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Discussion of issues relating to capital improvement projects at the Surface Water Treatment Plant.

Summary:

There are three (3) large scale projects that are needed at the surface water treatment plant. This presentation is an overview of the three projects and why each is needed. Two of these projects have a portion for consideration and action during the regular Council Meeting.

Project 1 is methods of solids handling at the Surface Water Treatment Plant. Currently, three (3) lagoons exist in the back of the plant that receive the sludge from the clarifiers. These lagoons were designed to allow water to return to the headworks of the plant so that water could be retreated and reused. The lagoons need to be cleaned out regularly, but that has not occurred. Currently, the lagoons are maxed out and we have run out of places to put the sludge. In approximately 2012, the middle lagoon was cleaned out with the material put into the northern most lagoon. In 2016-2017, the middle lagoon was partially cleaned out again because the plant was starting to return sludge to the headworks. The 2016-2017 project cost was \$603,022.03. We estimate that less than half of the wet lagoon was cleaned at this cost. In 2017-2018, Ardurra Group, LLC was hired to conduct a study to compare 4 methods of sludge handling. Based on that report, one method was ruled as incompatible with our sludge and financial impacts were developed for the other three methods. Our proposal is to pursue the third alternative of using roll-off container, gravity dewatering system with additional structures needed for the efficient dewatering of sludge. The sludge would then be hauled offsite for disposal at a landfill. This project will be considered in the regular meeting to enter into an agreement with Ardurra Group LLC to begin the Engineering phase of the project.

Project 2 is a change to the existing clearwell. The clearwell is sized incorrectly for the requirements of the plant. We need additional pump capacity which requires that the clearwell be increased slightly in size. Additionally, baffles would be added to the ground storage tanks (GSTs) at the plant to increase the time the water is in contact with the disinfection chemicals prior to being put into the distribution system.

Project 3 is to change the disinfection methods used by the plant. Chlorine gas is the most dangerous chemical used at the water treatment plant. The amount of chlorine gas needed for our operation requires us to fall under the EPA's Risk Management Program. Part of that program is to show the area effected of a devastating leak, which includes an oblong circle with a diameter of approximately 5 miles. This project aims to reduce the personnel and public health hazards through the use of other methods and technologies than straight chlorine gas. A study is being considered during the regular session to identify the short-term and long-term costs of each alternative as well as the risks incurred with each system. This is a project that would be requested at a later date.

The three projects come with an estimated capital cost of approximately \$11,000,000.

**Fiscal/Budgetary Impact:**

A portion of the funding is available from proceeds of Certificates of Obligation previously issued. The majority of the cost of the improvements is unfunded and will need to come from Certificates of Obligation not yet issued or currently included in the Capital Improvements Plan.

Discussion only. Two of these topics will be considered during the regular Council Meeting.