



Legislation Details (With Text)

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Title:	Discussion of issues relating to the Surface Water Treatment Plant Disinfection Alternative Evaluation.				
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Attachments:	1. DP Disinfection Alternative Evaluation Council Meeting 2.18.pdf				

Date	Ver.	Action By	Action	Result
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Discussion of issues relating to the Surface Water Treatment Plant Disinfection Alternative Evaluation.

Summary:

In December of 2018, City Council approved an agreement with the Ardurra Group to perform an alternative disinfection study. Currently the City uses two (2) 1-ton containers, operated one at a time, to provide the primary source of chlorine for the system. To this chlorine, Aqueous Ammonia is added to create chloramines, a more stable disinfectant. This is boosted in the system where we have two (2) 150 pounds cylinders at our four remote sites. We also have Liquid Ammonium Sulfate (LAS) at two of the sites which is a recent change from Aqueous Ammonia.

The disinfection study compared three alternatives:

Alternative 1: ChlorTainer system- The ChlorTainer system is a passive container system that allows the ton container to fit inside it. If there were to be a leak while the container was in use, the leak would be contained and the chlorine would be allowed to be used that was with the ChlorTainer vessel but outside the tank.

Alternative 2: Bulk Sodium Hypochlorite- Bulk Sodium Hypochlorite is an industrial grade bleach that runs between 12.5-19%. The bulk hypochlorite is fed as a liquid and shipped in at the high concentration.

Alternative 3: Onsite Hypochlorite Generation- The Onsite Hypochlorite Generation (OSHG) system includes a system for creating sodium hypochlorite at a 0.8% concentration. This low concentration takes is out of the hazardous chemical classification. It relies on the conversion of salt to sodium hypochlorite by electrolysis. The process is a batch system where a brine solution enters cells where it is electrified. The result is sodium hypochlorite that is sent to a storage tank and hydrogen gas which is allowed to vent to the atmosphere through piping that takes it through the roof.

Staff is going to recommend that Alternative 3 be approved at a future Council Meeting, but wanted to have a discussion with Council about the study, the impacts of each alternative, and to answer any questions before presenting the alternative and request to enter a contract for the design phase.

Fiscal/Budgetary Impact:

While there is no budgetary impact based on this discussion, at the December 4, 2018 City Council Workshop, a presentation showed the total project cost to be \$3.45M that would come through the sale of Certificates of Obligation. Each alternative has the following estimated costs: Alternative 1 \$2,023,000, Alternative 2 \$1,096,000, and Alternative 3 \$2,543,000.

Discussion only at this time.