

CITY COUNCIL STUDY SESSION

TO: Mayor and City Council
FROM: Mari E. Macomber, City Manager *MEM*
SESSION DATE: April 5, 2010
TIME: 5:00 p.m.
PLACE: Water Treatment Plant – Potter

We will need to adjourn by 5:45 pm to allow the City Council to travel to City Hall for the 6:00 pm City Council Meeting.

AGENDA:

- **WATER TREATMENT PLANT TOUR**
- **REVIEW NEWSLETTER**

WATER TREATMENT PLANT TOUR

The City advertised for bids for improvements to the Water Treatment Plant starting June 11, 2008. Bids were opened on July 22, 2008. Three bids were received, with the low bid offered by Sparks Constructors of Kirksville. Sparks was awarded the contract approved by both the City and the Missouri Department of Natural Resources, since the funding for this project was supported through the State of Missouri Revolving Loan Fund Program (SRF).

The scope of work for the proposed contract included: Replacement of the three high-service pumps and associated valves, installation of a system of valves and actuators to balance the secondary clarifiers, installation of new chemical feeders, remodeling of the lab and computer control area, cleaning and repainting of the ground storage tank, and electrical updates and improvements. Included with this Council Study Session Packet is a Staff Report from Public Works Director John Buckwalter outlining the status of the project.

This project is the second phase outlined in the November 2004 facility plan. Phase 1 included replacement of the low-lift pumps, improvements to the filters, and improvements to the Chlorine storage and feeding systems. Design of Phase 1 and 2 works were completed as a unit. The construction cost of the Phase I work was \$1,287,165.64.

The funding for these improvements has been made possible through voter approval and participation in the SRF program. Participation in the drinking water SRF program first occurred in the fall of 2004 to finance an extension of the City's water main to the Airport, which occurred in conjunction with the Adair Public Water Supply district extending the line to supply water to the City of La Plata. Additional SRF funding was received in the fall of 2005 to complete upgrades of the water treatment facility and water main improvements.

In April 2006, voters approved the City to acquire additional bonds of up to \$3.5 million for future water needs. In April 2007, \$3.5 million was issued to fund needed water plant improvements (Phase 1 and 2) and to replace the downtown water lines. Some of the work done prior to 2006 includes: 16" Main/ Water Treatment Plant to the Brewington Elevated Tank (1999); Forest Lake Raw Water Pump Station Upgrades and Transmission Main (2002); Water Treatment Plant Filter Upgrades and Expansion to 6 Million Gallon Day production (2003); Water Treatment Plant Ammonization System Improvement (2003); and Water Distribution Line Extensions – annexation areas (2004).

The City's water system provides water service to more than 7,000 customers directly, inside and outside the city limits, and to the Adair County Public Water Supply District customers. With the extension of the transmission line to the airport, the City of LaPlata now receives water from the City through the Adair County Public Water Supply District.

The water treatment facility is located on city property at the northwesterly edge of the City. The water treatment facility was designed to treat surface water with facilities for feeding chemical for treatment and distribution of finished water. The water supplying the plant comes from two water supply reservoirs (Forest Lake and Hazel Creek Lake). Forest Lake was constructed in 1952 and Hazel Creek in 1982.

The raw water from each of these reservoirs is pumped through transmission lines to a holding pond located at the water treatment plant. On Monday, Public Works Director Buckwalter will walk the Council through the water treatment process from the plant to the finished product, highlighting the improvements that have been made through the recent contract with Sparks Contractors and explaining the work that remains to be done with Phase 2.

Once the water is treated it is transferred to the four elevated water storage tanks and the ground storage tank. These tanks account for about 4 million gallons of finished water storage. The ground storage tank is located at the water treatment plant and is scheduled for painting under the contract with Sparks. The other tanks are located on the north, south, east and west of the City (Brewington, Shepherd, School, and Downtown). The system also consists of over 100 miles of water mains that bring the water to the private service lines feeding homes and businesses.

The City's Enterprise Fund, which includes water, sewer and the recent addition of storm water, makes up 33% of the 2010 budget and account for 60% of the total user charges.

Recommended Action:

The City Council is asked to participate in a tour of the water treatment plant, and ask any questions you may have about the process and the work being done.

NEWSLETTER

Attachments

Staff Report Status of Water Treatment Plant Phase 2

KIRKSVILLE CITY COUNCIL STUDY SESSION ATTACHMENT

SUBJECT: Water Treatment Plant Improvements Update

STUDY SESSION MEETING DATE: April 5, 2010

CITY DEPARTMENT: Public Works

PREPARED BY: John R. Buckwalter, PE, Public Works Director

Council will have an opportunity to tour the Water Treatment Plant, and observe progress on the current plant improvement project. This project is the second phase outlined in the November 2004 facility plan, and is referred to in contract documents as Phase IA/II. Phase I, completed in 2007, included replacement of the low-lift pumps, improvements to the filters, and improvements to the Chlorine storage and feeding systems. The construction cost of the Phase I work was \$1,287,165.64.

On August 18, 2008 the City approved a contract with Sparks Constructors, Inc for improvements to the City's Water Purification Plant, in the amount of \$1,699,367.98. The scope of work for the contract included: replacement of the three high-service pumps and associated valves, installation of a system of valves and actuators to balance the secondary clarifiers, installation of new chemical feeders, remodeling of the lab and computer control area, cleaning and repainting of the ground storage tank, and electrical updates and improvements. A change order was approved in May 2009 which included the addition of grating and handrail in the sludge collection pit at the primary clarifier, installation of a sludge line check valve and pit; change of pump manufacturer, and time extension for the ground storage tank cleaning and painting. The costs of changes made and proposed have brought the contract cost to \$1,773,636. The project completion date was extended by 400 calendar days to July 5, 2010.

The current Phase II work is progressing now that we have favorable weather again. The laboratory and computer rooms have been completed. The third and final high service pump was placed in service on April 1. All major electrical work, including installation of a new electrical sub-station by Ameren UE has been finished. Chemical feeders were replaced early in the project, and some have been in service of over a year now.

Work currently in progress includes construction of the vaults which will house the actuators and valves which will balance the secondary clarifiers, installation of the sludge line check valve, and installation of a secondary chlorine feed system and back-flow prevention system.

Work which remains includes installation of a number of smaller pumps, work at the sludge collection pit, draining the secondary clarifiers and installing the regulating valves, and most critically, draining, cleaning, and repainting the 1.5 million gallon ground storage tank. Current schedules call for tank painting to begin by early May, to be completed by mid June.