City of Prineville

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DEPARTMENT OF PUBLIC WORKS

ENGINEERING DEPARTMENT

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Date: September 4, 2018
To: Prineville City Council
From: Eric Klann, City Engineer/Public Works Director
Staff Report: Capital Projects Update

Overview:

The Public Works Department has over $29 million of capital projects scheduled to be completed over the next two years. These projects will significantly increase the capacity of the City's water and wastewater systems and allow for significant additional growth while stabilizing consumer rates. Below is a list of the projects to be complete and a short description of each.

Airport Industrial Park Utility Extension Project (AIPUE) $8,192,016.98

This project began in the spring of 2018 and included the construction of four pipelines from the valley floor to the airport industrial area. The four lines include:

1. 10,931 lineal feet of 16" water main and installation of a 2,000 gallon per minute booster pump station.
    a. Currently, a single 8-inch waterline connects the Airport Industrial Area (AIA) to the valley floor. This line can let a limited amount of water from the AIA to the valley floor, but water cannot be directed from the valley floor to the AIA. Installation of this line will allow water generated on the valley floor to serve the AIA and potentially be stored in the Airport Aquifer as part of an Aquifer Storage and Recovery (ASR) Project.
2. 8,312 lineal feet of wastewater line varying in size from 30-18 inches.
    a. Currently, a single 8-inch sewer line connects the Airport Industrial Area (AIA) to the valley floor and the wastewater treatment plant (WWTP). This new line will provide additional wastewater collection capacity for future growth in the AIA. Facebook and Apple have paid an additional $1,719,959.98 to have this line installed at a depth of up to 32 feet. This depth will allow both sites to continue development without the need for sewer pump stations.
3. 6,634 lineal feet of 12-inch waterline line to be used for a potential future wastewater reuse project.
    a. The line will be installed parallel to the waterline and may transmit polished wastewater to the AIA in the future.
4. 6,630 lineal feet of 12-inch wastewater line.
    a. The line will be installed parallel with the wastewater line and may be used in the future to collect the blowdown brine from data center interests if DEQ requires pretreatment of the waste stream.

The Airport Industrial Park Utility Extension Project has been funded primarily through System Development Charges and data center payments. This project is scheduled to be complete spring 2019.

Aquifer Storage and Recovery Project (ASR) $12,727,379.90

A Feasibility Study and Implementation Plan conducted by the City in spring 2018 concluded that the region's unique geology, including a buried canyon formed by the ancestral Crooked River, was favorable for the adoption of an aquifer storage system. With an ASR system, water is collected in the aquifer during periods of cooler temperatures, higher streamflow, and lower demands. The stored water can later be recovered and used during periods of hotter temperatures and higher water demands, thereby easing peak demand stress on native water sources and reducing the need to build expensive storage facilities.

Prineville's ASR system is expected to mitigate the long-term impacts of climate change, including reduced snowpack and stream flows, and provides for a readily available underground reservoir of stored water for use in the event of drought. This project will include the following features.

- 20 shallow wells on the valley floor producing a combined 2,000 Gallons Per Minute (GPM)
- Water Treatment Facility
- New, 350 GPM valley floor well
- New, 3,000 GPM AIA well to recover stored water

This project will be funded entirely through the payment of SDCs and is scheduled to be complete in December 2020.

Railroad Sewer Line and N. 10th and Main Intersection Improvements $1,550,000

In 2014, the City installed over 6,500 feet of 18-inch sewer to support the construction of the new hospital. This project directed the 18-inch sewer from the new hospital to an existing 10-inch sewer located in NE 7th St. This project will be completed by installing 2,300 lineal feet of 21-inch sewer from NE 7th St to the intersection of N 10th St and N Main St.

During construction of the sewer, the intersection of 10th and Main will be significantly impacted. As part of this project, the intersection will be realigned and improved.

The project will be funded entirely through the payment of SDCs and is scheduled for fall/winter '19-'20.

Elm St. Bridge Replacement $2,352,580

The Street Department recently received a grant from ODOT for $2,110,970.04 to replace the Elm St. Bridge. This is the City's last driven pile bridge. Anderson Perry and Associates was selected to design and administer the construction of the new structure. Construction of the bridge replacement is scheduled for summer 2019. By removing the driven piles, there will be significant improvements to the floodway. The City has contracted with the Army Corps of Engineers to study the floodway before and after the construction of the new bridge. This project is expected to remove many homes from the flood zone.

Golf Course Irrigation System Reconstruction $700,000

The existing irrigation system at Meadow Lakes Golf course is over 25 years old and in need of reconstruction. Funds from the collection of Wastewater SDCs will be used to fund this much-needed project. Construction is estimated for fall 2019.

Improvements to WWTP and Slip Lining $4,137,342.58

Remaining Wastewater SDCs will be used to make improvements to the City's WWTP and collection system. Existing pump stations will be rebuilt to improve reliability and to allow for growth. Funds will also be directed to slip lining the existing collection system to reduce infiltration and inflow as well as pay off existing debt.

Summary:

These projects and funding sources will be discussed during the September 11, 2018 Council Meeting. Please let staff know of any questions or concerns.

Thanks,

Eric