



## Legislation Text

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**File #:** PUB16-207, **Version:** 1

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### Agenda Information Sheet

**DEPARTMENT:** Water Utilities

**ICM:** Howard Martin

**DATE:** September 12, 2016

#### **SUBJECT**

Consider recommending approval of the bid from Xylem Inc. for the purchase of dry pit submersible pumps for the Raw Sewage Pump Station Number 2 at the Pecan Creek Water Reclamation Plant in the amount of \$226,852 (RFP#6152).

#### **BACKGROUND**

Hazen and Sawyer was retained to do the computational fluid dynamics (CFD) modeling of the flow patterns from the raw wastewater screen to the inlet of the raw wastewater pumps for the Raw Wastewater Pump Station No. 2 (RSPS2). Staff had noticed issues with vibration, noise and limited pumping capacity in the RSPS2 pumps. The CFD analysis showed the approach velocities to the pump suction bells were much higher than recommended by the Hydraulic Institute (HI) Standards, cross flow was visible under the wall across the suction bell of Pump No. 6, and there were signs of swirling flow near the suction bell of Pump no. 6 and No. 7 in particular. The combination of the above hydraulic and structural deficiencies created an inefficient and unsustainable pumping station. The contract with Hazen was amended to provide design services for the replacement of the existing worn out pumps and improve the flow pattern in the existing wet well to the pump inlets.

PUB and Council approved the amendment to the engineering design contract with Hazen and Sawyer (Hazen) for the design of the lift station in March 2016. The design was completed, and a Request for Proposal (RFP) was sent out to equipment vendors. Three vendors responded to the RFP. Based on the RFP submittals the bids were ranked from the three bidders. Xylem Inc. was ranked No. 1, and a Best and Final Offer was requested from the two highest ranked bidders which resulted in a bid of \$226,852 from the highest ranked vendor Xylem Inc. The next ranked vendor Pierce Pump submitted a bid of \$209,000 (Exhibit 1).

The hardened metal and the advanced design used by Xylem is unique and not available from any other vendor. Please see attached photos (Exhibit 2) of a submersible pump that was used at the Denton Cooper Creek Lift Station. The pump impeller kept clogging up with disposable wipes and rags and the plant operations staff would have to shut off the motor, pull the pump out and pull the rags by hand from this pump. This was happening on a weekly basis. A nasty and dangerous operation. The pumps in the Cooper Creek Lift Station were replaced with the advanced design impellers and pump designed and manufactured by Xylem. Since then we did not have to pull the pumps out to manually clean them for fouled up impellers. The pumps at Good Samaritan Village also had to be changed out due to the same impeller clogging issue with the Xylem pumps, and the operation has been trouble free for over two years.

The Raw Sewage Pump Station No. 2 at the Pecan Creek Plant is a critical asset. The unobstructed and reliable operation is key to successful pumping of the wastewater from the sewer system to the treatment plant. Based on actual field operational experience at the Cooper Creek and Good Samaritan lift stations, staff is recommending purchase of the pumps from Xylem Inc.

#### **RECOMMENDATION**

1. Recommend approval of the bid from Xylem, Inc
2. Recommend denial of the bid from Xylem, Inc

#### **PRIOR ACTION/REVIEW (Council, Boards, Commissions)**

March 14, 2016: PUB recommended for approval Scope of Work and Cost Proposal from Hazen and Sawyer engineers for design of the RSPS2 rehabilitation

#### **DATE SCHEDULED FOR COUNCIL APPROVAL**

September 20, 2016

#### **FISCAL INFORMATION**

Funds for the amendment to the contract will be funded from revenue funds set aside in job account number 640321541.

#### **STRATEGIC PLAN RELATIONSHIP**

The City of Denton's Strategic Plan is an action-oriented road map that will help the City achieve its vision. The foundation for the plan is the five long-term Key Focus Areas (KFA): Organizational Excellence; Public Infrastructure; Economic Development; Safe, Livable, and Family-Friendly Community; and Sustainability and Environmental Stewardship. While individual items may support multiple KFAs, this specific City Council agenda item contributes most directly to the following KFA and goal:

**Related Key Focus Area:**      **Public Infrastructure**

**Related Goal:**                      **2.3 Promote superior utility services and facilities**

#### **EXHIBITS**

1. Bid Tabulation
2. Cooper Creek Pump Photos

Respectfully submitted:  
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