

AGENDA BILL

**Beaverton City Council
Beaverton, Oregon**

SUBJECT: Contract Award – Aquifer Storage and Recovery (ASR) Well No. 3A Drilling Project, (CIP #4021 G) to Schneider Water Services.

FOR AGENDA OF: 04-09-19 **BILL NO:** 19085

MAYOR'S APPROVAL: *Derry Dale*

DEPARTMENT OF ORIGIN: Public Works *AA*

DATE SUBMITTED: 04-01-19

CLEARANCES: City Attorney *MKT*
Mayor's Office *AA*
Purchasing *J. M. Small*
Finance *Maclean*
Engineering *Kirkman Pryor*

PROCEEDING: CONSENT AGENDA
(CONTRACT REVIEW BOARD)

EXHIBITS: 1. Bid Results Summary
2. Project Vicinity Map

BUDGET IMPACT

| EXPENDITURE | AMOUNT | APPROPRIATION |
|---------------------|-------------|---------------|
| REQUIRED \$653,894* | BUDGETED | REQUIRED \$0 |
| | \$694,872** | |

*This is the construction cost based on the bid results (Exhibit 1).

**Account Number 505-75-3623 Water Construction Fund – Non Potable Purple Pipe Projects – Construction Account. The FY 2018-19 Construction Budget has a remaining available balance of \$694,872. This ASR No. 3 Drilling Project is one of the two construction projects that are funded in the FY 18-19 Adopted budget under Project 4021 G which has a total appropriation of \$940,850. The other project, a potable to non-potable interconnect system, has been completed and paid for (\$245,978) in FY 18-19.

RECOMMENDED ACTION:

City Council, acting as the Contract Review Board, authorizes the Mayor to sign a contract with the lowest responsive bidder, Schneider Water Services, in the amount of \$653,894, for the Aquifer Storage and Recovery (ASR) Well No. 3A Drilling Project, (CIP #4021 G) in a form approved by the City Attorney.

HISTORICAL PERSPECTIVE:

The South Cooper Mountain (SCM) (540 acres) area of Beaverton, annexed to the City in 2014; and the Metro Urban Reserve Area 6B (1,200 acres), when annexed to the City of Beaverton is intended by Beaverton for higher density urban development over the next 20 years. These areas are planned for (potable) drinking water service. In addition to potable drinking water service, the City also has plans for a non-potable water supply. The sustainability benefits of having a non-potable water supply include offsetting potable water used for drinking, fire protection and increased summer peak demands. It also would reduce and potentially postpone costly increases in to the City's treated-water capacity. Summer potable water demand is about 60 percent higher than winter demand due mainly to irrigation and outdoor use.

In 2000, the City purchased two subdivision lots and drilled Aquifer Storage and Recovery (ASR) Test Well No. 3, at SW Loon Drive and SW Scholls Ferry Road. The groundwater test results revealed that the water within the well and aquifer contained levels of aesthetic constituents that

made it not suitable for direct potable water use, without significant treatment.

Beginning in 2016, the City partnered with Clean Water Services (CWS) of Washington County to develop a system that utilizes the ASR Well No. 3, to store and recover treated urban residential stormwater collected in the South Cooper Mountain area for use as supply water for the City's just-commencing non-potable, purple pipe water distribution system.

In 2016, CWS received a \$50,000 Feasibility Study Grant from the Oregon Water Resources Department (OWRD) for the Sterling Park Storm Water Recharge project. Sterling Park is a large developed neighborhood in SCM, located near the City's ASR Well No. 3 well where significant stormwater is available during the winter/spring period. CWS worked with GSI Water Solutions, a hydrogeological and stormwater firm to analyze stormwater quality field samples and evaluate treatment options for feasibility assessment prior to moving forward with pilot testing of a treatment and injection testing phase. The purple-pipe system will distribute water for various summer water uses, such as turf and landscaping irrigation at Mountainside High School and about 3,000 residential units when complete, potential release into ponds/lake, summer streamflow cooling, and even toilet flushing where the purple pipe system is available in the SCM area.

Working cooperatively with CWS, the City's non-potable overall system plan has been expanded to include winter-time stormwater collection (from the City's storm drainage system) with treatment and groundwater injection into the *existing* non-potable ASR No. 3 well which would allow for annual storage up to 50 million gallons. The non-potable stormwater recharge would be recovered in the summer period, pumped out of the *proposed* ASR Well No. 3A and into the purple pipe distribution system to supply non-potable water meters. Both wells Nos. 3 (injection well) and 3A (pumping well) will access the same deep basalt aquifer. This construction project includes drilling and development of just ASR Well No. 3A.

The stormwater recharge program was added following successful award of a grant for \$1.15 million to Clean Water Services and City of Beaverton entitled the "Sterling Park Stormwater Recharge Project" from the Oregon Water Resources Department, in November 2018. The overall non-potable water project now includes construction cost for a stormwater treatment and recharge system which increases the estimated overall SCM non-potable system cost of \$7.5 million.

A sophisticated potable-to-non-potable interconnect system was completed in Summer 2018, which supplies water from the City's potable system to the purple pipe distribution system and using telemetry remotely monitors the downstream pressure and measures the non-potable water demand so that flow capacity is maintained for continuous summer irrigation as the purple pipe system is progressively extended with development. The interconnection system is monitored and operated by Water Operations staff using the City's water system SCADA/telemetry system. The interconnection system also has a protective backflow valve prevention feature (required under Oregon law) to ensure that non-potable water cannot enter the potable water system. The purple pipe system is partially operational as of last summer, supplying at this time with potable water until non-potable water is available. To date, about two miles of purple pipe distribution system have been installed in developing areas of SCM.

With the approval of Metro's Urban Reserve Area 6B to be added to the urban growth boundary, and with future annexation to the City for high density development on the horizon, the non-potable system/purple pipe system is being planned to eventually cover the 1,200-acre area in the upper elevations of the south side of Cooper Mountain. Metro estimates UR Area 6B could yield 3,760 new homes and about 9,000 population once fully developed.

In May 2019, staff will also be requesting Council approval of a comprehensive consultant contract: Non-Potable (Purple Pipe) Water System Program Manager. The contract is intended to expedite the design and construction of the remaining capital improvements to fully operate and maintain the new non-potable water system utility in SCM. Additionally, the Program Manager will assist with City Code language, rates and charges, and service area boundaries to formally recognize the non-

potable water system in City Code as a new utility with a defined service area establishing required use for new development areas of SCM. Tasks in the Program Manager contract will be to provide professional engineering and design services with demonstrated experience in: program planning, system analysis, design and project management of municipal domestic potable and non-potable water systems; financial services to establish rates and SDCs development; for water systems; and public outreach and involvement for purple pipe systems.

INFORMATION FOR CONSIDERATION:

The Aquifer Storage and Recovery (ASR) Well No. 3A Drilling Project, (CIP #4021 G) will consist of drilling a new ASR production well that is up to 1,000 feet below ground surface and is intended for non-potable use. The non-potable stormwater (injection) recharge of ASR Well No. 3 during the winter/spring period will be recovered in the summer period by pumping out of the nearby *proposed* ASR Well No. 3A and into the purple pipe distribution system to supply non-potable water meters

An Invitation to Bid was advertised in the Daily Journal of Commerce on February 13, 2019. A mandatory pre-bid conference was held on February 21, 2019, with five prime contractors in attendance. Bids were opened on March 13, 2019, at 2:00 p.m. and the City received three bids (Exhibit 1). Staff reviewed the bids and determined that Schneider Water Services from St. Paul, Oregon was the lowest responsive bidder at \$653,894. The lowest bid was lower than GSI Water Solutions, Inc.'s construction cost estimate of \$700,000 and staff believe that the bid is reasonable.

A project vicinity map is attached (Exhibit 2) showing the ASR Well No. 3A included in this construction contract.

The schedule proposed by Schneider Water Services anticipates a construction duration of approximately six months (April – September 2019). Staff recommends award of the construction contract for the Aquifer Storage and Recovery (ASR) No. 3A Well Drilling Project, (CIP #4021 G) to Schneider Water Services.

City of Beaverton

BID SUMMARY

Project Name: AQUIFER STORAGE AND RECOVERY (ASR) NO. 3 WELL DRILLING PROJECT CIP 4021G, Solicitation No. 3465-19B

OPENED ON: March 13, 2019 at 2:00 PM

WITNESSED BY: Terry Muralt

| VENDOR NAME CITY, STATE | Bid Proposal | Bid Proposal - Certification - Ack. Addenda | Bid Bonds | Bidder Construction Schedule | Current Project Info | Bidders Responsibility Form | TOTAL BID | |
|--|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------|-------------|
| | | | | | | | 1 | 2 |
| Schneider Water Services – Saint Paul, OR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | \$612,534 | \$653,894* |
| Holt Services, Inc. – Milton, WA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | \$940,128 | \$999,928 |
| Yellow Jacket Drilling Services, LLC – Phoenix, AZ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | \$878,569 | \$1,009,969 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

* - The City's recommendation to Council is to award a contract to Schneider Water Services using Grand Total Bid Amount No. 2

The Purchasing process has been confirmed.

Signed: _____

Finance Department, Purchasing Division

The above amounts have been checked: YES NO

Date: _____

3/13/2019



LOON DR

Exhibit

EXISTING TREES AND SHRUBS
IN THE VICINITY OF THE NEW WELL
MAY HAVE TO BE REMOVED FOR
ACCESS AND SITING DRILLING EQUIPMENT

100' FROM NORTH TAX LOT BOUND

(Irrigation Well
(approximate))

ASR 3 Pilot Well

100' FROM WEST SIDEWALK OF LOON DR

ASR 15B005900

ASR 08C06600

