

## **Review Criteria for Amendments to the Areawide Water Quality Management Plan for Northeastern Illinois**

By executive order, the Northeastern Illinois Planning Commission (NIPC or the Commission) was designated the areawide planning agency for northeastern Illinois in 1975 (Governor Walker Executive Order, May 13, 1975). The Commission's role in reviewing water quality management plan amendment requests (facility planning area (FPA) amendment requests) was further clarified in 1994 by Section 33.5 of the Northeastern Illinois Planning Act (70 ILCS 1705/33.5). This Act authorizes NIPC to conduct reviews of FPA amendment requests within the northeastern Illinois region. This responsibility for reviewing FPA amendment requests has been codified in the Illinois Administrative Code at 35 Ill. Admin. Code Part 399.

In 1983, NIPC adopted review procedures to guide the review of facility planning area amendment requests (Resolution 83-9, adopted in September 1983) in fulfillment of its statutory and advisory roles. These procedures included three levels of FPA amendment requests (with different review processes) and nine review criteria applicable to all FPA amendment requests. NIPC also prepared a comprehensive amendment request application form that all applicants must complete. In addition, NIPC prepared the *Water Quality Management Plan Amendment Process and Procedures* manual (*Procedures* manual) to further aid applicants, staff and the Commission in reviewing all FPA amendment requests and the fulfillment of the review criteria.

There are three levels of FPA amendment requests. Level I FPA amendment requests require consideration by the full Commission at its quarterly meeting upon recommendation of the Water Resources Committee. Level I FPA amendment requests require a public hearing (after 45 day notice). These amendment requests include those proposals that are areawide in their anticipated impact and/or have extensive implications for the areawide water quality management plan or the implementation process.

Level II FPA amendment requests require consideration by the Water Resources Committee at regularly scheduled monthly meetings. These FPA amendment requests have a 45-day processing, public notice and comment period prior to consideration by the Water Resources Committee.

Level III FPA amendment requests are reviewed by NIPC staff after a 15-day public notice and comment period. These FPA amendment requests generally reflect changes and/or corrections in the factual basis of the areawide water quality management plan and its supporting tables. While the Water Resources Committee is informed of all Level III FPA amendment requests, such requests do not require formal Committee action.

There are nine review criteria that can be found both in the amendment application form and in the *Procedures* manual. The “Criteria for Facility Amendments to the Areawide Water Quality Management Plan for Northeastern Illinois” were developed, in part, to respond to the U.S. Environmental Protection Agency’s conditions for the certification of the *Areawide Water Quality Management Plan* (40 CFR 130.5(b)(4) and (5)). These conditions required the Commission to (1) develop a procedure for interim plan updating for amendments to the Areawide Water Quality Management Plan; and (2) establish a process to assess the environmental, social, and economic impacts of plan implementation throughout the continuing planning program. (See also 40 CFR 130.6(b)(c)(6) and 40 CFR 35.917 (1) – (9))

The nine review criteria were developed by NIPC using federal and state statutes and regulations regarding facilities planning and water quality management planning. (Cites to legislative and regulatory authority can be found in the *Procedures* manual, pages 10-13.) The review criteria delineate five conditions that must be addressed as necessary prerequisites for any amendment; there are an additional four conditions also of concern to the Commission in reviewing amendment requests. (Review Criteria No. 9 generally is not applicable to FPA amendment requests and will not be discussed here.) Staff cannot conduct a thorough review of a requested facility planning area amendment nor can the Water Resources Committee engage in meaningful discussion or issue a recommendation of support without the information relevant to these review criteria.

The appendices included in the *Water Quality Management Plan Amendment Process and Procedures* assist applicants in understanding and responding to the review criteria. The appendices also guide NIPC staff and Commissioners in the evaluation of the applicant’s fulfillment of the review criteria and in issuing recommendations to the Illinois Environmental Protection Agency (Illinois EPA).

The applicant’s responses to the review criteria provide the Water Resources Committee, the Northeastern Illinois Planning Commission and the Illinois EPA with the “information needed to assess the economic, social and environmental impact of carrying out the water quality management plan.” (*Water Quality Management Plan Amendment Process and Procedures*, pg 10) The applicant’s responses also provide the information required to review facilities plan amendments. (*Water Quality Management Plan Amendment Process and Procedures*, pg 10 citing 40 Code of Federal Regulations Part 6: Procedures for Implementing the Requirements of the Council of Environmental Quality on the National Environmental Policy Act; and Ill. Administrative Code, Title 35, Chap. II, Part 351, Subpart B, Section 351.202(a) and (b))

Pursuant to the *Procedures* manual, “Satisfactory compliance with the first five criteria are necessary prerequisites for all amendment requests.” Therefore, every applicant seeking an

amendment to either its facility planning area boundary or its wastewater treatment service plans must fulfill these requirements. Applicants seeking the transfer of 40 acres must provide the same information as applicants seeking the transfer of 4,000 acres. If the applicant does not submit all of the necessary information for staff to evaluate any of the review criteria, then the “Staff Analysis” will indicate that the applicant’s requested amendment is “inconsistent” or “incomplete” with respect to that particular review criteria. If an “inconsistent” or “incomplete” determination is made for any of the first five review criteria, then it is not likely that a recommendation of support can be made by the Commission to the Illinois EPA.

NIPC has taken a team approach in reviewing all of the information submitted by every applicant and interested party in support of or objection to the FPA amendment request. All of the information submitted into the public record is thoroughly reviewed by members of the team and incorporated into the final review. On occasion, staff requests that the applicant submit additional information to respond to issues raised or to fill gaps where needed. Every applicant should provide the same type of information; similar issues are considered in evaluating every facility planning area amendment request.

It is important to reiterate that every applicant is held to the same standard. The review criteria do not change nor do the relevant water quality issues. Staff’s goal in completing a review of an FPA amendment request is to convey all of the information and issues to the Water Resources Committee (and the full Commission in the case of Level I requests) for their informed consideration. Gaps and concerns are identified and recommendations are made, as necessary, to address any outstanding issues. All of this information is then conveyed to the Illinois Environmental Protection Agency, the final decision-maker in all facility planning area amendment requests in the State of Illinois.

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**Review Criteria No. 1** states that “Any proposed facility amendment must be designed to meet State of Illinois water quality standards for the receiving waters and the appropriate discharge standards or must receive a variance from the Illinois Pollution Control Board.” In reviewing an applicant’s compliance with Review Criteria No. 1, staff considers the existing water quality of the receiving stream (is it on the state 303(d) list of impaired waterways or is it considered a high quality stream). Then, based upon the applicant’s preferred wastewater treatment alternative, staff calculates the estimated increased pollutant loading to the receiving stream and assesses whether this pollutant loading will likely lead to a violation of water quality standards.

The *Water Quality Management Plan Amendment Process and Procedures* states that “there is evidence to suggest most treatment facilities will fail to meet effluent standards on occasion and that treatment reliability is generally the lowest for small facilities. There is also

evidence to indicate that even when a facility consistently meets its effluent standards it may still have adverse effects on the receiving stream.” (Appendix V, pg 24) In light of this, staff makes every effort to ensure that all applicants have considered the likely impacts of the proposed discharges and the possible measures that could be taken to mitigate those impacts.

The evaluation of Review Criteria No. 1 is generally a complicated one. The evaluation is even more complicated when an applicant seeks a boundary expansion without seeking sufficient treatment plant capacity at the same time. In this situation, the applicant often has not considered the full range of available treatment technologies (both discharging and non-discharging) nor has the applicant conducted any type of stream assessment (biological, water quality or other). Applicants often conduct the analysis of treatment technologies at the time that they update their facilities plan in preparation for a treatment plant capacity expansion. The stream assessments are frequently conducted at the permitting stage.

However, the Water Resources Committee has recently seen that conducting these studies early in the process can change the outcome and, therefore, the applicant’s proposed wastewater treatment alternative. This was recently the situation for the Village of Frankfort. At the urging of the Water Resources Committee, the Village voluntarily agreed to conduct a stream assessment and an anti-degradation analysis as part of its request to expand the capacity of its Regional Wastewater Treatment Plant. This treatment plant discharges into Hickory Creek via a constructed wetland. The current design capacity of the Regional WWTP is 1.5 mgd and the Village sought an expansion to 3.0 mgd. As a result of their stream work, the Village discovered that their proposed effluent standards would not be protective of water quality in Hickory Creek. The Village of Frankfort then took the further extraordinary step of committing to effluent standards that far exceed current Illinois EPA requirements.

**Review Criteria No. 2** states that “The population and employment for which the proposed amendment is designed must fall within the 20-year forecasts most recently adopted by the Commission for the facility planning area. The Commission may agree to adjustments within the regional forecast total.” As with the other review criteria, the evaluation of population projections is not always a simple matter. FPA boundaries (both existing and requested) are often not coincident with municipal boundaries (or with anticipated municipal boundaries) and, therefore, staff cannot sum up all of the forecast data at the quarter-section level for the FPA and requested amendment area to arrive at a figure for comparison with the NIPC projections.

Staff considers more than quarter-sections in its assessment of consistency. We look at the NIPC Development Database for proposed developments, data generated in the Paint-the-Town sessions for municipal goals (regardless of the final projections that NIPC generated) and any additional information that may be available, such as recently updated comprehensive land

use plans. Therefore, determining compliance with Review Criteria No. 2 requires more than simply comparing two numbers.

**Review Criteria No. 3** states that “The applicant must demonstrate that the unit of local government granting zoning to the project has formally accepted financial responsibility for the wastewater system in the event of system malfunction or failure. Such acceptance must be in the form of a resolution from the unit of government responsible for zoning.” This review criteria applies to privately owned wastewater treatment systems rather than publicly owned treatment works. In situations where developers propose to construct a land treatment system that the homeowners’ association will own and be responsible for, NIPC and the Illinois EPA require written verification that there is a local unit of government that will be financially responsible. There is always a risk that a homeowners’ association will not have sufficient funds (even if there is a dedicated trust funded by the developer and/or the homeowners) to repair or replace a failing treatment system. Appendix IV of the *Water Quality Management Plan Amendment Process and Procedures* provides a model ordinance to assist developers and local governments.

Privately-owned and operated wastewater treatment facilities (such as those owned and operated by Aqua Illinois, Inc.) are licensed by the Illinois Commerce Commission (ICC). As such, NIPC and the Illinois EPA require a statement from the ICC regarding the financial solvency of the utility company. This can be in the form of financial statements or any other written document attesting to the company’s financial state.

**Review Criteria No. 4** states that “The proposed amendment should not reduce the effectiveness of the water quality improvement strategy contained in the original plan, either for point source or nonpoint source control.” In evaluating an applicant’s compliance with this review criteria, staff generally relies on the analysis of Review Criteria No. 1 to assess point source pollution control issues. However, Appendix V further delineates this issue. To assess non-point source pollution control, staff reviews the applicable non-point source control ordinances to determine whether they are consistent with the NIPC model ordinances. Appendix VI provides additional guidance on what constitutes compliance with the non-point source control portion of Review Criteria No. 4 and, in addition, states very explicitly the procedures to be followed when an applicant is not in compliance.

The *Water Quality Management Plan Amendment Process and Procedures* includes Appendix V, “Procedures for Determining Compliance with Point Source Management Policies” to further guide applicants, the Water Resources Committee, the Northeastern Illinois Planning Commission and the Illinois EPA in its consideration of Review Criteria No. 4. The Appendix includes a brief statement regarding the deleterious effects of urbanization on streams in northeastern Illinois, even when wastewater treatment plants consistently meet their effluent

standards. It also provides procedures to be followed by the Water Resources Committee when applicants are proposing new or increased discharges into high quality and/or low flow streams.

Appendix V argues for special consideration of water quality in small, high quality streams. Specifically, “it is recommended that new or substantially expanded discharges to small, high quality streams be avoided. If such discharges cannot be avoided, then special facility designs should be required to ensure effluent reliability.” (*Water Quality Management Plan Amendment Process and Procedures*, pg 24) Furthermore, “An evaluation of whether new facilities or expansions can be avoided should consider all practical alternatives.” (pg 24) This includes regionalization and non-discharging systems, such as land treatment.

In recognizing that there are occasions where such discharges cannot be avoided, the Appendix states that “it may sometimes be preferable to implement a slightly more expensive alternative to avoid a predicted adverse water quality or stream use impact.” In addition, when such discharges cannot be avoided, “special facility designs or operational requirements should be implemented to ensure minimization of adverse impacts.” The Appendix includes suggestions for minimizing adverse impacts, including high-reliability technologies, redundancy in critical process designs and effluent polishing lagoons. “If it is clearly demonstrated that there are no practical alternatives to the new or expanded discharge, the applicant should describe what special facility and/or operational design ... will be used to ensure the minimization of adverse impacts to the receiving waterbody.” (*Water Quality Management Plan Amendment Process and Procedures*, pg 26)

Appendix V concludes by stating that “without special consideration given to new or substantially expanded discharges to small, high quality water bodies, impairment of water quality and waterbody use is inevitable.” (*Water Quality Management Plan Amendment Process and Procedures*, pg 26)

The Water Resources Committee has seen numerous communities take additional steps to protect water quality in both receiving streams and in streams that traverse the facility planning area. For example, the villages of Dundee, Manhattan, Lakewood, Gilberts, Burlington, Pingree Grove, Huntley and Hampshire have all committed to either greater treatment levels (such as nutrient removal and tertiary treatment), constructed wetlands and/or partial effluent reuse (land application of a portion of the treated effluent). In addition, several communities are considering imposing impact fees on developers to be used, at least in part, for stream restoration work. Each of these communities has addressed the principles and requirements detailed in Appendix V of the *Water Quality Management Plan Amendment Process and Procedures*.

**Review Criteria No. 5** states that “The proposed amendment should not adversely affect the cost effectiveness of the Areawide Water Quality Management Plan for meeting water quality standards in the facility planning area as a whole.” In evaluating the applicant’s compliance with

this review criteria, staff considers the applicant's wastewater treatment alternatives analysis and the cost-effectiveness of the applicant's preferred alternative. The weight of the cost-effectiveness analysis is determined, in part, on the funding mechanism to be used by the applicant. (If the applicant will rely on state grants and loans to fund the necessary capital expenditures, then cost-effectiveness of the preferred alternative carries greater weight.)

As part of the wastewater treatment alternatives analysis, all applicants must consider non-discharging systems (required by Illinois EPA permitting procedures). In February 2002, the Illinois Pollution Control Board adopted anti-degradation regulations and, in July 2002 the Illinois EPA issued "Revisions in Permitting Procedures for All New and Expanded Sewage Treatment Plants." The Illinois EPA permitting procedures state that "Any discharge of treated wastewater to surface waters has the potential to cause the quality of the receiving water to become degraded. Therefore, systems that do not discharge should be considered and must be deemed not feasible before a discharging system can be considered." Every applicant must conduct a complete evaluation of a no-discharge treatment system and that alternative must be deemed not feasible before considering any wastewater treatment alternatives that will result in discharges to surface waterbodies.

Several recent applicants have determined that, while it is not the most cost-effective alternative, it is the most environmentally sensitive and responsible alternative. For example, the Village of Pingree Grove will utilize a conventional wastewater treatment plant and an extensive spray irrigation system for 1.0 mgd wastewater to be generated in the Pingree Grove FPA. The villages of Lakewood and Huntley will utilize fully treated effluent to irrigate area golf courses. The Village of Burlington is proposing to construct two separate wastewater treatment systems to meet the needs of its facility planning area while maintaining its commitment to environmental quality. Over the past one and one half years, the Water Resources Committee has witnessed increasing creativity among communities in addressing their wastewater treatment needs with the goal of protecting water quality in area streams.

**Review Criteria No. 6** states that "The proposed amendment should have the endorsement of the designated management agency for wastewater treatment and substantial support by the municipalities within the affected facility planning area. In situations where the designated management agency (DMA) is the municipal government, it is assumed that the amendment application is consistent with the portion of this review criteria requiring the endorsement of the DMA. (Under Illinois law, developers and other private parties are not permitted to submit an amendment request unless they are seeking status as a designated management agency. (35 IAC 351.201(b)) In some situations, there is more than one municipality within the facility planning area. NIPC recommends to applicants that they discuss the proposed developments to be included within the facility planning area and/or served by the

wastewater treatment facility with these municipalities to gain their support. Although such discussions and support are not mandatory, staff will note such issues in its review, which may also result in a finding of "inconsistent" for Review Criteria No. 6.

**Review Criteria No. 7** states that "The proposed amendment should not adversely affect adjoining units of government." This review criteria is not as broad and encompassing as the "Developments of Regional Importance" concept, but does take into consideration limited impacts on adjacent communities. Staff encourages applicants to meet with adjacent communities as well as county officials and other interested parties to present their proposals and discuss differences.

Some amendment applications seek the transfer of land from one facility planning area to another. The Illinois EPA has stated that concurrence by the non-applicant DMA is not required to transfer the land to the applicant's facility planning area. However, if the amendment request is not consistent with existing boundary agreements, it is not likely that the amendment request will be granted. The position of both NIPC and the Illinois EPA is that such boundary agreements should be recognized by the agencies and that the FPA amendment process is not the proper way in which to invalidate a boundary agreement.

In situations where there is no boundary agreement, NIPC strongly encourages municipalities to work out such agreements. Applicants frequently agree to defer consideration of their amendment applications to give the municipalities additional time to work out their differences. However, this does not always occur and in these situations, NIPC requests that both designated management agencies provide information on the costs of providing wastewater treatment services (including conveyance costs, plant expansion costs and operation and maintenance). Staff also considers proposed treatment processes and effluent limits as well as receiving streams and water quality impacts to inform the cost comparison. (For example, costs should include realistic anticipated effluent limits as well as any additional treatment processes required to meet water quality standards.) Staff then conducts a cost comparison and may recommend the most cost-effective solution. When there is not a substantial difference in cost, staff looks for a compelling reason for the transfer of land from one FPA to another.

**Review Criteria No. 8** states that "The proposed amendment should be consistent with other county and regional plans or state policies." These plans and policies include local comprehensive land use plans, agricultural/farmland protection and fish and wildlife protection. In evaluating the applicant's compliance with Review Criteria No. 8, staff considers all applicable resource protection plans and land use plans from the local, county, regional and state level. These plans can be very diverse, but generally include local comprehensive land use plans and agricultural protection areas. Consistency among these plans often indicates good planning.

Most of the recent applicants submitting Level I Facility Planning Area Amendment requests have recently updated their comprehensive land use plans as they plan for substantial, long term development and growth within their jurisdictional planning areas.

The *Water Quality Management Plan Amendment Process and Procedures* includes a section entitled “The Need to Coordinate Wastewater Facility Planning with Comprehensive Planning.” (pgs 13-14) In addition to reiterating the need for good planning, this section includes a list of components that should be included in a comprehensive facility plan. Consistency between the two plans tends to reduce the likelihood that treatment plants will either exceed design capacities or will have significant unused capacity.

The *Water Quality Management Plan Amendment Process and Procedures* includes Appendix VII, “Procedures and Criteria for Proposed FPA Expansions Affecting Identified Agricultural Preservation Areas.” This Appendix is applicable where the facility planning area amendment request seeks the transfer of more than 100 acres of specifically designated agricultural preservation area. It enumerates five criteria specifically applicable to Agricultural Preservation Areas and states that “A recommendation by the Commission will be based on the degree to which the proposal satisfies all of the ... criteria.” (*Water Quality Management Plan Amendment Process and Procedures*, pg 30)