City of Altamont
Public Hearing
February 11, 2013
6:00 pm
Wastewater Treatment Plant Improvement and Community Impact

The City of Altamont has applied to the Illinois Environmental Protection Agency's (IEPA) Water Pollution Control Loan Program to request funding to finance improvements to the City's South Wastewater Treatment Plant (WWTP). In accordance with the IEPA Loan Rules, Title 35, Subtitle F, Chapter II, Part 365.530 (State Environmental Review), Illinois Administrative Code, the IEPA has determined that a public hearing should be held to give the public an opportunity to comment on the facilities plan and the Agency's Preliminary Environmental Impact Determination (PEID) document.

A public hearing will be conducted at 6:00 p.m. on 11 February 2013 to make information about the project available to the public and to allow public comment. In addition, the Agency's PEID document shall be displayed at City Hall, 202 N. Second Street, Altamont, IL 62411, for at least 10 days prior to the hearing to obtain a level of public participation appropriate to the scope and impacts of the proposed project. Comments regarding the proposed project may be submitted in writing within 10 days from the date of the public hearing to the City of Altamont, 202 N. Second Street, Altamont, IL 62411, or to Gary Bingenheimer, IEPA Bureau of Water, 1021 N. Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276.

Project Summary on Following Pages

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

PAT QUINN, GOVERNOR JOHN J. KIM, DIRECTOR

Project Summary and
Preliminary Environmental Impacts Determination

Date:
Loan Applicant: City of Altamont, IEPA Loan Project Number: L174987 & L175008

To all interested persons:

Section 365.530 of the Illinois Procedures for Issuing Loans From the Water Pollution Control Loan Program requires that the Illinois Environmental Protection Agency (IEPA) conduct an assessment of the environmental impacts of proposed wastewater projects to be funded with loans. This review is carried out in conjunction with the State's review of the applicant's facilities plan. Prior to final approval of the plan, the public's comments are sought regarding environmental impacts of the proposed project.

The IEPA has reviewed the facilities plan and has determined the project to be technically sound and cost-effective. Unless new information gained from the public causes a reconsideration, the Agency will approve the facilities plan at the close of the public comment period.

The applicant will make the attached Project Summary and Preliminary Environmental Impacts Determination (PEID) available for public inspection and must conduct a hearing within 60 days of receipt on both the PEID and project planning, providing advertisement of the hearing at least 10 days in advance. A comment period of at least 10 days shall be provided after the hearing date in which written comments may be provided to the loan applicant or directly to the IEPA contact person identified in the attached document. Upon final approval of this plan, the project priority score may be modified to reflect new information provided in the planning in accordance with the provisions of Sections 366.105, 366.106, and 366.107 of the Procedures and Requirements for Determining Loan Priorities for Municipal Wastewater Treatment Works. The project described in the facilities plan is classified as Service Continuation under the Illinois Project Priority System.

For information purposes only, a copy of this document is being provided to your local newspaper of record.

Your interest and participation in this process are appreciated.

Sincerely,

J. Geoffrey Andres, Manager
Infrastructure Financial Assistance Section
Bureau of Water

JGA:BH:Tm13012301

Project Identification

City of Altamont
202 North 2nd Street
Altamont, Illinois 62411

Effingham County

Existing Conditions/Project Justification

The City of Altamont is located in Effingham County, approximately 15 miles southwest of Effingham. Interstate Route 70 passes through Altamont on the southerly side of the City, and U.S. Route 40 passes through the center part of the City paralleling Interstate Route 70. Illinois Route 128 originates in Altamont, and travels in a northerly direction. The current estimated population of Altamont was 2,319 according to the 2010 census, with 1,040 sewer customers in the City. The historical population of Altamont has remained relatively stable over the last 30 years and the City does not anticipate any large changes in its population over the next 20 years. The City owns and operates two lagoon-type wastewater treatment plants (WWTP's), with one serving the southern part of the City (South WWTP) and the other serving the northern part of the City (North WWTP).

The South WWTP has received violation notices from the Illinois Environmental Protection Agency (IEPA) due to the fact that it is organically overloaded and cannot comply with effluent standards prescribed in its National Pollution Discharge Elimination System (NPDES) Permit. The City's South Sewage Pump Station equipment has outlived its useful life, requiring the replacement of pumping equipment and controls. The City's North WWTP has sufficient reserve capacity to meet anticipated needs for the next 20 years. However, the aeration equipment at the WWTP has been in service for nearly 25 years, is nearing the end of its useful life, and now needs to be replaced in the two lagoon cells. Also, while the City receives a disinfection exemption and no longer treats effluent with chlorine since effluent standards were being met at the North WWTP, the former chlorine contact basin needs a floating cover to reduce algae growth.

The City's sanitary sewer collection system experiences significant flow increases during wet weather events. Intensive inflow and infiltration (I/I) analysis in the form of smoke testing was conducted on the sanitary sewer collection system in the late 1980's and the City has repeated the smoke testing since that time. The City wishes to purchase equipment so that they can conduct close circuit TV inspections of the sanitary sewer collection lines to identify areas where corrective action is required to remedy the excessive I/I. **The cost of the inspection and the inspection equipment will not be funded by an IEPA loan.*

Environmental Issues Relating to Proposed Improvements

All of the above referenced WWTP improvements will be constructed on existing wastewater treatment plant grounds; therefore, the project is not expected to have any environmental impacts. The planning anticipates no disturbance to any endangered or threatened species of

plants or animals as documented by an Illinois Department of Natural Resources (IDNR) sign-off for their consultation process. Additionally, the State Historic Preservation Agency (SHPA) determined that, as proposed, this project shall have no effect on any Historic Properties in the National Register of Historic Places and they have no objection to proceeding with the project as planned.

Proposed Project

The City plans on using a phased approach to the proposed construction projects, which consist of the following:

Phase 1 Project:

South WWTP Pump Station Improvements

The "wet weather" pumps at the existing terminal pump station are nearing the end of their useful life. Altamont proposes replacing the two existing larger wet weather pumps with two new submersible variable frequency drive (VFD) "wet weather" pumps, each rated for 2,150 gpm peak flow. When the "dry weather" flow rating of the existing smaller "dry weather" pumps is exceeded, the water level in the wet well will rise and activate a switching mechanism to start the VFD pumps and turn-off the smaller "dry weather" pumps. The VFD "wet weather" pumps would remain in operation until flow subsides, at which time the smaller "dry weather" pumps would return to service.

South WWTP Terminal Pump Station Forcemain Improvements

The existing 10-inch force main from the Terminal Pump Station would require at least an 85 horse power pump if the peak wet weather flow rate of 3.04 million gallons per day (MGD) was to be conveyed through the 10-inch forcemain. While electricity consumption to operate an 85 horse power pump is a consideration, the more significant cost would be to operate a standby generator in the event of a power outage. It is more economical to construct a parallel 12-inch forcemain to convey peak wet weather flows through both the existing 10-inch and a parallel 12-inch forcemain, requiring two new 35 horse power pump motors, with one in operation during wet weather flow and the second alternating in normal service and serving as a backup. The City proposes that the Terminal Pump Station piping be arranged to convey all dry weather flows through the existing 10-inch pipe while all wet weather flows will be conveyed through both the existing 10-inch forcemain and the newly proposed parallel 12-inch foremain. Both forcemains will join together into a short section of 12-inch pipe discharging into the proposed influent flow meter and grinder discussed below.

South WWTP Improvements

Installation of an influent magnetic flow meter is proposed at the entrance to the South WWTP to accurately measure all influent flows. Influent flows will be displayed on a proposed treatment plant supervisory control and data acquisition (SCADA) system. Following the flow meter, flow will go to a grinder to reduce the size of solids, and the grinder structure will be equipped with an internal bypass channel with a manually cleaned bar screen for use in the event of a grinder malfunction.

*From there, flows will be conveyed to a proposed complete mix aeration basin for biological treatment of the wastewater, and where magnesium hydroxide and carbon dioxide will be added to support the nitrification process and maintain proper effluent pH if required to supplement alkalinity content of the raw wastewater. Flow will then go to a proposed partial mix aeration basin for additional biological treatment of the wastewater. Both mix basins will have fine bubble diffusers for aeration to sustain the biological treatment process, and are proposed to be constructed in the existing lagoon cell S-1, and will include insulated floating covers to minimize algae growth and to maintain winter time wastewater temperature high enough to achieve biological treatment objectives. Next, flow will continue to the proposed dual settling basins. After settling, the flow is proposed to be treated in a submerged attached growth biofilm reactor downstream of the settling basins, and then be discharged to the receiving stream. The City proposes that sludge from the lagoons be removed in liquid form and land applied to agricultural ground.

*The City proposed utilizing a chemical feed unit which can add magnesium hydroxide and carbon dioxide to the plant influent. The chemical feed unit will only be installed if effluent limits from the NPDES permit are being exceeded after the upgraded Plant is operational. The cost for this equipment is currently included in the total estimated project cost. Should the equipment be necessary the City could submit a loan application for this installation of the equipment, bid the construction and installation of the equipment, and then a separate loan could be provided by IEPA. If the equipment is not determined to be necessary, this would reduce the overall cost for the South WWTP construction project listed below, which would reduce the amount of the average customer's monthly bill from the $56.86 that is projected below.

The City proposes installing the new aeration process blowers in separate buildings, with two for the aeration basins and two for the nitrification reactor. Aeration basin blowers will be VFD to permit variability of air flow seasonally and VFD controls will be located in a separate enclosure that will be air conditioned to prevent over-heating the equipment during warm seasons. Additionally, the City proposes installing control structures downstream of the settling basins and the nitrification reactor to maintain process operating water levels. Control structure No. 1 will be downstream of the proposed settling basins and control structure No. 2 will be located downstream of the proposed nitrification reactor.

In order to maintain satisfactory waste water treatment efficiency during construction, the City proposes removing Lagoon S-2 from service and constructing the proposed settling basins within that basin, to be used for temporary treatment during construction. The City proposes using temporary floating aspirator aerators in the proposed settling basins during construction to provide the required oxygen source to provide biological treatment.

Phase 2 Project:

North WWTP Pump Station Improvements

The wet weather pumps at the existing terminal pump station are nearing the end of their useful life. The City proposes replacing the two existing larger wet weather pumps with two new submersible VFD wet weather pumps, each rated for 1.728 mgd peak flow during wet weather. When the dry weather flow rate exceeds the capacity of the smaller pumps, the water level in the wet well will rise and activate switching mechanisms to start the VFD wet weather pumps and turn-off the smaller pumps. The larger VFD wet weather pumps will remain in operation until the flow subsides, when the VFD wet weather pumps would turn off and the smaller pumps would be restored to service.

North WWTP Terminal Pump Station Force Main Improvements

The existing 8-inch forcemain will be modified to interconnect with the proposed magnetic influent flow meter.

North WWTP Improvements

The City proposes installing a magnetic flow meter to measure influent flow, which will be recorded and displayed with a proposed treatment plant SCADA system. Influent flow will then be conveyed to lagoon cells N-1 and N-2. The City proposes replacing the aeration equipment in both lagoon cells with a new fine bubble aeration system since aeration equipment has reached the end of its useful life. Additionally, the City proposes modifying the existing lagoon cell N-2 by installing a synthetic membrane baffle to reduce its size for more economical operation and to minimize algae growth, which contributes to effluent total suspended solids (TSS) concentration levels that intermittently exceed permit limits. The City also proposes adding a floating cover to the former chlorine contact basin to reduce algae growth and an automatic composite sampler at the WWTP's effluent Parshall flume to ensure their NPDES Permit limits are being met.

The cost estimates for these projects are as follows:

South WWTP Improvements-Phase 1 (L174987)

Construction	$4,757,150
Construction Contingency	$ 475,850
Design Engineering	$ 453,530
Construction Engineering	$ 235,322
Legal	$ 114,346
Total	**$6,036,198**

North WWTP/Collection System Improvements-Phase 2 (L175008)

Construction	$ 984,400
Construction Contingency	$ 98,400
Design Engineering	$ 87,737
Construction Engineering	$ 48,678
Legal	$ 23,654
Total	**$1,242,869**

Total For Both Projects	**$7,279,067**

Implementation

The proposed South WWTP treatment plant project (L174987) is scheduled for initiation of construction in the Summer of 2013, with completion of the project expected to be in the Summer of 2014. The proposed North WWTP project (L175008) is scheduled for initiation of construction in the Summer of 2015 with construction complete by Summer of 2016. The City of Altamont wishes to obtain two separate 20-year loans from the IEPA Water Pollution Control Loan Program (WPCLP) to finance the construction of the Phase 1 and Phase 2 projects described above. For a 20-year loan of $6,036,198 for the South WWTP project (Phase 1), at the current interest rate of 1.93%, the annual loan repayment of approximately $365,233 would be made from revenues of the system. The current monthly basic sewer user rate for an average 3,562 gallon per month consumer of is $15.41. To pay for additional operation, maintenance, replacement costs for the Phase 1 project, coupled with the additional debt service to repay the associated IEPA loan, will bring the average customers monthly bill to $56.86 by the Summer of 2014.

For a 20-year loan of $1,242,869 for the North WWTP project, at the historically more traditional rate of 2.5%, the annual loan repayment of approximately $79,348 would be made from revenues of the system. To pay for additional operation, maintenance, replacement costs for the Phase 2 project, coupled with the additional debt service to repay the associated IEPA loan, will increase the average customer' s monthly bill from $56.86 to $63.85 by the Summer of 2016.

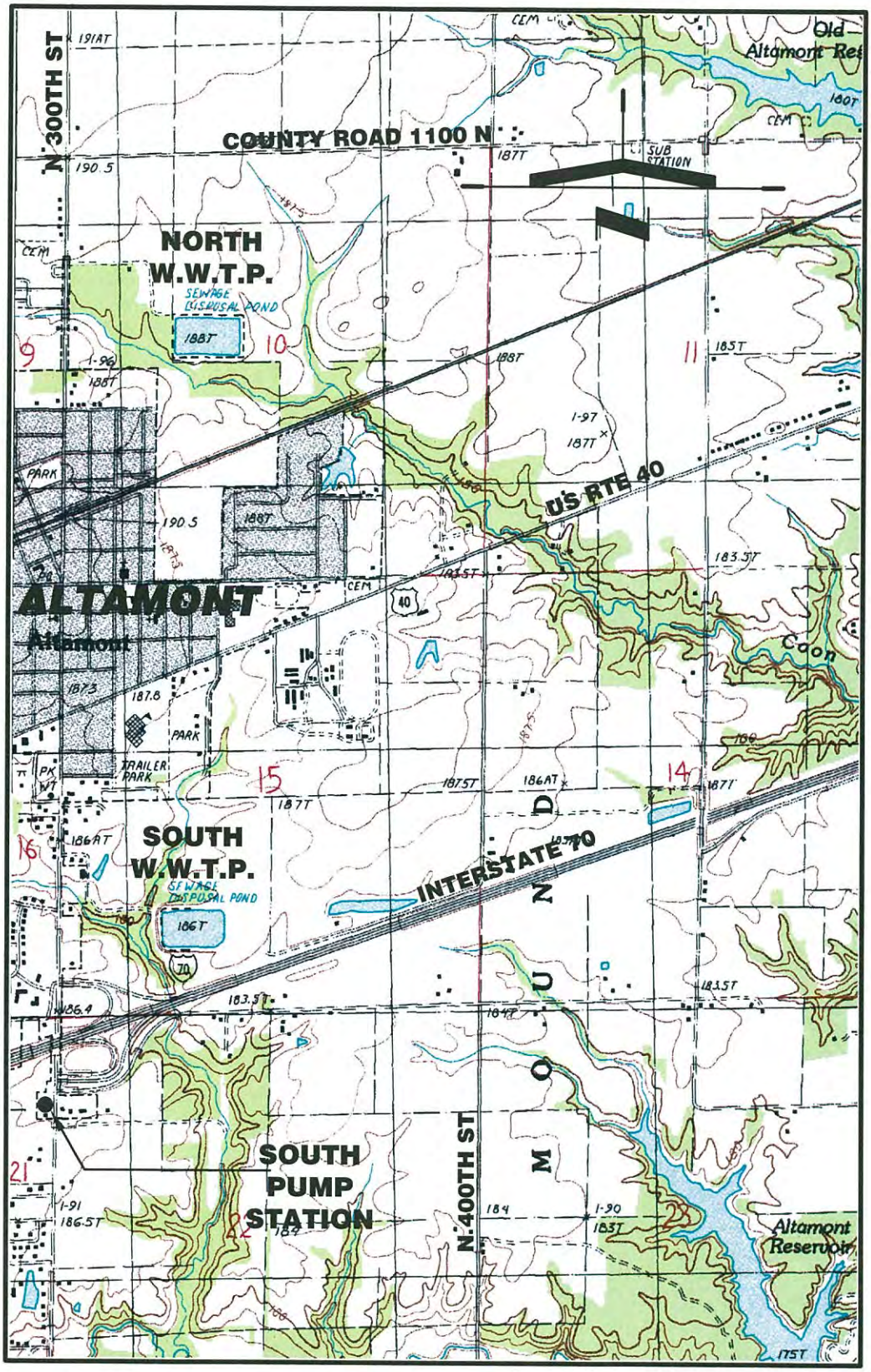
Both rate increases discussed above result in yearly sewer user charges of $682.32 and $766.20, respectively. These yearly sewer user charges fall within the Agency's affordability guideline of 2.0% of Altamont's median household income of $42,837, based on the latest census data.

Public Participation

Public comments are invited on the proposed project. For further information contact:

Gary W. Bingenheimer
Illinois Environmental Protection Agency
Bureau of Water
Infrastructure Financial Assistance Section
P.O. Box 19276

BH:Tm10042702



PROPOSED IMPROVEMENTS TO WASTEWATER DISPOSAL FACILITIES CITY OF ALTAMONT

IEPA PROJECT NO. L174987
SEPTEMBER 2012
2012.53

Curry & Associates
ENGINEERS INC

1253-LOCATION.dwg