ANNUAL WATER QUALITY REPORT FOR 1984

northeastern illinois planning commission

NORTHEASTERN ILLINOIS PLANNING COMMISSION

COMMISSIONERS March 1985

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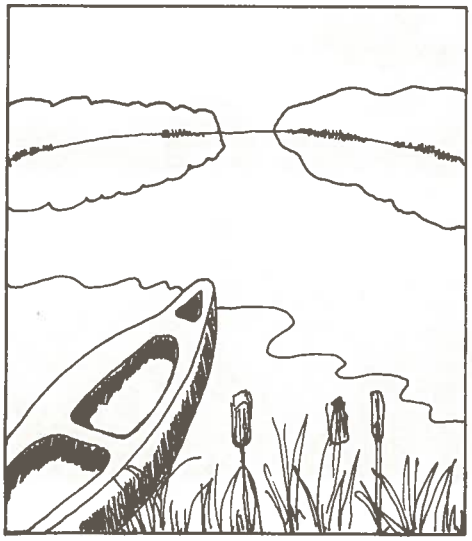
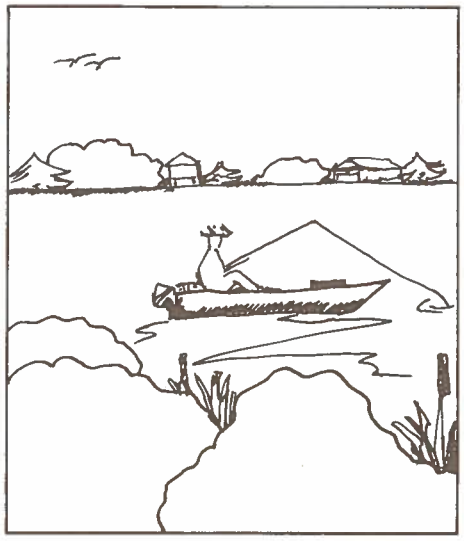
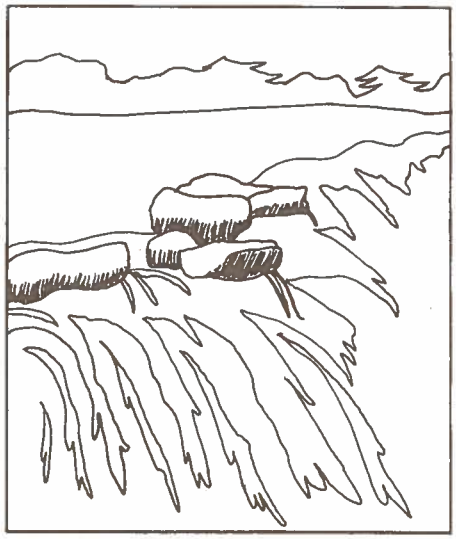
This annual water quality report was prepared in part using federal Water Pollution Control Act Section 205j funds from the Illinois Environmental Protection Agency and in part through voluntary contributions from local governments in the region.







LAKE PROTECTION HIGH PRIORITY FOR NORTHEASTERN ILLINOIS

To those of us who perceive Illinois as a vast, flat expanse of farmland punctuated by towns and cities, it may come as a surprise to learn that Illinois can boast more than 2,900 lakes which are six acres or more in size. Many of these are in northeastern Illinois.

Unfortunately, our lakes have not received their fair share of federal, state and local attention. This is due partly to their complex nature: unlike streams and rivers with swiftly moving water that can *"wash away"* pollution problems, lakes tend to act as dead-end pollutant traps, where problems are accumulated and magnified. They also are biologically complex, and are not readily amenable to management by conventional *"engineered"* methods.

Our region's lakes have suffered as well from the historical sentiment that they were the responsibility of the homeowners living around them. In reality, many of our lakes have public access, and thus deserve public care. This attitude has a special meaning when we realize that, more often than rivers and streams, our lakes are the places where the general public comes in direct contact with our water resource. Whether they use lakes for swimming, boating, or fishing, many Illinois citizens should have an opportunity to experience firsthand the benefits of pollution abatement programs.

In recognition of these principles, NIPC has played an active role in encouraging lake improvement and management activities throughout the region. Staff members have helped to expand the Illinois Environmental Protection Agency's Volunteer Lake Monitoring Program, where citizens who *"adopt"* a lake can conduct a simple but meaningful monitoring program to keep regular tabs on its water quality. Reports are prepared by lake specialists who assess the data and provide management recommendations. This information provides a historical data base for the lakes, and is used for analysis of regional water quality trends.

In addition, NIPC has helped to organize the Illinois Lake Management Association—one of the first of its kind in the nation. Staff has been involved in developing and conducting several major conferences on lake management, as well as providing technical assistance directly to municipalities, lake associations, and individuals on lake management strategies. As a result, the public has gained a better understanding of lake problems and their causes, and corrective efforts are underway on many local lakes.

The Commission has supported continuation of the federal Clean Lakes Program (Section 314 of the Clean Water Act). Through it, funds are provided (to be equally matched by local sponsors) for the development and implementation of lake protection and restoration progams. In Illinois, Clean Lakes Program projects include Lake of the Woods in Champaign County, Johnson Sauk Trail Lake in Henry County, Lake Le-Aqua-Na in Stephenson County, and the Skokie Lagoons in Cook County (see article, page 4).

But the completion of these projects and the much-needed implementation of others depends on the continued viability of the Clean Lakes Program or if necessary its replacement by state or local programs. Currently, this is the only federal program which specifically addresses development and implementation of lake management plans.

Communities, organizations and individuals are all encouraged to become more actively involved in lake resource management. The Commission may be contacted regarding participation in the Volunteer Lake Monitoring Program, upcoming lake management seminars, as well as information on other local, state and national lake management activities. Technical assistance is also available to those interested in developing or implementing a local lake management program.

Skokie Lagoons Update

The effort to restore the 226-acre Skokie Lagoon lake system in northeastern Cook County is well underway. As described in last year's Water Quality Report, the lagoons will be rescued from their degraded state by a cooperative effort of the Illinois EPA, the Forest Preserve District of Cook County, NIPC, and the North Shore Sanitary District (NSSD).

Last fall, $711,500 in partial funding for the project was provided under the federal Clean Lakes Program. An equal amount of matching funds is being provided by the Forest Preserve District. Additional funds are being sought from the federal program, with the entire cost expected to be approximately $2.4 million. It will include:

- diversion of treated effluent from the NSSD-Clavey Rd. wastewater treatment plant around the lagoons, in order to reduce the amount of nutrients coming into the system by more than 80 percent and thus limit blooms of nuisance algae;
- dredging of the sediments which have displaced more than a third of the lagoons' original water volume, as well as deepening of certain areas to create favorable fish habitat;
- reestablishment of diverse vegetation and aquatic communities, especially those that will support a diverse sport fish population.

To date, a preliminary engineering design and water quality and sediment analyses have been performed, and recreational improvement alternatives are being studied. In addition, NSSD has received a state construction grant to begin work on its wastewater diversion program, which will be completed by the end of 1986.

During the coming year, the lake restoration design will be completed, and special programs to control shoreline erosion and runoff from the lagoons' watershed will be initiated. Sediment removal is expected to begin during the summer of 1986.

Numerous water quality-related benefits are expected from this restoration project, such as improved recreation—boating, canoeing, sport fishing, wildlife observation, and in general the pleasant experience of being near clean water in a beautiful setting—all benefits that will be appreciated by the more than 700,000 people who live within ten miles of the lagoons.

Des Plaines River Wetlands Restoration

Northeastern Illinois' wetlands have gone the way of their ecosystem neighbors, the prairies—they have been filled, drained, and channelized out of existence to literally *"pave the way"* for urban development. However, as the economic value of wetlands becomes more and more apparent (for flood control, fish and waterfowl breeding, recreation and natural water purification), plans are afoot to actually reinstate wetlands in appropriate areas and *"put them to work."*

One such plan, put forth by a non-profit corporation called Wetlands Research, Inc., envisions recreating a wetland-floodplain forest-wet meadow habitat on a 450-acre site near the town of Wadsworth in Lake County. Bounded by U.S. Highway 41 on the west and a railroad embankment on the east, the site is transversed by a 2.8-mile stretch of the DesPlaines River on its journey from Wisconsin to the Illinois Waterway 100 miles south. A tributary called Mill Creek feeds into the DesPlaines here, and several mining ponds dot the site. On the whole, the area has lost most of its original natural features and is largely degraded, although hiking trails and fishing attract visitors.

Wetlands Research (a consortium composed primarily of representatives of the Lake County Forest Preserve District and the Open Lands Project, with Donald Hey serving as project director) proposes regrading the site to divert the main channel flow through a shallow, interconnected *("braided")* network of meandering streams that would slow the water velocity down from .8 to .06 feet per second, thereby increasing the detention time for water passing along that stretch from 5 hours to 3 days. The slowing and spreading out of the river also would be helpful in reducing flood peaks. In addition, wetland *"terraces"* would be constructed along the riverbanks to filter additional flow that would be diverted by pumping to the periphery of the site.

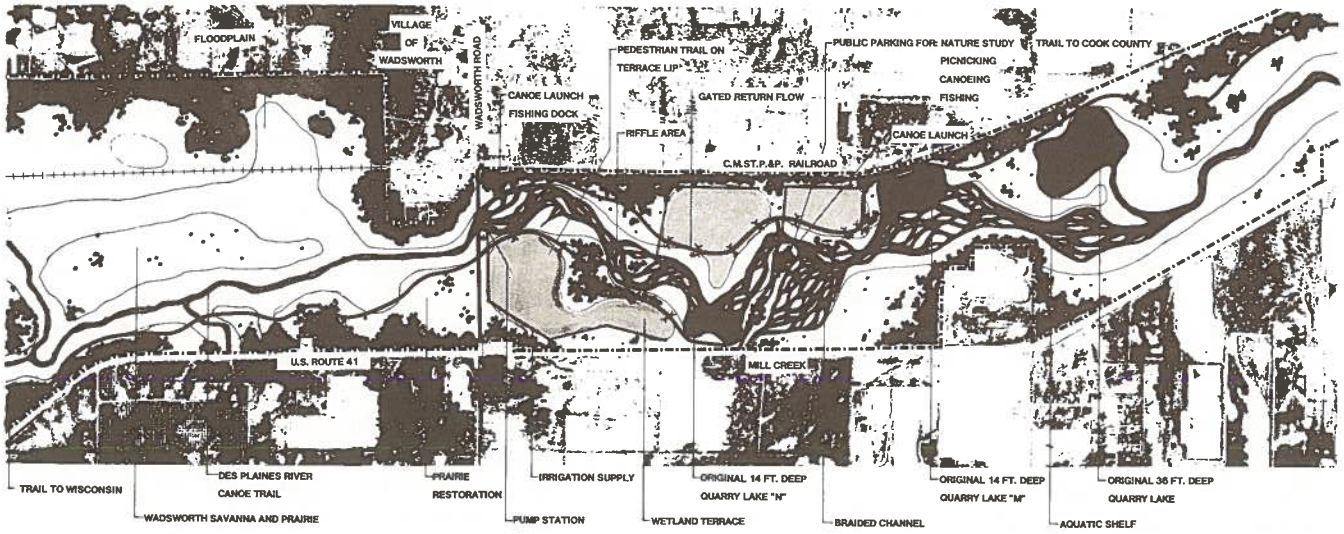
(Continued on page 5)

(Continued from page 4 - DesPlaines River Wetlands)

Most of the site would be revegetated with native species to provide a variety of bird, mammal, and aquatic habitats that might have approximated original conditions in this portion of the state where prairie, woodland, and wetland came together. It is hoped that the constructed ecosystems would attract new species to this acreage, thereby adding natural amenities to the recreational benefits (fishing ponds, hiking, nature, and canoe trails) that a rehabilitated site would offer.

But the real value of the project would be in the water quality improvements that the wetlands would provide naturally—an economically-justified service that would augment the jobs performed by sewage treatment plants upstream. In fact, proponents of the plan feel that the wetlands will be so efficient that water leaving the site will be much cleaner than the water entering it. And their claims would be carefully tested because the project would be considered a prototype whose lessons could be applied elsewhere. This wetland, in effect, will be a *"living technical research lab,"* to be intensively studied for five years by a team of hydrologists, biologists, and other scientists.

At this point, the $8.25 million project has received an impressive amount of both public and private financial support. The Lake County Forest Preserve District is donating the land (a $1.4 million value); the Illinois Department of Energy and Natural Resources has provided $72,000 for a feasibility study and preliminary engineering; and $130,000 has come from private sources ($80,000 from the Atlantic Ritchfield Foundation and $50,000 from Gaylord Donnelley) for initial planning. In addition, Congress recently appropriated more than half a million dollars (to be administered by the Department of the Interior, Fish and Wildlife Service) to begin work on a base line survey, engineering design and research planning. (The cost of future wetlands re-creation projects patterned after this prototype is expected to be lower because they would not include as thorough a research component.) Construction on the project is expected to start in July, 1985.



DES PLAINES RIVER WETLANDS PROJECT

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SCALE: 1" = 800'

Antitrust Litigation

In the year since we last reported on the $28.5 million *"Unity Ventures vs. Lake County"* lawsuit, some progress has been made, but it has taken place in Congress instead of an Illinois courtroom. In a revision of the Sherman (antitrust) Act, Congress moved to close the avenue that allowed municipalities to be liable for treble damages in antitrust cases. Called the *"Local Government Antitrust Act of 1984,"* the new provision was signed into law in October, 1984.

Being protected from liability for treble damages is good news for municipal officials, although the Act did not clarify whether local growth management and public works planning are subject to antitrust laws. However, because the Act was not made retroactive, it may not affect the Unity Ventures case. Although the jury has handed in its verdict (against the defendants) on this lawsuit, the judge has not made his ruling on it yet, so the final outcome is still undecided.

The case is a precedent-setting one because it involves a community's ability to plan for its rate and direction of growth, as well as its right to enter into intergovernmental agreements regarding the provision of public utilities and related services to private developers.

Because the private developer (William Alter of Unity Ventures was unable to obtain a connection to the regional sewage treatment plant for his proposed subdivision, Lake County and the Village of Grayslake were charged with conspiring to restrain trade and denying due process (the *"right"* of sewage treatment) to the developer. (The proposed development would have placed a housing subdivision on a 600-acre tract of farmland at least two miles away from the nearest sewer).

However, the jury in the trial was directed not to consider the *"social"* implications of Grayslake's refusal, and the prosecuting attorneys were able to concentrate instead on the *"marketing"* aspects of the case: They claimed that Grayslake and its neighboring village of Round Lake Park were in effect competing for the tax dollars such a development would have offered. (The property had been annexed by Round Lake Park but was within Grayslake's *"sphere of influence"* for wastewater treatment, as determined by an agreement between Grayslake and Lake County. It was this very agreement that the developer charged as illegal because its application in effect prevented the construction of his subdivision and posed what he alleged was a *"restraint on trade."*)

The jury decided in favor of the developer. The defendants were found guilty of violating Section 1983 of the Civil Rights Act of 1871 and Section 1 of the Sherman Act, and were fined treble damages totalling $28.5 million.

Alarmed by the jury's verdict, NIPC, the National Association of Regional Councils, the Metropolitan Housing and Planning Council, and the American Planning Association petitioned the court to file an amicus (*"friend of the court"*) brief on the defendant's

behalf. The brief was turned down by the presiding judge, Hon. Nicholas Bua. However, the Illinois Attorney General was prompted to file a brief of his own, which was accepted by the court.

In his brief, the Attorney General argued that Illinois statutes permit *"...municipalities and other units of local government to execute agreements for the efficient provision of sewer services regardless of the affect (sic) on competition."* He forcefully added that: *"...a municipality can have no greater governmental interest than controlling the development of land within and adjacent to its borders. Although this interest may restrain the development of real estate, this restraint was contemplated by the legislature... An attack on such a restraint must be addressed in the legislature rather than in an antitrust lawsuit."*

Although NIPC supports this view, it unfortunately does not change the fact that wastewater agreements still are liable to lawsuit. Meanwhile, citizens of Grayslake and Lake County are uncertain of their liability for the $28.5 million. Even if triple damages are no longer a threat to future sewer agreements, the outcome of this case leaves officials in the 6,700 municipalities, townships, districts, and counties in Illinois holding their collective breaths about whether they will have any real powers to control their communities' growth, and prudently spend dollars for sewer extensions.

Some good news, however, has recently come from the U.S. Supreme Court's decision in the *Town of Hallie v. City of Eau Claire* case. In that case, four towns surrounding Eau Claire, Wisconsin demanded sewer service from the city and sued on anti-trust grounds when Eau Claire refused to provide it unless the areas to be served were annexed to the city. The towns claimed that they were competitors with Eau Claire and the city's withholding of sewer service constituted an anti-competitive monopoly. The court held that Wisconsin's statute authorizing cities to employ annexation agreements was a *"clearly articulated and affirmatively expressed"* state policy. The implication of this is that local governments do not have to worry about the anti-competitive implications of actions they may take under their statutory enabling powers. The court also made another important interpretation in the Hallie case. It stated that the state did not have to maintain a monitoring function (a requirement in some state-sanctioned private anti-competitive situations) over the anti-competitive actions of local governments authorized by state statutes. The application of this ruling to the Alter case remains to be seen.

Operation Topsoil

Ever since the *"Dust Bowl"* era of the '30s, Americans have been aware that erosion of topsoil from farmland poses a serious threat to agricultural productivity. Only recently have we begun to realize the negative impacts erosion has on water quality, as rainwater laden with toxic chemicals from herbicides and pesticides or nutrients from fertilizers, or oils, salts, and greases from highways washes off the land and ends up in our lakes and streams.

In Illinois alone, approximately 180 million tons of soil are lost each year through erosion, soil that carries with it chemicals that provide heavy pollutant loads to receiving streams. Yet, because such pollution does not come from a single source, controlling runoff becomes a sticky issue. Even now, contemplated revisions to the federal Clean Water Act shy away from mandating specific enforcement measures, instead accentuating local initiatives.

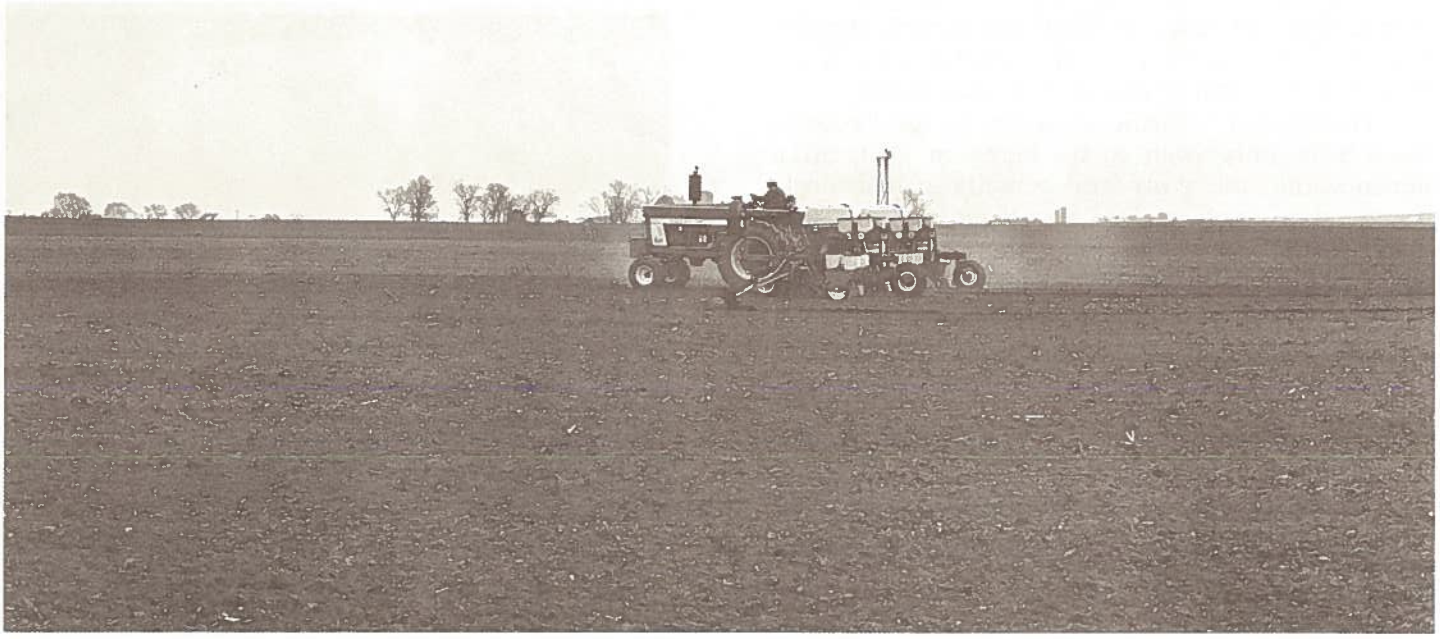
One such important initiative has begun this past fall in the Fox River-Chain O'Lakes area of McHenry County, touted as the busiest recreational waterway in the nation. This system receives more than 34,000 tons of sediments annually, carried in by the tributary streams in the Fox River Valley watershed. Such an enormous input of silt and organic debris clogs the connecting channels between the lakes and threatens aquatic life.

Concerned about both the environmental and the economic damage caused by erosion and sedimentation, as well by the apparent lack of any really workable solutions to date, an environmental group called the McHenry County Defenders has inititated a program called Operation Topsoil supported by a grant from the Joyce Foundation. The program seeks to bring together farmers, recreational property owners, and representatives of federal, state (both Wisconsin and Illinois), and local agencies to develop and implement cooperative strategies to control runoff in the Chain O'Lakes watershed.

In order to assess the problem better, the Defenders have mapped the location of soils in the county that have a high erosion potential. Program director Jerry Paulson will be evaluating the impact of federal farm legislation (especially the Farm Bill, which is up for Congressional reauthorization during 1985) on the availability of funds for federal soil conservation programs. A major effort to contact and educate local property owners is underway, and a regional conference sponsored by the McHenry County Defenders is planned for this coming fall.

Already Operation Topsoil has expanded to examine the effects of erosion from construction sites (an important aspect to consider in an area under great recreational development pressure), as well as from drawdowns of the river for flood control purposes.

NIPC sees this type of effort as a workable approach to a very difficult problem. Persons interested in learning more about Operation Topsoil are encouraged to contact Jerry Paulson at 815-459-0450, McHenry County Defenders.



Hydrologic Modifications and Their Effects on Stream Use

Many of the streams in northeastern Illinois can be classified as *"urban,"* a term which immediately conjures up images of sluggish, debris-clogged waterways that flood often, smell awful, and look worse. Unfortunately, this reputation makes our local streams easy prey for a variety of hydrologic modifications—channelization (straightening and deepening of streambeds); clearing and snagging (removing obstacles from the water and along the banks); and filling of adjacent wetland or floodplain areas.

Often such changes are proposed to improve drainage or alleviate flooding problems, but they don't take into consideration the negative effects they might cause to aquatic habitat, recreational use, and downstream water quality. Worse yet, these last three issues traditionally have not received adequate consideration under the law, either.

For example, Section 404 of the Clean Water Act prohibits the filling of wetlands without a permit authorized by the Corps of Engineers and the USEPA, but this applies only to wetlands adjacent to navigable waterways, and it offers no protection whatsoever when wetlands are threatened by being drained. Recent research has shown that the runoff from drained marshes and wet meadows (which, when normally functioning, serve as traps for nutrient-rich sediments) is so rich in phosphorous that it can have as detrimental an impact on its receiving waters as a pollution point source.

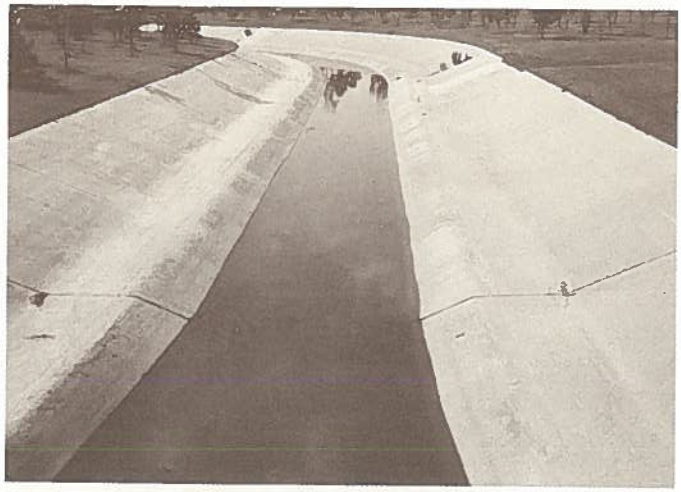
In Illinois, the rules of the state Division of Water Resources allow channel modifications within streams only if no feasible alternatives exist to achieve the purpose of the project. However, in practice, channel modifications continue to occur, especially when they are part of smaller projects which, when evaluated piecemeal, are not considered *"significant"* enough to have any impact.

Unfortunately, their cumulative effect on downstream uses and water quality usually is not assessed until it's too late. And the resultant losses to local communities—in terms of flood and erosion control, water quality, fish habitat, and recreational and aesthetic benefits—can be measured in real dollars.

Therefore, it's to the advantage of local governments to be fully aware of the long-term costs often hidden within the short-term benefits of hydrologic modifications—before they give permission for such alterations to be made. Here are some important points to keep in mind when planning for river edge *"improvements:"*

- ***Streambank vegetation is a must.*** Studies have found that vegetation can effectively filter sediment from runoff and keep it out of the stream (and it's the sediment that contains 85 percent of the phosphorous and 70 percent of the nitrogen in runoff). A waterway left unshaded by nearby shrubs and trees will have instream water temperatures 6-9°, C higher than normal. As a result, it may no longer be able to support certain desirable fish species. In addition, the water will have a lower oxygen capacity and will be more vulnerable to blooms of nuisance algae. Vegetation also stabilizes the streambanks and reduces erosion. (See box on next page for ways to manage vegetation for both flood control and wildlife habitat.)

- ***Channelization often causes more problems than it solves.*** Water moving along a straight, uninterrupted path moves more quickly, scours out more of the river bottom and sides, and dumps a greater volume of water and sediments downstream. Water slowed by traveling along meanders has a greater self-cleansing capability—important in considerations of water quality. What's more, an artificial channel reduces the habitats necessary for a variety of macroinvertebrate and fish species, and without this type of variety, a whole series of recreational uses suffers—fishing, boating, hiking, camping, etc.



(Top: Natural conditions – Lily Cache Creek near Plainfield, Bottom: Highly modified conditions—Higgins Creek near Mt. Prospect)

- ***Wetlands are worth their weight in gold.*** Research has shown that many wetlands can actually serve as floodwater reservoirs and natural filtering systems that trap sediments and purify the water that moves slowly through them. In addition, their value as fish spawning areas and waterfowl nesting sites is unequalled.
- ***Flooding is a natural process as well as a natural hazard.*** This means that although it's impossible to completely prevent flooding, an understanding and respect for natural processes will help to control when, where and how the water is going to collect. Thus, most types of construction/development allowed in any portion of a floodplain not only will be deliberately courting danger from inundation, their placement also will interfere with the area's natural hydrologic processes, regardless of *"mitigative measures."* This tends to aggravate problems downstream where the floodwaters, deterred from their natural *"spreading out"* pattern, are forced to converge with increased volume, velocity, and elevation.

As stated earlier, legislation on both the state and federal levels leaves gaps in coverage that must be filled by local government officials, who must weigh changes made for drainage and development against the benefits of a *"natural ecosystem."* As part of its comprehensive development plan, NIPC suggests that municipalities and counties play a larger role in protecting their floodplains, wetlands, and riverine natural areas through thoughtful zoning controls, refusal to extend utilities into these areas and a cooperative approach among communities in evaluating the cumulative effects of stream channel modifications. Only by careful provisions for land use can we begin to solve some of our broader-based water quality problems, to which land use is inextricably linked.

(Upper Salt Creek)

Modified Stream Clearing Techniques

While it's true that fallen trees and built-up debris that clog the flow of streams can aggravate flooding problems in their immediate vicinity, it's also true that extensive snagging (removing obstructions from the channel) and clearing (removing all significant vegetation from the stream banks) can cause erosion, destroy aquatic habitat, and actually add to flooding problems downstream. At this point, harrassed local officials wonder if there can be a happy medium.

Scientists researching the subject seem to think so, and some of them advise *"modified"* clearing and snagging techniques, including:

- Removing fewer trees along the river edge (especially those whose roots help stabilize the bank) and simply pruning those branches that protrude below normal flood height.
- Removing only those dead or dying trees that promise to become a major block to streamflow, and allowing their stumps (and soil-stabilizing root systems) to remain intact. Dead trees that do not threaten streamflow should be retained for wildlife habitat.
- Ignoring minor organic debris and embedded logs that are aligned with the flow because these have value as macroinvertebrate and fish habitat, and, if located properly, also can retard erosion.
- Keeping machinery and access routes as small-scale as possible to lessen damage on the surrounding property.
- Establishing vegetation management zones (*"buffer strips"* or *"greenbelts"*) running along both sides of the waterway to filter runoff, reduce erosion, and maintain water temperatures supportive of aquatic life (the shade cast by riverbank trees and shrubs provides this service).
- Scheduling work to avoid prime fish spawning and fisherman use seasons.
- Ensuring that the result appears as natural as possible.

These are just a few suggestions to help retain some of the important natural characteristics of an urban stream while modifying the most flood-prone aspects. NIPC staff has further information on the subject. Call Dennis Dreher at 454-0400 for a bibliography.

Privately Owned Point Sources

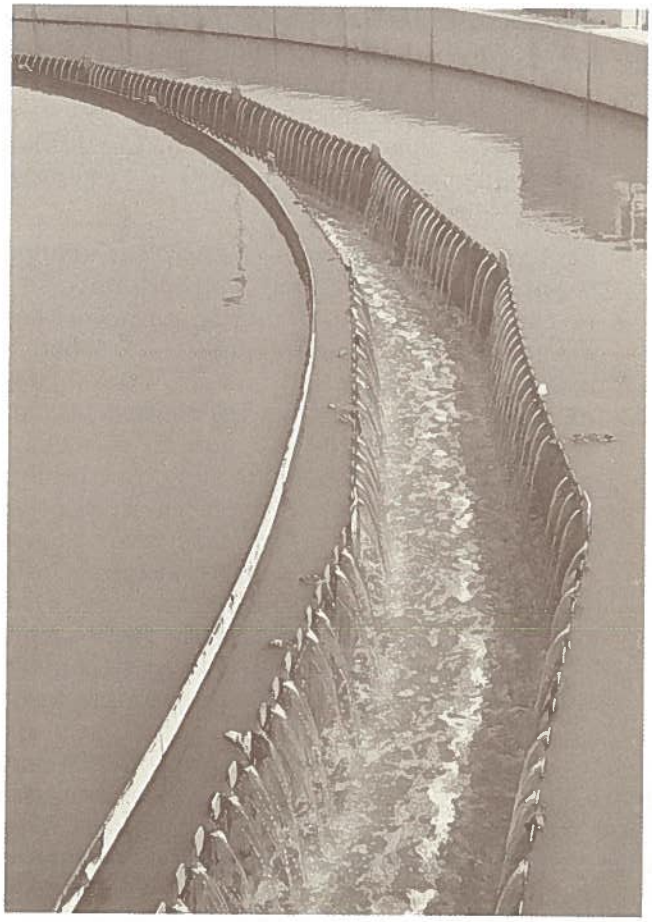
During the past several years, the Areawide Water Quality Steering Committee has been confronted with controversies over privately-owned sewage treatment plants. These small, scattered operations are usually built by developers to service residential subdivisions, shopping centers, and industrial parks which are too far from municipal sewage systems to allow an affordable hookup. With the elimination of federal dollars for sewage treatment plant expansions, the pressure to build more plants of this type will become greater.

Although designed with the intent of protecting the water quality in nearby streams, there is widespread feeling that the extended operation of some of these facilities has just the opposite effect. And correcting the problem can prove to be extremely difficult. Thus far, evidence against small private plants is anecdotal, because no systematic study has been completed that analyzes their performance in comparison to larger public plants.

Frequently, the problems begin with the decision to permit development at locations distant from established public wastewater treatment facilities. Such decisions by land owners and zoning authorities often have created situations where the types of land use are too intensive to permit on-site treatment, but too small to support an economic and effective treatment facility. The resulting private treatment plants operate without full-time staff and without backup equipment to respond to malfunctions. Thus, a record of violations and complaints may begin to build. Likewise, small size often goes hand-in-hand with inadequate maintenance, further increasing the risk of failure.

Another stumbling block appears to be enforcement. It is no secret that the regulations protecting water quality are really effective only as long as they are enforced. Under the IEPA's current budget, money just isn't available to staff the more intensive surveillance activities needed for these widely scattered plants. IEPA has recently initiated an intensive monitoring effort on small treatment facilities in northeastern Illinois with inspections two or three times a year instead of the usual once every 1-3 years.

However, the fact remains that IEPA, like its federal counterpart, must rely on the individual operators to keep it apprised of the contents of their plant's effluent, as well as any problems they may have meeting their effluent limitations. This *"honor system"* approach has not been very effective: operators who neglect to file their reports have not been fined, and some plants who have reported permit violations have been allowed to continue operating for years without corrective measures. Once again, the problem with enforcement is simply that these *"fish are too small to fry"*—the state reasons that there are many more serious offenders worth the effort of a prolonged battle in court.



As a result, the problem lands squarely in the laps of local community officials, especially when the developer/property owner of the finished project either goes bankrupt, or admits that his plant will never be able to meet water quality standards without technical help. Then the local government is saddled with the responsibility of either completely taking over the operation and maintenance of the plant, or using tax dollars to run a sewer line connecting it to the public facility. Either way, the community ends up footing the bill for what originally had been an attractive, *"care-free"* addition to the local tax base.

Although this problem is largely unresolved in northeastern Illinois, NIPC feels that better planning and regulatory provisions can be developed to deal with this issue. Local communities must adopt a more aware and self-protective stance in reviewing proposals for and granting zoning variances to allow developments with self-operated treatment plants.

On the state level, the Illinois EPA can toughen up its permitting policies for these facilities to require, for example, daily attention by unskilled operators just to make sure equipment is operating to augment less frequent visits by skilled operators, as well as better assurances of long-term maintenance capability through such measures as performance bonds. Better design features can make successful plant operation more certain even in the event of a breakdown in a plant component. In addition, future IEPA budgets and work programs could include stricter surveillance and enforcement capabilities.

Editorial

Several times during this past year's water quality reviews we at NIPC have encountered situations involving local zoning decisions that created wastewater service problems. A few cases involved a county that zoned for mobile home developments beyond the planned service area of adjoining municipalities. In other instances, a decision was made by villages without sewers to zone a single parcel for a residential density or for a commercial activity necessitating wastewater treatment.

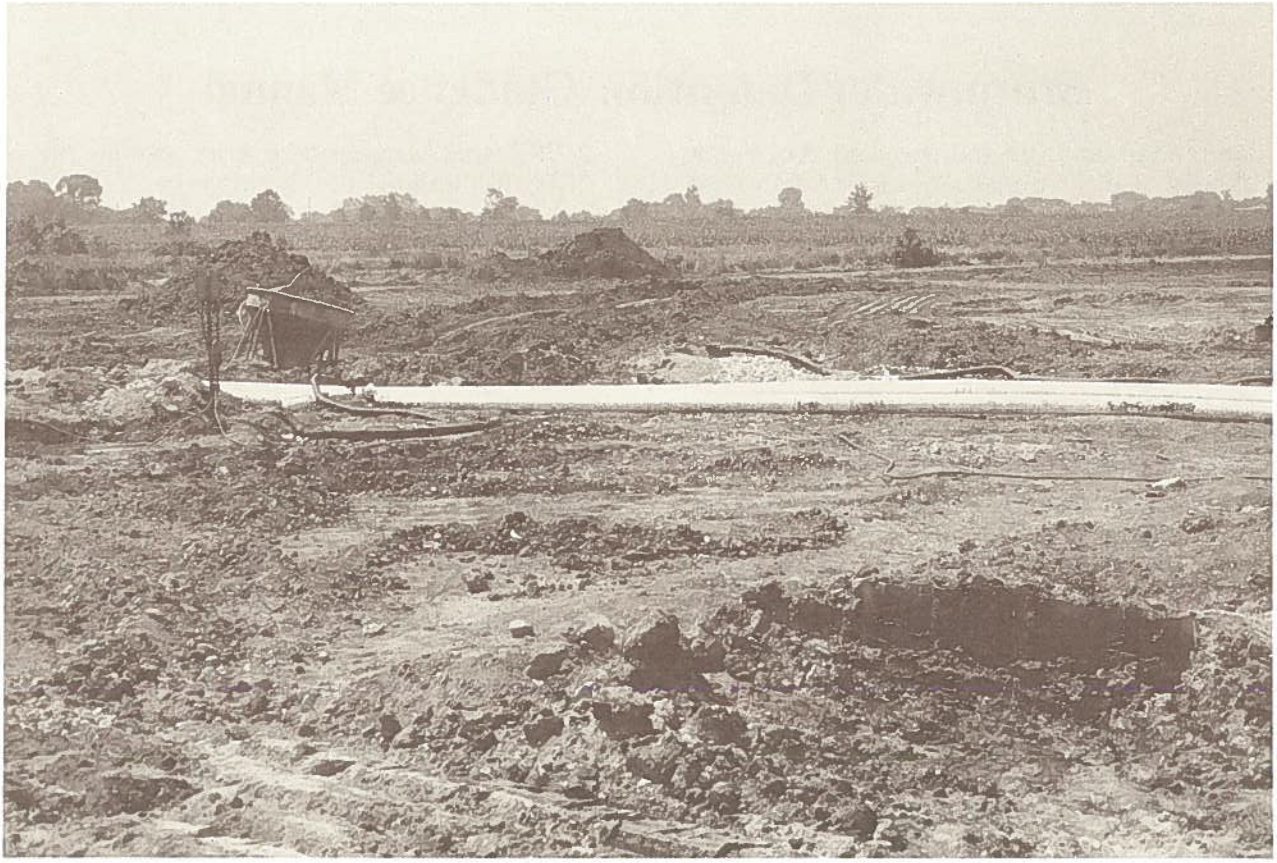
In each situation, the results have been unpleasant for the local government. The county's decisions usually have led to choices of small package plants or extensions of service from the distant village. The extension of service frequently has skewed the development plans of the village, while installing a privately-operated plant has often led to operation and maintenance problems described elsewhere in this report. Environmental damage is inevitable when a small treatment plant in a previously unsewered town introduces a discharge of effluent into a previously pristine stream.

Project approvals of this sort beg the question of whether to sewer other parts of the town. If a village has permitted one development at a density requiring sewers, the precedent has been established for subsequent petitioners. Although the initial action might be taken in the interest of building a tax base, there are many veterans of this process who can tell you that the shift from country town to suburban town does not result in lower taxes.

Nor can one look to other governments to solve the environmental problems. The Illinois EPA works within statutory limits for turning down wastewater discharge permits and is hard-pressed financially to monitor and enforce standards on these little treatment plants. In some cases, a regional interceptor can come to the rescue and carry the wastes to a sophisticated water reclamation plant miles away. But there aren't dollars enough to serve all parts of our vast region.

The moral of this story is: Beware of that first zoning decision which creates the need for sewers where there aren't any. Land use planning and wastewater planning must take place together. Past failures to do so still haunt us.

Virginia M. Hayter



Update on the Construction Grants Program

As the battle over Congressional reauthorization of the Clean Water Act gears up once again, municipal officials all over the country have their fingers crossed about the fate of the federal Construction Grants Program. Without the funding provided through this program, many community wastewater treatment facilities will not be able to meet the July 1, 1988 deadline for coming into compliance with final effluent regulations, as mandated by the Clean Water Act.

In Illinois, the state EPA has required that facilities not currently meeting final standards submit their Municipal Compliance Plan (MCP) by June 30, 1985, which describes how they plan to meet the 1988 deadline. Many communities have filed their MCPs and had them approved, but have not been able to implement them because of a shortfall of both state and federal funds. As a result, the state legislature in the IEPA appropriation bill for FY 85, specifically named 55 *"backlog"* projects to receive a state grant of 15-20 percent to complement their existing federal grant for a total not to exceed 70 percent. Communities not on the special *"backlog"* list probably don't have a chance for funding until beyond FY 86, according to the IEPA.

A cutback in the federal Construction Grants Program would seriously impede progress towards the 1988 deadline. The Reagan Administration's budget proposal for the program requests a 1986 budget authority of $2.4 billion (the program's current level of funding) and would begin a 4-year phaseout that would drop the amount of funding by a rate of $600 million per year. Under this proposal, money provided after FY 85 would be only for projects already underway; no new starts would be funded. After the phaseout, communities would be expected to finance waste treatment facilities through market sources with assistance as state governments may provide.

If the legislation pending before Congressional subcommittees is any indication, it may be that Congress has a more generous attitude toward the Construction Grants Program. The Senate bill (S. 652) would continue funding the program at its current ($2.4 billion) rate through 1991. Then it would begin a four-year phaseout (at $600 million/year) to 1994.

The House bill (H.R. 8) would include a four-year reauthorization of the program at twice its current level, and would not comtemplate any funding termination at all. Both the Senate and the House bills propose providing assistance to states to establish revolving loan funds, but it is understood that, at least for the next few years, these would serve to augment, not replace, the program.

As of this writing, the Association of Metropolitan Sewerage Agencies (AMSA) has joined forces with other national groups such as the Sierra Club, the League of Women Voters, and the National Wildlife Federation to urge Congress to continue the funding for the Construction Grants Program for the next several years at a minimum level of $2.4 billion. AMSA

(Continued on next page)

Stormwater Detention Guidance Manual

When rainfall lands on the paved areas of northeastern Illinois, it picks up an impressive load of solids, metals, nutrients and other materials before being washed into nearby waterways. As a result, *"stormwater runoff"* often is responsible for violations of water quality and stream use standards.

In an effort to better understand this problem and how to address it, the State of Illinois and NIPC participated in The Nationwide Urban Runoff Program (NURP). In its 1985 Water Pollution Program Plan, the Illinois EPA concludes that *"The NURP results indicated that detention basins were the most effective best management practice"* for controlling pollution caused by urban stormwater runoff. This is good news for northeastern Illinois because 80 percent of the communities in this region already have implemented stormwater detention ordinances, primarily for flood control purposes.

However, although these ordinances have spawned the construction of hundreds of detention basins, such facilities are not equally efficient or effective in capturing and treating runoff (thereby protecting water quality and helping communities to meet instream standards and use objectives). As part of the NURP studies and other work around the country, NIPC has isolated the factors necessary for stormwater detention basins to provide urban runoff pollution control.

As a result, the Illinois EPA is supporting NIPC in the preparation of a guidebook on *"stormwater detention for water quality."* Its goal will be to assist local municipalities in choosing the type of basin design—for either building new facilities or retrofitting existing ones—that will provide water quality benefits in addition to flood control at little or no additional capital cost. Publication of the guidebook is scheduled for this spring.

In order to prepare the guidebook's design criteria, NIPC has conducted a survey of design parameters for existing facilities throughout the region, and how communities rate the performance of these facilities. If you have any comments or experiences in this area that you'd like to share with the authors of the guidebook, call Gary Schaefer at NIPC. Other publications on the topic are also available from NIPC offices.

(Continued from page 12 - Grants Programs)

also is asking that Congress *"ensure the grant flow to projects underway and to new projects yielding a maximum return in terms of environmental gains* (consistent with the enforceable requirements of the Clean Water Act) *and people served."*

Meanwhile, back in Illinois, Governor Thompson has suggested, as part of his proposed *"Build Illinois"* program, that an additional $335 million in grant assistance be provided over the next five years to enable 43 communities still on the waiting list to be provided with funds for wastewater treatment improvements. The proposal also promises that *"funds...will be available for new projects which are directly related to economic development opportunities."* Whether or not *"Build Illinois"* will be implemented is still undecided (its funds will come from taxes on soda pop and used car sales), but one thing is certain: full funding from both the state and federal government will probably be necessary before Illinois communities come into full compliance with the 1988 deadline for effluent limitations.

TABLE 1: NORTHEASTERN ILLINOIS COMMUNITIES ANTICIPATING WATER POLLUTION CONTROL GRANTS THROUGH SEPTEMBER 1986

Project Name	Priority Number	Estimated Project Cost	Estimated Grant	Funding Year	Funding Source
MSDGC*	4	35.90	26.3	1985	F, S
MSDGC	4	25.40	17.7	1986	F, S
MSDGC	4	128.00	90.0	1986	BI
Berkeley	4	0.28	0.20	1986	BI
McCook	4	0.55	0.40	1985	F, S
Northlake	4	0.16	0.11	1986	BI
Bensenville*	7	2.30	1.70	1985	F
Itasca	15	7.60	4.20	1985	F, S
South Chicago Heights	17	0.69	0.50	1985	F, S
Woodridge	19	2.00	1.40	1985	F, S
Carpentersville	29	1.92	1.34	1986	BI
Buffalo Grove	31	1.92	1.34	1986	BI
Glencoe	31	0.40	0.30	1985	F, S
Glenview	31	0.10	0.70	1986	BI
Morton Grove	31	0.06	0.04	1986	BI
Niles	31	0.67	0.47	1986	BI
Palatine	31	1.70	1.20	1985	F, S
Schaumburg	31	1.30	0.90	1985	F, S
Wheeling	31	4.76	3.33	1986	BI
Wilmette	31	0.64	0.45	1986	BI
Alsip	83	0.75	0.53	1986	BI
Evergreen Park	83	2.63	1.83	1986	BI
Garden Homes S.D.	83	0.10	0.07	1985	F, S
Hazel Crest	83	0.08	0.06	1986	BI
Kimberly Heights S.D.	83	0.04	0.03	1985	F, S
Oak Forest	83	0.57	0.40	1985	F, S
Bartlett	143	2.70	1.60	1985	F, S
Lansing	150	0.90	0.60	1985	F, S
Lake Forest	152	5.94	4.16	1986	BI
Elgin S.D.	159	8.00	5.60	1986	BI
Wauconda	208	0.50	0.35	1986	BI
Villa Park	274	10.40	7.30	1986	F, S
Downers Grove S.D.*	434	11.00	8.30	1986	F
Frankfort	622	4.80	2.20	1986	F, S
Lockport, Lockport Heights S.D., Bonnie Brae S.D.	624	3.09	2.00	1985, 1986	S
Lockport	624	1.50	1.10	1985	F
Crest Hill	627	7.50	5.00	1986	F, S
Homewood	631	10.10	6.70	1986	F, S
Elmhurst**	633	5.50	4.10	1985	F
Hanover Park	634	2.30	1.60	1986	F, S
North Shore S.D.	636	8.00	4.00	1985, 1986	S
Roselle	637	5.70	3.20	1986	F, S

*Projects *"grandfathered"* at 75% Federal Funding
**Innovative and Alternative Grant
F = Federal
S = State
BI = State Build Illinois

As the federal share of construction grant money dropped to 55 percent, the State of Illinois moved to support the construction of sewage treatment works in Illinois. Public Act 83-1231 authorized another 38 million dollars of state money for matching grants not to exceed 20 percent of project costs to supplement the federal grants for fiscal years 1985 and 1986. In addition to this effort the governor's *"Build Illinois"* program contains funds for construction and upgrading of wastewater treatment plants in areas anticipating economic development in the next few years. A list of projects expected to be funded in calendar years 1985 and 1986 is shown in Table 1.

AREAWIDE WATER QUALITY STEERING COMMITTEE (AWQSC) REVIEWS ACTIONS DURING THE PRECEDING YEAR

Amendment Application	NIPC Review No.	Date of AWQSC Consideration	Amendment Description	AWQSC Recommendation
Aurora Sanitary District	84-WQ-001	2-1-84	Water quality review of the *"Addendum to the Facility Plan for Wastewater Systems"* which recommended rehabilitation of sanitary sewers, modification of diversion structures, and expansion of their treatment plant from 32.0 mgd to 42.0 mgd.	Approval
Villa Park	84-WQ-002	2-1-84	WQ reviews of the Revised Facility Plan and Environmental Assessment which made several recommendations for improvements to wet weather flow facilities.	Approval
MSDGC	84-WQ-008	3-7-84	MSD request for comments on a proposed service agreement with the Village of Roselle.	Approval of comments
Village of Roselle	84-WQ-013	4-4-84	Review of *"Report on Facilities Planning for Village of Roselle"* — recommended expansion of main Roselle plant to 2.5 mgd, modification of FPA boundary, and delineation of a Roselle service area.	Approval
Gateway Mobile Home Park	84-WQ-016	4-4-84	New point source permit for construction of a 0.034 mgd treatment plant to serve the proposed Gateway Mobile Home Park. This is an update of water quality review No. 82-WQ-097. At that time it was recommended that wastewater be routed to the Village of Frankfort's treatment facilities.	Not Approved
Hanover Park	84-WQ-027	7-17-84	Request for a facility planning area boundary amendment to reflect a corporate boundary between Carol Stream and Hanover Park.	Approval
Abbott Laboratories (North Chicago)	84-WQ-028	9-5-84	Proposed *new* NPDES permit for outfall 001 to Lake Michigan via a storm sewer for 0.26 mgd of non-contact cooling water and 0.04 mgd of uncontaminated stormwater.	Approval
Lawrencewood Management/Robert Krilich (Village of Lakemoor)	84-WQ-044	2-13-85	Request for a plan amendment to reflect the construction of a 95,750 (gpd) aerated lagoon treatment system for the proposed Sullivan Lake PUD with discharge to Sullivan Lake.	Not Approved[4]
Hoffman Estates	84-WQ-047	3-6-85	Village of Hoffman Estates[1] request for a plan amendment to transfer the 1100 acre Expo site from the Barrington FPA to the Elgin FPA. Comments by the Village of Hoffman Estates were submitted at the 3-6-85 meeting. The Village requested that in its statement to the IEPA, the Commission should indicate that the Barrington Wastewater Treatment plant does not have the capability to provide service to all of the Barrington FPA or indicate support of Hoffman Estates[1] amendment request to reduce the size of the Barrington FPA by 1400 acres.	Elevated to Level I at the 1-9-85 meeting
Holiday Park	84-WQ-034	8-1-84	Proposed NPDES permit for the Holiday Park Development's 0.113 mgd package treatment plant on Galligan Road discharging to an unnamed tributary to Tyler Creek. (Update of 83-WQ-059). Committee approval of a letter submitted to IEPA stated the Commission's opposition to issuance of an NPDES permit for the Holiday Park Dev.	Not Approved[1]
CPC International	84-WQ-036	9-5-84	Proposed new NPDES permit for Corn Products Co. International for the discharge of 60.0 mgd of non-contact cooling water from outfall 001 into the Chicago Sanitary and Ship Canal.	Approval
Gilberts	84-WQ-037	11-7-84	*"Wastewater Facility Planning Study"* for Gilberts FPA which recommended sewer, force main, and pump stations transporting wastewater to Elgin Sanitary District's North Treatment Plant.	Approval[2]
Frelk Development/ Prestonfield STP	84-WQ-040	11-7-84	Amendment request to reflect the expansion of the Prestonfield Sewage Treatment Plant from 10,000 gpd capacity to 125,000 gpd capacity. (Later reduced to 60,000 gpd per county recommendations).	Approval with conditions
Lake in the Hills/Lake in the Hills Sanitary District	84-WQ-041	2-13-85	Request for amendment of the FPA boundary to reflect recent annexations by the Village of Lake in the Hills.	Not Approved[3]

[1]This request was not approved because of the committee's preference for a subregional approach to wastewater service. Attempts at reaching an intergovernmental agreement with the Village of Gilberts whereby the Holiday Park Development would be included in their facilities plan (Review # 84-WQ-037) failed.

[2]Approved with an amendment stating that the committee's vote of conditional support for Gilberts' plan should not prejudice IEPA's decision on the NPDES permit for the Holiday Park development and that a statement expressing this be sent to IEPA.

[3]Requested amendment not supported by the Commission's *"Recommended criteria for Facility Amendments to the Areawide Water Quality Management Plan for Northeastern Illinois."* No new information was received by 2-13-85 to justify requested amendment.

[4]This amendment request was not approved because of conflicts with NIPC's December 1983 endorsed population and household forecasts for the Village of Lakemoor, the Governor's Executive Order # 4 regarding the preservation of Illinois farmland and the Illinois Farmland Protection Policy, the *Lake County Illinois Framework Plan* and the *Regional Land Use Policy Plan.* Non-endorsement of the proposed development by the areas it would directly affect and Commission concerns regarding the effects of using Sullivan Lake for treatment discharge on neighboring state natural areas and water quality conditions in the areas also contributed to the committee's denial.

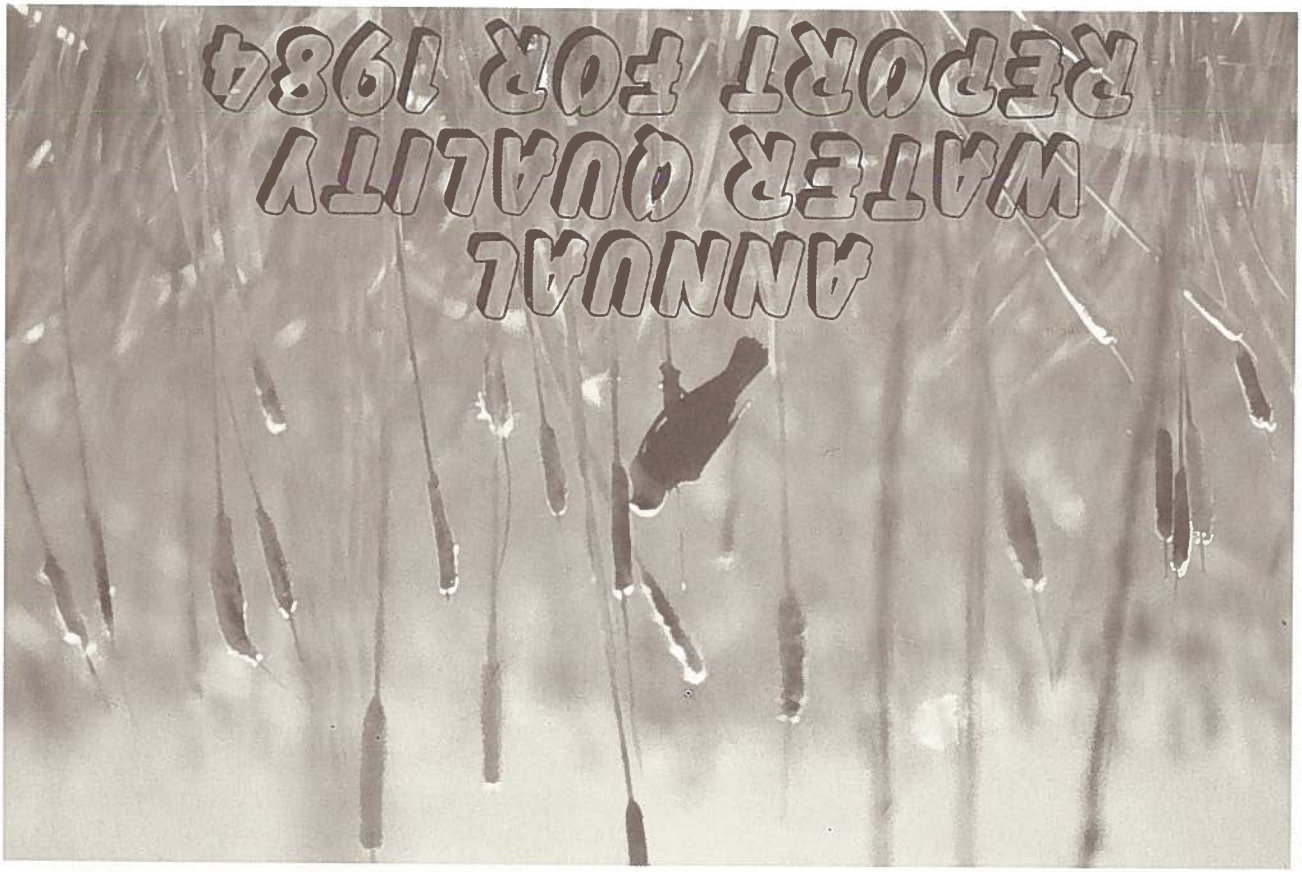
FY 86 WATER QUALITY MANAGEMENT WORK PROGRAM OF THE NORTHEASTERN ILLINOIS PLANNING COMMISSION

Funded Work Items

- NIPC will continue to review facility plans and NPDES permit requests for consistency with the Illinois State Water Quality Management Plan (federal 205j funds through IEPA).
- NIPC will continue its role as mediator of conflicts between designated management agencies or private parties requesting amendment of the State Plan. The vehicle for mediation will be the county water quality coordinating committees where they exist or the Areawide Water Quality Steering Committee (205j).
- NIPC will again coordinate the Volunteer Lake Monitoring Program in northeastern Illinois. As part of this program NIPC will train citizen volunteers to sample lake quality on a semi-monthly basis, collect their data, write an annual report on sampling results, and provide technical management assistance (205j).
- NIPC will continue to participate in meetings of the Stream and Lakes Use Management Group composed of representatives of state natural resources agencies to review existing and recommend potential use designations for streams and lakes in northeastern Illinois (205j).
- As part of Phase II of the Skokie Lagoons Lake Restoration Project, NIPC will coordinate the selection and design of restoration measures for the lagoons (Cook County Forest Preserve District and USEPA funds through the IEPA).
- NIPC will continue to keep track of northeastern Illinois diversion of Lake Michigan water, using the Commission's computerized accounting system (Illinois Division of Water Resources).
- NIPC will be responsible for preparation of the next annual water quality report (205j).

Possible Future Work Items

- NIPC will possibly assist Wetlands Research Inc. in its construction of a wetland on the Des-Plaines River in Lake County, through the provision of hydrologic information.
- NIPC also hopes to implement a wetland prioritization project which would utilize existing NIPC regional plans and coordinate them with wetland planning and protection efforts in northeastern Illinois.
- NIPC will encourage and participate in new lake management programs in the region.
- A project examining the impact of small privately owned point sources from an environmental assessment aspect is planned by NIPC. The result of such a project could be recommendations to IEPA and the Illinois Commerce Commission on permitting these facilities and a planning aid for local government to guide development decisions allowing these types of facilities.
- NIPC hopes to continue its involvement in future water quality standards review activities regarding the Fox and greater DesPlaines River watersheds.
- Further work aimed at implementation of urban nonpoint pollution management activities is anticipated in FY 86. Technical assistance on nonpoint pollution control techniques and policy would be a major part of this work.



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