Mark and I had a get Site visit yesterday and were able to obtain some good information for the system design and review the proposed locations for the Wells.

I have prepared the attached document that you can use to solicit Bids or updated bids from drillers. Please note that Allwest and Ace drilling have completed wells on Snowberry lane as indicated on the attached well logs so they should be familiar with the drilling conditions in this location at Finley Point. In addition to the attached document, the following is a description of the project that you can copy and paste into the email you send in your updated request for bids:

We have revised the Proposed Well detail for the three Timbrshor Wells (Well #4, Well #5, and Well #9), and are asking for a revised price from you in order to plan for installation of these three wells this Fall (September or October preferable) of 2021. Attached is an updated drawing that includes the Well Construction information that we are requesting, along with the following brief description:

- 10-inch borehole to a depth of 25 feet completed with a bentonite grout seal in accordance with ARM 36.21.655 and ARM 36.21.654. Please provide a lump sum for the completion of the surface seal.
- 2. 6-inch steel casing from 3 feet above ground surface to the bottom of the hole. The steel casing shall meet the requirements of ARM36.21.640 for steel with welded joints. Please provide a cost per foot for drilling each well and assume that the depth of each well will be 400 feet.
- 3. Provide a price to perforate the steel casing with 5/16" perforation using a perforator. Please provide a cost per foot, assuming that the length of casing perforations will be 20 feet.
- 4. Please provide a cost for a Baker premium watertight cap with screened air vent.

We would appreciate it if you would provide your costs on the attached Bid Tabulation Form. If you would like to propose other materials for construction of these wells, based on local drilling knowledge or equipment, please provide us with your proposal.

Also attached are the Well logs from four local Wells. The Cannon Well GWIC ID#008222 is located approximately 150feet from proposed Well #4 at approximately the same elevation. The other three Well logs are existing wells located south of the property.

For the THOA Board, the reason that we requesting costs specifically for steel well casing and not PVC well casing is due to risk. When you drill with steel casing, you drive the casing as you advance the drill bit, eliminating the risk of the hole caving in. When you use PVC casing, you drill an open hole and then install the PVC casing as a second step. Having an open hole could lead to stuck equipment or the need to redrill all or a portion of the hole. If we specify the PVC casing then we are taking the risk and potential cost of redrilling if something were to happen. However, the use of PVC casing is allowable and if the driller understands the local geology and is willing to take the risk, then it may be worth pursuing. Therefore, if they propose PVC casing we can discuss the project with that driller further.

In addition to updating the PWS well design and soliciting the Bids, we noted several tasks yesterday that need to be completed prior to the drillers showing up on-site. We can discuss and coordinate these task when you have time:

- 1. Get a surveyor to stake the approved well locations, as these locations can't change.
- 2. Once staked, evaluate the proposed well locations and determine what site prep needs to occur to drill wells at these approved locations. It may be helpful to allow the well drillers to inspect site or maybe set up prebid meeting with them to have them look at the Site and get their feedback on any Site constraints or preparation that is needed. This could be done prior to soliciting final bids from them, or it could just be done with the selected driller.
- 3. Site prep that we noted yesterday based on estimated well locations included:

- Well 4: Tree Removal and earthwork t create a level pad/ working surface.
- Well 5: Tree Removal.
- Well 9: Possible Tree removal and potential powerline issues.

Items for Hydrometrics to work on include:

- Revise water main alignment and layout and provide to THOA Board for review.
- Incorporate edits from THOA and then resubmit to THOA for all owners to have an opportunity to review proposed hookup locations. Possibly mark line locations on ground for people to see.
- Provide THOA with a list describing the order and process for project completion prior to Annual Meeting
- Prepare a deviation request for Rotundi parcel for drain field area so parcels can be included in sewer COSA for DEQ for THOA Board to submit to DEQ
- Review options for burial depth of water lines and how to deal with Sewer Line proximity.

Happy to answer any questions you may have.

Thanks, Greg

Gregory W. Lorenson, P.E.

Hydrometrics. Inc.
3020 Bozeman Avenue
Helena, MT 59601

Cell: <u>406-465-0941</u>

glorenson@hydrometrics.com

Blake Johnson
Rosenthal Wine Merchant
917.620.8191
blake@madrose.com