

Metropolitan Water Reclamation District of Greater Chicago

Stormwater Management Program

Annual Report for 2005



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Overview

The Metropolitan Water Reclamation District of Greater Chicago (District) assumed responsibility for Stormwater Management following the passage of Public Act 93-1049 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 legislation began as SB-2196, which was introduced in the General Assembly on January 14, 2004, and was passed by both houses on May 12, 2004. On August 9, 2004, the Governor vetoed the bill citing an objection to the language allowing increasing property taxes outside the limits of tax caps. However, by November 17, 2004, both houses overrode the Governor's veto. Two days later, the law became effective.

The District is responsible for forming watershed planning councils. Councils have been established for seven watersheds: the North Branch of the Chicago River, Lower Des Plaines Tributaries, Cal-Sag Channel, Little Calumet River, Poplar Creek, Upper Salt Creek, and combined sewer areas in Cook County. The District may establish additional watershed planning councils as deemed necessary. The purpose of the watershed planning councils is to advise the District on the development and implementation of the countywide stormwater management plan, specifically representing concerns of local governments. Councils of Government (COGs) are responsible for coordinating the watershed planning councils.

Goals considered during the development of a stormwater management plan for Cook County include flood damage reduction, protection of life and health, minimization of property losses, promotion of beneficial floodplain use, ensuring a functional drainage system, protection of the environment and guidance of development. Part of the effort to develop the countywide stormwater management plan involves reviewing other successful master plans. After development and at least one public hearing, the stormwater management plan will be adopted by ordinance. The law also requires the District to develop an ordinance to enact standardized stormwater regulations throughout Cook County. The ordinance will be written based upon the development of the countywide stormwater management plan.

The District's Stormwater Management Section (Section) within the Engineering Department has assumed the responsibility for implementing the requirements of Public Act 93-1049. During 2005, the District staffed the Section, and began development of the countywide stormwater management plan. The Section also worked with the COGs in Cook County to form the watershed planning councils. Two consulting firms with experience in the formation of stormwater management programs were selected and retained to aid District staff in the planning process. In 2006, the Section's primary goal is to complete the countywide stormwater management plan, have it reviewed by the watershed planning councils and public, and subsequently adopt it officially. This plan will document the program's approach to identifying, evaluating and prioritizing capital projects. It is anticipated that one or more projects will be identified for funding allocation in 2006. In addition, the plan will contain technical guidance for detailed watershed studies. The framework set forth in the plan will be employed when performing planning studies for each of the watersheds in Cook County, an effort that we intend to begin in 2006. These studies will be comprehensive evaluations of the existing conditions and problems in each watershed, and will provide recommendations as to the remedial measures that should be taken. Finally, a consultant will complete an assessment of the District's Geographic Information System (GIS) needs, and the Section will begin the development and implementation of a stormwater management GIS.

Mission and Goals

Stormwater Management Mission Statement

To provide Cook County a program of effective rules, regulations, and projects that will reduce the potential for stormwater damage to life, public health, safety, and property.

Goals

The District has been developing the stormwater management program for Cook County with the following goals in mind. The official listing of the program's goals will be included in the finalized countywide stormwater management plan when it is adopted by ordinance in 2006.

- Protect existing and new development by minimizing the increase of stormwater runoff volume beyond that experienced under predevelopment conditions.
- Identify and remedy existing regional flooding problems to the extent practical.
- Establish comprehensive basin plans within each watershed, which quantify, plan for and manage stormwater flows within and among the jurisdictions in those watersheds.
- Promote responsible land use practices in the floodplains and floodways of waterways in Cook County.
- Establish uniform, minimum, countywide stormwater management regulations while recognizing and coordinating with those stormwater programs effectively operating within Cook County.
- Require cooperation and consistency in stormwater management activities between the government entities having stormwater jurisdiction, and clearly define the roles and responsibilities of each entity.
- Coordinate with surrounding counties to ensure minimal negative impacts of inter-county stormwater runoff flows.
- Coordinate with watershed councils to provide for the short and long term maintenance of natural and manmade drainageways and stormwater management facilities in new and existing developments.
- Seek to maximize available revenue sources in undertaking comprehensive watershed planning and stormwater facility construction activities, thereby leveraging and reducing reliance on the stormwater funds raised by levy.
- Protect existing water resources, including lakes, streams, floodplains, and wetlands, from detrimental and unnecessary modification so that their beneficial functions are maintained and public expenditures and damages are minimized.
- Develop and maintain a comprehensive hydrologic, hydraulic, demographic and cartographic database using the best available and most appropriate technology to manage the stormwater, flood and water quality data needs of the program.
- Promote the awareness and understanding of stormwater management issues by the practitioner and the layperson through ongoing public information efforts.
- Reduce or mitigate the environmentally detrimental effects of existing and future runoff in order to improve and maintain water quality and protect water related environments.
- Control sediment and erosion in and from drainageways, developments, and construction sites.

- Consider water quality and habitat protection measures in all stormwater management activities within Cook County.
- Preserve and enhance existing aquatic and riparian environments and encourage restoration of degraded areas.
- Manage and operate the program in an effective and cost-efficient manner.
- Be in compliance with all applicable state and federal laws.

2005 Activities

The District's primary activities in 2005 were focused on establishing the stormwater management program by developing policies and procedures in compliance with the intent of the enabling legislation and our guiding goals. Some of the highlights from the first year are listed below.

- Create and Staff a Stormwater Management Section within the Engineering Department- The District budgeted for nine positions within the Stormwater Management Section, filling six of them in 2005. The other positions are slated to be filled in 2006 as the program starts funding capital projects and performing the detailed watershed studies. The nine positions consist of eight Civil Engineers and one Administrative Assistant.
- Define Role of COGs in Countywide Stormwater Management – The District conducted multiple meetings with representatives of the four Councils of Government (COGs) in Cook County charged with coordinating the Watershed Planning Councils (WPCs). By the end of 2005, the COGs had helped to facilitate meetings with the WPCs (see next item) and were in the process of entering into agreements with the District that outline their responsibilities and describe the method by which the District can fund their administrative activities. Each COG will be responsible for the coordination of one or more WPCs in their region (See Exhibit).
- Form Watershed Planning Councils (WPCs)-The Public Act required that the District set up WPCs for seven major watersheds in Cook County: Lower Des Plaines Tributaries, North Branch of the Chicago River, Upper Salt Creek, Poplar Creek, Little Calumet River, Calumet Sag Channel, and the Combined Sewer Area. In October 2005 a series of meetings was held for the initial WPC formation in six of the seven watersheds (the Combined Sewer Area WPC will be formed at a later date). All communities that are included in a given watershed were invited to the respective WPC meeting. The meetings focused on the new stormwater management roles of the District, COGs and WPCs, and described the steps in establishing the program in Cook County.
- Develop a "Countywide Stormwater Management Plan"- The District, with the assistance of a consulting engineering firm, is preparing a countywide stormwater management plan. This will be a high level "organizational" plan that will identify the goals and objectives for the program, and describe the various elements of the overall program and the timeframe for their implementation. Further, it will outline the District's procedures for identifying and prioritizing capital projects, on a countywide basis, for possible funding under the program. Finally, it will include technical guidance for performing detailed watershed studies (see next item). Before adoption by the District's Board of Commissioners, the plan will be reviewed by the WPCs, which will advise the District as to the needs and interests of the public and local governments. This document is expected to be finalized and approved in the spring of 2006.

- *Develop Technical Guidance for Conducting Detailed Watershed Studies*- The District, with the assistance of a consulting engineering firm, is developing standards that will be used for the preparation of detailed watershed plans for each of the watersheds. This guidance will be included in the countywide stormwater management plan. A minimum of seven comprehensive watershed studies, corresponding to each of WPCs, will be conducted in Cook County over the next few years, with the first studies beginning in 2006.
- *Inventory Current Stormwater Facilities and Assets within Cook County*- The Stormwater Management Section has begun the task of reviewing existing assets and facilities located within the county. The Section has been collecting and reviewing documents such as intergovernmental agreements used for reservoir and stream maintenance, and inspecting existing facilities to make sure that they are properly maintained.
- *Geographic Information System (GIS) Needs Assessment* – The use of a GIS is currently being investigated to aid the District with activities such as stormwater facility asset management, planning and modeling the effects of new projects, identifying areas of concern, and monitoring current and predicted conditions arising from storm events. A consultant study is expected to present recommendations in early 2006, and if it is determined that a GIS system is warranted, it is planned for implementation in mid-2006.
- *Coordinate With External Agencies* – Initial meetings were held with various agencies to discuss projects and programs that are already in place, and identify possible areas of cooperation. The Section has met with the Illinois Department of Natural Resources-Office of Water Resources (IDNR-OWR), Army Corps of Engineers, Cook County Highway Department, United States Geological Survey (USGS), Northern Illinois Planning Commission (NIPC), and the Federal Emergency Management Agency (FEMA).
- *Develop Minimum Requirements for Projects* – The Stormwater Management Section has developed minimum requirements that stormwater projects would have to meet to be considered eligible for funding by the District under this program. The District's Board of Commissioners adopted these guidelines in January 2006. The minimum requirements are discussed later in this report.
- *Identify Capital Projects for 2006* - The District plans to commit funding to one or more capital stormwater management projects in 2006. To select candidate projects, the District has applied the minimum requirements to known projects that have been approved by either the Army Corps of Engineers or the IDNR-OWR. After the list of potential projects is finalized, the individual projects will be prioritized and funding will be committed based on a consideration of their relative rankings.
- *Project Prioritization System* – Work began on a Capital Project Prioritization System that will assist the District in selecting projects for funding in a given year. The system will analyze the benefits of each project in areas such as flood damage reduction and wetland creation/riparian environment enhancement, measured against the project's costs. This analysis will be used to make capital budget recommendations for the District Board of Commissioners' approval.
- *Involvement in Army Corps of Engineers Upper Des Plaines River Study* – The District has begun participating in the Upper Des Plaines River and Tributaries Multi-Purpose Feasibility Study. This study, undertaken by the Army Corps of Engineers and local sponsors such as the Illinois Department of Natural Resources, Lake County Stormwater Management Commission, Cook County Highway Department, and Kenosha County,

Wisconsin, was initiated in 2001. The purpose is to develop a plan for improvements in flood damage reduction, environmental restoration and protection, water quality, recreation, and related purposes on the Des Plaines River and its tributaries. In 2005 the District began participating in various study committees associated with the project, and has agreed to support the remaining activities.

- Public Information System – Efforts have been made to develop a website that will inform the public about the Stormwater Management Section's activities. The website will outline current facilities and proposed capital projects, as well as provide useful information to educate the public about stormwater and flood control related topics.
- Stormwater Resident's Reporting System – The design and implementation of a stormwater resident's reporting system was started in 2005. Strides are being made that will help the residents of Cook County voice concerns about waterways and stormwater facilities in their community. We will utilize an e-mail address, stormwater@mwr.org, to collect this information electronically. We are investigating the benefits of expanding the resident's reporting system onto the Stormwater Management Website.

Anticipated Activities for 2006

In 2006 the District will complete the Countywide Stormwater Management Plan, including the technical guidance for detailed watershed planning. This effort will be of primary importance as it is the necessary basis for many further activities. Once completed, the plan will allow us to proceed with comprehensive watershed planning and the funding of capital projects, for example. A few of the key activities forecasted for 2006 are as follows:

- Watershed Planning Studies – We expect to initiate detailed watershed planning studies for three of the seven watersheds in 2006. These studies will be comprehensive investigations of each watershed, and will identify specific areas of concern. Alternative capital improvement projects and/or other actions will be developed and evaluated in response to the problems encountered. Proposed capital projects will then be evaluated against other potential projects on a countywide basis to prioritize future capital expenditures.
- Capital Projects – The Stormwater Management Section will commit resources to selected projects that meet the program's minimum requirements, after eligible projects have been evaluated and prioritized.
- Add 29 Maintenance Positions to Stormwater Budget – 29 additional positions in the District's Maintenance & Operations Department will be included in the Stormwater Management Budget starting in 2006. These personnel will have the task of maintaining certain existing stormwater management facilities and waterways located throughout the county.
- GIS Implementation – A GIS System will be implemented to the level determined necessary by the needs assessment started in 2005. This activity will likely include the purchase and installation of certain computer hardware and software elements, and integration with current systems and outside sources of information.
- Develop Stormwater Management Ordinance – Work will begin on developing a regulatory ordinance that will govern the management of stormwater. At this time, the intention is to set minimum standards for all communities in Cook County. The District's

direction as to the specific areas that will be regulated will be contained in the Countywide Stormwater Management Plan.

- Continue Development of Public Information System – Efforts will be made to continue to develop our public information system. We will focus on continued website development as the primary information source.

Minimum Requirements for Projects

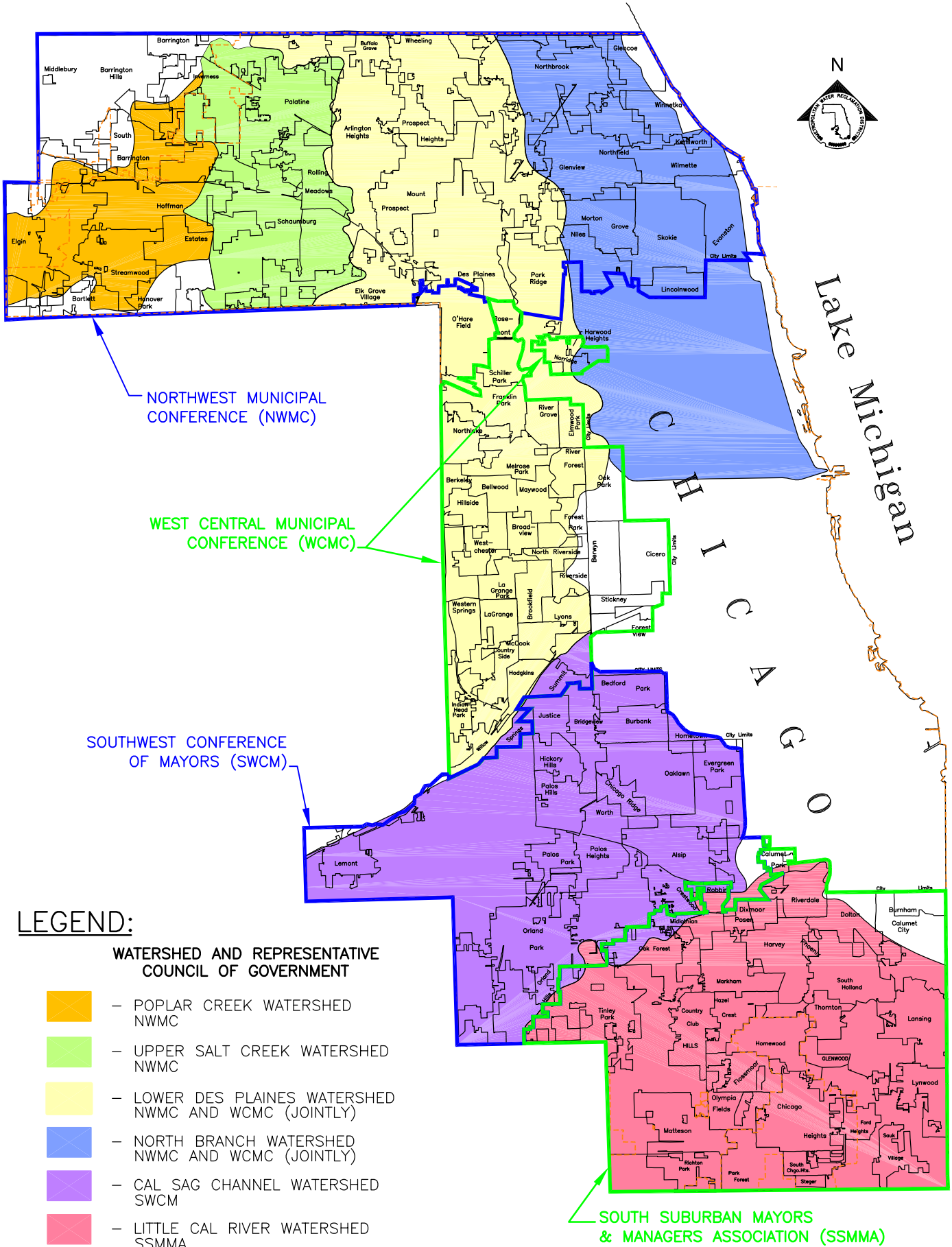
The following are the minimum requirements for capital projects to be considered eligible for funding under the Stormwater Management Program. This set of basic criteria will be used to evaluate all potential projects against the authority granted to the District under Public Act 93-1049. These criteria represent the minimum requirements with which a project must comply in order to be considered for possible funding, however a project is not guaranteed funding solely on the basis of meeting these conditions.

- The project is consistent with the District's Stormwater Management Goals, the District's Countywide Stormwater Management Plan (CSMP), and the District's watershed management plan for the watershed in which the project will be constructed. In the event that the District's goals, CSMP, and watershed plan do not exist yet, the proposed project must have been previously approved by a federal or state government agency for funding under their program requirements.
- Benefiting communities are in compliance with the terms and conditions of all existing intergovernmental agreements with respect to stormwater management issues, and the project is legally consistent with all such agreements.
- The project is for the purpose of improved stormwater and watershed management and is not being pursued as a condition of compliance with any local regulation or requirement.
- The project does not serve, as its primary purpose, to accelerate development of floodplain and flood fringe areas. However, development of areas removed from the floodplain as a byproduct of an approved flood-damage reduction project will not be precluded.
- The project does not increase the risk of flooding or erosion to downstream or upstream areas.
- The project is a regional project that affects multiple jurisdictions. Multiple jurisdictions shall be affected in at least one of the following ways:
 - The problem being addressed by the project affects multiple jurisdictions, or the source of the problem arises from other jurisdictions.
 - The project may be a localized part of a solution to a regional problem that has been identified in an approved watershed plan.
- Benefiting municipalities must be participants in good standing in the National Flood Insurance Program.

Expenditures

Category	Description	2005 Expenditures
Personal Services: In-House	Salaries and associated costs related to District personnel	\$503,026.56
Personal Services: Consultant	Fees paid to outside consultants for professional services. In 2005, two agreements totaling \$500,000 were awarded to consulting firms to assist in planning activities. The majority of these fees will be paid in 2006.	\$90,415.17
Contractual Services	Payments for work and services provided by outside agencies or companies. Examples include court reporting services for transcripts of meetings, and expenses of the Councils of Government assisting the District by coordinating activities of the Watershed Planning Councils.	\$7,502.63
Materials and Supplies	Items such as books, computer software and supplies, printing and photographic supplies.	\$0.00
Machinery and Equipment	Items with a normal life expectancy of more than one year or individual cost of greater than \$5,000. Examples include computer hardware and software.	\$13,080.00
Capital Projects	Costs related to the construction of stormwater management facilities	\$0.00
Total Expenditures		\$614,024.36
2005 Appropriation (Based on tax levy for Stormwater Fund of 0.88¢ per \$100 of equalized assessed valuation)		\$10,085,300.00
Net Assets Appropriable for 2006		\$9,471,275.64

WATERSHEDS AND COUNCILS OF GOVERNMENT BOUNDARIES



NOTE: COMBINED SEWER WATERSHED NOT SHOWN.