Annual Water Quality Report 1986-87

Northeastern Illinois Planning Commission

Tougher Toxics Standards Mean New Challenges for Local Municipalities

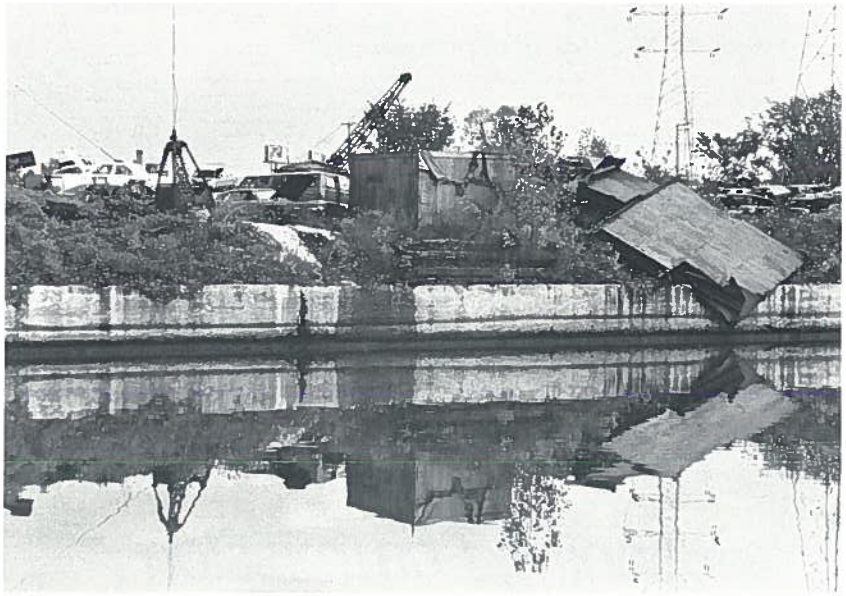
According to U.S.EPA officials, the passing of the 1987 Clean Water Act over a Presidential veto has been a clear indication of a nationwide mandate to not only continue but also to expand efforts to improve the quality of our country's lakes, rivers, and streams.

More than ever before, responsibility for cleanup efforts will fall upon local governments, who will find themselves facing tougher standards coupled with new sources of pollution to address.

The best example of these changes involves control of toxic chemicals. Section 308 of the Act gives each state until April 1989 to compile a list of those waters that will not meet water quality standards or maintain beneficial uses due to toxic pollutants, even after implementation of best available technologies and pretreatment standards.

Best available technologies refers to the most cost-effective nationally available pollution control methods geared to specific types of industrial processes. For example, a certain range of chemicals is expected to be produced as a by-product of a typical steelmaking process. According to its NPDES (direct-discharge) permit – which would contain a minimum requirement of "meeting best available technologies" – a steel company would be expected to install the degree of pollution control equipment specified by the EPA for that particular type of industrial process. If more stringent limits and treatment were necessary to meet state water quality standards, then the permit would have to require them, as well.

On the other hand, if the steel company discharged its wastewater into a municipal sewer instead of directly to the waterway, the local sewage treatment plant would require "pretreatment," – that the company remove or reduce its pollutants (by any process it wishes) to meet certain specified limits set by EPA or the city, before allowing the wastewater into the sewer system.



However, the problem with direct discharge working under best available technologies (also known as "technology-based") regulations, is that while it is good enough to control most conventional pollutants, it often is not adequate to screen out toxics. Moreover, even where technology-based regulations do play some role in reducing toxics, the final effluent may still be in violation of water quality standards. This is because of a relatively new way the EPA is using to measure toxicity. In addition to isolating each chemical and reducing it below permissible amounts (or "chemical-specific limits") before it's discharged into a waterway, the EPA now is examining "whole effluent toxicity."

Whole effluent toxicity means that what comes out of a pipe is considered as a whole, and its cumulative effects on aquatic life (and human health) is measured through direct biological testing. Thus, individual chemicals that may not be in concentrations that are toxic in and of themselves might still render the effluent toxic as a whole because of their effect when combined with all the other chemicals in that effluent.

This toxicity will be measured according to what happens to living organisms in the receiving stream, through the use of "bioassays," in addition to chemical-specific tests. In bioassays, "indicator species" of stream fauna will be observed to see if they survive the influx of materials from a given outfall.

Under Section 308, every outfall in the state could be subject to this scrutiny – not just industries, but also outfalls from publicly-owned treatment works, stormwater runoff, combined sewer overflow, etc. For those outfalls found to be discharging materials toxic to aquatic life, control strategies must be developed and carried out. In the eyes of the U.S.EPA, these "control strategies" must be incorporated into NPDES permits as enforceable requirements..

The new legislation says that each outfall violating water quality standards because of its toxic effects will need an NPDES permit containing limits for toxic inputs based on chemical-specific or whole effluent limitations. The state is responsible for setting these limits (based on state water quality standards and national EPA criteria), either by setting numerical ("x-parts per million") or narrative (generally stated) limits.

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Unfortunately, many states' water quality standards do not address specific toxic pollutants, except metals. In Illinois, the IEPA operates under a narrative standard. However, that standard provides adequate authority to justify rewriting NPDES permits to expand the number of toxic pollutants which must be controlled. Congress has already mandated strict control guidelines for a list of 126 different toxic pollutants. If the state needs technical advice on setting limits for a specific chemical, it is now available in federal EPA "criteria document."

How does the state plan to respond to this new mandate on toxics? Toby Frevert, Manager of Planning and Standards for IEPA says, *"We won't design a whole new monitoring program to look for toxics. Instead, we'll evaluate our existing data from ongoing programs, including our ambient monitoring network, our intensive basin and facility surveys, and our studies of fish contamination, accident spills, and fish kills."*

In addition to this effort, Frevert asserts that IEPA has the capability to require and perform bioassays. The agency is currently targeting a list of probable dischargers who will be asked to submit bioassays of their effluent; their NPDES permit might, as a result, require ongoing biomonitoring, as well as toxicity reduction strategies. Frevert says that the state will initially target industries known to process potentially toxic chemicals—such as petroleum and pesticide manufacturers—and municipalities whose publicly-owned treatment works receive toxic discharges from industries. Federal officials point out that U.S.EPA requires sewer systems with pretreatment programs to conduct both chemical-specific testing and biomonitoring on a regular basis, because there is a high likelihood that toxic pollutants introduced by industries will be present in the treatment plant's discharge.

Frevert adds that the IEPA is now drafting a permitting strategy to deal with toxics—one that relies on existing regulations but will provide adequate reduction requirements, regardless of whether they're based on whole-effluent or chemical-specific limitations. IEPA is also revising its narrative water quality standard for toxics to make it more specific. And, Frevert sees the agency headed toward "a mandate for dechlorination" (or development of alternate disinfectant processes for wastewater) as a means of preventing chlorine's toxic effects on aquatic life.

Region V of the U.S. EPA will scrutinize Illinois' 308 toxics report very carefully and compare the state findings with the results of its own biomonitoring project which by February 1989, will have analyzed every major discharger in this state.

What does all this mean to local governments? The message, according to EPA Region V's Water Quality Branch Chief, Ken Fenner, is that water quality results (instead of technology) are being used to set limits for NPDES permits, and that the whole process is being accelerated. Federal statutes require that states not wait until NPDES permits are up for renewal. Toxic dischargers must be identified and their permits opened up for revision now. In two years, federal officials warn, permits must be in place to control toxics. Adds Frevert with the state opinion: *"If they're a large municipality or one handling heavy inputs from industries, sooner or later IEPA will require a toxicity assessment of their discharge."*

Fenner recommends that communities begin getting a handle on potential toxics problems within their jurisdictions. If, for instance, a community finds that the effluent from its publicly-owned treatment works is toxic, it has several options. It can rely on the up-and-running federally-managed pretreatment program to eliminate the problem by forcing industries to remove their pollutants before their wastewater is released into the sewer system. Or if the plant is too small to have a pretreatment program in effect, the local government can request that the state use its authority to control the industrial dischargers. Or a community can develop an ordinance preventing industries from discharging to the sewers above certain prescribed limits.

This focus on potential toxics problems in publicly-owned treatment works also is reflected in another provision of the Water Quality Act. Section 406, which requires the EPA to identify toxics in sewage sludge and close the loopholes currently allowing polluters to discharge hazardous waste into sludge. The state must establish numerical limits for such contaminates (either through NPDES permits or an equivalent program) and develop practices to achieve those limits. The federal EPA promises stepped-up enforcement in this area.

Although toxic control authority will continue to rest with the state EPA, Region V of the U.S. EPA

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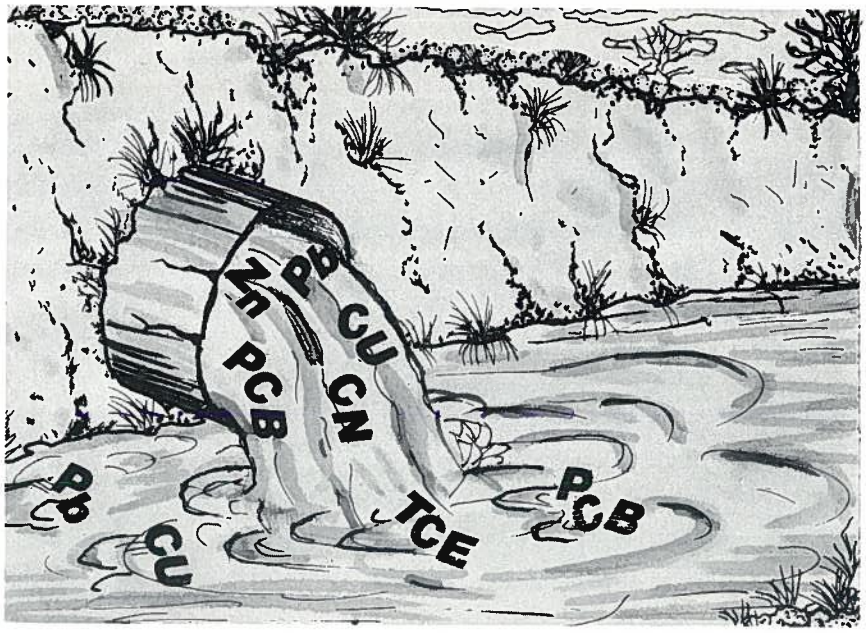

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has made it clear that the push is on to clean up toxics – even before the 1992 deadline set in this year's legislation.

Says Chuck Sutfin, Director of Region V's Water Division: *"Our top priority should be able to deal first with what we know about. If we know about a toxics problem, we're going to insist that the states deal with it. Past experience has shown us that knowing about a toxics discharge, but doing nothing to limit it is, in effect, giving a license to discharge that toxic pollutant."* The IEPA echoes this attitude: Toby Frevert states that *"toxics have to be dealt with. We're trying to get limits for toxics set in advance, instead of waiting until permits come up for review and renewal."*

The message to communities is clear: Be Prepared. An early awareness by the community will provide time to locate solutions and protect the economic value that the toxics generator may represent.

State to Begin Bank for Wastewater Loans

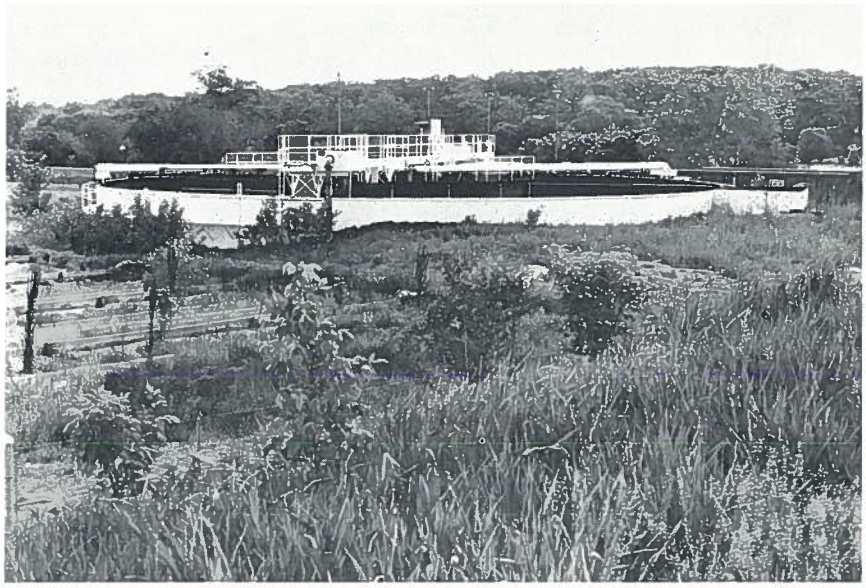
In its 1987 amendments to the Clean Water Act, the federal government made clear its plans to phase out funding for municipal wastewater treatment facilities. If authorizations in the Act are subsequently appropriated, the construction grants program, as it is known, will receive $2.4 billion per year until the close of fiscal year 1988; for each of the two succeeding years, that amount will be slashed to $1.2 billion, and by the end of FY90, the program will officially end.

Unfortunately, the work the program was meant to do – i.e., finance the construction and upgrading of publicly-owned treatment works so that their processed discharge meets water quality standards – is far from completed. In Illinois alone, 236 treatment plants are not in compliance with their federal discharge (NPDES) permits, a problem that is expected to exceed $507 million to solve. The deadline for these plants to come into compliance is July 1, 1988, and the state officials warn that there is *"absolutely no indication that it will be extended."*

Congress has not completely abandoned local communities to their plight, however. Instead, it has begun to shift financial responsibility to the states. Section 212 of the Clean Water Act offers the opportunity for states to use allocated federal monies to support the capitalization of revolving loan funds that would be available at low interest rates to municipalities for use in completing necessary treatment plant improvements.

In Illinois, such a "State Revolving Fund" could receive up to $100 million in federal monies each year for FY89, 90, and 91. During that period, the State would be required to provide a 20 percent match per year. Federal funding would then decrease from FY92 through FY94, but it is possible that for the six-year life of the program, a total of $350 million in federal dollars and $70 million in State matching dollars would be generated. (After 1994, the State would be obligated to take over full funding responsibility for necessary treatment plant improvements.) This is significantly less than the $110 million per year Illinois had been receiving.

Previous commitments of grant funds in FY87 and FY88 will limit the availability of funds for transition to a state revolving fund. In FY89 and FY90, federal law directs 50 percent of the $100 million each year coming to Illinois to be directed to a state revolving fund. So, if Illinois has not set up its fund by October of 1988, it stands to lose substantial federal funding.



Therefore, a small state revolving fund appropriation of $10 million has been sent to the governor for FY88 as part of a package passed by the state legislature. This bill would officially sanction a state revolving fund and appropriate the state's 20 percent match, which would total $70 million over six years. This money is slated to come from an anti-pollution bond fund.

With this new source of funding on the horizon, communities which have languished near the bottom of the state's priority list need not fear that they'll lose out this time around. The federal legislation specifically stipulates that state revolving fund monies must first be used to

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bring all facilities on the list into compliance, regardless of their priority. Only after this is accomplished are the states free to use the loan fund for other purposes. In addition, money that is returned to the fund in the form of loan repayments (known as "second-round" funds) will not be subject to the restriction for compliance-related uses.

According to Section 212, states are eligible to use such money to fund nonpoint source programs, but the IEPA, who will be administering the revolving fund, has other more immediate priorities: initially, IEPA plans to spend those "second round" funds to aid in "urgent" situations where significant components of sewage treatment systems suffer structural failure and require emergency repair.

Another slated use of the loan repayments would be to help communities who are on or approaching "Restricted Status," where new tap-ons to the system are banned because the plant is already operating at its full capacity. Municipalities would be able to borrow money from the revolving fund to expand their treatment plant facilities to allow further growth in accordance with an approved facilities plan.

In addition, IEPA officials are discussing the possibility of using non-restricted funds to help those communities who never did appear on the state's priority list. Aiding those communities—as well as others who are financially strapped and have little hope of repaying higher interest loans—might be a future consideration.

Beyond 1993, further use of the revolving fund might be determined by a custom "needs survey," and might include consideration of "non-wastewater needs, such as financial assistance for local public water supplies."

Those interested in learning more about the state revolving fund and how it operates in Illinois should contact the IEPA.

Congress Mandates Attack on Nonpoint Source Pollution

It has taken nearly twenty years for this nation to come to grips with the water pollution problems originating from point sources—pipes and outfalls. With legislation covering most of these inputs now in place, Congress finally has begun to address the equally severe but harder to address problem of pollutants mixing with rainwater and running off farm fields, roads, and urban areas. The 1987 Water Quality Act amendments now contain provisions (in Section 319) concerning what is termed "nonpoint source" pollution.

Under this new legislation, each state had 18 months from the Water Quality Act's approval to prepare an assessment report identifying: 1) those waters that are unlikely to comply with water quality standards without additional control of nonpoint sources of pollution; 2) the nonpoint sources causing the problem; 3) the institutional framework for developing Best Management Practices (BMPs); and, 4) local nonpoint source (NPS)-related programs that already are in place. In addition, states must also identify those groundwater areas that are impacted by nonpoint source pollution. The draft for this assessment report is due April 1, 1988.

Some general baseline data already exists on this subject for Illinois. Portions of the State's annual water quality (305b) reports reproduced in a related study by the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) illustrate how disturbingly pervasive the NPS problem is in Illinois.

According to the ASIWPCA study, more than one-half of all Illinois lakes under 5,000 acres in size, suffer severe use impairment as a result of pollution from nonpoint sources. Large lakes (more than 5,000

acres) can tolerate such input better, yet almost 90 percent of these suffer moderate use impairment, as do 67 percent of the assessed river miles in the state.

The study attributes 90 percent of the use impairment in Illinois lakes to sediment, which originates from agricultural and urban runoff, primarily. In addition to contributing eroded soil, agricultural runoff transports nutrients and toxics from fertilizers and pesticides into the state's streams and lakes.

Urban runoff carries its own set of chemical insults to receiving lakes and streams: oils, metals, and salts from streets and highways; pesticides from lawns; and rainwater laced with a soup of chemicals from industrial storage yards and municipal salt piles.

State officials note that, rarely can a situation be found where a polluted water body is impacted by only one nonpoint source. Says Toby Frevert, Manager of Planning and Standards for IEPA: *"Nonpoint*

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source pollution can originate in a variety of ways—agricultural runoff, gully wash, channel modifications, indiscriminate dumping, and poor pesticide practices." Frevert adds that quite often inputs from such sources can be mixed with oils and greases from storm sewers, eroded material from high stream flows, and turbidity and contamination from shifting sediments already in the riverbed.

Compiling the assessment report will be difficult, but the work does not end there. Along with that assessment report, Congress also requires states to submit a management program to control nonpoint source pollution.

The management program, due August 4, 1988, must include: 1) identification of measures to control the nonpoint pollution identified in the assessment report; 2) identification of programs to implement those measures; 3) certification that the state's laws provide adequate authority to implement the program; 4) identification of sources of all funding for nonpoint source pollution control; 5) a schedule for expeditious implementation of the program; and, 6) a list of federal programs that would affect local nonpoint source control efforts.

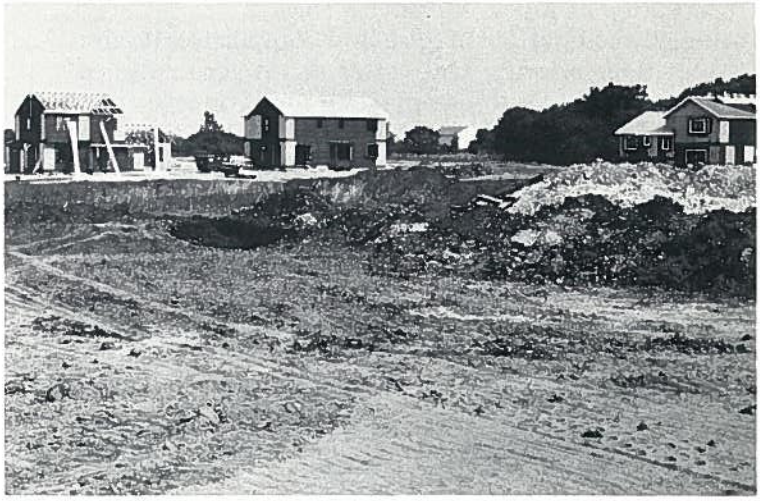
Federal officials expect the state's program to outline management initiatives to deal with each problem and category of pollution identified in the assessment report. If the state does not have a program already in place (or the authority to implement one), U.S.EPA wants to see a schedule for its development.

The U.S.EPA will be looking for more than a series of isolated demonstration projects, as had been done in the past. Says Ken Fenner, Director of Region V's Water Quality Branch, *"Congress is looking for a statewide management program built on a watershed-by-watershed basis."*

Such a program, Fenner adds, should include the state's plan for ongoing monitoring, as well as for implementation of the *"best management practices"* to reduce nonpoint source pollution loadings. An implementation schedule complete with annual "milestones" for compliance and reporting purposes is also expected.

If the assessment report and management program are approved, the state will be eligible for federal grants (given on a 60 federal-40 state cost-share basis) to operate and implement its nonpoint source program. Under Section 319(h), $70 million has been authorized nationally for the first year of the protram, $100 million per year for the second and third years, and $130 million the fourth. Under Section (i), a portion of these funds can be used by the state for groundwater protection programs.

According to the legislative guidelines, less than ten percent of the money can be used for administration. The balance can be spent on monitoring, technical assistance, enforcement and regulatory activities,



staff training, technology transfer, education, and demonstration projects.

At the end of each year, states will have to prove they made progress and met their milestones in controlling nonpoint source pollution, before they can be considered eligible for another grant.

In Illinois, a variety of projects currently deal with portions of the nonpoint source problem: Soil Conservation and Agricultural Extension services attempt to curb soil erosion; a special department addresses problems caused by abandoned mine lands; and the Clean Lakes and Stream Preservation programs are ongoing. However, no coordinated statewide program exists to identify and quantify nonpoint source impacts on water quality, or to develop a priority list of practices that are effective in minimizing those impacts.

In response to the federal mandate, the IEPA plans to build its assessment report on data from its ongoing intensive basin surveys, its studies of fish, sediments, habitat conditions, and chemical imputs, as well as its annual water quality reports. Toby Frevert of the IEPA sees the focus of the State management programs as *"going into a watershed as a whole and implementing the practices necessary to recover and protect the stream or lake."*

Although representatives at both the state and federal levels agree that nonpoint source pollution has taken its toll on the nation's waters and prevented the achievement of the goals of the Clean Water Act, exactly how the intentions of both agencies will be translated into reality is uncertain. Nevertheless, U.S. EPA's Ken Fenner maintains, *"Section 319 is not just a piece of 'make-work' legislation. The four-year life of the nonpoint source program is a reflection of Congress giving the states a chance to develop their own solutions, which will be evaluated for their effectiveness at the end of that period."* He concludes, *"It's likely that the nonpoint source effort will continue into the future until water quality standards are achieved and maintained."*

Municipal Stormwater Permitting–an Update

New legislation requiring permits for municipal stormwater dischargers (Section 405 of the 1987 Water Quality Act) appears to have left many northeastern Illinois communities "off the hook" until October, 1992. However, before breathing a sigh of relief, municipal officials should read on.

The waiver until 1992 applies to local units of government (including sanitary, drainage, and flood protection districts, airport authorities, etc.) owning separated sewer systems serving less than 100,000 people. For systems serving a population of more than 250,000, permits must be issued within four years; systems serving 100,000 to 250,000 must have permits within six years. (It is important to note that municipalities with both combined and separated sewer systems only have to count the portion of their population that is served by separated sewers.)

However, should a state or the U.S.EPA determine that any stormwater discharge source "contributes to a violation of a water quality standard, or is a significant contributor of pollutants," an NPDES permit will be required immediately.

Considering that the state soon must begin to examine all lakes, rivers, and stream segments for evidence of toxic contamination (see article, p. 2), municipal stormwater dischargers might find the spotlight on them much sooner than 1992.

Toxic contamination of stormwater discharge is a distinct possibility, even with separated sewers. Pesticides from lawns, runoff from piles of waste materials, and drainage from industrial sites can contribute enough chemicals to collectively impact the final effluent. What's more, federal EPA officials warn that communities who once had combined sewer systems that accepted industrial discharge should be especially vigilant in checking their outfalls even after they've switched over to separated sewers—there might be enough old residue left in the pipes to contaminate their stormwater effluent.

If a stormwater discharge has been determined to be causing an impact it is possible that it might be treated as a separate clause in a community's regular NPDES permit, instead of requiring a new permit. But, either way, it is definite that at the end of the waiver period, permit limitations of one form or another will be required for discharges causing standards violations or other water quality impacts.

Meanwhile, state EPA officials will have their hands full with new toxics and nonpoint source requirements, and will be unlikely to pressure municipalities into obtaining stormwater discharge permits before the required deadline. That is, of course, unless the stormwater discharge proves to be toxic.

Landmark Groundwater Bill Goes to Governor's Desk

Illinois' groundwater is a vital natural resource that has long been in jeopardy due to contamination. However, 1987 proved to be the year when legislators would hammer out a comprehensive bill to protect the drinking water source for five million people —nearly half the state's population.

In the spring session, the Illinois General Assembly passed the "Illinois Groundwater Protection Act," S.B. 1482 and sent it to the governor for signature. This action represented a compromise among environmentalists, state and local governments, and industrial interests.

The bill had its roots in efforts originally begun by a special interagency groundwater task force appointed by Governor Thompson in 1986. The task force in turn based its effort on *A Plan for Protecting Illinois Groundwater,* a document produced in 1986 by the Illinois Environmental Protection Agency (IEPA).

Part of the problem in reaching an accord about groundwater involved deciding how to protect a resource that is literally hidden from sight until the moment it emerges from a kitchen faucet. Groundwater is drawn from a subsurface system of aquifers where rainwater (having filtered down through the soil) travels through cracks, fissures, or porous sections of rock until it is drawn up through wells for human use.

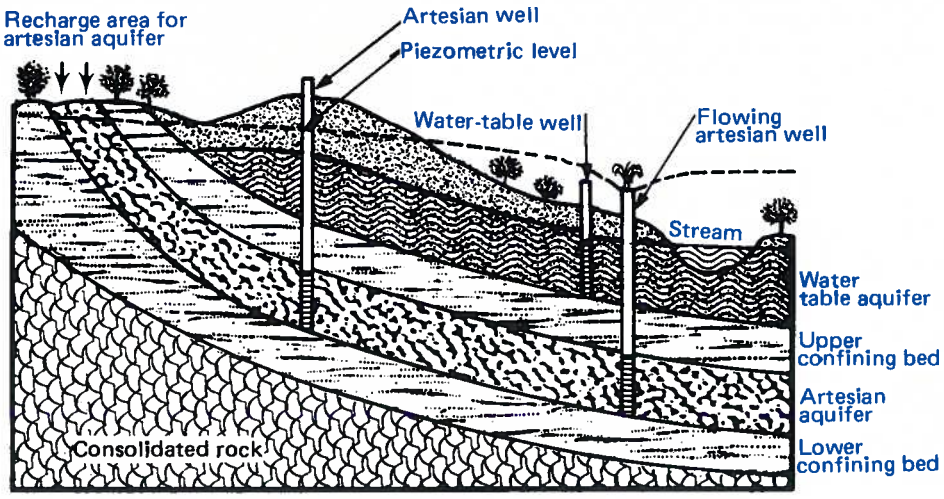
In Illinois, 48 percent of available groundwater goes to public water supplies (more than half this amount is withdrawn in our six-county region of northeastern Illinois). Self-supplied industry consumes 28 percent; almost as much is used by farmers for domestic, livestock, and irrigation needs.

Compared to surface water supplies, relatively little is known about groundwater due to the great expense of gathering data on how and where it moves, and how it is affected by pollution. Unfortunately, it is all too easy to contaminate groundwater. Pollution sources include landfills and underground storage tanks, pesticides and fertilizers from fields and lawns, leaking septic and sewer systems, underground injection of wastes, mining activities, road salts, and oil and gas production.

In a typical scenario, materials on the surface leach into the soil and contaminate the groundwater beneath. That contaminated water usually does not remain in one spot, possibly flowing hundreds of feet underground before it is drawn out. Once an aquifer is contaminated there is little corrective action that can be taken. Worse yet, many present monitoring programs are not sophisticated enough to alert the average user about the presence of exotic contaminants in well water.

For these reasons there has been a great sense of urgency about passage of groundwater protection legislation. The bill, which the governor is expected to sign, is viewed as "a good first step" in the words of one environmental organization and should place Illinois well on the way to having one of the most aggressive and cooperative programs of groundwater protection in the country. The legislation accomplishes the following:

1. Creates the "Interagency Coordinating Committee on Groundwater" to review and report on Illinois groundwater quality, quantity, and enforcement efforts.



GROUND-WATER CYCLE

2. Creates a "Groundwater Advisory Council" which includes representatives of state agencies, environmental interests, local government, and regional planning agencies. The Council will advise the state on groundwater research and data needs, and the effectiveness of current regulations, including the Act.

3. Directs the Department of Energy and Natural Resources to initiate a groundwater education program with the cooperation of other state agencies, local government, and regional planning agencies.

4. Directs the Department of Energy and Natural Resources to prepare, within 18 months of the Act's approval, statewide groundwater assessments, including mapping of aquifers and identification of recharge areas.

5. Directs the IEPA to develop new standards for groundwater quality standards and propose them to the Illinois Pollution Control Board by July 1, 1989.

6. Categorizes potential groundwater threats into "potential routes" (i.e., gravel pits and improperly abandoned wells); "potential primary sources" (i.e., landfills); and "potential secondary sources" (i.e., small storage tanks for gasoline or hazardous materials).

7. Establishes setback zones to assure adequate separation between potable water wells and potential sources and routes.

8. Directs the IEPA to propose regulations to the Illinois Pollution Control Board by January 1, 1989, prescribing requirements for the operation of sources and routes.

9. Requires the IEPA to develop a system for certifying certain potential sources as posing a minimal hazard to groundwater and therefore allowing them to avoid setback and operating requirements.

10. Requires polluters of community water supply wells to restore or replace contaminated wells, or be fined up to $ 10,000 a day.

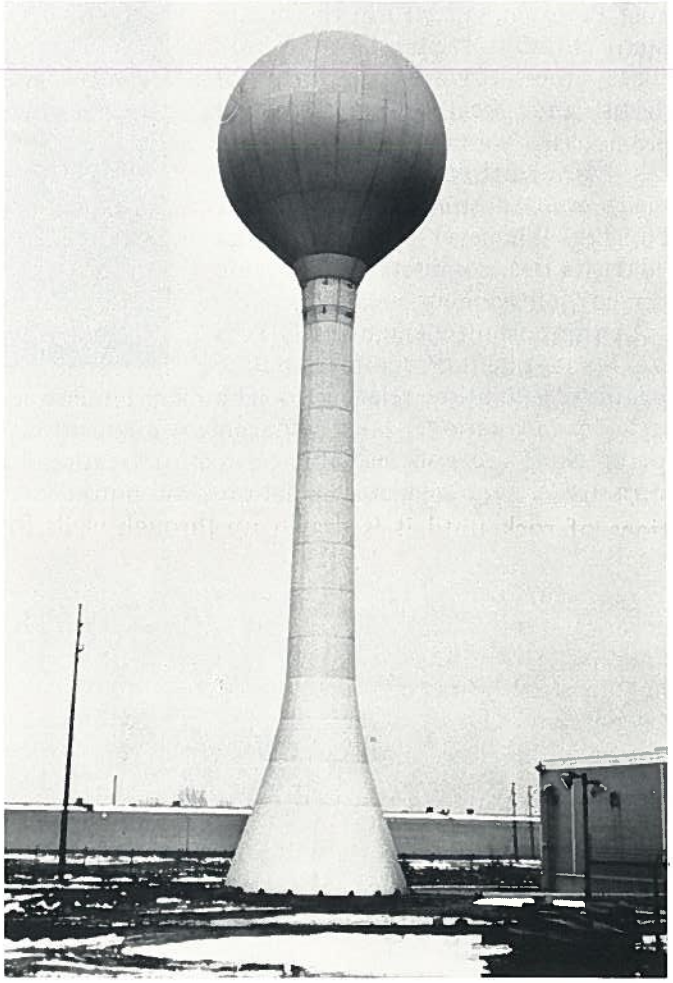
11. Allows counties and municipalities to develop groundwater protection needs assessments to evaluate threats to their water supply wells.

12. Requires the IEPA to survey community water supply well sites to describe nearby geography, topography, general geology, and potential sources and routes of contamination.

13. Directs the IEPA to designate priority groundwater protection planning regions and establish a regional planning committee for each region identified. Members of the regional planning committee shall include local government, water system operators, and the general public.

14. Allows the IEPA to propose to the Illinois Pollution Control Board regulated recharge areas which would extend extra protection to community well recharge areas shown to be highly susceptible to contamination.

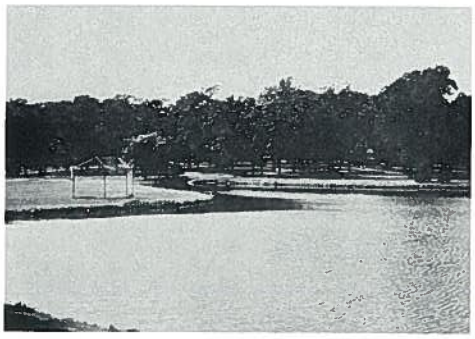
15. Provides funding through reallocation of monies in the "Hazardous Waste Fund" and the "Hazardous Waste Research Fund," and a new annual fee of $250 plus $20 per hauling vehicle fee for Special Waste Hauling Permits. Grants to local government are authorized.



Lake Management

The NIPC Natural Resources Department staff is available to provide local units of government and lake homeowners with information and technical assistance on lake management. The Commission coordinates Illinois EPA's Volunteer Lake Monitoring Program (VLMP) in the northeastern Illinois region. The VLMP utilizes the volunteer efforts of citizens and local agency staff to collect basic water quality data on lakes. NIPC staff analyze the data and prepare written summary reports for each lake. Whenever possible, on-site field visits are conducted to provide technical management assistance.

An important element of NIPC's Lake Management Program is public education. Literature relating to lake management is available, often at no charge. NIPC staff have direct access to statewide and national lake management associations, and can provide referrals to other researchers and technical experts. Staff are also available to make educational presentations on lake management topics to meetings of local governments, homeowners associations, and public interest groups.



Commission Continues Technical Assistance in Stormwater Management

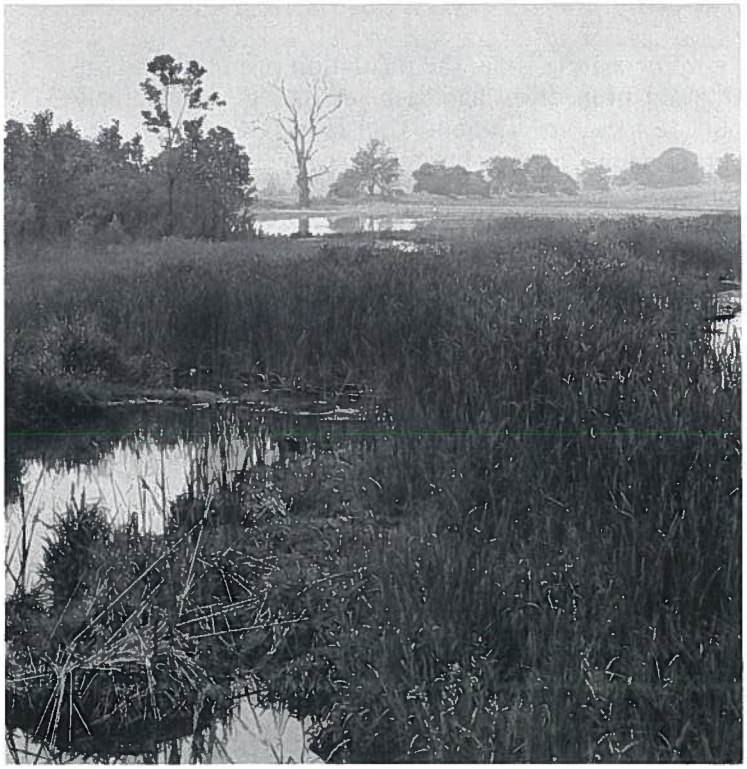
The advent of several major highway projects in northeastern Illinois, as well as a general boom in the new housing industry, generated calls to the Commission last year for advice on managing stormwater from new developments to protect water quality. Relying on principles contained in NIPC's guidebook, *Stormwater Detention for Water Quality Benefits*, Commission staff provided technical assistance to the Illinois State Toll Highway Authority, the Illinois Department of Transportation, and a number of municipalities and agencies including the Village of Woodridge and the Morton Arboretum. As a result of these efforts, it is expected that stormwater runoff pollutants from these new projects will be trapped in specially designated detention basins resulting in better water quality in neighboring streams. Commission staff are ready to assist your community or agency in managing the quality of stormwater runoff from new and existing development.

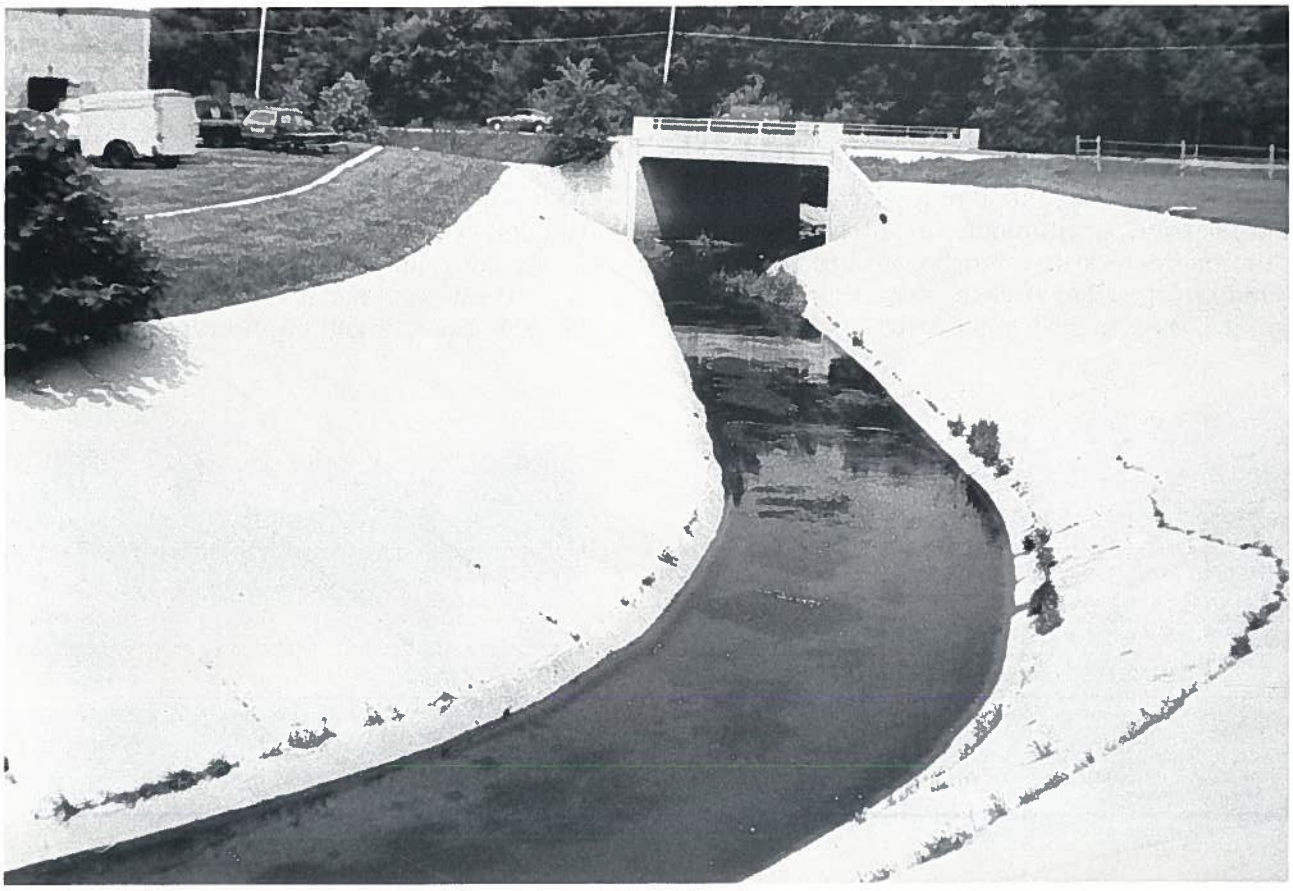
NIPC Assists Local Goverments in Stream and Wetland Protection

NIPC is involved in a technical assistance effort to help local governments preserve the natural character of streams. Increasing development of drainage basins in northeastern Illinois has resulted in a serious loss of the natural abilities of stream corridors and wetlands to contain stormwater and to assimilate pollutants. At the same time, recreational opportunities, fish and wildlife habitat, and aesthetic qualities are lost when streams are modified extensively or channelized. With billions of dollars already spent in the region to improve water quality, it is ironic that continuing stream modification activity destroys the benefits of clean water and, in addition, requires costly maintenance efforts.

A technical report and a summary report documenting the recent history and impacts of stream modification, and the regulation of modification activities, has recently been completed. In addition, a model ordinance for local regulation of development activity in stream corridors and wetlands (Model Lowland Conservancy Overlay District) has been drafted and is undergoing technical review.

This program is funded in part by the Illinois Environmental Protection Agency, and the Illinois Department of Energy and Natural Resources.





editorial

The Focus Shifts to Local Government

For a long time, the regulation of pollution control and prevention has been a matter decided largely outside local government. Legislation, regulation, and enforcement action have been, for the most part, somebody else's responsibility. The main role of municipalities, counties, and sanitary districts traditionally has involved complying with these imposed regulations through capital investments and increased operation and maintenance of their treatment facilities.

Recent events, however, indicate that this scenario is changing. Several examples come to mind:

- U.S.EPA now mandates municipal compliance by a firm deadline, regardless of the amount of funds available at the state or federal level.
- A movement is also on to institute groundwater protection programs, with local governments shouldering much of the responsibility.
- Local stormwater discharge points will be scrutinized more closely as potential pollution sources, subject to regulation.
- Local governments will likely be expected to assist in measures to control nonpoint source pollution.

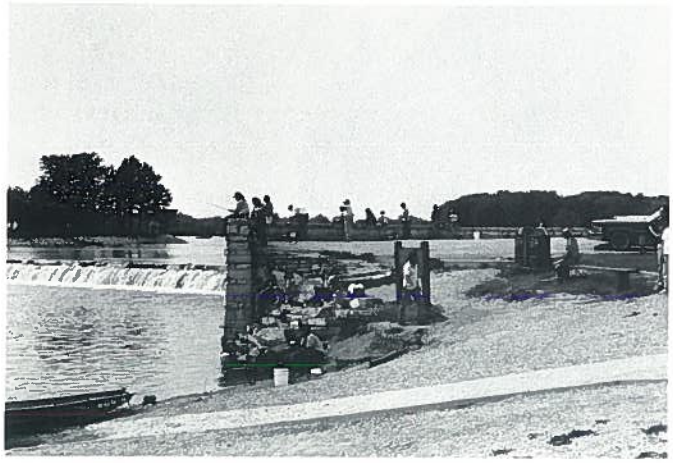
Even a cursory examination of overlooked pollution sources—underground contamination of well water, urban and agricultural runoff, stormwater outfalls, etc.—illustrates how diffuse the target of water pollution has become. Historically, the state has focused on sewage, which is easy to control and measure and poses the most immediate health threat. However, no longer can the state be content to look over the shoulder of a relatively small number of dischargers; now the pollution sources have burgeoned into the thousands, and are spread all over the map. From this perspective, it is easy to see why effective environmental protection will require a much "closer-to-the-source" involvement that only local government can provide.

It is ironic that just at the time when more responsibility is being handed to local officials, fewer federal dollars will be available to carry out that responsibility. Nor is there any reason to believe that this trend will be reversed in the future. It appears that the only choice left to local government is to recognize the direction of the years ahead and begin to prepare for it.

Half the battle involves accepting the responsibility for identifying pollution problems and deciding upon proper corrective actions. This is both good politics and common sense. It's good politics because broad citizen support for clean water—and the measures necessary to achieve it—has been well documented and reflected in the Congressional mandate. It's common sense because the quality of environment in each community has been shown to be important to potential investors and residents.

The actual matching of a corrective measure to a perceived problem will require the shift in philosophy characterized by the 1987 amendments to the Clean Water Act. Instead of focusing on the traditional sewage treatment plant technology-based cleanup as was done in the past, current thinking demands a preventive approach focusing on all manners of diffuse pollutant sources and their direct harmful effect on receiving waters.

At the time this report is published, we find ourselves at the start of a new major phase of national pollution control legislation. Exactly how these laws will impact the financial resources of local governments, only time will tell. Nevertheless, the direction is clear enough, and it is a wise governing body that takes its cue now and begins to plan ahead.



Rundown on 1987 Amendments to the Clean Water Act

The articles in this report address provisions of the 1987 Clean Water Act amendment that will have the greatest impact on local communities. However, other portions of the new legislation may also be of particular interest to local governments. The following is a guide to selected amendments to the Clean Water (also known as the Water Quality) Act:

Section	Content
104	Great Lake National Program
105	Funding: $11 million/year for FY 1987-91. 40% for demonstrations of control and removal of toxics. 7% for nutrient monitoring. 30% for research (emphasis, according to sec. 105: bioaccumulation in aquatic communities; impact on aquatic health and sports industries).
209	Requires states to allocate at least 40 percent of water quality planning funds for use by regional comprehensive public planning organizations.
211	Authorization for construction grants: $2.4 billion for fiscal years 1986, '87, '88. $1.2 billion for fiscal years 1989, '90. $0 for fiscal year 1991.
212	State-administered Water Pollution Control Revolving Funds: (see article, p. 4)
214	Provides that Chicago Tunnel and Reservoir system may receive grants from the allotment to Illinois without regard to the limitation on use of funds for such projects of 20 percent of a state allotment if the U.S. EPA regional administrator determines the project is cost-effective and water quality benefits will result.
301	Compliance deadlines extended for "Best Available Technologies."
302	Procedure for petitioning for a modification of best available technologies requirements for non-conventional pollutants.
304	Extends until 180 days after enactment of the Clean Water Act the deadline for publicly-owned treatment works to apply for extentions of the date by which they have to come into compliance with the water quality standards. Extensions cannot go beyond July 1, 1988.
305	Deadline for compliance with effluent limitations applicable to innovative technologies extended from July 1, 1987 to 2 years after point at which it would have been otherwise applicable. Same type of extension continued for conventional pollutants.
306	Fundamentally Different Factors—modifies minimum national technology-based treatment requirements for fundamentally different facilities.
308	Individual Control Strategies for Toxics Pollutants (discussed in article, p. 2).
309	Two-year extension for compliance with categorical pretreatment standards given to existing facilities using innovative systems.
312	Criminal penalties.
313	Civil penalities.
314	Administrative penalties. New enforcement penalties—collected administratively instead of judicially. Two Classes: Class I = $10,000 to $25,000. Class II = $10,000/day, up to $125,000. Instances when these will be most likely to apply: – for short-term violations – when compliance will be achieved in a short period of time – industrial user violations such as meeting filing deadlines, etc. – slippage of compliance schedules – significant reporting violations
315	Clean Lakes Program
319	Nonpoint Source program (see article, p.5).
402	Prohibits EPA from requiring additional pretreatment of conventional pollutants by indirect dischargers when a publicly-owned treatment work fails to meet its permit requirements because of operational or design failures.
403	NPDES program can be partially delegated to states.
404	Anti-backsliding program: Flat prohibition against allowing higher loads based on technology-based standards (anti-degradation) or based on water quality limits (water quality standard actions have to be consistent with anti-backsliding provisions).
405	Stormwater discharges (see article, p. 7).
406	Requires EPA to identify toxic pollutants of concern in sewage sludge and establish numerical limits and practices to achieve them.
507	Landfill leachate collection systems are now considered a point source. (Agricultural runoff collected into a pipe and discharge, is not.)
521	Great Lakes Consumptive Use Study.

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

Amendment Application	NIPC Review No.	Date of AWQSC Consideration	Amendment Description	AWQSC Recommendation
Village of Shorewood	86-WQ-001	3-5-86	Water Quality amendment to reflect a new discharge.	Withdrawn
Village of Roselle	86-WQ-002	3-5-86	FPA boundary amendment to incorporate area currently part of the Hanover Park/Bartlett FPA.	Non-support[1]
Prestbury Utility Company	86-WQ-004	4-2-86	Amendment request to reflect the purchase and transfer of existing treatment facility from DuPage County to the Sugar Grove FPA.	Approval
Village of Hoffman Estates	85-WQ-005	6-4-86	Request for FPA boundary amendment to reflect transfer of approx. 1360 acres from the Barrington FPA to the Elgin FPA.	Non-support
Village of Kildeer/Bishop's Ridge Homeowners Assoc.	86-WQ-012	11-5-86	Request to amend WQ plans to reflect the expansion of the Bishop's Ridge treatment plant to double its size.	Non-support[2]
City of Warrenville/ Fermi National Accelerator Laboratory	86-WQ-013	9-3-86	Proposed wastewater service agreement for the treatment of 700 P.E. from the "village" portion of Fermi and phase out of Fermi treatment plant.	Approval
Unincorporated McHenry County, Non-FPA area	86-WQ-014	11-5-86	CDC Realty Corp. request for WQ plan amendment to reflect new discharge for executive retreat.	Withdrawn
Roselle and Hanover Park	86-WQ-015	11-5-86	Joint request for FPA boundary amendment to reflect intergovernmental boundary agreement between the two communities.	Approval
Cartex Corporation	86-WQ-020	11-5-86	Proposed new discharge of variable stormwater to Salt Creek.	Withdrawn
Naval Training Center	86-WQ-030	1-7-87	IEPA proposal for a new NPDES Permit for discharge of non-contact cooling water to storm sewer facility to Pettybone Creek.	Approval

[1] Recommended service agreement between Village of Hanover Park and Village of Roselle which would allow the Village of Roselle to provide wastewater to the subject site.

[2] Staff recommended that the Village of Kildeer develop a facility plan which would address wastewater services for the entire village including environmental, population, and service information needed to develop a cost-effective and environmentally sound approach to wastewater needs.

FY 88 WATER QUALITY MANAGEMENT FUNDED WORK PROGRAM OF THE NORTHEASTERN ILLINOIS PLANNING COMMISSION

- NIPC will prepare the 1987/88 annual water quality report.
- As part of the Des Plaines River Wetland Demonstration Project, NIPC will act to survey toxics contributions to the site and to coordinate collection and analysis of data for project water quality, hydrology, and meterology.
- NIPC will continue to provide technical assistance on stormwater management for water quality benefits. This work will include assistance to the IEPA in their assessment of nonpoint source pollution problems in northeastern Illinois, assistance to local agencies and communities on stream preservation, stormwater detention for water quality benefits, and lake watershed management, and preparation of model ordinances.
- NIPC will complete an inventory of solid waste disposal sites in northeastern Illinois from 1900 to present.
- NIPC will continue public education efforts on groundwater protection, stream preservation, lakes management, and stormwater management.
- NIPC will continue to review facility plans and NPDES permit requests for consistency with the Illinois Water Quality Management Plan.
- 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 NIPC Areawide Water Quality Steering Committee.
- 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.
- As part of the Skokie Lagoons Lake Restoration Project, NIPC will coordinate the selection of contractors for implementation of lagoon restoration measures.
- NIPC will continue to keep track of northeastern Illinois diversion of Lake Michigan water, using the Commission's computerized accounting system.

Northeastern Illinois Planning Commission

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