

## **WASTEWATER PLANNING AND MANAGEMENT IN NORTHEASTERN ILLINOIS**

April 4, 2007

Water quality drives virtually every aspect of our communities. Wastewater planning and management is directly linked to water quality. When municipalities plan for wastewater treatment services, they are planning for the growth and development of their community over a 20-year period. This growth and development will necessitate drinking water, roads, homes, commercial enterprises, schools, parks and open space, and numerous other infrastructure improvements. It will also establish patterns of land use that will directly and indirectly affect the quality of surface waters throughout a much broader area. In planning for growth and development, every community has the opportunity to affect water quality, either by improving it or by impairing it. It is essential that the Chicago Metropolitan Agency for Planning participate at the earliest possible opportunity in planning efforts that impact water quality throughout the region, providing leadership to local communities and integrating them into a comprehensive framework.

The federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 et seq., also known as the Clean Water Act) and subsequent amendments set forth the framework for establishing water quality management programs in each state. The Illinois Environmental Protection Act addresses all aspects of environmental protection in the State, including water pollution. The goal of Clean Water Act is "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." (Clean Water Act, Section 101(a)) State programs to implement the Clean Water Act address both point source discharges (such as wastewater treatment plants) and nonpoint source runoff from land (such as urban stormwater runoff from streets and parking lots). Section 208 of the Clean Water Act required that states develop comprehensive areawide water quality management plans that address all sources of pollution generated within an area. These 208 plans also were required to include alternatives for waste treatment management.

The Illinois Environmental Protection Act designates the Illinois Environmental Protection Agency as the pollution control agency for the State for all purposes of the federal Clean Water Act. Pursuant to provisions of the Clean Water Act, Governor Walker designated the Northeastern Illinois Planning Commission as the areawide planning agency for the six counties in northeastern Illinois in 1975.<sup>1</sup> NIPC developed the *Areawide Water Quality Management Plan for Northeastern Illinois* and also participated in the Illinois EPA's consolidation of the four areawide water quality management plans into the *Illinois Water Quality Management Plan*. Pursuant to provisions of the Clean Water Act and the Illinois Environmental Protection Act, NIPC developed nine review criteria, the amendment application and the *Water Quality Management Plan Amendment Process and Procedures* manual. These documents were developed to guide applicants in preparing requests to change their facility planning area boundaries and to expand or modify their wastewater treatment facilities. They were also developed to aid NIPC in reviewing these amendment requests to ensure consistency with the *Areawide Water Quality Management Plan for Northeastern Illinois* and the *Illinois Water Quality Management Plan*. (Appendix A provides greater detail on the legal framework and authority under which the State and NIPC have conducted their water quality planning activities.)

The current facility planning area process has been in place for over 20 years. In 1983, NIPC conducted a lengthy public process to develop the current review procedures. NIPC last updated its procedures in 1996. Many of the varied sectors interested in water quality and wastewater planning and management supported the resultant FPA review process. and, as a result, had the support of all the varied sectors interested in water quality and wastewater planning and management.

NIPC's FPA amendment review process considers many aspects of water quality, including the implementation of water quality standards, consistency with population projections, nonpoint source

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Two other regional organizations were designated as areawide planning agencies for other regions of the State. The Illinois EPA is the designated areawide planning agency for the remaining portions of the State. Each of the areawide planning agencies developed areawide water quality management plans for their designated areas.

pollution controls, wastewater treatment alternatives analysis, intergovernmental cooperation, comprehensive planning (municipal, county and region), and agricultural preservation. It is not a perfect process and there are complaints from applicants and the interested public regarding what they view as weaknesses. It can be complicated, demanding and time consuming. ~~It can result in duplication of effort by applicants and State agencies. It can result in applicants duplicating some data to NIPC and the Illinois Environmental Protection Agency to satisfy the agencies' different programmatic goals.~~ It is narrowly focused on a ~~single issue and a~~ single community. It does not encompass an integrated and coordinated approach to environmental protection, growth and development. ~~It can be influenced by politics and political power.~~

However, the FPA process also has significant benefits. It facilitates an in-depth review to determine whether local ordinances adequately protect waterways and wetlands in the vicinity of the FPA. It encourages voluntary reductions of effluent discharges at the outset of the planning stages, rather than facing more costly alterations in plans later in the permitting stage. It also considers how expanding an FPA area will diminish protected farmland in the region by analyzing five criteria that reflect Illinois Department of Agriculture policy. It considers whether proposed expansions reflect a local need and are consistent with municipal, county and regional comprehensive land management plans. The detailed and particular review of each facility has allowed for a greater specificity in NIPC recommendations regarding regional impact.

The overall effectiveness of NIPC in coordinating the implementation of the *Areawide Water Quality Management Plan* has been limited because a comprehensive program for continued planning and implementation at both the watershed and regional levels has never been realized. Although there have been numerous discussions regarding revisions to the process or even the end of the FPA process in Illinois, no process has yet been developed to take its place. While changes may be necessary, the existing FPA process should not be ended until another comprehensive process is in place and fully operational.

In the past five years, this region has seen a dramatic increase in the number and size of FPA amendment requests. Between ~~2001 and 2006~~, NIPC reviewed approximately ~~\_\_\_\_\_~~ requests to amend facility planning areas or wastewater treatment facilities ~~that include a total area of \_\_\_\_\_ square miles.~~ Many of the requests submitted since the end of 2002 have involved significant acreage and/or significant increases in treatment plant capacity. (Appendix B provides greater detail regarding the existing facility planning area amendment process.)

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There are several existing or proposed programs that either conduct reviews of some aspect of water quality or that could enhance or replace the existing FPA amendment process. However, they are either limited in scope, not yet well developed or not developed at all. These programs include NPDES permitting reviews, total maximum daily load requirements (TMDLs), watershed planning and management and "developments of regional importance". Two of these programs—NPDES permits and TMDLs—are state-run, federally required programs. NPDES permit reviews are limited in scope and review only the impacts to a particular stream from a particular wastewater treatment facility. It does not evaluate the nonpoint source impacts to surface waters from related developments that will be served by the treatment facility. In terms of the FPA process, the NPDES program reviews only requests to expand or modify treatment facilities; it does not review requests to expand facility planning area boundaries. [The requests to expand FPA territory have become more significant with increased confluence of municipal boundaries and population increases in outlying areas.]

The TMDL program is more comprehensive in geographic scope and in sources of pollution. However, it applies only to those waterbodies identified on the State's 303(d) list of impaired waterbodies—does not apply to waterbodies that are not yet impaired—and it applies only to those specific pollutants that are identified as contributing to the impairment rather than all sources of pollution that may otherwise impact the waterway. (Appendix C provides greater detail on the State's NPDES permitting and TMDL programs.)

Recent years have seen the shift to watershed planning and management. The U.S. EPA is now recommending that states pursue this approach to water quality problems. The Illinois EPA has indicated that it intends to move toward watershed planning. Watershed planning and management is one potential program that could eventually replace the existing FPA amendment process. Watershed planning and management involves defining the hydrologically-related, geographically focused area, identifying all environmental stressors, involving all stakeholders, establishing a coordinated framework and strategically addressing priority water resource goals by integrating multiple programs. It is a community-oriented and science-based process.

While watershed planning and management holds great promise in addressing water quality in northeastern Illinois, it has just begun and the watershed planning process is presently not construed for this purpose. Watershed planning committees or councils currently have no institutionalized regulatory or advisory oversight authority. State legislation would be required in order to give them this authority. It will likely take many years to complete the necessary watershed plans that could then completely replace the existing FPA amendment process. In addition, there currently is a lot of variability in watershed plans - even at the local level. A uniform set of watershed plan standards would have to be adopted to resolve this inconsistency so that the FPA process could be adequately and consistently reviewed at the watershed level region-wide. Procedural issues such as how reviews would be coordinated by several watershed councils when a proposed FPA spans multiple watersheds would also need to be resolved prior to moving to a watershed-based review. (Appendix D provides greater detail regarding watershed planning and management.)

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When done correctly, watershed planning and management is ideal for implementing a comprehensive approach to restoring and protecting water quality. Staff at NIPC/CMAP have been and are now engaged in several watershed planning efforts in this region. CMAP has committed to pursuing watershed planning in its September 2006 *Strategic Report*.

The concept of "Developments of Regional Importance" (DRI) is another potential program that could augment the existing FPA amendment process as well as a watershed planning and management program. A DRI process would evaluate large developments whose impacts would extend beyond the boundaries of the local government that approved the development. The DRI concept proposes a balanced approach between local, regional and state interests. It should improve communications between and within the various levels of government, assessing a broad range of impacts before conflicts arise. It also includes a wide array of proposed developments, such as housing, commercial, industrial and other non-residential developments, transportation, and water and sewer infrastructure. It involves a comprehensive review process that assesses a broad range of impacts, including impacts on the environment and natural resources and on residents' quality of life. While the DRI is an intriguing concept, its usefulness as an effective tool for FPA review will be very limited if it is optional and advisory only, therefore, it would have to require a mandatory review element in order to replace the existing FPA review process. (Appendix E provides greater detail on the DRI process.)

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The continued growth and development of the northeastern Illinois region is inextricably linked to environmental protection generally and water quality specifically, and wastewater planning and management is an integral factor. Therefore, the Chicago Metropolitan Agency for Planning should play a central role in coordinating wastewater planning and water quality protection. The existing facility planning area process should be retained until such time as a watershed management planning process is fully operational, and can address the specific needs and unique ramifications of expanding facility planning areas and the capacity of wastewater treatment plants. (This process may will need to be modified to recognize advances in water quality planning.)

CMAP should aggressively pursue the development of watershed plans for all of the watersheds within the region. These plans can then be adopted by the Illinois EPA as an amendment to the *Areawide Water Quality Management Plan for Northeastern Illinois*, thereby becoming enforceable under the Clean Water Act. In order for watershed plans to be enforceable under the Clean Water Act, they will have to move from their traditional use as advisory planning documents that recommend actions to improve the

condition of the watershed to mandated use as a regulatory tool. As a part of this transition, it will have to be determined who the review and enforcement authority will be and how it will be funded.

CMAP should develop the “Developments of Regional Importance” concept to include wastewater infrastructure both as a project to be reviewed and as an “impact” to be included in each project review. When watershed plans are completed and the DRI process is in place, CMAP will have a comprehensive water quality review process for northeastern Illinois.

**Recommendations to CMAP:**

- Seek inclusion of Kendall County in the designated planning area (for areawide planning agency jurisdiction).
- Maintain a central role in reviewing requests to amend facility planning area boundaries and to modify or expand wastewater treatment facilities as the areawide planning agency for northeastern Illinois.
- Aggressively pursue the development and implementation of watershed plans for all watersheds wholly or partially within the northeastern Illinois region.
- Develop a “Developments of Regional Importance” program that includes water and sewer infrastructure improvements and expansions.
- In prioritizing the implementation strategies set forth in the 2040 Regional Framework, ensure the integration of wastewater planning and management.
- Ensure a direct link between the regional comprehensive plan, designated “environmentally critical areas” and wastewater management and treatment plans.