

STAFF REPORT UTILITY MEETING

AGENDA DATE: January 30, 2024

DEPARTMENT: Water Utilities

TITLE:

Change Order #1 for Globaltech, Inc. adding additional vessels and membranes to existing Reverse Osmosis Trains

SUMMARY:

The city plans to upgrade the existing Reverse Osmosis (RO) trains by adding six additional pressure vessels and membrane elements as part of the membrane replacement project.

BACKGROUND AND JUSTIFICATION:

The membrane replacement project aims to upgrade the Reverse Osmosis (RO) trains. The current configuration consists of three RO trains, each equipped with 36 pressure vessels that contain 7 RO membrane elements. The system currently uses 24 pressure vessels for Stage 1 and 12 for Stage 2, producing 1.5 million gallons per day (MGD) of permeate from 2.0 MGD of feed water at a 75% recovery rate.

To increase the production of permeate, six open slots per RO train are available for additional pressure vessels. Four slots are allocated for Stage 1 expansion, and two for Stage 2 expansion. The objective is to enhance the permeate output from 1.5 MGD to 1.75 MGD, which requires an increase in feed water from 2.0 MGD to 2.33 MGD. However, the original design's 75% recovery rate is maintained throughout the modification.

Adding additional pressure vessels provides several benefits, such as improved energy efficiency, system reliability, and water quality. The funding will come from the reallocation of the bond money from Resolution 05-2024.

MOTION:

Move to approve/disapprove Change Order #1 to Globaltech, Inc. for additional membranes and vessels.

ATTACHMENT(S):

Fiscal Impact Analysis – N/A
Change Order #1
Membrane Train & Pump Photo
Membrane Train Pressure Vessels Photo