

**1993-1994
Water Quality
Activities**



NORTHEASTERN ILLINOIS PLANNING COMMISSION

Water Resource Project Highlights ♦ 1993–1994

- ❖ Assisted Lake County Stormwater Management Commission in development of watershed action plans for Flint and Mutton creeks in Lake County
- ❖ Development of a curriculum and presentation of a course on "Designing Stormwater Best Management Practices in Northeastern Illinois," October 10-12, 1993
- ❖ Completion of designs and partial construction of detention basin retrofitting demonstration projects in the Villages of Flossmoor and Addison
- ❖ Phase I Clean Lakes Program Diagnostic/Feasibility Study initiated for Lake George in Richton Park, Cook County
- ❖ Phase II Clean Lakes Program Implementation Program begun to restore and protect McCullom Lake in the City of McHenry, McHenry County
- ❖ Coordination of a seventh annual conference for U.S. EPA entitled "Enhancing the States' Lake Management Programs—Building Partnerships for Lake and Watershed Protection," May 4-6, 1994
- ❖ Coordination of the 1993-94 Volunteer Lake Monitoring Program for 47 lakes in NE Illinois
- ❖ Development of a watershed assessment and BMP recommendations for the Lake County Lake Michigan watershed
- ❖ Lake restoration neared completion and ecological enhancement programs continued at the Skokie Lagoons, Cook County
- ❖ Completion of lake water quality assessments for 15 lakes in northeastern Illinois
- ❖ Coordination of a national training workshop, "Empowering Watershed Stakeholders," May 2-3, 1994
- ❖ Continued technical support of countywide and watershed stormwater management planning programs
- ❖ Review of one Level I and eighteen Level II Illinois Water Quality Management Plan amendment requests including twelve facility planning area boundary changes, three plant expansions, one application for new discharge and one land treatment system. Also reviewed 85 Level III requests for reissue, modification or termination of National Pollutant Discharge Elimination System (NPDES) permits or map corrections.

Inside...

- 3 WATERSHED PLANNING EDITORIAL
- 4 WATERSHED PROJECTS IN LAKE COUNTY
- 5 FOX RIVER WATERWAY EIS
- 6 SKOKIE RIVER RESTORATION
- 7 DESIGNING DETENTION BASINS
- 8 MCCULLOM LAKE IMPROVEMENT BEGINS
- 8 LAKE WATER QUALITY ASSESSMENT
- 8 LAKE GEORGE STUDY
- 9 VOLUNTEER LAKE MONITORING PROGRAM
- 9 ILLINOIS LAKE PROGRAM FUNDING UPDATE
- 10 SKOKIE LAGOONS LAKE RENOVATION
- 10 CONFERENCE HIGHLIGHTS
- 11 FACILITY PLANNING AREA REVIEW FEES

For more information on the topics discussed in this report, please contact these individuals at NIPC (312/454-0400).

NATURAL RESOURCES DEPARTMENT:

- Dennis Dreher**, Director of Natural Resources: Water Quality Protection, Watershed Management, and Nonpoint Source Control
- Bob Kirschner**, Principal Environmental Planner: Lake Management and Conference Coordination
- Tom Price**, Senior Engineer: Stormwater Management and Urban Nonpoint Source Control
- Holly Hudson**, Senior Environmental Analyst: Volunteer Lake Monitoring and Lake Management
- Kim Soulliere**, Planning Technician: Conference Coordination and Publication Design

PROJECT REVIEW DEPARTMENT:

- Deborah Washington**, Director of Project Review/Work Program Development: Water Quality Management Plan Amendment Requests, and FPA Boundary Amendment Review Fees
- Penny Wenstrom**, Assistant Planner: Water Quality Management Plan Amendment Requests and Procedures

This report was prepared using Federal Water Pollution Control Act Section 205j funds from the Illinois Environmental Protection Agency. The findings and recommendations contained herein are not necessarily those of the funding agency.

Watershed Planning

...the time is right!

Proposed language to reauthorize the Clean Water Act places a significant new emphasis on watershed planning. This emphasis is clearly warranted in light of experience since Areawide Water Quality Management Plan adoption by NIPC in 1979. Although substantial progress has been made in the control of wastewater discharges and combined sewer overflows, beneficial uses in most urban streams and lakes remain seriously impaired and new development is seriously threatening a number of other high quality waterbodies.

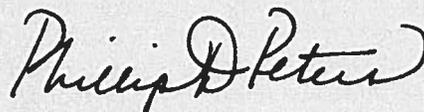
While each watershed has its own unique problems, it is now apparent that the principal causes of continued degradation in many watersheds are nonpoint sources such as stream channelization, urban runoff, and construction activities. The most effective mechanism for addressing waterbody impairments, caused by both point and nonpoint sources, is watershed-based planning. Currently, NIPC staff are involved in watershed planning to address water quality problems in Butterfield Creek in south Cook County; Flint, Mutton, and Sequoit creeks in Lake County; the Lake Michigan watershed in Lake County; and the Skokie Lagoons in north Cook County. Watershed planning also is being done at a smaller scale in lake restoration studies for McCullom Lake in McHenry and Lake George in Richton Park.

Ongoing watershed initiatives are being funded through several Clean Water Act programs (Sections 104(b)(3), 314, and 319). However, these programs are limited both in terms of the amount of funds available and in the types of problems which can be considered. Comprehensive watershed planning across northeastern Illinois will be enabled only if proposed Clean Water Act amendments are approved.

Once plans are prepared, implementation may be quite challenging, especially if the recommended plan includes expensive remedial projects. Unlike earlier efforts to improve the level of wastewater treatment or ongoing efforts to reduce flooding, there is very little state or federal funding available to implement urban nonpoint source controls.

One way to address the funding problem is to take a multi-objective approach to both broaden the base of support for problem remediation and to expand funding opportunities. For example, stormwater committees in DuPage and Lake counties have established holistic objectives to enable consideration of water quality enhancement in flood control projects. The Butterfield Creek Steering Committee has defined a similar approach. With local flexibility and effective cooperation among funding agencies, it is possible to devise projects to both reduce flooding and improve water quality and recreational opportunities. Similarly, local governments can work with developers to encourage site plans which enhance degraded amenities such as streams and wetlands.

The Commission is strongly supportive of comprehensive watershed planning approaches. Legislation currently under consideration in Congress would enable comprehensive watershed planning and flexible use of federal funds to carry out watershed plans. The Commission supports this legislation.



Phillip D. Peters
Executive Director

WATERSHED PROJECTS FIND RECEPTIVE AUDIENCES IN LAKE COUNTY

Commission staff are assisting the Lake County Stormwater Management Commission (SMC) in the development of watershed plans for two important water resource areas in Lake County. The two areas—Flint and Mutton creeks in the southwest and the Lake Michigan watershed in the east—differ greatly in their demographics, physical conditions, and potential uses. However, both areas can be addressed using a similar watershed planning strategy. The recommended strategy involves the following components: establish goals and objectives; inventory watershed conditions; analyze waterbody problems and impairments; recommend control measures and best management practices (BMPs) for problem remediation and prevention; develop an effective, implementable action plan; and implement the plan. Highlights of the two projects, which were funded through the Illinois Environmental Protection Agency under Section 104(b)(3) of the Clean Water Act, are presented below.

Flint and Mutton Creeks

Watershed planning efforts in Flint and Mutton creeks followed the watershed planning strategy described above. The planning process utilized a team approach which included not only professionals from several technical disciplines but also included local government officials and citizens participating in watershed steering committees.

The Flint Creek and Mutton Creek watersheds contain marked differences in land uses and identified problems. The Flint Creek watershed is largely developed, principally in residential land uses in the villages of Barrington, Barrington Hills, Lake Barrington, Lake Zurich, and North Barrington. Due to the developed nature of the Flint Creek watershed, the principal study focus was the *restoration* of the stream, the riparian corridor, and onstream lakes. Flint Creek's problems included both nonpoint source impacts, such as contaminated urban runoff, and point source discharges from municipal treatment plants in Barrington and Lake Zurich (now phased out). It was, therefore, necessary to take a comprehensive approach in the planning strategy to address all significant water quality impacts.

The Mutton Creek watershed is primarily undeveloped, but development pressures are growing in Wauconda and Island Lake. The focus of the Mutton Creek study was mostly on *preventative* measures to avoid adverse impacts of urban development activities.

In addition to providing the means to develop local watershed plans, the purpose of the project was to develop a model watershed planning strategy to

aid other local entities in the sometimes daunting task of comprehensive watershed planning. The model strategy not only identifies the technical aspects of plan development but also the sometimes more difficult institutional aspects.

The watershed steering committees were instrumental in building support for the watershed plans. The support for the recommended action plan was particularly noteworthy for Flint Creek. Watershed communities, the Lake County Forest Preserve District, and local citizen groups worked with NIPC and the Lake County Stormwater Management Commission in the identification of numerous remediation and restoration projects. Funding has been applied for under Section 319 of the Clean Water Act for \$475,000 worth of projects identified in the watershed action plan. The projects include over 1.5 miles of stream stabilization and restoration, shoreline stabilization on Lake Zurich, and installation of sand filters in several parking lots. If funded, the projects will begin in the spring of 1995.

Lake Michigan Watershed

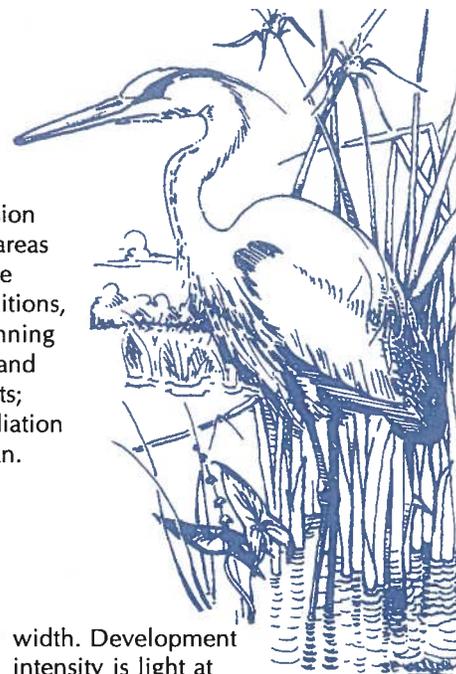
Lake Michigan is widely recognized as the most valuable waterbody in the region. Its recreational uses are appreciated not only by local residents but also by tourists, and its water is increasingly used to supply communities outside its watershed. There is, therefore, a heightened awareness of the need to protect its water quality for all potential users.

The Lake Michigan watershed in Lake County is relatively narrow, ranging from about one to four miles in

width. Development intensity is light at the northern edge of the county and heavy in the middle and southern areas. Development is primarily residential but includes areas of intense industrial and military use as well.

A watershed assessment was conducted to identify impairments of uses in the lake as well as in several small tributaries. Potential Lake Michigan uses included fish consumption, aquatic life, secondary contact recreation (e.g., boating), swimming, and public water supply. The only documented impairments were related to beach closings and fish consumption advisories. Beach closings were directly related to activities in the watershed, particularly identified cross-connections between sanitary and storm sewers which allowed raw wastewater to enter the lake. Other suspected contributing sources included urban runoff, and bypasses and overflows at wastewater plants and pumping stations. Fish consumption advisories are a lakewide problem—related to high concentrations of compounds such as PCBs and chlordane in fish flesh—and is not attributable to specific sources in the Lake Michigan watershed in Lake County. It should be noted that the Lake Michigan watershed study did not explicitly consider the PCB contamination problems of Waukegan Harbor. A draft remedial action plan (RAP) has been developed for this area of concern.

In addition to problems in Lake Michigan, it was apparent that small tributary streams leading to the lake also were impaired. While there was little hard data available, it was believed that aquatic life in the streams



FOX RIVER WATERWAY EIS COMPLETED

was impacted, due to factors such as channel modification and erosion, urban runoff, problem septic systems, and illicit connections to storm sewers.

Recommendations for best management practices included remedial, preventative, and ongoing/maintenance measures. One of the most important remedial BMPs is the elimination of illicit connections of sanitary and industrial sewers to storm sewers. The Lake County Stormwater Management Commission and its consultant have developed a simple, low-cost program to assist municipalities in the identification of such illicit connections. Examples of other recommended BMPs included stabilization of eroding stream channels and ravines, filter strips, swales, detention for new development and redevelopment, and better source control of household chemicals and wastes.

At the time of this report, BMP recommendations were being considered by watershed communities. Several communities have expressed interest in the illicit connection identification program and in developing better measures to protect sensitive ravines. A final action plan will lay out a strategy for implementing cost-effective, locally acceptable measures.

In June 1994, the U.S. Army Corps of Engineers concluded its Environmental Impact Statement (EIS), *Cumulative Impacts of Recreational Boating on the Fox River - Chain O'Lakes Area in Lake and McHenry Counties, Illinois*. Begun in 1991 as an outgrowth of a related Special Area Management Plan (SAMP) process, the EIS was undertaken by the Corps to identify and evaluate the individual and cumulative environmental impacts of recreational boating on the waterway (from the Illinois-Wisconsin state line to the Algonquin Dam) so that fully-informed permitting decisions could be made by the Corps.

Through recreational user surveys, environmental monitoring, and literature reviews, the EIS documented existing environmental and social impacts affecting the waterway's quality. The Corps concluded that the present state of recreational boating was adversely affecting the waterway, and that increased boating pressure associated with new construction of piers and launch ramps should be minimized. Based on the study findings, agency input, and public input, the Corps has adopted a "no net gain" permitting policy for the waterway. Placement of commercial piers must be accompanied by removal of an equal number of like-

size facilities. Single-family platted homes are allowed a single pier. To install a ramp, both commercial developments and private residences must remove a ramp with equal launching capacity.

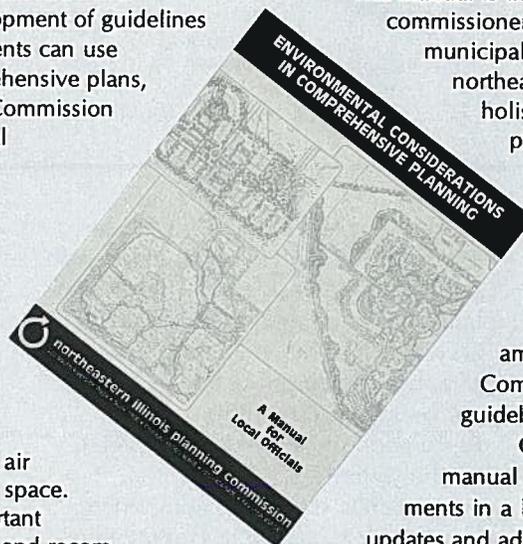
The EIS states that the no net gain policy is the fairest, most practicable alternative that addresses environmental concerns and minimizes adverse social impacts. Nevertheless, the Corps acknowledges that its no net gain policy "will not restore the environmental resources of the area, and will at best slow the rate of environmental degradation due to boating." The EIS urges governments and organizations, particularly those at the local level, to adopt long-term policies and programs that encourage environmentally-sensitive boating activities.

Toward that goal, there currently are renewed efforts among Lake and McHenry counties, municipalities along the waterway, the Fox River - Chain O'Lakes Waterway Management Agency, and other organizations to craft a comprehensive, long-term mechanism for intergovernmental cooperation. The future vitality of this outstanding recreational and environmental resource may well depend on the success of these efforts.

ENVIRONMENTAL PLANNING MANUAL PUBLISHED

The Commission's *Strategic Plan for Land Resource Management* recommended the development of guidelines which municipal and county governments can use in preparing and implementing comprehensive plans, programs, and regulatory ordinances. Commission staff and members of the Environmental Stewardship Working Group recently completed this task.

Environmental Considerations in Comprehensive Planning: A Manual for Local Officials addresses numerous important environmental planning concerns, including: stream, lake, and wetland protection, floodplain and stormwater management, wastewater facilities planning, farmland protection, transportation and air quality, energy conservation, and open space. The manual identifies key issues, important definitions, state and federal programs, and recommended local government planning initiatives. It also lists contacts, references, and examples of effective local programs.



The manual is intended primarily for plan commissioners and staff planners working for municipal, township and county governments in northeastern Illinois. The manual promotes holistic, comprehensive planning approaches to minimize environmental impacts of new development. It also identifies opportunities to better utilize features which have traditionally been viewed as site development constraints, such as wetlands, and to turn them into amenities. The manual complements the Commission's library of model ordinances, guidebooks, and videos on related topics.

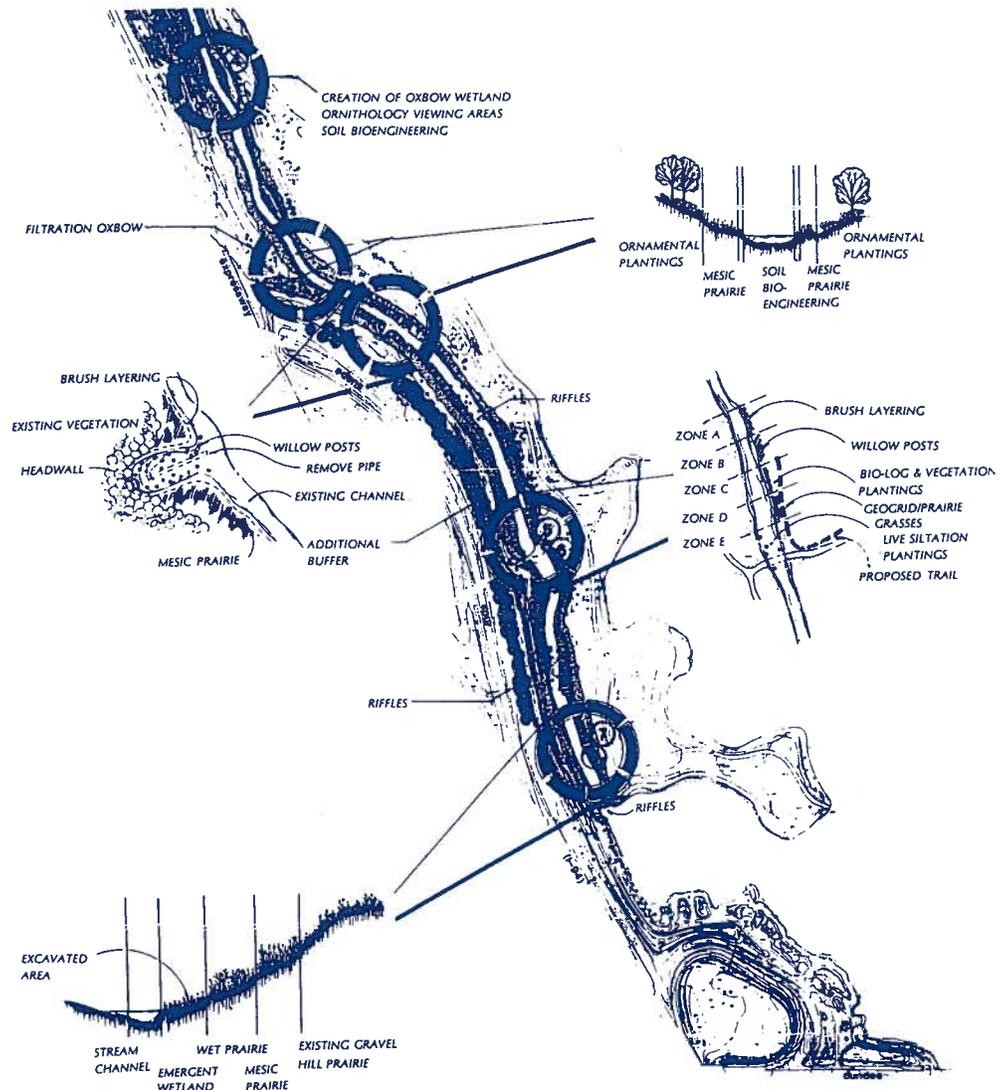
One complimentary copy of the manual will be distributed to local governments in a loose-leaf binder to allow for future updates and additions. Local governments are free to make copies. However, additional copies are available from the NIPC Publications Department for \$14.00.

INNOVATIVE RESTORATION TECHNIQUES BEING TESTED IN THE SKOKIE RIVER

The Chicago Botanic Garden in Glencoe is the site of a demonstration project to restore beneficial water quality and habitat functions to the Skokie River. Like many urban streams, the Skokie River has been degraded by a variety of upstream and local impacts. The river itself was relocated in the 1960s. A broad meandering wetland swale was replaced with a straightened channel. Riparian vegetation planted at that time consisted of shallow-rooted, non-native grasses. Upstream areas were intensely developed and wetlands were drained and filled, greatly increasing storm-water runoff rates and in-stream flow velocities.

There are several important consequences of these disturbances. The river's banks are rapidly eroding due to high flow velocities and the loss of deep-rooted stabilizing vegetation. The channel has widened and downcut, exposing sewers and utilities in the floodplain. Water depths in the widened channel are extremely shallow and, as a consequence, water temperatures reach stressful levels because of over exposure to the sun. Important fish habitat features such as riffles, meanders, and deep pools are seriously lacking.

NIPC staff are assisting the Chicago Horticultural Society and their project team in implementing a restoration plan for the river which is being funded under Section 319 of the Clean Water Act. The plan has three principal focal points: stabilization of eroding channel banks; restoration of the riparian buffer zone; and improvement of in-stream cover and water quality. Bank stabilization is being accomplished utilizing "bio-engineering" techniques which feature the use of deep-rooted native vegetation. Restoration of riparian buffers



will employ strips of prairie grasses and forbs (30-60 feet wide) along with excavated streamside and oxbow wetlands. In-stream improvements will be accomplished by re-creating sections of a meandered pilot channel and by enhancing existing riffle zones. Restoration work will be completed by the summer of 1995.

A public education component has been established to convey information about the project. This will be accomplished through a project advisory committee, through several semi-

nars and field trips, and through the production of a project video. Also, the project site is readily accessible to the hundreds of thousands of visitors to the Botanic Gardens. For more information, contact Dennis Dreher at NIPC (312/454-0400) or Cynthia Baker at the Chicago Botanic Garden (708/835-8300).

EXPERIENCE GROWS IN DESIGNING WATER QUALITY DETENTION BASINS

With design assistance from NIPC staff, wetland detention systems are being constructed on three sites in south Cook County. These multi-functional facilities are designed to control runoff rates and remove pollutants such as sediment, heavy metals, and oil and grease from urban runoff. While one of the sites is a retrofit of an existing detention basin, the other two are new developments incorporating wetland detention.

Homewood/Washington Park

In Homewood, the former Washington Park Racetrack property is being redeveloped for commercial, office, and light industrial uses. The centerpiece of the development is a lake which also provides stormwater detention for the site and some surrounding developments. Homewood and the developers view the lake as an amenity and an important marketing device to draw potential tenants.

To protect and enhance the site's aesthetic and recreational potential, a wetland biofilter was designed to pre-treat contaminated runoff from the intensely developed site. The biofilter, which includes a stilling basin and a shallow marsh, should be very effective in removing incoming sediment, nutrients, and organic matter, thereby protecting water quality in the lake. Unlike many modern hard-edged detention designs, the lake and biofilter are designed to resemble a natural system, with a broad aquatic shelf around the lake blending into the wetland biofilter. A trail system around the lake and through the wetland also is planned. The Washington Park wetland/lake was constructed and planted in the spring of 1994. Design and construction of the biofilter were funded by U.S. EPA as a demonstration of effective sediment pollution control.

As a further water quality consideration, at least one of the commercial tenants contributing runoff to the lake/wetland system is considering alternatives to salt for parking lot de-icing. Road salt, in high concentrations, can be harmful to native wetland vegetation and sensitive aquatic organisms. Traditional stormwater

BMPs such as wetland detention are relatively ineffective in removing salt from stormwater. Therefore, the only effective way to reduce its impacts is to limit its use.

These projects are excellent examples of creative solutions to stormwater management problems which can turn single-purpose stormwater facilities into aesthetic amenities that also prevent degradation of the region's water resources.

Flossmoor Retrofit

In Flossmoor, a detention basin constructed in the early 1980s was in need of rehabilitative maintenance due to excessive sediment deposition from construction site erosion, a clogged outlet structure, and a failed embankment. While restoring the basin and outlet structure, Flossmoor took the opportunity to modify the original design to improve the water quality benefits of the basin. Stilling basins were installed at the two inlets to the basin and a small pool was created at the outlet. The remainder of the basin bottom was planted with wetland vegetation and the side slopes were planted with a mix of native prairie plants. The outlet structure was modified from the original design so that even routine runoff events would pond in the basin to improve the settling of sediments and associated pollutants. Grading and planting of the basin was completed in the spring of 1994. This demonstration project, along with a similar project being designed in the Village of Addison, was partially funded by U.S. EPA through Section 319 of the Clean Water Act.



Flossmoor detention retrofit project under construction.

Matteson Commerce Center

A multi-phased commerce center, including both retail and light industrial uses, is being developed in the Village of Matteson. The Village recently adopted a new stormwater ordinance based on the NIPC model and requested technical assistance from Commission staff in the application of ordinance design criteria in this new development. The development will ultimately include three new detention basins and a wetland mitigation site which will also be used for detention.

NIPC worked with the developer and the Village to modify some of the existing detention basin designs to improve aesthetics, pollutant removal capabilities and to minimize future maintenance needs. The original detention basin plans, which specified rectangular basins with rip rap at the shoreline, were modified to incorporate variable width aquatic shelves below the water, and flat, vegetated shorelines. Two of the detention basins have been constructed and are scheduled to be planted in early summer of 1994.

In addition to the detention basin modifications, storm sewers have been replaced with open swales in several areas of the drainage plan. The swales will be planted with wetland and prairie vegetation to enhance infiltration of runoff and filtration of pollutants. These low-cost swale designs should greatly reduce pollutant loads into the wetland and detention basins.

MCCULLOM LAKE IMPROVEMENT BEGINS

The future looks bright for McCullom Lake in McHenry, Illinois. A Clean Lakes Program Phase II implementation grant from the U.S. Environmental Protection Agency was awarded to the City of McHenry in August 1993. The grant funds will be used to implement the *McCullom Lake Restoration and Protection Program*—an ambitious project to restore the lake's recreational uses and provide for its long-term ecological protection. This plan was developed by the Northeastern Illinois Planning Commission and the City of McHenry under a Phase I study grant from the Clean Lakes Program during the period 1989 through 1992.

Ironically, the lake's rebirth began with an eradication of the fish population, which was necessitated by an explosive rate of growth among bottom-feeding carp during 1991 through 1993. Illinois Department of Conservation fisheries biologists from all over the state converged on McCullom Lake just after the Labor Day weekend in 1993 to apply a fish toxicant called rotenone. Within the next few days, over 84,000 pounds of dead fish, almost all carp, were removed by lakeshore residents and

volunteers from throughout the community.

The removal of the carp resulted in greatly-improved water clarity. This improved water clarity led to the observation in spring 1994 that the nuisance exotic aquatic plant, Eurasian water milfoil, had unfortunately spread to over 70 percent of the lake's 244-acre area. This infestation was well beyond an assessment made just 7 months prior in fall 1993, and was due in part to the plant's prolific rate of spread. Eurasian water milfoil grows extremely fast and out-competes nearly all native plants in aquatic ecosystems. This is especially disturbing in McCullom Lake where at least one state-endangered aquatic plant species has been found. Needless to say, the expanded infestation necessitated the modification of the control strategies for the milfoil. An aggressive assault on the plant is now scheduled for early spring 1995.

1994 will still see significant activity at McCullom Lake. A lakeshore property owner and community



resident public education campaign will be launched. The overall objective of the campaign will be pollution prevention at the source within the watershed. Also, a wintertime lake aeration system will be installed to help sustain McCullom Lake's oxygen levels during winters with especially heavy snowpack or ice-cover duration. Special lake ecology programs within the community schools also are planned when school reopens in the fall.

LAKE WATER QUALITY ASSESSMENT PROGRAM

NIPCC's Natural Resources Department, in cooperation with the Illinois Environmental Protection Agency, conducted an assessment of 15 publicly-owned/public access lakes in the six county northeastern Illinois region. During late summer 1993, water and sediment sampling was conducted in each of the 15 lakes. Water samples were analyzed for basic constituents including suspended solids, phosphorus, nitrogen, and chlorophyll. In-situ measurements of Secchi disc transparency, pH, conductivity, and dissolved oxygen/temperature profiles also were made. Sediment samples were analyzed for organics and metals. The water and sediment quality data,

along with additional information gathered on lake morphology, hydrology, watershed and shoreline land use, and lake and watershed management, will be used to identify the major and minor sources and causes of pollutants as well as the extent of recreational and biological use impairment.

A report summarizing each lake's chemical (water and sediment), physical, and lake assessment information will be available in late fall 1994. To request a copy of the summary report, call the Natural Resources Department at NIPCC. Summary reports for Lake Water Quality Assessment Program lakes sampled during 1989 and 1992 also are available.

LAKE GEORGE STUDY INITIATED

A Clean Lakes Program Phase I Diagnostic/Feasibility Study began at Lake George in November 1993 with the initiation of in-lake water quality sampling. This two-year study, being conducted for the lake's owner, the Village of Richton Park, will identify and quantify existing water quality problems and provide recommendations for restoring the lake's environmental quality and enhancing its recreational and aesthetic attributes.

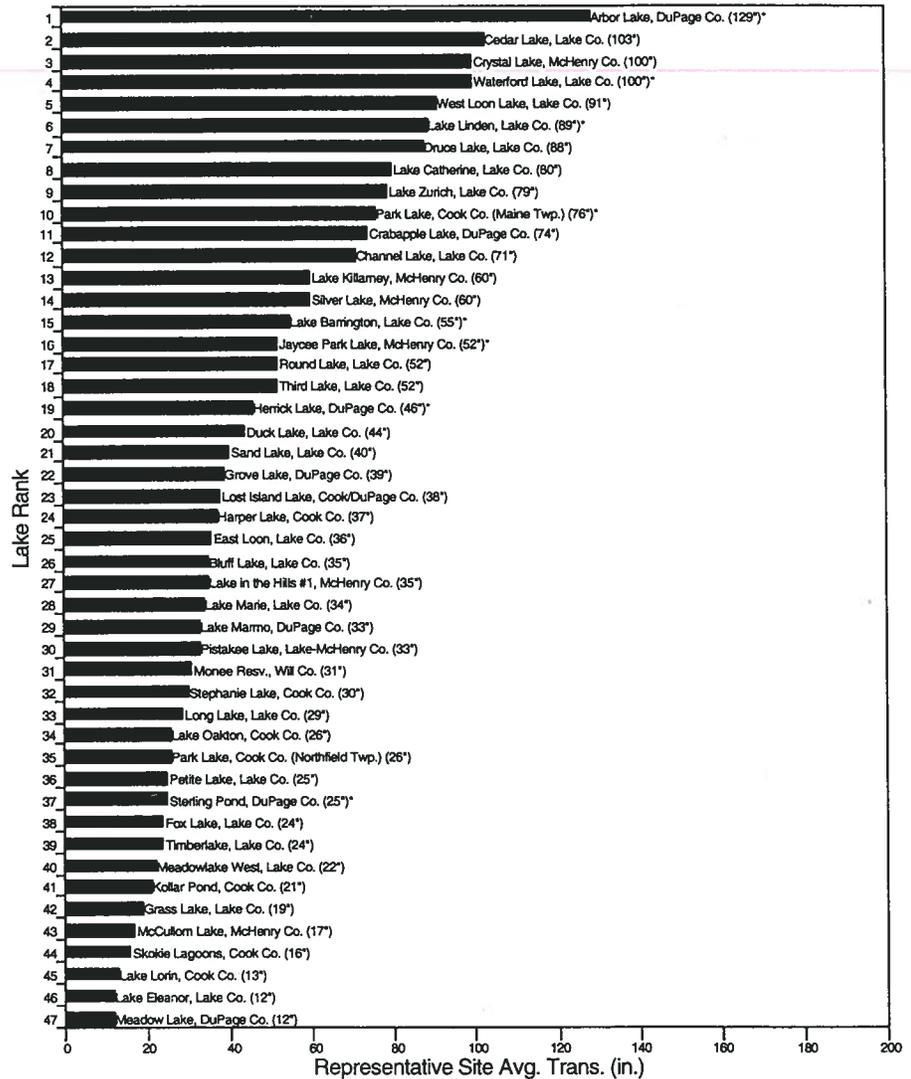
VOLUNTEER LAKE MONITORING PROGRAM

The Illinois Volunteer Lake Monitoring Program (VLMP) has been going strong since it was initiated by the Illinois Environmental Protection Agency in 1981, and the 1993 monitoring season was no exception. Of the 140 lakes participating in the VLMP statewide, 47 were in the northeastern Illinois region, involving 72 volunteers. NIPC continued to serve as program coordinator for the region providing volunteer training, technical assistance, educational materials, and an annual summary report.

The graph shown to the right presents lake ranking by average annual transparency for the 1993 monitoring season. Arbor Lake in DuPage County exhibited the greatest average Secchi disc transparency of 129* inches (an asterisk indicates that at least one Secchi disc reading was limited by aquatic plant growth or total site depth). Cedar Lake in Lake County was next with an average transparency of 103 inches. Crystal Lake in McHenry County and Waterford Lake in Lake County also exhibited average transparencies of at least 100 inches. The lowest annual average transparency of 12 inches was at Meadow Lake in DuPage County (due to substantial algal growth) and Lake Eleanor in Lake County (due to a combination of substantial algal growth and suspended sediment). Compared to the other VLMP lakes statewide, Arbor Lake ranked sixth, and Cedar, Crystal, and Waterford tenth, eleventh, and twelfth, respectively. Snake Den Hollow Lake in Knox County in western Illinois exhibited the greatest average transparency of 179 inches. Ten of the top thirty-one lakes in the state (average transparency of at least 60 inches) were in the northeastern Illinois region. Five lakes in northeastern Illinois were among the thirty-one lakes with lowest average transparency (24 inches or less).

More information on the VLMP and copies of the 1993 report (as well as previous years' reports) are available from NIPC's Natural Resources Department.

1993 Northeastern Illinois Lake Rankings
(lakes monitored four or more sampling periods)



* transparency limited by aquatic plants or total depth on at least one monitoring date

ILLINOIS LAKE PROGRAM FUNDING STILL IN QUESTION

A feature article in last year's Annual Report, *Illinois Lake Management Program Act... ready for implementation!*, described the importance of lakes to the northeastern Illinois region, and the opportunities offered by the Illinois Lake Management Program Act (ILMPA) to restore and protect these resources. As first proposed by the Illinois Lake Management Association in 1987, the ILMPA includes four comprehensive lake management objectives: public education, technical assistance, monitoring and research, and

financial incentives for local implementation efforts.

Underlying all aspects of ILMPA is a central theme to couple the enthusiasm, financial resources, and volunteerism of local lake management interests, together with the state's ability to provide education, technical assistance, and research. As mandated by the Act, the state's natural resource agencies cooperatively developed an Administrative Framework Plan for achieving these objectives. This Plan, together with a recommended funding level of approximately 1.3

million dollars per year, was submitted to Governor Edgar by Illinois EPA Director Mary Gade in July 1992.

In spring 1994, Governor Edgar announced his proposed *Conservation 2000* initiative. Of particular interest to lake proponents was a provision to fund the ILMPA at an annual funding level quite close to that suggested by the Illinois EPA. As this Annual Report goes to press in late June 1994, the state legislature has not yet taken final action on the *Conservation 2000* proposal.

SKOKIE LAGOONS LAKE RENOVATION CONTINUES

For the past 15 years, the Commission has served as technical coordinator for the Skokie Lagoons Lake Restoration and Protection Project. The Skokie Lagoons' series of seven lakes and interconnecting channels are owned and managed by the Forest Preserve District of Cook County, and provide tremendous recreational and flood control benefits for communities throughout the northern suburbs. In 1980, the lagoons began a metamorphosis—from a degraded environment ravaged by nearly 50 years of pollution and neglect—to a more balanced, healthy ecosystem.

The Commission completed the Lake Restoration and Protection Plan in 1983, and implementation activities began the following year. When the lake dredging program was finished in 1993, over 1 million cubic yards of organic sediment and bottom material had been removed. And beginning in 1987, municipal wastewater discharges have been routed away from the lagoons. Shore-to-shore floating mats of algae are now only bad memories for lagoon visitors from years past.

Fall 1993 brought about a widely-publicized element of the lake management program. A massive

effort to rid the system of bottom-feeding fish (notably carp) was undertaken by the Forest Preserve District in cooperation with the Illinois Department of Conservation. An estimated 80,000 pounds of fish—mostly carp—were removed. Soon thereafter, Forest Preserve District fisheries biologists began to return previously-netted native sport fish back to the Skokie Lagoons, which were supplemented by stockings of other fish species. Within a few years, the fishery should be well-established and the lagoons will once again offer quality sport fishing opportunities to the region's anglers.

Especially important are the ecological benefits that the restoration/protection program is providing. With the flocculent organic "muck" sediments and the bottom-feeding carp now removed, the conditions are right for a diversity of native aquatic plants, insects, and other aquatic organisms. The lagoons' water clarity already has improved from an average of only 1-2 feet during 1993, to as much as 11.5 feet during May 1994—all the way down to the lake bottom! And, beginning in mid-1994, a cooperative agreement among the U.S. Environmental Protection

Agency, Illinois Environmental Protection Agency, Forest Preserve District, and NIPC will enable development and implementation of lake shoreline stabilization practices that emphasize "bioengineering" approaches. Plans also are in the making to restore a diversity of terrestrial species and community habitats on the 650+ acres of preserve lands surrounding the Skokie Lagoons.

Recreational access improvements at the lagoons have accompanied the ecological and recreational renovation. Those exploring the preserve by foot, bike, or boat will now find their visit easier and more enjoyable.

The Skokie Lagoons are rich in history, too. Constructed by the Civilian Conservation Corps in the 1930s and '40s, the lagoons represent one of the first—and the largest—undertakings by the young men of the CCC. In June 1994, the CCC and the Forest Preserve District celebrated their accomplishments with a special commemorative and dedication ceremony on the lagoon shores. Watch next year's *Annual Water Quality Report* for an in-depth account of the conclusions and "lessons learned" from this nationally-recognized demonstration project.

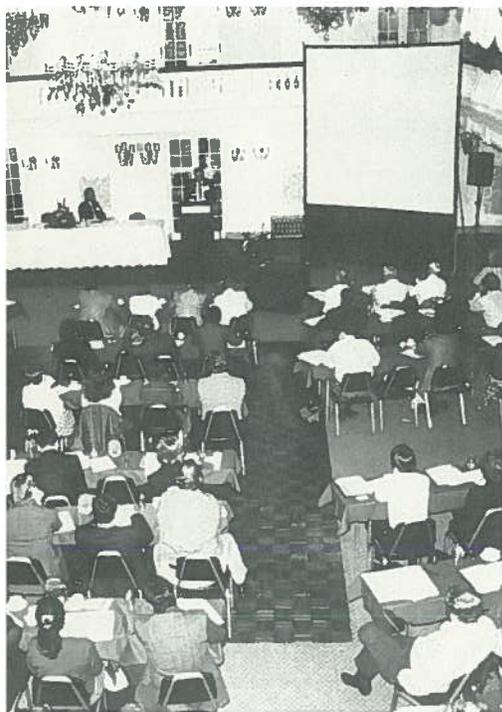
CONFERENCE AND COURSE HIGHLIGHTS

In May 1994 and for the seventh consecutive year, NIPC cosponsored and coordinated the *National Conference on Enhancing the States' Lake Management Programs*. The Commission was joined by the U.S. Environmental Protection Agency and the North American Lake Management Society as conference co-sponsors. Over 160 individuals attended, with the target audiences being state agency lake program coordinators (e.g., Illinois EPA), and leaders from the volunteer statewide lake management organizations (e.g., Illinois Lake Management Association). This year's gathering focused on building partnerships for lake and watershed protection. Instructional presentations and participatory workshops filled the 2½-day

conference. Strategies for public outreach programs, lake shoreland protection, volunteer monitoring programs, and economic impact assessments were among the topics discussed. Capping off the conference was a special evening tour at the John G. Shedd Aquarium.

* * *

"We're all downstream" is a frequently-heard phrase these days among those involved in water resource protection and enhancement. Every watershed has individuals and organizations with property ownership and resource management responsibilities—stakeholders—whose participation in watershed improvement programs is absolutely critical. Proven approaches for identifying and motivating these stakeholders was the topic of a May



1994 training workshop coordinated and cosponsored by NIPC, **Empowering Watershed Stakeholders**. Other cosponsors were the U.S. Environmental Protection Agency, the USDA-Soil Conservation Service, and the Conservation Technology Information Center. Workshop attendees included staff from local, state, and federal agencies who frequently are called upon as partners to support watershed management activities. This two-day workshop featured four intensive training sessions addressing public awareness, balancing natural resource uses through conflict resolution, stakeholder participation, and communication tools.

* * * *

Last year, NIPC's Natural Resources Department developed a course

curriculum **Designing Stormwater Best Management Practices in Northeastern Illinois**. This course was offered for the second time on October 12-14, 1993 at the Illinois Department of Transportation facilities in Schaumburg. Over 55 engineers, planners, and local officials attended the full course and over 25 attended a half-day overview session. The course is taught by NIPC staff and national experts. It offers intensive instruction on design and implementation of stormwater BMPs including filter strips, swales, infiltration trenches and basins, sand filters, and detention basins. A third offering of the course is tentatively planned for the fall or winter of 1994. Contact Tom Price or Dennis Dreher at 312/454-0400 for more information.

Watch for these Upcoming Conferences!

2nd National Nonpoint Source Watershed Monitoring Conference
September 26-30, 1994
Northbrook, Illinois

National Symposium on the Use of Ecological Restoration to Meet Clean Water Act Goals
March 14-16, 1995
Chicago, Illinois

8th Annual National Conference on Enhancing the States' Lake Management Programs
April 26-28, 1995
Chicago, Illinois

Contact NIPC's Natural Resources Department for more information on these and other meetings relating to water quality.

COMMISSION AUTHORIZED TO COLLECT FEES FOR FPA REVIEWS

Under contract with the Illinois EPA, the Commission has for over a decade conducted advisory reviews of proposed amendments to wastewater facility plans in the six-county area. While the cost of performing these reviews has steadily risen, the funding available from Illinois EPA, through Section 205j of the Clean Water Act, has remained fixed. As a consequence, the Commission sought and received legislative authorization, effective on June 9, 1994, to collect fees to supplement EPA funds to continue this important review function. The approved fee applies to ". . . each applicant who wishes to change the boundaries of a wastewater facility planning area (FPA) through an amendment to the Illinois Water Quality Management Plan required under the Federal Clean Water Act." **The fee does not apply** to any applicant whose submittal does not require a change in a facility planning area boundary.

The amount of the fee to be charged for reviews under this rule is a function of the area of the proposed FPA amendment. Small amendments involving 10 or fewer acres are charged \$10.00 per acre, amendments

involving 10 to 20 acres are charged a \$100.00 flat fee, and larger amendments are currently charged \$5.06 per acre. For further information

on FPA amendment procedures and the new fee system, contact Deborah Washington or Penny Wenstrom in the Project Review Department.

WATER RESOURCES COMMITTEE RECOMMENDATIONS TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
July 1, 1993-June 30, 1994

WQ	Applicant	Request	Finding
93-WQ-005	Village of Gilberts	FPA* Amendment	Support
93-WQ-055	Wheaton Sanitary District	FPA Amendment	Support
93-WQ-059	City of Joliet	FPA Amendment	Non-support
93-WQ-060	Village of Huntley	Level I FPA Amendment	Non-support
93-WQ-075	Village of Hainesville	FPA Amendment	Cond. support
93-WQ-077	Village of Wood Dale	FPA Amendment	Support
93-WQ-083	Village of Oswego	Facility Plan Review	Support
93-WQ-091	Vill. Roselle/Hanover Pk/Bloomdale	FPA Amendment	Cond. support
93-WQ-092	Village of Algonquin	FPA Amendment	Cond. support
93-WQ-104	Citizens Utilities Company	Plant Expansion	Support
94-WQ-003	DuPage Co. Dept. of Environ. Concerns	FPA Amendment	Support
94-WQ-004	Village of Gilberts	New Treatment Plant	Cond. support
94-WQ-005	Village of Romeoville	Plant Expansion	Cond. support
94-WQ-016	DuPage Co. Dept. of Environ. Concerns	FPA Amendment	Support
94-WQ-017	Mill Creek Water Reclamation District	Land Treatment System	Support
94-WQ-018	City of Joliet	FPA Amendment	Support
94-WQ-032	Village of Geneva	Facility Plan Review	Support
94-WQ-033	Village of East Dundee	Plant Expansion	Cond. support
94-WQ-035	Village of Frankfort	Facility Plan Review	Non-support

* wastewater facility planning area



northeastern illinois planning commission

222 South Riverside Plaza Chicago, Illinois 60606 (312)454-0400



Northeastern Illinois is diverse in its land use and complex in its political structure. It has some of the most productive farms on earth—also one of the world's greatest cities. It contains 3,714 square miles of land and 38 square miles of water. It is home to 7 million people, organized in more than 1,250 units of government.

In 1957, following a decade of rapid urbanization in the Chicago suburban area, the Illinois General Assembly created the Northeastern Illinois Planning Commission (NIPC) to conduct comprehensive planning for the six-county greater Chicago region.

The Commission has three statutory charges: conduct research and collect data for planning; assist local government; and prepare comprehensive plans and policies to guide the development of the counties of Cook, DuPage, Kane, Lake, McHenry and Will.

By necessity, regional planning deals with general development policies, not local land use detail. NIPC supports and coordinates county and municipal planning. The Commission has advisory powers only and relies upon voluntary compliance with its plans and policies.

EXECUTIVE COMMITTEE

- Donna P. Schiller**
President
- Jerry Butler**
Vice President
- Ralph Cianchetti**
Secretary
- Arthur F. Hill Jr.**
Treasurer
- Patricia Sjurseth**
Vice President for Planning
- Alan D. Cornue**
Vice President for Water Resources
- Ruth K. Kretschmer**
Past Commission President
- Shella H. Schultz**
Past Commission President
- Charlie A. Thurston**
Past Commission President
- Edgar Vanneman Jr.**
Past Commission President
- Phillip D. Peters**
Executive Director

WATER RESOURCES COMMITTEE

- Ralph Cianchetti**
Commissioner
- Alan D. Cornue**
Commissioner
- Donald Doherty**
Commissioner
- Raymond Semplinski**
Commissioner
- Patricia Sjurseth**
Commissioner
- Marcy Stanger**
Commissioner
- Edgar Vanneman, Jr.**
Commissioner
- Patricia Young**
Commissioner

COMMISSIONERS

Appointed by the Governor of Illinois

- Alan D. Cornue**
- Ruth K. Kretschmer**
- Donna P. Schiller**
- Charlie A. Thurston**
- Edgar Vanneman Jr.**

Appointed by the Mayor of Chicago

- Lemuel Austin Jr., Alderman,**
34th Ward, Chicago
- Ed H. Smith, Alderman,**
28th Ward, Chicago
- Mary Ann Smith, Alderman,**
48th Ward, Chicago
- Valerie B. Jarrett, Commissioner,**
Department of Planning and Development
- Rosanna A. Marquez,**
Assistant to the Mayor

Elected by the Assembly of Mayors

- Thomas A. Brown, President,**
Village of East Hazel Crest
- Betty M. Cheever, Mayor,**
Village of Downers Grove
- Jo Ann Eckmann, Mayor,**
Village of Libertyville
- William O'Hille, Mayor,**
City of Geneva
- Shella H. Schultz, President,**
Village of Wheeling
- Marcy Stanger, Trustee,**
Village of Fox River Grove
- Anthony Uremovic, Councilman,**
City of Joliet

Appointed by the County Board Chairmen

- Jerry Butler, Member,**
Cook County Board of Commissioners
- Danny K. Davis, Member,**
Cook County Board of Commissioners
- Herbert T. Schumann, Member,**
Cook County Board of Commissioners
- Olivia Gow, Member,**
DuPage County Board
- Patricia Sjurseth, Member,**
Kane County Board
- Richard Raffis, Member,**
Lake County Board
- Donald Doherty, Member,**
McHenry County Board
- Raymond Semplinski,**
Will County Board

Appointed by the Board of the Regional Transportation Authority

- Donald L. Totten**

Appointed by the Board of the Chicago Transit Authority

- Arthur F. Hill Jr.**

Appointed by the Board of Metra

- W. Warren Nugent**

Appointed by the Board of Pace

- Robert Parker Coffin**

Appointed by the Board of the Metropolitan Water Reclamation District of Greater Chicago

- Patricia Young**

Appointed by the Board of the Illinois Association of Park Districts

- Ralph Cianchetti**

Appointed by the Board of the Chicago Park District

- Appointment Pending**

Appointed by the Board of the Illinois Association of Wastewater Agencies

- James E. Swarhout**

printed on recycled paper

Northeastern Illinois Planning Commission

222 South Riverside Plaza ♦ Suite 1800

Chicago, Illinois 60606

312/454-0400 ♦ fax 312/454-0411

