

DENVER BOARD OF WATER COMMISSIONERS

Meeting Date: December 10, 2014

Board Item: II-A-10

Water Quality Operational Study Contract #15796A

Action by Consent

Action

Information

The goal of this study is to enhance our current distribution system model (hydraulic model) by adding the ability to simulate water quality issues throughout the distribution system. This enhanced model will allow staff to troubleshoot, predict, and help solve water quality issues in our distribution system. The known issues include low chlorine residuals, nitrification and the need for excessive flush of the system to maintain water quality. There are four main areas of the distribution system that will be examined. Additionally, the enhanced model will allow staff to predict the possibility of water quality issues occurring in the distribution system and allow staff to proactively resolve any identified issues.

As part of the study a system-wide tracer test will be conducted to calibrate the model to assure the model is accurately simulating how the distribution system performs and predict how water quality constituents travel and react throughout the distribution system under different operating conditions. The enhanced model will help staff meet the Strategic Plan goal to assure Denver Water continues to provide high quality water for our customers.

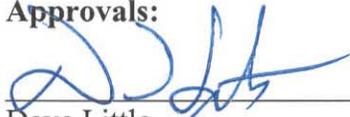
Eleven consulting firms were asked to bid on this study and two responded, HDR Engineering, Inc. and Black & Veatch. HDR was selected because of their tracer study approach, which avoids the need to install new monitoring equipment throughout the distribution system. HDR also proposed the use of leading edge water quality modeling technology for enhancing the model, which will help assure the enhanced model remains usable well into the future. Because of the specialized nature of this study, the MWBE goal of 10% was not reached. However, about 13 percent of the contract will be performed by CitiLogics, an SBE company.

The budget for this project is \$300,000 for 2015 and \$247,033 for 2016. The total cost is \$547,033. The planned expenditures for next year are included in the 2015 budget.

Recommendation:

It is recommended the Board approve the contract with HDR.

Approvals:



Dave Little
Director of Planning

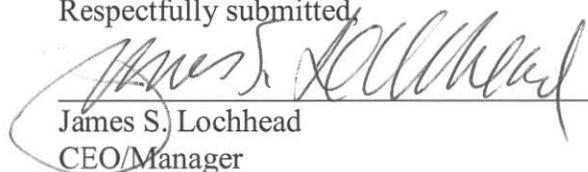


Patricia Wells
General Counsel

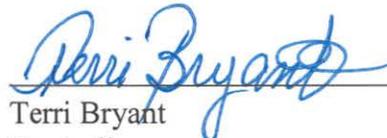


Tom Roode
Director of Operations and Maintenance

Respectfully submitted,



James S. Lochhead
CEO/Manager



Terri Bryant
Controller