



Ordinance 2365

Approve the Buffalo Run Golf Course Well Drilling - Sole Source Justification and Re-Appropriation Ordinance

Background

- Buffalo Run Golf Course has experienced drought
- Have reached limit on allocated acre-feet in past years
- Currently served by wells into an existing irrigation storage pond



Background

- Identified need for alternative irrigation source
- Staff considered two top options:
 - Non-tributary well in Lower Arapahoe Aquifer
 - \$515k for well drilling alone
 - Non potable supply through SACWSD
 - \$800k to connect to 112th line through SACWSD
 - + \$78,000 a year for water



Alternative Option based on February 14 Study Session

- Central Water Conservancy District augmentation of well water
- Purchase augmentation contract through landowner, add irrigation well to Central's augmentation plan
 - City would have to include the Golf Course into District and Groundwater Management Subdistrict (3-6 months)
 - Petition Board to include the Golf Course, a tax-exempt City property
 - Additional legal and engineering costs for Water Court case(s) to add City's well to Central's augmentation plan (Central quoted 5-10k minimum)
 - Amount of augmentation water varies year to year based on Central's quota and priorities



Background

- Pros to non-tributary well
 - Independence of not relying on another entity
 - Golf course not included in SACWSD boundaries so no approval from them required
- Cons to non-tributary well
 - Perceived heavy reliance on non-renewable aquifer supplies
 - Water quality considerations – high sodium (treatable)



Background

- Pros to SACWSD non-potable line
 - Reliable, renewable water source provided by the City's water provider
 - City staff has positive working relations with SACWSD
- Cons to SACWSD non-potable line
 - City does not have control of source
 - Fairly expensive
 - City would have to pay the full connection fees



Background

| New Lower Arapahoe Well: | | SACWSD Non-Potable Line: | |
|---|--|--|---|
| One-time Costs: | | | |
| Installation and First Pump (includes Temporary Sound Walls): | Appx. \$515,000 | Connection Fee (for 40 AF): | Appx. \$700,000 PLUS dedication of 86 of the City's ERUs |
| Permitting process with State Division of Water Resources: | Appx. \$2,000 | | |
| Annual Costs: | | | |
| Annual O&M: | Up to \$12,000 ^Δ | Annual cost for appx. 40 acre-feet of water: | \$86,649 <i>today</i> [£] |
| Appx. annual water quality management costs for sodium permeability only: | Up to \$2,000 depending on usage [£] | | N/A |
| Costs Over 50-Year Period (Assuming 20 Years of Use): | | | |
| O&M: | Range of appx. \$240,000 to \$600,000 [£] | Cost of water: | \$1,732,980 |
| Pump replacements: | Appx. \$337,500 [£] | | N/A |
| Total water quality management costs for sodium permeability only: | Up to \$40,000 [£] | | N/A |
| Total Approximate Cost Over 50-Year Life (Assuming 20 Years of Use): | | | |
| Range of \$1,134,500 to \$1,494,500 | | \$2,432,980 | |

^Δ Applegate Group provided an annual O&M estimate of \$11,000 in its 11/1/21 report, but it was based on using the well 1 to 2 times out of every 10 years. For using it 4 years out of every 10 (20 out of 50 years), Applegate told us the annual O&M cost would be \$12,000. Of course, in years when the well is not operated, the operations costs will not be incurred, but certain maintenance costs may be. As such, the O&M cost estimate is **up to** \$12,000 a year. Note that these estimates are in today's dollars, and electricity costs will increase over time.

[£] The \$86,649 cost is based on applying SACWSD's 2022 commercial water rate of \$6.65 per 1,000 gallons to 40 acre-feet of water. The cost of water from SACWSD will increase over time, possibly very significantly. For instance, the Board could impose tiered water rates. Currently, SACWSD does not have a separate non-potable water rate.

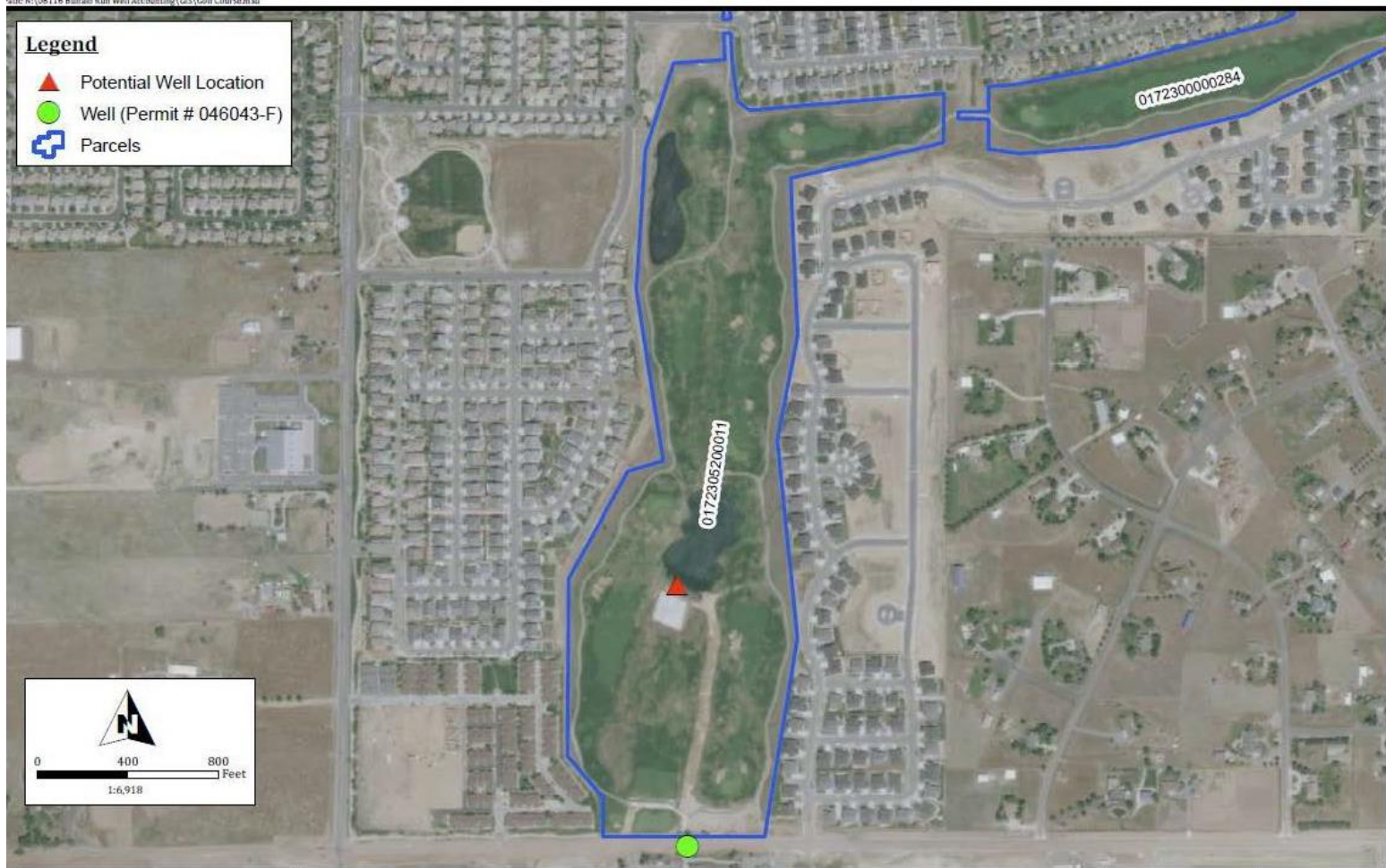


Lower Arapahoe Well

- Non-tributary well, not subject to water rights administration by the State
- Lower Arapahoe Aquifer
- Have rights up to 40 acre feet per year based on ownership of golf course lands
- Layne Christensen well drilling company



Site Map



Applegate Group, Inc.
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Buffalo Run Golf Course

Well Drilling

Date: 13 Sep 2021

Job #: 06-116

Drawn By: ABJ

Figure:

1

Of:

1

Timeline

- State permitting – 60 days
- Well drilling – 1 week (by availability of driller)
- Goal is by October 2022



Recommendation

- Staff recommends Council approve the Reappropriations Ordinance for the Buffalo Run Irrigation Well.





Questions?

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