



Chicago Metropolitan Agency for Planning

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Wastewater Committee

Agenda Item No 4.0

Date: February 13, 2013

CMAQ Water Quality Review #: 12-WQ-066

Applicant: Village of Lemont

Re: The Village of Lemont has requested a transfer of 25.27 acres from the Illinois American Facility Planning Area (FPA) to the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) FPA.

Based on the policies and recommendations of the *Areawide Water Quality Management Plan for Northeastern Illinois*, the *Illinois Water Quality Management Plan*, local government and agency comments, comments received from various interested and affected parties, and staff's analysis, staff recommends a recommendation of "*Support*" for the proposed amendment request.

Important Note: CMAQ is the designated areawide water quality planning agency and the advisory comprehensive regional planning agency for northeastern Illinois. Therefore, CMAQ needs to act as a consensus builder by promoting sound planning principles and practices. Though not specifically required by the Illinois Environmental Protection Agency (IEPA), Criteria Nos. 6 – 9 specifically address CMAQ's regional role and promote sound planning.

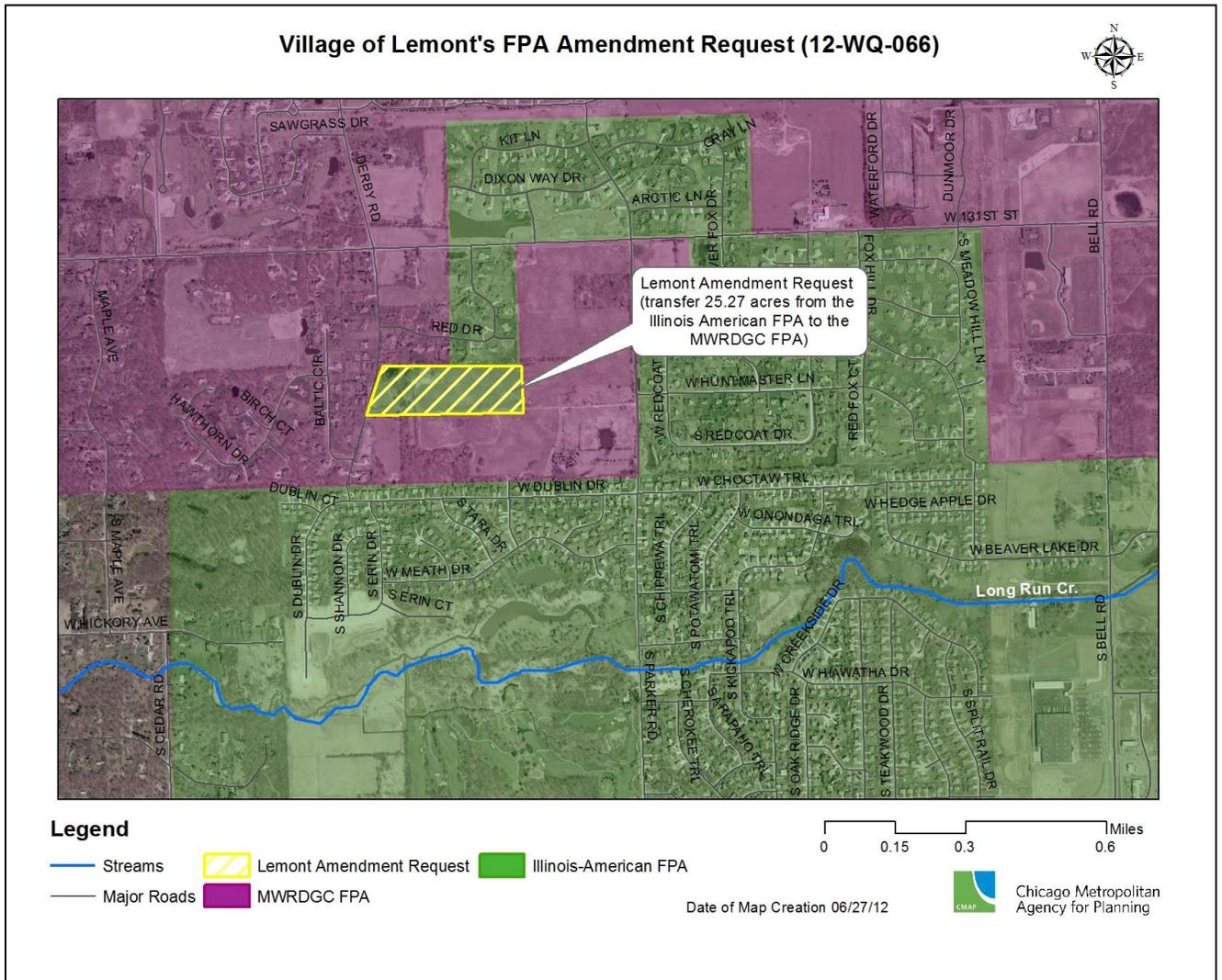


A. REQUEST SUMMARY

The Village of Lemont has requested a transfer of 25.27 acres from the Illinois American FPA (formerly Citizen's Utilities FPA) to the MWRDGC FPA (Figure 1). The proposed area is located in Cook County, Lemont Township, Section 34.

Map of FPA Boundary Amendment Site

Figure 1. Parcel transfer for WQ Amendment # 12-WQ-066





RELATIONSHIP TO RECOMMENDED CRITERIA FOR FACILITY PLAN AMENDMENTS

The MWRDGC is the designated management agency for its own FPA and provides wastewater treatment to most of Cook County. Due to a scrivener's error, the amendment request was inadvertently included in the Illinois American FPA (formerly Citizen's Utilities FPA), when it should have been included in the MWRDGC FPA.

Review Criteria and Staff Analysis	Results
<p>1. <i>"The proposed facility amendment must be designed to meet the 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."</i></p>	<p>Consistent</p>
<p>Wastewater flows from the amendment request will be serviced by an existing 12-inch sanitary sewer located adjacent to the development and tributary to the MWRDGC interceptor. The amendment is requested for the Glen Oaks Estates Development which has been planned, annexed, and zoned.</p> <p>Wastewater flows will be ultimately treated at the MWRDGC Lemont Water Reclamation Facility (WRF), which is regulated by the guidelines and standards of the National Pollution Discharge Elimination System (NPDES) Permit No. IL0028070. The WRF was constructed to a design average flow (DAF) of 2.3 million gallons per day (MGD) and a daily maximum flow maximum flow (DMF) of 4.0 MGD.</p> <p>MWRDGC's Lemont facility treatment process includes: grit removal; primary and secondary clarification; aeration; and, sludge dewatering and storage. The WRF was not listed on Illinois Environmental Protection Agency's (IEPA) most recent critical review or restricted status lists. This indicates the wastewater treatment facility has sufficient capacity to handle the additional wastewater flow.</p> <p>The MWRDGC Lemont facility is currently undergoing a plant expansion that will increase the DAF and DMF rated capacity of the facility to 4.2 MGD and 8.5 MGD, respectively. The expanded facility includes the relocation of outfall 001, using outfall 002 as a wet weather basin discharge point as well as combined sewer overflow, and construction of a wet weather basin and wet weather disinfection facilities. The expanded facility will include phosphorus removal within the treatment train. Until the start of operation of the expanded plant, the WRF's NPDES Permit has effluent concentration limits for suspended solids, carbonaceous biochemical oxygen demand (CBOD), and pH. Once the expanded facility is operational, wastewater flows from the WRF will be held to the same effluent concentration limits as the 4.2 MGD facility with the addition of a 1.0 mg/L monthly average phosphorus effluent limit and an ammonia nitrogen limit (see table below).</p>	



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NPDES Permit Concentration Limits mg/L				
	Existing WRF		After WRF Expansion	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
CBOD ₅	20	--	20	---
Suspended Solids	25	--	25	---
pH	Shall be in the range of 6 to 9 Standard Units			
Phosphorus	---	---	1.0	
<u>Ammonia Nitrogen</u> Apr - Oct Nov. - March	---	---	2.5	5.0

The WRF currently discharges treated wastewater into the Chicago Sanitary and Ship Canal (CSSC).^a The CSSC, in the location where the WRF discharges, has a 1312.83 cfs 7Q10 low flow. Water quality in the CSSC is severely degraded, and has been for many years as noted in the 1979 *Areawide Water Quality Management Plan (AQWMP) for Northeastern Illinois*. The Canal has been assessed for designated use attainment and is listed as an impaired waterway in the 2010 Illinois Integrated Water Quality Report.^b The Report designates the Canal as a secondary contact waterway^c capable of supporting indigenous aquatic life. Potential sources of impairment include municipal point sources, combined sewer overflows, urban runoff/storm sewers, habitat modification, flow regulation/modification and unknown sources.

Increasing the amount of pollutants discharged into the receiving stream will not facilitate improved water quality in the Canal. Hence, at a minimum, MWRDGC should make every effort to continue to comply with its NPDES permit requirements. MWRDGC should also make every effort to improve the quality of the effluent it discharges into its receiving waters.

2.	<i>“The population and employment for which the proposed amendment is designed must fall within the twenty year forecast most recently adopted by the Commission for the facility planning area or the Commission may agree to adjustments within the regional forecast total.”</i>	Consistent
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^a The Chicago Sanitary and Ship Canal was constructed for conveying wastewater away from Lake Michigan into the Illinois River. <http://il.water.usgs.gov/nawqa/uirb/sites/shipcanal.html>

^b The Report is not yet fully approved by USEPA.

^c On May 2012, Illinois EPA revised water quality standards for the Chicago Area Waterway System (CAWS), and approved new recreational uses for 8 segments of the CAWS. Four segments received disapproval of recreational use downgrades, including the Chicago Sanitary and Ship Canal. <http://www.epa.gov/region5/chicagoriver/pdfs/caws-summary-20120510.pdf>



<p>The applicant projects the amendment area will contain 154 residential population equivalents (PE), including 44 homes at 3.5 PE. The total PE forecasted is 154 generating an average daily flow of 154,000 gallons per day (gpd) of wastewater upon full buildout (Year 2015). The projected density of 44 homes over 25.24 acres of land suggests a build out density of 1.7 dwelling units per acre.</p> <p>CMAF's 2040 household population equivalent forecast for the Village of Lemont's municipal limits is 25,495 population equivalents in 8,741 homes. The Village's population projections fall well within CMAF's forecasts 2040 population forecasts.</p>	
<p>3. <i>"The applicant must demonstrate that the unit of local government granting zoning to the project formally accept financial responsibility for the wastewater treatment system in the event of a system malfunction or failure. Such acceptance must be in the form of a resolution from the unit of government granting zoning."</i></p>	<p>Not Applicable</p>
<p>The requested amendment does not involve the construction, operation or modification of a privately-owned treatment facility.</p>	
<p>4. <i>"The proposed amendment should not reduce the effectiveness of the water quality improvement strategy contained in the original plan, either for point or nonpoint source control."</i></p>	<p>Inconsistent</p>
<p><u>Point Source Impacts</u> (See analysis under Criterion #1)</p> <p><u>Nonpoint Source Impacts</u></p> <p>The expansion area is subject to MWRDGC's Stormwater Management Ordinance and the Village of Lemont's storm water management, soil erosion and sediment control and floodplain management ordinances. The Village of Lemont's ordinances have no provisions for stream and wetland protections. However, the Village will adopt MWRDGC's non-point protection ordinance,^d which has provisions for stream and wetland protections, when it is finalized.</p> <p>The following discrepancies from Checklist E of the application occur as noted below:</p> <p><u>Stormwater Management</u></p> <ul style="list-style-type: none"> • The ordinance does not require that peak post-development discharge from events less than or equal to the two-year, 24-hour event be limited to 0.04 cfs per acre of watershed. However, it does require that release is restricted to 0.15 cfs/acre for storms smaller than the 100-year event. • The ordinance does not require formal maintenance contracts for new detention 	

^d MWRDGC's Draft Watershed Management Ordinance <http://www.mwrdd.org/irj/portal/anonymous/managementordinance>



facilities.

Soil Erosion and Sediment Control

- The ordinance does not require ordinance applicability for any land disturbing activity in excess of 5,000 square feet, or 500 square feet if adjacent to a stream lake, or wetland.

Stream and Wetland Protection

The following protections are not in place:

- A comprehensive purpose statement which addresses the protection of hydrologic and hydraulic, water quality, habitat, aesthetic, and social and economic values and functions of wetlands.
- There are no safeguards in place to protect the beneficial functions of streams, lakes and wetlands from damaging modification, including filing, draining, excavating, damming, impoundment, and vegetation removal.
- There are no safeguards in place to prohibit the modification of high quality, irreplaceable wetlands, lakes, and stream corridors.
- There are no protections in place to discourage the modification of wetlands for stormwater management purposes unless the wetland severely degraded and nonpoint source BMPs are implement on the adjacent development.
- A designated minimum 75 foot setback zone from the edge of identified wetlands and water bodies in which development is limited to the following activities: minor improvements like walkways and signs, maintenance of highways and utilities, and park and recreational area development has not been put in place.
- There are no protections in place to prohibit detention in the floodway.
- A minimum 25-foot wide protected native vegetation buffer strip along the edge of identified wetlands and waterbodies has not been established.
- There are no safeguards in place to prohibit watercourse relocation or modification except to remedy existing erosion problems, restore natural conditions, or to accommodate necessary utility crossings.
- There are no provisions to prohibit on-stream detention unless it provides regional



<p>stormwater storage.</p> <ul style="list-style-type: none"> • There are no provisions to discourage the armoring of channels and banks unless natural vegetation and gradual bank slipping are inadequate to prevent severe erosion. • There are no protections in place to discourage culvert crossing of streams that are necessary for allowing access to a property. • There are no safeguards in place to discourage onstream impoundments unless public interest and environmental mitigation criteria are met. • There are no requirements in place to require adequate mitigation measures for approved wetland and water body modifications, including 1.5 to 1 acreage replacement for destroyed wetlands, maintenance and monitoring for at least 5 years, and full restoration of natural wetland or waterbody functions. <p>There are no wetlands and floodplains within the amendment area. The applicant requested an Illinois Department of Natural Resources (IDNR) Endangered Species Protection and Natural Areas Preservation Review for the project site. IDNR's Ecocat Ecological Compliance Assessment Tool indicates there are no threatened or endangered species in the vicinity of the project.</p> <p>The Illinois Historical Preservation, in a letter dated November 15, 2012, determined that no significant historic, architectural or archaeological resources are located within the amendment area.</p> <p>The amendment area will not require modification (i.e. filling, dredging, channelization, disposal or similar activity) of any lake, stream, wetland or floodplain area. Therefore, while Staff is concerned about the lack of consistent nonpoint source ordinances, this particular request does not contain environmental features that would be affected by inadequate nonpoint source protections. However, the Village should adopt MWRDGC's nonpoint source protections ordinances when they are finalized.</p>	
<p>5. <i>"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 areas as a whole."</i></p>	<p>Consistent</p>
<p>The applicant provided one treatment alternative, connection to the Illinois American FPA. This alternative was dismissed due to system capacity constrains to accommodate wastewater flows generated from the area. No costs were provided for this alternative.</p>	



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<p>The applicant's selected alternative includes providing treatment for wastewater flows from the site at the MWRDGC Lemont WRF facility. Supplemental information suggests that the cost of wastewater service is estimated to be \$670,800. The per household user connection fee is \$4320 with a monthly service fee of \$30.</p> <p>The proposed approach to provide sanitary sewer service to the amendment area by conveying the wastewater to MWRDGC appears to meet the current State of Illinois water quality standards.</p>	
<p>6. <i>"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."</i></p>	Consistent
<p>MWRDGC, in a letter dated July 20, 2012, supported the Village of Lemont's request. MWRDGC has sufficient conveyance and treatment capacity to treat wastewater flows from the amendment.</p>	
<p>7. <i>"The proposed amendment should not adversely affect adjoining units of government."</i></p>	Consistent
<p>The parcel was identified in the Village of Lemont's 2002 Comprehensive plan and is zoned as low density development. The request is consistent with the Village's comprehensive plan.</p> <p>Staff did not receive letters in support or in opposition to the Village's request from adjoining units of government.</p>	
<p>8. <i>"The proposed amendment should be consistent with other county and regional or state policies, such as the Governor's Executive Order #4 on the preservation of agricultural land."</i></p>	Consistent
<p>The Illinois Department of Agriculture, in a letter dated October 12, 2012 stated it had no concerns on the proposed boundary change request.</p>	
<p>9. <i>"Consideration will be given to evidence of municipal or county zoning approval and commencement of development activity prior to Areawide Water Quality Management Plan adoption in January 1979."</i></p>	Not Applicable