

RECEIVED
AUG 18 2014
DEPARTMENT OF
WATER RESOURCES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

\$50 fee

Received by gReceipt No. C099306Date 8/18/14

REQUEST FOR EXTENSION OF TIME

To provide additional time in which to submit proof of beneficial use for a water right permit

RECEIVED

SEP 12 2014

Department of Water Resources
Eastern Region

The Idaho Department of Water Resources will consider this form a request that the permit holder(s) be granted an additional period of time under the provisions of Section 42-204, Idaho Code, in which to complete development of a water right and file proof of beneficial use of water. There is a **FILING FEE** of \$50.00 to be included with this form when filed with IDWR.

Permit no. 35-13918 Date proof is due OCTOBER 01 2014

Name(s) of permit holder(s) GROVELAND WATER & SEWER DISTRICT

Mailing address PO BOX 833 City BLACKFOOT State ID Zip 83221

Telephone no. 208-785-4902 - CLM Email APPLEGRAPH@LIVE.COM

Describe what work has been completed toward the development of this water right:

If no work has been completed, show "none".

NONE

Costing \$ _____

The permit holder(s) has been unable to complete the remainder of the work for the following reasons:

D.E.G. APPROVAL FOR SUBDIVISION. WE ARE ~~STILL~~ WORKING
TO RESOLVE PROBLEMS

Permit holder(s) request an extension for 4^{cy} year(s).

Clem Yancey

Signature (If other than permit holder, Power of Attorney must be supplied)

8.15.2014
Date

ACTION OF THE DEPARTMENT OF WATER RESOURCES

The Department has reviewed the explanation for delay and concludes the reason(s) for delay meets the requirements for approval of the Request for Extension of Time as provided by Section(s) 42-204 and/or 42-218, Idaho Code.

☐ IT IS HEREBY ORDERED that the permit is **REINSTATED** with the priority date advanced to _____, 20____.

☒ IT IS HEREBY ORDERED that the above request for extension of time is **APPROVED**, and the time within which to submit proof of beneficial use is extended to September 17, 2015.

Signed this 23rd day of September, 2014

Jeff Peppersack, Chief
Water Allocation Bureau



HARPER-LEAVITT ENGINEERING, INC.

CIVIL AND STRUCTURAL ENGINEERING, MATERIALS TESTING AND LAND SURVEYING

**800 W. Judicial Street • Blackfoot, Idaho 83221 • Office Phone: 208.785.2977 • Fax: 208.785.2990
985 N. Capital Avenue • Idaho Falls, Idaho 83405 • Office Phone: 208.524.0212 • Fax: 208.524.0229**

RE: 100 Lot Home Subdivision
Attn: Groveland Water and Sewer District

October 15, 2013

Harper Leavitt Engineering has looked into your request for recommendation for supplying water/sewer to this subdivision. HLE has talked to some of the governing bodies including DEQ, IDWR and Blackfoot Fire Marshall. HLE has also read through the 2004 Groveland Water facilities planning study.

The existing pump is a 30 HP, 500 gpm submersible pump with a 6000 gallon pressure tank (HLE was told that a VFD was installed, the Facilities study does not mention this). The existing well is 743 feet deep and draws from water between 360 to 480 feet depth. The Facilities study states that the District water right number is 35-8354 with a total diversion of 1.7 cfs or 761 gpm. IDWR told us that the district has four (4) water rights totally 1.98 cfs or 888 gpm. As of right now the District has some fire hydrants but does not have the capacity to provide fire flow of a minimum of 1500 gpm.

DEQ said that the District would have to show documentation that the existing well would be adequate to supply the needs of the development along with the needs of existing consumers. They also said they would like to see a second well built.

The Blackfoot Fire Marshall who is the one who covers Groveland said that there is a possibility that he would require fire hydrants and fire flow to be installed in the subdivision, but he said that he would need to see the layout to make a final decision on what he would require if anything. Meter pits are required by DEQ on all new service lines. A meter does not have to be installed but the meter pit is required. I would suggest following Bingham County standard for ROW which is 50'. The utilities require 20' of easement on each side of the ROW.

If the district were to use the water for domestic use only and not allow irrigation using the existing system a total of approximately 350 homes (assuming a peak factor of 4 with 500 gpm of flow) could be serviced assuming the existing system pressure is adequate to provide that service. HLE is currently unaware of pressure problems or what pressure the system is currently providing at its furthest point. A test could be performed to see what pressure the system has at the furthest fire hydrant when fully open. This would also give us the maximum flow at that point. I would also recommend requiring the developer and all future developers to use their surface water rights to install a pressurized irrigation system for the developments irrigation needs (lawns, gardens, flowers etc.)

The hookup fee of \$500 is low comparable to surrounding areas but that is what also makes it appealing to develop in the District. According to the 2004 Facility report the probable operation and maintenance of adding a second well could range from \$9,950 to \$22,600 per year depending on system upgrades. The hookup fee is a onetime fee that helps the first year, but not the following years. Assuming the District gets 5 new hookups per year that is \$2500. So the district would have to come up with an up to an additional \$20,100 per year to pay for assumed operation and maintenance. With 54 + 5=59 users the first year at \$22 per month (from 2004 report) per user (monthly fee) equals \$15,576 per year. So the district is short \$4,424 the first year. To break even the monthly rate would need to be \$28.50 per month. You could increase the hookup fee to \$700 which would give the District an extra \$1000 per year assuming 5 new hookups per year, but those are not guaranteed.

Providing Sewer Service:

Assuming 320 gpd per dwelling (32,000 gpd for 100 homes) with a peak flow factor of 4.0 the subdivision would produce a flow of approx. 89 gpm at peak flow. An 8 inch gravity line 2/3 full can handle 244.5 gpm. The average daily flow in the existing system at lift station #1 is 156,750 gpd or 108 gpm without accounting for peaking factors. The average flow of lift station #2 is 51,251 gpd or 35.59 gpm without accounting for peaking factors. The pump capacity of lift station #2 is 210 gpm. With no lots in Groveland Heights being used but have been given a will serve letter, those

lots must be taken into account, which will produce an approximate 45 gpm at peak flow. The existing system is adequate to handle the existing and proposed flow of the initial 20 lots of the proposed subdivision and Groveland Heights but the lift station #2 and 4" pressure line will need to be looked at for possible upgrade once actual flows are determined prior to further development of the proposed subdivision. But there is a possibility that the Groveland Road lift station will be removed and the pressure line would be connected near the river as per the Wastewater facilities plan at such time more lots are requested.

In conclusion some assumptions were made throughout this letter such as growth, water pressure etc. HLE recommends the following: a flow/pressure test to be performed to get actual flow and pressure in the system unless the District has already has this information. Also the Blackfoot Fire chief needs to look at a sketch of what the developer is expecting to do to decide whether he is going to require fire flow. The system as is and allowing irrigation is not adequate for an additional 100 homes (which would require approximately 550 gpm exceeding the 500 gpm we assume available in the existing system). Once this information is available a decision can be made of whether a new well is required and or whether to only allow domestic use and no irrigation for current and future users. Once those questions are answered the decision of a new well should be answered. If a new well is required than the developer should provide that, but I would guess that they would go another route such as larger lots with sewer only before coming up with that large upfront cost. If a new well is not required immediately, then HLE recommends increasing hookup fees to \$700 and possibly user fees to help pay towards one in the future when development or other reasons require one. One option that HLE recalls in the Water Facilities Study is the option of connecting to the City of Blackfoot's system with a meter as a backup for needs in excess of the Districts current water capabilities. HLE does not know if this is a true option because we have not discussed this with either entity. It would be a less expensive alternative for the developer if more water is required.

The sanitary sewer has many variables that can affect sewer capacity prior to all 100 lots being platted and sold because of not knowing how long it will take to sale the 100 lots, if Groveland Heights starts to sale lots and or if Moreland starts to develop. The existing system is adequate to handle the existing and proposed flow of the initial 20 lots of the proposed subdivision but the lift station #2 and 4" pressure line will need to be looked at for possible upgrade once actual flows are determined prior to further development of the proposed subdivision. It is recommended to look into placing money into a fund from possibly raising the sewer hookup fee and user fee along with developer money to follow the Wastewater Facilities Plan and make all sewer north of Highway 26 connect to the pressure line near the bridge from a new centralized lift station and pressure line.

In the end the District has to make a choice do they want to support growth by existing users helping with the expense along with the developer or place all future growth at the expense of developers.

Should you have any questions regarding this recommendation please feel free to contact me by E-mail lukej@hleinc.com, or the office number is 208-785-2977.

Respectfully Submitted,
HARPER-LEAVITT ENGINEERING, INC.
B. Luke Jolley P.E.



Groveland Water and Sewer District
P. O. Box 833
Blackfoot, ID 83221

17
March 14, 2014

Mr. Craig Borrenpohl
Department of Environmental Quality
444 Hospital Way #300
Pocatello, ID 83201

Dear Mr. Borrenpohl:

Groveland Water and Sewer Board members met with DEQ on March 6, 2014 and discussed our request to allow 20 additional hook-ups to our water system without requiring a second well. Attached is our engineer's letter stating information pertaining to the existing system's pump, flows and existing connections.

The District has contemplated for some time how to obtain revenue for a second well and other needed improvements to the system. Our inquiries indicate that patrons will not support a bond. Idaho State Statutes 42-3218D and 42-3222 state that indebtedness to a water district for expansion or improvements can only be allowed by a vote of the patrons of the water district. We do not feel we have the funds to hold a bond election that we know will fail. Consequently, the District is unable to commit to a proposed timetable to install a second well.

Another option for obtaining revenue for a second well is to allow a developer to pay connection fees for 20 additional hook-ups. In the attached letter from Harper-Leavitt Engineering, Luke Jolley discussed the ability of the District to provide water to these 20 additional hook-ups without negative impact on the system. Besides the hook-up fees, we would have 20 additional users to pay monthly fees. These additional funds would allow the District to begin the process of obtaining a second well.

The District is seeking an engineer for our water system. We would like to do a study and are planning on applying for matching grants to help fund the study.

Because the Groveland area has a high potential for growth, the District is looking for ways to serve this future growth while remaining in compliance with requirements. Another developer may be able through hook-up fees to supply sufficient funds for us to install a second well.

Please review the attached letter from Harper-Leavitt Engineering. Will the District be allowed these 20 additional hook-ups without a second well? If not, how many hook-ups will we be allowed? Also, please consider our plans for future growth and compliance.

Sincerely,

Clem Yancey
Groveland Water and Sewer District



HARPER-LEAVITT ENGINEERING, INC.

CIVIL AND STRUCTURAL ENGINEERING, MATERIALS TESTING AND LAND SURVEYING

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985 N. Capital Avenue • Idaho Falls, Idaho 83405 • Office Phone: 208.524.0212 • Fax: 208.524.0229

RE: Groveland Water System
Attn: DEQ/Groveland Water and Sewer District

FEB 3 14
March 10, 2014

The District has supplied HLE with information pertaining to the existing systems pump, flows and existing connections.

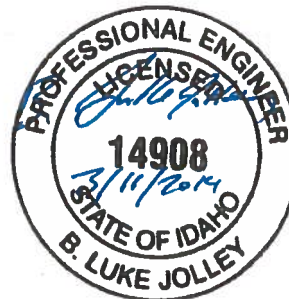
- 54 existing connections
- 42 of the 54 use water from the District's well to provide potable water and irrigation water for their ½ acre lots.
- Peak daily = 2.5 gpm (from Groveland Water Data during summer month)
- Peak hour = 1.25 gpm (avg daily for users with irrigation) x 4.3 (peak hour factor from ten state standards) = 5.4 gpm
- Total existing Peak Hour $42 \times 5.4 \text{ gpm} + 12 \times 3.26 \text{ gpm} (0.76 \text{ gpm} \times 4.3) = 266 \text{ gpm}$ currently used
- $20 (\text{proposed lots}) \times 3.26 \text{ gpm} = 65.2 \text{ gpm}$
- Total Proposed Peak Hour $266 + 65.2 = 331.2 \text{ gpm}$ which is less than the current pumps capacity of 500 gpm
- The 2004 Facilities Study has similar numbers
 - Current
 - AVG Day Flow 66 gpm
 - Max Day Flow 150 gpm
 - Peak Hour Flow 224 gpm
 - Avg Operating 60 psi
 - Min Operating 40 psi
- According to the Groveland Water and Sewer District Water Facilities Planning Study dated April 2004, it states that during high demand periods it is reported that this pressure delivery system is not capable of maintaining the minimum operating pressure of 40 psi required by IDAPA Regulations within the District's system. HLE has been told by the board that no such pressure problems are occurring at this time. Since the 2004 report the District has installed a VFD to the existing pump. This could very well be the reason behind no pressure problems currently. Also according to the May 5, 1999 DEQ Sanitary Survey PWS #6060095 The pressure is maintained between 55 and 62 psi with 50 connections. Also it states the well is set at approximately 80' depth not the 360' depth the 2004 report states.
- Existing fire hydrants cannot be used for fire flow due to lack of flow. But the Blackfoot Fire Department is not requiring fire flow at this time.
- HLE performed a water model on the current and proposed system. The pressure drop due to the new connections is very slight, and should remain above the minimum 40 psi and the existing pump can also provide adequate flow. Therefore 20 new connections will not have a negative impact on the system.
- HLE does recommend installing a new well for redundancy in the near future.

It is HLE's recommendation that the District submit these findings to DEQ as requested on the March 6, 2014 meeting. With these findings and DEQ's answer to substantially modified as per IDAPA the developer and the District will be able to proceed in a manner that is best for the District and in accordance with DEQ standards.

Should you have any questions please feel free to contact me by E-mail lukej@hleinc.com, or the office at 208-785-2977. We look forward to working with you on this project.

Respectfully Submitted,
HARPER-LEAVITT ENGINEERING, INC.

.B. Luke Jolley P.E.



IDAPA 58.01.08 Section 501.17 requires ground water source redundancy for Public Drinking Water Systems and therefore a minimum of two (2) sources are required if the system is intended to serve more than twenty-five (25) connections. Consequently if Groveland's groundwater source was constructed after July 1, 1985 the system would need a second well prior to any modification being made to the system and if the Groveland well was constructed before July 1, 1985 than source redundancy and other requirements would be required when a substantial modification is made to the system.

Previously submitted facility planning studies for the Groveland system included a well driller's report for the Groveland well. That report indicated drilling activities took place from January 30, 1985 through June 10, 1985. While it appears drilling activities were completed prior to July 1, 1985 the well would not have been adequately outfitted with the necessary equipment and approved to serve the patrons of the Groveland Public Water System until after July 1, 1985. A decision was requested from the state office on what constituted the completion of a source as this would impact Groveland directly due to the unusual timing of the drilling of your well. The state office, with the concurrence of the other regional engineers, indicated the source is considered constructed when well drilling activities have been completed. In this case that date would be prior to the specified date of July 1, 1985 and Groveland will be required to meet source redundancy requirements when a substantial modification is made to the system.

A water system is defined as being substantially modified in IDAPA 58.01.08, "Idaho Rules for Public Drinking Water Systems" when, "as the result of one (1) or more projects, there is a combined increase of twenty-five percent (25%) or more above the system's existing configuration in the population served or number of service connections, the total length of transmission and distribution water mains, and the peak or average water demand. (5-8-09)" An interpretation was also requested from the state office and the engineers from the other Idaho DEQ regional offices to ensure consistency in applying this definition. Regarding when this requirement is imposed the rule clearly states the system's existing configuration which is taken on the date of the rule acceptance, May 8, 2009. Therefore with the stated number of 54 existing connections an additional 20 connections would be a substantial modification and would only be allowed after the completion of all rule requirements including a second source of water.

While the previous facility planning studies all included recommendations which would provide for additional growth potential for the system it does not appear any of the recommended alternatives of those previous studies have been fully implemented. The Groveland Public Water System appears to be currently operating below its design capacity as the design recommendations have yet to be completed. The first study DEQ has on record was completed by Forsgren-Perkins Engineering in 1985 which recommended two wells should be completed to serve the users of the water system. All subsequent studies have noted the need for additional storage or source water yet as noted these recommendations do not appear to have been completed.

Regarding the number of additional connections which would be allowed to the Groveland Public Drinking Water System before the substantial modification threshold would be

breached; traditionally DEQ will evaluate a proposal which includes all the relevant information rather than provide a water system with a threshold number. DEQ does not have the required information to allow for an analysis and will rely on a proposal from the system with all the relevant information so DEQ can evaluate a proposal. From the definition of substantially modified, the three separate contributing factors of service connections, length of mains, and water demand are additive. Therefore an evaluation would be based on knowing the proposed percentage increase in all three areas. Total increases which sum to twenty-five percent (25%) or more would be seen as a substantial modification to the system.

A rough estimate would be possible if we assume the additional connections would bring an equal percentage increase to the Groveland Public Water System for each category of water mains, water demand, and service connections. If this were the case you could multiple the existing number of connections by eight percent (8%) to arrive at an allowable number of additional connections or approximately four (4) new connections for the Groveland system. Again this is a rough estimate and more detailed information would be required to make a final determination.

Idaho DEQ understands the difficulties faced by the Groveland Water and Sewer System in planning for improvements and then funding the recommended improvements. DEQ is encouraged to hear Groveland is planning for the anticipated growth in the area and may be seeking grant funds to assist in that effort. As I'm sure you are aware, DEQ provides matching planning grants and low interest construction loans but we have also assisted systems in their public education efforts in order to make the passage of a bond election more likely. If we may assist you in that effort please let us know. You may contact me at (208) 236-6160 or via e-mail at craig.borrenpohl@deq.idaho.gov should you have questions or require additional information.

Sincerely,



Craig M Borrenpohl, P.E.
Water Quality Engineer

cc: Tom Hepworth – DEQ – PRO (e-mail)
Barbara Jones – DEQ – PRO (e-mail)



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

444 Hospital Way, #300 • Pocatello, Idaho 83201 • (208) 236-6160
www.deq.idaho.gov

C.L. "Butch" Otter, Governor
Curt Fransen, Director

April 15, 2014

Groveland Water and Sewer District
P. O. Box 833
Blackfoot, ID 83221

Groveland Water and Sewer District:

Thank you for meeting with Idaho DEQ on March 6, 2014 to discuss your request to allow 20 additional hook-ups to the Groveland Public Drinking Water System. Our discussions revolved around whether a second well would be required prior to allowing these additional hook-ups. After our meeting I researched the issue by reviewing the prior facility planning studies, relevant IDAPA drinking water rules, and requested the input of Idaho DEQ engineers and staff in other regions and at that state office. Following is a review of that background work as well as a response to the request for additional connections with relevant IDAPA rule siting included.

IDAPA 58.01.08, "Idaho Rules for Public Drinking Water Systems" Section 513 discusses the number of ground water sources that are required for existing systems as quoted below.

513. FACILITY AND DESIGN STANDARDS: NUMBER OF GROUND WATER SOURCES REQUIRED – EXISTING SYSTEMS.

Existing community water systems served by ground water and intending to serve more than twenty-five (25) connections or equivalent dwelling units are subject to the following requirements for the number of ground water sources required. (5-8-09)

01. Existing System with All Sources Constructed Prior to July 1, 1985. A community water system served by ground water and with all existing sources constructed prior to July 1, 1985 will be required to comply with Subsection 501.17 upon substantially modifying the system after July 2002. (5-8-09)

02. Existing System with Any Sources Constructed After July 1, 1985. A community water system served by ground water with any sources constructed after July 1, 1985 is required to comply with Subsection 501.17 when a modification is made to the system which increases the population served or number of service connections, increases the length of transmission and distribution water mains, or increases the peak or average water demand. (5-8-09)



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RE: Groveland Water System
Attn: DEQ/Groveland Water and Sewer District

August 19, 2014

Clem and I met on Monday August 18, 2014 to discuss a plan and some options of moving forward with the Districts water system. HLE with input from the District will come up with a comprehensive plan. The plan will include items such as submitting for a DEQ grant to perform a Water Facilities Planning study. We will see if DEQ will allow the District to update the previous study instead of doing a complete new one since not much has changed since the last one. The study is required to do any upgrades or expansion of the system greater than 25%.

The plan would include estimates for cost for various options. Options that may be included are installing a new potable well, connecting to an existing public system such as Rose Garden Trailer park or the Groveland School. Rose Garden Trailer Park has a water right of 0.37 CFS which equals 166 gpm. They currently have approximately 29 hookups. HLE is unaware at this time the amount of water they are currently using. But it could benefit both parties if the two systems were combined.

It is the District Engineer's opinion that the District not allow any more water hookups until a plan is set and the districts goals are outlined.

Should you have any questions please feel free to contact me by E-mail lukej@hleinc.com, or the office at 208-785-2977. We look forward to working with you on this project.

Respectfully Submitted,
HARPER-LEAVITT ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'B. Luke Jolley', written in a cursive style.

.B. Luke Jolley P.E.