



## STAFF REPORT

DATE: March 12, 2019

### **DISCUSSION**

**AGENDA ITEM:** Well #1 Replacement

**SUBMITTED BY:** Kristina Handt, City Administrator

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#### **BACKGROUND:**

On January 22, 2019 the City submitted a feasibility study regarding options to address PFAS contamination at Well #1 (located in the Old Village area) to the state (Minnesota Pollution Control Agency, Department of Natural Resources, and Minnesota Department of Health). The feasibility study examined six options: blend well 1 with other existing wells, interconnect with an adjacent water supply, construct a new well and seal well 1, new storage facility to delay need for well, water treatment plant at well 3 (southwest portion of city), and water treatment plant at well 1.

Staff met with state staff on February 20, 2019 and learned the state would support the city's request for a new well on a cost share basis given the increased capacity of the pump. Well 1 had a 500 gallon per minute (gpm) capacity while well 5 would have a 1,250 gpm. Staff then had Bolton and Menk (who did the feasibility study) obtain cost estimates on the difference. A copy of that analysis is attached in your packet.

#### **ISSUE BEFORE COUNCIL:**

Is Council supportive of moving forward with this cost share on a new well? What other questions does Council have related to this issue?

#### **PROPOSAL DETAILS/ANALYSIS/OPTIONS:**

Staff is bringing this item forward for discussion amongst council and to gather feedback as we move forward.

The next steps would include having this item brought before the 3M Settlement Work groups. Staff would then gather quotes from consultants to begin work on the new well. Work would proceed once a grant agreement is in place with the MPCA. Well 5, as discussed last June, is proposed to be located in Tana Ridge Park. Surveying, a test well and other detailed analysis by the city and state agencies would help identify the specific location within the park.

#### **FISCAL IMPACT:**

The estimated city cost share per the cost difference analysis from Bolton and Menk would be about \$123,000. These funds would come from the water fund.

#### **ATTACHMENTS:**

- Well 5 Cost Difference

**Cost Difference for 500 gpm versus a 1250 gpm Well 5 (new Jordan Aquifer Well)  
 "Alternative 3 - Construct a new Water Supply Well No. 5 and Seal Well No. 1"  
 Lake Elmo Well 1 Advisory Study**

Alternative 3 Costs			
Element	for a 1250 gpm capacity Well 5	for a 500 gpm capacity Well 5	difference in costs between a 1250 gpm and 500 gpm capacity Well 5
Seal/Abandon Well 1	\$40,000	\$40,000	\$0
Demo Wellhouse 1	\$70,000	\$70,000	\$0
Test Well No. 5	\$50,000	\$50,000	\$0
Finished Water Line (FWL)	\$293,440	\$293,440	\$0
Wellhouse 5 (less Motor, Elect, Controls)	\$970,000	\$970,000	\$0
<b>Well Construction Components with costs that vary with well capacity</b>			
Drill & Drive 100 LF of Casing (18" or 24")	\$19,500	\$15,000	\$4,500
Drill 111 LF open hole (17" or 23")	\$16,095	\$11,100	\$4,995
F&I 211 LF steel casing (12" or 18")	\$20,045	\$16,880	\$3,165
Drill 80 LF open hole (11" or 17")	\$8,000	\$6,000	\$2,000
Grout (15 or 18 CY)	\$11,700	\$9,750	\$1,950
<b>Well Construction</b>	<b>\$200,000</b>	<b>\$183,390</b>	<b>\$16,610</b>
<b>Well &amp; Wellhouse Equipment Components (Electrical/Controls) with costs that vary with well capacity</b>			
Vertical Turbine Pump, Motor and Column Pipe	\$60,000	\$37,000	\$23,000
Electrical and Controls Equipment including Controls, Enclosure, Elect. Service (400 or 200 Amp), and VFD	\$115,000	\$69,000	\$46,000
Electrical Install	\$35,000	\$17,500	\$17,500
Controls Programming	\$20,000	\$20,000	\$0
<b>Pump, Column Pipe, Motor and Electrical</b>	<b>\$230,000</b>	<b>\$143,500</b>	<b>\$86,500</b>
<b>Total Construction Costs for Alternative</b>	<b>\$1,853,440</b>	<b>\$1,750,330</b>	<b>\$103,110</b>
Soft Costs and Contingencies	\$655,654	\$635,929	\$19,725
<b>Capital Project Costs</b>	<b>\$2,509,094</b>	<b>\$2,386,259</b>	<b>\$122,835</b>

**Shading Key / References /Notes:**

- Traut Wells (during the week of 2/28/19) identified these components of the well construction as having unit costs that would vary with the size of the well (500 gpm vs. 1250 gpm capacity). The unit costs assumed for each well size and the associated vertical turbine pump size are consistent with input from Traut Wells.

- Automatic Systems, Inc. (during the week of 3/4/19) identified these components of the electrical and controls portion of the project having costs that would vary with the size of the well (500 gpm vs. 1250 gpm capacity). The relative electrical and controls costs for each well size are consistent with input from Automatic Systems.