



State of Utah

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Department of
Environmental Quality

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DIVISION OF DRINKING WATER
Marie E. Owens, P.E.
Director

October 13, 2020

Rodger Smith
Highland Water Company
5880 North Highland Drive
Mountain Green, Utah 84050

Subject: **Review Comments**, Regarding Plan Approval Extension Request for Whisper Ridge Booster Pump Station (PF001);
Highland Water Company, System #15005, File #7267

This is not Plan Approval for construction.

Dear Mr. Smith:

The Division of Drinking Water (the Division) received the Project Notification Form, plans, and specifications for Kent Wilkerson, Cascade Civil, on October 1, 2020 to reissue Plan Approval for the Whisper Ridge pump station for another year.

Below is a summary of the project history:

- The Division issued the original Plan Approval for the proposed Whisper Ridge Booster Pump Station (identified as PF001 in the Division's database) on June 12, 2015.
- The Division issued an Amended Plan Approval on July 5, 2017.
- These Plan Approval letters state that approval must be renewed if construction has not begun or if substantial equipment has not been ordered within one year of the date of this letter. In July 2018, Highland Water Company requested and was granted extension of the Plan Approval for the Whisper Ridge Booster Pump Station for one year.
- Plan Approval was extended, for the last time, until July 31, 2020. The July 30, 2019 Plan Approval extension letter detailed how Highlands Subdivision Water System would need to resubmit plans and have new Plan Approval granted if construction had not been completed by July 31, 2020.

Our understanding of the Whisper Ridge Booster Pump Station project is that this booster station is intended to pump the water from the existing lower zone distribution system and the well water, from the proposed Johnson Well #1 (WS005), to the existing upper zone tanks (ST001 and ST002). The Whisper Ridge Booster Pump Station will provide redundancy to serve the connections located in the upper zones, which normally receive water by gravity from the existing Gordon Creek Springs 1 and 2 (WS002 and WS003). This booster station will consist of one (1) 200-gallon-per-minute (gpm) vertical centrifugal multistage pump designed to pump against total dynamic head of 543 feet. Approximately 40 linear feet of 12-inch diameter schedule 80 PVC and approximately 50 linear feet of 12-inch diameter Class 350 ductile iron pipe (DIP) water line will be constructed to connect the proposed booster station to the existing water system.

Please provide the following information to the Division so the review of the Whisper Ridge Booster Pump Station plan approval can be completed:

1. Updated plans and specifications stamped and signed by a Utah Professional Engineer.
2. Updated stamped, signed and dated hydraulic certification, certifying the hydraulic model has been updated with current demands as well as provide the following:
 - a. Gordon Creek Springs 1 and 2 flows used in the hydraulic model
 - b. Peak Day demand calculations used for the hydraulic model
 - c. Updated project hydraulic grade line (Sheet 4 of the approved May 2017 plan set) that includes the existing distribution infrastructure, any proposed distribution infrastructure, the Highlands Well #1(WS005) and the proposed Whisper Ridge Booster Pump Station. The Division needs to evaluate how this pump station will hydraulically impact the existing distribution system.
3. Assessment and explanations by the Highland Water Company regarding whether the requirements of R309-540-5(4)(b), regarding pump redundancy, are applicable to the Whisper Ridge Booster Pump Station (PF001). If applicable, you may consider requesting an exception to R309-540-5(4)(b).
 - o The source capacity of the Gordon Creek Springs 1 and 2 (WS002 and WS003) may have changed since the original review of this project in July 2015. Utah Administrative Code (UAC) R309-540-5(4)(b) requires the design of inline booster pumps include at least two pumping units such that with any one pump out of service, the remaining pump or pumps can meet the peak day demand of the specific portion of the system served. In previous approvals issued in 2015 and 2017 for the Whisper Ridge Booster Pump Station project, the gravity-feed water supplies from the Gordon Springs 1 and 2 was the basis of not requiring a redundant pump in the design. The source capacity of these springs needs to be verified since it affects the redundancy of the upper zone distribution system.
4. Assessment and updated treatment requirements of the Gordon Creek Springs Chlorinator (TP002) to show the dosing and treatment capacity still achieve primary and secondary disinfection on the combined sources flows.

Rodger Smith
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If you have any questions regarding this letter, you can contact me either by phone at (385) 271-7039 or e-mail chparker@utah.gov.

Sincerely,



Cheryl Parker, P.E.
Environmental Engineer III

CP/mrn/mdb

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