	Name		Positions	Dollars	Dollars	Percent	
4800	Flood and Pollution Control Construction	\$ -	2017	- \$ 2,736,000	\$ 854,000	45.4	i)
			2016	- \$ 1,882,000			
5800	Solids Disposal Construction	\$ 1,114,292	2017	- \$ 800,000	\$ 650,000	433.3	j)
			2016	- \$ 150,000			
7284	Store Operations and Issue	\$ 485,042	2017	- \$ -	\$ -	-	
			2016	- \$ -			
7290	Examinations and Employment Activities	\$ -	2017	- \$ 146,500	\$ 146,500	100.0	k)
			2016	- \$ -			
7350	General Legal Matters	\$ -	2017	- \$ 100,000	\$ 100,000	100.0	l)
			2016	- \$ -			
7367	Real Estate Asset Management	\$ 386,462	2017	- \$ -	\$ (270,000)	(100.0)	m)
			2016	- \$ 270,000			
7380	Information Technology and Telecommunications	\$ 1,146,224	2017	- \$ 842,500	\$ (389,500)	(31.6)	n)
			2016	- \$ 1,232,000			
7390	Accounting and Auditing	\$ -	2017	- \$ 125,000	\$ 75,000	150.0	o)
			2016	- \$ 50,000			
7461	Main Office Building Complex Operations	\$ 870,862	2017	- \$ 820,000	\$ (360,000)	(30.5)	p)
			2016	- \$ 1,180,000			
7480	Safety Program	\$ -	2017	- \$ -	\$ (118,000)	(100.0)	q)
			2016	- \$ 118,000			
7491	Automotive Fleet Procurement	\$ 177,995	2017	- \$ 900,000	\$ -	-	
			2016	- \$ 900,000			
7745	Utility Review	\$ -	2017	- \$ 190,000	\$ 90,000	90.0	r)
			2016	- \$ 100,000			

- i) Increase is due to 17-707-21, Re-pipe Devon Avenue Instream Aeration Station Air Main, OWRP (\$1,500,000) and additional funding for construction projects located at the Lockport Powerhouse (\$225,000), offset by reduced funding for 16-602-21, F&D Telemetry Replacement for Single Point Data at Various Locations (\$323,000) and rehabilitation projects associated with the District's sidestream elevated pool aeration stations (\$515,000) and North Service Area reservoirs (\$33,000).
- j) Increase is due to the addition of 17-603-21, F&D Windrow Turner, LASMA.
- k) Increase is due to the addition of the Human Resources Department's project related to job applicant tracking.
- l) Increase is due to a planned contribution to the Chi-Cal Rivers Fund to provide funds for green infrastructure projects within the District service area.
- m) Decrease is due to the 2016 completion of the geographic information system project.
- n) Decrease is due to reduced funding for infrastructure upgrades (\$469,400), single sign-on software (\$100,000), and consulting services related to management dashboards (\$100,000), system security assessments (\$100,000), and document management (\$50,000), offset by new information technology projects related to database consolidation (\$264,000), data backup and retention (\$95,000), and telecommunications (\$70,900).
- o) Increase is due to the project to determine a hosted solution for the District's Consolidated Annual Financial Report (\$125,000), offset by the completion of the project to upgrade ReadSoft software used District-wide for payment routing, approval, and processing (\$50,000).
- p) Decrease is due to the completion of various building improvement projects, including painting and replacing carpeting on the third floor of the Main Office Building (\$425,000), improving the HVAC system at the Main Office Building Annex (\$85,000), and installing new emergency public address and building automation systems (\$70,000), as well as reduced funding for the elevator rehabilitation project (\$50,000), offset by funding for projects at the Main Office Building, including roof improvements (\$250,000) and the purchase of a new air conditioning unit (\$20,000).
- q) Decrease is due to the 2016 receipt of outdoor electronic signs for the plant facilities.
- r) Increase is due to additional funding for the Illinois Department of Transportation sewer support relocation services.

**50000 CONSTRUCTION FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actuals	Positions	Dollars	Dollars	Percent	
7801	Information Technology Services - Gen Administration	\$ -	2017 -	\$ 16,000	\$ 16,000	100.0	s)
			2016 -	\$ -			
7900	M&O General Support Services	\$ 477,984	2017 -	\$ -	\$ (300,000)	(100.0)	t)
			2016 -	\$ 300,000			
Totals		\$ 21,903,278	2017 -	\$ 34,450,400	\$ (2,164,000)	(5.9%)	
			2016 -	\$ 36,614,400			

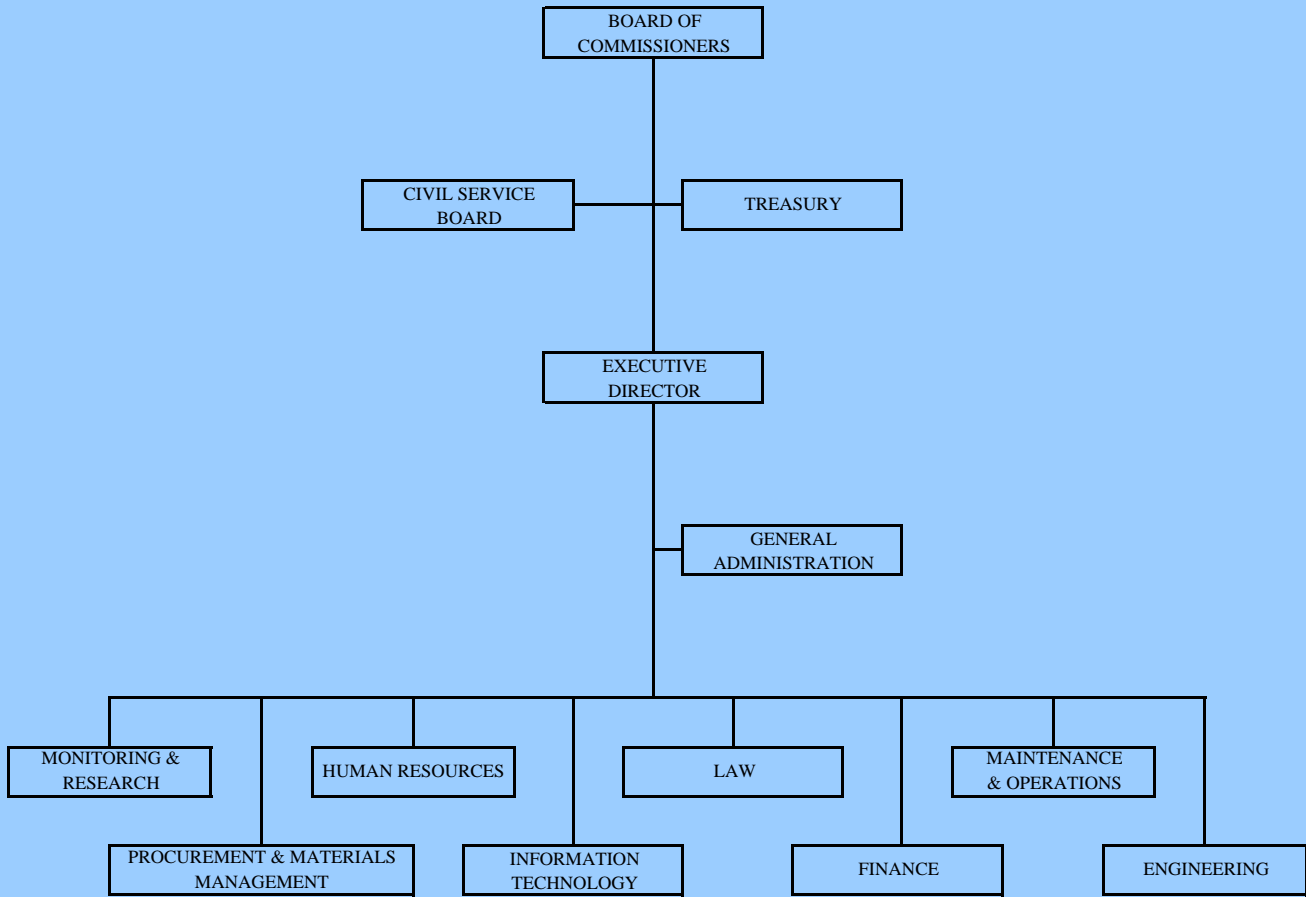
- s) Increase is due to the planned purchase of security cameras for the Main Office Building Complex.
- t) Decrease is due to the 2016 completion of the project to replace the fertilizer building roof at the Stickney WRP.

201 50000	Fund: Construction Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601170	Payments for Professional Services	\$ 2,252,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
601410	Personal Services Exp for Prelim Engineering Rpts and Studies	425,025	-	-	-	-	-	-
601440	Personal Svcs for Post-Award Engr for Construction Projects	119,953	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	2,797,500	-	-	-	-	-	-
612240	Testing and Inspection Services	871	-	-	-	600,000	600,000	600,000
612250	Court Reporting Services	485	-	-	-	-	-	-
612400	Intergovernmental Agreements	-	-	-	-	500,000	100,000	100,000
612430	Payments for Professional Services	-	3,832,100	2,877,100	2,087,400	4,368,600	3,634,900	3,624,900
612440	Preliminary Engineering Reports and Studies	-	55,000	114,900	14,900	-	-	-
612450	Professional Engineering Services for Construction Projects	-	1,253,200	1,723,200	444,400	1,019,000	1,859,000	1,859,000
612490	Contractual Services, N.O.C.	151,564	208,000	208,000	167,000	50,000	50,000	60,000
612600	Repairs to Collection Facilities	486,938	772,600	773,700	773,700	157,400	157,400	157,400
612680	Repairs to Buildings	-	100,000	100,000	-	-	-	-
612760	Repairs to Material Handling and Farming Equipment	201,479	-	-	-	-	-	-
200	TOTAL CONTRACTUAL SERVICES	841,337	6,220,900	5,796,900	3,487,400	6,695,000	6,401,300	6,401,300
623270	Mechanical Repair Parts	1,777,196	300,000	-	-	-	-	-
623570	Laboratory Testing Supplies, Small Equipment, and Chemicals	18,696	31,000	31,000	31,000	-	-	-
623810	Computer Supplies	-	-	-	-	-	95,000	-
300	TOTAL MATERIALS AND SUPPLIES	1,795,892	331,000	31,000	31,000	-	95,000	-
634600	Equipment for Collection Facilities	-	-	90,000	81,000	125,000	340,000	340,000
634620	Equipment for Waterway Facilities	118,737	408,000	408,000	183,000	315,000	335,000	335,000
634650	Equipment for Process Facilities	1,373,523	3,522,800	2,932,800	1,158,500	1,920,000	1,996,000	1,996,000
634780	Safety and Medical Equipment	-	50,000	50,000	28,500	-	-	-
634810	Computer Equipment	730,602	642,000	642,000	429,700	212,300	178,600	273,600
634820	Computer Software	-	150,000	213,000	213,000	50,000	131,500	131,500
634840	Communications Equipment (Includes Software)	-	-	-	-	-	70,900	70,900

201 50000	Fund: Construction Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
634860	Vehicle Equipment	492,985	900,000	837,000	192,000	1,157,000	1,157,000	2,072,000
634990	Machinery and Equipment, N.O.C.	408,931	1,088,000	848,000	619,200	1,404,000	1,404,000	1,404,000
400	TOTAL MACHINERY AND EQUIPMENT	3,124,779	6,760,800	6,020,800	2,904,900	5,183,300	5,613,000	6,623,000
645600	Collection Facilities Structures	301,850	3,190,000	2,863,000	1,310,000	2,339,000	2,339,000	2,469,000
645620	Waterway Facilities Structures	-	523,000	1,023,000	989,900	475,000	100,000	349,000
645650	Process Facilities Structures	3,009,977	4,727,200	4,940,500	3,800,700	4,879,300	5,179,300	5,329,300
645680	Buildings	3,367,508	2,580,100	2,790,000	1,800,000	2,361,600	2,767,400	2,767,400
645690	Capital Projects, N.O.C.	-	3,174,200	4,209,200	3,275,100	7,587,700	6,637,700	3,737,700
645700	Preservation of Collection Facility Structures	805,944	1,053,800	1,306,800	1,217,300	-	-	1,500,000
645720	Preservation of Waterway Facility Structures	-	539,000	325,800	103,000	600,000	975,000	931,000
645750	Preservation of Process Facility Structures	4,977,831	4,637,400	4,393,400	3,474,000	1,248,900	1,485,600	1,485,600
645780	Preservation of Buildings	779,284	1,407,000	1,379,000	594,000	2,110,000	2,484,000	2,484,000
645790	Preservation of Capital Projects, N.O.C.	101,377	1,470,000	1,535,000	1,486,100	373,100	373,100	373,100
500	TOTAL CAPITAL PROJECTS	13,343,770	23,301,700	24,765,700	18,050,100	21,974,600	22,341,100	21,426,100
TOTAL ENGINEERING CONSTRUCTION		\$ 21,903,278	\$ 36,614,400	\$ 36,614,400	\$ 24,473,400	\$ 33,852,900	\$ 34,450,400	\$ 34,450,400

NOTES: 1. Amounts may not add up due to rounding.  
 2. Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

**NOTE PAGE**



# CAPITAL IMPROVEMENTS BOND FUND

## Fund Summary

The Capital Improvements Bond Fund is used when acquiring an asset that meets the definition of a capital asset: the cost typically exceeds \$500,000 and the useful life extends beyond five years. Capital projects pursued by the Engineering Department are: (a) mission critical, improve environmental quality, (b) preservation/rehabilitation of existing infrastructure to maintain service levels, or (c) commitment to the community through process optimization. The Capital Improvements Bond Fund is funded by the sale of bonds and receipt of loans from the Illinois Environmental Protection Agency and State Revolving Loan Fund. The use of these funds is governed by state statutes and federal guidelines.

## Summary of 2016 Accomplishments

The District's Capital Improvements Bond Fund are grouped into three categories: mission critical, preservation of infrastructure, and commitment to community.

### Mission Critical, Improve Environmental Quality

- Completed mining of the McCook Reservoir's Stage 1;
- Awarded a contract to construct the Des Plaines Inflow Tunnel, which improves conveyance of combined sewer overflows from the Tunnel And Reservoir Plan's (TARP) Des Plaines tunnel system to the McCook Reservoir, relieving flooding along the Des Plaines River;
- Completed construction of a phosphorus recovery facility at the Stickney Water Reclamation Plant (WRP);
- Awarded a contract to install the Waste Activated Sludge Stripping to Remove Internal Phosphorus (WASSTRIP®) process, which will increase the amount of phosphorus that will be recoverable by the phosphorus recovery facility and provide a more sustainable biosolids product.

### Preservation of Infrastructure

- Completed the rehabilitation of the Glenbrook Sanitary Sewer, North Shore Intercepting Sewer No. 2, and Des Plaines River Intercepting Sewer;
- Completed construction of air piping and airlift modifications and installation of diffuser plates at the Stickney WRP;
- Awarded a construction contract to rehabilitate the Calumet Intercepting Sewer 19F.

### Commitment to Community

- Began engineering design work for a digester gas cleaning facility at the Calumet WRP which is essential to achieve energy neutrality;
- Completed construction of the ANITA™ Mox (Nitrogen Removal in Centrate) system at the Egan WRP, which reduces the amount of oxygen needed to treat the centrate and therefore reduces our energy usage;
- Awarded an engineering study to look at the feasibility of achieving energy neutrality at the Egan and Hanover Park WRPs.

## Budget Highlights

The Capital Improvements Bond Fund's 2017 appropriation is \$354,625,600, a decrease of \$129,139,200, or 26.7 percent, from 2016. There are no staff positions budgeted in the Capital Improvements Bond Fund. The 2017 appropriation includes construction costs for capital projects to be awarded in 2017 in the amount of \$273,332,000, including funding for stormwater management capital projects. The remaining \$81,293,600 includes funding for acquisition of land and easements, allowances for contract change orders, and legal and other support services relating to capital projects.

Significant features of the 2017 budget are:

### Mission Critical, Improve Environmental Quality

- Complete several McCook Reservoir projects and place the reservoir in service at the end of 2017;
- Continue construction of the Des Plaines Inflow Tunnel at the McCook Reservoir;
- Continue mining the McCook Reservoir's Stage 2;
- Continue work on the automation of air valves to allow better control of air usage for the enhanced biological phosphorus removal treatment process at the Stickney WRP;
- Continue construction of a process to recover phosphorus from the centrate waste stream at the Stickney WRP;
- Continue construction of nine new primary settling tanks and aerated grit removal facilities at the Stickney WRP.



## Preservation of Infrastructure

- Continue Phase 2 rehabilitation of the service and connecting tunnels at the Stickney WRP;
- Continue construction to replace the aging coarse screens and raw sewage pump slide gates at the Egan WRP;
- Continue construction to replace the medium voltage switchgear in the D799 substation at the Stickney WRP;
- Continue construction to replace the TARP pumps, motors, variable frequency drives, and screens at the Calumet WRP;
- Continue construction to rehabilitate Pump #8 at the Mainstream Pumping Station;
- Continue construction to replace the TARP pumping station screens, which require manual cleaning, with a fully automated self-cleaning screen system at the Calumet WRP;
- Continue to upgrade and improve the heating, ventilation, and air conditioning system for the Monitoring & Research Laboratory to meet the evolving needs of the Monitoring & Research personnel and regulatory compliance;
- Award a construction contract to rehabilitate corroded portions of the Upper Des Plaines Drop Shaft 5.

## Commitment to Community

- Award construction contract for an organic waste receiving facility at the Calumet WRP, which is essential to achieve energy neutrality;
- Award a construction contract to provide a covered composting system to produce a high quality composted biosolids product at the Calumet WRP;
- Award a construction project to convert two gravity concentration tanks into primary fermenters at the Stickney WRP;
- Award an engineering design contract for the development of a digester gas utilization facility at the Stickney WRP;
- Complete the energy neutrality feasibility study for the Egan and Hanover Park WRPs.

## 2017 Initiatives in Support of the Strategic Business Plan Include the Following:

### • Add Value

- Place Stage 1 of the McCook Reservoir in service to capture combined sewer overflows and flood water;
- Recover valuable resources and reduce the consumption of energy by improving treatment processes;
- Stabilize Capital Improvement Program project expenditures;
- Fully utilize digester gas to reduce the energy demand from outside sources and reduce the carbon footprint and air pollutants associated with conventional energy sources;
- Develop a program for receiving organic waste streams for co-digestion that both increases energy production and reduces waste products going to landfills;
- Promote the ongoing work of effluent disinfection at the Calumet and O'Brien WRPs;
- Identify new projects to move toward energy neutrality at the Egan and Hanover Park WRPs.

### • Excellence

- Strive to achieve best-in-class performance for budgeting and scheduling of all Capital Improvement Program projects;
- Review contracts after construction is completed to document best practices and foster continuous improvement;
- Apply comprehensive metrics to manage Capital Improvement Program projects for best-in-class performance;
- Continue to lead the industry and exceed contractor expectations by promptly processing and paying invoices for completed work within 30 days after submittal;
- Remove nutrients from the waste stream to benefit downstream receiving waters and ecosystems.

### • Resource Recovery

- Achieve multiple environmental benefits by recovering and reusing phosphorus in the most cost-efficient manner, in lieu of phosphate rock which must be mined and transported for use;
- Optimize the use of digester gas;
- Explore projects to supply effluent water to businesses that require non-potable water, replacing their dependence on Lake Michigan water;
- Complete construction of a covered biosolids composting facility at the Calumet WRP.

**CAPITAL PROJECTS LISTED BY SERVICE AREA - CAPITAL IMPROVEMENTS BOND FUND**

The following is a list of capital projects within the District’s three major service areas. They are presented by their association with a water reclamation plant (WRP) and by their completion status: projects under construction, for 2017 award, or under development.

**Bold type indicates projects to be financed by "Unlimited Tax Bonds."**

**STICKNEY  
SERVICE  
AREA (SSA)**



**Stickney Water Reclamation Plant (SWRP)**

<b>Projects Under Construction (with estimated completion dates)</b>		<b>Estimated Construction Cost</b>
02-111-3M	TARP Pump #8 Rehabilitation, MSPS (1/2017)	\$ 4,533,000
04-128-3P	West Side Primary Settling Tanks 1-9 and Aerated Grit Facility, SWRP (7/2018)	226,208,000
04-132-3D	A/B and C/D Service Tunnel and Connecting Tunnel Rehabilitation - Phase II, SWRP (4/2019)	20,519,000
06-155-3S	Salt Creek Intercepting Sewer 2 Rehabilitation, SSA (9/2018)	43,878,000
09-182-3E	D799 Switchgear Replacement, SWRP (7/2019)	12,645,000
11-195-AP	Phosphorus Recovery System, SWRP (1/2017)	31,914,000
13-106-4F	<b>McCook Reservoir Des Plaines Inflow Tunnel (2/2020)</b>	107,770,000
15-120-3P	Conversion of Old GCTs to the WASSTRIP® Process, SWRP (4/2018)	5,223,000
15-122-3P	Aeration Tanks Air Valves Automation in Batteries A, B, C, and D, SWRP (12/2018)	6,566,000
15-123-3D	Safety Railing around Tanks, SWRP (10/2017)	5,239,000
15-IGA-16 ^	Prairie/Washington Pumping Station Improvements, Brookfield (5/2017)	1,000,000
15-IGA-18 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Des Plaines (12/2017)	950,000
16-IGA-06 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Riverside Lawn (12/2017)	8,000,000
16-IGA-11 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Des Plaines (12/2019)	3,625,000
16-IGA-14 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Addison Creek, Northlake (11/2018)	1,184,000
16-IGA-15 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Addison Creek, Stone Park (12/2019)	2,700,000
<b>Total</b>		<b>\$ 481,954,000</b>

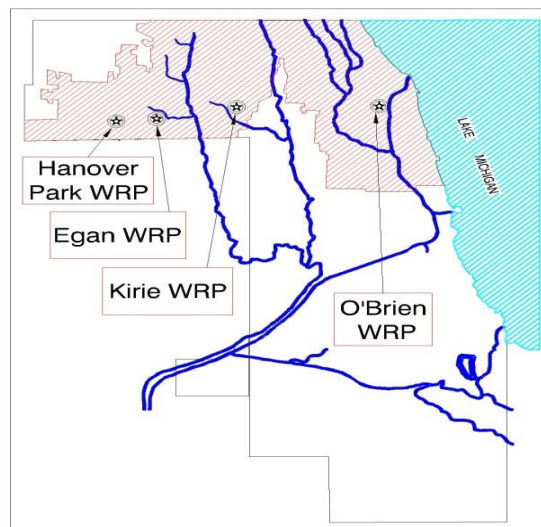
**Projects for 2017 Award**

11-186-3F ^	Addison Creek Reservoir	\$	109,542,000
13-199-3F ^	Lyons Levee Flood Control Improvements, Lyons		6,500,000
14-108-3F *^	Streambank Stabilization Projects for Addison Creek [Capital Improvements Bond Fund (CIBF) = \$478,000; Stormwater Management Fund = \$517,000]		478,000
15-118-3M	Main Sewage Pump Seal Water System Modification, MSPS		1,030,000
15-124-3P	Conversion of Two Gravity Concentration Tanks to Primary Sludge Fermenters, SWRP		1,900,000
16-125-4F	<b>McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls</b>		11,200,000
16-126-3S	Summit Conduit Rehabilitation, SSA		1,700,000
16-IGA-13 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Silver Creek, Franklin Park		4,681,000
17-1SS-31	Enhancements to iPACS		200,000
17-RFP-15	Enhancements to the Laboratory Information Management System (LIMS)		300,000
		Total	\$ <b>137,531,000</b>

**Projects Under Development**

01-103-AS	39th Street Conduit Rehabilitation - Phase II, SSA	\$	24,700,000
08-174-3D	Battery A Final Settling Tanks, Rehabilitation of Concrete, SWRP		2,000,000
11-187-3F ^	Addison Creek Channel Improvements		48,133,000
11-189-3P	Digester Gas Utilization Facilities, SWRP		17,000,000
13-101-3P	Deammonification System, SWRP		30,000,000
14-114-3M	Odor Control Facilities, SWRP		12,767,000
14-117-3P	Organic Waste Receiving Station, SWRP		10,000,000
16-127-3D	A/B and C/D Service Tunnel Rehabilitation - Phase III		17,000,000
16-128-3D	Battery B Final Settling Tanks, Rehabilitation of Concrete, SWRP		2,000,000
16-129-3D	Battery C Final Settling Tanks, Rehabilitation of Concrete, SWRP		2,000,000
16-130-3D	Battery D Final Settling Tanks, Rehabilitation of Concrete, SWRP		2,000,000
		Total	\$ <b>167,600,000</b>
		Stickney Service Area Grand Total	\$ <b>787,085,000</b>

# NORTH SERVICE AREA (NSA)



## Terrence J. O'Brien Water Reclamation Plant (OWRP)

<b>Projects Under Construction (with estimated completion dates)</b>		<b>Estimated Construction Cost</b>
11-052-3F ^	Streambank Stabilization Project for the West Fork of the North Branch of the Chicago River (4/2017)	\$ 413,000
14-066-3F #	Albany Park Stormwater Diversion Tunnel (5/2018)	24,750,000
14-824-3D	Rehabilitation of Bridges, NSA (8/2017)	2,093,000
15-072-3D	Safety Railing around Tanks, OWRP (9/2017)	1,400,000
<b>Total</b>		<b>\$ 28,656,000</b>

### Projects for 2017 Award

12-056-3F ^	Flood Control Project on Farmers and Prairie Creeks	\$ 14,100,000
16-077-3E	Devon Instream Aeration Station Switchgear Replacement and Wilmette Pumping Station Conduit Replacement	1,000,000
16-079-3D	Rehabilitation of North Branch Pumping Station, NSA	1,500,000
<b>Total</b>		<b>\$ 16,600,000</b>

### Projects Under Development

10-047-3S	North Shore 1 Rehabilitation, NSA	\$ 21,500,000
16-IGA-18 ^	Flood Control Project for the West Fork of the North Branch of the Chicago River, Glenview	6,600,000
<b>Total</b>		<b>\$ 28,100,000</b>

## John E. Egan Water Reclamation Plant (EWRP)

### Project Under Development

11-404-3S	Upper Des Plaines Intercepting Sewer 11D, Ext. C Rehabilitation, NSA	\$ 5,500,000
<b>Total</b>		<b>\$ 5,500,000</b>

## James C. Kirie Water Reclamation Plant (KWRP)

### Projects for 2017 Award

13-370-3F *^	Buffalo Creek Reservoir Expansion [CIBF = \$19,300,000; Stormwater Management Fund = \$1,830,700]	\$ 19,300,000
14-372-3S	Drop Shaft 5 Inspection and Rehabilitation, NSA	2,700,000
16-373-3P	Furnish, Deliver, and Install Odor Control Systems, KWRP	1,000,000
16-IGA-16 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Wheeling Township	1,407,000
<b>Total</b>		<b>\$ 24,407,000</b>

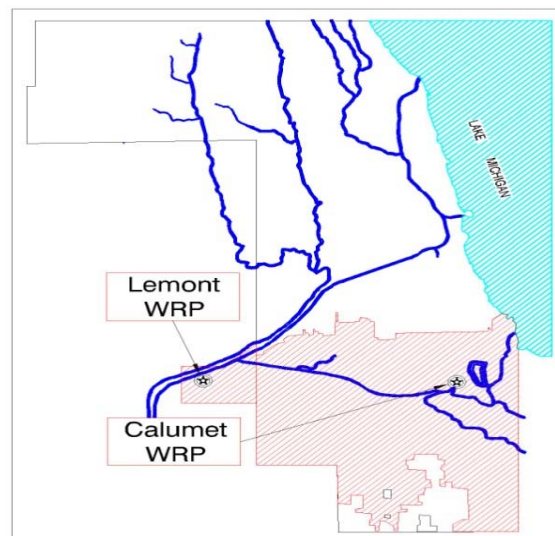
**Projects Under Development****Estimated Construction Cost**

06-358-3M	Upgrade Gate Control Equipment at TARP Control Structures, KWRP, NSA	\$	2,200,000
06-360-3S	Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA		6,700,000
12-369-3S	Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA		5,500,000
		Total	\$ <u>14,400,000</u>

**Hanover Park Water Reclamation Plant (HPWRP)****Project for 2017 Award**

16-537-3P	Furnish, Deliver, and Install Odor Control Systems, HPWRP	\$	1,000,000
16-RFP-09	Design, Build, Operate, and Maintain a Native Plant and Tree Nursery at the Hanover Park WRP, Fischer Farm		3,500,000
		Total	\$ <u>4,500,000</u>
	North Service Area Grand Total	\$	<u><u>122,163,000</u></u>

## CALUMET SERVICE AREA (CSA)



### Calumet Water Reclamation Plant (CWRP)

#### Projects Under Construction (with estimated completion dates)

		Estimated Construction Cost
06-212-3M	Calumet TARP Pumping Station Improvements, CWRP (5/2018)	\$ 35,288,000
10-237-3F ^	Streambank Stabilization Project on Oak Lawn Creek (9/2017)	3,035,000
11-239-3S	Calumet Intercepting Sewer 19F Rehabilitation, CSA (7/2018)	12,306,000
13-246-3M	Calumet TARP Screens, CWRP (1/2019)	12,754,000
16-PBC-MO	Public Building Commission Guaranteed Energy Performance Contract (9/2017)	4,250,000
15-IGA-14 *^	Construction of a Levee along Thorn Creek at Arquilla Park, Glenwood [CIBF = \$3,483,000; Stormwater Management Fund = \$387,000] (10/2017)	3,483,000
16-IGA-12 ^	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Butterfield Creek, Flossmoor (12/2018)	640,000
<b>Total</b>		<b>\$ 71,756,000</b>

#### Projects for 2017 Award

10-882-CF ^	Streambank Stabilization Project along Midlothian Creek, Tinley Park	\$ 392,000
10-883-BF ^	Flood Control Project at Arrowhead Lake, Palos Heights	1,200,000
10-883-CF *^	Flood Control Project on the East Branch of Cherry Creek, Flossmoor [CIBF = \$3,810,000; Stormwater Management Fund = \$1,050,000]	3,810,000
10-884-BF ^	Flood Control Project for Deer Creek, Ford Heights	3,440,000
11-240-3P	Organic Waste Receiving Facility and Digester Gas Flare Upgrade, CWRP	10,500,000
13-248-3F ^	Streambank Stabilization Project on Melvina Ditch in Oak Lawn and Chicago Ridge	8,800,000
14-252-3F ^	Flood Control Project on Natalie Creek in Oak Forest and Midlothian	8,300,000
14-263-3F ^	Melvina Ditch Reservoir Improvements	21,452,000
15-IGA-04 ^	Flood Control Project for Midlothian Turnpike at Lavergne Avenue, Crestwood	500,000
15-IGA-22 ^	Flood Control Project on 103rd Street from Cicero Avenue to Central Avenue, Oak Lawn	3,000,000
16-270-3P	Covered Composting System, CWRP	24,000,000
16-271-3P	Furnish, Deliver, and Install Junction Chamber Odor Control System, CWRP	1,000,000
16-272-3P	Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP	3,500,000
16-IGA-20 ^	Pilot Study for Investigating Technology to Address Basement Backups	400,000
<b>Total</b>		<b>\$ 90,294,000</b>

<b>Projects Under Development</b>		<b>Estimated Construction Cost</b>
09-230-3M	Screens and Conveyor Improvements at 125th Street Pumping Station, CSA	\$ 3,825,000
10-882-AF ^	Streambank Stabilization Project on Tinley Creek, Orland Park	3,800,000
11-242-3S	Palos Hills Pumping Station - Force Main, CSA	10,000,000
12-245-3P	Phosphorus Recovery System, CWRP	10,000,000
14-250-3P	Digester Gas Utilization Facilities, CWRP	13,000,000
15-266-3F	Decommissioning of the Thornton Transitional Reservoir	3,500,000
15-830-3D	Replacement of Tailrace Stop Logs, Equipment, and Headgates, Lockport Power House	10,000,000
16-269-3P	Fermenters, CWRP	3,000,000
	Total	<b>\$ 57,125,000</b>
	Calumet Service Area Grand Total	<b>\$ 219,175,000</b>
	Capital Projects Grand Total - All Service Areas	<b>\$ 1,128,423,000</b>

^ These projects are part of the Stormwater Management Program. Detailed information about this fund and these projects appears in Section VI of this budget document.

\* These projects are funded by the Capital Improvements Bond Fund and the Stormwater Management Fund.

# This project is designed and built by the City of Chicago. The District is sharing the cost.

## Capital Improvements Bond Fund Program

<b><u>Awards in 2017</u></b>		Est.		Est.	
#	Project Name	Project Number	Construc- tion Cost	Dura- tion (days)	Award Date
1	Organic Waste Receiving Facility and Digester Gas Flare Upgrade, CWRP	11-240-3P	\$ 10,500	541	Jan-17
2	Main Sewage Pump Seal Water System Modification, MSPS	15-118-3M	1,030	572	Jan-17
3	Conversion of Two Gravity Concentration Tanks to Primary Sludge Fermenters, SWRP	15-124-3P	1,900	511	Jan-17
4	Devon Instream Aeration Station Switchgear Replacement and Wilmette Pumping Station Conduit Replacement	16-077-3E	1,000	391	Jan-17
5	Design, Build, Operate, and Maintain a Native Plant and Tree Nursery at the Hanover Park WRP, Fischer Farm	16-RFP-09	3,500	360	Jan-17
6	Enhancements to iPACS	17-1SS-31	200	360	Jan-17
7	Enhancements to the Laboratory Information Management System (LIMS)	17-RFP-15	300	304	Mar-17
8	Summit Conduit Rehabilitation, SSA	16-126-3S	1,700	269	Apr-17
9	Covered Composting System, CWRP	16-270-3P	24,000	300	Apr-17
10	Furnish, Deliver, and Install Odor Control Systems, HPWRP	16-537-3P	1,000	389	Apr-17
11	<b>McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls</b>	16-125-4F	11,200	392	May-17
12	Furnish, Deliver, and Install Junction Chamber Odor Control System, CWRP	16-271-3P	1,000	394	Jun-17
13	Drop Shaft 5 Inspection and Rehabilitation, NSA	14-372-3S	2,700	298	Jul-17
14	Rehabilitation of North Branch Pumping Station, NSA	16-079-3D	1,500	391	Oct-17
15	Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP	16-272-3P	3,500	391	Oct-17
16	Furnish, Deliver, and Install Odor Control Systems, KWRP	16-373-3P	1,000	377	Oct-17
Total 2017 Awards			<u>\$ 66,030</u>		

### **Projects Under Development**

#	Project Name	Project Number	Est. Construc- tion Cost	Dura- tion (days)	Est. Award Date
17	Upper Des Plaines Intercepting Sewer 11D, Extension C Rehabilitation, NSA	11-404-3S	\$ 5,500	450	Feb-18
18	Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA	06-360-3S	6,700	360	Mar-18
19	Replacement of Tailrace Stop Logs, Equipment, and Headgates, Lockport Power House	15-830-3D	10,000	720	Mar-18
20	39th Street Conduit Rehabilitation - Phase II, SSA	01-103-AS	24,700	770	Jun-18
21	Digester Gas Utilization Facilities, CWRP	14-250-3P	13,000	540	Jul-18
22	Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA	12-369-3S	5,500	450	Aug-18
23	Battery A Final Settling Tanks, Rehabilitation of Concrete, SWRP	08-174-3D	2,000	370	Sep-18
24	Upgrade Gate Control Equipment at TARP Control Structures, KWRP, NSA	06-358-3M	2,200	540	Oct-18
25	Digester Gas Utilization Facilities, SWRP	11-189-3P	17,000	1,095	Jan-19
26	North Shore 1 Rehabilitation, NSA	10-047-3S	21,500	500	Jan-19
27	Phosphorus Recovery System, CWRP	12-245-3P	10,000	1,095	Jan-19
28	Decommissioning of the Thornton Transitional Reservoir	15-266-3F	3,500	365	Mar-19



<b><u>Projects Under Development (continued)</u></b>		Project	Est. Construction Cost	Duration (days)	Est. Award Date
29	Odor Control Facilities, SWRP	14-114-3M	\$ 12,767	730	Apr-19
30	Organic Waste Receiving Station, SWRP	14-117-3P	10,000	365	Apr-19
31	Screens and Conveyor Improvements at 125th Street Pumping Station, CSA	09-230-3M	3,825	500	Jul-19
32	Battery B Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-128-3D	2,000	370	Sep-19
33	A/B and C/D Service Tunnel Rehabilitation - Phase III	16-127-3D	17,000	1,095	Oct-19
34	Battery C Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-129-3D	2,000	370	Sep-20
35	Fermenters, CWRP	16-269-3P	3,000	370	Jan-21
36	Palos Hills Pumping Station - Force Main, CSA	11-242-3S	10,000	500	Feb-21
37	Deammonification System, SWRP	13-101-3P	30,000	550	Sep-21
38	Battery D Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-130-3D	2,000	370	Sep-21
Total Future Awards			<u>\$ 214,192</u>		
Cumulative 2017 and Future Awards			<u>\$ 280,222</u>		

Note: All cost figures are in thousands of dollars; inflation factor is 0 percent.

**Bold Type Indicates Unlimited Tax Bond Project**

	<b>Method of Financing</b>		
	State Revolving Fund Loans	General Obligation Bonds	
Tunnel and Reservoir Plan	\$ -	\$ 11,200	\$ 11,200
Water Reclamation Plant	45,767	1,900	47,667
Expansion and Improvements			
Solids Management	57,500	37,000	94,500
Collection Facilities	24,700	11,030	35,730
Replacement of Facilities	25,725	64,900	90,625
Other	-	500	500
	<u>\$ 153,692</u>	<u>\$ 126,530</u>	<u>\$ 280,222</u>

## Capital Improvements Bond Fund Program Impacts

#	Project Name	Project Number	Justification				Impact		
			Capacity Needs	Useful Life	Economic Benefit	Safety/Regulatory	Manpower	Energy	Chemical
<b><u>Awards in 2017</u></b>									
1	Organic Waste Receiving Facility and Digester Gas Flare Upgrade, CWRP	11-240-3P			x		-	++	=
2	Main Sewage Pump Seal Water System Modification, MSPS	15-118-3M				x	-	-	=
3	Conversion of Two Gravity Concentration Tanks to Primary Sludge Fermenters, SWRP	15-124-3P				x	=	-	=
4	Devon Instream Aeration Station Switchgear Replacement and Wilmette Pumping Station Conduit Replacement	16-077-3E		x			=	=	=
5	Design, Build, Operate, and Maintain a Native Plant and Tree Nursery at the Hanover Park WRP, Fischer Farm	16-RFP-09							
6	Enhancements to iPACS	17-1SS-31		x	x		--	=	=
7	Enhancements to the Laboratory Information Management System (LIMS)	17-RFP-15	x	x	x		--	=	=
8	Summit Conduit Rehabilitation, SSA	16-126-3S		x			=	=	=
9	Covered Composting System, CWRP	16-270-3P			x		-	=	=
10	Furnish, Deliver, and Install Odor Control Systems, HPWRP	16-537-3P				x	=	=	=
11	McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls	16-125-4F			x		=	=	=
12	Furnish, Deliver, and Install Junction Chamber Odor Control System, CWRP	16-271-3P				x	+	=	+
13	Drop Shaft 5 Inspection and Rehabilitation, NSA	14-372-3S				x	=	=	=
14	Rehabilitation of North Branch Pumping Station, NSA	16-079-3D		x			=	=	=
15	Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP	16-272-3P				x	-	-	+
16	Furnish, Deliver, and Install Odor Control Systems, KWRP	16-373-3P				x	=	=	=
<b><u>Projects Under Development</u></b>									
17	Upper Des Plaines Intercepting Sewer 11D, Extension C Rehabilitation, NSA	11-404-3S		x			=	=	=
18	Upper Des Plaines Intercepting Sewer 14B Rehabilitation, NSA	06-360-3S		x			=	=	=
19	Replacement of Tailrace Stop Logs, Equipment, and Headgates, Lockport Power House	15-830-3D		x		x	=	=	=
20	39th Street Conduit Rehabilitation - Phase II, SSA	01-103-AS		x	x		=	=	=
21	Digester Gas Utilization Facilities, CWRP	14-250-3P			x		-	++	=

<b>Capital Improvements Bond Fund</b> <b>Operating Impacts for Projects Under</b> <b>Development (continued)</b>			Justification				Impact		
			<i>Capacity Needs</i>	<i>Useful Life</i>	<i>Economic Benefit</i>	<i>Safety/Regulatory</i>	<i>Manpower</i>	<i>Energy</i>	<i>Chemical</i>
#	Project Name	Project Number							
22	Upper Des Plaines Intercepting Sewer 11D Rehabilitation, NSA	12-369-3S		x	x		=	=	=
23	Battery A Final Settling Tanks, Rehabilitation of Concrete, SWRP	08-174-3D		x			=	=	=
24	Upgrade Gate Control Equipment at TARP Control Structures, KWRP, NSA	06-358-3M		x			=	=	=
25	Digester Gas Utilization Facilities, SWRP	11-189-3P			x		-	++	=
26	North Shore 1 Rehabilitation, NSA	10-047-3S		x			=	=	=
27	Phosphorus Recovery System, CWRP	12-245-3P				x	-	-	-
28	Decommissioning of the Thornton Transitional Reservoir	15-266-3F		x			=	=	=
29	Odor Control Facilities, SWRP	14-114-3M				x	-	-	-
30	Organic Waste Receiving Station, SWRP	14-117-3P			x		-	++	=
31	Screens and Conveyor Improvements at 125th Street Pumping Station, CSA	09-230-3M		x			=	=	=
32	Battery B Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-128-3D		x			=	=	=
33	A/B and C/D Service Tunnel Rehabilitation - Phase III	16-127-3D		x			=	=	=
34	Battery C Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-129-3D		x			=	=	=
35	Fermenters, CWRP	16-269-3P				x	=	=	=
36	Palos Hills Pumping Station - Force Main, CSA	11-242-3S		x			=	=	=
37	Deammonification System, SWRP	13-101-3P	x				=	-	=
38	Battery D Final Settling Tanks, Rehabilitation of Concrete, SWRP	16-130-3D		x			=	=	=

<b>LEGEND</b>	
Under " <b>Justification</b> ," the marked columns note the categories of benefits expected from each project.	
<p>+ or - Labor savings (+) or increases (-) expected to result in redirecting existing manpower away from or toward facility or process to other tasks with no net change in total position costs.</p> <p>+ or - Minor energy savings (+) or costs (-) having a negligible impact on the District's overall energy budget.</p> <p>+ or - Chemical savings (+) or costs (-) having a negligible impact on the District's overall chemical costs.</p> <p>= No budgetary impact expected.</p>	<p><b>Manpower</b></p> <p>++ or -- Labor impact significant enough to ultimately result in reduction (++) or increase (--) in personnel. See additional cost details contained in the Project Fact Sheets.</p> <p><b>Energy</b></p> <p>++ or -- Major energy savings (++) or costs (--) expected to result in significant revisions to a facility's energy budget. See additional cost details contained in the Project Fact Sheets.</p> <p><b>Chemical</b></p> <p>++ or -- Major chemical savings (++) or costs (--) expected to result in significant revisions to the budgeted chemical expenditures for the associated process. See additional cost details contained in the Project Fact Sheets.</p>

**TARP PHASE 2 PROJECT COSTS**

Though only partially complete, TARP has already been effective in reducing pollution and flooding. In order to substantially resolve the pollution and flooding problems in the Chicagoland combined sewer area, the reservoirs component of TARP must be completed. The Majewski Reservoir is completed and functional, and the Thornton Reservoir was made operational at the end of 2015. The last TARP reservoir, McCook, is under construction. McCook and Thornton Reservoir project costs are shown in the tables below.

**McCook Reservoir**

Project Name	Project Number	Estimated Cost (in thousands)				Eligible for Federal Cost Sharing	Status
		Outside Engineering	Construction	Total			
McCook Reservoir - Army Corps Work	73-161-2H	\$83,000	\$574,600	\$657,600	\$641,142	Army Corps Projects, District pays 25%	
Conveyance Tunnel	73-161-AH	891	4,537	5,428	0	Completed	
Site Preparation	73-161-BH	0	889	889	307	Completed	
Overburden Removal	73-161-CH	500	65,816	66,316	0	Completed	
Expanded Stage 2 Overburden Removal	73-161-DH	0	18,696	18,696	0	Completed	
Vulcan Excavation Agreement Hard Costs	73-161-EH	35	94,717	94,752	0	Mining underway	
Expanded Stage 2 - Other Costs	-	0	7,000	7,000	0	Future	
Expanded Stage 2 Slope Stab. & Retaining Walls	16-125-4F	0	11,200	11,200	0	Under Design	
Vulcan Conveyor and Maintenance Facilities	73-161-FH	1,817	30,564	32,381	1,753	Completed	
Vulcan Miscellaneous Mining Vehicles	73-161-GH	0	4,884	4,884	0	Completed	
Vulcan Mining Trucks and Loaders	73-161-HH	0	11,105	11,105	0	Completed	
Stage 2 Misc. Overburden Removal	73-161-JH	0	6,510	6,510	0	Completed	
Furnish and Deliver Primary Crusher	PO3030920	0	1,626	1,626	0	Completed	
Willow Springs Berm	96-249-2P	0	3,593	3,593	0	Completed	
73rd Street Tunnel Relocation	97-156-2H	129	15,003	15,132	15,132	Completed	
Des Plaines Inflow Tunnel	13-106-4F	2,071	107,770	109,841	0	Under Construction	
District Engineering/PM	-	2,500	0	2,500	2,500	Ongoing	
District Land Value	-	38	5,375	5,413	5,413	Completed	
<b>Total Project Cost</b>		<b>\$90,981</b>	<b>\$963,885</b>	<b>\$1,054,866</b>	<b>\$666,247</b>		

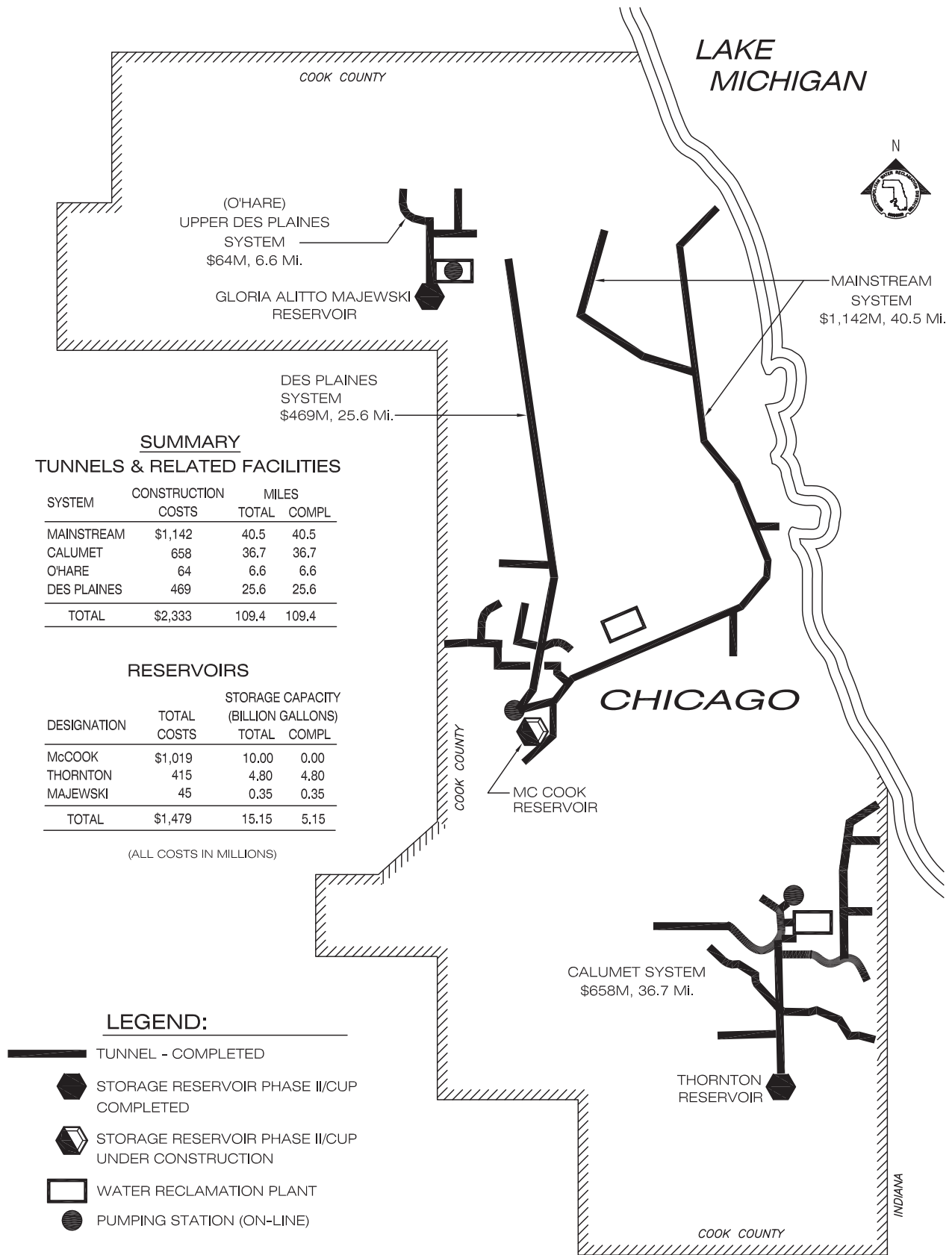
<b>Total McCook Reservoir Project Costs</b>	<b>\$1,054,866</b>
-Amount Ineligible for Cost Sharing	388,619
-Amount Eligible for Cost Sharing	666,247
<i>Corps' Share (75%)</i>	499,685
<i>District's Share (25%)</i>	166,562
District's Cash Payments to Date	134,261
District's Estimated Credits	25,322
Estimated Remaining Payments to Corps	6,979

Note: Through Q2 2016 the District has received \$13.9 million in royalty payments from Vulcan for the sale of rock mined from the site. It is estimated that the District will receive a total of \$36 million in royalties over the life of the project, offsetting some of the District's costs.

**Thornton Reservoir**

Project Name	Project Number	Estimated Cost (in thousands)				Eligible for Federal Cost Sharing	Status
		Outside Engineering	Construction	Total			
Vincennes Avenue Relocation	77-235-AF	\$483	\$3,534	\$4,017	\$3,534	Completed	
Thornton Transitional Reservoir	77-235-BF	2,970	51,737	54,707	0	Completed	
Transitional Reservoir GW Monitoring Wells	77-235-CF	0	529	529	0	Completed	
Overburden Removal and Berm Construction	JOC	0	1,674	1,674	0	Completed	
Chain Link Fence	77-235-2F	0	140	140	0	Completed	
MSC Hard Costs	77-235-2F	0	24,565	24,565	0	Completed	
MSC Lost Reserves/Capital Costs	77-235-2F	0	21,781	21,781	15,485	Completed	
Other Lands and Easements	77-235-2F	0	11,086	11,086	11,086	Completed	
Corps of Engineers LRR (Planning)	77-235-2F	6,345	0	6,345	6,345	Completed	
Tollway Dam, Grout Curtain, and Quarry Plugs	04-201-4F	12,809	64,992	77,801	77,801	Completed	
Connecting Tunnels and Gates	04-202-4F	10,017	137,067	147,084	147,084	Completed	
Final Reservoir Preparation	04-203-4F	9,347	53,925	63,272	63,272	Completed	
Surface Aeration	04-203-AF	701	1,195	1,896	1,896	Completed	
<b>Total Project Costs</b>		<b>\$42,672</b>	<b>\$372,225</b>	<b>\$414,897</b>	<b>\$326,503</b>		

<b>Total Thornton Reservoir Project Costs</b>	<b>\$414,897</b>
-Amount Ineligible for Cost Sharing	88,394
-Amount Eligible for Cost Sharing	326,503
<i>Corps' Share (75%)</i>	244,877
<i>District's Share (25%)</i>	81,626



# TUNNEL and RESERVOIR PLAN PROJECT STATUS

## TARP Pump #8 Rehabilitation, MSPS

**Project Number:** 02-111-3M

**Service Area:** Stickney

**Location:** Mainstream Pumping Station

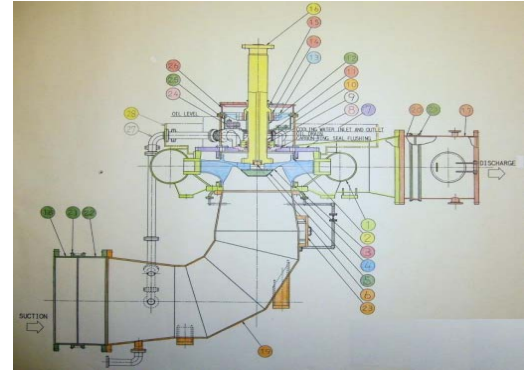
**Engineering Consultant:** In-house design

**General Contractor:** Broadway Electric, Inc.

**Estimated Construction Cost:** \$4,533,000

**Contract Award Date:** April 2015

**Substantial Completion Date:** January 2017\*



**Project Description:** The purpose of this project is to completely overhaul the pump and motor of main sewage pump #8 in the north pump house of the Mainstream Pumping Station. Also, the new inflatable seal design utilized on pumps #2 and #6 will be installed on pump #8. This contract will serve as the model for the overhaul of the other five original installations.

**Project Justification:** The complete overhaul of the pump and motor involves the installation of new parts and current technology components, which will reduce the maintenance labor required for both pieces of equipment and improve reliability. The new inflatable seal design will increase the life of the mechanical seal and decrease leakage. The pump and motor will operate more efficiently by pumping more liquid in less time, leading to reduced electricity usage. The overhaul will extend the useful life of the pump and motor which have been in service since May 1985.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## West Side Primary Settling Tanks 1-9 and Aerated Grit Facility, SWRP

**Project Number:** 04-128-3P

**Service Area:** Stickney

**Location:** Stickney WRP

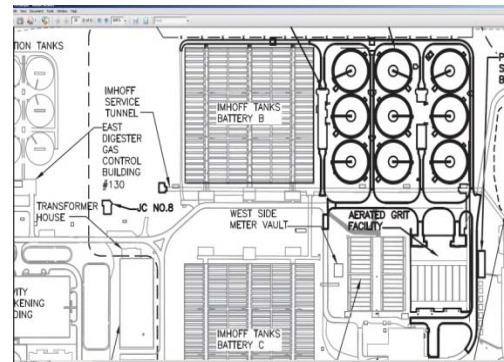
**Engineering Consultant:** Greeley and Hansen

**General Contractor:** IHC Construction Companies, LLC and F.H. Paschen, S.N. Nielsen Joint Venture

**Estimated Construction Cost:** \$226,208,000

**Contract Award Date:** December 2014

**Substantial Completion Date:** July 2018\*



**Project Description:** Construction of nine 160-foot diameter primary settling tanks (PST) and six 132-foot long aerated grit tanks, associated support facilities, service tunnels, and conduits. The aerated grit facility will include shaftless-screw conveyors, centrifugal and airlift pumps for grit removal, grit classifiers, and a dumpster-loading system. Grit tanks will be covered for odor control. Process air for the grit tanks and PSTs will be provided by new turbo blowers. The PST area will have tunnel access pump stations containing scum pumps, sludge airlifts, an electrical substation, odor control vessels and fans, and associated equipment. PST effluent weirs and troughs will be covered for odor control. The ability to bypass six PSTs will be provided. Additionally, modifications to the existing Monitoring & Research building at the Stickney Water Reclamation Plant are included in this project. The work involves the installation of new air handling units, an absorption chiller, heat exchangers, pumps, and strobic fans. Replacement of associated controls, intake, supply, and exhaust ductwork, piping, conduit, and wiring at the Monitoring & Research building is also included. Equipment will be provided by the District, but installed by the contractor. Piping will be installed in Mechanical Room LC-118 to bypass and abandon leaking underground condenser water piping.

**Project Justification:** The West Side Imhoff tanks are being decommissioned and replaced with more modern and effective treatment equipment. Imhoff battery A and skimming tanks 1-8 have already been demolished in preparation for this project. The Imhoff tanks that have been in service since 1928 are labor-intensive to operate and provide inferior treatment to PSTs. Valves for sludge withdrawal are difficult to operate and have resulted in injuries to personnel. Skimming scum from Imhoff tanks requires personnel to walk narrow walkways above open sewage without fall protection. Certain areas of the structures have exhibited structural cracking and leakage from conduits. Maintenance and repair supplies are not readily available for antiquated systems. Sludge solids are digested in the lower anaerobic zone of the Imhoff tanks and the methane gas byproduct of digestion is impossible to capture and is emitted to the atmosphere. A significant increase in digester gas production will result from this project, allowing the District to proceed on the path to energy neutrality. The aerated grit facility will replace the existing West Side skimming tanks and provide superior grit removal, thus protecting downstream piping and equipment from damage due to scouring by grit. The existing skimming tanks and grit concentration utilize maintenance-intensive chain-and-flight mechanisms. In addition, the skimming tanks and existing grit concentration create a recycle load of up to 100 million gallons per day. There will be minimal recycling from the new facilities. The existing Imhoff and skimming tanks are significant generators of odor. Odors from new facilities will be captured and removed, in keeping with the District's good-neighbor policy. The central portion of the Monitoring & Research building was constructed in 1963 and much of the existing equipment in this area is original to the facility. The supply and exhaust ventilation can no longer meet the testing and ventilation needs of the facility staff. Increased maintenance needs and the increased risk of failure necessitate that it be replaced to ensure a reliable and safe environment for the employees.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## A/B and C/D Service Tunnel and Connecting Tunnel Rehabilitation - Phase II, SWRP

**Project Number:** 04-132-3D

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design and Consultant, RME

**General Contractor:** IHC Construction Companies, LLC and F.H. Paschen, S.N. Nielsen Joint Venture

**Estimated Construction Cost:** \$20,519,000

**Contract Award Date:** May 2016

**Substantial Completion Date:** April 2019\*



**Project Description:** This project will rehabilitate approximately 200 feet of the A/B service tunnel and 135 feet of the C/D service tunnel, and it will replace 150 feet of connecting tunnel between the A/B and C/D service tunnels.

**Project Justification:** The A/B and C/D service tunnels are approximately 70 to 80 years old, and significant deterioration has occurred since they were placed into service. Rehabilitating the tunnels will restore structural capacity, extend their service life, and prevent further damage to the utilities inside the tunnels.

**Project Status:** This project is under construction.

\*Information shown is estimated.



## Salt Creek Intercepting Sewer 2 Rehabilitation, SSA

**Project Number:** 06-155-3S

**Service Area:** Stickney

**Location:** Proviso Township and Lyons Township

**Engineering Consultant:** In-house design

**General Contractor:** Kenny Construction Company

**Estimated Construction Cost:** \$43,878,000

**Contract Award Date:** December 2015

**Substantial Completion Date:** September 2018\*



**Project Description:** This project consists of rehabilitating approximately 32,800 feet of intercepting sewer with sizes ranging from 10" diameter to 7' x 7' semi-elliptic concrete pipe by using the cured-in-place pipe lining method, the channeline lining method, and/or the spray-on geopolymer lining system. This project also includes rehabilitating 81 manholes and two junction chambers by the spray-on lining system and/or the fiber wrap system, rebuilding and raising 11 manholes, constructing one manhole, and making control structure modifications.

**Project Justification:** The sewers were inspected by the Maintenance & Operations Department in 2003 with a closed-circuit television inspection system. The video inspection tapes show cracks (circular and longitudinal), sewage solids deposits, sags, offset joints, root intrusion, infiltration, and concrete corrosion due to the action of hydrogen sulfide generated by the decomposition of settled solids. Physical inspection of the manholes revealed cracks and holes in the walls and on the bases of the manholes.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Calumet TARP Pumping Station Improvements, CWRP

**Project Number:** 06-212-3M

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** AECOM

**General Contractor:** Sollitt/Sachi/Alworth Joint Venture

**Estimated Construction Cost:** \$35,288,000

**Contract Award Date:** May 2013

**Substantial Completion Date:** May 2018\*



**Project Description:** The purpose of this project is to replace the existing East 1 and West 1 Tunnel and Reservoir Plan (TARP) pumps with larger capacity pumps, replace their motors, and install new 4.6 kilovolt variable frequency drives (VFDs) for the pumps. The suction and discharge piping will be modified to accommodate the new pumps. Also, the remaining four pumps, East 2 and 3 and West 2 and 3, will be replaced with new 72 million gallons per day pumps, along with new motors and four 4.6 kilovolt VFDs. The drives will be located on an elevated platform in each of the pump rooms. A low pressure steam line will be constructed from the high-level influent pumping station to TARP for heating needs. The grading, roads, and site work disturbed during construction will be completed and restored.

**Project Justification:** This project will increase the firm pumping capacity of each pump room to 150 million gallons per day while restoring the dependability of the equipment at the Calumet TARP Station. There will be some increase in maintenance costs due to the addition of VFDs in place of the constant speed motors for the existing small pumps. However, VFDs will allow better control of pumping and reduce energy costs by matching pump speed with flow needs.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## D799 Switchgear Replacement, SWRP

**Project Number:** 09-182-3E

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** Electrical Systems, Inc.

**Estimated Construction Cost:** \$12,645,000

**Contract Award Date:** December 2015

**Substantial Completion Date:** July 2019\*



**Project Description:** Replacement of the medium voltage (13.2kV) switchgear and medium voltage feeder cables in D799 at the Stickney WRP.

**Project Justification:** The medium voltage switchgear and cables are over 30 years old. Failure of a tie breaker in 2009 caused the Stickney WRP facility to be out of service. Replacement of the switchgear would improve reliability, reduce the risk of failure, provide enhanced safety features, and provide for future expansion (proposed new Monitoring & Research laboratory and disinfection facility). Due to the switchgear's condition, the increased risk of failure necessitates its replacement to ensure the appropriate level of service. Recent inspection and testing revealed the potential of an incipient failure of the cables. They should be replaced to avoid a catastrophic failure.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Phosphorus Recovery System, SWRP

**Project Number:** 11-195-AP

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** Black & Veatch Corporation, Inc.

**General Contractor:** Black & Veatch Corporation, Inc./Ostara USA, LLC

**Estimated Construction Cost:** \$31,914,000

**Contract Award Date:** August 2014

**Substantial Completion Date:** January 2017\*



**Project Description:** The purpose of this project is to construct a facility to recover phosphorus from the pre- and post-centrifuge centrates. The scope of work will include the construction of a building to house the recovery process and product storage, installation of the Ostara Pearl® reactors, and installation of pumping equipment and appurtenances to transfer the centrates to this facility. As a result of Proposal 12-RFP-20, Phosphorus Recovery Plan at the Stickney WRP, the Black & Veatch Corporation, Inc./Ostara USA, LLC team was selected to design and construct this facility. The District will operate the facility, and Ostara USA, LLC will continue to market the product for the term of the agreement.

**Project Justification:** The District is voluntarily looking at means to reduce the phosphorus concentration in the Stickney WRP effluent. The District is further refining the enhanced biological phosphorus removal treatment occurring at the Stickney WRP to allow an increased uptake of phosphorus into our solids. The Ostara Pearl® Process will be utilized to recover the phosphorus from our system. The recovered phosphorus will be a marketable product. A combination of the enhanced biological phosphorus removal and the phosphorus recovery should effectively lower the District's effluent phosphorus concentration and recover a resource (phosphorus) that is being depleted in the world.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Calumet Intercepting Sewer 19F Rehabilitation, CSA

**Project Number:** 11-239-3S

**Service Area:** Calumet

**Location:** Bremen and Proviso Township

**Engineering Consultant:** In-house design

**General Contractor:** Insituform Technologies USA, LLC

**Estimated Construction Cost:** \$12,306,000

**Contract Award Date:** June 2016

**Substantial Completion Date:** July 2018\*



**Project Description:** The project consists of rehabilitating approximately 14,051 linear feet of 60-inch sewer pipe, 252 feet of 20-inch circular sewer, 23 drop manholes, and one junction structure, removing an existing 48-inch cast-in-place structure, and abandoning of a 10-inch diameter pipe.

**Project Justification:** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system. The video shows infiltration and concrete/metal deterioration due to hydrogen sulfide. In order to restore the hydraulic and structural integrity of the sewers, they need to be rehabilitated. The manholes and structures exhibit similar signs of deterioration and need to be rehabilitated.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Organic Waste Receiving Facility and Digester Gas Flare Upgrade, CWRP

**Project Number:** 11-240-3P

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$10,500,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** June 2018\*



**Project Description:** The overall scope includes repurposing a decommissioned sludge screening building into an organic waste receiving and processing facility. Construction includes a receiving station for unloading two tanker trucks simultaneously, a receiving pit for high strength liquid waste and fats, oils, and greases, screens, transfer pumps, transfer piping, odor control, and site work for handling truck traffic. Due to the increase in digester gas production, two new digester gas flares must be added, and the existing flares in the flare house will be rebuilt.

**Project Justification:** Biogas, generated as a by-product of the anaerobic digestion process at the Calumet WRP, has value as a fuel. Currently, the biogas is used to produce steam in boilers for plant heating. There are periods of time in the year when the steam demand is low and not all of the biogas is fully utilized. This project will permit the increase in biogas production by approximately 70 percent over the current volume by utilizing excess capacity in the digesters to take in organic waste material from outside sources. All of the biogas produced by plant solids and organic feedstock will then be fully utilized as an energy source, as a step towards energy neutrality. The biogas utilization facilities will be constructed under a separate project. Liquid organic waste will be supplied by a single supply chain manager to provide consistency and certainty of volume. Organic wastes will include high strength liquid waste from industrial sources such as food processing plants, and fats, oils, and greases from grease traps and commercial waste. The liquid organics supply chain manager will be selected under a separate request for proposal process. The receiving station constructed under this project will handle up to 200,000 gallons of liquid organic wastes per day.

**Project Status:** This project is being designed.

\*Information shown is estimated.

## McCook Reservoir Des Plaines Inflow Tunnel

**Project Number:** 13-106-4F

**Service Area:** Stickney

**Location:** Mainstream Pumping Station

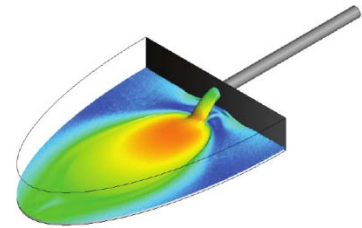
**Engineering Consultant:** Black & Veatch Corporation, Inc.

**General Contractor:** Walsh Construction Company II, LLC

**Estimated Construction Cost:** \$107,770,000

**Contract Award Date:** June 2016

**Substantial Completion Date:** February 2020\*



**Project Description:** This project consists of the construction of an approximately 20-foot diameter tunnel that will connect the Des Plaines tunnel directly to the McCook Reservoir and includes a gate shaft, primary gate, backup gate, gate control building, temporary construction access shaft, tunnel portal and highwall stability measures, and an energy dissipation apron with baffle blocks. The project also includes the demolition of an existing concrete tunnel plug, making a live connection to the existing Des Plaines Tunnel System and future McCook Reservoir, installation of reservoir level and tunnel inflow instrumentation, installation of ductbanks, conduits, wiring, lighting, and electrical equipment, installation of permanent perimeter fencing, and performance of other work.

**Project Justification:** The McCook Reservoir project is an essential part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows (CSOs). The tunnel is required to provide adequate conveyance of CSOs from the Des Plaines tunnel to the reservoir. The tunnel will improve upon the conveyance plan formulated by the Army Corps of Engineers, which includes undesirable flow restrictions.

**Project Status:** This project is under construction.

\*Information shown is estimated.



## Calumet TARP Screens, CWRP

**Project Number:** 13-246-3M

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** Rubinos & Mesia Engineers, Inc.

**General Contractor:** The George Sollitt Construction Company

**Estimated Construction Cost:** \$12,754,000

**Contract Award Date:** February 2015

**Substantial Completion Date:** January 2019\*



**Project Description:** The purpose of this project is to replace the existing bar screens, which are located upstream of the Tunnel and Reservoir Plan (TARP) pumping station approximately 350 feet below ground, with new screens which will be mechanically cleaned. The cleaning mechanism will be rail mounted at ground level and have a gripper, which will travel down the shaft and remove the screenings from the bar screens, returning them to the surface for disposal. The work will be performed in conjunction with Contract 06-212-3M, Calumet TARP Pumping Station Improvements, CWRP.

**Project Justification:** This project will restore the dependability of the equipment at the Calumet TARP pumping station. With the addition of the screen cleaning mechanism, there will be a decrease in maintenance costs for the screens due to the elimination of the manual cleaning operation. However, there will be an increase in energy costs. The mechanism will provide more frequent cleanings and a safer operation, as workers will no longer need to be lowered into the wet shaft via a man basket in order to manually clean the screens.

**Project Status:** This project is under construction.

\*Information shown is estimated.



## Albany Park Stormwater Diversion Tunnel

**Project Number:** 14-066-3F

**Service Area:** North

**Location:** Chicago, Illinois

**Engineering Consultant:** MWH Americas, Inc. under contract with Chicago Department of Transportation (CDOT)

**General Contractor:** Kenney Construction Company under contract with CDOT

**Estimated Construction Cost:** \$24,750,000 (District cost share amount)

**Contract Award Date:** August 2013 (Board authority to enter agreement)

**Substantial Completion Date:** May 2018\*



**Project Description:** Flood control project along the North Branch of the Chicago River to install a stormwater diversion tunnel to alleviate overland flooding in the Albany Park neighborhood in Chicago. CDOT proposes to construct a large diameter tunnel that would divert a portion of flood flows in the North Branch of the Chicago River from an inlet structure near Foster Avenue and North Springfield Avenue to an outlet on the North Shore Channel near Foster Avenue and Virginia Avenue. The proposed project includes an inlet shaft with inlet facilities, approximately 5,800 feet of 18-foot diameter rock tunnel, and an outlet shaft with outlet facilities.

**Project Justification:** Safety/Regulatory. This project will help alleviate public health and safety concerns by reducing overbank flooding affecting 336 structures in the Albany Park neighborhood in Chicago. This project is designed and built by the City of Chicago. The District is sharing the cost.

**Project Status:** Construction contract awarded. Notice to Proceed was issued April 25, 2016. This project is under construction.

This project is funded under the Capital Improvements Bond Fund.

\*Information shown is estimated.

## Drop Shaft 5 Inspection and Rehabilitation, NSA

**Project Number:** 14-372-3S

**Service Area:** North

**Location:** City of Des Plaines

**Engineering Consultant:** In-house design/Black & Veatch

**General Contractor:** To be determined

**Estimated Construction Cost:** \$2,700,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** April 2018\*



**Project Description:** The project consists of the rehabilitation of the following work at Drop Shaft No. 5: Drop shaft by means of slip lining, 100 feet of 108-inch pipe by the cured-in-place pipe lining process, 100 feet of the drop shaft exit conduit by spray-on lining, and replacement of deteriorated appurtenances. The work also includes the installation of radar level measurement devices at three shafts on the Calumet tunnel system and the replacement of gates and stop logs on Drop Shaft DS-P1, which is part of the 39th Street Conduit.

**Project Justification:** Drop Shaft No. 5 was inspected visually by the Maintenance & Operations and Engineering Departments. The results of the visual inspection show concrete and metal deterioration due to hydrogen sulfide. In order to restore the structural integrity of the drop shaft and sewer, they need to be rehabilitated.

A bubbler instrumentation system was installed to measure and monitor water levels in the Tunnel and Reservoir Plan system. The District has found that the bubbler systems at these locations are unreliable and provide inaccurate data.

During storm events in 2014, the stop logs at DS-P1 dislodged and passed through the dual flap gate bulkhead. As a result, the bottom flap gates were severely damaged in a manner that prevents proper operation.

**Project Status:** The design phase is 60 percent complete.

\*Information shown is estimated.

## Rehabilitation of Bridges, NSA

**Project Number:** 14-824-3D

**Service Area:** North

**Location:** Linden, Maple, and Sheridan Road Bridges

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$2,093,000

**Contract Award Date:** July 2016

**Substantial Completion Date:** August 2017\*



**Project Description:** This project provides for the replacement of sidewalks on the Linden and Maple Avenue bridges, removal of encasing concrete from the bottom flanges of steel girders and beams of the Sheridan Road bridge, strengthening of steel members, and painting of steel members. In addition, the Maple Avenue and Linden Avenue bridges will be modified to make them bicycle friendly.

**Project Justification:** The sidewalks of the Maple Avenue and Linden Avenue bridges are severely cracked and out of alignment. They need to be replaced for the safety of pedestrians. The concrete encasement on the steel girders and beams of the Sheridan Road bridge is cracked and loose. This concrete needs to be removed to protect the equipment inside the Wilmette Pumping Station (under the bridge) and for the safety of pedestrians walking under the bridge to the Wilmette Harbor. In addition, several steel members of the Maple Avenue and Linden Avenue bridges have section loss due to corrosion and need strengthening. All steel members will be painted for protection from further corrosion.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Safety Railing around Tanks, OWRP

**Project Number:** 15-072-3D

**Service Area:** North

**Location:** O'Brien WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,400,000

**Contract Award Date:** September 2016

**Substantial Completion Date:** September 2017\*



**Project Description:** Install safety railings around aeration tanks for worker safety and to meet Occupational Safety and Health Administration regulations.

**Project Justification:** The guard rails were never installed around some of these tanks and are required for worker safety.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Main Sewage Pump Seal Water System Modification, MSPS

**Project Number:** 15-118-3M

**Service Area:** Stickney

**Location:** Mainstream Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,030,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** July 2018\*



**Project Description:** Installation of three break tanks to provide a break between the city water and the service water systems. The service water system is used to feed the pump seals on the main pump floor at approximately 340 feet below grade. The project will install the piping, valving, electrical conduits, and wiring for power and controls along with the tanks and pumping equipment required to provide an air gap separation for the North and South Pump Houses and in the Gate House Control Building.

Paint all piping that was previously city water and is now service water to identify the water system as non-potable. Insulation and pipe painting will be performed in accordance with District standards.

Install vacuum breaker on a sloop sink at grade level just outside of the North Pump House receiving room.

**Project Justification:** This project will be performed to update the city water system to the latest Illinois plumbing code.

**Project Status:** Bids received November 15, 2016 are being evaluated.

\*Information shown is estimated.

## Conversion of Old GCTs to the WASSTRIP® Process, SWRP

**Project Number:** 15-120-3P

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** Morrison Construction Company, Inc.

**Estimated Construction Cost:** \$5,223,000

**Contract Award Date:** May 2016

**Substantial Completion Date:** April 2018\*



**Project Description:** The remaining old gravity concentration tanks will be converted to the Waste Activated Sludge Stripping to Remove Internal Phosphorus (WASSTRIP®) process to aid in the release of phosphorus which will be recovered from the pre-digestion centrate by the existing Ostara process.

**Project Justification:** The WASSTRIP® process will increase the quantity of phosphorus that will be recovered by the Ostara facility. This enhances the District's strategic plan toward sustainability and resource recovery. Additional benefits of this process will be the reduction of struvite formation in the digesters and post centrate piping as well as improving the dewaterability of our biosolids. The fermentation of primary sludge will create additional volatile fatty acids necessary for a more stable operation of the enhanced biological phosphorus removal treatment process.

**Project Status:** This project is under construction.

\*Information shown is estimated.

## Aeration Tanks Air Valves Automation in Batteries A, B, C, and D, SWRP

**Project Number:** 15-122-3P

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$6,566,000

**Contract Award Date:** October 2016

**Substantial Completion Date:** December 2018\*



**Project Description:** This project will replace the existing manually operated angle globe valves with automated valves on the first seven drop locations of pass one in each aeration tank. The associated air drop piping will also be modified as necessary. The work includes aeration tanks in batteries A, B, C, and D with the exception of tanks D-7 and D-8, which have been modified under a different contract.

**Project Justification:** The District has implemented enhanced biological phosphorus removal at the Stickney WRP. Better process control is needed in the first pass, which will include an anaerobic zone and a swing zone. Periodic mixing of the anaerobic zone is necessary for volatile fatty acid release from in-line fermentation. Automation of these air valves will allow for periodic mixing as well as adjusting the length of the anaerobic zone based on flow and other operating conditions.

**Project Status:** This project is under construction.

\*Information shown is estimated.



## Safety Railing around Tanks, SWRP

**Project Number:** 15-123-3D

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$5,239,000

**Contract Award Date:** July 2016

**Substantial Completion Date:** October 2017\*



**Project Description:** Install safety railings at batteries A, B, and C aeration tanks along both sides of the walkways for worker safety and to meet Occupational Safety and Health Administration regulations.

**Project Justification:** The guard rails were never installed around some of these tanks and are required for worker safety.

**Project Status:** This project is under construction.

\*Information shown is estimated.



## Conversion of Two Gravity Concentration Tanks to Primary Sludge Fermenters, SWRP

**Project Number:** 15-124-3P

**Service Area:** Stickney

**Location:** Stickney WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,900,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** May 2018\*



**Project Description:** This project will convert two of the new gravity concentration tanks into fermenters and install a pumping station to pump the fermentate directly into the West Side primary effluent conduit feeding the secondary aeration batteries. This project will also install a gas detection system for the new gravity concentration tank building.

**Project Justification:** The District is pursuing Enhanced Biological Phosphorus Removal at the Stickney WRP for the recovery of phosphorus and meeting a new regulatory limit for phosphorus in the effluent. The fermentation of primary solids will result in an additional production of volatile fatty acids which will be fed directly in secondary treatment. The additional volatile fatty acids will be utilized in the Enhanced Biological Phosphorus Removal process, resulting in a more stable and better performing process. Additionally, code requirements for an enclosed gravity concentration tank area requires the installation of a combustible gas detection system.

**Project Status:** This project is being designed.

\*Information shown is estimated.

## Devon Instream Aeration Station Switchgear Replacement and Wilmette Pumping Station Conduit Replacement

**Project Number:** 16-077-3E

**Service Area:** North

**Location:** Devon Instream Aeration Station and Wilmette Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,000,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** January 2018\*



**Project Description:** Replace electrical switchgear and motor control center at the Devon Instream Aeration Station. Replace conduit at the Wilmette Pumping Station.

**Project Justification:** For the Devon Instream Aeration Station: The electrical equipment is over 30 years old and is in poor condition. In order to avoid failure and to ensure the appropriate level of service, the equipment must be replaced. For the Wilmette Pumping Station: Due to flooding, the wires-to-gate actuators have been subjected to freezing/thawing and therefore have become damaged. The underground conduit and wire will be replaced with above ground conduit and wire.

**Project Status:** This project is being designed.

\*Information shown is estimated.

## Rehabilitation of North Branch Pumping Station, NSA

**Project Number:** 16-079-3D

**Service Area:** North

**Location:** North Branch Pumping Station

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,500,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** October 2018\*



**Project Description:** Provide grouted fiberglass fiber reinforced plastic jackets around the existing concrete columns to protect columns from erosion. Repair underwater deteriorated concrete of the east wall and under the deck wall. Repair deteriorated concrete stairs and concrete deck. Restore balustrade and deck lighting.

**Project Justification:** This pumping station has five 300 cubic feet per second discharge pumps that discharge excess storm water into the river. The pipe outlets are a few feet below river water facing downward. The high velocity discharged water has caused severe erosion around the columns generally at the river bottom. As a result, concrete column cross sections have eroded more than 20 percent and, in some cases, up to 50 percent of the original size. Restoration of concrete columns is essential for the safe serviceability of the building. Also, concrete deck and stairs have spalled areas that need to be repaired.

**Project Status:** This project is in the preliminary design stage.

\*Information shown is estimated.

## McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls

**Project Number:** 16-125-4F

**Service Area:** Stickney

**Location:** Lawndale Avenue Solids Management Area

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$11,200,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** May 2018\*



**Project Description:** The scope of work consists of constructing approximately 2,000 linear feet of a soil nail retaining wall along the western and southern sides as well as slope stabilization work around the entire perimeter of Expanded Stage 2 of the McCook Reservoir.

**Project Justification:** The McCook Reservoir project is an essential part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows. The retaining walls with correlating stabilization of the side slopes are required to provide sufficient mining reserves to achieve the intended capacity of ten billion gallons.

**Project Status:** Design is 98 percent complete.

\*Information shown is estimated.

## Summit Conduit Rehabilitation, SSA

**Project Number:** 16-126-3S

**Service Area:** Stickney

**Location:** Lyons Township

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,700,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project consists of the rehabilitation of 810 feet of 6'x7' semi-elliptic cast-in-place concrete sewer and inlet and outlet structures. The Summit Conduit begins on the northwest side of the Des Plaines River and extends southeast under the Des Plaines River and the Stevenson Expressway to the northwest side of the Chicago Sanitary and Ship Canal.

**Project Justification:** The sewers were inspected by the Maintenance & Operations Department with a closed-circuit television inspection system. The video shows infiltration and concrete and metal deterioration due to hydrogen sulfide. In order to restore the hydraulic and structural integrity of the sewers, they need to be rehabilitated. The inlet/outlet structures show similar signs of deterioration and need to be rehabilitated.

**Project Status:** Design is 30 percent complete.

\*Information shown is estimated.

## Covered Composting System, CWRP

**Project Number:** 16-270-3P

**Service Area:** Calumet

**Location:** Calumet WRP

**Engineering Consultant:** To be determined

**General Contractor:** To be determined

**Estimated Construction Cost:** \$24,000,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** January 2018\*



**Project Description:** The scope of work for this project is to design a covered composting system to be located at the Calumet WRP's East Drying Cells 5 and 6. The design shall utilize the GORE® system sized for 25,000 dry tons of annual production at 20 percent solids content. The GORE® system requires a biosolids feedstock with 15 to 25 percent solids content and a bulking agent (e.g. wood chips, yard waste, or shredded paper) to be mixed with the biosolids. The GORE® system consists of three phases: Phase I—High Rate Composting, Phase II—Maturation, and Phase III—Finishing. Each phase occurs at its own location. Phases I and II occur under a three-layer laminate cover in bunkers with four-foot high walls. The bunkers separate the compost piles and provide support for a cover winding system to easily install and remove the GORE® covers from the piles. No cover is needed in Phase III. A total of 36 bunkers are required for Phase I, and 18 bunkers are required for Phase II. Also included are conveyors to move material between phases, a receiving and mixing building, a biofilter system, blowers, and ancillary mechanical and electrical equipment.

**Project Justification:** The purpose of this project is to provide facilities at the Calumet WRP for high quality composted biosolids product to be marketed and sold. The system will produce an exceptional quality, Class A biosolids product, while containing nuisance odors generated during the process.

**Project Status:** This project is being designed.

\*Information shown is estimated.

## Furnish, Deliver, and Install Junction Chamber Odor Control System, CWRP

**Project Number:** 16-271-3P

**Service Area:** Calumet

**Location:** Calumet WRP

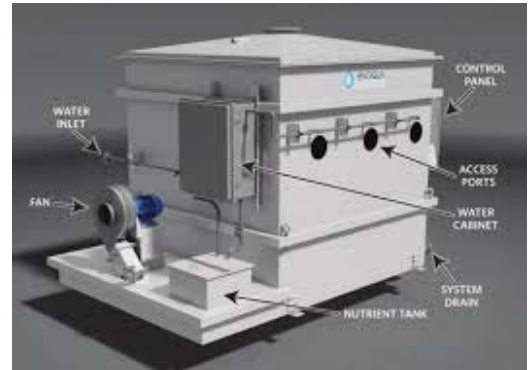
**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,000,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** June 2018\*



**Project Description:** The high-level influent pumping station is an odorous area at the Calumet WRP. Odor compounds, their concentrations, and associated air flows were collected and evaluated to determine the best available strategy to address the odor emissions in this area. A biotrickling filter will be installed to mitigate odors.

**Project Justification:** This project will reduce the odor emissions that affect the District's neighbors and staff.

**Project Status:** Detailed design is in progress.

\*Information shown is estimated.

## Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP

**Project Number:** 16-272-3P

**Service Area:** Calumet

**Location:** Calumet WRP

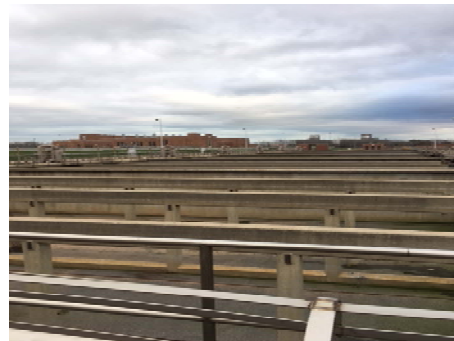
**Engineering Consultant:** Black & Veatch, Inc. (expected)

**General Contractor:** To be determined

**Estimated Construction Cost:** \$3,500,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** October 2018\*



**Project Description:** The project will construct a receiving station for high strength waste to assist in enhanced biological phosphorus removal (EBPR) at the Calumet WRP. Two of the old primary tanks will be repurposed and utilized, including repair of the tanks, coating of the tanks, covers, odor control, mixers, pumps, and piping with the ability to feed either batteries A, B, and C and/or E1/E2.

**Project Justification:** The District has volunteered a 1.0 milligram per liter total phosphorus limit for the Calumet WRP's effluent permit. EBPR is a sustainable approach to removing phosphorus; contrary to chemical phosphorus removal, there is not an increase in sludge produced and it allows for the phosphorus captured in the biosolids to be recovered and reused. However, influent characteristics need to be favorable to encourage the microorganisms to uptake phosphorus, including sufficient usable carbon. At the Calumet WRP, studies have shown that there is not enough carbon in the wastewater to support EBPR. In order to supplement the carbon loading to the plant, the District is pursuing the addition of high strength wastes to the aeration tanks. The conversion of the primary tanks through this project allows for the receiving, storage, and distribution of the high strength waste.

**Project Status:** The design contract is expected to be awarded in January 2017. The construction contract is expected to be awarded in October 2017.

\*Information shown is estimated.



## Furnish, Deliver, and Install Odor Control Systems, KWRP

**Project Number:** 16-373-3P

**Service Area:** North

**Location:** Kirie WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,000,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** October 2018\*



**Project Description:** The north and south pumphouses of the Kirie Water Reclamation Plant produce odorous emissions. Odor compounds, concentrations, and associated air flows were collected and evaluated to determine the best available strategy to address these emissions. A carbon adsorption filter unit will be installed to address the odorous exhaust from the north and south pumphouses.

**Project Justification:** This project will reduce the odor emissions that affect the District's neighbors and staff. The plant is located near a residential neighborhood and is next to public athletic fields.

**Project Status:** Detailed design is in progress.

\*Information shown is estimated.

## Furnish, Deliver, and Install Odor Control Systems, HPWRP

**Project Number:** 16-537-3P

**Service Area:** North

**Location:** Hanover Park WRP

**Engineering Consultant:** In-house design

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,000,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** April 2018\*



**Project Description:** The coarse screen building exhaust, gravity belt thickener exhaust, aerated grit tanks, and pre-treatment building are odorous areas at the Hanover Park WRP. Odor compounds, concentrations, and associated air flows were collected and evaluated to determine the best available strategy to address the odor emissions. The following technologies will be applied: a biotrickling filter unit will be installed to address odors from the gravity belt thickener exhaust, a separate biotrickling filter unit will be installed to address the odors from the pre-treatment building and the aerated grit tanks, and a carbon adsorption filter unit will be installed to address the coarse screen building exhaust. The project will also include the installation of covers over the aerated grit tanks.

**Project Justification:** This project will reduce the odor emissions that affect the District's neighbors and staff. The plant is located in a residential neighborhood, next to an elementary school.

**Project Status:** This project is being designed.

\*Information shown is estimated.

## Public Building Commission Guaranteed Energy Performance Contract

**Project Number:** 16-PBC-MO

**Service Area:** Calumet and Stickney

**Location:** Calumet WRP, Stickney WRP

**Engineering Consultant:** Public Building Commission of Chicago

**General Contractor:** Noresco, LLC

**Estimated Construction Cost:** \$4,250,000

**Contract Award Date:** February 2016

**Substantial Completion Date:** September 2017\*



**Project Description:** The 2016/17 energy performance project is primarily focused on energy-related capital improvements at the Calumet Water Reclamation Plant. The work includes the installation of upgraded HVAC controls, custom blanket insulation of certain steam pipe fittings and valves, and the conversion of obsolete light fixtures to the latest light-emitting diode lamp technology. Also included in the 2016/17 energy performance project is a light emitting diode fixture modernization project at a large warehouse at the Stickney Water Reclamation Plant.

**Project Justification:** The projects were recommended by the Public Building Commission of Chicago as part of their Investment Grade Audit Report.

**Project Status:** This project is in progress.

\*Information shown is estimated.

## Design, Build, Operate, and Maintain a Native Plant and Tree Nursery at the Hanover Park WRP, Fischer Farm

**Project Number:** 16-RFP-09

**Service Area:** North

**Location:** Hanover Park WRP

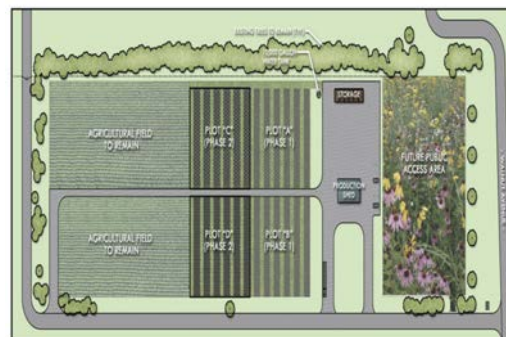
**Engineering Consultant:** To be determined

**General Contractor:** To be determined

**Estimated Construction Cost:** \$3,500,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Establish a native prairie landscape and tree farm nursery at the Hanover Park WRP, Fischer Farm that will use the District's biosolids-based compost as a growing media. The plants and trees cultivated at the nursery will be used at District facilities and other properties in the area. As production matures, the beneficiaries of the program will expand to local communities and other government agencies. The facility will also be used for educating communities about the beneficial use of biosolids, a byproduct of the wastewater treatment process.

**Project Justification:** The metropolitan Chicago region's tree population has been decimated by the emerald ash borer beetle and other pests and diseases. This project will not only demonstrate the usefulness of biosolids-based compost as a growing media, but will also increase public awareness of the need to restore the tree canopy in the region.

Under this project, volunteers will be recruited from the community to take an active role in growing the trees and shrubs from seed, as well as providing educational programs for adults and children. The nursery will serve as a model for other communities in demonstrating the value and viability of this common wastewater treatment product.

The District is committed to sustainable practices encompassing the use of biosolids as a resource rather than a waste product. The use of biosolids as a fertilizer will save landfills and will benefit society as a whole.

**Project Status:** Pending award.

\*Information shown is estimated.

## Enhancements to iPACS

**Project Number:** 17-1SS-31

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

**Engineering Consultant:** enfoTech & Consulting, Inc.

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$200,000

**Contract Award Date:** January 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** This project is to improve the capabilities of the internet-based Publicly owned treatment works Administration and Compliance System, which manages the District's pretreatment database system, with new software upgrades and modify the current database schema. As a result, the Pretreatment & Cost Recovery Section will be able to more efficiently utilize the tools provided and reduce maintenance costs on database servers.

**Project Justification:** The current internet-based Publicly owned treatment works Administration and Compliance System software was developed starting in 2007 by enfoTech. In the intervening nine years, the consultant has developed, with its other clients, many tools to make the software more efficient for pretreatment programs. Utilizing these improvements, along with migrating the software to a new, single Microsoft SQL database server, will increase efficiency by reducing manual steps in data analysis and provide long-term reductions in licensing fees by utilizing database software District-wide. These changes are in line with the District's goals for Innovation, as we continue to develop new capabilities to more efficiently complete our work and provide better customer service to our users.

**Project Status:** Design Phase

\*Information shown is estimated.

## Enhancements to the Laboratory Information Management System (LIMS)

**Project Number:** 17-RFP-15

**Service Area:** North, Calumet, and Stickney

**Location:** District-wide

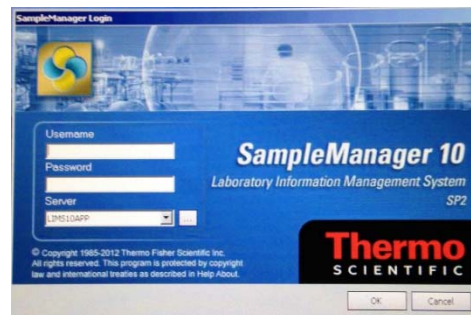
**Engineering Consultant:** To be determined

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$300,000

**Contract Award Date:** March 2017\*

**Substantial Completion Date:** December 2017\*



**Project Description:** Upgrade current Laboratory Information Management System (LIMS) version SM 10.2 to SM 11.2 and implement LIMS enhancements. Integrate the Organic Compound Analytical Laboratory fully into LIMS.

**Project Justification:** LIMS is currently heavily customized and we seek to greatly reduce this customization. LIMS version SM 11.2 has several functionalities out of the box that will replace significant portions of custom code, such as aliquoting and labels. This should also help to reduce the Monitoring & Research Department's reliance on the Information Technology Department, reduce the potential for transcription errors by having data automatically transfer between LIMS and instruments, and reduce chemist/technician/support specialist time as they will not have to manually enter data into reports or manually calculate quality control limits. The NELAC Institute rules for laboratory accreditation can be followed using the reagent, standard, and training tracking functionalities in LIMS. This would reduce the need to manually maintain and monitor additional tracking spreadsheets. Other departments can then also pull organic compounds data from LIMS for reporting purposes. Organic compounds are analyzed for NPDES permits, water quality, 503 Biosolids permits, and for Industrial Waste ordinances.

**Project Status:** Design Phase

\*Information shown is estimated.







LOCATION MAP

39th STREET CONDUIT REHABILITATION -  
 PHASE II, SSA  
 REHABILITATE CONDUIT FROM LAKE  
 SHORE DRIVE TO THE RACINE AVENUE  
 PUMPING STATION  
 COST: \$24,700,000

**LEGEND:**

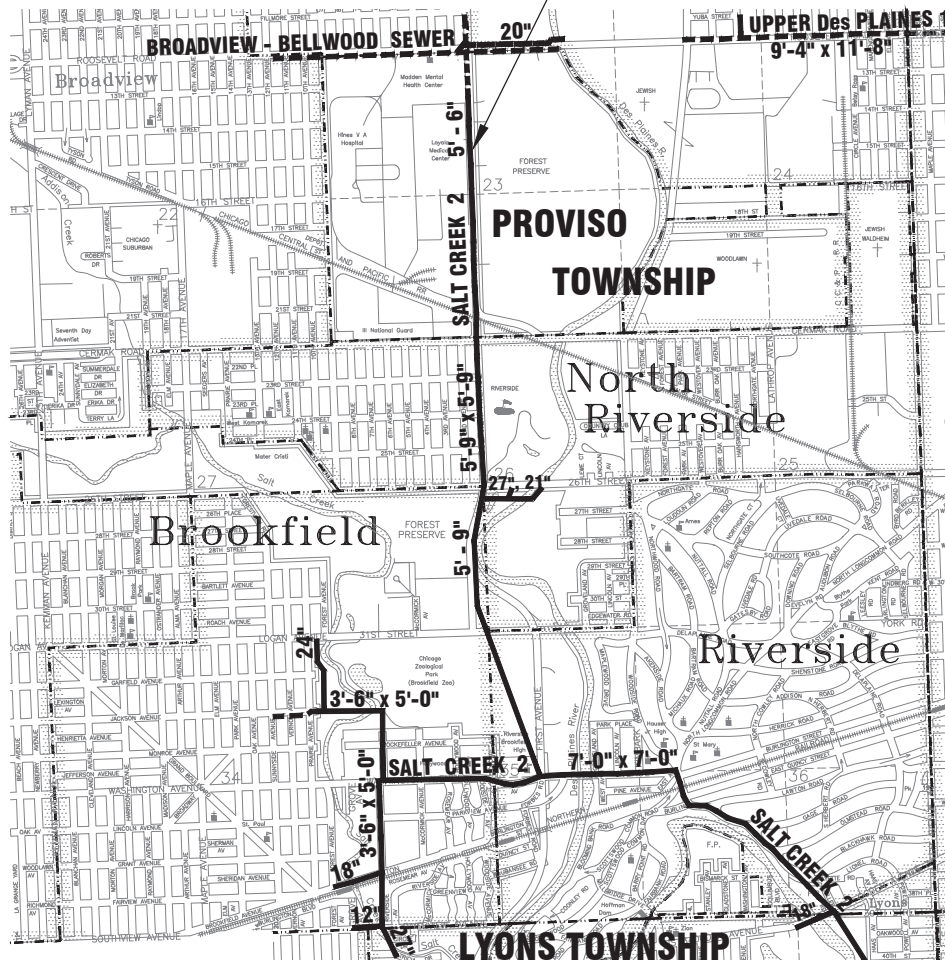
- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**39th STREET CONDUIT REHABILITATION - PHASE II, SSA**  
**CONTRACT 01-103-AS**





**SALT CREEK INTERCEPTING SEWER 2 REHABILITATION, SSA**  
**REHABILITATION OF:**  
 70 FEET OF 10-INCH DIAMETER PIPE  
 300 FEET OF 12-INCH DIAMETER PIPE  
 48 FEET OF 15-INCH DIAMETER PIPE  
 1,330 FEET OF 18-INCH DIAMETER PIPE  
 292 FEET OF 20-INCH DIAMETER PIPE  
 278 FEET OF 21-INCH DIAMETER PIPE  
 1,370 FEET OF 24-INCH DIAMETER PIPE  
 634 FEET OF 27-INCH DIAMETER CLAY PIPE  
 778 FEET OF 27-INCH DIAMETER CONCRETE PIPE  
 7,857 FEET OF 3'6" x 5'0" SEMI-ELLIPTICAL PIPE  
 12,442 FEET OF 5'9" x 5'9" SEMI-ELLIPTICAL PIPE  
 7,400 FEET OF 7'0" x 7'0" SEMI-ELLIPTICAL PIPE  
 REHABILITATION OF 81 MANHOLES  
 REHABILITATION OF 2 JUNCTION CHAMBERS  
 REBUILDING/RAISING OF 11 MANHOLES  
 CONSTRUCTION OF 1 MANHOLE  
 CONTROL STRUCTURE MODIFICATION  
**COST: \$43,878,000**



**LEGEND:**

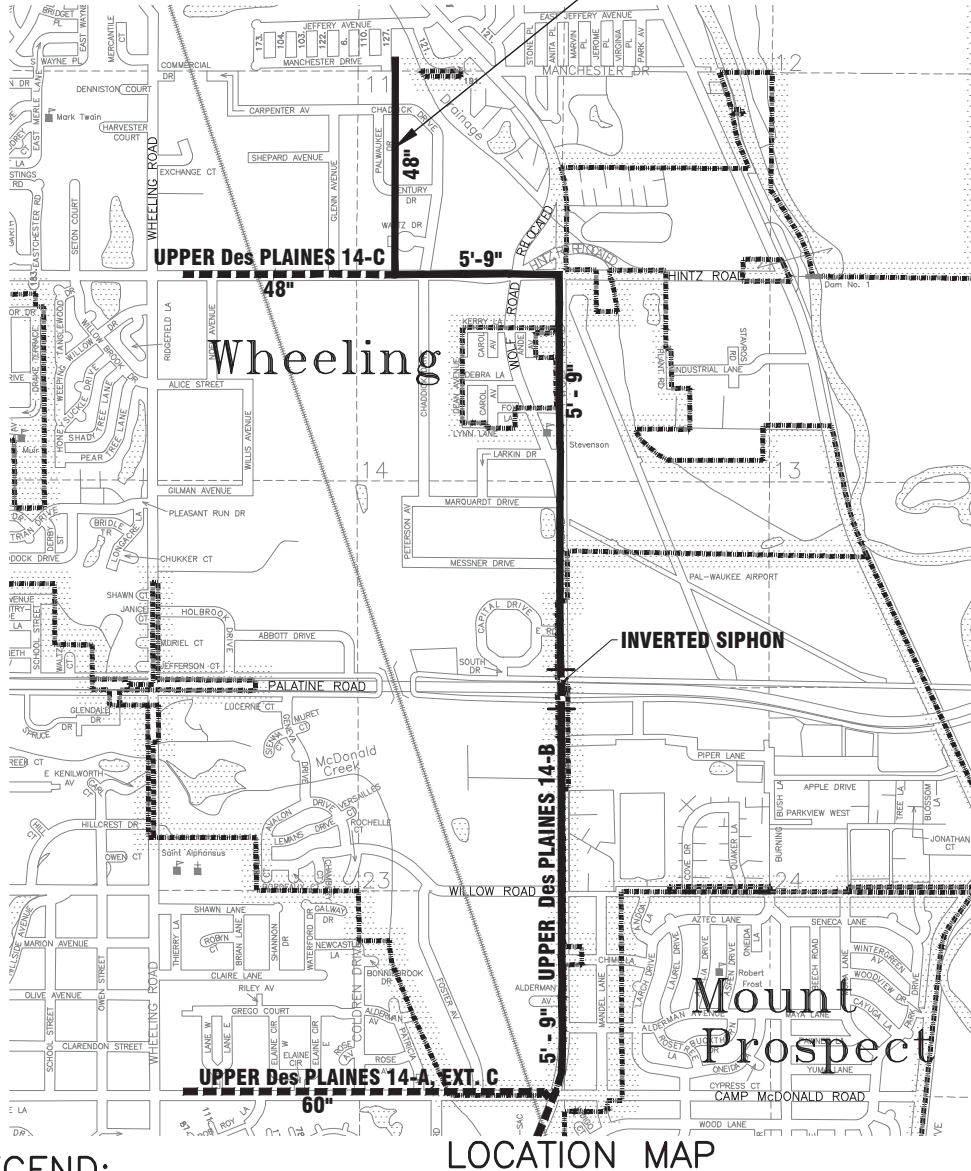
- = SEWER TO BE REHABILITATED
- = EXISTING SEWER

**LOCATION MAP**

**SALT CREEK INTERCEPTING SEWER 2 REHABILITATION, SSA**  
**CONTRACT 06-155-3S**



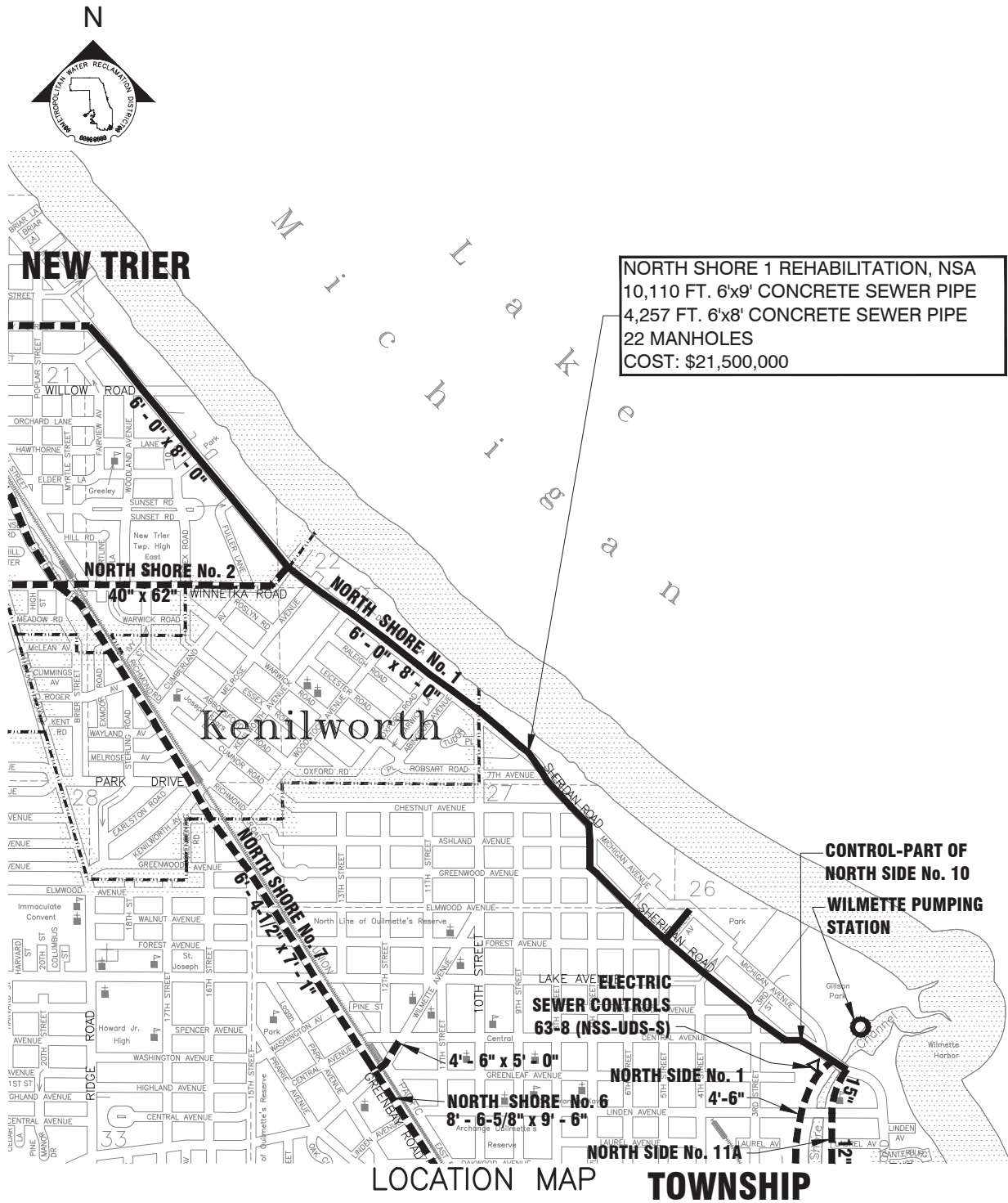
UPPER DES PLAINES INTERCEPTING SEWER 14B  
 REHABILITATION, NSA  
 3,000 FEET OF 48-INCH SEWER  
 11,000 FEET OF 69-INCH SEWER  
 26 MANHOLES/STRUCTURES  
 1 NEW MANHOLE  
 COST: \$6,700,000



**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - - -** = EXISTING SEWER

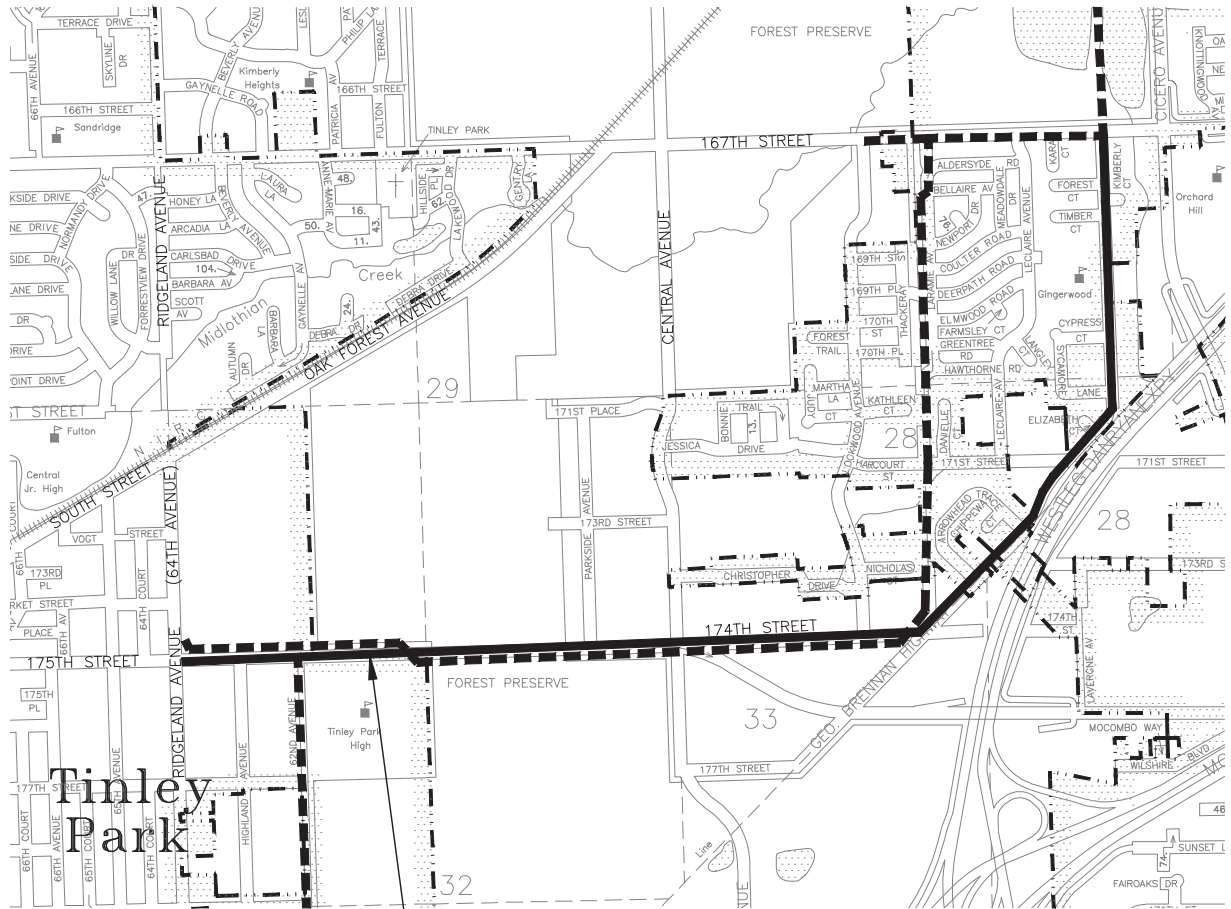
**UPPER DES PLAINES INTERCEPTING SEWER 14B REHABILITATION, NSA  
 CONTRACT 06-360-3S**



**LEGEND:**

- = SEWER TO BE REHABILITATED
- = EXISTING SEWER

**NORTH SHORE 1 REHABILITATION, NSA  
 CONTRACT 10-047-3S**



LOCATION MAP

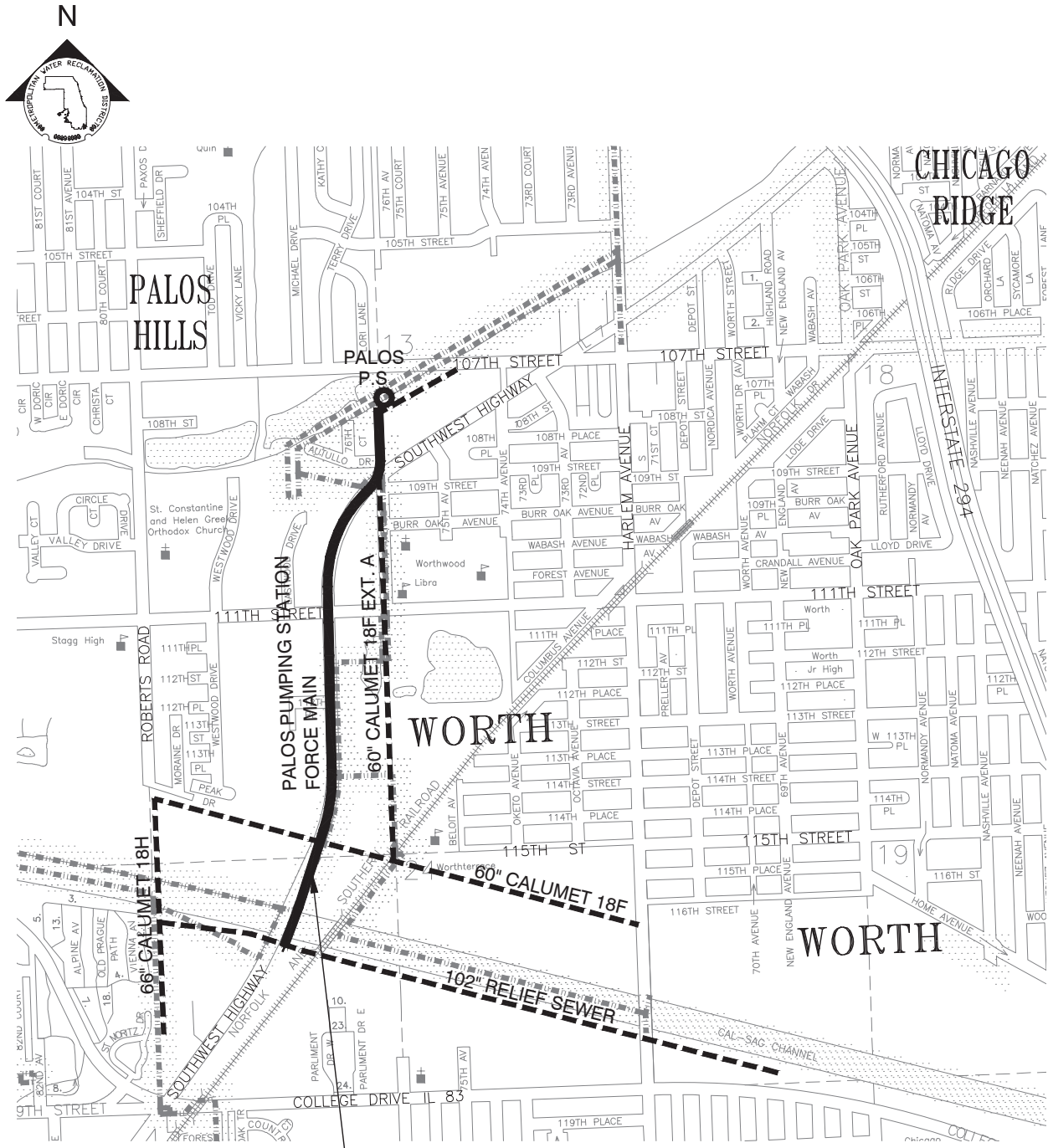
CALUMET INTERCEPTING SEWER 19F  
 REHABILITATION, CSA  
 14,051 FEET OF 60-INCH DIAMETER  
 SEWER  
 23 MANHOLES AND 1 JUNCTION  
 STRUCTURE  
 COST: \$12,306,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**CALUMET INTERCEPTING SEWER 19F REHABILITATION, CSA  
 CONTRACT 11-239-3S**





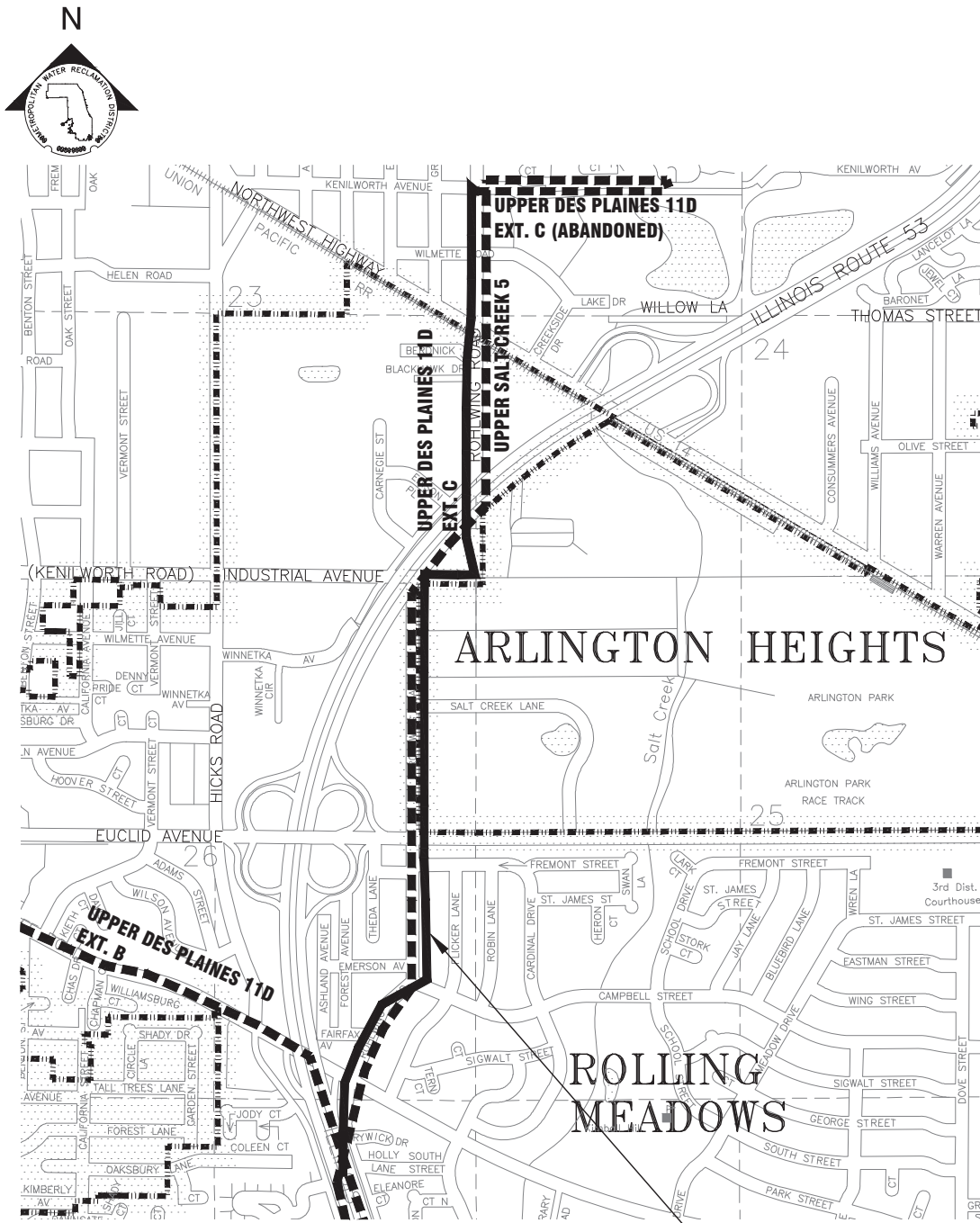
LOCATION MAP

PALOS HILLS PUMPING STATION FORCE MAIN, CSA  
 6,500 FEET OF 24-INCH DIAMETER FORCE MAIN  
 COST: \$10,000,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**PALOS HILLS PUMPING STATION FORCE MAIN, CSA**  
**CONTRACT 11-242-3S**



LOCATION MAP

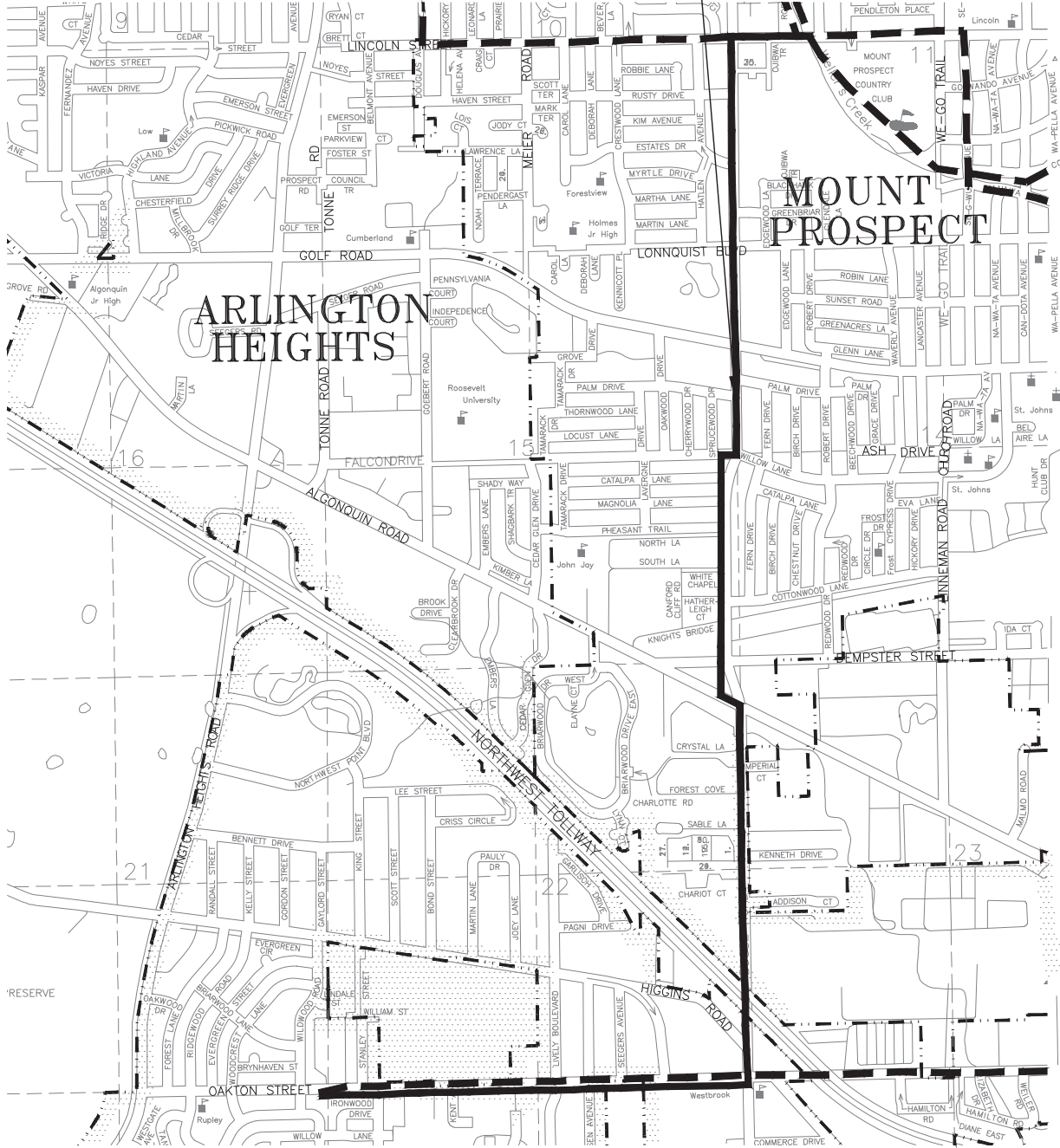
UPPER DES PLAINES INTERCEPTING SEWER 11D EXT. C REHABILITATION, NSA 10,828 FEET OF 36-INCH DIAMETER SEWER 24 MANHOLES AND ONE JUNCTION STRUCTURE  
 COST: \$5,500,000

**LEGEND:**

- = SEWER TO BE REHABILITATED
- - - -** = EXISTING SEWER

**UPPER DES PLAINES INTERCEPTING SEWER 11D EXT. C REHABILITATION, NSA CONTRACT 11-404-3S**

UPPER DES PLAINES INTERCEPTING SEWER 11D  
 REHABILITATION, NSA  
 11,317 FEET OF 36-INCH SEWER  
 1,089 FEET OF 54-INCH SEWER  
 36 MANHOLES  
 COST: \$5,500,000



**LEGEND:**

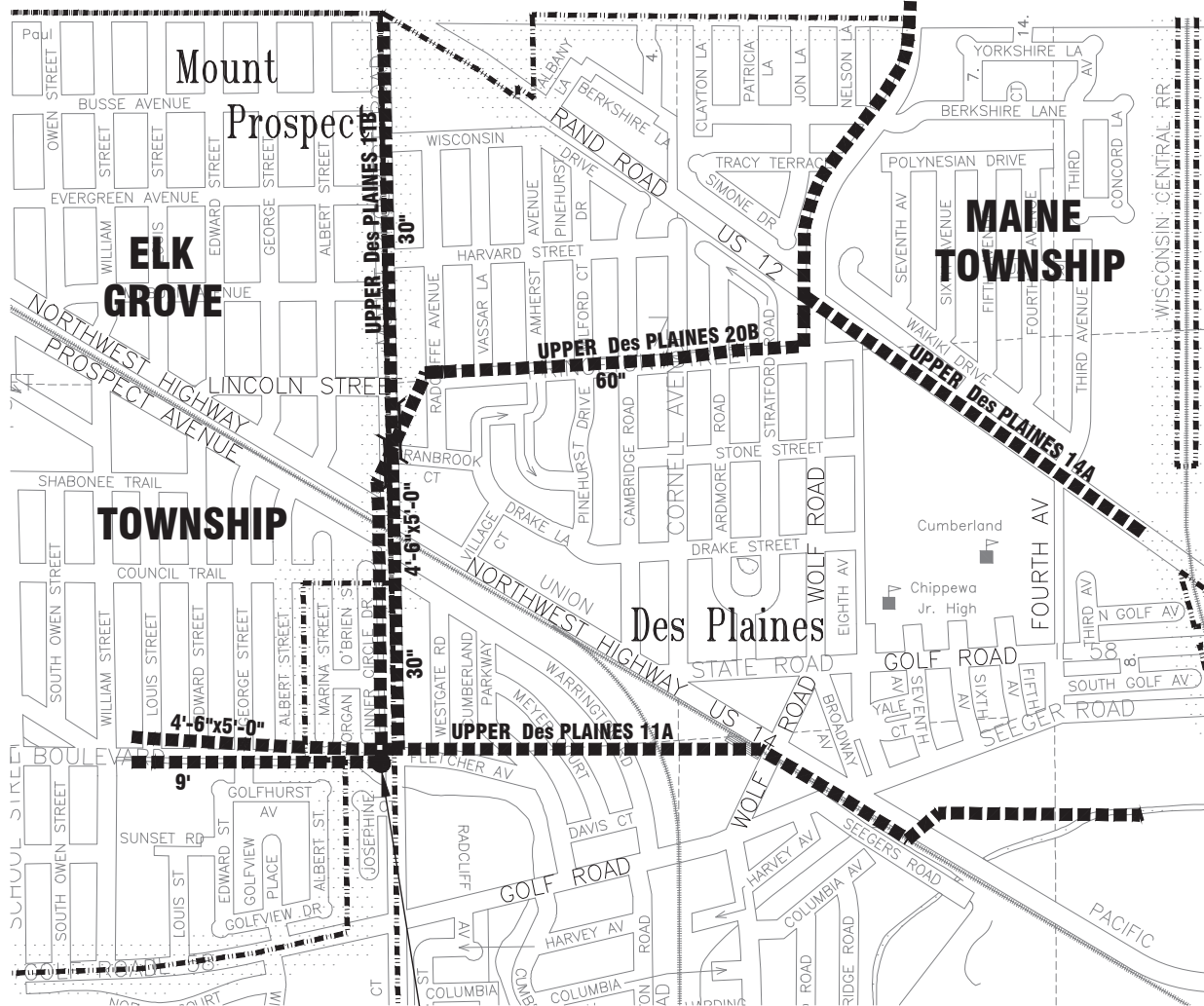
- = SEWER TO BE REHABILITATED
- - - - -** = EXISTING SEWER

**LOCATION MAP**

**UPPER DES PLAINES INTERCEPTING SEWER 11D REHABILITATION, NSA  
 CONTRACT 12-369-3S**







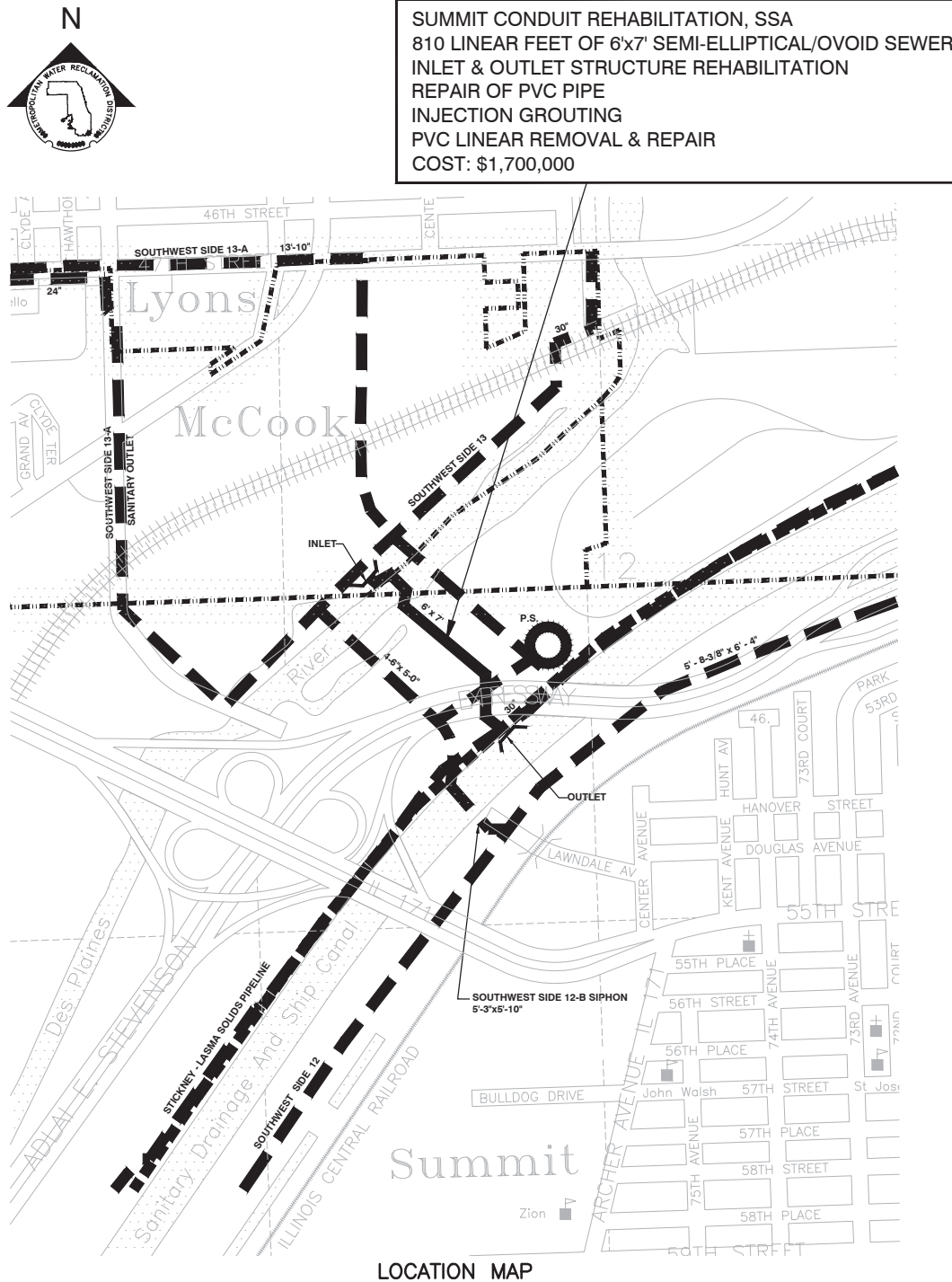
LOCATION MAP

DROP SHAFT 5 INSPECTION AND REHABILITATION, NSA  
 100 FEET OF 108" DIAMETER SEWER  
 75 FEET OF 108" DIAMETER DROP SHAFT  
 REPLACEMENT OF DETERIORATED METAL APPURTENANCES  
 COST: \$2,700,000

**LEGEND:**

- = MANHOLE TO BE REHABILITATED
- = EXISTING SEWER

**DROP SHAFT 5 INSPECTION AND REHABILITATION, NSA  
 CONTRACT 14-372-3S**



## Stormwater Management Capital Improvements Bond Fund Program

<u>Awards in 2017</u>		Project	Est. Construc- tion Cost	Dura- tion (days)	Est. Award Date
#	Project Name	Number			
1	* Flood Control Project on the East Branch of Cherry Creek, Flossmoor	10-883-CF	\$ 3,810	391	Feb-17
2	Melvina Ditch Reservoir Improvements	14-263-3F	21,452	408	Feb-17
3	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Silver Creek, Franklin Park	16-IGA-13	4,681	759	Mar-17
4	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Wheeling Township	16-IGA-16	1,407	759	Mar-17
5	Flood Control Project on Natalie Creek in Oak Forest and Midlothian	14-252-3F	8,300	754	Apr-17
6	Flood Control Project on 103rd Street from Cicero Avenue to Central Avenue, Oak Lawn	15-IGA-22	3,000	389	Apr-17
7	Streambank Stabilization Project along Midlothian Creek, Tinley Park	10-882-CF	392	392	May-17
8	* Streambank Stabilization Projects for Addison Creek	14-108-3F	478	394	Jun-17
9	Pilot Study for Investigating Technology to Address Basement Backups	16-IGA-20	400	213	Jun-17
10	Flood Control Project at Arrowhead Lake, Palos Heights	10-883-BF	1,200	390	Jul-17
11	Lyons Levee Flood Control Improvements, Lyons	13-199-3F	6,500	390	Jul-17
12	Streambank Stabilization Project on Melvina Ditch in Oak Lawn and Chicago Ridge	13-248-3F	8,800	1112	Sep-17
13	* Buffalo Creek Reservoir Expansion	13-370-3F	19,300	563	Sep-17
14	Flood Control Project for Midlothian Turnpike at Lavergne Avenue, Crestwood	15-IGA-04	500	381	Sep-17
15	Addison Creek Reservoir	11-186-3F	109,542	742	Oct-17
16	Flood Control Project on Farmers and Prairie Creeks	12-056-3F	14,100	650	Oct-17
17	Flood Control Project for Deer Creek, Ford Heights	10-884-BF	3,440	389	Dec-17
Total 2017 Awards			\$ 207,302		

**Projects Under Development**

#	Project Name	Project Number	Est. Construction Cost	Duration (days)	Est. Award Date
18	Streambank Stabilization Project on Tinley Creek, Orland Park	10-882-AF	\$ 3,800	370	Jan-18
19	Flood Control Project for the West Fork of the North Branch of the Chicago River, Glenview	16-IGA-18	6,600	730	Jan-19
20	Addison Creek Channel Improvements	11-187-3F	48,133	712	Sep-19
Total Future Awards			<u>\$ 58,533</u>		
Cumulative 2017 and Future Awards			<u>\$ 265,835</u>		

\*These projects are funded by the Capital Improvements Bond Fund and the Stormwater Management Fund. Refer to Section VI Stormwater Management Fund for more information about the Stormwater Management Capital Improvement Program.

**Note: All cost figures are in thousands of dollars; inflation factor is 0 percent.**

<b><u>Method of Financing</u></b>			
State Revolving Fund	Alternate	Grants	Total
<u>Loans</u>	<u>Bonds</u>		
\$ 178,967	\$ 76,868	\$ 10,000	\$ 265,835

# Stormwater Management Capital Improvements Bond Fund Program

## Operating Impacts

#	Project Name	Project Number	Justification					Impact		
			Capacity Needs	Useful Life	Economic Benefit	Safety/Regulatory	Flood Control	Manpower	Energy	Chemical
<b><u>Awards in 2017</u></b>										
1	Flood Control Project on the East Branch of Cherry Creek, Flossmoor	10-883-CF				x	x	=	=	=
2	Melvina Ditch Reservoir Improvements	14-263-3F				x	x	=	=	=
3	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Silver Creek, Franklin Park	16-IGA-13				x	x	=	=	=
4	Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Wheeling Township	16-IGA-16				x	x	=	=	=
5	Flood Control Project on Natalie Creek in Oak Forest and Midlothian	14-252-3F	x	x	x	x	x	=	=	=
6	Flood Control Project on 103rd Street from Cicero Avenue to Central Avenue, Oak Lawn	15-IGA-22				x	x	=	=	=
7	Streambank Stabilization Project along Midlothian Creek, Tinley Park	10-882-CF				x	x	=	=	=
8	Streambank Stabilization Projects for Addison Creek	14-108-3F				x	x	=	=	=
9	Pilot Study for Investigating Technology to Address Basement Backups	16-IGA-20			x		x	=	=	=
10	Flood Control Project at Arrowhead Lake, Palos Heights	10-883-BF				x	x	=	=	=
11	Lyons Levee Flood Control Improvements, Lyons	13-199-3F				x	x	=	=	=
12	Streambank Stabilization Project on Melvina Ditch in Oak Lawn and Chicago Ridge	13-248-3F				x	x	=	=	=
13	Buffalo Creek Reservoir Expansion	13-370-3F				x	x	=	=	=
14	Flood Control Project for Midlothian Turnpike at Lavergne Avenue, Crestwood	15-IGA-04				x	x	=	=	=
15	Addison Creek Reservoir	11-186-3F				x	x	=	=	=
16	Flood Control Project on Farmers and Prairie Creeks	12-056-3F				x	x	=	=	=
17	Flood Control Project for Deer Creek, Ford Heights	10-884-BF				x	x	=	=	=
<b><u>Projects Under Development</u></b>										
18	Streambank Stabilization Project on Tinley Creek, Orland Park	10-882-AF				x	x	=	=	=
19	Flood Control Project for the West Fork of the North Branch of the Chicago River, Glenview	16-IGA-18				x	x	=	=	=
20	Addison Creek Channel Improvements	11-187-3F				x	x	=	=	=

See legend on following page.

**LEGEND**

Under "**Justification**," the marked columns note the categories of benefits expected from each project.

**Manpower**

+ or - Labor savings (+) or increases (-) expected to result in redirecting existing manpower away from or toward facility or process to other tasks with no net change in total position costs.	++ or -- Labor impact significant enough to ultimately result in reduction (++) or increase (--) in personnel. See additional cost details contained in the Project Fact Sheets.
--	--

**Energy**

+ or - Minor energy savings (+) or costs (-) having a negligible impact on the District's overall energy budget.	++ or -- Major energy savings (++) or costs (--) expected to result in significant revisions to a facility's energy budget. See additional cost details contained in the Project Fact Sheets.
--	---

**Chemical**

+ or - Chemical savings (+) or costs (-) having a negligible impact on the District's overall chemical costs.	++ or -- Major chemical savings (++) or costs (--) expected to result in significant revisions to the budgeted chemical expenditures for the associated process. See additional cost details contained in the Project Fact Sheets.
= No budgetary impact expected.	

**50000 CAPITAL IMPROVEMENTS BOND FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. TREATMENT FACILITIES: Award four construction projects: Three odor control systems projects at the Hanover Park, Calumet, and Kirie WRPs and one other project that will reduce operation and maintenance costs or provide facility improvements.	\$ 4,900,000	1.4%
2. COLLECTION FACILITIES: Award four construction projects: Drop Shaft 5 Inspection and Rehabilitation, NSA, Summit Conduit Rehabilitation, SSA, and two other projects.	\$ 6,930,000	2.0%
3. SOLIDS PROCESSING AND DISPOSAL FACILITIES: Award four construction projects: Organic Waste Receiving Facility, Digester Gas Flare Upgrade, CWRP, Covered Composting System, CWRP and two other projects.	\$ 41,500,000	11.7%
4. FLOOD AND POLLUTION CONTROL: Award 12 construction projects: Buffalo Creek Reservoir Expansion and 11 other projects. Provide funding for Stormwater Management Intergovernmental Agreements.	\$ 213,414,000	60.2%
5. FLOOD-PRONE PROPERTY ACQUISITION PROGRAM: Provide financial assistance to communities for the identification and remediation of flood related problems, including the acquisition of flood-prone properties.	\$ 6,088,000	1.7%
6. LAND AND RIGHT-OF-WAY ACQUISITION COSTS: Acquisition of land for the expansion of reservoir projects and payments for land easements.	\$ 12,515,900	3.5%
7. PROJECT SUPPORT: Administration, design, and construction inspection for current and future contracts, funding support, and construction services, such as concrete and soil testing.	\$ 69,277,700	19.5%
<b>Total</b>	<b>\$ 354,625,600</b>	<b>100.0%</b>

MEASURABLE GOAL:	2015 Actual	2016 Estimated	2017 Proposed
Award contracts for the continued implementation of the District's Capital Improvement Program.			
Number of projects proposed	12	16	16
Number of contracts awarded	5	9	16
<p>The projects proposed for each year are based upon the requirements dictated by the Capital Improvement Program. The number of actual projects awarded may not, on face value, quantify performance. There are several factors that could either increase or decrease the number of projects awarded. Some of these factors are project size, project complexity, and unforeseen obstacles. These numbers are provided only as a general indicator of performance.</p>			

**50000 CAPITAL IMPROVEMENTS BOND FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015 Actual	Budgeted		Change		
Number	Name		FTEs	Dollars	Dollars	Percent	
1700	Collection Design	\$ 9,681	2017	- \$ -	\$ (1,500,000)	(100.0)	a)
			2016	- \$ 1,500,000			
1800	Collection Construction	\$ 26,069,922	2017	- \$ 9,695,000	\$ (10,140,000)	(51.1)	b)
			2016	- \$ 19,835,000			
2700	Treatment Design	\$ 1,931,056	2017	- \$ -	\$ (1,083,600)	(100.0)	c)
			2016	- \$ 1,083,600			
2800	Treatment Construction	\$ 113,344,398	2017	- \$ 18,325,000	\$ (55,177,600)	(75.1)	d)
			2016	- \$ 73,502,600			
3700	Solids Processing Design	\$ -	2017	- \$ 4,000,000	\$ 4,000,000	100.0	e)
			2016	- \$ -			
3800	Solids Processing Construction	\$ 35,260,176	2017	- \$ 40,000,000	\$ 18,292,400	84.3	f)
			2016	- \$ 21,707,600			
4341	Flood Mitigation Projects Planning and Design	\$ 380,052	2017	- \$ 7,992,000	\$ (9,904,000)	(55.3)	g)
			2016	- \$ 17,896,000			
4343	Flood Mitigation Projects Construction	\$ 858,233	2017	- \$ 213,062,300	\$ 117,362,600	122.6	h)
			2016	- \$ 95,699,700			
4344	Flood Mitigation Projects Contracted with Other Governments	\$ 3,303,232	2017	- \$ 7,900,000	\$ (63,078,400)	(88.9)	i)
			2016	- \$ 70,978,400			
4345	Flood Mitigation Projects Land and Easements	\$ -	2017	- \$ 16,088,400	\$ 6,088,400	60.9	j)
			2016	- \$ 10,000,000			
4600	Monitoring	\$ -	2017	- \$ 500,000	\$ 500,000	100.0	k)
			2016	- \$ -			

- a) Decrease is due to the biannual award of civil engineering support services in the previous budget year.
- b) Decrease is due to the 2016 award of Contract 11-239-3S, Calumet Intercepting Sewer 19F Rehabilitation, CSA (\$12,600,000) in the previous budget year, offset by the anticipated 2017 award of Contract 16-126-3S, Summit Conduit Rehabilitation, SSA (\$1,785,000).
- c) Decrease is due to the indefinite deferral of Contract 09-401-2P, Master Underground Piping Survey, EWRP (\$1,000,000).
- d) Decrease is due to the 2016 award of Contracts 04-132-3D, A/B and C/D Service Tunnel Rehabilitation - Phase II (\$23,100,000), 15-120-3P, Conversion of Old GCTs to the WASSTRIP® Process, SWRP (\$15,750,000), 15-122-3P, Aeration Tanks Air Valves Automation in Batteries A, B, C, and D, SWRP (\$10,500,000), 15-123-3D, Safety Railing Around Tanks, SWRP (\$9,450,000), and 15-265-3D, Safety Railing Around Tanks, CWRP (\$3,150,000), offset by anticipated increases in change order allowances for Process Facilities Structures and Preservation of Process Facilities Structures projects (\$6,487,400).
- e) Increase is due to the expected 2017 award of design engineering services contracts 11-189-3P, Digester Gas Utilization Facility, SWRP (\$3,000,000) and 16-272-3P, Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP (\$1,000,000).
- f) Increase is due to the expected 2017 award of construction Contracts 16-270-3P, Covered Composting System, CWRP (\$25,200,000) and 16-272-3P, Conversion of Primary Tanks to High Strength Waste Receiving and Distribution, CWRP (\$3,675,000), and an increased estimate for Contract 11-240-3P, Organic Waste Receiving Facility and Digester Gas Flare Upgrade, CWRP (\$3,255,000), offset by the rescheduling of Contract 14-250-3P Digester Gas Utilization Facility, CWRP (\$13,650,000) to 2018.
- g) Decrease is due to a decreased estimated need for stormwater management projects design (\$14,146,000), offset by post-award consulting services for the year (\$4,242,000).
- h) Increase is due to the planned 2017 award of Contract 11-186-3F, Addison Creek Reservoir (\$115,019,100), and 14-252-3F, Flood Control Project on Natalie Creek in Oak Forest and Midlothian (\$8,715,000), offset by the 2016 award of Contract 10-237-3F, Streambank Stabilization Project on Oak Lawn Creek (\$4,383,800), and the transfer of Contract 10-882-BF, Streambank Stabilization Projects along Midlothian Creek and Calumet Union Drainage Ditch in the Village of Markham to the Stormwater Management Fund (\$1,931,000).
- i) Decrease is due to the 2016 award of Contract 14-066-3F, Albany Park Stormwater Diversion Tunnel (\$24,750,500) and an overall net decrease in funding for various stormwater management intergovernmental cost-sharing agreements based on actual need and the status of negotiations with the various municipalities (\$38,327,900).
- j) Increase is due to flood-prone property acquisitions in Wheeling Township and Franklin Park.
- k) Increase is due to consulting services for enhancements to the Monitoring & Research Department's iPACS and Laboratory Information and Management systems.



**50000 CAPITAL IMPROVEMENTS BOND FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent	
4700	Flood and Pollution Control Design	\$ 2,904,117	2017	- \$ 1,250,000	\$ (1,300,000)	(51.0)	l)
			2016	- \$ 2,550,000			
4800	Flood and Pollution Control Construction	\$ 87,811,921	2017	- \$ 28,922,000	\$(139,839,900)	(82.9)	m)
			2016	- \$ 168,761,900			
5800	Solids Disposal Construction	\$ 4,389,764	2017	- \$ 4,675,000	\$ 4,675,000	100.0	n)
			2016	- \$ -			
7740	Land and Easements	\$ 16,250	2017	- \$ 2,215,900	\$ 1,965,900	786.4	o)
			2016	- \$ 250,000			
Totals		\$ 276,278,802	2017	- \$ 354,625,600	\$(129,139,200)	(26.7%)	
			2016	- \$ 483,764,800			

- l) Decrease is due to a revised estimate of need for general engineering consulting services.
- m) Decrease is due to the 2016 award of Contract 13-106-4F, McCook Reservoir Des Plaines Inflow Tunnel (\$145,950,000), and a reduction in the estimated payments to be made for Project 73-161-2H, Chicago Underflow Plan McCook Reservoir (\$6,400,000), offset by the expected 2017 award of Contract 16-125-4F, McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls (\$11,760,000), and 16-IGA-22, Remove the North Branch Dam and Stabilize Banks along the North Branch Chicago River and the North Shore Channel from Lawrence Avenue to Devon Avenue (\$732,000).
- n) Increase is due to the expected 2017 award of 16-RFP-09, Design, Build, Operate, and Maintain a Native Plant and Tree Nursery at the Hanover Park WRP, Fischer Farm (\$3,500,000) and an increase to the change order allowance for building projects (\$1,175,000).
- o) Increase is due to the expected payments for easements relating to various stormwater management projects.

401 50000	Fund: Capital Improvements Bond Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original * Appropriation	Adjusted ** Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601170	Payments for Professional Services	\$ 103,390	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
601410	Personal Services Exp for Prelim Engineering Rpts and Studies	348,415	-	-	-	-	-	-
601420	Personal Services Exp for Constr Drawings, Specs, and Cost Est	3,477,409	-	-	-	-	-	-
601440	Personal Svcs for Post-Award Engr for Construction Projects	5,441,597	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	9,370,811	-	-	-	-	-	-
612090	Reprographic Services	-	10,000	20,000	-	-	-	-
612240	Testing and Inspection Services	52,309	-	232,665	80,000	-	-	-
612250	Court Reporting Services	1,607	5,000	23,583	5,000	25,000	25,000	25,000
612380	Soil and Rock Mechanics Investigation	251,454	660,000	989,911	153,600	-	-	-
612400	Intergovernmental Agreements	11,159,839	70,978,400	80,145,890	10,417,500	7,500,000	7,900,000	13,988,400
612430	Payments for Professional Services	-	3,183,600	3,504,960	446,400	1,200,000	1,200,000	1,700,000
612440	Preliminary Engineering Reports and Studies	-	50,000	669,426	500,000	250,000	250,000	250,000
612450	Professional Engineering Services for Construction Projects	-	17,896,000	28,602,180	5,929,700	12,992,000	12,992,000	12,992,000
612470	Personal Svcs for Post-Award Engr for Construction Projects	-	3,000,000	25,791,365	4,800,000	-	-	-
612490	Contractual Services, N.O.C.	143,393	-	-	-	-	-	-
612780	Safety Repairs and Services	-	100,000	100,000	-	100,000	100,000	100,000
200	TOTAL CONTRACTUAL SERVICES	11,608,601	95,883,000	140,079,979	22,332,200	22,067,000	22,467,000	29,055,400
634620	Equipment for Waterway Facilities	422,608	-	-	-	-	-	-
400	TOTAL MACHINERY AND EQUIPMENT	422,608	-	-	-	-	-	-
645600	Collection Facilities Structures	38,030,288	2,250,000	46,428,080	26,195,600	3,000,000	3,000,000	3,000,000
645620	Waterway Facilities Structures	35,093,940	75,427,700	129,224,961	25,000,000	207,527,300	204,977,300	204,977,300
645630	Army Corps of Engineers Services	16,667,000	159,399,000	159,374,000	19,400,000	18,740,000	18,740,000	18,740,000
645650	Process Facilities Structures	138,242,527	70,012,600	271,704,677	100,880,000	54,525,000	54,525,000	54,525,000
645680	Buildings	-	-	5,127,600	1,070,000	4,675,000	4,675,000	4,675,000
645690	Capital Projects, N.O.C.	663,838	-	33,192	-	1,000,000	1,000,000	1,000,000
645700	Preservation of Collection Facility Structures	11,631,981	17,585,000	72,566,175	23,566,400	5,120,000	5,120,000	5,120,000

401 50000	Fund: Capital Improvements Bond Department: Engineering Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original * Appropriation	Adjusted ** Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
645720	Preservation of Waterway Facility Structures	864,966	28,654,300	28,654,300	3,355,300	15,792,000	17,942,000	17,942,000
645750	Preservation of Process Facility Structures	7,486,399	23,150,000	24,723,991	8,305,600	500,000	500,000	500,000
645780	Preservation of Buildings	-	-	9,578,700	-	2,575,000	2,575,000	2,575,000
500	TOTAL CAPITAL PROJECTS	248,680,939	376,478,600	747,415,676	207,772,900	313,454,300	313,054,300	313,054,300
656010	Land	1,045,097	10,300,000	14,000,000	12,110,000	10,300,000	10,300,000	10,300,000
600	TOTAL LAND	1,045,097	10,300,000	14,000,000	12,110,000	10,300,000	10,300,000	10,300,000
667340	Payments for Easements	16,250	250,000	275,100	275,100	2,215,900	2,215,900	2,215,900
727102	Principal Expense - Capital Lease	2,247,506	-	45,025,725	2,357,800	-	-	-
727112	Interest Expense - Capital Lease	2,142,259	-	16,337,778	2,032,000	-	-	-
767300	Bond Issuance Costs	744,732	853,200	853,100	365,000	-	-	-
700	TOTAL FIXED AND OTHER CHARGES	5,150,746	1,103,200	62,491,703	5,029,900	2,215,900	2,215,900	2,215,900
<b>TOTAL CAPITAL IMPROVEMENTS BOND</b>		<b>\$276,278,802</b>	<b>\$483,764,800</b>	<b>\$963,987,358</b>	<b>\$247,245,000</b>	<b>\$348,037,200</b>	<b>\$348,037,200</b>	<b>\$354,625,600</b>

\* The Capital Improvements Bond Fund is budgeted and accounted for on an obligation basis.

\*\* The appropriation in the Capital Improvements Bond Fund is adjusted to carry forward open value of contracts from the prior year.

- NOTES: 1. Amounts may not add up due to rounding.  
 2. Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. The Capital Improvements Bond Fund appropriation is controlled on the Summary Object level.  
 4. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

# SECTION VI

## STORMWATER MANAGEMENT FUND

Stormwater Management is organized with all revenues and expenditures accounted for in a separate fund. The District assumed responsibility for stormwater management following the passage of Public Act 093-1049 in November 2004. This law gives the District responsibility for stormwater management for all of Cook County, including areas that currently lie outside the District's boundaries.

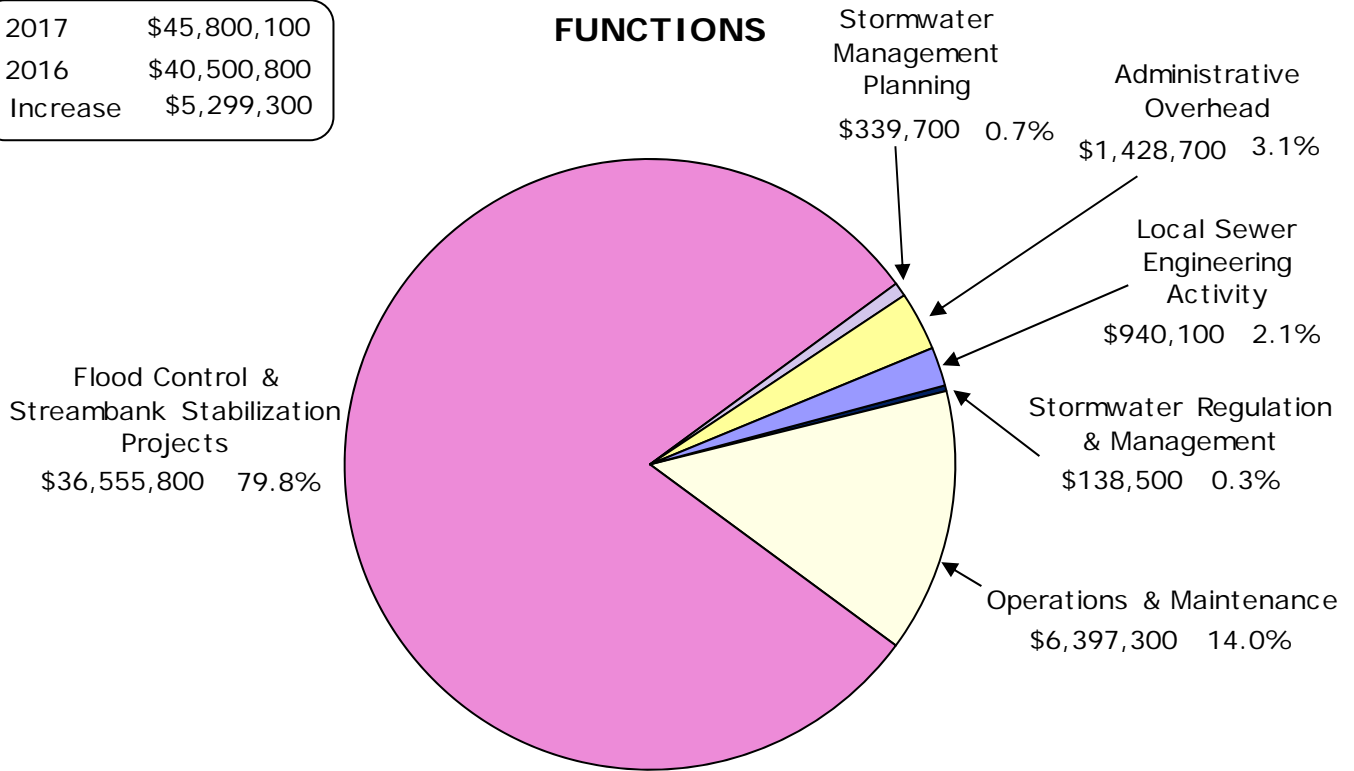
The District has established six watershed planning councils. The purpose of the watershed planning councils is to advise the District on the development and implementation of the countywide stormwater management plan, representing concerns of local governments. Municipal leagues are responsible for coordinating the activities of the watershed planning councils.

Stormwater Management Fund:	
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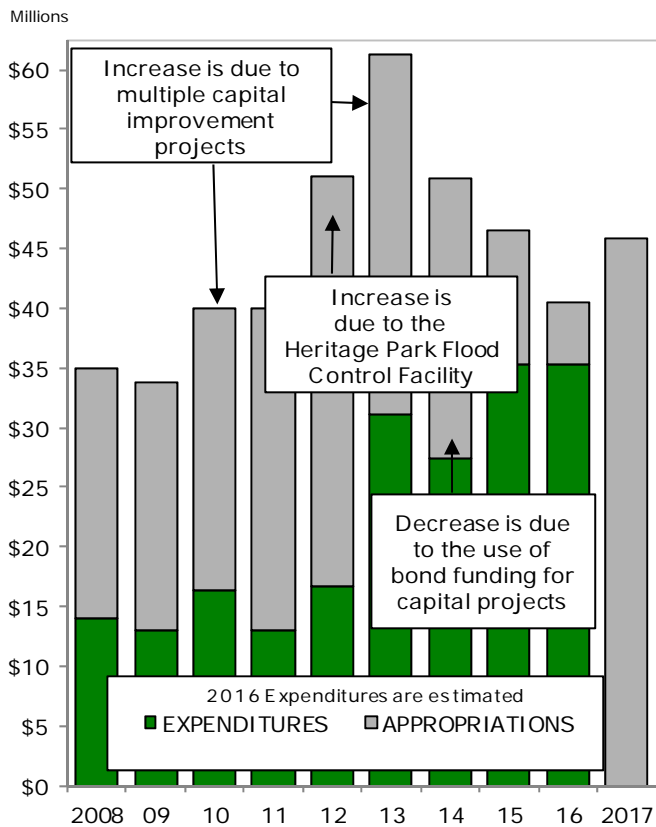
# STORMWATER MANAGEMENT

2017	\$45,800,100
2016	\$40,500,800
Increase	\$5,299,300

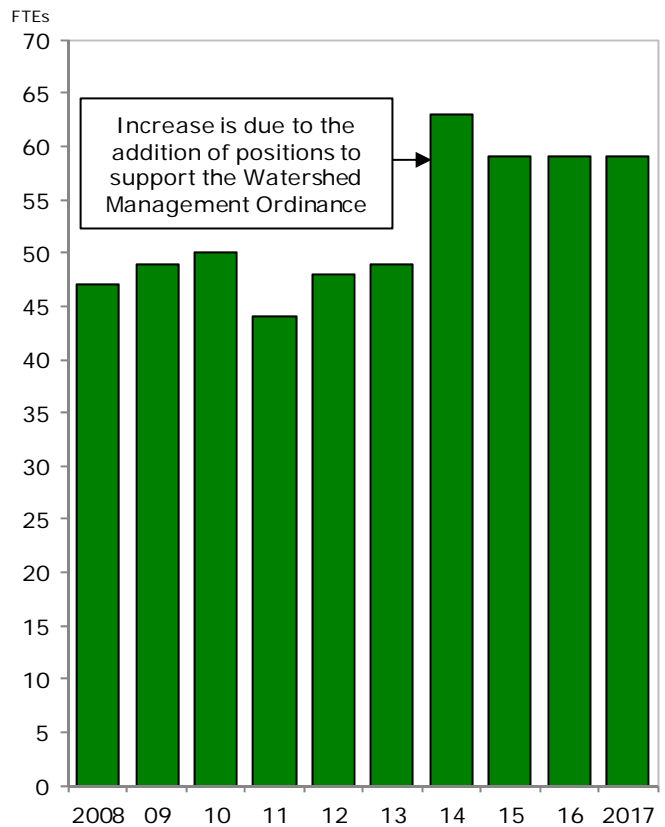
## FUNCTIONS



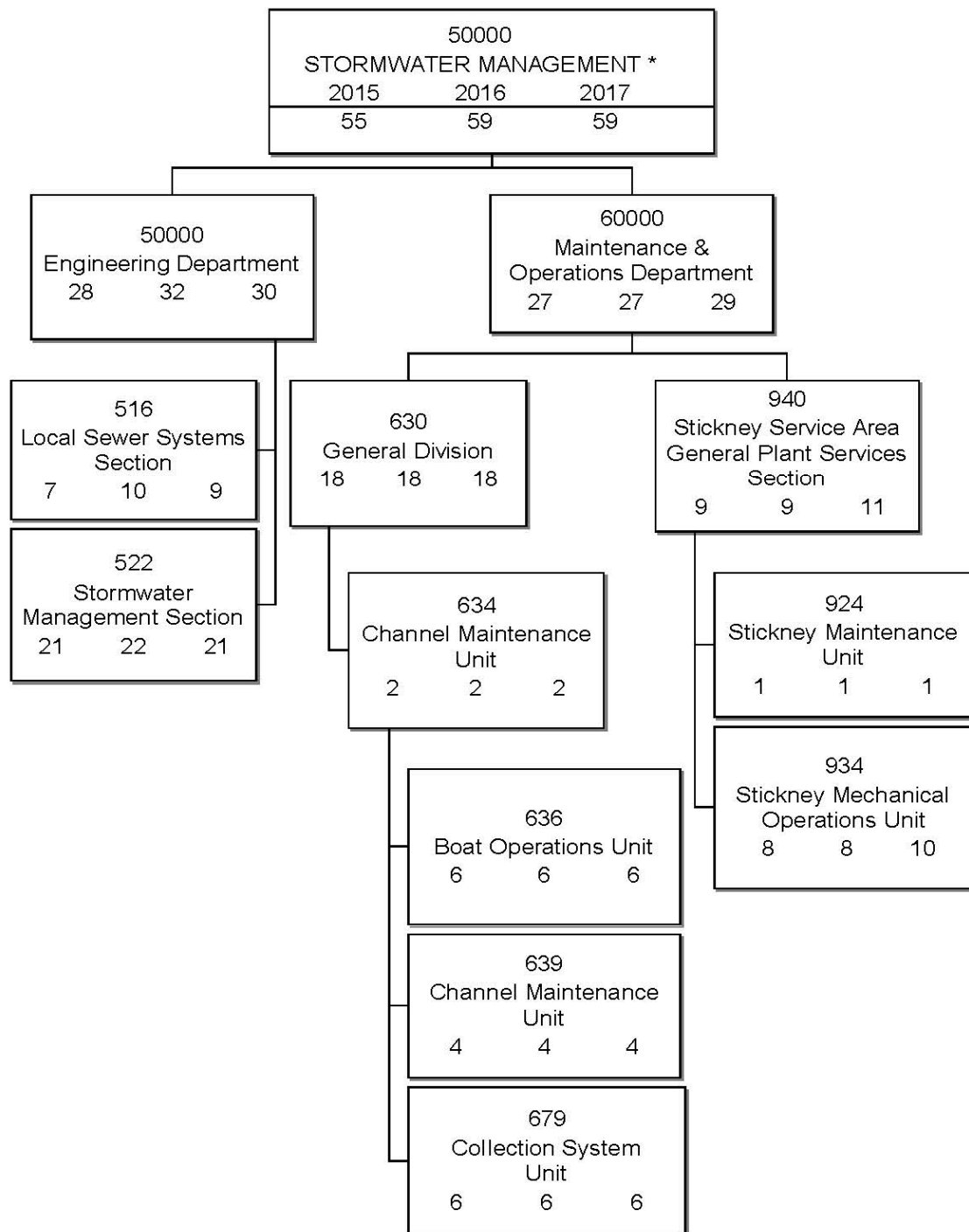
## APPROPRIATIONS & EXPENDITURES



## BUDGETED FTE POSITIONS



# STORMWATER MANAGEMENT



\* Positions funded by the Stormwater Management Fund are operationally controlled by the Engineering and Maintenance & Operations Departments.

## STORMWATER MANAGEMENT FUND

**The mission of the Stormwater Management Fund is to protect the safety of Cook County's residents and minimize flooding damage by coordinating, planning, implementing, financing, and operating regional stormwater management projects and to develop and enforce reasonable rules with respect to watershed development.**

### Fund Summary

The fund consolidates the stormwater management activities of the Engineering and Maintenance & Operations (M&O) Departments and supports the activities outlined in the Cook County Stormwater Management Plan, which serves as a framework for the District's countywide Stormwater Management Program. Under this program, the District has completed Detailed Watershed Plans (DWP) for all six major watersheds in Cook County, initiated a Stormwater Management Capital Improvement Program, initiated a Small Streams Maintenance Program (SSMP), and adopted and implemented the Watershed Management Ordinance. Information on the Stormwater Management Program can be found at [stormwater.mwrd.org](http://stormwater.mwrd.org).

### Summary of 2016 Accomplishments

- Completed construction of one streambank stabilization and one flood control project originally identified in the DWPs;
- Awarded four flood control and streambank stabilization projects;
- Entered into three Intergovernmental Agreements (IGAs) for Stormwater Management Phase II projects to allow for construction of local flood control projects;
- Continued design of Phase I regional projects recommended from the DWPs, including streambank stabilization projects on reaches of nine waterways and flood control projects on reaches of ten waterways;
- Continued design of Phase II conceptual flood control projects identified by local municipalities, townships, and agencies including the Cities of Blue Island, Burbank, and Palos Heights, the Villages of Crestwood, Midlothian, Robbins, and Worth, the Town of Cicero, Bremen Township, the Illinois Department of Transportation, and the Cook County Department of Transportation and Highways;
- Completed Stormwater Master Plan Pilot Studies in five locations recommended by the four Cook County Councils of Government and the City of Chicago;
- Negotiated and/or entered into IGAs for acquisition of flood-prone properties with six communities and the Cook County Land Bank Authority;
- Continued the SSMP with the objective of removing debris and blockages from 532 miles of small streams and rivers;
- Entered into IGAs with the City of Berwyn and the Villages of Niles and Skokie to partially fund green infrastructure projects;
- Completed design of a green infrastructure control system at Dearborn Homes in Chicago;
- Partnered with the Chicago Public Schools and the Chicago Department of Water Management for construction and monitoring (through the United States Geological Survey) of green infrastructure.

### Budget Highlights

The 2017 Stormwater Management Fund appropriation is \$45,800,100, an increase of \$5,299,300, or 13.1 percent, from 2016. The staffing level remains at 59 positions with the drop of an Assistant Civil Engineer position, the transfer of an Engineering Technician IV position to the General Division of the M&O Department, offset by the addition of two Maintenance Laborer Class A Shift positions.

Significant features of the 2017 budget are:

- Continue engineering design for Phase I and Phase II projects and begin construction of projects that have completed final design and have been approved by the Board of Commissioners;
- Undertake a pilot study with the City of Chicago to explore the effectiveness of various technologies aimed at reducing basement backup at private sites;
- Continue the SSMP to reduce flooding in urbanized areas;
- Expand the online content related to the Chicago Area Waterway System and the SSMP to provide educational materials, as well as general information regarding the management of the system before, during, and after a storm.

**2017 Initiatives in Support of the Strategic Business Plan Include the Following:**

- **Add Value**

The Stormwater Management Capital Improvement Program utilizes benefit-to-cost analysis developed for the recommended alternatives in the DWPs as the primary basis for prioritizing individual projects.

- **Excellence**

Stormwater staff approach each project with attention to detail in the spirit of excellence to deliver stormwater management projects that meet or exceed the expectation of the communities served. Staff attend various community meetings to explain the District’s role as the stormwater management authority for Cook County to the general public.

- **Resource Recovery**

Stormwater projects, particularly the Stormwater Management Phase II projects, will include a mix of both gray and green infrastructure elements. Wherever practical, stormwater recovery and reuse will be included in the project.

- **Develop Employees**

Stormwater staff include numerous licensed professional engineers and certified floodplain managers who are leaders in the field. Staff regularly attend and present papers at various conferences and seminars related to stormwater management.

- **Leading Partnerships**

The District has initiated a Green Infrastructure Program that facilitates the planning, design, and construction of multiple green infrastructure projects throughout Cook County, in partnership with a variety of stakeholders. Program framework and guidelines will continue to be developed in 2017 in collaboration with stakeholders. Currently, the District is partnered with the City of Chicago Department of Water Management and the Chicago Public Schools to design and construct large green infrastructure projects at six Chicago Public School campuses. The District is also partnered with other local municipalities to design and construct 82 regional and local stormwater management projects.

In 2016, projects under construction in partnership with municipalities included the construction of the Albany Park Tunnel, Addison Creek Streambank Stabilization, Niles Cleveland Street Relief Sewer, Roberts Road Trunk Sewer, Busse Woods South Dam Modifications, Silver Creek Channel Improvements, Stony Island Avenue Ditch and Detention Pump Station Improvements, and Glencoe-Terrace Court and Skokie Ridge Stormwater Projects.

- **Technology**

The District continues to expand the online content related to the Chicago Area Waterway System and the SSMP.

**SMALL STREAMS MAINTENANCE PROGRAM**

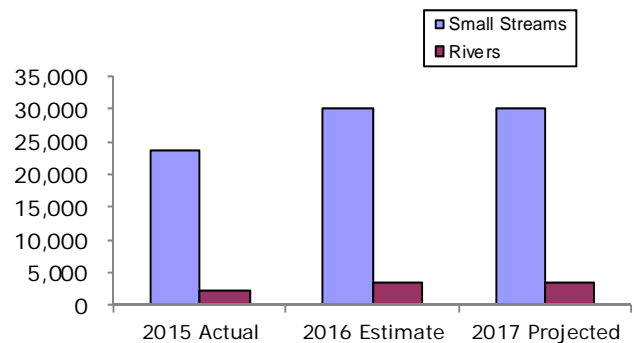
Through the management of the SSMP, the M&O Department works to reduce flooding in urbanized areas. Cook County has little elevation; therefore, its streams tend to move slowly and are naturally prone to flooding. Many developed areas were originally uninhabited muddy marshes with meandering streams that often overtopped their banks. The streams that flow through the neighborhoods of Cook County are more than just a scenic part of the landscape or a habitat for wildlife. They serve the vital function of draining stormwater and preventing flooding. In order to function properly, the streams must be maintained. The SSMP’s top priorities are removing blockages such as log jams, beaver dams, and other material and debris from the streams and preventing future blockages by removing dead and unhealthy trees and invasive species, such as buckthorn and honeysuckle, which choke out native vegetation from the streambanks.

**CAPITAL IMPROVEMENT PROGRAM**

The focus of many of the Stormwater Capital Improvement Program projects is on regional waterways in highly urbanized areas. During the design of these projects, the District focuses on utilizing natural methods for addressing streambank erosion, including the use of biostabilization measures, such as vegetated geogrids, geocells, turf reinforcing mats, and native vegetation, wherever practical.

The Board of Commissioners prioritizes potential projects arising from the DWPs on a countywide basis. Two categories have been established for DWP projects. The first category is streambank stabilization, which involves addressing critical active streambank erosion threatening public safety, structures, and/or infrastructure. The second category is flood control, which addresses regional overbank flooding.

**Cubic Yards of Debris Removed from Small Streams and Rivers in Cook County**





**Streambank Stabilization Projects and Flood Control Projects**

A map of streambank stabilization project locations is provided on page 537, while maps of flood control projects including reservoirs, capital improvement projects, and green infrastructure and other projects the District is implementing with local municipalities can be found on pages 538 – 540.

**FLOOD-PRONE PROPERTY ACQUISITION PROGRAM**

The District's statutory authority for Stormwater Management in Cook County (70 ILCS 2605/7h) was amended in 2014 to allow for the acquisition of flood-prone properties. Subsequent to amending the Cook County Stormwater Management Plan to be consistent with Public Act 98-0652, the District's Board of Commissioners adopted a policy on selection and prioritization of projects for acquiring flood-prone property, which is comprised of three distinct components, as follows:

- Local Sponsorship Assistance Program: The District's top priority will be to facilitate the Illinois Emergency Management Agency's federally funded program by assisting local sponsor communities in providing their share of the cost for property acquisition;
- District Initiated Program: The cost of a property acquisition alternative will be estimated for any approved project and compared to the estimated cost of the structural project determined through a preliminary engineering analysis. Should the cost of the property acquisition alternative be less than the structural project, and the benefits at least equivalent, the acquisition alternative will be pursued in lieu of the structural project;
- Local Government Application Program: The District will consider applications directly from local governments requesting property acquisition of specific flood-prone structures.

**Acquisition Projects**

- Partnered with Cook County to acquire flood-prone homes in unincorporated Riverside Lawn;
- Prioritized municipal applications to the District for assistance with the acquisition of flood-prone structures located throughout Cook County;
- Negotiated IGAs to partner with the Cities of Des Plaines and Northlake, the Villages of Flossmoor, Franklin Park, and Stone Park, and Wheeling Township to acquire 132 flood-prone residential structures. These acquisitions will occur over the next two years.

## Stormwater Management Fund Program

<u>Awards in 2017</u>		Project	Est. Constr- uction Cost	MWRD 2017 Appro- priation	Dura- tion (days)	Est. Award Date
#	Project Name	Number				
1 *	Flood Control Project on the East Branch of Cherry Creek, Flossmoor	10-883-CF	\$ 1,050	\$ 1,050	391	Feb-17
2	Rainwater Harvesting System at Dearborn Homes, Chicago	14-113-5F	1,220	1,220	150	Apr-17
3 *	Streambank Stabilization Projects for Addison Creek	14-108-3F	517	517	394	Jun-17
4	Flood Control Project at 61st Avenue and 36th Street, Cicero	16-IGA-21	2,498	1,250	370	Aug-17
5 *	Buffalo Creek Reservoir Expansion	13-370-3F	1,831	733	563	Sep-17
6	Streambank Stabilization Project along Calumet Union Drainage Ditch	10-882-BF	1,839	750	370	Sep-17
Total 2017 Awards			<u>\$ 8,955</u>	<u>\$ 5,520</u>		

<u>Projects Under Development</u>		Project	Est. Constr- uction Cost	Cumulative Const. Cost	Dura- tion (days)	Est. Award Date
#	Project Name	Number				
7	Intergovernmental Agreements	Various	\$ 25,000	\$ 33,955	Various	TBD
Total Future Awards			<u>\$ 25,000</u>			
Cumulative 2017 and Future Awards			<u>\$ 33,955</u>	<u>\$ 33,955</u>		

\*These projects are funded by the Capital Improvements Bond Fund and the Stormwater Management Fund. Refer to Section V Capital Budget for more information about Stormwater Management projects funded by alternative bonds.

**Note: All cost figures are in thousands of dollars; inflation factor is 0 percent.**

## Stormwater Management Fund Program Impacts

#	Project Name	Project Number	Justification					Impact		
			Capacity Needs	Useful Life	Economic Benefit	Safety/Regulatory	Flood Control	Manpower	Energy	Chemical
<b><u>Awards in 2017</u></b>										
1	Flood Control Project on the East Branch of Cherry Creek, Flossmoor	10-883-CF				x	x	=	=	=
2	Rainwater Harvesting System at Dearborn Homes, Chicago	14-113-5F				x	x	=	=	=
3	Streambank Stabilization Projects for Addison Creek	14-108-3F				x	x	=	=	=
4	Flood Control Project at 61st Avenue and 36th Street, Cicero	16-IGA-21			x		x	=	=	=
5	Buffalo Creek Reservoir Expansion	13-370-3F				x	x	=	=	=
6	Streambank Stabilization Project along Calumet Union Drainage Ditch	10-882-BF				x	x	=	=	=
<b><u>Projects Under Development</u></b>										
7	Intergovernmental Agreements	Various					x	=	=	=

**LEGEND**

Under "**Justification**," the marked columns note the categories of benefits expected from each project.

+ or - Labor savings (+) or increases (-) expected to result in redirecting existing manpower away from or toward facility or process to other tasks with no net change in total position costs.

+ or - Minor energy savings (+) or costs (-) having a negligible impact on the District's overall energy budget.

+ or - Chemical savings (+) or costs (-) having a negligible impact on the District's overall chemical costs.

= No budgetary impact expected.

**Manpower**

++ or -- Labor impact significant enough to ultimately result in reduction (++) or increase (--) in personnel. See additional cost details contained in "Description of Capital Projects" section.

**Energy**

++ or -- Major energy savings (++) or costs (--) expected to result in significant revisions to a facility's energy budget. See additional cost details in "Description of Capital Projects" section.

**Chemical**

++ or -- Major chemical savings (++) or costs (--) expected to result in significant revisions to the budgeted chemical expenditures for the associated process. See additional cost details contained in "Description of Capital Projects" section.

## Streambank Stabilization Project on Oak Lawn Creek

**Project Number:** 10-237-3F

**Service Area:** Calumet

**Location:** Oak Lawn, IL

**Engineering Consultant:** MWH Americas, Inc.

**General Contractor:** Judlau Contracting, Inc.

**Estimated Construction Cost:** \$3,035,000

**Contract Award Date:** September 2016

**Substantial Completion Date:** September 2017\*



**Project Description:** Stabilization of approximately 1,200 linear feet of Oak Lawn Creek, from Central Avenue to Massasoit Avenue in Oak Lawn, using soldier piles and precast concrete panels. Trees and other plantings will be installed upon the completion of the wall.

**Project Justification:** Safety/Regulatory. The creek banks have deteriorated due to hydraulic erosion and slope failures, thus potentially compromising the slopes and impacting residential structures that are in the vicinity.

**Project Status:** This project is under construction.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Streambank Stabilization Project along Calumet Union Drainage Ditch

**Project Number:** 10-882-BF

**Service Area:** Calumet

**Location:** Markham, IL

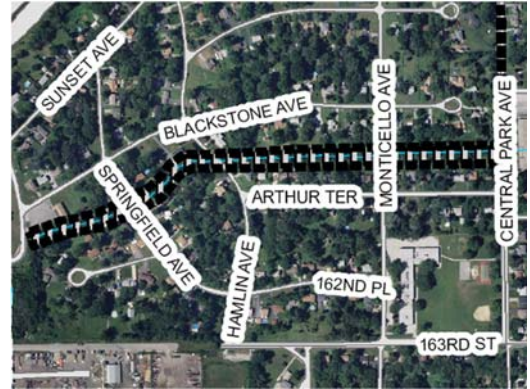
**Engineering Consultant:** Michael Baker, Jr., Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,839,000

**Contract Award Date:** September 2017\*

**Substantial Completion Date:** September 2018\*



**Project Description:** This project will stabilize approximately 3,559 linear feet of the Calumet Union Drainage Ditch, between Sunset and Central Park Avenues, in the City of Markham.

**Project Justification:** Safety/Regulatory. This project will protect 42 residential structures and infrastructure in imminent danger of failure from active streambank erosion and flooding.

**Project Status:** This project is at the 98 percent design stage. An Intergovernmental Agreement with the City of Markham has been executed and the permits have been obtained. The District is procuring easements from affected property owners.

\*Information shown is estimated.

## Streambank Stabilization Project along Midlothian Creek, Tinley Park

**Project Number:** 10-882-CF

**Service Area:** Calumet

**Location:** Tinley Park, IL

**Engineering Consultant:** Michael Baker, Jr., Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$392,000

**Contract Award Date:** May 2017\*

**Substantial Completion Date:** May 2018\*



**Project Description:** This project will stabilize approximately 495 linear feet of Midlothian Creek from 66th Court, north of 173rd Street, extending east approximately 300 feet, in the Village of Tinley Park.

**Project Justification:** Safety/Regulatory. This project will protect structures and infrastructure in imminent danger of failure from active streambank erosion and flooding.

**Project Status:** The final plans and specifications are being prepared. The permits and easements have been obtained. An intergovernmental agreement is being finalized with the Village of Tinley Park. The project received approval for funding from the Illinois Environmental Protection Agency's State Revolving Fund loan program in late November 2016.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Streambank Stabilization/Flood Control Project on Tinley Creek

**Project Number:** 10-882-DF

**Service Area:** Calumet

**Location:** Orland Hills, IL

**Engineering Consultant:** CH2M HILL Engineers, Inc.

**General Contractor:** Cardno, Inc.

**Estimated Construction Cost:** \$664,000

**Contract Award Date:** April 2016

**Substantial Completion Date:** April 2017\*



**Project Description:** This project will provide naturalized channel stabilization/flood control on Tinley Creek, from Lake Lorin to 88th Avenue in Orland Hills.

**Project Justification:** Safety/Regulatory. This project will protect against erosion along a segment of Tinley Creek and reduce the risk of overtopping of the Lake Lorin outlet structure.

**Project Status:** The project is under construction.

\*Information shown is estimated.

## Flood Control Project at Arrowhead Lake, Palos Heights

**Project Number:** 10-883-BF

**Service Area:** Calumet

**Location:** Palos Heights, IL

**Engineering Consultant:** CH2M HILL Engineers, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,200,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** July 2018\*



**Project Description:** This project will raise an existing bicycle trail on the north side of Arrowhead Lake, in unincorporated Palos Heights, to increase stormwater storage in the lake.

**Project Justification:** Safety/Regulatory. This project will remove approximately 70 structures from the Federal Emergency Management Agency Zone A floodplain.

**Project Status:** The District is finalizing an Intergovernmental Agreement with the Forest Preserve District of Cook County and the City of Palos Heights. The District is also working to obtain a dam permit from the Illinois Department of Natural Resources. Contract documents are being prepared for advertisement.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.



## Flood Control Project on the East Branch of Cherry Creek, Flossmoor

**Project Number:** 10-883-CF

**Service Area:** Calumet

**Location:** Flossmoor, IL

**Engineering Consultant:** CH2M HILL Engineers, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$4,860,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** February 2018\*



**Project Description:** This project includes the construction of an overflow channel on Homewood-Flossmoor High School's property, west of Governors Highway. It will also replace two collapsed culverts and create shelf storage on Cherry Creek.

**Project Justification:** Safety/Regulatory. This project will remove 16 structures from the regulatory floodplain.

**Project Status:** The contract is being advertised for bids.

This project is partially funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information [Capital Improvements Bond Fund = \$3,810,000; Stormwater Management Fund = \$1,050,000].

\*Information shown is estimated.

## Flood Control Project for Deer Creek, Ford Heights

**Project Number:** 10-884-BF

**Service Area:** Calumet

**Location:** Ford Heights, IL

**Engineering Consultant:** Black & Veatch Corporation

**General Contractor:** To be determined

**Estimated Construction Cost:** \$3,440,000

**Contract Award Date:** December 2017\*

**Substantial Completion Date:** December 2018\*



**Project Description:** This project will reduce flood damage by improving channel conveyance and raising a berm at approximately 3,000 feet, between U.S. Route 30 and Hammond Lane, within the Village of Ford Heights. This project includes the construction of a vegetated berm, stabilization of bank slopes, placement of pools and rock riffles, and planting of diverse native landscaping.

**Project Justification:** Safety/Regulatory. This project will help alleviate public health and safety concerns by reducing overbank flooding, which affects approximately 270 structures within the Village of Ford Heights.

**Project Status:** The District has executed an intergovernmental agreement with the Village of Ford Heights for this project. The project is at the 98 percent design completion stage. The District is currently working to obtain the required easements and acquisitions for the project. Permits need to be finalized with the Army Corps of Engineers and the Illinois Department of Natural Resources.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Streambank Stabilization Project for the West Fork of the North Branch of the Chicago River

**Project Number:** 11-052-3F

**Service Area:** North

**Location:** Northbrook, IL

**Engineering Consultant:** AMEC Environment & Infrastructure, Inc.

**General Contractor:** Pan Oceanic Engineering Co., Inc.

**Estimated Construction Cost:** \$413,000

**Contract Award Date:** April 2016

**Substantial Completion Date:** April 2017\*



**Project Description:** This project will stabilize the eastern streambank along the West Fork of the North Branch of the Chicago River through construction of a 155-foot gravity retaining wall.

**Project Justification:** Safety/Regulatory. This project will address public safety and protect two structures and utilities in imminent danger of failure due to active streambank erosion.

**Project Status:** This project is under construction.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Addison Creek Reservoir

**Project Number:** 11-186-3F

**Service Area:** Stickney

**Location:** Bellwood, IL

**Engineering Consultant:** Christopher B. Burke Engineering, Ltd.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$109,542,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** October 2019\*



**Project Description:** This project will create an approximately 600 acre-foot flood control reservoir in Bellwood just north of Washington Boulevard and east of Addison Creek. This project includes reservoir excavation and installation of necessary appurtenances for operation of the facility, such as control structure, inlet structure, spillway, piping, and a pump station.

**Project Justification:** Safety/Regulatory. This project, along with Addison Creek Channel Improvements project, will help alleviate public health and safety concerns by reducing overbank flooding to approximately 2,200 structures along Addison Creek from Northlake to Broadview. In addition to providing flood control benefits, this reservoir will serve as compensatory storage for the channel improvement project.

**Project Status:** The project is in final design phase.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Flood Control Project on Farmers and Prairie Creeks

**Project Number:** 12-056-3F

**Service Area:** North

**Location:** Des Plaines, Park Ridge, and Maine Township

**Engineering Consultant:** HNTB Corporation

**General Contractor:** To be determined

**Estimated Construction Cost:** \$14,100,000

**Contract Award Date:** October 2017\*

**Substantial Completion Date:** July 2019\*



**Project Description:** This project includes flood storage and conveyance improvements along Farmers and Prairie Creeks, including channel modifications, detention expansion, diversion sewer construction, and streambank stabilization.

**Project Justification:** Safety/Regulatory. This project will help alleviate public health and safety concerns by reducing overbank flooding to approximately 128 structures and protecting numerous buildings through streambank stabilization.

**Project Status:** This project is in the final design stage. Ninety-eight percent documents were issued in February 2016.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Lyons Levee Flood Control Improvements, Lyons

**Project Number:** 13-199-3F

**Service Area:** Stickney

**Location:** Lyons, IL

**Engineering Consultant:** MC Consulting, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$6,500,000

**Contract Award Date:** July 2017\*

**Substantial Completion Date:** July 2018\*



**Project Description:** The Lyons Levee is located on the east bank of the Des Plaines River and is approximately 4,000 feet long, beginning at Joliet Road at the upstream end and extending approximately 700 feet downstream of 47th Street. The scope of the project involves the restoration and improvement of the levee to a condition that will elevate the levee to modern design standards, provide flood protection, and prevent overtopping by events up to a 100-year design flood.

**Project Justification:** Safety/Regulatory. This project will provide protection against overtopping of the levee during a 100-year flood. Overtopping has resulted in major flooding in the recent past (2013), impacting the Village of Forest View that is located east of the levee. Overtopping could also jeopardize the ComEd substation that is located east of Forest View and create the potential for power disruptions or failures at Midway Airport and the Stickney Water Reclamation Plant.

**Project Status:** This project is in the final design stage. Short-term, temporary stabilization measures were implemented in 2014, pending long-term restoration measures.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.



## Streambank Stabilization Project on Melvina Ditch in Oak Lawn and Chicago Ridge

**Project Number:** 13-248-3F

**Service Area:** Calumet

**Location:** Oak Lawn and Chicago Ridge, IL

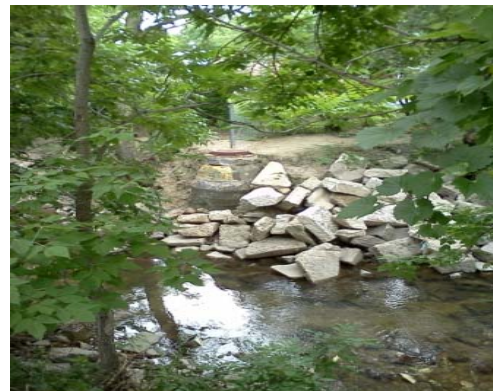
**Engineering Consultant:** MWH Americas, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$8,800,000

**Contract Award Date:** September 2017\*

**Substantial Completion Date:** September 2020\*



**Project Description:** This project involves streambank stabilization along Melvina Ditch, from 95th Street to 99th Street. Approximately 150 linear feet of the ditch at the north end of the project site will be stabilized with twin box culverts. The remaining 2,500 linear feet of the ditch will be stabilized with a precast concrete modular block retaining wall system.

**Project Justification:** Safety/Regulatory. The banks have deteriorated due to hydraulic erosion and slope failures, potentially compromising roadways and structures that are in the vicinity.

**Project Status:** Finalizing easements and permits. The District is currently seeking funding from Illinois Environmental Protection Agency's State Revolving Fund loan program.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Buffalo Creek Reservoir Expansion

**Project Number:** 13-370-3F

**Service Area:** North

**Location:** Buffalo Grove, IL

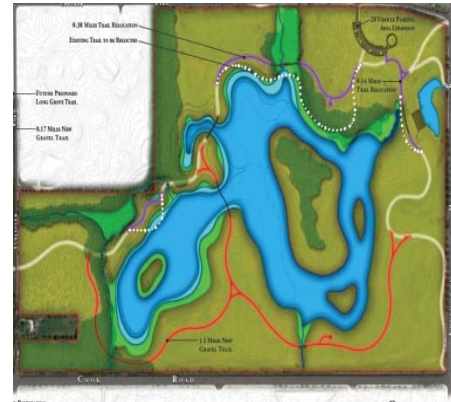
**Engineering Consultant:** Hey & Associates, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$21,130,700

**Contract Award Date:** September 2017\*

**Substantial Completion Date:** March 2019\*



**Project Description:** This project will increase the impoundment capacity of the existing Buffalo Creek Reservoir by approximately 180 acre-feet. Pedestrian bridges and boardwalks will be replaced and existing trails will be relocated to remove them from the ten-year storm event.

**Project Justification:** Safety/Regulatory. Approximately 104 structures will receive flood protection from the expansion.

**Project Status:** Finalizing Intergovernmental Agreement for construction of the project with the Lake County Forest Preserve District and the Village of Buffalo Grove. The District is also working to obtain necessary permits, which requires an Intergovernmental Agreement with the Lake County Forest Preserve District for wetland mitigation.

This project is partially funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information [Capital Improvements Bond Fund = \$19,300,000; Stormwater Management Fund = \$1,830,700].

\*Information shown is estimated.



## Streambank Stabilization Projects for Addison Creek

**Project Number:** 14-108-3F

**Service Area:** Stickney

**Location:** Northlake and North Riverside, IL

**Engineering Consultant:** Burns & McDonnell Engineering Company, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$995,000

**Contract Award Date:** June 2017\*

**Substantial Completion Date:** July 2018\*



**Project Description:** The scope of this project involves stabilization of approximately 750 feet of Addison Creek adjacent to Fullerton Avenue in Northlake and 410 linear feet of streambank adjacent to 19th Avenue in the Village of North Riverside. Stabilization methods include the installation of native vegetation, a vegetated geogrid, turf reinforcing mat, and the placement of riprap.

**Project Justification:** Safety/Regulatory.

**Project Status:** Project design is complete. The District is preparing bid documents.

This project is partially funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information [Capital Improvements Bond Fund = \$478,000; Stormwater Management Fund = \$517,000].

\*Information shown is estimated.

## Rainwater Harvesting System at Dearborn Homes, Chicago

**Project Number:** 14-113-5F

**Service Area:** Stickney

**Location:** Chicago, IL

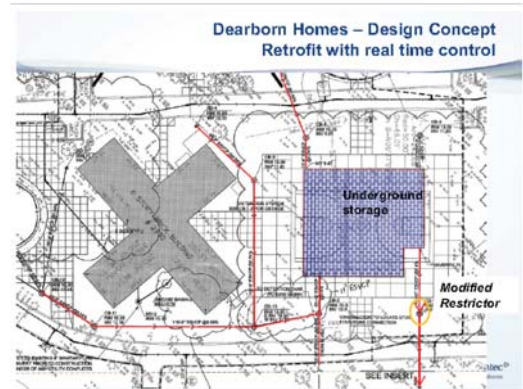
**Engineering Consultant:** Geosyntec Consultants

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,220,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** September 2017\*



**Project Description:** Construct and install storm sewers, structures, irrigation equipment, rainwater harvesting pumps, water service connections, and the OptiRTC control tool to reuse the detained stormwater for irrigation of nearby landscaping for six buildings within the housing complex.

**Project Justification:** This project will assist in fulfilling requirements in the Green Infrastructure Section of the Combined Sewer Overflow Consent Decree.

**Project Status:** The design stage is almost complete. The project will either be bid out by the District or performed under Job Order Contracting. The project should be started and completed in 2017.

\*Information shown is estimated.

## Flood Control Project on Natalie Creek in Oak Forest and Midlothian

**Project Number:** 14-252-3F

**Service Area:** Calumet

**Location:** Oak Forest and Midlothian, IL

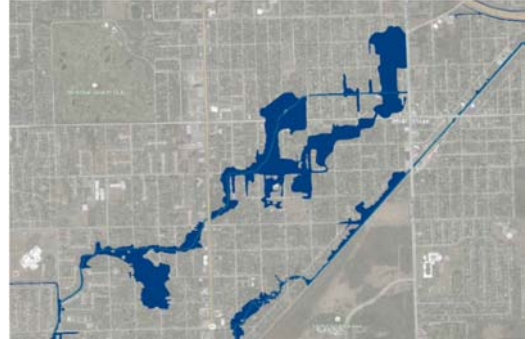
**Engineering Consultant:** Burns & McDonnell Engineering Company, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$8,300,000

**Contract Award Date:** April 2017\*

**Substantial Completion Date:** April 2019\*



**Project Description:** The scope of this project is to install flood control measures for an estimated 15,800 linear feet along Natalie Creek from 157th and Central Park in Oak Forest to 146th and Pulaski in Midlothian. Flood control measures involve the upsizing of restrictive culverts, improving the channel at several locations, and the installation of a stormwater detention basin. The project will reduce flood damages for over 230 structures. This project is in the Little Calumet River Watershed.

**Project Justification:** Capacity Needs, Useful Life, Economic Benefit, and Safety/Regulatory.

**Project Status:** This project is in final design.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Melvina Ditch Reservoir Improvements

**Project Number:** 14-263-3F

**Service Area:** Calumet

**Location:** Burbank, IL

**Engineering Consultant:** V3 Companies of Illinois, Ltd.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$21,452,000

**Contract Award Date:** February 2017\*

**Substantial Completion Date:** March 2018\*



**Project Description:** This project consists of expanding the existing Melvina Ditch Reservoir by up to 195 acre-feet to increase its storage capacity (up to 118 percent increase), modifying the pumping station to accommodate the reservoir expansion, and installing a new emergency overflow weir to reduce the likelihood of reservoir overtopping. Reservoir expansion will include work within the existing reservoir footprint (District property) and includes additional private properties around the perimeter of the reservoir. Local stakeholders gave feedback and a reservoir expansion configuration was selected. Additional work includes the installation of an emergency overflow/high water bypass structure and three flap gates and the replacement of the existing elliptical culverts at the outlet of the Melvina Ditch Reservoir Pumping Station with dual box culverts and a stormwater chamber. Construction limits are immediately adjacent to the pumping station and in the 87th Street right-of-way as needed to install the culverts and to replace any disturbed utilities in conflict with the installation. Storm pumps will be removed and serviced and the impellers will be lengthened.

**Project Justification:** The Melvina Ditch Reservoir has exceeded its capacity in recent storm events, resulting in flooding in Burbank and Oak Lawn.

**Project Status:** This project is currently in the final design engineering stage. Construction of the Melvina Ditch Reservoir Improvements is anticipated to take 28 months. A portion of this project will be funded through a grant from the State of Illinois through its Build Illinois Bond Fund.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Flood Control Project for Midlothian Turnpike at Lavergne Avenue, Crestwood

**Project Number:** 15-IGA-04

**Service Area:** Calumet

**Location:** Midlothian Turnpike & Lavergne Avenue Intersection

**Engineering Consultant:** Village of Crestwood

**General Contractor:** To be determined

**Estimated Construction Cost:** \$500,000 (District cost share amount)

**Contract Award Date:** September 2017\* (Board Authority to enter agreement)

**Substantial Completion Date:** September 2018\*



**Project Description:** This is a cost sharing agreement with the Village of Crestwood. Severe local flooding occurs at the intersection of Midlothian Turnpike and Lavergne Avenue due to the Calumet-Sag Tributary C overflowing its banks. The channel runs north and south along the west side of Lavergne Avenue.

**Project Justification:** The Village of Crestwood is currently investigating various stormwater flood control storage options (e.g. detention storage on Midlothian Country Club property or miscellaneous vacant Village parcels, etc.) in order to resolve the flooding of the Midlothian Turnpike and Lavergne Avenue intersection. An effective flood control alternative will eliminate the flooding hazard at the intersection and allow “Life Safety” services safe travel through the area. In the past, the Village of Crestwood has often closed the flooded intersection in order to keep commuters safe.

**Project Status:** This project is in the preliminary design stage.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Construction of Alternative ADCR-7B, Northlake

**Project Number:** 15-IGA-13

**Service Area:** Stickney

**Location:** Northlake, IL

**Engineering Consultant:** Christopher B. Burke Engineering, Ltd. under contract with the City of Northlake

**General Contractor:** To be determined

**Estimated Construction Cost:** \$1,000,000 (District cost share amount)

**Contract Award Date:** July 2013 (Board authority to enter agreement)

**Substantial Completion Date:** July 2018\*



**Project Description:** This is a cost sharing agreement with the City of Northlake. This project will stabilize Addison Creek between Wolf Road and Palmer Avenue in the city of Northlake.

**Project Justification:** This project will alleviate public safety risks by protecting infrastructure from the danger of failure due to active streambank erosion.

**Project Status:** This project is in the design stage. The Board of Commissioners granted authority to enter into an Intergovernmental Agreement with the City of Northlake in July 2013, and the Intergovernmental Agreement was executed on March 10, 2014. The City of Northlake is currently working to obtain remaining funding required to pay for construction of the project.

\*Information shown is estimated.



## Construction of a Levee along Thorn Creek at Arquilla Park, Glenwood

**Project Number:** 15-IGA-14

**Service Area:** Calumet

**Location:** Glenwood, IL

**Engineering Consultant:** K-Plus Engineering, LLC under contract with the Village of Glenwood

**General Contractor:** To be determined

**Estimated Construction Cost:** \$3,870,000 (District cost share amount)

**Contract Award Date:** January 2016 (Board authority to enter agreement)

**Substantial Completion Date:** October 2017\*



**Project Description:** This project will provide a levee at Arquilla Park to protect residential structures from overbank flooding. This is a cost sharing agreement with the Village of Glenwood.

**Project Justification:** This project will protect approximately 31 residential structures from overbank flooding along Thorn Creek.

**Project Status:** The Board of Commissioners granted authority to enter into an Intergovernmental Agreement with the Village of Glenwood in January 2016, and the Intergovernmental Agreement was executed June 14, 2016. This project is currently in the design stage. Payment from the Stormwater Management Fund was made in 2016 for design. Payment from the Capital Improvements Bond Fund will occur when construction begins.

This project is partially funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information [Capital Improvements Bond Fund = \$3,483,000; Stormwater Management Fund = \$387,000].

\*Information shown is estimated.

## Prairie/Washington Pumping Station Improvements, Brookfield

**Project Number:** 15-IGA-16

**Service Area:** Stickney

**Location:** Brookfield, IL

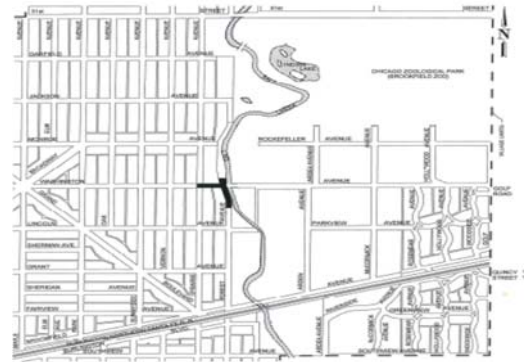
**Engineering Consultant:** Village of Brookfield

**General Contractor:** Glenbrook Excavating & Concrete, Inc.

**Estimated Construction Cost:** \$1,000,000 (District cost share amount)

**Contract Award Date:** April 2016 (Board authority to enter agreement)

**Substantial Completion Date:** May 2017\*



**Project Description:** This is a cost sharing agreement with the Village of Brookfield. The Village of Brookfield proposes to install a new pumping station and back-up generator near the Washington Avenue/Forest Avenue intersection, a box culvert under Forest Avenue, a new detention pond west of Forest Avenue, and other miscellaneous storm sewer improvements and restorations for the public benefit of reducing flooding in the general area. The Village is responsible for design, construction, operation, and maintenance.

**Project Justification:** Roadway and residential flooding due to Salt Creek flood levels, causing area storm sewers to back up.

**Project Status:** This project is under construction.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.



## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Des Plaines

**Project Number:** 15-IGA-18

**Service Area:** Stickney

**Location:** Des Plaines, IL

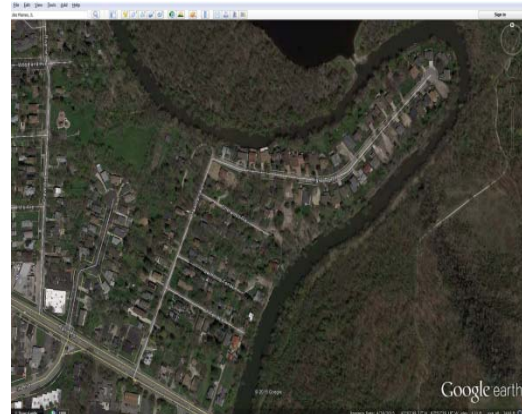
**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$950,000 (District cost share amount)

**Contract Award Date:** September 2015 (Board authority to enter agreement)

**Substantial Completion Date:** December 2017\*



**Project Description:** Purchase 13 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with the City of Des Plaines.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Des Plaines.

**Project Status:** Acquisitions have begun.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Installation of Green Infrastructure at Chicago Public Schools

**Project Number:** 15-IGA-20

**Service Area:** North, Calumet, and Stickney

**Location:** All Service Areas

**Engineering Consultant:** Multiple/To be determined

**General Contractor:** Multiple/To be determined

**Estimated Construction Cost:** \$16,000,000 (District cost share amount)

**Contract Award Date:** October 2014 (Board authority to enter agreement)

**Substantial Completion Date:** October 2020\*



**Project Description:** The District, the Chicago Department of Water Management, and the Chicago Public Schools are partnering to design and install playgrounds at various Chicago Elementary Schools utilizing green infrastructure. The projects will reduce flooding, reduce the load on the combined sewer system, and educate students and neighbors about green infrastructure techniques and purpose.

**Project Justification:** This project will assist in fulfilling requirements in the Green Infrastructure Section of the Combined Sewer Overflow Consent Decree.

**Project Status:** Four playgrounds were transformed in 2014 as a pilot program under a different Intergovernmental Agreement. The current IGA has called for 30 more school playgrounds to be designed and constructed during the period of 2015-2019. Six schools were designed in 2015. Two of these schools, Willer Cather Elementary and Orozco Elementary Academy of Fine Arts and Sciences, were completed in 2015. The construction of three more school playgrounds (Daniel J. Corkery Elementary, Frank W. Gunsaulus Elementary Scholastic Academy, and James Wadsworth Elementary School) started in August 2016, and are anticipated to be completed by the end of 2016. It is anticipated that ten more schools will be designed in 2016-2017. The District plans to fund the ten designs, with the anticipation that the Chicago Department of Water Management and Chicago Public Schools will fund the design of the remaining schools. An amendment to the current Intergovernmental Agreement to allow us to fund these designs is being drafted by the Law Department.

\*Information shown is estimated.

## Flood Control Project on 103rd Street from Cicero Avenue to Central Avenue, Oak Lawn

**Project Number:** 15-IGA-22

**Service Area:** Calumet

**Location:** Oak Lawn, IL

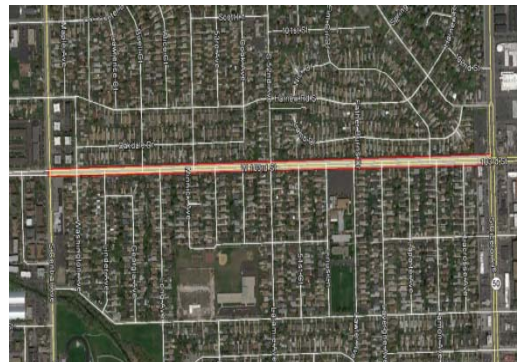
**Engineering Consultant:** Village of Oak Lawn

**General Contractor:** To be determined

**Estimated Construction Cost:** \$3,000,000 (District cost share amount)

**Contract Award Date:** April 2017\* (Board Authority to enter agreement)

**Substantial Completion Date:** April 2018\*



**Project Description:** This is a cost sharing agreement with the Village of Oak Lawn. Oak Lawn proposes to install precast box culverts under 103rd Street and a back flow preventer with a pump prior to or at Stony Creek to provide underground stormwater detention storage.

**Project Justification:** This project will reduce flooding to residents of Oak Lawn. It will also reduce flooding downstream by preventing flow backup into the Oak Lawn sewer system.

**Project Status:** This project is being designed.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## McDermott Drive/Morris Avenue Storm Sewer Improvements, SSA

**Project Number:** 16-IGA-04

**Service Area:** Stickney

**Location:** Village of Berkeley, IL

**Engineering Consultant:** Shovel Ready (Civiltech Engineering, Inc. hired by the Village of Berkeley)

**General Contractor:** To be determined

**Estimated Construction Cost:** \$2,696,000 (District cost share amount)

**Contract Award Date:** June 2016 (Board authority to enter agreement)

**Substantial Completion Date:** November 2018\*



**Project Description:** Construct two new storm sewers along McDermott Drive and Morris Avenue, expand the existing detention basin, and construct a stormwater pumping facility at the southwest corner of the existing detention basin to adequately convey a 100-year storm event. This is a cost sharing agreement with the Village of Berkeley.

**Project Justification:** This project will reduce flooding for nearly 800 residential structures in the Village of Berkeley.

**Project Status:** Phase II is currently in design.

\*Information shown is estimated.

## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Riverside Lawn

**Project Number:** 16-IGA-06

**Service Area:** Stickney

**Location:** Riverside Lawn, IL

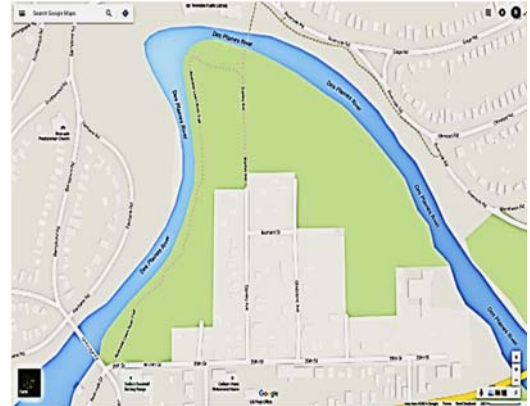
**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$8,000,000 (District cost share amount)

**Contract Award Date:** January 2016 (Board authority to enter agreement)

**Substantial Completion Date:** December 2017\*



**Project Description:** Purchase 39 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with Riverside Lawn.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in the Riverside Lawn area.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## City of Berwyn Green Alleys

**Project Number:** 16-IGA-07

**Service Area:** Stickney

**Location:** Berwyn, IL

**Engineering Consultant:** Frank Novotny & Associates, Inc.

**General Contractor:** To be determined

**Estimated Construction Cost:** \$666,700 (District cost share amount)

**Contract Award Date:** December 2016 (Board authority to enter agreement)

**Substantial Completion Date:** November 2017\*



**Project Description:** The City of Berwyn will be replacing ten alleys with permeable pavements throughout the city to reduce the current load to the combined sewer system and to help alleviate flooding within the project area. The District will be funding approximately 27.5 percent of the total \$2,428,557.20 construction cost.

**Project Justification:** This project will assist in fulfilling requirements in the Green Infrastructure Section of the Combined Sewer Overflow Consent Decree.

**Project Status:** An Intergovernmental Agreement with the City of Berwyn is under review and was approved by the Board of Commissioners on December 15, 2016. The project design has nearly been completed.

\*Information shown is estimated.

## Village of Skokie Rain Garden in Devonshire Park near Kenneth Terrace and a Detention Area near the Skokie Police Headquarters

**Project Number:** 16-IGA-10

**Service Area:** North

**Location:** Skokie, IL

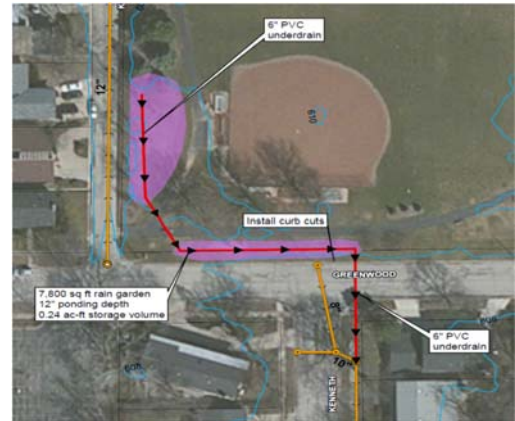
**Engineering Consultant:** Baxter & Woodman

**General Contractor:** To be determined

**Estimated Construction Cost:** \$200,000 (District cost share amount)

**Contract Award Date:** December 2016 (Board authority to enter agreement)

**Substantial Completion Date:** September 2017\*



**Project Description:** The Village of Skokie is proposing to construct a rain garden to be located at Devonshire Park to address localized flooding at the intersection of Greenwood Street and Kenneth Terrace. The Village is also proposing to construct a naturalized stormwater detention basin at the Police Station Headquarters located at 7300 Niles Center Road.

**Project Justification:** This project will assist in fulfilling requirements in the Green Infrastructure Section of the Combined Sewer Overflow Consent Decree.

**Project Status:** An Intergovernmental Agreement with the Village of Skokie was approved by the Board of Commissioners in December 2016. The project has been planned and will be started soon.

\*Information shown is estimated.



## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Des Plaines

**Project Number:** 16-IGA-11

**Service Area:** Stickney

**Location:** Des Plaines, IL

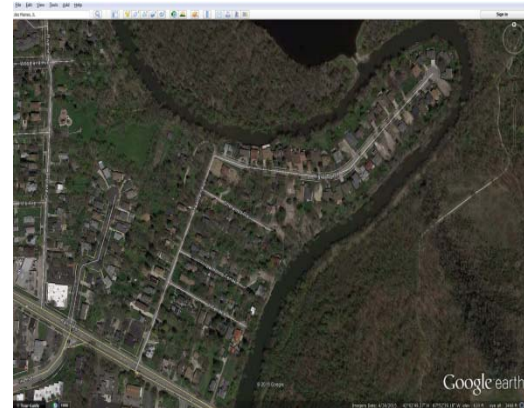
**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$3,625,000 (District cost share amount)

**Contract Award Date:** November 2016 (Board authority to enter agreement)

**Substantial Completion Date:** December 2019\*



**Project Description:** Purchase 49 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with the City of Des Plaines.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Des Plaines.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.



## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Butterfield Creek, Flossmoor

**Project Number:** 16-IGA-12

**Service Area:** Calumet

**Location:** Flossmoor, IL

**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$640,000 (District cost share amount)

**Contract Award Date:** December 2016 (Board authority to enter agreement)

**Substantial Completion Date:** December 2018\*



**Project Description:** Purchase two flood-prone homes along Butterfield Creek. This is a cost sharing agreement with the Village of Flossmoor.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Flossmoor.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Silver Creek, Franklin Park

**Project Number:** 16-IGA-13

**Service Area:** Stickney

**Location:** Franklin Park, IL

**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$4,681,000 (District cost share amount)

**Contract Award Date:** March 2017\* (Board authority to enter agreement)

**Substantial Completion Date:** March 2019\*



**Project Description:** Purchase 32 flood-prone homes along Silver Creek. This is a cost sharing agreement with the Village of Franklin Park.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Franklin Park.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Addison Creek, Northlake

**Project Number:** 16-IGA-14

**Service Area:** Stickney

**Location:** Northlake, IL

**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$1,184,000 (District cost share amount)

**Contract Award Date:** September 2016 (Board authority to enter agreement)

**Substantial Completion Date:** November 2018\*



**Project Description:** Purchase eight flood-prone homes along Addison Creek. This is a cost sharing agreement with the City of Northlake.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Northlake.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along Addison Creek, Stone Park

**Project Number:** 16-IGA-15

**Service Area:** Stickney

**Location:** Stone Park, IL

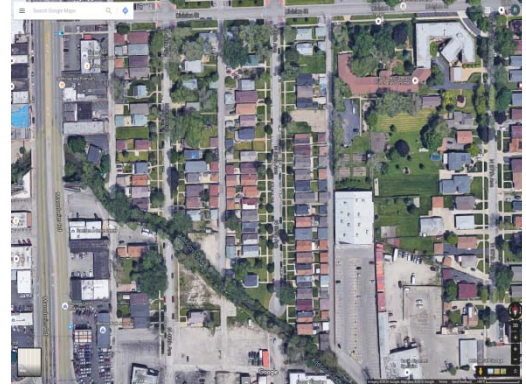
**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$2,700,000 (District cost share amount)

**Contract Award Date:** December 2016 (Board authority to enter agreement)

**Substantial Completion Date:** December 2019\*



**Project Description:** Purchase 35 flood-prone homes along Addison Creek. This is a cost sharing agreement with the Village of Stone Park.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Stone Park.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Wheeling Township

**Project Number:** 16-IGA-16

**Service Area:** North

**Location:** Wheeling Township, IL

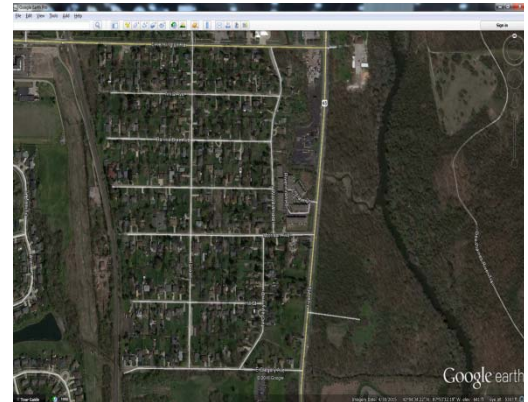
**Engineering Consultant:** Not applicable

**General Contractor:** Not applicable

**Estimated Construction Cost:** \$1,407,000 (District cost share amount)

**Contract Award Date:** March 2017\* (Board authority to enter agreement)

**Substantial Completion Date:** March 2019\*



**Project Description:** Purchase six flood-prone homes along the Des Plaines River. This is a cost sharing agreement with Wheeling Township.

**Project Justification:** Purchase of these homes will reduce the flood hazard risk in Wheeling Township.

**Project Status:** The Intergovernmental Agreement has been prepared.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Pilot Study for Investigating Technology to Address Basement Backups

**Project Number:** 16-IGA-20

**Service Area:** Calumet

**Location:** Chicago, IL

**Engineering Consultant:** Chicago Department of Transportation with the Center for Neighborhood Technology

**General Contractor:** To be determined

**Estimated Construction Cost:** \$400,000 (District cost share amount)

**Contract Award Date:** June 2017\* (Board authority to enter agreement)

**Substantial Completion Date:** December 2017\*



**Project Description:** The District and the City of Chicago (City), through its Departments of Water Management and Transportation, are partnering to conduct a pilot study to evaluate potential runoff reduction and flood protection alternatives. The City will draft the Intergovernmental Agreement.

**Project Justification:** The results of the pilot study will provide valuable information for consideration in future efforts to address flooding in the region.

**Project Status:** An Intergovernmental Agreement with the City is being negotiated, and the pilot study is anticipated to commence in early 2017.

This project is funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*Information shown is estimated.

## Flood Control Project at 61st Avenue and 36th Street, Cicero

**Project Number:** 16-IGA-21

**Service Area:** Stickney

**Location:** Cicero, IL

**Engineering Consultant:** To be determined

**General Contractor:** To be determined

**Estimated Construction Cost:** \$2,498,000 (District cost share amount)

**Contract Award Date:** August 2017\* (Board authority to enter agreement)

**Substantial Completion Date:** September 2018\*



**Project Description:** New storm sewers will be constructed to collect stormwater tributary to the 61st Avenue and 36th Street intersection in the Town of Cicero and conveyed to Kolar Park, where it will be detained and released via a constricted outlet. A new split detention system will include a 5.5 acre-feet underground detention facility beneath Kolar Park, designed to attenuate a 25-year storm, and an additional 1.9 acre-feet of storage will be provided above ground by recessing Kolar Park to achieve a 50-year storm total level of protection. This is a cost sharing agreement with the Town of Cicero. The design, construction, operations, and maintenance will be the responsibility of the Town.

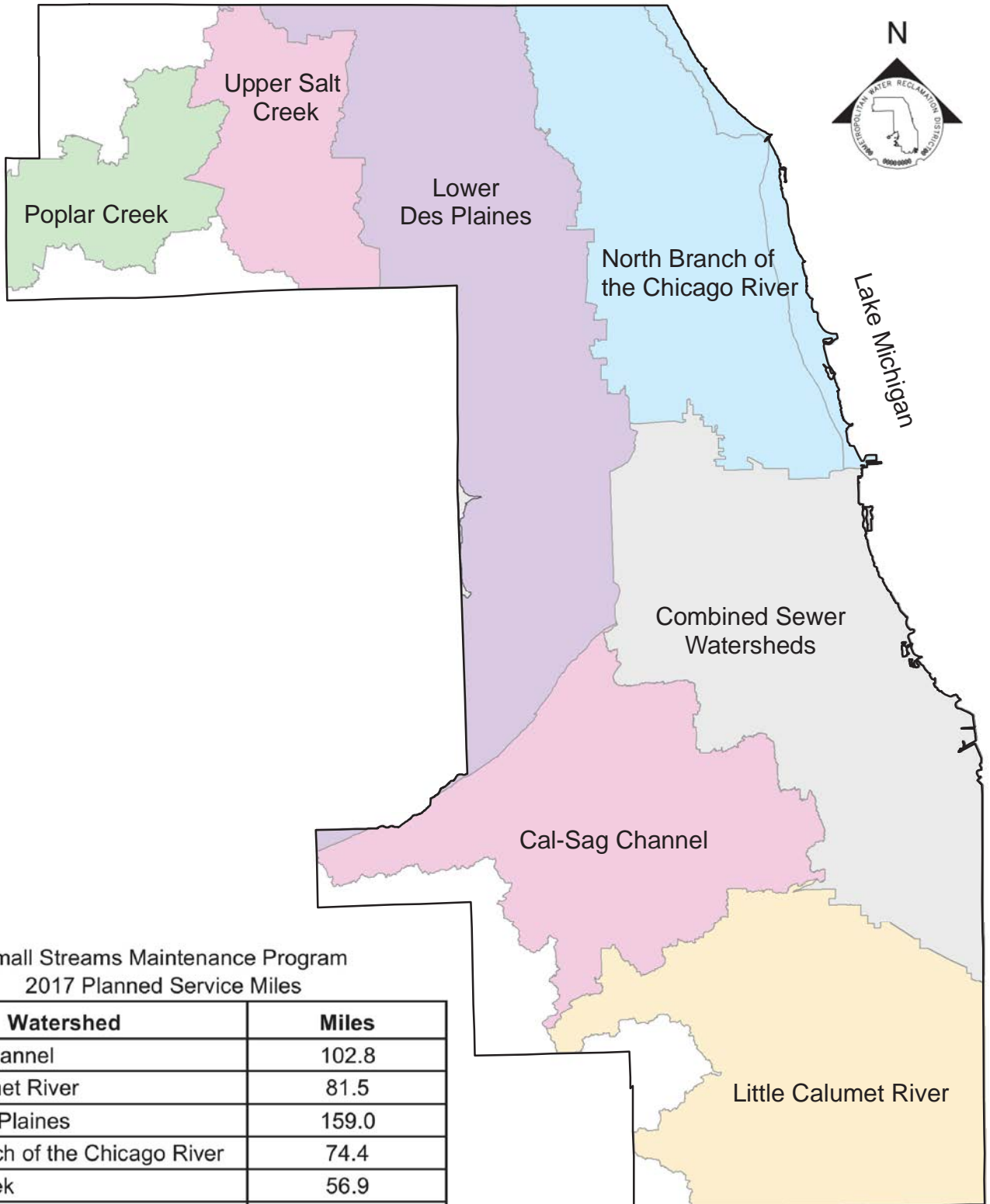
**Project Justification:** This project will protect approximately 34 residential structures, Lincoln Elementary School, and New Life Community Church from flooding.

**Project Status:** The preliminary design phase of this project was completed in February 2016. Final design is expected to be completed by the Town of Cicero as part of the Intergovernmental Agreement. The first draft of the Intergovernmental Agreement is currently in negotiation between the Town of Cicero and the District and is expected to be executed in August 2017.

\*Information shown is estimated.



# STORMWATER MANAGEMENT WATERSHEDS

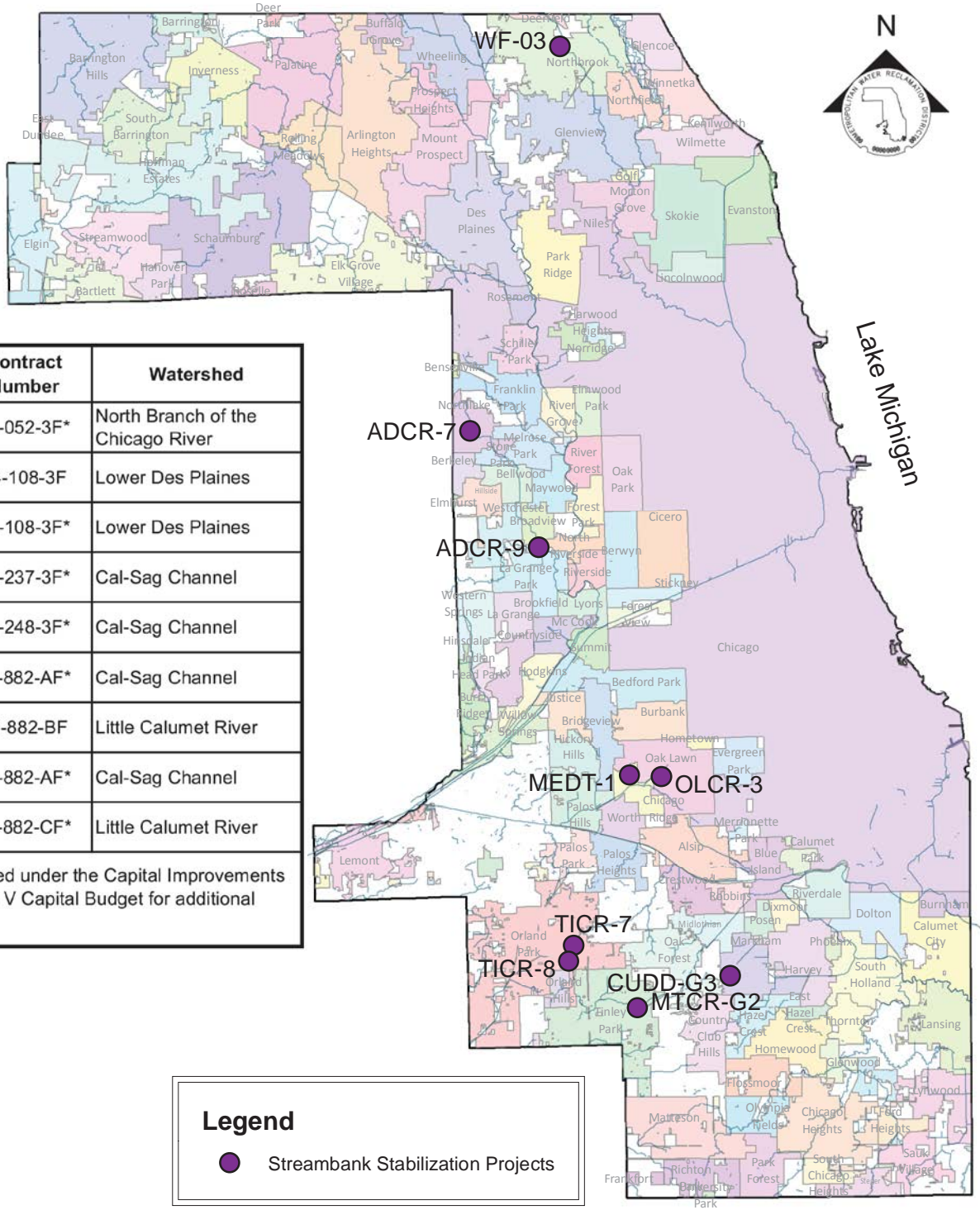


Small Streams Maintenance Program  
2017 Planned Service Miles

Watershed	Miles
Cal-Sag Channel	102.8
Little Calumet River	81.5
Lower Des Plaines	159.0
North Branch of the Chicago River	74.4
Poplar Creek	56.9
Upper Salt Creek	57.1
<b>Total</b>	<b>531.7</b>



# STORMWATER MANAGEMENT PROJECTS STREAMBANK STABILIZATION



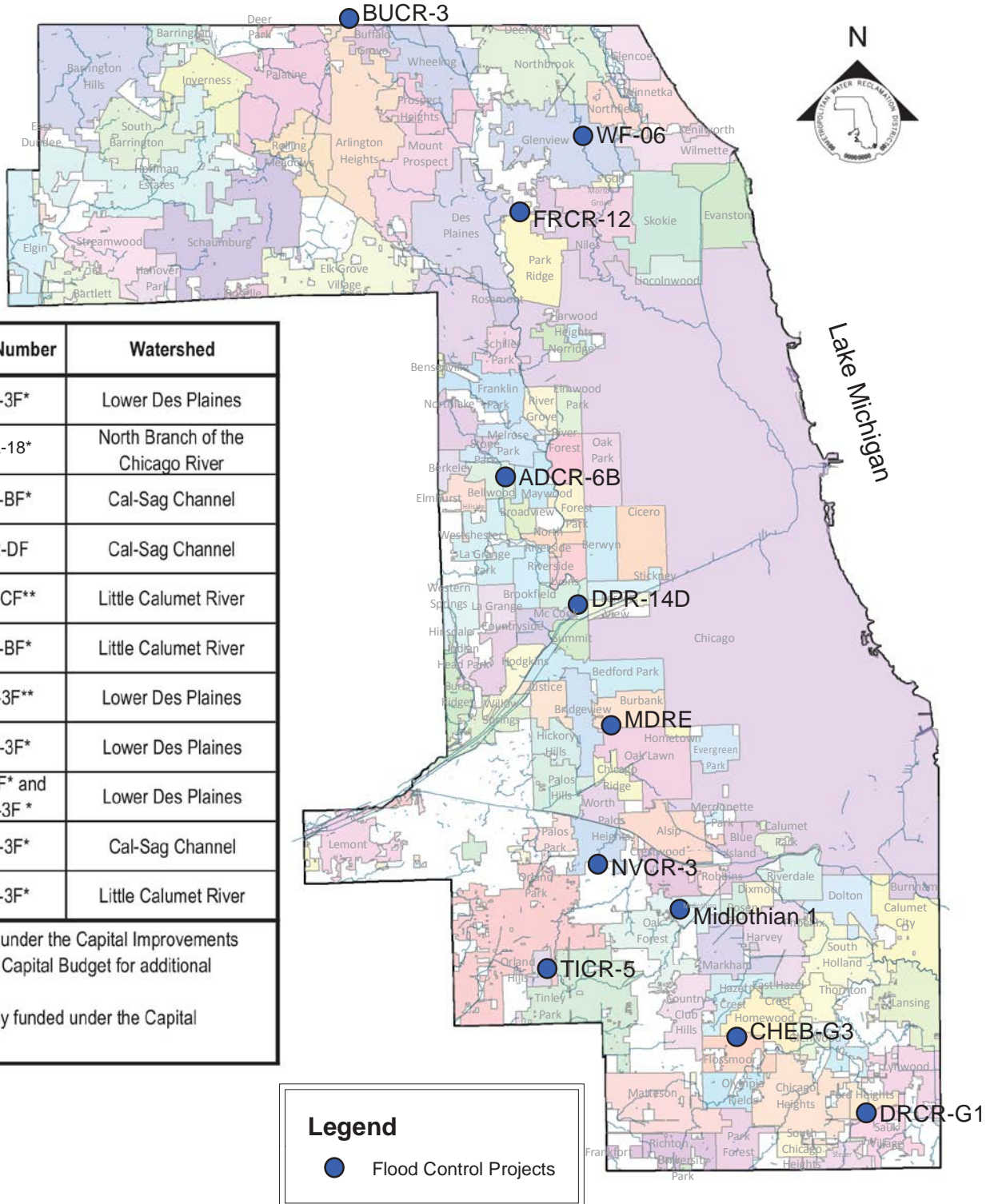
Project ID	Contract Number	Watershed
WF-03	11-052-3F*	North Branch of the Chicago River
ADCR-7	14-108-3F	Lower Des Plaines
ADCR-9	14-108-3F*	Lower Des Plaines
OLCR-3	10-237-3F*	Cal-Sag Channel
MEDT-1	13-248-3F*	Cal-Sag Channel
TICR-7	10-882-AF*	Cal-Sag Channel
CUDD-G3	10-882-BF	Little Calumet River
TICR-8	10-882-AF*	Cal-Sag Channel
MTCR-G2	10-882-CF*	Little Calumet River

\*These projects are funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

**Legend**

● Streambank Stabilization Projects

# STORMWATER MANAGEMENT PROJECTS FLOOD CONTROL

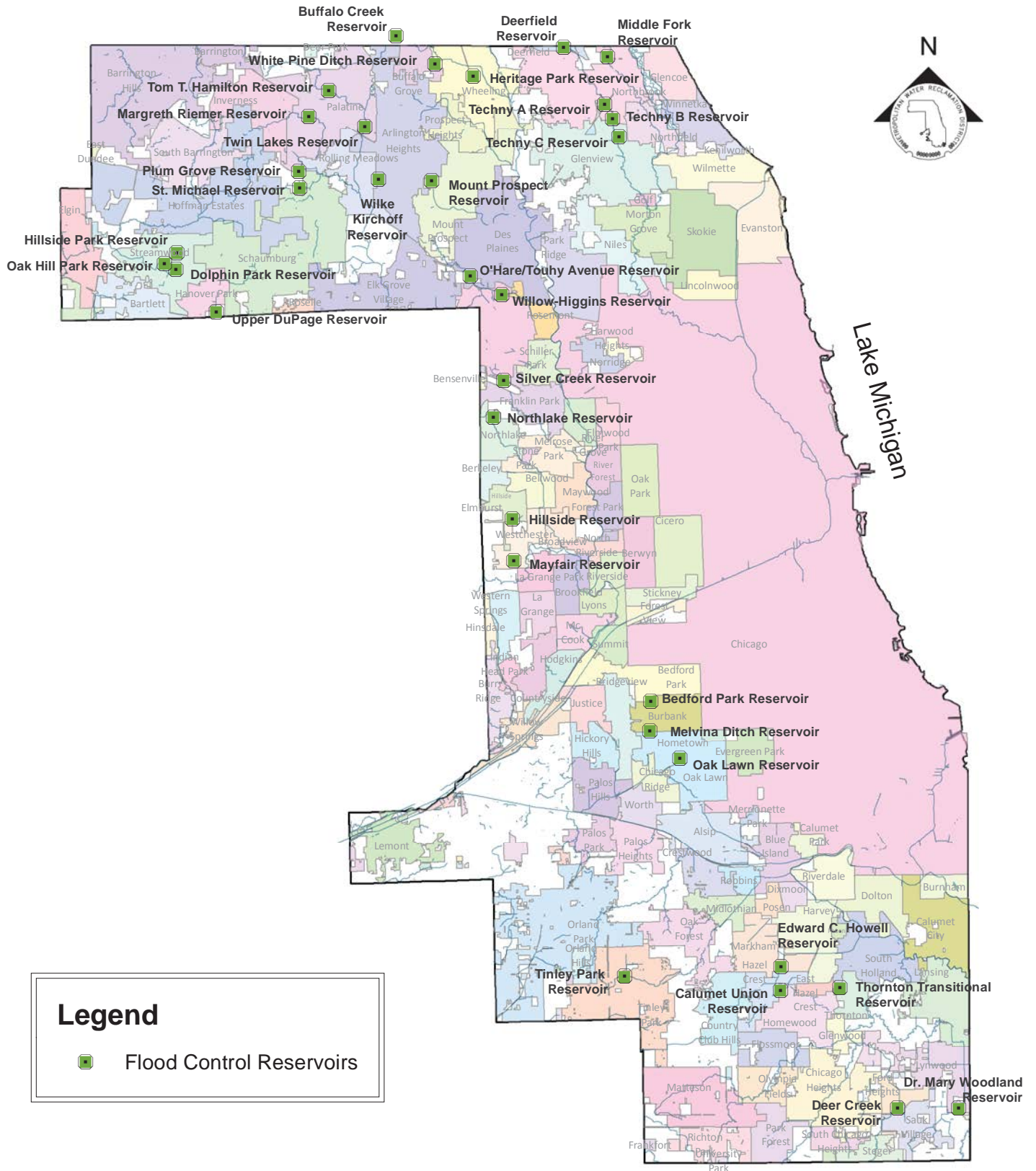


Project ID	Contract Number	Watershed
FRCR-12	12-056-3F*	Lower Des Plaines
WF-06	16-IGA-18*	North Branch of the Chicago River
NVCR-3	10-883-BF*	Cal-Sag Channel
TICR-5	10-882-DF	Cal-Sag Channel
CHEB-G3	10-883-CF**	Little Calumet River
DRCR-G1	10-884-BF*	Little Calumet River
BUCR-3	13-370-3F**	Lower Des Plaines
DPR-14D	13-199-3F*	Lower Des Plaines
ADCR-6B	11-186-3F* and 11-187-3F *	Lower Des Plaines
MDRE	14-263-3F*	Cal-Sag Channel
Midlothian 1	14-252-3F*	Little Calumet River

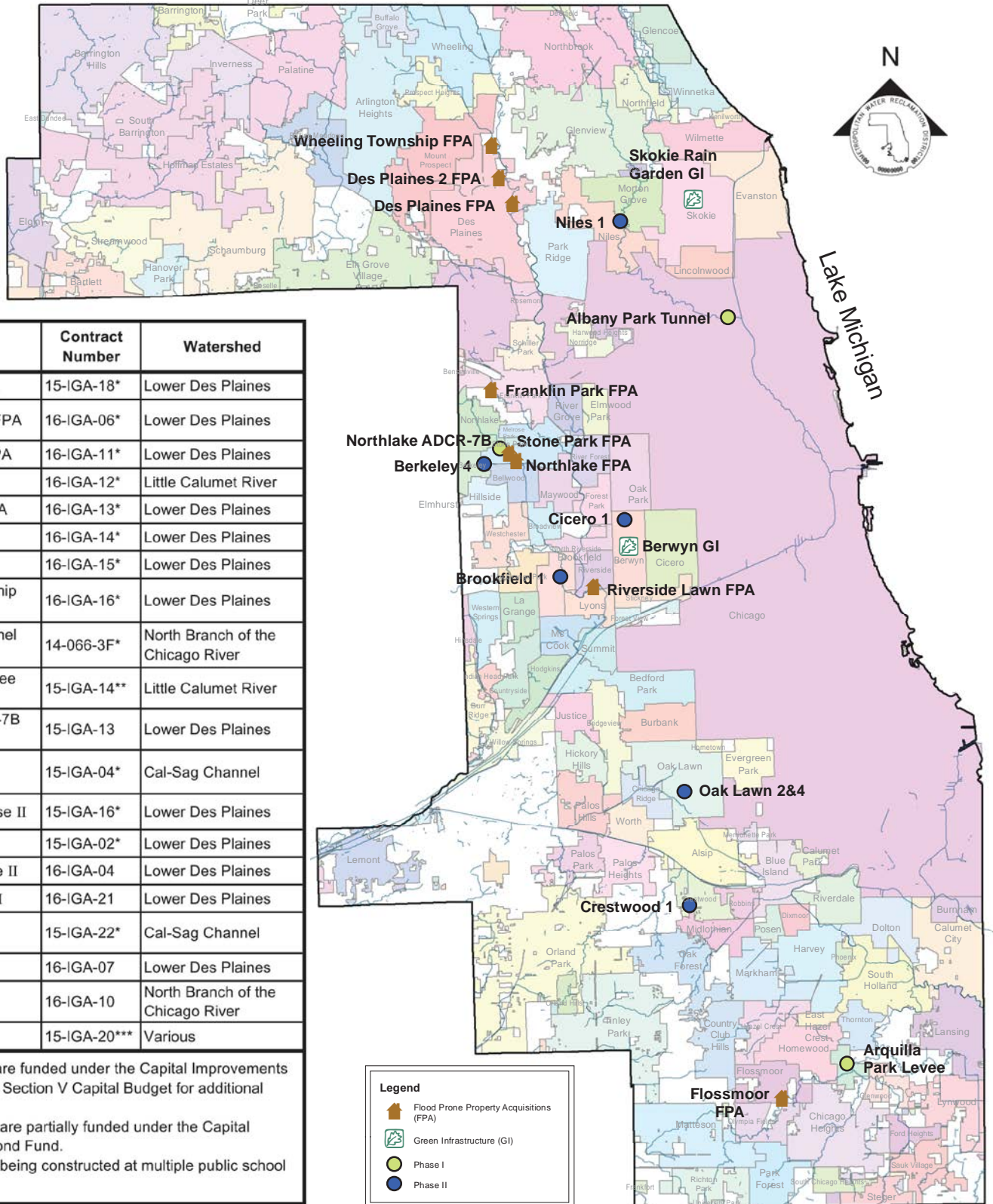
\*These projects are funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.  
 \*\*These projects are partially funded under the Capital Improvements Bond Fund.



# EXISTING MWRD SUPPORTED FLOOD CONTROL RESERVOIRS



# STORMWATER MANAGEMENT PROJECTS GREEN INFRASTRUCTURE AND INTERGOVERNMENTAL AGREEMENTS



Project ID	Contract Number	Watershed
Des Plaines FPA	15-IGA-18*	Lower Des Plaines
Riverside Lawn FPA	16-IGA-06*	Lower Des Plaines
Des Plaines 2 FPA	16-IGA-11*	Lower Des Plaines
Flossmoor FPA	16-IGA-12*	Little Calumet River
Franklin Park FPA	16-IGA-13*	Lower Des Plaines
Northlake FPA	16-IGA-14*	Lower Des Plaines
Stone Park FPA	16-IGA-15*	Lower Des Plaines
Wheeling Township FPA	16-IGA-16*	Lower Des Plaines
Albany Park Tunnel Phase I	14-066-3F*	North Branch of the Chicago River
Arquilla Park Levee Phase I	15-IGA-14**	Little Calumet River
Northlake ADCR-7B Phase I	15-IGA-13	Lower Des Plaines
Crestwood 1 Phase II	15-IGA-04*	Cal-Sag Channel
Brookfield 1 Phase II	15-IGA-16*	Lower Des Plaines
Niles 1 Phase II	15-IGA-02*	Lower Des Plaines
Berkeley 4 Phase II	16-IGA-04	Lower Des Plaines
Cicero 1 Phase II	16-IGA-21	Lower Des Plaines
Oak Lawn 2&4 Phase II	15-IGA-22*	Cal-Sag Channel
Berwyn GI	16-IGA-07	Lower Des Plaines
Skokie Rain GI	16-IGA-10	North Branch of the Chicago River
CPS GI	15-IGA-20***	Various

\*These projects are funded under the Capital Improvements Bond Fund. See Section V Capital Budget for additional information.

\*\*These projects are partially funded under the Capital Improvements Bond Fund.

\*\*\*This project is being constructed at multiple public school locations.

**Legend**

- Flood Prone Property Acquisitions (FPA)
- Green Infrastructure (GI)
- Phase I
- Phase II

**50000 STORMWATER MANAGEMENT FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

OBJECTIVES BY PRIORITY:	Cost	Percent
1. Implementation of the Watershed Management Ordinance. Initiation of the program to improve flood control, manage runoff, improve water quality throughout Cook County, and clearly define uniform rules and regulations.	\$ 2,844,500	6.2%
2. Planning, design, and construction of stormwater management projects by the District or outside agencies under agreement.	\$ 36,558,300	79.8%
3. Operation and maintenance of natural and manmade drainageways for the purpose of stormwater management.	\$ 6,397,300	14.0%
<b>Total</b>	<b>\$ 45,800,100</b>	<b>100.0%</b>

MEASURABLE GOALS:	Unit of Measure	2015 Actual	2016 Estimated	2017 Proposed
1. Award contracts for the continued implementation of the Stormwater Management Capital Improvement Plan in the Stormwater Management and Capital Improvements Bond Funds.	No. of Contracts	3	5	14
2. Expenditures for the acquisition of flood-prone properties in the Capital Improvements Bond Fund.	Dollars	\$8,000,000	\$4,750,000	\$13,955,200
3. Expenditures for intergovernmental cost sharing agreements relating to Green Infrastructure and Stormwater Management Phase II projects in the Stormwater Management and Capital Improvements Bond Funds.	Dollars	\$17,730,782	\$6,799,315	\$16,013,600
4. Remove 33,500 cubic yards of debris from 532 miles of small streams and rivers.	Debris Cubic Yards Removed	25,785	33,500	33,500
Further details of Stormwater Management projects, intergovernmental cost sharing agreements, and land acquisitions are in the Stormwater Management Fund narrative.				

**50000 STORMWATER MANAGEMENT FUND**

**OBJECTIVES AND PROGRAM SUMMARY**

PROGRAMS BY PRIORITY:		2015	Budgeted		Change		
Number	Name	Actual	FTEs	Dollars	Dollars	Percent	
1500	Local Sewer Engineering Activity	\$ 617,184	2017 9	\$ 940,100	\$ (13,300)	(1.4)	
			2016 10	\$ 953,400			
4310	Stormwater Management Planning	\$ 126,989	2017 -	\$ 339,700	\$ 52,100	18.1	a)
			2016 -	\$ 287,600			
4320	Stormwater Management Regulation	\$ 126,727	2017 1	\$ 138,500	\$ (67,700)	(32.8)	b)
			2016 1	\$ 206,200			
4330	Operations and Maintenance	\$ 6,378,301	2017 28	\$ 6,316,200	\$ (14,200)	(0.2)	
			2016 26	\$ 6,330,400			
4340	Flood Mitigation Projects	\$ 27,243,518	2017 19	\$ 36,555,800	\$ 5,656,300	18.3	c)
			2016 20	\$ 30,899,500			
4350	Administrative Overhead	\$ 833,818	2017 2	\$ 1,428,700	\$ (329,400)	(18.7)	d)
			2016 2	\$ 1,758,100			
7604	Social Security and Medicare Contributions	\$ -	2017 -	\$ 81,100	\$ 15,500	23.6	e)
			2016 -	\$ 65,600			
Totals		\$ 35,326,537	2017 59	\$ 45,800,100	\$ 5,299,300	13.1%	*
			2016 59	\$ 40,500,800			

- a) Increase is due to the addition of a watershed specific rate release study 16-838-5C (\$300,000) as required under the Watershed Management Ordinance, offset by the completion in 2016 of another watershed specific study 15-833-5F (\$253,000).
- b) Decrease is due to the reallocation of salaries to more accurately reflect current activities.
- c) Increase is due to the addition of requests for support of the Chicago Public Schools Green Infrastructure Program (\$4,500,000) and for 14-113-5F, Rainwater Harvesting System at Dearborn Homes, Chicago (\$1,220,000).
- d) Decrease is due to a reduced volume of planned stormwater management projects that require mitigation fees (\$350,000).
- e) Increase is due to the calculation for Social Security and Medicare as a percentage of salaries.

\* For 2017, two Maintenance Laborer Class A Shift positions (day shift) were added to transition non-day shift positions to day shift positions. The salaries for these added positions were offset by vacancy adjustments applied to two existing Maintenance Laborer Class A Shift #1 positions (non-day shift), which will be dropped as they are vacated.

**50000 STORMWATER MANAGEMENT FUND**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
1500	Local Sewer Engineering Activity					
1530	Local Sewer Permit Activity	Cost	\$ 425,167	\$ 614,000	\$ 608,300	
1560	Local Sewer Public Service Coordination	Cost	\$ 149,433	\$ 287,600	\$ 262,800	
1570	Local Sewer Rehabilitation	Cost	\$ 42,584	\$ 51,800	\$ 69,000	a)
4310	Stormwater Management Planning					
4311	Watershed Councils	Cost	\$ 20,052	\$ 21,700	\$ 37,200	b)
4312	Mapping, Surveys, and Soil Testing	Cost	\$ 54,105	\$ 253,000	\$ 300,000	c)
4314	Publications and Public Information	Cost	\$ 25,704	\$ 12,900	\$ 2,500	d)
4315	GIS System	Cost	\$ 27,128	\$ -	\$ -	
4320	Stormwater Management Regulation					
4321	Permits	Cost	\$ 26,276	\$ 134,700	\$ 127,300	
4322	Storm & Flood Ordinance Development	Cost	\$ 89,134	\$ 60,000	\$ -	e)
4323	Inspections	Cost	\$ 11,317	\$ 11,500	\$ 11,200	
4330	Operations & Maintenance					
4331	Stormwater Detention Reservoir Activity	Cost	\$ 1,130,865	\$ 1,148,400	\$ 1,192,400	
4332	Small Stream Maintenance	Cost	\$ 4,046,156	\$ 4,926,300	\$ 4,878,900	
	Debris Cubic Yards Removed		25,785	33,500	33,500	
	Cost per Cubic Yard		\$ 156.92	\$ 147.05	\$ 145.64	
4334	Operations & Maintenance Contracted with Other Governments	Cost	\$ 1,082,335	\$ 155,700	\$ 159,900	
4335	Waterways Debris Removal	Cost	\$ 118,945	\$ 100,000	\$ 85,000	f)

- a) Increase is due to the reallocation of salaries to more accurately reflect current activities.
- b) Increase is due to the reallocation of salaries to more accurately reflect current activities.
- c) Increase is due to the addition of a watershed specific rate release study 16-838-5C (\$300,000) as required under the Watershed Management Ordinance, offset by the completion in 2016 of another watershed specific study 15-833-5F (\$253,000).
- d) Decrease is due to reallocation of salaries to more accurately reflect current activities (\$11,400), offset by an increased requirement for express mailings (\$1,000).
- e) Decrease is due to the reallocation of salaries to more accurately reflect current activities.
- f) Decrease is due to the deferral to 2017 and reduced estimate for the purchase of a pontoon boat.



**50000 STORMWATER MANAGEMENT FUND**

**PERFORMANCE DATA**

Program Number	Measurable Activity Title		2015 Actual	2016 Budgeted	2017 Estimated	
4340	Flood Mitigation Projects					
4341	Planning/Design	Cost	\$ 10,710,493	\$ 10,745,200	\$ 9,389,700	g)
4342	Contract Administration	Cost	\$ 602,100	\$ 628,800	\$ 585,200	
4343	Construction	Cost	\$ 5,140,207	\$ 9,410,100	\$ 6,203,200	h)
4344	Flood Mitigation Projects Contracted with Other Governments	Cost	\$ 8,387,107	\$ 3,972,200	\$ 13,038,900	i)
4345	Land & Easements	Cost	\$ 279,691	\$ 2,870,500	\$ 1,569,500	j)
7601	Capital Financing Program and Other Related Costs	Cost	\$ 2,123,920	\$ 3,272,700	\$ 5,769,300	k)
4350	Administrative Overhead	Cost	\$ 833,818	\$ 1,758,100	\$ 1,428,700	l)
7604	Social Security and Medicare Contributions	Cost	\$ -	\$ 65,600	\$ 81,100	m)
<b>Total</b>			<b>\$ 35,326,537</b>	<b>\$ 40,500,800</b>	<b>\$ 45,800,100</b>	

- g) Decrease is due to the progress in preliminary engineering consulting for 11-186-5C, Preliminary Engineering for the Addison Creek Reservoir (\$1,515,600), 14-261-5C, Stormwater Master Plan for the Southeast Side of the City of Chicago (\$505,000), and 14-063-5C, Stormwater Master Plan for the Village of Harwood Heights (\$328,200), offset by an increased estimate for Stormwater Preliminary Engineering Projects (\$1,000,000).
- h) Decrease is due to the planned completion of construction work in 2016 for 10-883-AF, Flood Control/Streambank Stabilization Project on Tinley Creek, Crestwood (\$6,861,000), offset by the addition of major projects such as 14-113-5F, Rainwater Harvesting System at Dearborn Homes, Chicago (\$1,220,000), 10-883-CF, Flood Control on East Branch of Cherry Creek, Flossmoor (\$1,050,000), 10-882-BF, Streambank Stabilization Project along Calumet Union Drainage Ditch (\$842,000), and Waterway Facilities Structures (\$603,000).
- i) Increase is due to 15-IGA-20, Intergovernmental Agreement for Green Infrastructure with the Chicago Public Schools (\$4,500,000), new potential Phase II Intergovernmental Agreements (\$3,298,900), and 16-IGA-21, Flood Control Project at 61st and 36th Street, Cicero (\$1,250,000).
- j) Decrease is due to reduced land acquisitions (\$590,000), an anticipated decrease in the need for easements for planned projects (\$600,000), and the drop of an Assistant Civil Engineer (\$43,700).
- k) Increase is due to an increased equity transfer from the Stormwater Management Fund to the Bond Redemption and Interest Fund. for debt service payments. All debt service payments related to the District's Alternative Revenue Stormwater Bonds are required to be funded by property tax collections of the Stormwater Management Fund.
- l) Decrease is due to a reduced volume of planned stormwater management projects that require paying wetland mitigation fees (\$350,000).
- m) Increase is due to the calculation for Social Security and Medicare as a percentage of salaries.



501 50000	Fund: Stormwater Management Department: Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601010	Salaries of Regular Employees	\$ 5,134,227	\$ 5,768,100	\$ 5,754,100	\$ 5,400,000	\$ 5,634,800	\$ 5,634,800	\$ 5,634,800
601060	Compensation Plan Adjustments	101,620	179,900	179,900	154,000	193,000	193,000	193,000
601070	Social Security and Medicare Contributions	-	65,600	79,600	79,600	81,100	81,100	81,100
601080	Salaries of Nonbudgeted Employees	-	20,000	20,000	-	11,400	11,400	11,400
601100	Tuition and Training Payments	1,815	10,000	10,000	10,000	30,600	30,600	30,600
601170	Payments for Professional Services	9,613	-	-	-	-	-	-
601250	Health and Life Insurance Premiums	522,073	550,000	550,000	528,000	580,300	580,300	580,300
601410	Personal Services Exp for Prelim Engineering Rpts and Studies	7,816,443	-	-	-	-	-	-
601420	Personal Services Exp for Constr Drawings, Specs, and Cost Est	1,248,647	-	-	-	-	-	-
601440	Personal Svcs for Post-Award Engr for Construction Projects	28,601	-	-	-	-	-	-
100	TOTAL PERSONAL SERVICES	14,863,038	6,593,600	6,593,600	6,171,600	6,531,200	6,531,200	6,531,200
612010	Travel	646	2,000	2,000	2,000	2,300	2,300	2,300
612030	Meals and Lodging	2,487	5,600	5,600	4,800	5,100	5,100	5,100
612040	Postage, Freight, and Delivery Charges	999	1,500	1,500	1,500	2,500	2,500	2,500
612050	Compensation for Personally-Owned Automobiles	19,038	24,000	24,000	19,000	24,800	24,800	24,800
612080	Motor Vehicle Operating Services	288	800	800	700	800	800	800
612240	Testing and Inspection Services	1,148	20,000	20,000	10,000	29,500	29,500	29,500
612250	Court Reporting Services	9,279	10,000	10,000	8,900	12,000	12,000	12,000
612330	Rental Charges	-	2,500	2,500	2,200	2,500	2,500	2,500
612380	Soil and Rock Mechanics Investigation	5,542	20,000	20,000	10,000	-	-	-
612400	Intergovernmental Agreements	6,570,943	4,231,000	6,162,200	5,617,000	13,312,500	13,312,500	12,845,500
612410	Governmental Service Charges	38	-	-	-	-	-	-
612430	Payments for Professional Services	-	900,000	175,000	92,500	775,000	775,000	775,000
612440	Preliminary Engineering Reports and Studies	-	7,599,200	6,499,200	5,360,000	4,800,000	4,800,000	4,800,000
612450	Professional Engineering Services for Construction Projects	-	1,702,700	1,242,700	1,129,000	3,843,900	3,843,900	3,843,900
612470	Personal Svcs for Post-Award Engr for Construction Projects	-	75,900	75,900	5,300	-	-	-
612490	Contractual Services, N.O.C.	2,614,635	356,400	256,400	177,000	196,400	196,400	246,400
612520	Waste Material Disposal Charges	37,138	55,000	55,000	55,000	70,000	70,000	70,000

501 50000	Fund: Stormwater Management Department: Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
612620	Repairs to Waterway Facilities	2,246,517	2,500,000	2,310,000	2,074,100	2,415,000	2,415,000	2,415,000
612990	Repairs, N.O.C.	96	6,000	6,000	1,500	6,000	6,000	6,000
200	TOTAL CONTRACTUAL SERVICES	11,508,793	17,512,600	16,868,800	14,570,500	25,498,300	25,498,300	25,081,300
623130	Buildings, Grounds, Paving Materials, and Supplies	-	5,000	5,000	5,000	5,000	5,000	5,000
623520	Office, Printing, and Photo Supplies, Equipment, and Furniture	409	11,500	11,500	10,500	11,500	11,500	11,500
623560	Processing Chemicals	1,115	5,000	5,000	5,000	5,000	5,000	5,000
623680	Tools and Supplies	1,087	11,000	11,000	10,000	11,000	11,000	11,000
623700	Wearing Apparel	1,077	2,000	2,000	2,000	2,000	2,000	2,000
623990	Materials and Supplies, N.O.C.	1,645,960	1,240,000	4,730,000	4,135,700	1,240,000	1,240,000	1,240,000
300	TOTAL MATERIALS AND SUPPLIES	1,649,648	1,274,500	4,764,500	4,168,200	1,274,500	1,274,500	1,274,500
634790	Marine Equipment	-	100,000	100,000	85,000	85,000	85,000	85,000
400	TOTAL MACHINERY AND EQUIPMENT	-	100,000	100,000	85,000	85,000	85,000	85,000
645620	Waterway Facilities Structures	1,457,351	8,056,600	8,056,600	6,780,000	3,169,800	3,169,800	3,169,800
645690	Capital Projects, N.O.C.	-	750,000	372,800	-	400,000	400,000	1,620,000
645720	Preservation of Waterway Facility Structures	3,533,787	940,800	315,800	146,700	1,459,000	1,459,000	1,459,000
500	TOTAL CAPITAL PROJECTS	4,991,139	9,747,400	8,745,200	6,926,700	5,028,800	5,028,800	6,248,800
656010	Land	-	1,000,000	78,000	78,000	410,000	410,000	410,000
600	TOTAL LAND	-	1,000,000	78,000	78,000	410,000	410,000	410,000
667020	Equity Transfer	2,123,920	3,272,700	3,272,700	3,272,700	5,769,300	5,769,300	5,769,300
667340	Payments for Easements	190,000	1,000,000	78,000	1,800	400,000	400,000	400,000
700	TOTAL FIXED AND OTHER CHARGES	2,313,920	4,272,700	3,350,700	3,274,500	6,169,300	6,169,300	6,169,300
<b>TOTAL STORMWATER MANAGEMENT</b>		<b>\$ 35,326,537</b>	<b>\$ 40,500,800</b>	<b>\$ 40,500,800</b>	<b>\$ 35,274,500</b>	<b>\$ 44,997,100</b>	<b>\$ 44,997,100</b>	<b>\$ 45,800,100</b>

NOTES: 1. Amounts may not add up due to rounding.  
 2. Departmental appropriation totals for salaries in the Line Item Analysis may differ from those contained in the Position Analysis by a factor identified to adjust for vacancies. Additionally, Estimated Expenditure may exceed Adjusted Appropriation when transfers of funds are anticipated.  
 3. Effective 01/01/2016, professional services previously included in Personal Services (accounts 601170, 601410, 601420, 601430, and 601440) were reclassified to Contractual Services (accounts 612430, 612440, 612450, 612460, and 612470 respectively).

Fund: Stormwater Management Dept: Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
<b>50000</b>	<b>Engineering Department</b>					
	<b>516 Local Sewer Systems Section</b>					
HP18	Principal Civil Engineer	1	1		1	
HP17	Senior Civil Engineer	1	2		2	
HP15	Associate Civil Engineer	2	3		3	
HP14	Assistant Civil Engineer	2	2		2	
HP12	Engineering Technician IV	1	2		1	
TOTAL	Local Sewer Systems Section	7	10	955,126.12	9	935,692.36
	<b>522 Stormwater Management Section</b>					
HP20	Managing Civil Engineer	1	1		1	
HP18	Principal Civil Engineer	3	3		3	
HP17	Senior Civil Engineer	7	7		7	
HP15	Associate Civil Engineer	5	6		6	
HP14	Assistant Civil Engineer	4	4		3	
HP11	Administrative Specialist	1	1		1	
TOTAL	Stormwater Management Section	21	22	2,432,748.76	21	2,293,585.58
TOTAL	Engineering Department	28	32	3,387,874.88	30	3,229,277.94
<b>60000</b>	<b>Maintenance &amp; Operations Department</b>					
	<b>630 General Division</b>					
	<b>634 Channel Maintenance Unit</b>					
HP17	Senior Civil Engineer	1	1		1	
HP15	Associate Civil Engineer	1	1		1	
TOTAL	Channel Maintenance Unit	2	2	226,055.70	2	228,316.27
	<b>636 Boat Operations Unit</b>					
HP14	Engineering Technician V	1	1		1	
HP14	Engineering Technician V #4	1	1		1	
HP12	Engineering Technician IV	1	1		1	
HP12	Engineering Technician IV #4	1	1		1	

Fund: Stormwater Management Dept: Division:		POSITION ANALYSIS				
		2015	2016		2017	
PAY PLAN & GRADE	CLASS TITLE	ACTUAL FTEs	BUDGETED FTEs	APPROPRIATION IN DOLLARS	BUDGETED FTEs	APPROPRIATION IN DOLLARS
NR8650	Maintenance Laborer Class A Shift	2	2		2	
TOTAL	Boat Operations Unit	6	6	540,787.78	6	549,363.49
	<b>639 Channel Maintenance Unit</b>					
HP14	Engineering Technician V	1	1		1	
HP14	Engineering Technician V #4	1	1		1	
NR8650	Maintenance Laborer Class A Shift	2	2		2	
TOTAL	Channel Maintenance Unit	4	4	367,963.70	4	379,574.74
	<b>679 Collection System Unit</b>					
NR8331	Laborer Foreman	1	1		1	
NR8650	Maintenance Laborer Class A Shift	4	4		4	
PR6473	Truck Driver	1	1		1	
TOTAL	Collection System Unit	6	6	475,155.20	6	488,342.40
TOTAL	General Division	18	18	1,609,962.38	18	1,645,596.90
	<b>940 Stickney Service Area General Plant Services Section</b>					
	<b>924 Stickney Maintenance Unit</b>					
PR7773	Pipefitter	1	1		1	
TOTAL	Stickney Maintenance Unit	1	1	97,760.00	1	98,800.00
	<b>934 Stickney Mechanical Operations Unit</b>					
NR8650	Maintenance Laborer Class A Shift	4	4		4	
NR8650	Maintenance Laborer Class A Shift #1	-	-		2	
NR6831	Operating Engineer I	4	4		4	
TOTAL	Stickney Mechanical Operations Unit	8	8	701,376.00	10	884,624.00
TOTAL	Stickney Service Area General Plant Services Section	9	9	799,136.00	11	983,424.00
TOTAL	Maintenance & Operations Department	27	27	2,409,098.38	29	2,629,020.90
TOTAL	Stormwater Management	55	59	5,796,973.26	59	5,858,298.84
<p>Note: The positions budgeted are funded by the Stormwater Management Fund, while the operations remain in the Engineering and Maintenance &amp; Operations Departments.</p>						
<p>NOTE: Departmental appropriation totals for salaries in the Position Analysis differ from those contained in the Line Item Analysis by a factor identified to adjust for vacancies. Salary ranges corresponding to the pay plan and grade for each class title can be found in the table of Salary Schedules in the Appendix.</p>						

# SECTION VII

## OTHER FUNDS

Other funds included in the annual District Budget are: the Reserve Claim Fund, Bond Redemption & Interest Fund, Retirement Fund, Corporate Working Cash Fund, Construction Working Cash Fund, and Stormwater Working Cash Fund.

The Reserve Claim Fund is used to accumulate resources for the payment of claims and judgments against the District, as well as for emergency repair or replacement of District facilities. A narrative description of the purpose and operation of this fund is contained in this section along with an appropriation schedule. A tax levy ordinance for this fund is presented in Section VIII of this Budget.

The Bond Redemption & Interest Fund is used to accumulate the proceeds from property taxes and investment income, which are set aside to pay the principal and interest on the outstanding bond issues of the District. These funds are segregated and accounted for by each bond issue. A narrative description of this fund and an appropriation schedule, detailing payment of principal and interest during 2017, are included in this section. A tax levy ordinance for the principal and interest due in 2018 and 2019 from the Bond Redemption & Interest Fund is included in Section VIII of this Budget. Statements of Outstanding Bonds and Estimated Statutory Debt Margin, with a graphic illustration of past, current, and estimated future debt service, are included in the Budgetary and Financial Summaries section, pages 52-54.

The Retirement Fund is the pension plan for District employees, accounted for in a trust fund the Illinois Compiled Statutes established as a legal entity separate and distinct from the District. This section contains an appropriation of taxes the District received on behalf of the Retirement Fund. A tax levy ordinance for this fund is presented in Section VIII of this Budget.

The District utilizes Corporate, Construction, and Stormwater Working Cash Funds, as authorized by Illinois Compiled Statutes, to make temporary loans to the Corporate, Construction, and Stormwater Funds. Loans are repaid to the Working Cash Funds from the tax levies of the funds. The use of Working Cash Funds eliminates the need to issue short-term financing. There will be no tax levies for the Corporate, Construction, or Stormwater Working Cash Funds in 2017.

Reserve Claim Fund:	
Description of Fund, Purpose, and Operation.....	549
Line Item Analysis.....	550
Bond Redemption & Interest Fund:	
Description of Fund, Purpose, and Operation.....	551
Appropriation for Payment of Outstanding Bonds, 2017 .....	553
Retirement Fund:	
Description of Fund, Purpose, and Operation.....	555
Appropriation Ordinance .....	557

# RESERVE CLAIM FUND

## Description of Fund, Purpose, and Operation

The Reserve Claim Fund is the District’s self-insurance fund. It is maintained at an appropriation level adequate to meet potential liabilities. The fund is capable of providing coverage for those risks that can be expected to be encountered and is able to pay such claims without exposing the agency to financial risk that could curtail normal operations of protecting the public health, safety, and welfare.

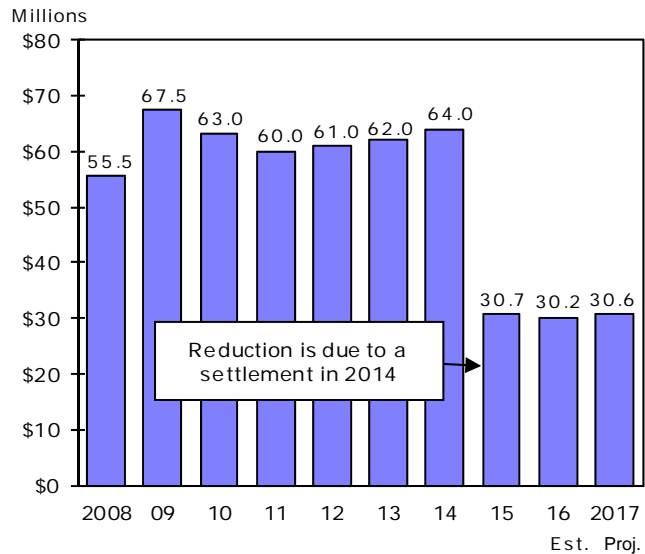
A property tax levy limited by law at 0.5 cents per \$100 of equalized assessed valuation (EAV) provides funds for this purpose. The accumulation of funds, per Illinois State Statute, is not to exceed .05 percent of the EAV, or approximately \$65.2 million. Resources are accumulated in this fund to the extent that revenue from the annual tax levy, personal property replacement tax, and investment income on the fund balance is reduced by the payment of claims.

The policy, set by the Board of Commissioners, is to accumulate a reserve fund balance towards the statutory limit and to levy at the statutory tax rate limit. This policy is similar in function to insurance company reserves. The estimated 2016 year-end fund balance is \$24.8 million and the projection for 2017 is \$25.6 million.

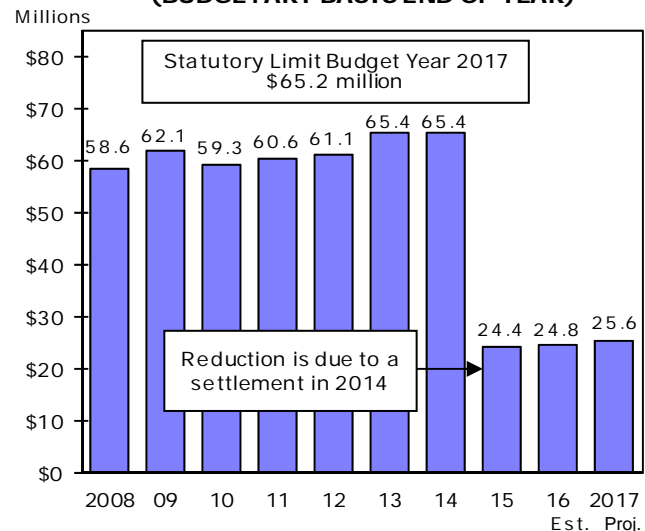
The appropriation for the Reserve Claim Fund is not designed to be spent during any one budget year. The available fund balance plus new revenue to be received must be appropriated each year to authorize the District to fund emergencies and to settle large claims or lawsuits. Designation is also provided for accounts payable and other contingent liabilities. For 2017, accounts payable and other liabilities are estimated at \$0.4 million. The designation for liabilities is reviewed and adjusted on an annual basis.

The fund is appropriated in two line items, Account 601090 (Employee Claims) and Account 667220 (General Claims and Emergency Repair and Replacement Costs). Account 601090 is for the payment of workers' compensation and other District employee claims, while Account 667220 is used to pay general claims or judgments against the District, as well as emergency repairs or replacements of District facilities. District staff makes considerable efforts to control claim expenditures by implementing aggressive safety training programs and returning employees to work as soon as possible.

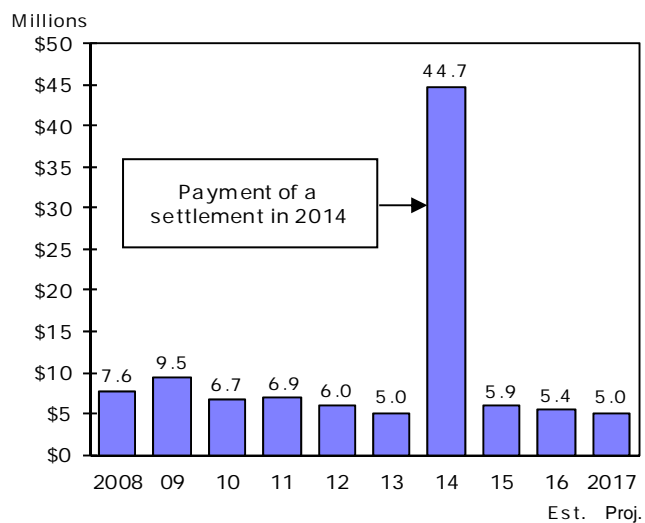
**RESERVE CLAIM FUND APPROPRIATIONS**



**RESERVE CLAIM FUND BALANCE (BUDGETARY BASIS END OF YEAR)**



**RESERVE CLAIM FUND EXPENDITURES**



901	Fund: Reserve Claim Department: Division:	LINE ITEM ANALYSIS						
		2015	2016			2017		
Account Number	Account Name	Expenditure	Original Appropriation	Adjusted Appropriation 12/31/16	Estimated Expenditure 12/31/16	Proposed by Executive Director	Recommended by Committee on Budget and Employment	Adopted and Amended by Board of Commissioners
601090	Employee Claims	\$ 4,099,743	\$ 8,000,000	\$ 8,000,000	\$ 4,600,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000
100	TOTAL PERSONAL SERVICES	4,099,743	8,000,000	8,000,000	4,600,000	8,000,000	8,000,000	8,000,000
667220	General Claims and Emergency Repair and Replacement Costs	1,790,668	22,175,900	22,175,900	798,200	22,617,100	22,617,100	22,617,100
700	TOTAL FIXED AND OTHER CHARGES	1,790,668	22,175,900	22,175,900	798,200	22,617,100	22,617,100	22,617,100
<b>TOTAL RESERVE CLAIM FUND</b>		<b>\$ 5,890,411</b>	<b>\$ 30,175,900</b>	<b>\$ 30,175,900</b>	<b>\$ 5,398,200</b>	<b>\$ 30,617,100</b>	<b>\$ 30,617,100</b>	<b>\$ 30,617,100</b>

NOTE: Amounts may not add up due to rounding.

# BOND REDEMPTION & INTEREST FUND

## Description of Fund, Purpose, and Operation

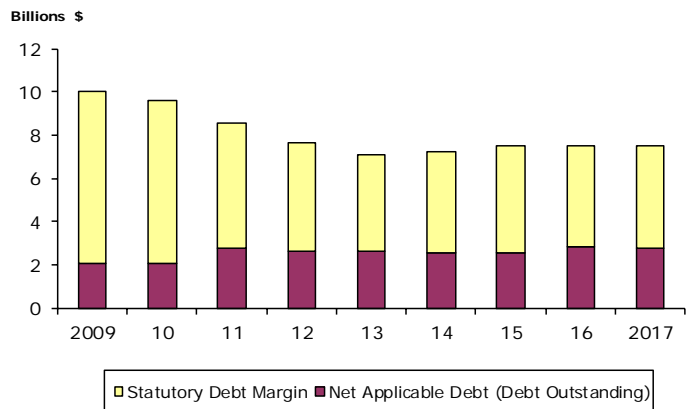
The District's Bond Redemption & Interest Fund is a debt service fund established to account for annual property tax levies and certain other revenues, principally interest on investments, which are used for the payment of interest and redemption of general obligation bond issues. Sub-funds are established for each debt issue.

### Debt Limits, Margins, and Borrowing Authority

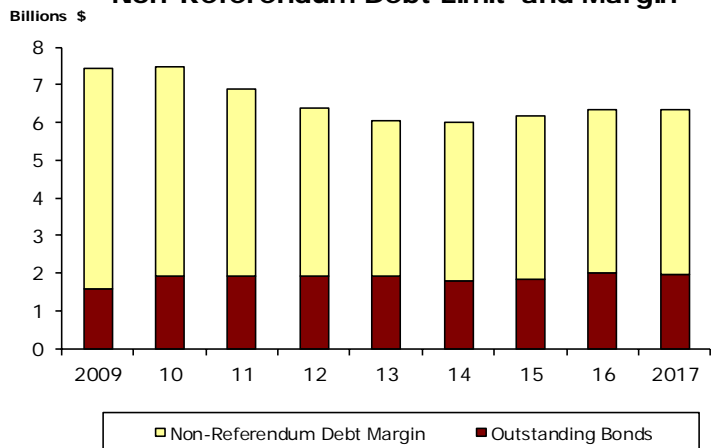
Applicable Illinois State Statutes establish the following limitations relative to the District:

- General Obligation Notes may be issued at an amount not to exceed 85 percent of the current General Corporate Fund tax levy.
- The District may fund up to 100 percent of the aggregate total of the estimated amount of taxes levied or to be levied for corporate purposes plus the General Corporate Fund portion of the personal property replacement tax allocation certified for distribution during the budget year, through borrowing from the Corporate Working Cash Fund and the issuance of tax anticipation notes or warrants.
- The District's debt may not exceed 5.75 percent of the last published equalized assessed valuation (EAV) of taxable real property (\$130.3 billion for 2015) within the District boundary. On December 31, 2016, the District's statutory debt limit is estimated at \$7.5 billion, with a net applicable debt of \$2.8 billion and an estimated statutory debt margin of \$4.7 billion.
- The amount of non-referendum Capital Improvements Bonds which may be outstanding may not exceed 3.35 percent of the last-known EAV of taxable real property within the District boundary. On December 31, 2016, it is estimated that the District's outstanding capital improvement and refunding bonds will total \$2.0 billion with a non-referendum statutory debt limit of \$4.4 billion and a non-referendum bonded debt margin of \$2.4 billion.
- The Illinois Compiled Statutes provide authorization for the funding of the District's Capital Improvement Program by the issuance of non-referendum Capital Improvements Bonds through the year 2024, as extended, effective January 1, 2011. Bonds may be issued during any one budget year in an amount not to exceed \$150 million plus the amounts of any bonds authorized and unissued during the three preceding budget years. This amount was increased from \$100 million during 2003 as the result of Public Act 93-279. The extension of non-referendum bonding authority is a significant change that accommodates funding of the capital program as planned. Build America Bonds were issued in the amount of \$600 million in August 2009, and were exempted from the non-referendum authority by statute.
- This non-referendum authority had been significantly impacted by enactment of the Tax Cap laws, Public Acts 89-1 and 89-385. Public Act 89-1 restricted the District's non-referendum authority to only apply to projects initiated prior to October 1, 1991. There was a specific exception, essentially to exclude debt for the Tunnel and Reservoir Plan project, to the more restrictive provisions of the Act which require referendum approval of all new debt. A subsequent law, Public Act 89-385, provides additional non-referendum authority to the District by authorizing the issuance of limited bonds that allow the District to issue non-referendum debt for projects initiated after October 1, 1991. Limited bonds can be issued to the extent that the total debt service requirements of any new debt, when combined with existing debt service, does not exceed the debt service extension base established by the Act. The debt service extension limitation for the District, related to the 2016 tax year, is \$159.3 million.

**Net Debt and Statutory Debt Margin**



**Non-Referendum Debt Limit and Margin**





# BOND REDEMPTION & INTEREST FUND

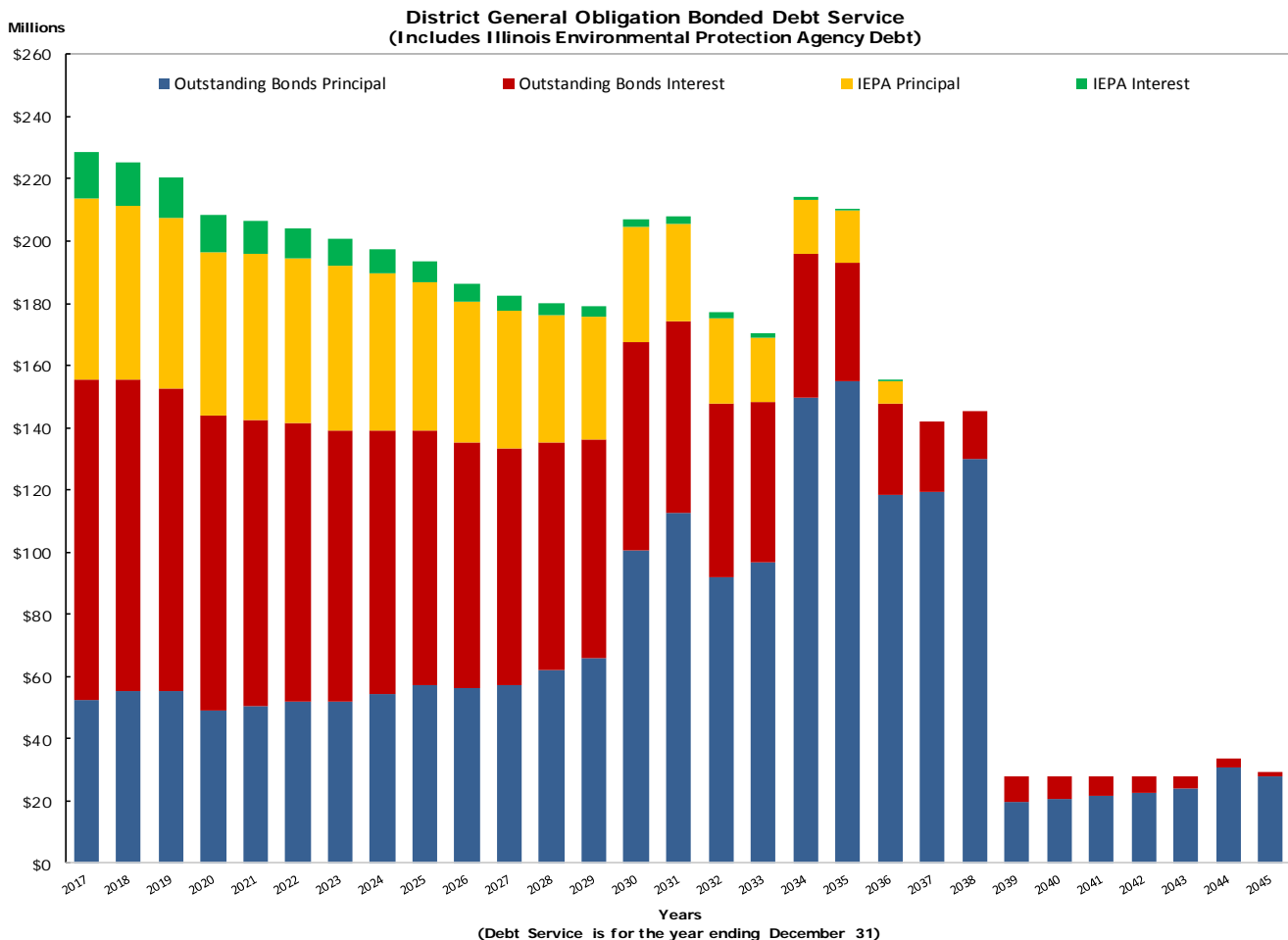
## Description of Fund, Purpose, and Operation (continued)

- Additional legislation was passed in 1997 to expand the “limited bond” authority for the District. Public Act 90-485 excludes debt associated with the Tunnel and Reservoir Plan program from the limitations imposed by prior Tax Cap legislation. Public Act 96-0501 allows for an annual increase in this debt service extension limitation base by the lesser of five percent or the percentage increase in the Consumer Price Index beginning with the 2009 levy.
- The amount of non-referendum Corporate Working Cash Bonds which, when added to a) proceeds from the sale of working cash bonds previously issued, b) any amounts collected from the Corporate Working Cash Fund levy, and c) amounts transferred from the Construction Working Cash Funds, may not exceed 90 percent of the amount produced by multiplying the maximum general corporate tax rate (41 cents per \$100 of EAV) permitted by the last known EAV of all property within the District boundary (\$130.3 billion for 2015) at the time the bonds are issued, plus 90 percent of the last-known entitlement of the Personal Property Replacement Tax.

### Current and Future Bond Debt Service

The exhibit below reflects the current debt service obligation of the District. Bond sale proceeds provide partial financing for the ongoing new construction and rehabilitation program of the District. As current State Revolving Fund loans are converted to bonds, additional annual debt service will be added. These amounts will be in the range of \$6 to \$10 million per year.

The debt for future bond sales is not included in this exhibit. Future bond sales are based on estimated cash flow requirements of the Capital Improvements Bond Fund new construction and rehabilitation program. The estimates for total debt service assuming future bond sales are included in the Five-Year Financial Forecast in Section II, Budget and Financial Summaries, Schedules, and Exhibits, of this budget document.



**BOND REDEMPTION & INTEREST FUND****Appropriation for Payment of Outstanding Bonds During the Year 2017**

BOND ISSUE	RATES OF INTEREST	JANUARY 1, 2017		JULY 1, 2017		TOTAL PAYABLE
		INTEREST PAYABLE	PRINCIPAL PAYABLE	INTEREST PAYABLE	PRINCIPAL PAYABLE	
<b>Capital Improvements Bonds - Series:</b>						
July 2016 QECCB	5.0	\$ 80,000 (1)	\$ -	\$ 80,000 (2)	\$ - (2)	\$ 160,000
August 2009 Limited Tax Series	5.72	17,160,000 (1)	-	17,160,000 (2)	- (2)	34,320,000
July 2011 Limited Tax Series	5.0	6,703,922 (1)	-	6,703,922 (2)	6,115,000 (2)	19,522,844
July 2011 Unlimited Tax Series C	3.0 to 5.0	1,200,366 (1)	-	1,200,366 (2)	4,955,000 (2)	7,355,732
2014 Unlimited Tax Series A	5.0	2,500,000 (1)	-	2,500,000 (2)	- (2)	5,000,000
2014 Alt Rev Tax Unltd Series B	2.0 to 5.0	1,167,125 (1)	-	1,167,125 (2)	935,000 (2)	3,269,250
2014 Limited Tax Series C	2.0 to 5.0	1,846,000 (1)	-	1,846,000 (2)	11,305,000 (2)	14,997,000
2016 Alt Rev Tax Unltd Series E	5.0	1,250,000 (1)	-	1,250,000 (2)	- (2)	2,500,000
2016 Unlimited Tax Series C	5.0	750,000 (1)	-	750,000 (2)	(2)	1,500,000
2016 Limited Tax Series D	5.0	500,000 (1)	-	500,000 (2)	(2)	1,000,000
<b>State Revolving Fund Bonds - Series:</b>						
94R SRF L 170820	2.50	20,856	829,018	10,493	839,381	1,699,748
92T SRF L 170876	2.50	7,582	606,539	-	-	614,121
92U SRF L 170877	2.50	16,960	674,146	8,533	682,572	1,382,211
94V SRF L 171150	2.50	52,286	1,026,317	39,458	1,039,146	2,157,207
97AA SRF L 170822	2.506	117,480	1,514,410	98,505	1,533,385	3,263,780
97BB SRF L 171151	2.535	31,402	296,207	27,649	299,962	655,220
97CC SRF L 172031	2.535	154,072	1,036,778	140,931	1,049,920	2,381,701
97DD SRF L 171152	2.905	94,976	424,548	88,810	430,715	1,039,049
01A SRF L 172126	2.57	330,877	1,567,458	310,736	1,587,600	3,796,672
01B SRF L 172127	2.50	366,961	1,560,614	347,453	1,580,122	3,855,150
01C SRF L 172128	2.50	356,810	1,340,334	340,057	1,357,088	3,394,289
04A SRF L 172485	2.50	188,784	600,670	181,276	608,178	1,578,908
04B SRF L 172488	2.50	220,536	701,700	211,765	710,471	1,844,472
04C SRF L 172493	2.50	19,822	66,503	18,992	67,334	172,650
04D SRF L 172494	2.50	19,009	63,774	18,213	64,572	165,568
04E SRF L 172495	2.50	64,279	194,362	61,849	196,791	517,281
04F SRF L 172496	0.00	-	99,367	-	99,368	198,735
04G SRF L 172611	2.50	30,880	103,604	29,586	104,899	268,970
04H SRF L 172849	2.50	472,188	1,296,533	455,983	1,312,740	3,537,443
07A SRF L 172625	2.50	394,726	990,502	382,345	1,002,884	2,770,457
07B SRF L 172850	2.50	271,788	653,348	263,621	661,515	1,850,273
07C SRF L 172770	0.00	-	1,666,667	-	1,666,667	3,333,334
07D SRF L 172763	2.50	90,033	225,923	87,210	228,747	631,912
09A SRF L 173074	1.25	242,119	1,097,334	235,262	1,104,193	2,678,908
09B SRF L 173064	0.00	-	191,445	-	191,445	382,890
09C SRF L 173063	0.00	-	55,979	-	55,980	111,958
09D SRF L 174558	2.30	421,943	890,318	411,728	900,534	2,624,524
09E SRF L 173005	1.25	193,773	945,724	187,864	951,635	2,278,996
09F SRF L 174557	1.25	329,046	1,493,098	319,716	1,502,430	3,644,291
09G SRF L 173075	1.25	159,928	700,604	155,550	704,983	1,721,065
09H SRF L 173800	0.00	-	18,396	-	18,397	36,793
09I SRF L 174675	1.25	52,166	263,414	50,521	265,061	631,162
12A SRF L 174710	2.295	78,736	160,412	76,896	162,252	478,296
12B SRF L 174712	2.295	67,431	137,380	65,856	138,956	409,624
12C SRF L 174621	1.995	106,938	226,227	104,681	228,484	666,330
12D SRF L 174988	1.930	306,635	696,215	299,917	702,933	2,005,700
12E SRF L 174709	1.930	52,649	123,398	51,460	124,589	352,095

(1) Interest Payable June 1, 2017.

(2) Interest and Principal Payable December 1, 2017.

**BOND REDEMPTION & INTEREST FUND****Appropriation for Payment of Outstanding Bonds During the Year 2017 (continued)**

BOND ISSUE	RATES OF INTEREST	JANUARY 1, 2017		JULY 1, 2017		TOTAL PAYABLE
		INTEREST PAYABLE	PRINCIPAL PAYABLE	INTEREST PAYABLE	PRINCIPAL PAYABLE	
<b>State Revolving Fund Bonds - Series:</b>						
12F SRF L 174989	1.930	530,795	1,205,172	519,166	1,216,802	3,471,935
12H SRF L 174924	1.930	264,785	601,195	258,983	606,997	1,731,960
12I SRF L 175222	2.210	37,951	68,745	37,192	69,505	213,392
12J SRF L 175172	1.995	25,804	58,149	25,225	58,729	167,907
12K SRF L 174925	1.995	118,567	258,792	115,985	261,374	754,718
12L SRF L 175161	2.210	332,411	602,141	325,758	608,795	1,869,105
12N SRF L 175164	1.995	24,544	51,924	24,027	52,442	152,937
12O SRF L 175166	1.995	44,563	97,267	43,594	98,237	283,661
14A SRF L 173076	2.210	801,288	1,451,481	785,250	1,467,520	4,505,540
14B SRF L 175171	2.210	25,521	47,695	24,995	48,222	146,433
14C SRF L 174559	2.295	44,616	487,753	185,611	346,759	1,064,738
14J SRF L 175219	2.210	13,571	25,361	13,290	25,641	77,864
<b>Refunding Bonds - Series:</b>						
March 2007 Unlimited Tax Series A	4.0 to 5.0	3,219,875 (1)	-	3,219,875 (2)	17,955,000 (2)	24,394,750
March 2007 Unlimited Tax Series B	4.0 to 5.0	2,410,932 (1)	-	2,410,931 (2)	- (2)	4,821,863
March 2007 Limited Tax Series C	4.0 to 5.0	2,673,825 (1)	-	2,673,825 (2)	- (2)	5,347,650
2014 Limited Tax Series D	2.0 to 5.0	1,763,375 (1)	-	1,763,375 (2)	11,425,000 (2)	14,951,750
July 2016 Unlimited Tax Series A	5.0	7,023,250 (1)	-	7,023,250 (2)	- (2)	14,046,500
July 2016 Limited Tax Series B	5.0	1,033,250 (1)	-	1,033,250 (2)	- (2)	2,066,500
<b>TOTAL</b>		<b>\$ 58,880,009</b>	<b>\$ 29,494,943</b>	<b>\$ 58,723,911</b>	<b>\$ 81,726,951</b>	<b>\$ 228,825,813</b>

(1) Interest Payable June 1, 2017.

(2) Interest and Principal Payable December 1, 2017.

# RETIREMENT FUND

## Description of Fund, Purpose, and Operation

The Metropolitan Water Reclamation District Retirement Fund (Fund) is a defined benefit public employee retirement system that provides retirement, death, and disability benefits to the employees of the Metropolitan Water Reclamation District of Greater Chicago according to Chapter 40, Act 5, Articles 1, 13, and 20 of the Illinois Compiled Statutes.

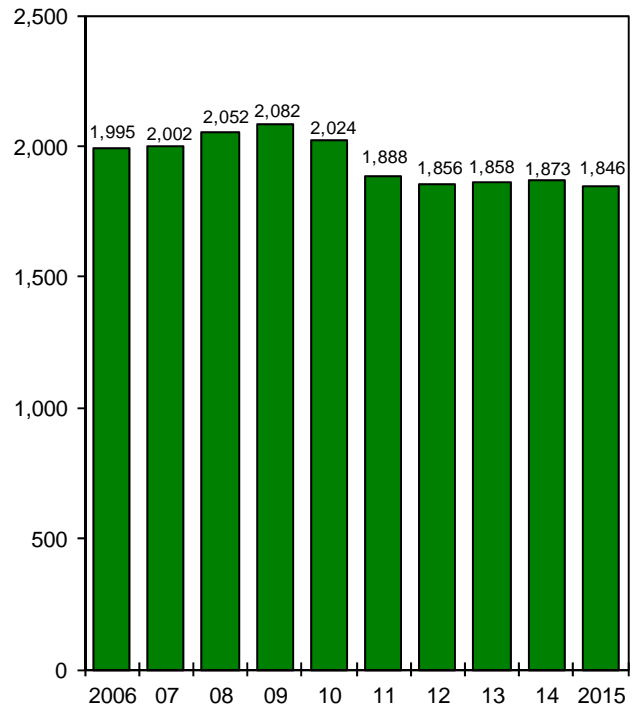
On August 3, 2012, the Governor signed Public Act 97-0894, which increased required employee contributions one percent per year for three years beginning in 2013 for employees who first became a member of the Fund or certain reciprocal systems before January 1, 2011. The employee contribution rate will be reduced to nine percent when the funded ratio reaches 90 percent. This bill also changes the manner in which the District calculates the annual tax levy. Beginning in 2013, the tax levy will be based on the Fund’s actuarially determined contribution requirement but shall not exceed an amount equal to employee contributions two years prior multiplied by 4.19.

As of December 31, 2015, there were 1,846 active (contributing) participants in the Fund and 2,389 beneficiaries. Annuitants accounted for 2,359 of these beneficiaries, including 1,760 retired employees, 580 surviving spouses, and 19 children. Additionally, the Fund paid disability benefits to 30 District employees.

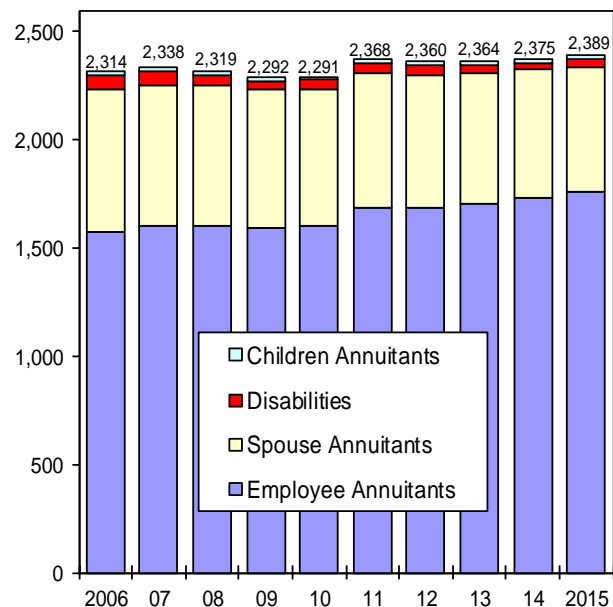
Gross income for the Fund is composed of the following items:

- **Employee contributions** – beginning in 2015, employees hired prior to January 1, 2011 contribute 12 percent of salary to the Fund. Employees hired on or after January 1, 2011 contribute nine percent of salary to the Fund since they are entitled to reduced benefits under the new provisions which include a higher retirement age and a longer final average salary period.
- **Employer contributions** - include real estate property tax levies and the Personal Property Replacement Tax. In 2017, the District shall annually levy a tax which will produce a sum that will be sufficient to meet the Fund’s actuarially determined contribution requirement but shall not exceed an amount equal to the employee contributions two years prior multiplied by 4.19. The tax levy calculation is defined under the Illinois Compiled Statutes and is only changed upon recommendation by the Trustees of the Fund based on Fund requirements and approval by the Illinois State Legislature.
- **Investment income** - includes dividends and interest, as well as realized and unrealized appreciation (depreciation) in the fair value of the investments.

Active Participants



Beneficiaries



Gross income for 2015 was \$96.6 million, which is a combination of employee and employer contributions of \$92.4 million, investment income of \$3.5 million, securities lending income of \$565,000, and other income of \$29,000; reflecting an income of \$83.8 million less than in 2014. Total investment income in 2015 was lower than the prior year primarily due to lower returns in the U.S. and non-U.S. equity markets as well as fixed income markets during 2015.

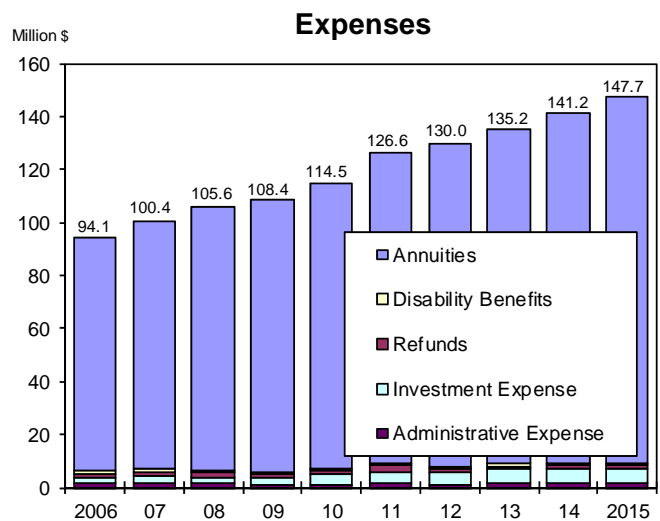
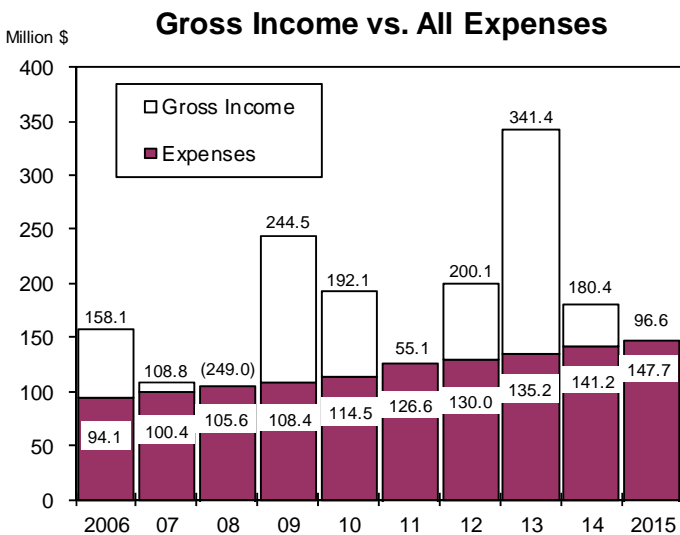
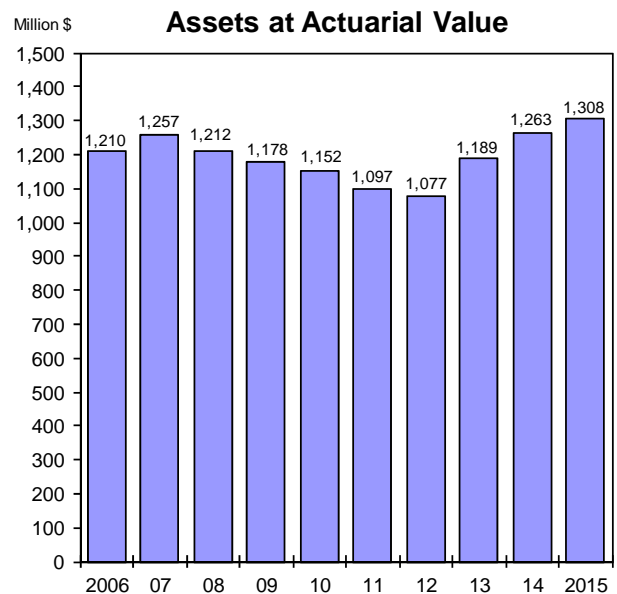
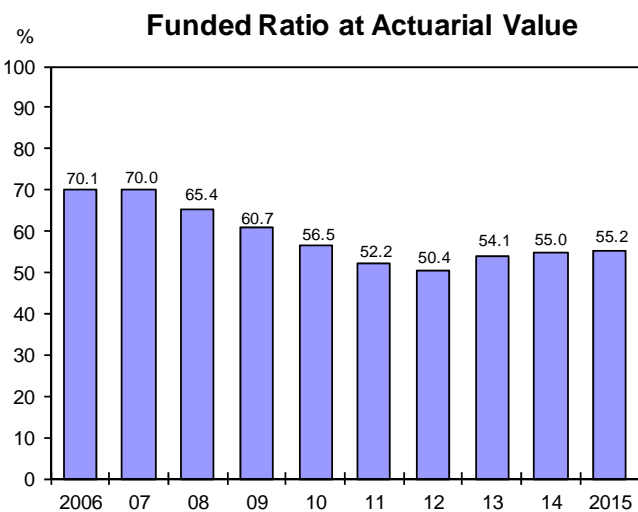
# RETIREMENT FUND

## Description of Fund, Purpose, and Operation (continued)

Expenses for 2015 include annuity and disability benefit payments of \$139.2 million, investment management expenses of \$5.5 million, administrative expenses of \$1.7 million, and refunds of \$1.3 million for a total of \$147.7 million.

As of December 31, 2015, the funded ratio of the Fund was 55.2 percent. Beginning in 1997, Fund assets and this ratio are reported at the new Actuarial Asset Value required by the Governmental Accounting Standards Board. The funded ratio has been in the range of 50.4 percent to 70.1 percent during the last ten years. The District’s Board of Commissioners adopted a Funding Policy recommended by the Retirement Fund Board of Trustees to ensure the long-term financial health of the pension program while balancing the interests of the employees, retirees, taxpayers, and the District. The funding policy establishes maximum contribution amounts equal to the maximum contribution allowed by Statute and minimum contribution levels that are intended to exceed the minimum contribution required by Statute. The funding goal of the policy is to contribute annually to the Fund an amount that will increase the funded ratio to 100 percent by the year 2050. The Policy was adopted by the Board of Commissioners on October 2, 2014.

For the 2017 Budget, the gross property tax levy totals \$73.4 million, an increase of \$8.2 million, or 12.7 percent, above the 2016 adjusted levy. The 2017 Personal Property Replacement Tax allocation to the Retirement Fund is \$18.7 million. The 2017 appropriation is \$79.5 million, an increase of \$8.7 million, or 12.3 percent, above the 2016 Adjusted Budget.



**APPROPRIATION ORDINANCE NUMBER O16-011A**

**THE METROPOLITAN WATER RECLAMATION DISTRICT RETIREMENT FUND**

And an amount of Estimated Expenditures for the Purpose of the Metropolitan Water Reclamation District Retirement Fund of \$79,505,000.

*Section 9.* That the appropriation herein of the amounts for the payment of "unpaid bills" or "contractual liabilities," or to defray the expense of any project or purpose, shall not be construed as an approval or an admission of liability by the Board of Commissioners of any said bills or contractual liabilities, or of any project or purpose mentioned herein but shall be regarded only as the provision of a fund or funds, for the payment thereof when

said bills or contractual liabilities have been found to be valid and legal obligations against the Metropolitan Water Reclamation District of Greater Chicago and when properly vouchered and audited by the Department of Finance, or when any project or purpose is approved and authorized by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago, as the case may be.

*Section 10.* This ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:

Approved:



*Head Assistant Attorney*

*President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago*



*General Counsel*

**NOTE PAGE**

# SECTION VIII

## TAX LEVY ORDINANCES

The Tax Levy Ordinances are the means by which tax levies, enacted by the Board of Commissioners under authority of the Illinois Compiled Statutes, are given legal effect.

Each tax levy states the revenue which is to be raised, through the collection of property taxes, to finance the operations of a specific fund. The gross tax levy, which allows for loss in collection, is presented with the amount of estimated loss, where applicable. A factor of 3.5 percent for loss in collection is used for 2017 levies.

This section includes 2017 Tax Levy Ordinances for the Retirement Fund, Corporate Fund, Construction Fund, Reserve Claim Fund, and Stormwater Management Fund. A Tax Levy Ordinance, to pay the interest on outstanding bonds and to discharge the principal thereof, along with a detailed schedule of the 2017 Tax Levy for Payment of Outstanding Bonds, can also be found in this section.

Retirement Fund and Corporate Fund .....	559
Construction Fund .....	560
Bond Redemption & Interest Fund:	
Tax Levy Ordinance for Outstanding Bonds .....	561
Tax Levy for Payment of Outstanding Bonds, 2017 .....	563
Reserve Claim Fund .....	565
Stormwater Management Fund .....	566



**ORDINANCE NUMBER O16-012**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
UPON ALL TAXABLE PROPERTY WITHIN THE TERRITORIAL LIMITS OF THE  
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
AS SAID TERRITORIAL LIMITS EXIST ON JANUARY 1, 2017  
FOR THE PURPOSE OF PROVIDING REVENUES FOR  
THE METROPOLITAN WATER RECLAMATION DISTRICT  
RETIREMENT FUND AND CORPORATE FUND**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* That there be and is hereby levied upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, for the fiscal year ending December 31, 2017, the amounts of money hereinafter stated as follows:

For the amount certified to the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago by the Retirement Board of the Metropolitan Water Reclamation District Retirement Fund for the purpose of providing the revenue for the Retirement Fund of the Metropolitan Water Reclamation District pursuant to Article 13 of the Illinois Pension Code, the sum of \$73,438,135 which includes the sum of \$2,570,335 as a reserve for loss in collection of taxes, distributed as

Contributions for Service Retirement Allowances and Spouses' Allowances .....	\$13,374,159
Contributions for Ordinary Disability Benefits .....	806,308
Contributions for Duty Disability Benefits .....	308,984
Contributions for Expense of Administration .....	1,499,923
Contributions for Children's Annuities .....	95,072
Contributions for Current and Past Service Requirements.....	<u>57,353,689</u>
	<u>\$73,438,135</u>

For Corporate Purposes of the said Metropolitan Water Reclamation District of Greater Chicago "the sum of \$223,946,065 which includes the sum of \$7,838,112 as a reserve for loss in the collection of taxes."

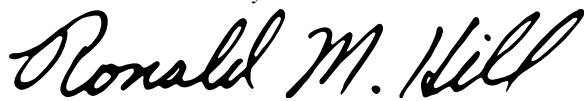
*Section 2.* That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago be, and is hereby directed to certify to the County Clerk of Cook County, the several amounts above set forth to be raised by taxation in the year 2017 and to file a certified copy of the Ordinance with the said County Clerk of Cook County and said County Clerk of Cook County aforesaid, is hereby directed to cause the aforesaid amounts of money to be extended upon and against the taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, all in accordance with the laws and statutes of the State of Illinois in such case made and provided, and the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby directed to cause this Ordinance to be published at least once in a newspaper published within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago and to incur the necessary expenses therefor.

*Section 3.* This Ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:



Head Assistant Attorney



General Counsel

Approved:



President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago

**ORDINANCE NUMBER O16-013**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
UPON ALL TAXABLE PROPERTY WITHIN THE TERRITORIAL LIMITS OF THE  
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
AS SAID TERRITORIAL LIMITS EXIST ON JANUARY 1, 2017  
FOR THE PURPOSE OF PROVIDING REVENUES  
FOR THE CONSTRUCTION FUND**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* That there be and is hereby levied upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017 for the fiscal year ending December 31, 2017, to provide revenue for the replacement, remodeling, completion, alteration, construction, and enlargement, including alterations, enlargements and replacements which will add appreciably to the value, utility, or the useful life of sewage treatment works or flood control facilities, and additions therefor, pumping stations, tunnels, conduits and intercepting sewers connecting therewith, and outlet sewers together with the equipment and appurtenances necessary thereto, and for the acquisition of the sites and rights of way necessary thereto, and for engineering expenses for designing and supervising the construction of the works above described, "the sum of \$17,000,000 which includes the sum of \$595,000 as a reserve for loss in collection of taxes."

*Section 2.* That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago be, and is hereby directed to certify to the County Clerk of Cook County, the amount above set forth to be raised by taxation in the year 2017 and to file a certified copy of the Ordinance with the

said County Clerk of Cook County, and said County Clerk of Cook County aforesaid, is hereby directed to cause the aforesaid amount of money to be extended upon and against the taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, all in accordance with the laws and statutes of the State of Illinois in such case made and provided, and subject to reduction as provided in the text below, and the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby directed to cause this Ordinance to be published at least once in a newspaper published within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago and to incur the necessary expenses therefor.

*Section 3.* That said County Clerk of Cook County, as tax extension officer for said District, is hereby directed to *reduce this levy of taxes* by the District for the year 2017 by the amount necessary to enable said District's aggregate tax levies to comply with the Property Tax Extension Limitation Law; that is, the entire reduction in the aggregate of all tax levies for said District for the year 2017 required by said Law shall be taken against the Construction Fund levy as set forth in this Ordinance.

*Section 4.* This Ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:



Head Assistant Attorney



General Counsel

Approved:



President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago

**ORDINANCE NUMBER O16-014**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
TO PAY THE INTEREST ON OUTSTANDING BONDS AND TO  
DISCHARGE THE PRINCIPAL THEREOF**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* For the purpose of creating a sinking fund to pay the principal and interest on outstanding bonds, there is hereby levied upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater

Chicago, as said territorial limits exist on January 1, 2017, and all taxable property in townships or parts of townships disconnected from the Metropolitan Water Reclamation District of Greater Chicago prior to January 1, 2017, but after the issuance of any bonds, the amounts of money hereinafter stated:

Capital Improvement Bonds – Series:

August 2009 Limited Tax .....	08-26-09 .....	35,564,767
July 2011 Limited Tax Series A .....	07-21-11 .....	41,406,315
July 2011 Unlimited Tax Series C .....	07-21-11 .....	3,981,898
Dec. 2014 Unlimited Tax Series A .....	01-06-15 .....	5,181,348
Dec. 2014 Alt Rev Unltd Tax Series B .....	01-06-15 .....	3,389,171
Dec. 2014 Limited Tax Series C .....	01-06-15 .....	3,240,156
July 2016 Unlimited Tax Series C .....	07-07-16 .....	1,554,405
July 2016 Limited Tax Series D .....	07-07-16 .....	1,036,270
July 2016 Alt Rev Unltd Tax Series E .....	07-07-16 .....	2,590,674
July 2016 Limited Tax QECB Series F .....	07-07-16 .....	165,804

State Revolving Funds Bonds – Series:

94V SRF L171150 .....	1,117,724
97AA SRF L170822 .....	3,382,155
97BB SRF L171151 .....	678,984
97CC SRF L172031 .....	2,468,083
97DD SRF L171152 .....	1,076,734
01A SRF L172126 .....	3,934,375
01B SRF L172127 .....	3,994,973
01C SRF L172128 .....	3,517,398
04A SRF L172485 .....	1,636,174
04B SRF L172488 .....	1,911,370
04C SRF L172493 .....	178,912
04D SRF L172494 .....	171,572
04E SRF L172495 .....	536,043
04F SRF L172496 .....	205,943
04G SRF L172611 .....	278,725
04H SRF L172849 .....	1,593,205
07A SRF L172625 .....	2,870,940
07B SRF L172850 .....	1,917,382
07C SRF L172770 .....	1,381,692
07D SRF L172763 .....	654,830
09A SRF L173074 .....	2,776,070
09B SRF L173064 .....	396,778
09C SRF L173063 .....	116,018
09D SRF L174558 .....	2,719,713
09E SRF L173005 .....	2,361,654
09F SRF L174557 .....	1,703,927
09G SRF L173075 .....	1,783,487
09H SRF L173800 .....	38,127
09I SRF L174675 .....	654,054
12A SRF L174710 .....	495,642
12B SRF L174712 .....	424,480
12C SRF L174621 .....	690,496
12D SRF L174988 .....	2,078,444
12E SRF L174709 .....	364,865

**ORDINANCE NUMBER 016-014**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
TO PAY THE INTEREST ON OUTSTANDING BONDS AND TO  
DISCHARGE THE PRINCIPAL THEREOF  
(CONTINUED)**

State Revolving Funds Bonds – Series:

12F SRF L174989 .....	3,597,860
12G SRF L174923 .....	1,772,021
12H SRF L174924 .....	1,794,777
12I SRF L175222 .....	221,131
12J SRF L175172 .....	173,996
12K SRF L174925 .....	782,092
12L SRF L175161 .....	1,936,896
12M SRF L175168 .....	709,845
12N SRF L175164 .....	158,483
12O SRF L175166 .....	293,949
14A SRF L173076 .....	4,331,606
14B SRF L175171 .....	151,744
14C SRF L174559 .....	901,554
14D SRF L175263 .....	689,119
14E SRF L173062 .....	2,424,870
14G SRF L175152 .....	1,134,715
14H SRF L175355 .....	72,539
14I SRF L175223 .....	673,575
14J SRF L175219 .....	253,886
14K SRF L175366 .....	290,155
14L SRF L175219 .....	290,155

Refunding Bonds – Series:

March 2007 Unlimited Tax Series A .....	03-21-07 .....	26,509,845
March 2007 Unlimited Tax Series B .....	03-21-07 .....	4,996,749
March 2007 Limited Tax Series C .....	03-21-07 .....	5,541,607
2014 Limited Tax Series D .....	01-06-15 .....	9,264,767
July 2016 Unlimited Tax Series A .....	07-07-16 .....	14,555,959
July 2016 Limited Tax Series B .....	07-07-16 .....	<u>2,141,451</u>
		<u>\$233,887,123</u>

Section 2. That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago be, and is hereby directed to certify to the County Clerk of Cook County, the several amounts above set forth to be raised by taxation in the year 2017 for the purpose of providing the funds to pay the interest on bonds and discharge the principal thereof, and to file a certified copy of this Ordinance with said County Clerk of Cook County, and said County Clerk of Cook County is hereby directed to cause aforesaid amounts of money to be extended upon and against taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, and the County Clerk of Cook County is further directed to extend upon all taxable property in all townships or parts of townships

disconnected from the Metropolitan Water Reclamation District of Greater Chicago prior to January 1, 2017 those amounts aforesaid necessary to pay the principal and interest for any bonds issued prior to the date of disconnection, all in accordance with the laws and statutes of the State of Illinois in such case made and provided, and the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby directed to cause this Ordinance to be published at least once in a newspaper published within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago and to incur the necessary expenses therefor.

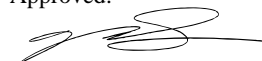
Section 3. This Ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:

*Helen S. Wright*  
Head Assistant Attorney

*Ronald M. Hill*  
General Counsel

Approved:



President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago

## BOND REDEMPTION AND INTEREST FUND

### 2017 Tax Levy for Payment of Outstanding Bonds

BOND ISSUE	ISSUE DATED	INTEREST PAYMENT DATES	INTEREST	PRINCIPAL	RESERVE FOR UNCOLLECTED TAX (A)	GROSS LEVY
<b>Capital Improvement Bonds - Series:</b>						
July 2016 QECCB		6/1/17- 12/1/17	\$ 160,000	\$ -	\$ 5,804	\$ 165,804
August 2009 Limited Tax Series	08-26-09	6/1/17- 12/1/17	34,320,000	-	1,244,767	35,564,767
July 2011 Limited Tax Series	07-21-11	6/1/17- 12/1/17	13,102,094	26,855,000	1,449,221	41,406,315
July 2011 Unlim Tax Series C	07-21-11	6/1/17- 12/1/17	2,202,532	1,640,000	139,366	3,981,898
2014 Unlim Tax Series A	01-06-15	6/1/17- 12/1/17	5,000,001	-	181,347	5,181,348
2014 Alt Rev Unlim Tax Series B	01-06-15	6/1/17- 12/1/17	2,315,550	955,000	118,621	3,389,171
2014 Limited Tax Series C	01-06-15	6/1/17- 12/1/17	3,126,751	-	113,405	3,240,156
2016 Alt Rev Tax Unltd Series E			2,500,000	-	90,674	2,590,674
2016 Unlimited Tax Series C			1,500,001	-	54,404	1,554,405
2016 Limited Tax Series D			1,000,001	-	36,269	1,036,270
<b>State Revolving Funds Bonds - Series:</b>						
94V SRF L171150	01-01-03	7/1/17- 1/1/18	13,316	1,065,288	39,120	1,117,724
97AA SRF L170822	01-08-99	7/1/17- 1/1/18	99,977	3,163,803	118,375	3,382,155
97BB SRF L171151	10-24-00	7/1/17- 1/1/18	36,093	619,127	23,764	678,984
97CC SRF L172031	04-27-02	7/1/17- 1/1/18	214,645	2,167,055	86,383	2,468,083
97DD SRF L171152	08-01-03	7/1/17- 1/1/18	145,973	893,075	37,686	1,076,734
01A SRF L172126	01-15-04	7/1/17- 1/1/18	518,416	3,278,256	137,703	3,934,375
01B SRF L172127	01-15-05	7/1/17- 1/1/18	595,157	3,259,992	139,824	3,994,973
01C SRF L172128	06-27-08	7/1/17- 1/1/18	594,443	2,799,846	123,109	3,517,398
04A SRF L172485	06-30-08	7/1/17- 1/1/18	324,158	1,254,750	57,266	1,636,174
04B SRF L172488	06-30-08	7/1/17- 1/1/18	378,680	1,465,792	66,898	1,911,370
04C SRF L172493	06-05-07	7/1/17- 1/1/18	33,730	138,920	6,262	178,912
04D SRF L172494	06-05-07	7/1/17- 1/1/18	32,347	133,220	6,005	171,572
04E SRF L172495	06-30-08	7/1/17- 1/1/18	111,277	406,005	18,762	536,043
04F SRF L172496	12-01-09	7/1/17- 1/1/18	-	198,735	7,208	205,943
04G SRF L172611	06-05-07	7/1/17- 1/1/18	52,550	216,420	9,755	278,725
04H SRF L172849	02-27-09	7/1/17- 1/1/18	349,094	1,188,349	55,762	1,593,205
07A SRF L172625	06-16-10	7/1/17- 1/1/18	701,380	2,069,077	100,483	2,870,940
07B SRF L172850	07-01-10	7/1/17- 1/1/18	485,484	1,364,790	67,108	1,917,382
07C SRF L172770	02-01-11	7/1/17- 1/1/18	-	1,333,333	48,359	1,381,692
07D SRF L172763	06-09-10	7/1/17- 1/1/18	159,977	471,934	22,919	654,830
09A SRF L173074	07-01-13	7/1/17- 1/1/18	435,843	2,243,065	97,162	2,776,070
09B SRF L173064	10-27-09	7/1/17- 1/1/18	-	382,891	13,887	396,778
09C SRF L173063	08-26-11	7/1/17- 1/1/18	-	111,957	4,061	116,018
09D SRF L174558	07-01-14	7/1/17- 1/1/18	771,310	1,853,213	95,190	2,719,713
09E SRF L173005	08-26-11	7/1/17- 1/1/18	345,838	1,933,158	82,658	2,361,654
09F SRF L174557	06-09-10	7/1/17- 1/1/18	252,243	1,392,047	59,637	1,703,927
09G SRF L173075	06-09-10	7/1/17- 1/1/18	288,958	1,432,107	62,422	1,783,487
09H SRF L173800	06-09-10	7/1/17- 1/1/18	-	36,793	1,334	38,127
09I SRF L174675	06-21-11	7/1/17- 1/1/18	92,716	538,446	22,892	654,054
12A SRF L174710	07-01-14	7/1/17- 1/1/18	144,396	333,899	17,347	495,642
12B SRF L174712	07-01-14	7/1/17- 1/1/18	123,664	285,959	14,857	424,480
12C SRF L174621	07-01-15	7/1/17- 1/1/18	197,875	468,454	24,167	690,496
12D SRF L174988	07-01-14	7/1/17- 1/1/18	565,652	1,440,046	72,746	2,078,444
12E SRF L174709	07-01-14	7/1/17- 1/1/18	96,859	255,236	12,770	364,865
12F SRF L174989	07-01-14	7/1/17- 1/1/18	979,165	2,492,770	125,925	3,597,860
12G SRF L174923	07-01-14	7/1/17- 1/1/18	1,710,000	-	62,021	1,772,021
12H SRF L174924	07-01-14	7/1/17- 1/1/18	488,452	1,243,508	62,817	1,794,777
12I SRF L175222	07-01-14	7/1/17- 1/1/18	70,508	142,883	7,740	221,131

**BOND REDEMPTION AND INTEREST FUND****2017 Tax Levy for Payment of Outstanding Bonds (continued)**

<b>BOND ISSUE</b>	<b>ISSUE DATED</b>	<b>INTEREST PAYMENT DATES</b>	<b>INTEREST</b>	<b>PRINCIPAL</b>	<b>RESERVE FOR UNCOLLECTED TAX (A)</b>	<b>GROSS LEVY</b>
<b>State Revolving Funds Bonds - Series:</b>						
12J SRF L175172	07-01-14	7/1/17- 1/1/18	47,495	120,411	5,259	173,996
12K SRF L174925	07-01-15	7/1/17- 1/1/18	218,831	535,888	27,373	782,092
12L SRF L175161	07-01-15	7/1/17- 1/1/18	617,581	1,251,524	67,791	1,936,896
12M SRF L175168	07-01-15	7/1/17- 1/1/18	685,000	-	24,845	709,845
12N SRF L175164	07-01-15	7/1/17- 1/1/18	45,416	107,520	5,547	158,483
12O SRF L175166	07-01-14	7/1/17- 1/1/18	82,248	201,413	10,288	293,949
14A SRF L173076	07-01-16	7/1/17- 1/1/18	4,180,000	-	151,606	4,331,606
14B SRF L175171	07-01-16	7/1/17- 1/1/18	47,300	99,133	5,311	151,744
14C SRF L174559	07-01-17	7/1/17- 1/1/18	870,000	-	31,554	901,554
14D SRF L175263	07-01-17	7/1/17- 1/1/18	665,000	-	24,119	689,119
14E SRF L173062	07-01-18	7/1/17- 1/1/18	2,340,000	-	84,870	2,424,870
14G SRF L175152	07-01-18	7/1/17- 1/1/18	1,095,000	-	39,715	1,134,715
14H SRF L175355	07-01-17	7/1/17- 1/1/18	70,000	-	2,539	72,539
14I SRF L175223	07-01-17	7/1/17- 1/1/18	650,000	-	23,575	673,575
14J SRF L175219	07-01-16	7/1/17- 1/1/18	245,000	-	8,886	253,886
14K SRF L175366	07-01-17	7/1/17- 1/1/18	280,000	-	10,155	290,155
14L SRF L175219	07-01-17	7/1/17- 1/1/18	280,000	-	10,155	290,155
<b>Refunding Bonds - Series:</b>						
March 2007 Unlimited Tax Series	03-21-07	6/1/17- 12/1/17	5,567,000	20,015,000	927,845	26,509,845
March 2007 Unlimited Tax Series	03-21-07	6/1/17- 12/1/17	4,821,863	-	174,886	4,996,749
March 2007 Limited Tax Series C	03-21-07	6/1/17- 12/1/17	5,347,651	-	193,956	5,541,607
2014 Limited Tax Series D	01-06-15	6/1/17- 12/1/17	2,955,500	5,985,000	324,267	9,264,767
July 2016 Unlimited Tax Series A	07-07-16	6/1/17- 12/1/17	14,046,500	-	509,459	14,555,959
July 2016 Limited Tax Series B	07-07-16	6/1/17- 12/1/17	2,066,500	-	74,951	2,141,451
<b>TOTAL</b>			<b>\$ 123,860,991</b>	<b>\$ 101,840,088</b>	<b>\$ 8,185,214</b>	<b>\$ 233,887,123</b>

(A) Reserve at 3.5%

**ORDINANCE NUMBER O16-015**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
UPON ALL TAXABLE PROPERTY WITHIN THE TERRITORIAL LIMITS OF  
THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
AS SAID TERRITORIAL LIMITS EXIST ON JANUARY 1, 2017  
FOR THE PURPOSE OF PROVIDING REVENUES  
FOR THE RESERVE CLAIM FUND**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* That there is hereby levied the sum of \$5,900,000 upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago as said territorial limits exist on January 1, 2017, for the fiscal year ending December 31, 2017, for the purpose of providing revenues for establishing and maintaining a reserve fund for the payment of claims, awards, losses, judgments, liabilities, settlements, or demands, and associated attorney's fees and costs that might be imposed on or incurred by such Metropolitan Water Reclamation District in matters including, but not limited to, the Worker's Compensation Act or the Workmen's Occupational Diseases Act, any claim in tort, any claim of deprivation of any constitutional or statutory right or protection, for all expenses, fees, and costs, both direct and in support of the repair or replacement of any property owned by such sanitary district which is damaged by fire, flood, explosion, vandalism or any other peril, natural or manmade.

*Section 2.* That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago be, and is hereby directed to certify to the County Clerk of Cook County, the amount above set forth to be raised by taxation in the year 2017 and to file a certified copy of the Ordinance with the said County Clerk of Cook County and said County Clerk of Cook County aforesaid, is hereby directed to cause the aforesaid amount of money to be extended upon and against the taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, all in accordance with the laws and statutes of the State of Illinois in such case made and provided, and the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby directed to cause this Ordinance to be published at least once in a newspaper published within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago and to incur the necessary expenses therefor.

*Section 3.* This Ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:



Head Assistant Attorney



General Counsel

Approved:



President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago

**ORDINANCE NUMBER O16-016**

**FOR THE LEVY OF TAXES FOR THE FISCAL YEAR  
BEGINNING JANUARY 1, 2017 AND ENDING DECEMBER 31, 2017  
UPON ALL TAXABLE PROPERTY WITHIN THE TERRITORIAL LIMITS OF THE  
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
AS SAID TERRITORIAL LIMITS EXIST ON JANUARY 1, 2017  
FOR THE PURPOSE OF PROVIDING REVENUES  
FOR THE STORMWATER MANAGEMENT FUND**

**BE IT ORDAINED** by the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago:

*Section 1.* That there be and is hereby levied upon all taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, for the fiscal year ending December 31, 2017, to provide revenue for the development, design, planning and construction, operation, and maintenance of regional and local stormwater facilities provided for in the countywide stormwater management plan and the acquisition of real property in furtherance of its regional and local stormwater management activities, and for payment of principal and interest on bonds issued for stormwater projects as authorized under the District’s Act, “the sum of \$40,856,008 which includes the sum of \$1,429,960 as a reserve for loss in collection of taxes”.

*Section 2.* That the Clerk of the Metropolitan Water Reclamation District of Greater Chicago be, and is hereby directed to certify to the County Clerk of Cook County, the amount above set forth to be raised by taxation in the year 2017, and to file a certified copy of the Ordinance with the said County Clerk of Cook County, and said County Clerk of Cook County aforesaid, is hereby directed to cause the aforesaid amount of money to be extended upon and against the taxable property within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago, as said territorial limits exist on January 1, 2017, all in accordance with the laws and statutes of the State of Illinois in such case made and provided, and the Clerk of the Metropolitan Water Reclamation District of Greater Chicago is hereby directed to cause this Ordinance to be published at least once in a newspaper published within the territorial limits of the Metropolitan Water Reclamation District of Greater Chicago and to incur the necessary expenses therefor.

*Section 3.* This Ordinance shall take effect January 1, 2017.

Approved as to Form and Legality:



Head Assistant Attorney



General Counsel

Approved:



President,  
Board of Commissioners of the  
Metropolitan Water Reclamation District  
of Greater Chicago



# SECTION IX

## APPENDIX

This section explains the structure of the District's compensation plan and financial and technical terminology contained in the District's Budget. It also details the various awards the District has received for its accomplishments over the last 43 years.

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## COMPENSATION PLAN NARRATIVE

In accordance with Illinois State Statute, Chapter 70, Section 2605/4.2, a Department of Human Resources for the District was created, the executive officer of which is the Director of Human Resources. The Director shall, with the consent and approval of the Civil Service Board of the District, classify all non-exempt and non-represented positions in the District for the purpose of establishing pay grades.

For the purpose of establishing uniformity of pay and title for positions, the Director prescribes the minimum and maximum pay for each grade and title.

While maintaining internal balance as established by the relative evaluation of classes, the compensation for non-represented and non-exempt positions shall be at least equal to the median compensation provided by other employers for similar work in the Metropolitan Chicago labor market or other appropriate labor market. Compensation for non-represented positions is defined in the Salary Schedule for Technical, Administrative, and Managerial (HP) Employees.

Salary advancement within salary ranges for non-represented positions and certain exempt positions is provided to recognize growth in the job, and the rate of advance shall be based primarily upon the quality of performance. Salary advancement stages are defined as “steps” within the salary schedules for each grade of position.

Employees in positions covered by collective bargaining agreements shall be compensated on the basis of negotiations between unions representing such employees and the management of the District. The rates paid to all such employees shall be adjusted in accordance with changes caused by the duly prescribed negotiations, provided that any change in rates may be made applicable at the beginning of the next budget year following the date of change in the rate, in the event necessary funds are not available. Compensation for these positions is defined in the Salary Schedule for Labor Trades (LT) Employees.

Compensation for exempt positions is established by the Board of Commissioners, with the exception of their own compensation, which is established by Illinois Compiled Statutes. Compensation for exempt positions is defined in the Salary Schedule for Exempt (EX) Employees.

## SALARY SCHEDULES (bi-weekly rates)

### Exempt (EX)

EX01	\$2,884.62	EX09	\$576.92	EX17	\$8,955.37
EX02	\$2,692.31	EX10	\$8,955.37	EX18	\$5,037.42
EX03	\$6,792.28	EX11	\$10,074.79	EX19	\$8,955.37
EX04	\$2,478.05 to \$3,857.14	EX12	\$10,074.79	EX20	None
EX05	\$8,955.37	EX13	\$8,955.37	EX21	\$2,884.62
EX06	\$2,478.05 to \$3,857.14	EX14	\$10,074.79	EX22	\$3,076.92
EX07	\$11,194.26	EX15	\$10,074.79	EX23	\$3,651.91
EX08	\$8,955.37	EX16	\$673.08	EX24	\$3,651.91

### Technical, Administrative, and Managerial (HP)

HP07	\$1,287.51 to \$1,875.17	HP14	\$2,664.47 to \$4,130.62	HP21	\$5,360.70 to \$8,043.46
HP08	\$1,401.26 to \$2,064.46	HP15	\$2,924.43 to \$4,455.01	HP22	\$5,917.36 to \$8,788.12
HP09	\$1,537.71 to \$2,291.74	HP16	\$3,245.51 to \$4,855.68	HP23	\$6,579.54 to \$9,571.04
HP10	\$1,719.71 to \$2,594.73	HP17	\$3,622.69 to \$5,326.34	TM01	\$1,040.00
HP11	\$1,932.09 to \$2,948.20	HP18	\$4,066.18 to \$5,879.66	TM02	\$1,400.00
HP12	\$2,189.90 to \$3,377.44	HP19	\$4,616.65 to \$6,566.53		
HP13	\$2,478.05 to \$3,857.14	HP20	\$4,888.94 to \$7,412.39		

### Labor Trades (LT)

NR1541	\$3,078.60	NR6275	\$4,608.00	PR5153	\$3,628.00	PR5975	\$3,856.00	PR7579	\$3,988.00
NR1835	\$2,763.20	NR6441	\$3,325.60	PR5155	\$3,788.00	PR5989	\$3,976.00	PR7743	\$3,996.00
NR1853	\$3,119.20	NR6810	\$3,260.80	PR5159	\$3,828.00	PR6453	\$3,928.00	PR7773	\$3,800.00
NR1857	\$3,325.60	NR6831	\$3,827.20	PR5353	\$3,590.40	PR6459	\$4,248.00	PR7775	\$4,040.00
NR2483	\$3,119.20	NR6832	\$3,965.60	PR5553	\$3,564.00	PR6473	\$2,900.00	PR7779	\$4,200.00
NR3641	\$2,235.20	NR7393	\$4,182.40	PR5555	\$3,787.20	PR6479	\$3,160.00	PR1025	\$2,039.40 to \$3,337.20
NR3642	\$2,445.60	NR7394	\$4,975.20	PR5753	\$3,860.00	PR7343	\$3,688.00	TR3509	\$1,998.35
NR5369	\$3,135.20	NR7399	\$3,389.60	PR5755	\$4,020.00	PR7347	\$4,168.00		
NR6210	\$3,431.20	NR8331	\$3,325.60	PR5759	\$4,100.00	PR7349	\$3,928.00		
NR6232	\$3,603.20	NR8650	\$3,119.20	PR5933	\$3,660.00	PR7423	\$3,912.00		
NR6233	\$3,783.20	NR8651	\$2,969.60	PR5935	\$3,940.00	PR7424	\$4,312.00		
NR6251	\$4,389.60	NR8652	\$2,070.40	PR5953	\$3,442.40	PR7425	\$4,632.00		
NR6271	\$4,419.20	NR8660	\$1,827.00	PR5955	\$3,752.00	PR7573	\$3,708.00		
NR6272	\$4,182.40	NR8661	\$2,720.90	PR5973	\$3,696.00	PR7575	\$3,908.00		

The Position Analysis for each Department shows the Pay Plan and Grade for each budgeted position. The Salary Schedules above display the salary ranges associated with each Pay Plan and Grade. For example, in Section 681 of the General Division of the Maintenance & Operations Department, the Principal Mechanical Engineer position is associated with the HP (Technical, Administrative, and Managerial) Pay Plan at Grade 18. By looking up HP18 in the second table above, the salary range for this or any other title at that Pay Plan and Grade is \$4,066.18 to \$5,879.66 bi-weekly. By multiplying those rates by 26, it can be determined that the annual salary range for such positions is \$105,720.68 to \$152,871.16. For the HP and some EX Pay Plans, the actual salary earned in a position is dependent on the "step" of the incumbent occupying the position. Where applicable, there are nine steps in each Pay Plan and Grade. Which step an incumbent is at is determined by a combination of the incumbent's longevity in the title and at the District. Incumbents with the greatest longevity factors will be at the highest steps, assuming satisfactory job performance.

## USER CHARGE RATES

Year	Large Commercial/Industrial Users				Tax-Exempt Users			
	Flow per million gallons	BOD <sub>5</sub> per 1,000 pounds	SS per 1,000 pounds	O, M&R Factor	Flow per million gallons	BOD <sub>5</sub> per 1,000 pounds	SS per 1,000 pounds	Revenues in \$ millions
2017	\$ 259.61	\$ 229.13	\$ 142.47	33.9%	\$ 259.61	\$ 229.13	\$ 142.47	\$ 47.0
2016	255.02	234.95	148.33	34.4%	255.02	234.95	148.33	47.5
2015	250.51	240.49	154.08	39.1%	250.51	240.49	154.08	48.5
2014	246.08	245.75	159.72	43.5%	246.08	245.75	159.72	45.0
2013	241.73	250.76	165.25	42.4%	245.18	254.34	167.60	53.8
2012	256.48	259.22	195.95	48.6%	263.48	266.27	201.24	77.6
2011	243.99	247.48	191.18	47.3%	250.31	253.89	199.21	48.3
2010	262.44	270.68	200.33	55.7%	269.25	277.70	205.33	48.7
2009	229.37	231.90	174.25	50.4%	235.96	238.56	179.25	45.0
2008	223.72	229.23	178.11	49.9%	230.29	235.98	183.35	54.4
2007	224.87	228.39	173.01	50.4%	231.07	234.69	177.77	53.6
2006	225.80	239.79	183.41	56.8%	235.40	249.99	191.20	53.6
2005	210.91	226.64	174.33	56.8%	219.30	235.65	181.26	44.1
2004	202.39	215.86	168.16	56.9%	209.31	223.25	173.92	50.8

BOD<sub>5</sub> Biochemical Oxygen Demand based on standard 5-day test

SS Suspended Solids

O, M&R Portion of real estate taxes credited to users for the District's Operations, Maintenance, and Replacement costs

User charges are calculated based on sewer discharge volumes and representative sampling of the discharge for concentrations of BOD<sub>5</sub> and suspended solids. Loadings in thousands of pounds annually are extrapolated from the volume and concentration measurements, with the rates listed above applied. Users are given a credit for real estate taxes paid to the District multiplied by the O, M&R factor. Users owing more than \$12,000 annually pay monthly estimates.

## PROPERTY TAX LEVIES AND COLLECTIONS

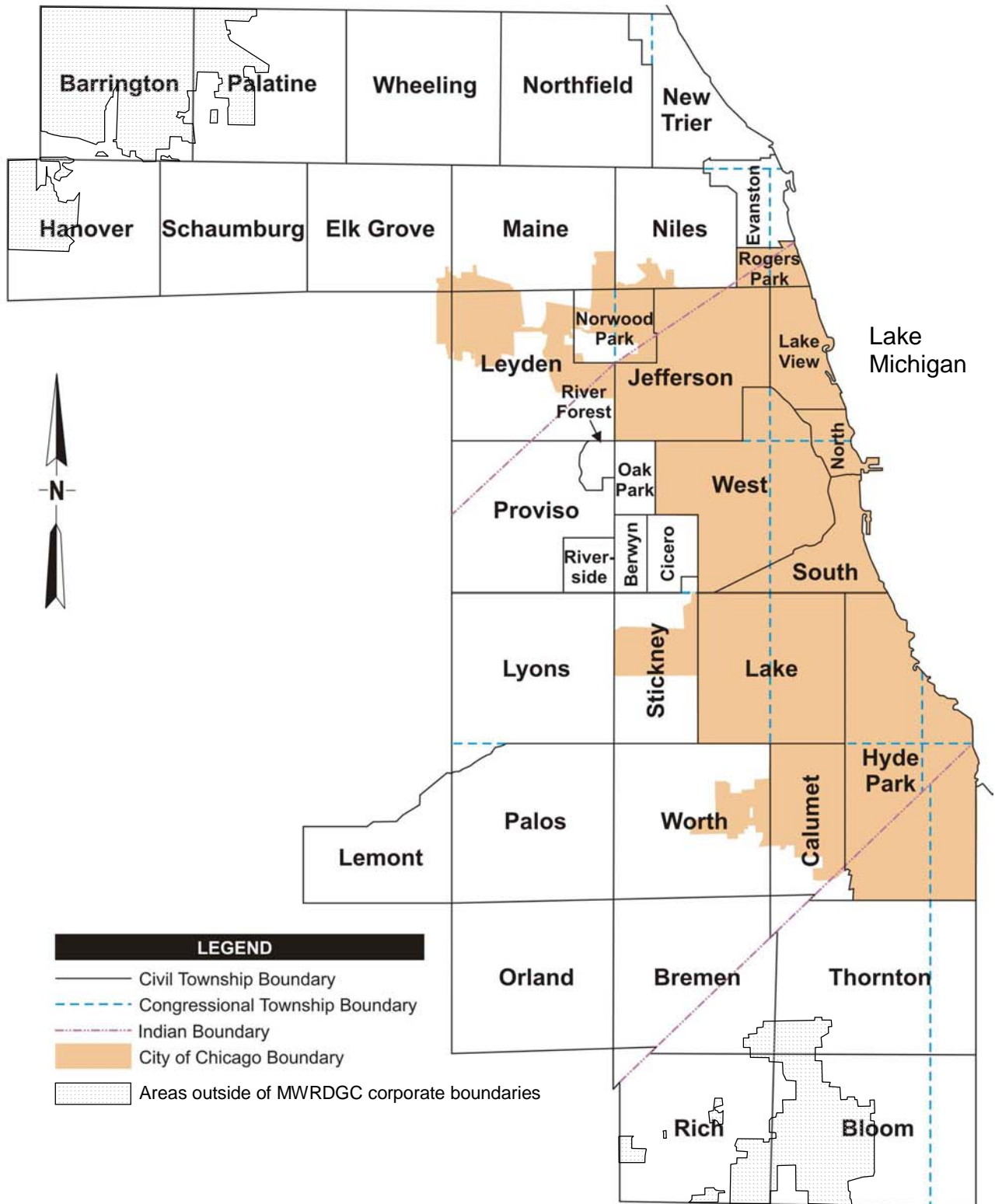
(in thousands of dollars)

Fiscal Year Ended Dec. 31	Taxes Levied for the Fiscal Year	Collected within the First Year		
		Amount	Percentage of Levy	Final Due Date
2015	\$ 560,179	-	-	08/01/16
2014	540,250	523,203	96.8	08/01/15
2013	515,590	497,452	96.5	08/01/14
2012	493,673	476,881	96.6	08/01/13
2011	476,955	460,618	96.6	08/01/12
2010	457,356	435,009	95.1	10/01/11
2009	455,361	383,612	84.2	12/13/10
2008	428,645	400,048	93.3	12/01/09
2007	410,208	390,440	95.2	11/03/08
2006	401,771	353,566	88.0	12/03/07

Note: The source for Property Tax Levies and Collection is the Comprehensive Annual Financial Report of the Metropolitan Water Reclamation District of Greater Chicago for the Year Ended December 31, 2015.

# PROPERTY TAX BASE

The Metropolitan Water Reclamation District of Greater Chicago receives the majority of its income from local real estate taxes. Taxes are collected by the Cook County Treasurer based on property values established by the Cook County Assessor. North, South and City of Chicago townships are reassessed on a three-year rotation.



The underlying county township map is derived from the Illinois Secretary of State Archives:  
<http://www.cyberdriveillinois.com/departments/archives/IRAD/cook.html>

## PROPERTY TAX BASE

### MWRDGC Equalized Assessed Valuation by Township 2010 - 2015

(in \$ millions)

Township	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Average Annual Change</u>
<b>Suburban</b>							
Barrington	\$ 457	\$ 389	\$ 353	\$ 325	\$ 328	\$ 326	-4.91%
Berwyn	935	753	688	647	596	581	-7.06%
Bloom	698	551	503	474	450	440	-7.18%
Bremen	2,204	1,853	1,689	1,566	1,469	1,425	-6.76%
Calumet	244	202	184	176	177	176	-5.34%
Cicero	914	678	625	586	555	536	-7.77%
Elk Grove	4,456	3,996	3,652	3,128	3,184	3,103	-6.84%
Evanston	3,042	2,727	2,515	2,202	2,245	2,196	-6.46%
Hanover	2,018	1,808	1,647	1,406	1,426	1,379	-7.30%
Lemont	1,001	841	778	733	715	711	-5.56%
Lyden	3,193	2,891	2,655	2,331	2,332	2,409	-5.73%
Lyons	4,857	3,961	3,680	3,465	3,469	3,373	-5.57%
Maine	5,349	4,881	4,531	3,729	3,778	3,666	-6.94%
New Trier	5,507	4,947	4,595	4,151	4,201	4,075	-7.00%
Niles	5,246	4,696	4,333	3,810	3,886	3,818	-6.24%
Northfield	6,339	5,676	5,290	4,722	4,787	4,627	-6.67%
Norwood Park	1,035	929	859	726	745	727	-6.29%
Oak Park	1,851	1,597	1,470	1,369	1,383	1,334	-5.11%
Orland	3,915	3,366	3,098	2,921	2,829	2,753	-5.61%
Palatine	3,559	3,240	3,001	2,597	2,628	2,557	-6.87%
Palos	1,944	1,583	1,459	1,369	1,330	1,290	-6.23%
Proviso	3,811	3,130	2,893	2,723	2,652	2,573	-6.15%
Rich	1,531	1,241	1,138	1,044	988	962	-7.54%
River Forest	704	573	529	493	488	470	-4.66%
Riverside	700	592	541	505	489	474	-5.98%
Schaumburg	5,379	4,835	4,460	3,949	3,999	3,892	-6.96%
Stickney	1,377	1,139	1,049	972	935	914	-6.80%
Thornton	2,584	2,064	1,867	1,718	1,662	1,651	-7.32%
Wheeling	5,805	5,289	4,875	4,185	4,253	4,152	-6.80%
Worth	4,178	3,497	3,194	3,011	2,847	2,752	-6.66%
<b>City of Chicago</b>							
Hyde Park	4,884	4,453	3,748	3,576	3,648	3,890	-3.94%
Jefferson	14,363	13,317	11,060	10,529	10,741	11,311	-3.79%
Lake	8,593	8,122	6,488	6,227	6,364	6,684	-3.65%
Lake View	11,730	10,389	8,886	8,416	8,654	9,521	-3.62%
North Chicago	15,056	13,717	12,745	12,079	12,509	14,197	-1.63%
Rogers Park	1,984	1,750	1,391	1,299	1,318	1,376	-5.97%
South Chicago	15,001	13,717	12,616	12,050	13,277	14,559	-0.81%
West Chicago	10,478	9,658	8,317	8,188	8,398	9,427	-1.89%
Total EAV	166,918	149,048	133,398	123,400	125,736	130,305	-4.58%

Shaded figures indicate assessed values following triennial reassessments.

**AWARDS AND ACHIEVEMENTS RECOGNITION**

Academy of Interactive and Visual Arts	2014	<i>The Interactive Multimedia Communicator Award for "National Save for Retirement Week Campaign"</i>
American Academy of Environmental Engineers	2012	<i>Excellence in Environmental Engineering Grand Prize for the University Research for Chicago Health, Environmental Exposure, and Recreation Study (CHEERS)</i>
	2010	<i>Excellence in Environmental Engineering Honor Award in Research for the Microbial Risk Assessment for Recreational Use of the Chicago Area Waterways</i>
	1995	<i>Honor Award for the Sidestream Elevated Pool Aeration Stations</i>
	1989	<i>Grand Prize Award for Planning the Sidestream Elevated Pool Aeration Stations</i>
American Council of Engineering Companies of Illinois	2010	<i>Special Achievement Award for the Calumet Isolation Chamber</i>
American Infrastructure Magazine	2016	<i>PUBBY Award for Water Project of the Year: Thornton Composite Reservoir</i>
American Public Works Association	2016	<i>Project of the Year (Environment, More than \$75 Million) for the Thornton Composite Reservoir</i>
	2012	<i>Chicago City Branch: Project of the Year in the Environmental \$25 to \$75 Million Category for the design of the Calumet Central Boiler Facility</i>
		<i>Chicago Metro Chapter: Project of the Year in the Environmental \$25 to \$75 Million Category for the design of the Calumet Central Boiler Facility</i>
		<i>Chicago Metro Chapter: Public Works Project Excellence Award for the design of the Calumet Central Boiler Facility</i>
	2003	<i>Environmental Project of the Year, Over \$10 Million Category, for the Thornton Transitional Reservoir</i>
	2000	<i>Reversal of the Chicago River, one of the "Top Ten Public Works Projects of the Century"</i>
		<i>Tunnel and Reservoir Plan Phase I, one of the "Top Ten Chicago Area Public Works Projects of the 20th Century"</i>
		<i>Tunnel and Reservoir Plan Phase I, Member's Choice for "Most Significant Chicago Area Public Works Projects of the 20th Century"</i>
	1995	<i>The American Public Works Association Award for the District's Innovative Energy Audit and Control Program</i>
	1981	<i>Outstanding Public Works Project of the Year for the Tunnel and Reservoir Plan</i>
American Public Works Association, Chicago Metro Chapter	2016	<i>Project of the Year (Environment, More than \$75 Million) for the Thornton Composite Reservoir</i>
		<i>Public Works Project Excellence Award for the Thornton Composite Reservoir</i>
American Rivers, Incorporated	1994	<i>Scientific or Engineering Breakthrough Award for the Calumet River System Sidestream Elevated Pool Aeration Project</i>
American Society of Civil Engineers - Illinois Section	2016	<i>Project of the Year (Higher than \$25 Million) for Thornton Composite Reservoir</i>
		<i>Outstanding Civil Engineering Achievement Award, Under \$10 Million Category, for the Busse Reservoir South Dam Modification Project</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

American Society of Civil Engineers - Illinois Section (continued)	2016	<i>Outstanding Civil Engineering Achievement Award, Over \$25 Million Category, for the Thornton Composite Reservoir</i>
	2003	<i>Outstanding Civil Engineering Achievement of the Year Award, Over \$5 Million Category, for the Thornton Transitional Reservoir</i>
	2000	<i>District's wastewater treatment system was recognized as representing one of civil engineering's "Monuments of the Millennium" of the 20th century</i>
	1998	<i>Outstanding Civil Engineering Achievement Award for the O'Hare-CUP Reservoir Project</i>
	1996	<i>Public Sector Employer Recognition Award</i>
	1994	<i>Outstanding Civil Engineering Achievement received for Sidestream Elevated Pool Aeration Project</i>
	1986	<i>Outstanding Civil Engineering Achievement received for Tunnel and Reservoir Plan</i>
		<i>Outstanding Civil Engineering Achievement of Past 100 Years in Illinois for the Tunnel and Reservoir Plan</i>
	1985	<i>Tunnel and Reservoir Plan Mainstream System, Phase 1, the "Outstanding Civil Engineering Achievement of 1985"</i>
	1974	<i>Special Civil Engineering Achievement Award received for the Prairie Plan in Fulton County</i>
Black Contractors United	1994	<i>Agency of the Year for Affirmative Action Program</i>
Center for Active Design	2014	<i>Excellence Award (Honorable Mention) for the Space to Grow program, a collaboration between the District, Chicago Public School Systems, and the City of Chicago Department of Water Management. Space to Grow was the only submission from Chicago to be recognized. Fellow award recipients span the globe</i>
Chatham Business Association	2015	<i>Partner Award</i>
Chicago Federation of Labor - AFL CIO	2001	<i>Michael J. Bruton Workplace Safety Award</i>
Chicago Public Schools	2011-2010	<i>Certificate of Appreciation for providing outstanding work-based learning experiences for Chicago Public School Career and Technical Education students through participation in the Work-Based Learning Program</i>
Chicago Southland Convention and Visitor Bureau	2009	<i>Hospitality Award of Merit for outstanding work on behalf of the Calumet-Sag Trail</i>
Chicago Wilderness and United States Environmental Protection Agency	2007	<i>Conservation and Native Landscaping Award for Native Prairie Restorations at the Lemont and North Side Water Reclamation Plants</i>
City of Chicago	2000	<i>Best Practices in expanding employment opportunities for people with disabilities</i>
Conservation Foundation & DuPage River Coalition	2006-2005	<i>Clean Water Award for Hanover Park Water Reclamation Plant</i>
	2002	<i>DuPage River Clean Water Award</i>
Construction Industry Service Corporation (CISCO)	2015	<i>Public Body of the Year</i>
		<i>Project of the Year - Infrastructure category for constructing the Wet Weather Treatment Facility and Reservoir at the Lemont Water Reclamation Plant</i>



**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

Engineering News Record	1999	<i>Construction of the Chicago Sanitary and Ship Canal in 1900 and Tunnel and Reservoir Plan in 1985 named as two of the top 125 engineering projects of the past 125 years</i>
Federation of Women Contractors	2016	<i>Outstanding Advocate Award</i>
	2012	<i>Outstanding Program of the Year Award for the MWRD Affirmative Action Program</i>
	2007	<i>Advocacy Award for Affirmative Action Program</i>
Friends of the Chicago River	2016	<i>Chicago River Blue Awards Green Ribbon Award for Disinfection at the Calumet Water Reclamation Plant and O'Brien Water Reclamation Plant and Thornton Reservoir</i>
Government Finance Officers Association of the United States and Canada	2016-1985	<i>Budget document recognized for Distinguished Budget Presentation</i>
	2016	<i>Budget document received Special Performance Measures recognition</i>
	2015	<i>Budget document received outstanding in the overall category of Communications Device</i>
	2015-2007	<i>Certificate of Achievement for Excellence in Financial Reporting for the MWRD Retiree Health Care Trust - Comprehensive Annual Financial Report for Fiscal Years 2007 through 2015</i>
	2015-1975	<i>Certificate of Achievement for Excellence in Financial Reporting - Comprehensive Annual Financial Report for Fiscal Years 1975 through 2015</i>
	2015-1993	<i>Certificate of Achievement for Excellence in Financial Reporting for the MWRD Retirement Fund - Comprehensive Annual Financial Report for Fiscal Years 1993 through 2015</i>
	1999, 1996-1993	<i>Outstanding Achievement in Popular Annual Financial Reporting</i>
	1998-1988	<i>Budget document recognized as "Especially Notable" or "Outstanding" in various categories</i>
Illinois Association for Floodplain and Stormwater Management	2016	<i>Flood Reduction Project Award for Large Project for the Thornton Composite Reservoir</i>
	2014	<i>Sustainability Award for the Space to Grow program for the redevelopment of four school properties using a variety of Best Management Practices for creating green space</i>
Illinois Department of Natural Resources	2016	<i>Illinois Mined Land Reclamation Award in the non-coal category for the Thornton Composite Reservoir</i>
Illinois Engineering Council	2006	<i>Outstanding Engineering Achievement Award for Tunnel and Reservoir Plan Phase I</i>
Illinois Environmental Protection Agency	1994, 1983, 1981	<i>Certificate of Excellence Award for Wastewater Safety for James C. Kirie Water Reclamation Plant</i>
	1993-1992	<i>Certificate of Excellence Award for Safety received by various treatment plants</i>
	1992-1987	<i>Certificate of Excellence Award for Wastewater Safety received by various treatment plants</i>
	1991-1988	<i>Letters of Commendation of Excellence on Maintenance, Operation, and Compliance for various treatment plants</i>
	1988	<i>Hanover Park Treatment Plant named Plant of the Year</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

Illinois Safety Council and Greater Chicago Safety Council	2007	<i>Safety and Health Outstanding Safety Performance Award for North Side and Calumet Water Reclamation Plants</i>
		<i>Fleet and Transportation Outstanding Safety Performance Award - District-wide</i>
	2006	<i>Safety and Health Outstanding Safety Performance Award for Calumet and Stickney Water Reclamation Plants</i>
	2005	<i>Safe Driving Award - District-wide, Fulton County Prairie Plan, Main Office Building, Main Office Building Annex, Lockport Powerhouse, John E. Egan, Hanover Park, James C. Kirie, Lemont, North Side, and Stickney Water Reclamation Plants</i>
		<i>Health and Safety Award for North Side Water Reclamation Plant</i>
	2004, 2001	<i>Transportation Award for Outstanding Safety Performance - District-wide</i>
	2004	<i>Health and Safety Award - Fulton County Prairie Plan, James C. Kirie Water Reclamation Plant, Lawndale Avenue Solids Management Area, Racine Avenue Pumping Station, Main Office Building Annex, Lemont, North Side, and Stickney Water Reclamation Plants</i>
		<i>Outstanding Safety Performance Award</i>
	2003	<i>Health and Safety Award - District-wide, Fulton County Prairie Plan, Lockport Powerhouse, Main Office Building, Main Office Building Annex, John E. Egan, Hanover Park, James C. Kirie, Lemont, and North Side Water Reclamation Plants</i>
	2003-2002 1996-1994	<i>Safety and Health Award for Outstanding Safety Performance</i>
2002, 2000	<i>Outstanding Safety Performance in maintaining a safe and healthy working environment for its employees</i>	
Illinois Society of Professional Engineers	2010	<i>Chicagoland Excellence in Engineering Project Award, Mechanical Division, for the Calumet Central Boiler Facility</i>
	1986	<i>MWRDGC System deemed one of the "Ten Outstanding Engineering Achievements in Illinois in the Last 100 Years"</i>
	1985	<i>Outstanding Engineering Accomplishment Award for the Tunnel and Reservoir Plan - Phase I System</i>
	1984	<i>Outstanding Engineering Accomplishment Award for Upper Salt Creek Watershed Floodwater Management Plan</i>
Illinois Water Environment Association	2016	<i>Best Presentation Award, "Biosolids Beneficial Reuse Programs: SWOT and PEST Evaluations to Ensure Sustainability"</i>
	2013	<i>Debra Shore, Commissioner, is the recipient of the inaugural Public Official of the Year award. The Public Official of the Year award is presented to an elected or appointed public official that has made a documented significant contribution in the areas of clean water legislation, public policy, government service, or another area of public prominence that resulted in improvements to the water environment</i>
	2010	<i>Best Technical Presentation Award: Protozoa as Indicators of Activated Sludge Treatment System Conditions</i>
	2008	<i>Best Technical Presentation Award: Concerns about Endocrine Disrupting Chemicals in Land Applied Biosolids - Media Hype or Reality?</i>
International Personnel Management Association	1995	<i>Award for Excellence - Best personnel department in a medium-sized agency</i>
Lake Michigan Water Analysts	1995	<i>Award of Excellence</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

Metropolitan Chicago Masonry Council	1981	<i>"Excellence in Masonry '80" for James C. Kirie Water Reclamation Plant Masonry Design</i>
National Association of Clean Water Agencies (NACWA), formerly known as Association of Metropolitan Sewerage Agencies	2016	<i>Utility of the Future Today Recognition</i>
	2015	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 24 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 19 consecutive years of full compliance for Lemont Water Reclamation Plant; Platinum Award for 11 consecutive years of full compliance for James C. Kirie Water Reclamation Plant; Platinum Award for ten consecutive years of full compliance for Terrence J. O'Brien Water Reclamation Plant; and Platinum Award for eight consecutive years of full compliance for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Gold Award for John E. Egan and Stickney Water Reclamation Plants</i>
	2014	<i>Excellence in Management Platinum Award for excellence in utility management and successful implementation of programs that address the range of management challenges facing public wastewater utilities in today's competitive environment</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 23 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 18 consecutive years of full compliance for Lemont Water Reclamation Plant; Platinum Award for ten consecutive years of full compliance for James C. Kirie Water Reclamation Plant; Platinum Award for nine consecutive years of full compliance for Terrence J. O'Brien Water Reclamation Plant; and Platinum Award for seven consecutive years of full compliance for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Gold Award for John E. Egan and Stickney Water Reclamation Plants</i>
	2013	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 22 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 17 consecutive years of full compliance for Lemont Water Reclamation Plant; Platinum Award for nine consecutive years of full compliance for James C. Kirie Water Reclamation Plant; Platinum Award for eight consecutive years of full compliance for Terrence J. O'Brien Water Reclamation Plant; and Platinum Award for six consecutive years of full compliance for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for John E. Egan and Stickney Water Reclamation Plants</i>
		<i>Richard Lanyon, former Executive Director, was inducted into the Hall of Fame and became the fifth former District executive in its ranks. The other four are former Director of M&amp;R Dr. Cecil Lue-Hing and former General Superintendents Bart Lynam, Hugh McMillan, and Ben Sosewitz</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

National Association of Clean Water Agencies (NACWA), formerly known as Association of Metropolitan Sewerage Agencies (continued)	2012	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 21 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 16 consecutive years of full compliance for Stickney and Lemont Water Reclamation Plants; Platinum Award for eight consecutive years of full compliance for James C. Kirie Water Reclamation Plant; Platinum Award for seven consecutive years of full compliance for North Side Water Reclamation Plant; and Platinum Award for five consecutive years of full compliance for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for John E. Egan Water Reclamation Plant</i>
	2011	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 20 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 15 consecutive years of full compliance for Stickney and Lemont Water Reclamation Plants; Platinum Award for seven consecutive years of full compliance for James C. Kirie Water Reclamation Plant; and Platinum Award for six consecutive years of full compliance for North Side Water Reclamation Plant</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for John E. Egan Water Reclamation Plant</i>
	2010	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 19 consecutive years of full compliance for Calumet Water Reclamation Plant; Platinum Award for 14 consecutive years of full compliance for Stickney and Lemont Water Reclamation Plants; Platinum Award for six consecutive years of full compliance for John E. Egan and James C. Kirie Water Reclamation Plants; and Platinum Award for five consecutive years of full compliance for North Side Water Reclamation Plant</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Hanover Park Water Reclamation Plant</i>
	2009	<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Hanover Park and North Side Water Reclamation Plants</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Platinum Award for John E. Egan, James C. Kirie, Stickney, Calumet, and Lemont Water Reclamation Plants</i>
	2008	<i>National Environmental Achievement Award in Public Information and Education - Education Program category for "Mission Possible: Educating People to Promote Beneficial Use of Biosolids"</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for John E. Egan, Hanover Park, James C. Kirie, and North Side Water Reclamation Plants</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for 17 consecutive years of full compliance for Calumet Water Reclamation Plant and Platinum Award for 12 consecutive years of full compliance for Stickney and Lemont Water Reclamation Plants</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

National Association of Clean Water Agencies (NACWA), formerly known as Association of Metropolitan Sewerage Agencies (continued)	2007	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for Hanover Park Water Reclamation Plant</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Platinum Award for Stickney, Calumet, and Lemont Water Reclamation Plants</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for James C. Kirie, John E. Egan, and North Side Water Reclamation Plants</i>
	2006	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Platinum Award for Stickney, Calumet, and Lemont Water Reclamation Plants</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for James C. Kirie, John E. Egan, Hanover Park, and North Side Water Reclamation Plants</i>
	2005-2003	<i>Certificate of Recognition for Excellence in Management for excellence in utility management and successful implementation of programs that address the range of management challenges facing public wastewater utilities in today's competitive environment</i>
	2005	<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for North Side Water Reclamation Plant</i>
		<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Stickney, Calumet, James C. Kirie, John E. Egan, Hanover Park, and Lemont Water Reclamation Plants</i>
	2004	<i>NACWA Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Stickney, Calumet, North Side, and Lemont Water Reclamation Plants</i>
		<i>NACWA Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for James C. Kirie, John E. Egan, and Hanover Park Water Reclamation Plants</i>
	2003	<i>Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Stickney, Calumet, North Side, Hanover Park, John E. Egan, James C. Kirie, and Lemont Water Reclamation Plants</i>
	2002	<i>Award for Full Compliance with National Pollutant Discharge Elimination System, Platinum Award for Hanover Park, North Side, and Calumet Water Reclamation Plants</i>
		<i>Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for John E. Egan, James C. Kirie, Stickney, and Lemont Water Reclamation Plants</i>
	2001	<i>Research and Technology Award on "Biosolids as a Topsoil Substitute for the Germination and Growth of Turf, Forage, Prairie Grasses and Wild Flower Plants"</i>
		<i>National Environmental Achievement Award for Excellence in Research and Technology</i>
		<i>Award for Full Compliance with National Pollutant Discharge Elimination System, Platinum Award for Stickney and Lemont Water Reclamation Plants</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

National Association of Clean Water Agencies (NACWA), formerly known as Association of Metropolitan Sewerage Agencies (continued)	2001	<i>Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for John E. Egan Water Reclamation Plant</i>
		<i>Award for Full Compliance with National Pollutant Discharge Elimination System, Gold Award for Hanover Park, James C. Kirie, North Side, and Calumet Water Reclamation Plants</i>
	2000	<i>Award for Compliance with National Pollutant Discharge Elimination System, Silver Award for John E. Egan and James C. Kirie Water Reclamation Plants</i>
		<i>Award for Full Compliance with National Pollutant Discharge System Permit Standards, Gold Award for Hanover Park, North Side, Stickney, Calumet, and Lemont Water Reclamation Plants</i>
	1999	<i>Gold Award for 100% Compliance with National Pollutant Discharge System Permit Standards - Stickney, Calumet, North Side, Hanover Park, John E. Egan, James C. Kirie, and Lemont Water Reclamation Plants</i>
		<i>National Environmental Achievement Award - Research and Technology for Optimization of Conventional Low Technology Sludge Process to Produce Class A Sludge</i>
	1998	<i>Gold Award for 100% Compliance with National Pollutant Discharge System Permit Standards - Stickney, Calumet, North Side, Hanover Park, James C. Kirie, and Lemont Water Reclamation Plants</i>
	1997	<i>National Achievement Outstanding Operations Award to North Side Water Reclamation Plants for its Instrumentation Project</i>
		<i>Platinum Award for 100% Compliance for more than five years with National Pollutant Discharge System Permit Standards - Calumet and North Side Water Reclamation Plants</i>
		<i>Gold Award for 100% Compliance with National Pollutant Discharge System Permit Standards - James C. Kirie, Lemont, and Stickney Water Reclamation Plants</i>
		<i>Silver Award for 99.9% Compliance with National Pollutant Discharge System Permit Standards - John E. Egan and Hanover Park Water Reclamation Plants</i>
	1993	<i>Outstanding Operations Award for Sidestream Pool Aeration Stations</i>
National Association of Flood and Stormwater Management Agencies (NAFSMA)	2016	<i>Green Infrastructure Award, First Place in the Large Agency Category for the Space to Grow Program</i>
National Association of Government Defined Contribution Administrators	2013, 2009	<i>Leadership Recognition Award of Distinction for National Save for Retirement Week Campaign</i>
National Biosolids Partnership (Water Environment Federation and National Association of Clean Water Agencies)	2008	<i>Certificate of Achievement for meeting all the requirements for admittance and certification to the National Biosolids Partnership Environmental Management System Program</i>
National Institute of Governmental Purchasing	2017-2003	<i>Outstanding Agency Accreditation Achievement Award</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

National Physical Plan Alliance	2014	<i>Champion Award for the Space to Grow program for the collaborative efforts of the District, Chicago Public Schools, and the Department of Water Management in transforming Chicago's underused and outdated schoolyards into vibrant outdoor spaces that benefit students, communities and the environment</i>
National Purchasing Institute	2006-2005	<i>Achievement of Excellence in Procurement</i>
National Society of Professional Engineers	1985	<i>Outstanding Engineering Accomplishment Award for the Tunnel and Reservoir Plan - Phase I System</i>
	1973	<i>Outstanding Engineering Achievements in the United States for the Brookfield LaGrange Rock Tunnel</i>
Risk & Insurance Magazine	2016	<i>Honorable Mention in the national Theodore Roosevelt Workers' Competition and Disability Management (TEDDY) Award competition for excellence in safety and workers' compensation risk management</i>
Rotary Club of Naperville	2016	<i>Paul Harris Award</i>
Stormwater Solutions Magazine	2016	<i>Top 10 Stormwater Project for the Blue Island Green Infrastructure Project</i>
Structural Engineers Association of Illinois	1985	<i>Honor Award for the Structural-Geotechnical Design of the Tunnel and Reservoir Plan Mainstream Pumping Station</i>
The Consulting Engineers Council of Illinois	1985	<i>Engineering Excellence Honor Award for the Tunnel and Reservoir Plan Mainstream System Phase I</i>
United States Department of Defense	2003	<i>Certificate of Appreciation for Outstanding Achievement through Value Engineering</i>
United States Environmental Protection Agency	2008	<i>Exemplary Biosolids Management Award - First Place in the Public Acceptance Category</i>
	2004	<i>National Second Place Clean Water Act Recognition Award, James C. Kirie Water Reclamation Plant, for Outstanding Operations and Maintenance, Large Advanced Plant</i>
	2003	<i>Certificate of Recognition as a Clean Water Partner for the 21st Century</i>
	1998	<i>Designation of the Chicago River as "One of the 25 Outstanding Success Stories in the Nation on the Occasion of the 25th Anniversary of the Clean Water Act"</i>
	1996	<i>Award of Excellence for First Place in Category Five in the National Pretreatment Program</i>
	1995	<i>National Pretreatment Award recognizing excellence in the administration of the District's Pretreatment Program</i>
	1994	<i>National First Place Award recognizing the District's Outstanding Combined Sewer Overflow Control Program</i>  <i>Award for Excellence in Maintenance and Operations Category in Region V as the Best Large Advanced Plant - James C. Kirie Water Reclamation Plant</i>
	1993	<i>Second Place for Outstanding Treatment Facility by Stickney and John E. Egan Water Reclamation Plants in the Area of Maintenance and Operations</i>
	1992	<i>North Side Treatment Plant named "Best in the Midwest" for Municipal Pollution Control</i>  <i>Affirmative Action Program named "Best in the Country"</i>
	1991	<i>Special Award for Sustained Outstanding Long-Term Contribution to the Beneficial Use of Sludge at the Prairie Plan, Fulton County</i>  <i>Award for the Affirmative Action Program</i>

**AWARDS AND ACHIEVEMENTS RECOGNITION (continued)**

United States Green Building Council	2015	<i>Best of Green Schools Award for Collaboration, Space to Grow Partnership</i>
	2014	<i>Emerald Award for the Space to Grow Program in the Chapter Mission category recognizes the impact collaborations can have in building better, brighter, and healthier spaces to live, learn, and work</i>
Water and Wastes Digest	2016	<i>Thornton Composite Reservoir, one of the "Top Projects for 2016 Award"</i>
Water Environment Federation	1999-1989	<i>Award for Outstanding Achievement in Water Quality Improvement</i>
	1992	<i>Recognition for the Solids Dewatering Prototype at the Stickney Water Reclamation Plant</i>
Water Environment Research Foundation	2013	<i>Award for Excellence in Innovation</i>
The Waterfront Center	2008	<i>Excellence on the Waterfront Award for Sidestream Elevated Pool Aeration Project</i>



**LEADING PARTNERSHIPS**

The District recognizes the importance of involvement in the world around us and encourages its employees to become actively involved in organizations, particularly in the water industry. We firmly believe that participation in professional organizations will enhance our awareness of current issues in our industry and help us make informed decisions. We also encourage our employees to take leadership roles in these organizations to further uphold the District as one of the top leaders in the water industry.

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
American Academy of Environmental Engineers and Scientists	Solid Waste Management Committee	Granato, Dr. Thomas C.	Director of Monitoring & Research
	Co-Chair, Environmental Microbiology group of the Environmental Life Sciences Committee	Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
The American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America	Soil Science Society of America Early Career Members Committee	Brose, Dr. Dominic	Associate Environmental Soil Scientist
	Incoming Chair, Soil and Environmental Quality Division Associate Editor, Agronomy Journal	Kumar, Dr. Kuldip	Senior Environmental Soil Scientist
	Student Contest Committee	Oladeji, Dr. Olawale	Associate Environmental Soil Scientist
Asian Carp Regional Coordinating Committee	Technical and Policy Workgroup Member	Minarik, Tom	Senior Aquatic Biologist
Calumet Bi-State Collaborative	Communications Committee	Fore, Allison	Public & Intergovernmental Affairs Officer
	Millenium Reserve Steering Committee	St. Pierre, David	Executive Director
Central States Water Environment Association	Vice Chair, Global Water Stewardship Committee	Durkin, Maureen	Managing Civil Engineer
Chicago Area Waterway System and Chloride Reduction Initiative	Data Acquisitions Committee and Water Quality Committee	Minarik, Tom	Senior Aquatic Biologist
	Chair, Water Quality Committee	Wasik, Jennifer	Supervising Aquatic Biologist
Chicago Region Trees Initiative	Executive Advisory Council	St. Pierre, David	Executive Director
	Work Group	Fore, Allison	Public & Intergovernmental Affairs Officer
Cook County Economic Advisory Committee	Development & Planning Subcommittee	St. Pierre, David	Executive Director
Current Water	Ex Officio Board Member	St. Pierre, David	Executive Director
DuPage River Salt Creek Workgroup	Chloride Committee and Projects Committee	Minarik, Tom	Senior Aquatic Biologist
	"Member at Large", DRSCW Executive Board	Serafino, Sergio	Assistant Director of Maintenance & Operations
Emerson Process Management's Ovation Group	President on the Executive Board	Majka, Jeff	Senior Electrical Engineer
Environtopica	Associate Editor	Guanglong, Dr. Tian	Supervising Environmental Soil Scientist
Governor's River Advisory Council	Member	St. Pierre, David	Executive Director

**LEADING PARTNERSHIPS (continued)**

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
Human Resources Round Table for the City of Chicago Sister Agencies	Member	Kosowski, Thaddeus J.	Assistant Director of Human Resources
Illinois Association of Wastewater Agencies	Committee Chair, Subcommittee on Biosolids	Cox, Dr. Albert	Environmental Monitoring & Research Manager
	Chairman, Awards Committee	Perkovich, Brian	Assistant Director of Maintenance & Operations
	Member, Legislative Subcommittee and the Nutrients Workgroup		
	Nutrients and Total Maximum Daily Loads Committee	Szyska, Theodore	Senior Civil Engineer
	Committee Chair, Subcommittee on the Environmental Utility	Wasik, Jennifer	Supervising Aquatic Biologist
Illinois Environmental Protection Agency	Committee Member, Subcommittee on Water Quality; Subcommittee on Nutrients and Total Maximum Daily Loads; Subcommittee on Tiered Aquatic Life Use Development	Wasik, Jennifer	Supervising Aquatic Biologist
	Nutrient Reduction Strategy, Performance and Benchmarks Committee	Cox, Dr. Albert	Environmental Monitoring & Research Manager
	Nutrient Reduction Strategy, Policy Working Group	Cox, Dr. Albert	Environmental Monitoring & Research Manager
	Bacteria Stakeholders Workgroup	Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
	Ammonia Workgroup	Vick, Justin	Associate Aquatic Biologist
	Nutrient Reduction Strategy, Nutrient Monitoring Council	Vick, Justin	Associate Aquatic Biologist
	Ammonia Implementation Committee	Wasik, Jennifer	Supervising Aquatic Biologist
Illinois Nutrient Loss Reduction Strategy	Policy Workgroup	Granato, Dr. Thomas C.	Director of Monitoring & Research
Illinois Public Employer Labor Relations Association	Awards and Training Committees	Bonner, Roxanne J.	Human Resources Manager
	Membership and Marketing Committees	Kosowski, Thaddeus J.	Assistant Director of Human Resources
Illinois State Bar Association's Section on Environmental Law	Appointee to the Section Counsel	Mihalopoulos, Jorge	Senior Attorney
Institute of Electrical and Electronics Engineers, Power & Energy Society-Chicago	Vice Chair of the Executive Committee	Nator, Mohammed	Senior Electrical Engineer
Inter-Governmental Panel on Climate Change	Agricultural Soil CO2 Expert Committee	Guanglong, Dr. Tian	Supervising Environmental Soil Scientist

**LEADING PARTNERSHIPS (continued)**

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
Illinois Water Environment Association	President-Elect for 2016-2017 and President for 2017-2018	Collins, Dan	Managing Civil Engineer
	Chairman of the Nutrient Removal and Recovery Committee	Garelli, Brett	Deputy Director of Maintenance & Operations
	Vice Chair of the Electrical Power, Energy, and Controls Committee	Gottardo, Glenn	Managing Electrical Engineer
	Plant Operations Committee	Kohlhaas, Lynn	Senior Civil Engineer
	Nutrient Removal and Recovery Committee	Kozak, Dr. Joseph	Supervising Environmental Research Scientist
	Biosolids and Resources Recovery Committee	Kumar, Dr. Kuldip	Senior Environmental Soil Scientist
	Biosolids and Resources Recovery Committee	McGregor, Matthew	Senior Civil Engineer
	Biosolids and Resources Recovery Committee	Oladeji, Dr. Olawale	Associate Environmental Soil Scientist
	Electrical Power, Energy, and Controls Committee	Patel, Sanjay	Engineer of Treatment Plant Operations I
	Co-Chair of the Lab Committee	Rabah, Anas	Assistant Environmental Chemist
	Scholarship Committee	Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
	Chair of the Lab Committee	Rose, Rebecca	Senior Environmental Chemist
	Industrial Pretreatment Committee	Scapardine, Barbara	Environmental Specialist
	Nominating Committee Chair	Storino, Lou	Principle Civil Engineer
	Chairman of the Membership Committee	Wu, Fred	Senior Civil Engineer
Scholarship and Charitable Giving Committee			
Students and Young Professionals Committee			
Industrial Water, Waste, and Sewage Group	Treasurer	Scapardine, Barbara	Environmental Specialist
Local Governmental Law Consortium	Founding and Organizing Member	Goldberg, Lisa A.	Head Assistant Attorney
	Founding and Organizing Member	Saindon, Pamela	Senior Attorney

**LEADING PARTNERSHIPS (continued)**

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
Midwest Water Analysts Association	Steering Committee	Coolidge, Donna	Assistant Director of Monitoring & Research
	Secretary	Miller, Sarah	Senior Environmental Chemist
	Lab Chair of the Steering Committee	Rose, Rebecca	Senior Environmental Chemist
	President	Stefanich, Tricia	Senior Environmental Chemist
The National Association of Clean Water Agencies	Utility and Resource Management Committee	Carmody, Steve	Engineer of Treatment Plant Operations I
	Communications and Public Affairs Committee	Fore, Allison	Public & Intergovernmental Affairs Officer
	Pretreatment Program Committee	Joseph, Mathew	Assistant Director of Monitoring & Research
	Biosolids Management Committee	McGregor, Matthew	Senior Civil Engineer
	Pathogen Workgroup	Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
	Treasurer	St. Pierre, David	Executive Director
	Facility and Collection System Committee	Storino, Lou	Principle Civil Engineer
	Water Quality Committee Emerging Contaminants Committee	Vick, Justin	Associate Aquatic Biologist
	Water Quality Committee	Wasik, Jennifer	Supervising Aquatic Biologist
	Pretreatment Program Committee	Yarnik, Greg	Supervising Environmental Specialist
National Biosolids Partnership	Blue Ribbon Panel and Appeals Board	Granato, Dr. Thomas C.	Director of Monitoring & Research
National Council of Examiners for Engineering and Surveying	Structural Committee	Geraminejad, Babak	Associate Structural Engineer
The National Science Foundation	Ebola Advisory Committee	Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
	Industrial Advisory Board of Water Equipment and Policy Committee	Zhang, Dr. Heng	Assistant Director of Monitoring and Research
Partnership for River Restoration in the Upper Midwest	Technical Committee	Vick, Justin	Associate Aquatic Biologist
Society for Ecological Restoration	Global Organization and the Midwest and Great Lakes Chapter	Vick, Justin	Associate Aquatic Biologist
Suburban Cook County Local Emergency Planning Committee	Chairperson of the Chemical Liaison Committee	Wienberg, Kristine	Environmental Specialist
United States Department of Agriculture	W-3170 Workgroup	Guanglong, Dr. Tian	Supervising Environmental Soil Scientist
US Water Alliance	Value of Water Campaign Communications Committee	Fore, Allison	Public & Intergovernmental Affairs Officer

**LEADING PARTNERSHIPS (continued)**

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
The World Academy of Sciences	Advisor	Guanglong, Dr. Tian	Supervising Environmental Soil
Water Environment Federation	Collection Systems Committee	Durkin, Maureen	Managing Civil Engineer
	Collection Systems Committee	Fitzpatrick, Kevin	Managing Civil Engineer
	Communications Committee	Fore, Allison	Public & Intergovernmental Affairs Officer
	Municipal Resource Recovery Design Committee	Kozak, Dr. Joseph	Supervising Environmental Research Scientist
	Vice President of the Water Resource Recovery Facility Design Committee	Kunetz, Thomas	Assistant Director of Engineering
	Residuals and Biosolids Committee	McGregor, Matthew	Senior Civil Engineer
	Utility Management Committee	Patel, Sanjay	Engineer of Treatment Plant Operations I
	Stormwater Institute Advisory Committee	Sheriff, William	Assistant Director of Engineering
	Collection Systems Committee and the Students and Young Professionals Committee	Storino, Lou	Principle Civil Engineer
	Water Environment Federation's Annual Technical Exhibition and Conference Advisory Committee		
	Stormwater Committee	Watson, John	Associate Civil Engineer
	Membership Committee	Wu, Fred	Senior Civil Engineer
	Water Environment & Reuse Foundation	Chair, Odor Control Workgroup, Leaders Innovation Forum for Technology	Granato, Dr. Thomas C.
Trace Organics in Biosolids Research Challenge Committee		Kumar, Dr. Kuldip	Senior Environmental Soil Scientist
Biosolids Committee			
Steering Committee, Leaders Innovation Forum for Technology		Kunetz, Thomas	Assistant Director of Engineering
Sustainable Struvite Control Using Carbon Dioxide from Digester Gas Steering Committee		Patel, Kamlesh	Senior Environmental Research Scientist
Project Steering Committee and Ebola Advisory Committee		Rijal, Dr. Geeta K.	Supervising Environmental Microbiologist
Issue Area Team on Linking Receiving Water Impacts to Sources Committee		Wasik, Jennifer	Supervising Aquatic Biologist
Issue Area Team on the Nutrient Challenge Program Committee	Zhang, Dr. Heng	Assistant Director of Monitoring and Research	

**LEADING PARTNERSHIPS (continued)**

<b>PROFESSIONAL ORGANIZATION</b>	<b>MEMBERSHIP ROLE</b>	<b>EMPLOYEE NAME</b>	<b>JOB TITLE</b>
Water Environment & Reuse Foundation Leaders Innovation Forum for Technology (continued)	Design and Implementation of Peracetic Acid for Municipal Water and Wastewater Related Processes Subcommittee	Patel, Kamlesh	Senior Environmental Research Scientist
	Vice Chairman of the Workgroup on Shortcut Nitrogen Removal	Zhang, Dr. Heng	Assistant Director of Monitoring and Research
	Workgroup on Digestion Enhancements Committee Workgroup on Energy from Wastewater Committee		

## **FINANCIAL GLOSSARY**

**Abatement:** A complete or partial cancellation of tax levy imposed by a government.

**Accrual Basis of Accounting:** The basis of accounting under which transactions are recognized when they occur, regardless of the timing of cash receipts and disbursements.

**Accrued:** The accumulation of a receivable or payable during a given period even though no explicit transaction occurs within that period.

**Activities:** The major programs and projects performed by an organizational unit.

**Ad Valorem Tax:** A tax levied in proportion to the value of the property against which it is levied (also known as property tax).

**Appropriation:** An amount of money in the budget, authorized by the Board of Commissioners, for expenditure or obligation within organizational units for specific purposes. The Corporate Fund appropriates money for operating and general purposes. The Capital Improvements Bond Fund appropriates money for major improvements, plant expansion, sewers, etc.

**Assessed Valuation:** The value of all taxable property within the boundaries of the District as a basis for levying taxes (i.e., the property's value). See tax base.

**Assets:** Resources owned or held by the District which have monetary value.

**Balance Sheet:** A statement showing the financial position at a given time, disclosing assets, liabilities and fund balances.

**Balanced Budget:** Budgeted resources are equal to budgeted requirements.

**Bond:** A written promise to pay a specified sum of money (called the principal) at a specified date in the future, together with periodic interest at a specified rate. In the budget document, these payments are identified as debt service.

**Bond Redemption & Interest Fund (Debt Service Fund):** Established to account for annual property tax levies and certain other revenues, primarily interest on investments, which are used for the payment of principal and interest of general obligation bond issues.

**Budget:** A balanced financial plan for a given period of time, which includes appropriations and tax levy ordinances for the various sources of revenue which finance the various funds. The budget is not only a financial plan; it also serves as a policy guide, as an operations guide and as a communications medium.

**Capital Equipment:** Fixed assets such as vehicles, marine equipment, computers, furniture, technical instruments etc., which have a life expectancy of more than one year and a value over \$5,000.

**Capital Improvement Program:** The aggregate compilation of those individual construction projects identified as necessary for new facilities, or to rehabilitate, replace, or expand existing District facilities for the District to continue to meet its statutory service mandates in keeping with existing regulatory requirements.

**Capital Improvements Bond Fund:** Established to account for the proceeds of bonds authorized by the Illinois General Assembly, government grants and certain other revenues, all to be used in connection with improvements, replacements and additions to the District's facilities.

**Capital Outlay:** Expenditures which result in the acquisition of, or addition to, fixed assets, including land, buildings, improvements, machinery and equipment. Most equipment or machinery is included in the annual operating budget. Capital improvements such as acquisition of land, construction and engineering expenses are included in the Capital Budget.

**Capital Projects Fund:** Established to account for all resources, principally bond proceeds and construction grants, which are used for the acquisition or construction of capital facilities. Included in Capital Projects Funds are the Capital Improvements Bond Fund and the Construction Fund.

**Capitalized:** Capital outlays recorded as additions to the asset account, not as expenses.

**Carryover (Net Assets Applicable):** That resource balance left after subtracting Current Liabilities and Designated Fund Balances from Current Assets.

**Cash Basis of Accounting:** Revenues are not recorded until cash is received, and expenditures are recorded only when cash is disbursed.

**Cash Management:** A conscious effort to manage cash flows in such a way that interest and penalties paid are minimized and interest earned is maximized. Funds received are deposited on the day of receipt and invested as soon as the funds are available. The District maximizes the return on all funds available for investment without sacrifice of safety or necessary liquidity.

**Classification of Budgetary Code Accounts:** A manual published annually which specifies the official code designations set forth in the annual budget for the purposes of accounting and expenditure control. Budgetary code listings for funds, organizations, locations, programs and line items are included.

**Commitment Items:** Expenditure classifications established to account for and budget the appropriations approved. Also referred to as Line Item.

**Construction Fund:** Established to account for an annual property tax levy and certain other revenues to be used in connection with improvements, replacements and additions to the District's facilities.

**FINANCIAL GLOSSARY (continued)**

**Construction Working Cash Fund:** Established to make temporary loans (repayable from the tax levy of the applicable year) to the Construction Fund, reducing the need for issuing short-term debt and the resultant interest expense.

**Consumer Price Index (CPI):** A measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

**Corporate Fund:** Established to account for an annual property tax levy and certain other revenues which are to be used for the operations and payments of general expenditures of the District not specifically chargeable to other funds.

**Corporate Working Cash Fund:** Established to make temporary loans (repayable from the tax levy of the applicable year) to the Corporate Fund, thus reducing the need for issuing short-term debt and the resultant interest expense.

**Crosshatch (#):** The crosshatch mark (#) indicates a restriction on the filling of a vacated position.

**Current Assets:** Cash plus assets that are expected to be converted to cash, sold or consumed during the next twelve months or as a part of the normal operating cycle.

**Current Liabilities:** Obligations that will become due within the next year or within the normal operating cycle, if longer than a year.

**Debt Service Fund:** See Bond Redemption & Interest Fund.

**Debt Service Requirements:** The amount of money required to pay interest and principal on outstanding debt.

**Delinquent Taxes:** Taxes remaining unpaid on and after the date to which a penalty for nonpayment is attached.

**Depreciation:** The allocation of the acquisition cost of plant, property and equipment to the particular periods or products that benefit from the utilization of the asset in service.

**Disbursements:** Payments made on obligations.

**Encumbrances:** Obligations incurred in the form of orders, contracts and similar items that will become payable when goods are delivered or services rendered.

**Equalization:** After the County Assessor has established the assessed valuation for a given year, and following any revisions by the Board of (Tax) Appeals, the Illinois Department of Revenue is required by statute to review the assessed valuation. The Illinois Department of Revenue establishes an equalization factor, commonly called the "multiplier," for each county to make all valuations uniform among the 102 counties in the state.

**Equalized Assessed Valuation (EAV):** Once the equalization factor (multiplier) is established, the assessed valuation, as revised by the Board of (Tax) Appeals, is multiplied by the equalization factor (multiplier) to determine the EAV.

**Expenditure:** An amount of money disbursed or obligated. Expenditures include current operating expenses requiring the present or future use of net current assets, debt service, and capital outlays. (see Accrual and Cash Basis of Accounting).

**Fiduciary Funds:** Established to account for transactions related to assets held in trust for a public purpose.

**Fiscal Year:** The time frame to which the budget applies. For the District, this is the period from January 1 through December 31.

**Fixed Assets:** Long-term tangible assets that have a normal use expectancy of more than one year and do not lose their individual identity through use. Fixed assets include buildings, equipment, improvements other than buildings and land.

**Function:** A group of related tasks, such as sewage treatment and collection, or the reduction of water pollution, which is aimed at accomplishing a major service or regulatory program for which a governmental unit is responsible.

**Fund:** An accounting entity established to account for sums of money or other resources, such as taxes, charges, fees, etc., to conduct specified operations and to attain certain objectives. Funds are frequently under specific limitations. For more information regarding specific funds, refer to the Financial Narrative in Section III, "Financial Statements by Fund."

**Fund Accounting:** A governmental accounting system which is organized and operated on a fund basis.

**Fund Balance:** The cumulative difference of all revenues and all expenditures of the fund from the time the governmental entity was established. Fund balance is also considered to be the difference between fund assets and fund liabilities and is sometimes referred to as "fund equity."

**Generally Accepted Accounting Principles (GAAP):** Uniform minimum standards of, and guidelines for, external financial accounting and reporting. They govern the form and content of the basic financial statements of an entity. GAAP encompasses the conventions, rules, and procedures necessary to define accepted accounting practices at a particular time. They include not only broad guidelines of general application, but also detailed practices and procedures. GAAP provides a standard by which to measure financial presentations. The primary authoritative statement on the application of GAAP to state and local governments is Government Accounting Standards Board (GASB) pronouncements.

**General Obligation Bonds:** Bonds, the payment for which the full faith and credit of the issuing government are pledged.

**Governmental Funds:** Group of funds utilized to account for revenues and expenditures in compliance with the legal requirements and constraints of current statutes for governmental agencies.



**FINANCIAL GLOSSARY (continued)**

**Grant:** A contribution by one governmental unit to another unit. The contribution is usually made to aid in the support of a specified function, such as sewer construction, pollution control, etc.

**Home-Rule Unit:** The principle or practice of self-government in the internal affairs of a dependent political unit. In Illinois, any municipality with population of more than 25,000 is a home-rule unit unless it elects by referendum not to be a home-rule unit. Any other municipality may elect by referendum to become a home-rule unit.

**Internal Control:** Methods and procedures that are mainly concerned with the authorization of transactions, safeguarding of assets, and accuracy of the financial records.

**Liabilities:** Obligations incurred in past or current transactions requiring present or future settlement.

**Limited Tax Bonds:** A form of nonreferendum bonding authority granted by Illinois PA 89-385 allowing the District to issue additional debt for projects initiated after October 1, 1991. Limited Tax Bonds can be issued to the extent that the total debt service requirements of any new debt, when combined with existing debt service, do not exceed the debt service extension base established by the Act.

**Line Items:** Expenditure classifications established to account for and budget the appropriations approved. Also referred to as Commitment Item.

**Mid-Year Reviews:** Twice during the fiscal year (in May and August), the current year budget is evaluated based on spending to date and current projections. The primary areas reviewed and analyzed are (1) current year budget versus previous year revenues and expenditures; (2) year-to-date expenditure and revenue status plus expenditure and revenue projections for the remainder of the year; and (3) data to support recommendations for budget transfers.

**Modified Accrual Basis of Accounting:** The basis of accounting under which revenues are recognized when measurable and available to pay liabilities, and expenditures are recognized when the liability is incurred except for interest on long-term debt which is recognized when due.

**Multiplier:** See Equalization.

**Net Assets Appropriable:** That resource balance left after subtracting Current Liabilities and Designated Fund Balances from Current Assets. Commonly referred to as carryover.

**Net Present Value:** A mathematical formula used to measure the expected return on investments by calculating how much money needs to be invested today to result in a certain sum at a future time.

**Object Classification:** A grouping of expenditures on the basis of goods or services purchased (e.g., personal services, materials and supplies, equipment, etc.), also referred to as Object of Expenditure.

**Objectives:** The annual organizational levels of achievement expected. A statement of purpose defined more specifically than a goal. (A goal can include several related objectives.) Objectives are listed in order of priorities with their associated costs including estimates of salaries, equipment, supplies, etc.

**Obligations:** Amounts which a government may be legally required to meet out of its resources. They include not only actual liabilities, but also encumbrances not yet paid.

**Ordinance:** A bill, resolution or order by means of which appropriations are given legal effect. It is the method by which the appropriation of the annual budget is enacted into law by the Board of Commissioners per authority of state statutes.

**Other Postemployment Benefits (OPEB):** Cost of retiree health insurance benefits recognized over the active service life of the employees rather than on a pay-as-you-go basis.

**Performance:** The measurable unit of types of work, related to District activities and, where meaningful, the costs of operation that are used to develop the costs for each unit of activity (e.g., dollars per one million gallons of sewage treated).

**Personal Property Replacement Tax:** Since July 1979, this income tax on corporations, partnerships and invested capital of utilities replaces the personal property taxes previously levied.

**Pollution Control Facilities:** The State of Illinois directly assesses all pollution control facilities which have been certified by the Pollution Control Board. Pollution control facilities include any system, method, construction, device or appliance appurtenant that is designed, constructed, installed or operated for the primary purpose of eliminating, preventing or reducing air and water pollution as defined in the Environmental Protection Act. This does not include any pollution control facility used for radioactive waste, nuclear generation of electric power or for sewage disposal or treatment.

**Programs:** The essential activities performed by the District such as collection, treatment, flood and pollution control, etc., including specific and related sub-activities.

**Property Tax Extension Limitation Laws:** Illinois Public Act 89-1 provides for limitations on real estate property tax levies. As applicable to the District, the 1994 tax levy, payable in 1995 is limited to a 5 percent increase from the 1993 levy. Future levies are limited to increases of the lesser of 5 percent or the percentage change in the national Consumer Price Index (CPI-U).

**Property Tax Rate:** The amount of tax stated in terms of a unit of the tax base, expressed as dollars per \$100 of equalized assessed valuation.

**Railroad Property:** The State of Illinois directly assesses railroad property which includes all railroad "operating property." Tracks and right-of-way, all structures, equipment, and all property connected with or used in the operation of the railroad along with real estate held for expansion. Nonoperating railroad property is assessed by the County Assessor.

**FINANCIAL GLOSSARY (continued)**

**Real Property:** Real Estate, including land and improvements (buildings, fences, pavements, etc.) classified for purposes of assessment.

**Refunding Bonds:** Bonds issued to retire bonds already outstanding.

**Reserve Claim Fund:** Established for the payment of claims, awards, losses, judgments or liabilities which might be imposed against the District, and for the emergency repair or replacement of damaged District property.

**Resources:** The actual assets of a governmental unit, such as cash, taxes receivable, land, buildings, etc., including estimated revenues applying to the current fiscal year, and bonds authorized and unissued.

**Retirement Fund:** Established to account for annual pension costs and supported in part by property taxes which are levied in accordance with statutory requirements.

**Revenue:** Income generated by taxes, notes, bonds, investment income, land rental, user charge, sludge and scrap sales as well as federal and state grants.

**Sinking Fund:** See Bond Redemption & Interest Fund.

**Special District:** A governmental entity established by the State of Illinois for a specific purpose or purposes. The District was originally organized under an act of the General Assembly of the State of Illinois in 1889.

**State Revolving Fund (SRF):** Under the Water Quality Act Amendment of 1987, federal authorization created State Revolving Funds administered by State agencies which provide loans from these funds to municipal agencies for their wastewater construction programs. These loans carry interest rates which are below general rates available in the municipal bond market. Therefore, pollution control facilities receive subsidies which can provide the approximate equivalent of a 25 to 30 percent grant.

**Tax Base:** The aggregate value of the items being taxed. The base of the District's real property tax is the market value of all taxable real estate within the boundaries of the District. See assessed valuation.

**Tax Cap:** (Property Tax Extension Limitation Laws). Illinois Public Act 89-1 provides for limitations on real estate property tax levies. As applicable to the District, the 1994 tax levy, payable in 1995 is limited to a 5 percent increase from the 1993 levy. Future levies are limited to increases of the lesser of 5 percent or the percentage change in the National Consumer Price Index (CPI-U).

**Tax Levy:** An amount of money raised through the collection of property taxes to finance each fund operation.

**Tax Levy Ordinance:** An ordinance through which taxes are levied. See ordinance.

**Tax Rate:** See Property Tax Rate.

**Taxes:** Mandatory charges levied by a governmental unit for the purpose of financing services performed for the common benefit.

**User Charge System:** In compliance with the 1977 Clean Water Act, the District is required to augment the ad valorem property tax system with a charge related to the actual use of waste treatment services. Users exceeding their ad valorem amount pay additional amounts for services received.

**Working Cash Funds (Corporate, Construction, and Stormwater):** Authorized by Illinois State Statutes to make temporary loans to the Corporate, Construction, and Stormwater Management Funds. Loans are repaid to the Working Cash Funds from the tax levies of the funds. The use of Working Cash funds eliminates the need for the issuance of short-term financing.

## **GLOSSARY OF TECHNICAL TERMS**

**Biochemical Oxygen Demand (BOD):** The quantity of oxygen used in the biochemical oxidation of organic matter in a specified time, at a specific temperature, and under specific conditions; the BOD analysis is a standard test used in assessing wastewater strength. See “Carbonaceous Biochemical Oxygen Demand.”

**Biological Oxidation:** The process whereby living organisms in the presence of oxygen, convert the organic matter contained in wastewater into new cells and subsequently into more stable compounds.

**Biosolids:** The nutrient-rich organic materials resulting from the treatment of domestic sewage in a wastewater treatment facility. These organic materials are generated when solids (sewage sludge) generated during the treatment of domestic sewage are treated further to meet the 40 CFR (Code of Federal Regulations) Part 503 sewage sludge regulatory requirements for beneficial reuse.

**Carbonaceous Biochemical Oxygen Demand (CBOD):** The portion of BOD attributable to organic matter containing carbon; does not include nitrogenous oxygen demand.

**Centrifuge:** A mechanical device in which centrifugal force is used to separate solids from liquids and/or to separate liquids of different densities, e.g., a dewatering device.

**Coarse and Fine Screens:** A coarse screen is a bar screen with approximate 3” openings located at the point of incoming wastewater which is used to capture large objects and other debris; this device protects the sewage pumps. A fine screen is a bar screen with approximately 5/8” openings to collect and remove small debris via a traveling rake. The screening is conveyed to a scavenger disposal box.

**Collection System:** A system of underground conduits/sewers collecting wastewater from a source and conveying it to the treatment facility.

**Combined Sewer:** A sewer that transports wastewater and (in wet weather conditions) stormwater.

**Design Capacity:** The maximum rate of sewage flow which a treatment plant is capable of treating, on a long-term basis, to continuously attain required effluent quality.

**Dewatering:** Water removal or concentration of solids by filtration, centrifugation, or drying.

**Digestion, Anaerobic:** The biological decomposition of organic matter in the absence of oxygen, resulting in partial gasification, liquidation, and mineralization. The digester gas is collected, compressed and used to fuel the plant boilers.

**Drying Bed:** Large areas on which solids are placed for dewatering by gravity, drainage, and evaporation.

**Effluent:** The resulting product of the wastewater treatment process which is also used for tank cleaning, grass watering, and conveyor belt cleaning.

**Exceptional Quality (EQ):** Exceptional Quality refers to biosolids or composted biosolids that meet the Class A pathogen standard, lowest metal concentration limits, and vector attraction reduction requirement specified in 40 CFR Part 503. Biosolids meeting the EQ criteria can be beneficially used without any restrictions.

**503 Regulations:** The U.S. EPA issued on February 19, 1993, comprehensive federal sewage sludge use and disposal regulations which are organized in five parts: general provisions, land application, surface disposal, pathogens and vector attraction reduction, and incineration. Parts addressing standards for land application, surface disposal, and incineration practices consist of sections covering applicability and special requirements, management practices, frequency of monitoring, record keeping, and reporting requirements.

**Industrial User (IU):** A person who conducts any industrial, manufacturing, agricultural, trade, or business process or who conducts the development, recovery or processing of natural resources.

**Industrial Waste:** All solid, liquid, or gaseous waste resulting from an industrial user.

**Infrastructure:** Assets that are long-lived capital assets that normally are stationary in nature and normally can be preserved for a significantly greater number of years than most capital assets. Examples from our infrastructure holdings include: wastewater tankage, LASMA Drying sites, SEPA stations, the Deep Tunnel, and sewerage interceptors.

**Interceptor:** A larger sewer which “intercepts” the wastewater from smaller and/or local sewers.

**Interceptor Inspection and Rehabilitation Program (HRP):** The inspection and repair of District sewers and interceptors.

**Lagoon, Solids:** An earthen basin which is used for the storage, continued stabilization, and dewatering of solids.

**Lysimeter:** A device used for collecting water from the pore spaces of soils and for determining the chemical composition of the water that percolates through a certain depth of soil.

**Maintenance Management System (MMS):** A District-wide computerized system to assist management in maintaining the District’s infrastructure.

**National Pollutant Discharge Elimination System (NPDES):** The permit and regulation system governing direct discharges into navigable waters administered by the IEPA and USEPA.

**Odor Control Program:** The systematic modifying or altering of certain processes to minimize obnoxious odors. Ferric chloride, ozonation (conversion of oxygen into ozone), and deodorants are some of the various methods used in combating odors.

**GLOSSARY OF TECHNICAL TERMS (continued)**

**Phycoremediation:** The process of using algae (macro-algae or micro-algae) for the removal of pollutants, like nutrients (nitrogen and phosphorus), from the wastewater and carbon dioxide (CO<sub>2</sub>) from waste air.

**Pretreatment (Industrial):** Any method, construction, device, arrangement, or appliance installed for the purpose of treating, neutralizing, stabilizing, disinfecting, or disposing of sewage, industrial waste, or other wastes prior to entry into the District's sewerage system.

**Pretreatment Program:** The District's efforts to identify, monitor and control by enforcement, the discharge of industrial waste from industrial sources into the District's sewerage system, in conformance with federal regulations promulgated pursuant to the Clean Water Act.

**Primary Treatment:** The District uses a series of large screens to remove large debris from the wastewater which can clog the machinery. Heavy solids like sand and grit are then removed in the grit chamber. Any remaining heavy solids settle to the bottom of the primary settling tanks.

**Reservoirs, Storm:** Temporary storage areas for containing surface waters during extreme storm conditions.

**Secondary Treatment Process:** The wastewater flows to aeration tanks which have been seeded with bacteria. Filtered air is pumped through the liquid to provide oxygen for the bacteria. The bacteria consume organic materials in the wastewater, grow and multiply. The mixture of bacteria and water then flow into a secondary settling tank. The bacteria clump together and become heavy "flocs" which settle to the bottom of the tank and are removed. At this point, the water can be discharged to a nearby waterway after disinfection, with over 90 percent of its contaminants removed.

**Set Point:** The desired or target value for an essential variable of a system.

**Sewage:** Water-carried human wastes or a combination of water-carried wastes from residences, business buildings, institutions and industrial establishments, together with such ground, surface, storm, or other waters as may be present.

**Sewage and Waste Control Ordinance:** An ordinance to provide for the abatement and prevention of pollution by regulating and controlling the quantity and quality of sewage and industrial waste admitted to or discharged into the sewerage systems, sewage treatment facilities, and waterways under the jurisdiction of the District. This ordinance was originally adopted by the District's Board of Commissioners in 1969 and continues to be amended as necessary.

**Sewerage System:** Sewers, intercepting sewers, pipes or conduits, pumping stations, force mains, constructed drainage ditches, surface water intercepting ditches, and all other constructions, devices, and appliances used for collecting or conducting sewage, industrial waste, or other wastes to a point of treatment or ultimate disposal.

**Sidestream Elevated Pool Aeration (SEPA):** A process in which a portion of the flow of a body of water is pumped up

approximately 15 feet; the water is then allowed to cascade downward over a series of weirs, thus increasing the dissolved oxygen content of the body of water.

**Solids:** The accumulated solids separated from wastewater during processing. The precipitate or product from chemical treatment, coagulation, or sedimentation of wastewater.

**Solids Content:** The weight of total solids in sludge per unit total weight of sludge, expressed in percent. Water content plus solids content equal 100 percent.

**Solids Processing:** A variety of settling or filtering operations (grit and scum dewatering, raw sludge concentration, sludge stabilization, dewatered stabilized sludge air drying, for example) used to collect solid material from wastewater or other liquids for subsequent utilization.

**Spoil Pile:** Excavated materials such as soil and rock that are piled for storage as the result of canal construction activities.

**Struvite:** A salt precipitate of Magnesium, Ammonium, and Phosphate in wastewater treatment facilities which may build up to the level that cause operational blockages.

**Suspended Solids:** Solid material that either floats on the surface of, or contained in suspension in, wastewater or other liquids. This material is largely removed by settling or filtering processes at a treatment plant. (See Solids Processing, above.)

**TARP (Deep Tunnel):** The Tunnel and Reservoir Plan (TARP) improves water quality by capturing combined sewer overflows (CSOs), storing this polluted wastewater, and then pumping it to a treatment plant for processing.

**Tertiary Treatment:** The third stage of wastewater treatment which purifies the wastewater by removal of fine particles, nitrates, and phosphates with sand filtration. This process removes 99 percent of the impurities.

**USEPA:** The United States Environmental Protection Agency. This federal agency is responsible for setting the guidelines and policies related to wastewater effluents and solids disposal. The Illinois EPA issues the District's National Pollutant Discharge Elimination System permit and other regulatory constraints.

**Utilization:** Solids used for daily landfill cover, final cover for a landfill closure, and to reclaim severely disturbed soil such as strip-mining land.

**Wastewater Treatment:** Processes which involve physical removal of contaminants from the wastewater by use of coarse screens, fine screens, grit tanks and settling tanks (primary treatment); further treatment via aeration and clarification (secondary treatment); and in some cases, the physical or chemical separation and removal of impurities from secondary-treated effluent (tertiary treatment).

**Wetlands:** Areas which are inundated by surface or groundwater at a frequency which maintains saturation. The wetlands can be natural (marshes, bogs, swamps, for example) or man-made.

**ACRONYMS**

<b>ALD</b>	Analytical Laboratories Division	<b>LF</b>	Linear Feet
<b>AMS</b>	Asset Management Section	<b>LIMS</b>	Laboratory Information Management System
<b>ASCE</b>	American Society of Civil Engineers	<b>LPH</b>	Lockport Powerhouse
<b>BOD</b>	Biochemical Oxygen Demand	<b>LSSS</b>	Local Sewer Systems Section
<b>BMP</b>	Best Management Practices	<b>LWRP</b>	Lemont Water Reclamation Plant
<b>CAFR</b>	Comprehensive Annual Financial Report	<b>mg/l</b>	Milligrams per liter
<b>CALSMA</b>	Calumet Solids Management Area	<b>M&amp;O</b>	Maintenance & Operations
<b>CAWS</b>	Chicago Area Waterway System	<b>M&amp;R</b>	Monitoring & Research
<b>CBOD</b>	Carbonaceous Biochemical Oxygen Demand	<b>MBE</b>	Minority Business Enterprise
<b>CIBF</b>	Capital Improvements Bond Fund	<b>MGD</b>	Millions of Gallons per Day
<b>CIP</b>	Capital Improvement Program	<b>MMS</b>	Maintenance Management System
<b>CPI</b>	Consumer Price Index	<b>MOB</b>	Main Office Building – 100 E. Erie St., Chicago, Illinois
<b>CPR</b>	Cardio-Pulmonary Resuscitation	<b>MOBA</b>	Main Office Building McMillan Pavilion – 111 E. Erie St., Chicago, Illinois
<b>CSA</b>	Calumet Service Area	<b>MOBC</b>	Main Office Building Complex – MOB & MOBA
<b>CSO</b>	Combined Sewer Overflow	<b>MOP</b>	Manual of Procedures
<b>CUP</b>	Chicago Underflow Plan	<b>MSC</b>	Material Service Corporation
<b>CWRP</b>	Calumet Water Reclamation Plant	<b>MSPS</b>	Mainstream Pumping Station
<b>DCS</b>	Distributed Control System	<b>MWRD</b>	Metropolitan Water Reclamation District
<b>DO</b>	Dissolved Oxygen	<b>NAA</b>	Net Assets Appropriable
<b>DT</b>	Dry Tons	<b>NACWA</b>	National Association of Clean Water Agencies
<b>DWP</b>	Detailed Watershed Plan	<b>NBP</b>	National Biosolids Partnership
<b>EAP</b>	Employee Assistance Program	<b>NBPS</b>	North Branch Pumping Station
<b>EAV</b>	Equalized Assessed Valuation	<b>NCBP</b>	Non-Core Business Projects
<b>EBPR</b>	Enhanced Biological Phosphorus Removal	<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>EEO</b>	Equal Employment Opportunity	<b>NSA</b>	North Service Area
<b>EWRP</b>	Egan Water Reclamation Plant	<b>NSWRP</b>	North Side Water Reclamation Plant (renamed OWRP)
<b>F&amp;D</b>	Furnish and Deliver	<b>OM&amp;R</b>	Operations, Maintenance, & Replacement costs
<b>FD&amp;I</b>	Furnish, Deliver, and Install	<b>OPA</b>	Office of Public Affairs
<b>FESOP</b>	Federally Enforceable State Operating Permit	<b>OPEB</b>	Other Postemployment Benefits
<b>FMLA</b>	Family Medical Leave Act	<b>OSHA</b>	Occupational Safety and Health Administration
<b>FOIA</b>	Freedom of Information Act	<b>OWRP</b>	O'Brien Water Reclamation Plant (formerly known as NSWRP)
<b>FTE</b>	Full-Time Equivalent	<b>PBF</b>	Public Budget Formulation
<b>GAAP</b>	Generally Accepted Accounting Principles	<b>P&amp;MM</b>	Procurement & Materials Management
<b>GASB</b>	Government Accounting Standards Board	<b>PO</b>	Purchase Order
<b>GFOA</b>	Government Finance Officers Association	<b>PPO</b>	Participating Provider Option
<b>GIP</b>	Green Infrastructure Program	<b>PPRT</b>	Personal Property Replacement Tax
<b>GIS</b>	Geographic Information System	<b>PS</b>	Pumping Station
<b>HASMA</b>	Harlem Avenue Solids Management Area	<b>PST</b>	Primary Settling Tank
<b>HPWRP</b>	Hanover Park Water Reclamation Plant	<b>RAPS</b>	Racine Avenue Pumping Station
<b>HVAC</b>	Heating, Ventilation, and Air Conditioning	<b>RAS</b>	Return Activated Sludge
<b>I/I</b>	Infiltration/Inflow	<b>RFP</b>	Request for Proposal
<b>IAS</b>	Instream Aeration Station	<b>RMIS</b>	Risk Management Information System
<b>IEPA</b>	Illinois Environmental Protection Agency	<b>SAN</b>	Storage Area Network
<b>IGA</b>	Intergovernmental Agreement	<b>SAP</b>	SAP is a German computer software firm
<b>iPACS</b>	The internet-based Publicly owned treatment works Administration and Compliance System	<b>SBE</b>	Small Business Enterprise
<b>IRS</b>	Internal Revenue Service	<b>SBP</b>	Strategic Business Plan
<b>IT</b>	Information Technology	<b>SEPA</b>	Sidestream Elevated Pool Aeration stations
<b>ITD</b>	Information Technology Department	<b>SIU</b>	Significant Industrial User
<b>IU</b>	Industrial Users	<b>SPO</b>	Sewer Permit Ordinance
<b>IWD</b>	Industrial Waste Division		
<b>kWh</b>	kilowatt hour		
<b>KWRP</b>	Kirie Water Reclamation Plant		
<b>LASMA</b>	Lawndale Avenue Solids Management Area		

**ACRONYMS (continued)**

<b>SRF</b>	State Revolving Fund loan program
<b>SS</b>	Suspended Solids
<b>SSA</b>	Stickney Service Area
<b>SSMP</b>	Small Streams Maintenance Program
<b>SWCO</b>	Sewage and Waste Control Ordinance
<b>SWRP</b>	Stickney Water Reclamation Plant
<b>TARP</b>	Tunnel and Reservoir Plan
<b>TGM</b>	Technical Guidance Manual
<b>TIF</b>	Tax Increment Financing district
<b>UCO</b>	User Charge Ordinance
<b>USEPA</b>	United States Environmental Protection Agency
<b>UV</b>	Ultraviolet
<b>VFD</b>	Variable Frequency Drive
<b>WASSTRIP®</b>	Waste Activated Sludge Stripping to Remove Internal Phosphorus
<b>WBE</b>	Women-owned Business Enterprise
<b>WEFTEC</b>	Water Environment Federation Technical Exhibition and Conference
<b>WMO</b>	Watershed Management Ordinance
<b>WRP</b>	Water Reclamation Plant

**NOTE PAGE**



## Metropolitan Water Reclamation District of Greater Chicago Historical Information And Milestones

- 1837** Chicago was incorporated as a city. The city's primary source of drinking water is Lake Michigan. Due to poor drainage and discharges to Lake Michigan, water-borne diseases plagued the city throughout the 1800s.
- 1856** Sewers were constructed to collect the city's wastewater. These sewers emptied into the Chicago River, ultimately becoming a health hazard.
- 1885** A torrential rainstorm flushed pollution from the river into Lake Michigan prompting public concern for ways to safeguard the quality of the drinking water.
- 1886** A Drainage and Water Supply Commission was created to study the growing problem of contamination of the city's water supply.
- 1889** Illinois Legislature passed an act enabling the establishment of the Sanitary District of Chicago to keep sewage pollution out of Lake Michigan. Referendum passed creating the Sanitary District of Chicago.
- 1892** Ground was broken on the 28-mile Main Channel of the Sanitary and Ship Canal. The canal would reverse the flow of the Chicago River by linking it to the Des Plaines River, and thus prevent pollution of Lake Michigan by the river.
- 1900** Main Channel of the Sanitary and Ship Canal opened.
- 1907** Main Channel Extension including Lockport Powerhouse and Lock completed.
- 1910** North Shore Channel completed.
- 1919** District's Board of Commissioners passed an ordinance committing the District to the construction and operation of treatment plants.
- 1922** The 16-mile Calumet-Sag Channel became operational; Calumet Treatment Plant placed into operation.
- 1928** North Side Treatment Plant placed into operation.
- 1930** U.S. Supreme Court Decree issued reducing diversion of Lake Michigan in steps. Effective January 1, 1939, diversion reduced to 1,500 cubic feet per second; West Side Treatment Plant placed into operation.
- 1939** Southwest Treatment Plant placed into operation.
- 1949** West and Southwest Treatment Plants combined.
- 1955** District's name changed to the Metropolitan Sanitary District of Greater Chicago (MSDGC); the Chicago Sewage Disposal System named one of the Seven Wonders of Modern Engineering by the American Society of Civil Engineers (ASCE), recognizing the size of the system, including intercepting sewers, treatment plants, and waterways.
- 1956** Referendum, enabled by legislation, passed adding 412 square miles to the District.
- 1961** Lemont Treatment Plant placed into operation.
- 1963** Hanover Park Treatment Plant placed into operation.
- 1969** Board adopted the Sewage and Waste Control Ordinance, prohibiting any waste discharge into Lake Michigan.
- 1971** Fulton County "Prairie Plan" began whereby abandoned strip-mines were reclaimed into agriculturally productive land; won "Special Civil Engineering Achievement Award" in 1974 from the ASCE.
- 1972** District adopted the Tunnel and Reservoir Plan (TARP) as recommended by a committee of representatives from the state, city, county, and MSDGC. The plan provided for the collection, transportation, storage, and treatment of combined rainwater and sewage that in periods of heavy rain overflowed into waterways, underpasses, and basements.
- 1975** Construction began on the 31-mile Mainstream tunnel system; Egan Treatment Plant placed into operation.
- 1977** Construction began on the Calumet tunnel system.
- 1980** O'Hare Treatment Plant (later renamed Kirie Water Reclamation Plant) and Upper Des Plaines TARP tunnel system placed into operation.
- 1985** Mainstream tunnel system placed into operation, capable of storing one billion gallons of combined sewage and stormwater; TARP Mainstream System, Phase I, received award for "Outstanding Civil Engineering Achievement" from the ASCE.
- 1986** TARP received awards for "Outstanding Civil Engineering Achievement" and "Outstanding Civil Engineering Achievement of Past 100 Years in Illinois"; 9.2-mile Calumet tunnel system placed into operation.
- 1988** Water quality improvements recognized as causing increased real estate development along the waterway system; construction began on the Des Plaines TARP tunnel.
- 1989** District celebrated its 100th anniversary. As part of the Centennial Celebration, the District changed its name to the Metropolitan Water Reclamation District of Greater Chicago and dedicated the Centennial Fountain.
- 1990** Army Corps of Engineers and the District began construction of the O'Hare-CUP Reservoir, the first of three reservoirs in the TARP program.
- 1992-1994** District's five Sidestream Elevated Pool Aeration Stations (SEPA) completed along the Calumet River system. These stations add oxygen to the waterways to enhance the aquatic environment. The District received "Outstanding Civil Engineering Achievement" in 1994 by ASCE for these projects.
- 1998** O'Hare-CUP Reservoir placed into operation, capable of storing 350 million gallons of combined sewage and stormwater; North Branch tunnel placed into operation.
- 1999** Des Plaines tunnel placed into operation; construction began on the McCook Reservoir.
- 2000** District celebrated the 100th anniversary of the reversal of the Chicago River and completed a century of protecting Chicago's water environment; construction began on Thornton Transitional Reservoir.
- 2003** Construction began on the major capital improvement program for the Calumet, North Side, and Stickney Water Reclamation Plants.
- 2004** By an act of the Illinois Legislature, the District became responsible for stormwater management in Cook County.
- 2006** TARP Phase I 109-mile tunnel system completed; all four TARP tunnel systems in operation.
- 2007** District celebrated 100th anniversary of the Lockport Powerhouse and Dam.
- 2009** Construction of the Thornton Composite Reservoir began.
- 2010** District celebrated the 100th anniversary of the North Shore Channel.
- 2012** North Side Water Reclamation Plant renamed Terrence J. O'Brien Water Reclamation Plant.
- 2014** District celebrated its 125th anniversary.
- 2015** Disinfection facility at the Calumet Water Reclamation Plant placed into operation. Thornton Composite Reservoir placed into operation.
- 2016** Phosphorus recovery facility placed into operation at the Stickney Water Reclamation Plant; implemented an ultraviolet disinfection process at the O'Brien Water Reclamation Plant.



# MOVING DOWN THE TRACK

The District is on track as we embark on the third year of our strategic business plan adopted in 2015. Guided by the vision statement, "Recovering Resources, Transforming Water," we have made steady progress toward the six goals established in the strategic plan: Add Value, Excellence, Resource Recovery, Develop Employees, Leading Partnerships, and Technology.

**Add Value** The District is pursuing opportunities to add value throughout our operations. We are producing a high quality, valuable composted soil amendment by blending wood chips from the City of Chicago with biosolids, a product of our wastewater treatment process. In 2016 we scaled up our operations, adding a new composting machine which is able to efficiently turn and aerate 20,000 cubic yards of compost per day.

**Excellence** We are focused on achieving excellent results at all levels of our organization. One of our biggest projects, the Tunnel and Reservoir Plan, is being completed on-schedule and is functioning as designed, providing water quality and flood prevention benefits throughout the Chicago region. Thornton Composite Reservoir, which went online in 2015, has virtually eliminated combined sewer overflows within its service area. The 10 billion gallon McCook Reservoir is being completed in two stages with the first phase scheduled to go online in 2017.

**Resource Recovery** The District is committed to implementing sustainable and resilient practices and have embraced a resource recovery model in our operations. In addition to large scale resource recovery work such as the phosphorus recovery facility that went online at our Stickney Water Reclamation Plant in 2016, we are also looking to the future and considering emerging technologies. We are investigating using algae to remove nutrients from water in the Algae Research Greenhouse at our O'Brien Water Reclamation Plant. In this pilot facility, algae grown on moving membranes removes nutrients from water, which could be used to produce biodiesel, dyes, fish food, and other products.

**Develop Employees** We have the best employees in the industry and are investing in our future by developing our employees. We continue to strive to reach the goal of providing every employee with 24 hours of training opportunities annually to enhance their knowledge and skills for both current and future positions. In addition, the District's internship program attracts future leaders to the organization by providing college students in our community with learning opportunities and employee development that is relevant to their academic pursuits.

**Leading Partnerships** The District recognizes the importance of active involvement in the world around us and is working to develop strong relationships with constituents on a local, state, and national level. We are partnering with municipalities to address local flooding issues, providing needed assistance to complete flood mitigation and green infrastructure projects throughout our service area. We partnered with the Village of Northbrook on their 7.5 million gallon Wescott Park Stormwater Storage Facility, which will help prevent flooding in the surrounding neighborhood. The facility is being built beneath an existing park out of modular concrete pieces and will be equipped to treat and use some of the captured stormwater for irrigation of the park.

**Technology** The District is embracing a new era of technology that delivers reliable and useful information. We are working to simplify SAP to increase utilization and maximize effectiveness while using current capabilities and enhancing use of available platforms.

*On the front cover: The District's train carries biosolids seven miles from the Stickney Water Reclamation Plant to solids management areas where they are processed to become a composted soil amendment and a sustainable alternative to chemical fertilizers.*

