



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, INTERIM DIRECTOR

Project Summary and Preliminary Environmental Impacts Determination

SEP - 5 2013

Date:

Loan Applicant: City of Moline, IEPA Loan Project Number: L174969

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 Expansion - Treatment 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 Summary and Preliminary Environmental Impacts Determination

Project Identification

City of Moline
619 16th Street
Moline, Illinois 61265

Rock Island County

Existing Conditions/Project Justification

The City of Moline, located in Rock Island County, has a population of 43,483, according to the 2010 census. Moline owns and maintains their two wastewater collection systems and their two wastewater treatment plant (WWTP)'s, the North Slope WWTP and the South Slope WWTP. There are approximately 11,400 City of Moline sewer service accounts tributary to North Slope WWTP's service area, and approximately 5,500 City of Moline sewer service accounts tributary to the South Slope WWTP's service area. In addition, the South Slope WWTP serves the City of East Moline and the Village of Coal Valley. The City of East Moline and Coal Valley own and operate their sewer collection systems and both discharge to a shared interceptor sewer that conveys wastewater to the South WWTP. Operation, maintenance and capital improvement budgets are shared between both WWTP's and are not tied to the individual WWTP's tributary service accounts.

The North Slope WWTP has met permit limits under the current flow and loadings and this project only proposes improvements at the North Slope WWTP where only an approximate 4% increase in the population that is serviced by this plant is expected over the next 20 years.

The Moline North Slope WWTP is reaching the end of its useful life and is in need of upgrades. The WWTP was built in 1965 and was expanded in 1975. Many of the facilities from the initial construction and the subsequent expansion in 1975 are still in use and are now 38 to 48 years old, resulting in maintenance and performance issues. In addition, the WWTP's existing single fine screen and influent pumping station have insufficient capacity to handle peak flows during wet weather events, which results in significant maintenance issues and has contributed to sanitary sewer overflows (SSOs) on the River Drive Interceptor (RDI). On July 8, 2009 the Illinois Environmental Protection Agency (Agency) issued a notice of noncompliance to Moline for SSOs on the RDI.

There are three pumping stations in the North Slope wastewater collection system. The 3rd Street and Homestead pumping stations are relatively small and serve a limited number of homes. The largest pumping station is the 39th Street facility, which is located on the eastern end of the

collection system. The 39th Street pumping station discharges to the RDI, which conveys wastewater in a westerly direction along the Mississippi River to the North Slope WWTP.

Many of the historical SSO events have occurred in the RDI just downstream of the manhole at which the 39th Street pumping station discharges. During wet weather events, the flow from the pumping station exceeds the capacity of the intercepting sewer. In the spring of 2011, the City cleaned and televised the intercepting sewer downstream of the 39th Street pumping station. The City has also modified the wet weather operation of the system to maximize storage in the sewers tributary to the 39th Street pumping station. These two modifications have improved the operation of the system, resulting in a significant decrease in the occurrence of SSOs.

Project Identification

WWTP Headworks Improvements

At the WWTP's headworks, the City proposes replacing the existing single fine screen and influent pumping station with a new headworks building and pump station located to the east at an adjacent site. This will include two deep fine screens, a new submersible pump station with a divided wet well, four large and two small submersible pumps with variable frequency drives (VFDs). This will increase pumping capacity by about 10 million gallons per day (gpd) to a peak flow capacity of 34 mgd, versus the current 24 mgd. Expanding the flow capacity of the North Slope WWTP to 34 mgd is proposed to off-load the sanitary sewer system during wet weather events and to reduce the amount of additional future storage potentially required in the collection system. See the attached map for project location.

WWTP Treatment Process Improvements

The City proposes biological treatment of 13.75 mgd and excess flow treatment of flows greater than 13.75 mgd and up to 34 mgd. This is similar to the current operations at the WWTP, except that approximately 10 mgd of excess flow treatment capacity will be added to increase total peak flow through the plant to 34 mgd. This will reduce collection system surcharging and SSO events while maintaining the current level of biological treatment at the WWTP.

The following treatment process construction is proposed:

1. Raise the walls of the existing two primary clarifiers by approximately 3 to 4 feet.
2. Construct a new flow splitter structure for the primary and excess flow clarifiers.
3. Raise the walls on the existing contact aeration tanks by approximately 2.75 feet.
4. Install 4 new aeration blowers.
5. Construct 2 new final clarifiers.
6. Construct a new return activated sludge (RAS) and waste activated sludge (WAS) building.
7. Install 3 new RAS pumps.
8. Install 2 new WAS pumps.
9. Convert the existing 2 final clarifiers to excess flow clarifiers
10. Construct new larger sludge storage tanks, sludge control building addition, and pumped mixing system.

WWTP Disinfection Improvements

The City proposes liquid chemical disinfection of forward and excess flows. A new forward flow disinfection facility is proposed to be located to the east of the existing North Slope WWTP site. Excess flow disinfection is proposed to occur in the existing chlorine contact tank and in one converted excess flow clarifier.

Additional WWTP Improvements

The North Slope WWTP currently does not have facilities to measure final effluent flow. The City proposes installing new flumes with flow measurement equipment and samplers to permit measurement of influent and effluent flows, as well as excess flow of influent and effluent.

The City desires to upgrade the WWTP's existing electrical service, which is generally from the 1960's and 1970's. Additionally, the existing 350 kilowatt diesel generator that was installed in the 1970's is not able to provide emergency power to all electrical components in the WWTP. The City proposes replacing older switchgear, distribution equipment, motor control centers, wiring where appropriate, and install a new high capacity generator to provide emergency back-up power to all essential WWTP equipment and systems.

The WWTP's controls were installed in the 1970's or earlier and are outdated. Currently, the WWTP has very limited automated monitoring and controls. The City proposes installing a new Supervisory Control and Data Acquisition (SCADA) system to allow remote monitoring of the WWTP.

The Main Control Building was constructed in the 1960's and expanded in the 1970's. The City has determined that demolition of the existing main Control Building and construction of a new fully ADA compliant Control Building is prudent and cost-effective when compared to rehabilitation and upgrade of the existing building.

Additionally, the City proposes the following WWTP modifications:

1. The new control room and SCADA control station will be incorporated into the new Main Control building.
2. The existing generator room will be demolished and the new high capacity generator will be installed outside in a weatherproof enclosure.
3. The existing screening and pumping facilities will be demolished after the new facilities are placed in service.
4. The existing Filter Building that is attached to the existing Main Control building will not be demolished. The eastern portion of the Filter Building will be modified to allow for one vehicle to be stored in that area. A portion of the existing Blower and Thickener Building will be modified to meet remaining vehicle storage needs.
5. New appropriately sized laboratory facilities will be included in the new Main Control building.
6. The existing laboratory addition will be demolished.
7. The existing Main Control building will be demolished. The new Main Control building will include energy efficient lighting, HVAC and roofing system. The lighting, HVAC and roof of existing Filter Building will be replaced.

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.

The estimated cost for the project is:

1. Construction	\$29,728,000
2. Contingency	\$ 2,972,000
3. Design Engineering	\$ 2,000,000
4. Construction Engineering	\$ 2,900,000
Total Project	\$37,600,000

Implementation

The City's engineer indicates that Moline intends to start construction on the proposed project by the spring of 2014, with construction to be complete in 20 months. The design engineering services of approximately \$2,000,000 is anticipated to be funded by the City. The City proposes to finance the remaining estimated project cost of \$35,600,000 with a loan from the IEPA Water Pollution Control Loan Program (WPCLP). The average sewer user's monthly sewer bill is currently \$26.10, based on an average monthly water consumption of 4,000 gallons. While interest rates may change from the current 1.93% after September of 2013, the debt repayment discussed in this document is based on a historically more traditional rate of 2.5%. Based on a 2.5% interest rate, Moline's estimated annual loan repayment is \$2,283,638. The resulting estimated 2016 increase in the average customer's monthly sewer bill is \$10.73 including loan repayment and an operation and maintenance inflation of 3 percent per year from 2012 to 2016. Therefore, the average customer's monthly sewer bill in 2016 is expected to increase to \$36.83.

The projected average sewer bill falls within the Agency's affordability guideline of 2.0% of Moline's median household income of \$47,431, based on the latest census data.

Public Participation

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

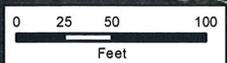
Gary Bingenheimer
Illinois Environmental Protection Agency
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-2027



Path: S:\MAD\3600-3699\9676\001\Drawings\Figures\Figure 9.01-1-Recommended Plan Bx11.mxd
 User: danc
 Date: 8/16/2013
 Time: 10:25:39 AM

Legend

- Manhole
- Sanitary Main
- New Facilities



RECOMMENDED PLAN PRELIMINARY LAYOUT

NORTH SLOPE WWTP FACILITY PLANNING
CITY OF MOLINE
ROCK ISLAND COUNTY, ILLINOIS



FIGURE 9.01-1
3676.001



© 2013 Microsoft Corporation