

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

OVERVIEW OF THE MWRD'S
STORMWATER MANAGEMENT PROGRAM
FOR COOK COUNTY

Statutory Background

- *Historic flooding in the Chicago metropolitan area during 1986 and 1987*
- *Public Act 85-905*
 - *Responsibilities for countywide stormwater management in the five collar counties of Cook County*

Statutory Background

County	Year Countywide Stormwater Management Plan Adopted
DuPage	1989
Lake	1990
McHenry	1996
Kane	1998
Will	1998

Statutory Background

- *Public Act 86-1463*
 - *Extended stormwater planning authority into Cook County, but did not provide an effective organizational framework or funding mechanism*
- *Public Act 93-1049*
 - *Granted authority to the District to assume responsibilities of stormwater management for Cook County and provided a funding mechanism*

Statutory Background

- *Why the District was granted this authority*
 - *The District has worked with various agencies, such as NRCS and IDNR on numerous flood control projects located throughout Cook County*
 - *TARP*
 - *Sewer Permit Ordinance*

MWRDGC STORMWATER MANAGEMENT

LEGISLATIVE MANDATES

- *Stormwater management in Cook County placed under the authority of the MWRD by Public Act 93-104 in November 2004*
- *MWRD given general authority to plan, manage, implement and finance activities relating to stormwater management in Cook County*
- *Requires adoption of a countywide stormwater management plan*
- *Requires benefit cost analysis in evaluating project prioritizations between watersheds*
- *Creates a minimum of 7 Planning Councils to act as advisory bodies to the MWRD*

MWRD STORMWATER MANAGEMENT STATUTORY PROVISIONS

- *Includes areas outside existing MWRD corporate limits but within Cook County*
- *Exempts municipalities with population of 1 million or more*
- *Requires public hearings prior to adoption of the stormwater management plan*
- *May adopt rules and regulations for stormwater management*
- *May enter into agreements and contracts with agencies and organizations (including watershed councils) for the funding and performance of activities related to stormwater management*

MWRD STORMWATER MANAGEMENT STATUTORY PROVISIONS *(Cont'd)*

- *May assume responsibility for maintenance of any stream within Cook County*
- *Shall provide for public review and comment on any proposed stormwater management project*
- *May petition the circuit court to dissolve existing drainage districts subsequent to adoption of stormwater management plan*
- *Can utilize federal and state funds, but must comply with preparing all environmental assessment, impact studies and public information requirements*
- *Must prepare an annual report on activities and expenditures of the program*

FINANCING STORMWATER MANAGEMENT

- *The Board of Commissioners may levy taxes at 0.05% of the assessed valuation of all taxable property within the District, for stormwater management purposes, beginning in 2005*
- *The corporate tax levy limit shall change to 0.41% from 0.46%, beginning in 2005*
- *Authorizes issuance of bonds, but will pursue “pay as you go” approach, for the purpose of funding stormwater management projects*
- *The District may apply for state and federal funding for projects*
- *Fees collected from areas outside of the District but within Cook County*

STORMWATER MANAGEMENT PLANNING COUNCILS STATUTORY PROVISIONS

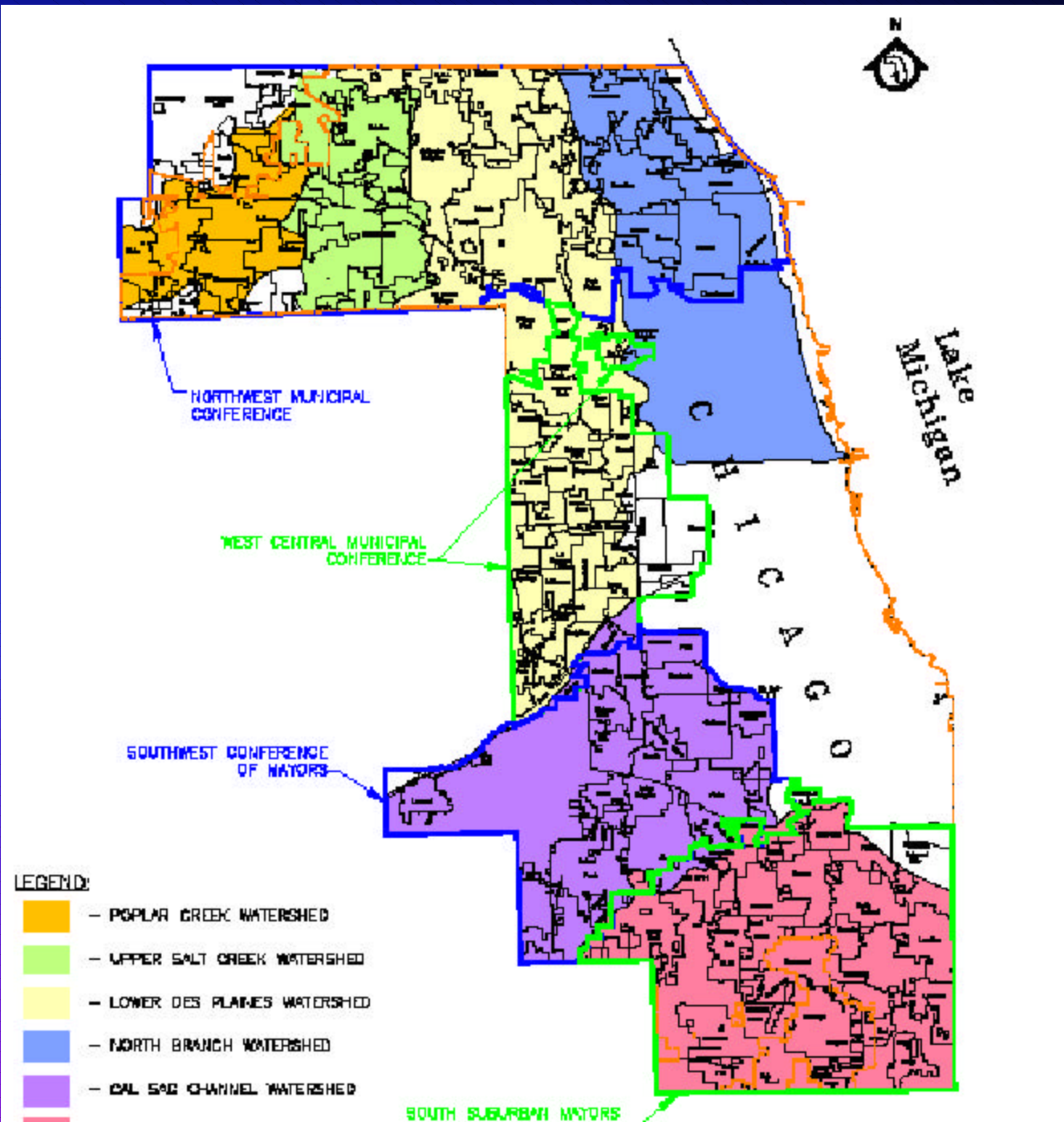
- *Minimum of seven planning councils required*
 - *One for each of the 6 established watersheds of the Chicago Metropolitan Area:*
 1. *North Branch Chicago River*
 2. *Cal-Sag Channel*
 3. *Little Calumet River*
 4. *Lower Des Plaines River Tributaries*
 5. *Upper Salt Creek*
 6. *Poplar Creek*
 - *Additional planning council required for the Combined Sewer Areas*
- *Additional watershed councils may be formed at the discretion of the District*

STORMWATER MANAGEMENT PLANNING COUNCILS STATUTORY PROVISIONS

- *Must be comprised of one representative (chief elected official or their designee) from each municipality within a watershed boundary*
- *County representative required on watersheds containing unincorporated lands*
- *Municipal representative required on multiple councils where municipality exists in multiple watersheds*

STORMWATER MANAGEMENT PLANNING COUNCILS STATUTORY PROVISIONS

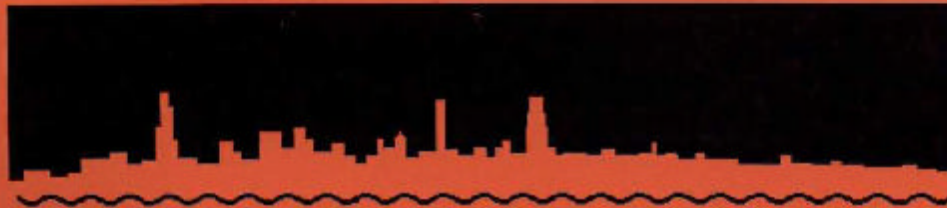
- *Councils may establish subcommittees and bylaws to assist and govern their duties*
- *Councils of Government are responsible for coordinating the watershed planning councils*
- *Per the Act, the watershed councils are to serve as advisory bodies*
 - *Represent the needs and interests of members of the public and local governments in their respective watersheds*
 - *May recommend rules and regulations*
- *The District gives careful consideration to all recommendations presented by the watershed councils*



COOK COUNTY STORMWATER MANAGEMENT PLAN

AUGUST 7, 2006

DRAFT



Metropolitan Water Reclamation District of Greater Chicago

BOARD OF COMMISSIONERS

HON. TERRENCE J. O'BRIENPRESIDENT
HON. KATHLEEN THERESE MEANYVICE PRESIDENT
HON. GLORIA ALITTO MAJEWSKI.....CHAIRMAN OF FINANCE
HON. FRANK AVILA.....
HON. JAMES C. HARRIS.....
HON. BARBARA J. MCGOWAN.....
HON. CYNTHIA M. SANTOS.....
HON. PATRICIA YOUNG.....
HON. HARRY "BUS" YOURELL.....

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

- *A countywide stormwater management plan is required to be adopted by the District's Board of Commissioners per the Act*
- *The CCSMP is a high level "organizational" plan which identifies the goals and parameters of the program.*
- *Approach to CCSMP was similar to that of neighboring counties such as DuPage and Lake*
- *The CCSMP is NOT a regulatory ordinance*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

- *Chapter 1*
 - *Provides statutory background*
 - *Discusses Watershed Planning Council and Municipal Conference roles in the program*
 - *Provides a synopsis of the Stormwater Management Authority granted to the District under Public Act 93-1049*
 - *Sets forth Mission and Purpose of the countywide program*
 - *Presents the Goals of the countywide program*
 - *Presents the Absolute Minimum Requirements for District funding of capital projects*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

■ *Chapter 2*

- *Provides information on existing stormwater management framework and resources within Cook County*
- *Discusses roles of various local, state and federal agencies and ecosystem partnerships, non-profit organizations, and volunteer groups in regards to stormwater management*
- *Elements:*
 - *Administration and Management*
 - *Regulation*
 - *Planning*
 - *Maintenance*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

- *Chapter 3*
 - *Provides an assessment of stormwater management activities and programs in Cook County*
 - *Questionnaire sent to all municipalities and townships*
 - *Administration and Management*
 - *Regulation*
 - *Release rates, floodplain management, etc.*
 - *Planning*
 - *Studies, Local Capital Projects*
 - *Maintenance*
 - *65% of respondents have a regular stormwater management maintenance program*
 - *Gap Analysis*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

■ *Chapter 4*

- *Assessment of current stormwater conditions and problems*
 - *Basic description of watersheds*
 - *Flooding*
 - *Maintenance*
 - *Water Quality*
 - *Soil Erosion and Sediment Control*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

- *Chapter 5*
 - *Countywide Stormwater Management Program*
 - *Administration and Management*
 - *Staff*
 - *WPC & Municipal Conference coordination*
 - *Funding mechanism*
 - *Prepare and adopt a countywide regulatory ordinance*
 - *Technical Guidance Manual*
 - *Maintenance*
 - *Small Streams Maintenance Program >>
M&O Department Administers*
 - *Watershed Plans*
 - *Capital Projects*

WATERSHED PLANS

- *Methodology for Watershed Plans discussed in Chapter 6*
- *These will be detailed studies performed by the MWRD to obtain information on existing conditions, stormwater problems, alternative improvements considered to address stormwater problems, and other relevant information necessary to prioritize projects on a countywide level.*
- *Plans to address multiple issues*
 - *Flooding*
 - *Erosion*
 - *Water quality*
 - *Protection of wetlands/riparian environment*
- *Watershed plans have been started for the Little Calumet River, Calumet-Sag Channel, and Upper Salt Creek watersheds. Plans for the remaining watersheds will begin later in 2007.*

WATERSHED PLANS

■ *Status*

- *Three DWPs awarded this fall*
 - *Calumet-Sag Channel DWP awarded to CH2M HILL*
 - *Upper Salt Creek to MWH*
 - *Little Calumet River to CDM*
- *Remaining three will be awarded in 2007*

WATERSHED PLANS

- ***Two-phase studies:***
 - ***Phase A: Gather existing information and studies, analyze suitability of existing information, determine what additional information is necessary but currently missing, and outline procedures for obtaining missing information***
 - ***Phase B: Obtain the required new data, develop models of the watershed, identify potential projects to address stormwater related issues, quantify benefits and estimate costs of potential projects, and determine other non-economic factors to allow evaluation of alternative projects***
- ***Watershed Planning Council members have been contacted to provide information about their watersheds, including stormwater problems, as part of Phase A.***

WATERSHED PLANS

- *MWRD will update Watershed Planning Councils on status of watershed plans at quarterly meetings.*
- *MWRD will call technical meetings with engineering staff of municipalities and townships.*
- *Input of Watershed Planning Council members will be sought in recommending alternative solutions to stormwater problems.*

REGULATORY ORDINANCE

- *Chapter 7 discusses regulatory concepts*
- *MWRD will develop a countywide stormwater management ordinance*
- *This ordinance will set baseline rules and regulations for stormwater detention, floodplain development, and other issues associated with stormwater*
- *MWRD will seek input from Watershed Planning Councils during development of the regulatory ordinance*
- *MWRD will also review other county and model ordinances, and will seek input from other agencies with regional stormwater management regulatory experience*

REGULATORY ORDINANCE

- *Topics to be considered during development of the ordinance include:*
 - *Floodplain Management*
 - *Standards must be at least as stringent as those of IDNR-OWR and FEMA*
 - *Communities with stricter regulations will not be required to adopt less restrictive regulations*
 - *Regulations will apply to drainage areas less than one square mile*
 - *May require compensation for lost storage in flood fringe and depressional storage areas*

REGULATORY ORDINANCE

- *Stormwater Drainage and Detention*
 - *Regulations will apply to all development*
 - *May include requirements on the control of the 100-year release rate, low flow release rates, and minimization of runoff volumes*
 - *Will consider water quality benefits, preservation of on-site depressional storage, detention in flood fringe, onstream detention, and direct release of stormwater runoff to wetlands*
 - *Will include requirements for perpetual maintenance of detention facilities*

REGULATORY ORDINANCE

- *Wetland Protection*
 - *May protect isolated wetlands, which are not currently protected at the federal level*
 - *May address buffer requirements for wetlands*
 - *May specify wetland mitigation requirements*

REGULATORY ORDINANCE

- *Stream Habitat and Riparian Environment Protection*
 - *May limit relocation and modification of watercourses*
 - *May require mitigation for stream modifications*
 - *Will consider the use of bioengineering techniques where appropriate*
 - *May include requirements for buffer zones*

REGULATORY ORDINANCE

- *Soil Erosion and Sediment Control*
 - *Necessary to protect water quality and limit loss of conveyance capacity in culverts, sewers, channels, and floodplains*
 - *May require erosion control measures and plans for land disturbances of all sizes*
 - *May require routine inspection and maintenance of soil erosion control measures*

REGULATORY ORDINANCE

- *Water Quality*
 - *May emphasize protection of natural hydrologic conditions and minimization of impervious surfaces*
 - *Benefits of Best Management Practices (BMPs) may be considered*
 - *Note that stakeholders have already expressed divergent opinions on whether to include BMPs in the regulatory ordinance*
 - *MWRD must investigate the actual benefits and investigate maintenance concerns of BMPs before establishing a policy on their role in the regulatory ordinance*

REGULATORY ORDINANCE

- *Alternative Site Design Features*
 - *Examples >> cluster developments, reducing road width, building setbacks, sidewalks on one side of street*
- *Development and Redevelopment*
 - *Redevelopment offers opportunities for implementing stormwater management measures*
 - *However, meeting all of the requirements of new development may be prohibitively expensive*
 - *Ordinance will consider means by which redevelopment can accomplish stormwater management goals*

REGULATORY ORDINANCE

- *Certified Community Concept*
 - *Successful in neighboring counties*
- *Options for enforcement*
 - *Certified Communities*
 - *In-house reviews*
 - *Consultant Assistance*
 - *Will be a combination of the above*

COOK COUNTY STORMWATER MANAGEMENT PLAN (CCSMP)

- *Chapter 8*
 - *Plan Implementation*
 - *Phasing*
- *Status of CCSMP*
 - *Public review period concluded on October 13, 2006*
 - *Conducted 7 public hearings*
 - *District received 34 comment letters*
 - *District has responded to every letter*
 - *CCSMP being revised, goal is to have completed by end of year/early January*
 - *Present to Board of Commissioners for approval and adoption in February*

ABSOLUTE REQUIREMENTS FOR CAPITAL PROJECTS



MINIMUM REQUIREMENTS FOR CAPITAL PROJECTS

- *Ensures funds collected from the taxpayers are only used for projects conforming to the intent of the legislation*
- *Enables staff to move forward on evaluating and recommending existing flood control projects for further consideration/participation.*
- *Sets limits on the program where the legislation is open-ended*
- *Provides guidance to the Watershed Planning Councils as to what type of projects can/should be submitted for consideration.*
- *Minimizes chances for staff to become mired down in reviewing/responding to requests which obviously don't comply with intent of legislation.*

BASIS: LEGISLATIVE MANDATE

*The Stormwater Management Act (70 ILCS 2605 / 7h(g)), states that the "District may plan, implement, finance and operate **regional** stormwater management projects in accordance with the adopted countywide stormwater management plan."*

MINIMUM PROJECT REQUIREMENTS

- A. *The project is consistent with the District's Stormwater Management Goals, the Cook County Stormwater Management Plan (CCSMP), 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, CCSMP, 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.*

MINIMUM PROJECT REQUIREMENTS

- b. 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.*

- c. 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.*

MINIMUM PROJECT REQUIREMENTS

- D. 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.*

- E. The project does not increase the risk of flooding or erosion to downstream or upstream areas.*

MINIMUM PROJECT REQUIREMENTS

- F. The project is a regional project that affects multiple jurisdictions. Multiple jurisdictions shall be affected in at least one of the following ways:
 - 1. The problem being addressed by the project affects multiple jurisdictions, or the source of the problem arises from other jurisdictions.*
 - 2. The project may be a localized part of a solution to a regional problem that has been identified in an approved watershed plan.**
- G. Benefiting municipalities must be participants in good standing in the National Flood Insurance Program.*

UPPER DES PLAINES RIVER PHASE I STUDY

- *Study conducted by Corps of Engineers and local sponsors to identify solutions to mainstem Des Plaines flooding issues from Illinois/Wisconsin border to Riverside, Illinois*
- *December 1999 report identified six projects: four storage facilities and two levees*
- *Two of the projects benefiting Cook County are expansion of the existing Buffalo Creek Reservoir, and construction of Levee 37*
- *Corps has federal funds to proceed with Levee 37, needs compensatory storage to obtain IDNR permit*

Buffalo Creek Reservoir Expansion and Levee 37

Proposed Location of Expansion
Existing Buffalo Creek Reservoir
Proposed Location of Wetland Restoration

Buffalo Creek Reservoir Expansion and Levee 37 Benefits

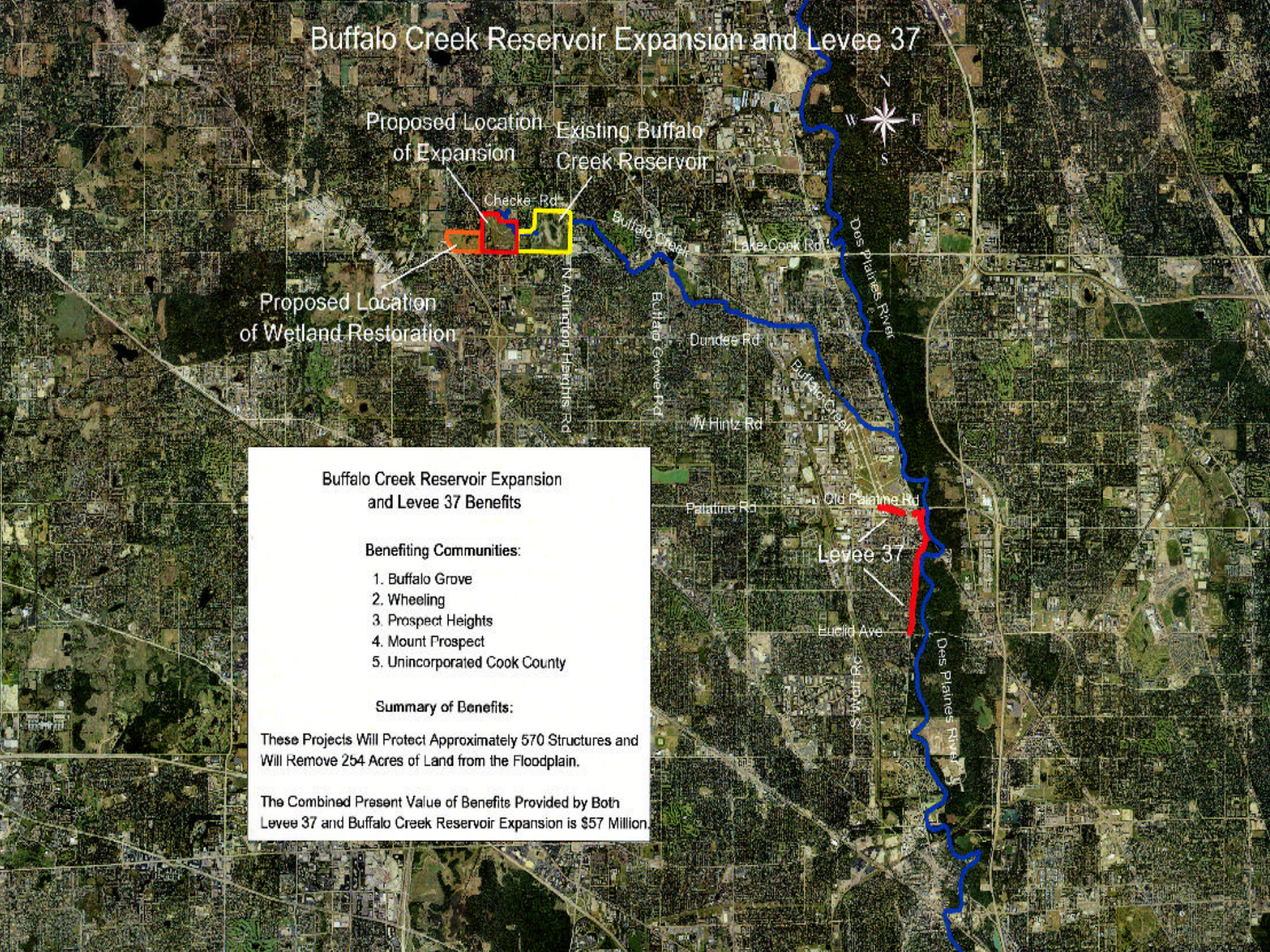
Benefiting Communities:

1. Buffalo Grove
2. Wheeling
3. Prospect Heights
4. Mount Prospect
5. Unincorporated Cook County

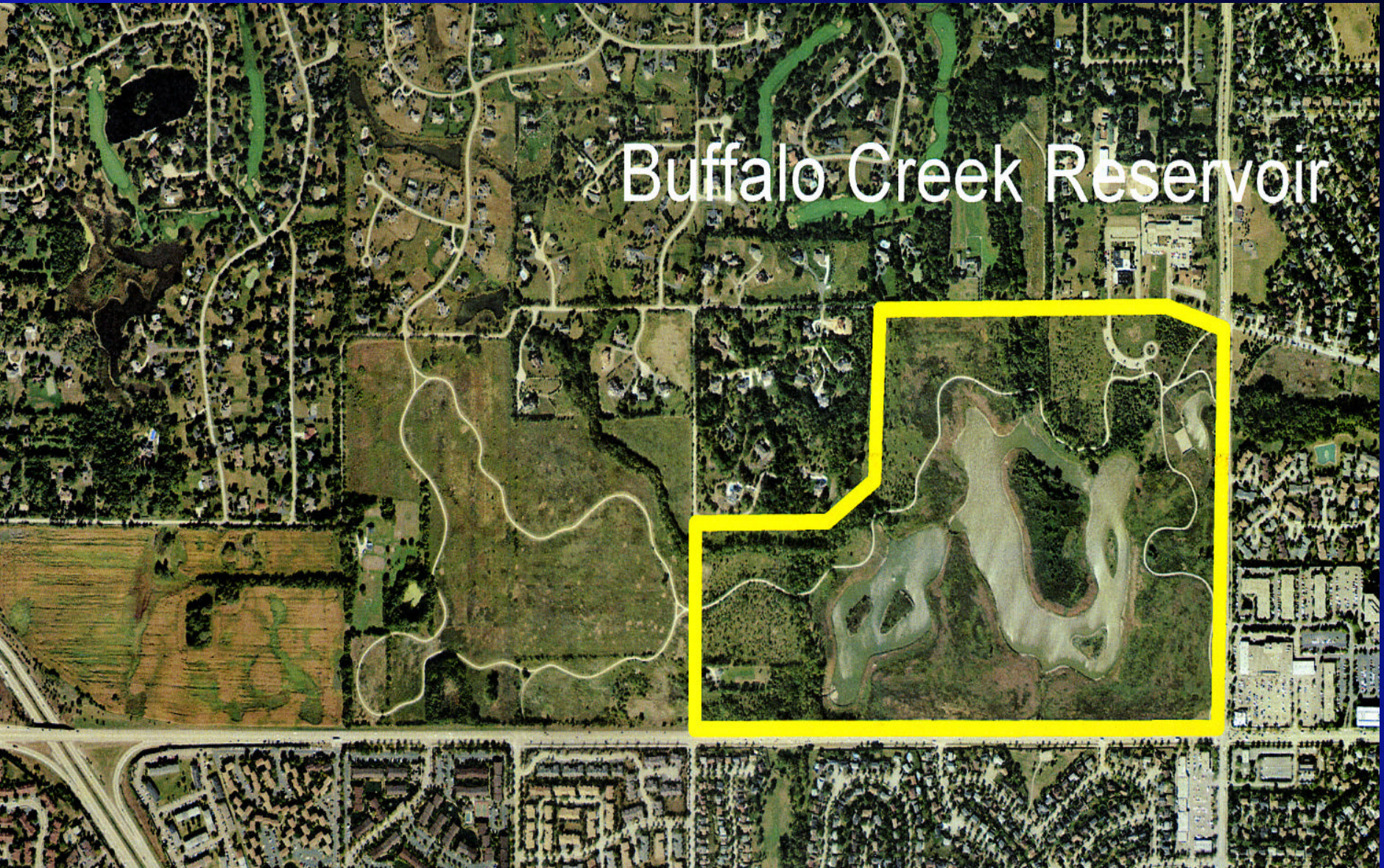
Summary of Benefits:

These Projects Will Protect Approximately 570 Structures and Will Remove 254 Acres of Land from the Floodplain.

The Combined Present Value of Benefits Provided by Both Levee 37 and Buffalo Creek Reservoir Expansion is \$57 Million

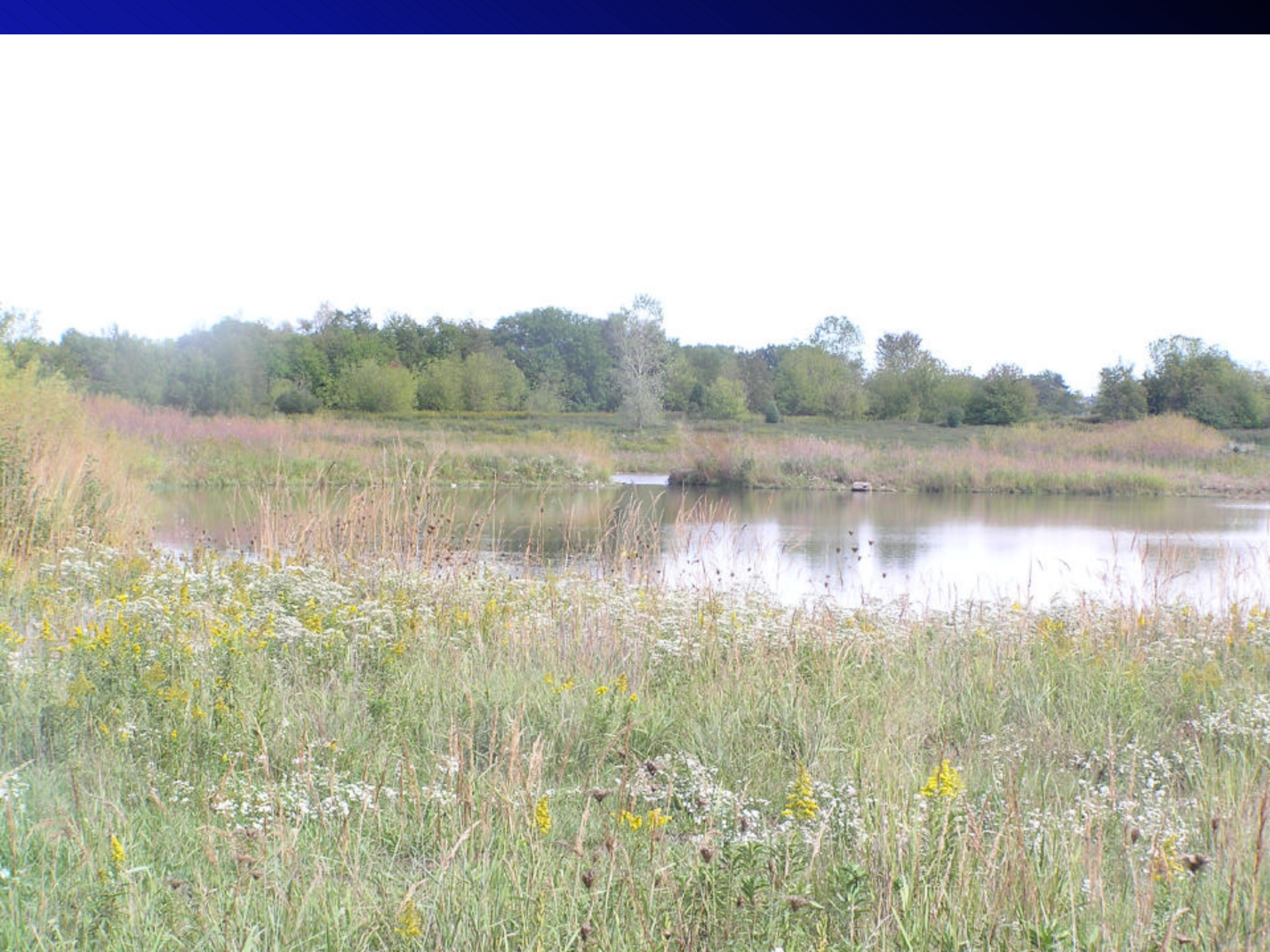


BUFFALO CREEK RESERVOIR SITE



Buffalo Creek Reservoir





BUFFALO CREEK RESERVOIR EXPANSION

- *Corps' original concept was enlarging existing reservoir*
- *Lake County Forest Preserve District opposed altering existing site*
- *District negotiated use of adjacent land to enable construction of a new reservoir providing the volume called for in the Corps' study*
- *Agreement signed with Lake County allows until January 31, 2007 to perform feasibility analyses*
- *District will fund construction and seek cost-share partners (IDNR) - project would be eligible for Corps' cost-sharing reimbursement in the future*

EXISTING BUFFALO CREEK RESERVOIR

STORAGE PROVIDED = 720 ACRE-FT

PHASE CONSTRUCTION: 1983

PHASE II CONSTRUCTION: 1995

ALL IMPROVEMENTS AT EXISTING RESERVOIR
ARE THE RESPONSIBILITY OF THE
LAKE COUNTY FOREST PRESERVE DISTRICT

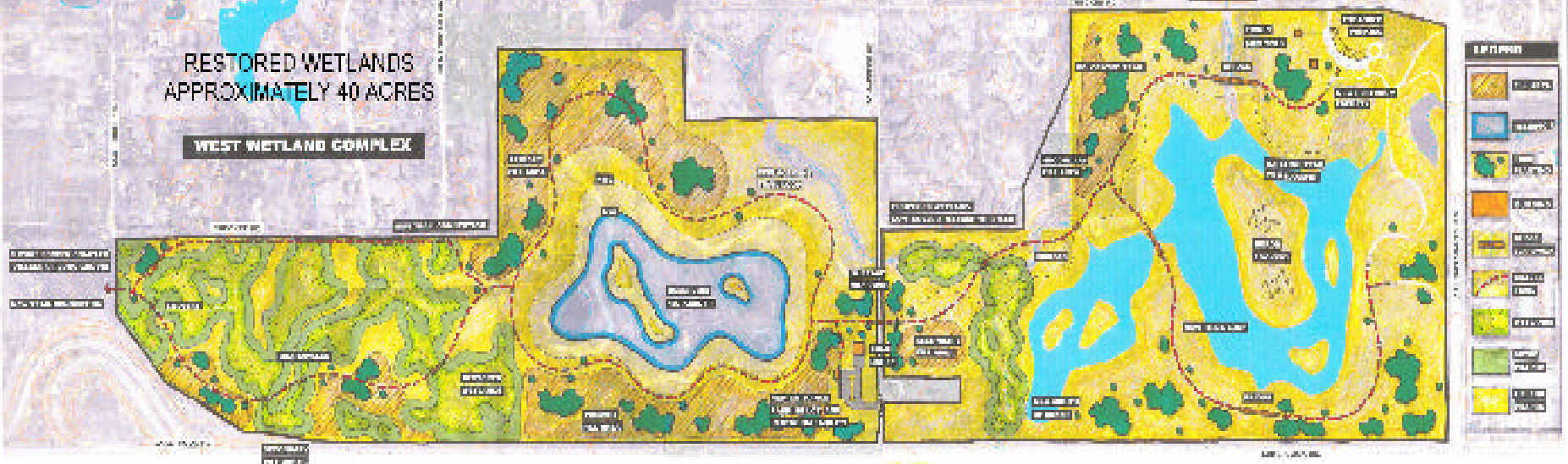
PROPOSED EXPANSION
STORAGE PROVIDED = 485 ACRE-FT

WEST RESERVOIR

EAST RESERVOIR

RESTORED WETLANDS
APPROXIMATELY 40 ACRES

WEST WETLAND COMPLEX



LEGEND	
[Orange Box]	FOREST
[Blue Box]	WETLAND
[Green Box]	WETLAND COMPLEX
[Yellow Box]	FOREST
[Light Green Box]	FOREST
[Dark Green Box]	FOREST
[Light Blue Box]	WETLAND
[Dark Blue Box]	WETLAND
[Light Yellow Box]	FOREST
[Dark Yellow Box]	FOREST
[Light Green Box]	FOREST
[Dark Green Box]	FOREST
[Light Blue Box]	WETLAND
[Dark Blue Box]	WETLAND

Buffalo Creek: Reservoir Expansion Concept



Forest Preserve Lands
Wetland

EXISTING RESERVOIR (EAST)



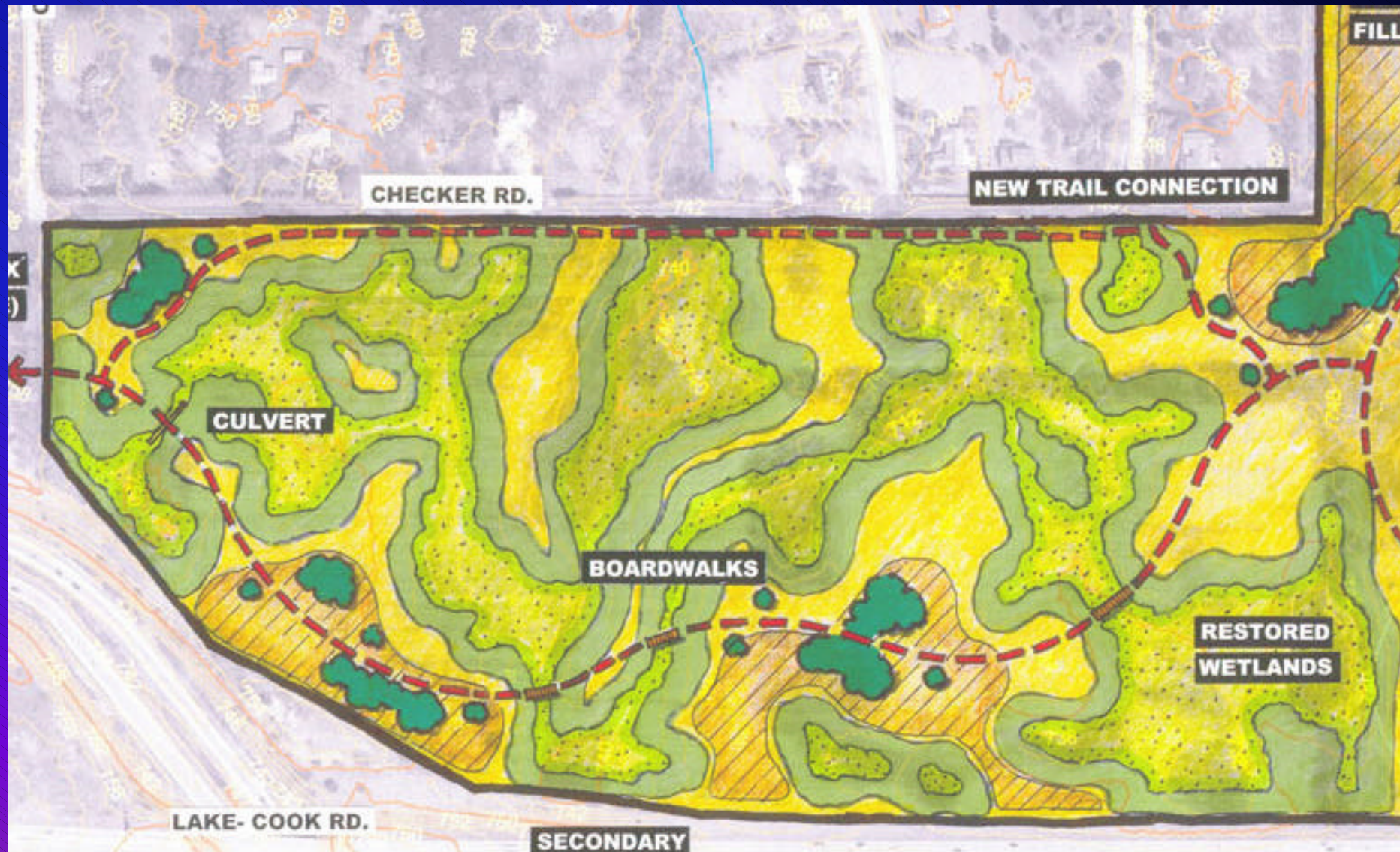
PROPOSED RESERVOIR (WEST)







WETLAND RESTORATION





STORMWATER PROGRAM STATUS

- *CCSMP adoption:*
 - *Draft sent for review August 7, 2006*
 - *Comment period completed on October 13, 2006*
 - *Final plan to be submitted to MWRD Board of Commissioners for adoption anticipated Winter 2006/07*
- *Watershed studies for three watersheds have begun*
- *Studies for remaining watersheds to begin in 2007:*
 - *Lower Des Plaines and Tributaries*
 - *North Branch of Chicago River*
 - *Poplar Creek*
- *Continue background investigations into the development of countywide regulatory ordinance, work will begin formally with stakeholder input in 2007*
- *Development of a GIS for stormwater management*