



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

October 21, 2014

Skyler Allen, PE
Keller Associates, Inc.
305 N 3rd Avenue, Suite A
Pocatello, ID 83201

**Teton Reserve Home Owner's Association Well No. 2 Preliminary Engineering Report
Not Approved (PWS No. 7410049)**

Dear Mr. Allen:

Thank you for submitting the Teton Reserve Home Owner's Association (HOA) Well No. 2 Preliminary Engineering Report. As discussed in the report, the Teton Reserve HOA water system currently serves 24 residential connections and meets the definition of a public water system. Teton Reserve HOA water system is not in compliance with the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08).

IDAPA 58.01.08.503 states preliminary engineering reports are required for all new water systems or material modifications to existing water systems that require plan and specification review and approval. The preliminary engineering report shall be in conformance with the approved facility plan or shall describe any modifications to the facility plan. However, the Department has no record or approved a facility plan for the water system. The Teton Reserve Home Owner's Association Well No. 2 Preliminary Engineering Report is **not approved**. In order for the Teton Reserve water system to be approved and in compliance with IDAPA 58.01.08, the following items must be adequately addressed.

1. IDAPA 58.01.08.502 requires all new public drinking water systems, and existing public drinking water systems undergoing material modification or expansion, are required to have a current facility plan that shall address all applicable issues specifically required in Sections 500 through 552 of the Idaho Rules for Public Drinking Water Systems including, but not limited to, hydraulic capacity, treatment capacity, standby power, redundancy, fire flows, project financing, and operation and maintenance considerations sufficiently to determine the effects of the project on the overall infrastructure. Facility plans must address the entire potential service area of the project. Teton Reserve HOA must submit a facility plan in accordance with IDAPA 58.01.08.502.
2. IDAPA 58.01.08.500 states that no person shall proceed, or cause to proceed, with construction of a new or substantially modified community or nontransient, noncommunity drinking water

system until it has been demonstrated to the Department that the water system will have adequate technical, financial, and managerial (TFM) capacity, as defined in Section 003 of the Idaho Rules for Public Drinking Water Systems. We have not approved a finalized TFM document. The Department will issue its approval of the new system capacity demonstration in writing provided the TFM requirements of IDAPA 58.01.08.500 are satisfied.

3. IDAPA 58.01.08.501.12 requires a new or updated operation and maintenance manual that addresses all water system facilities shall be submitted to the Department for review and approval prior to start-up of the new or materially modified public water system unless the same system components are already covered in an existing operation and maintenance manual. We do not have a record of an approved operation and maintenance manual.
4. IDAPA 58.01.08.504.09 requires that within thirty (30) calendar days of the completion of construction of facilities for which plans are required to be reviewed pursuant to Subsection 504.03, record plans and specifications must be submitted to the Department by the design engineer. If the construction does not materially deviate from the approved plans and specifications, the owner may have a statement to that effect prepared by an Idaho licensed professional engineer and filed with the Department in lieu of submitting a complete and accurate set of record drawings. We have no record drawings or an engineer certified statement for DEQ approved projects for Teton Reserve's Phase I, Teton Reserve Drive well transmission line (Phase II), as well as Peregrine, Snow Goose, Trumpet Swan, Royal Elk Area, and Bison Areas.
5. IDAPA 58.01.08.503 states preliminary engineering reports are required for all new water systems or material modifications to existing water systems that require plan and specification review and approval pursuant to Subsection 504.03. The preliminary engineering report shall be in conformance with the approved facility plan or shall describe any modifications to the facility plan. We have no record of an approved facility plan.

In addition, the intent of a preliminary engineering report must demonstrate compliance with the Idaho Rules for Public Drinking Water Systems. However, the Teton Reserve HOA Well No. 2 Preliminary Engineering Report indicates several issues that do not comply with the Idaho Rules for Public Drinking Water Systems. The Teton Reserve HOA Well No. 2 Preliminary Engineering Report is not approved. The following comments are in respect to the Teton Reserve HOA Well No. 2 Preliminary Engineering Report.

1.1 Project Description, page 3. Although it is stated that 24 connections are currently served, there is no discussion on the population being served by the water system. Well No. 1 has a fifty foot radius easement as shown in Appendix D of the report. Page 3 states "Well #2 will be located approximately 100 feet west of Well #1 occupying the same lot." There needs to be a legal easement or property boundaries that clearly defines the ownership and dimensions of the well lot for the two wells.

1.1.3 Electrical Requirements, page 3. The report states the "emergency power generator is not included in the current project scope, design will include accommodations for the installation of an emergency power generator. A standby generator will be supplied by Teton Reserve HOA to meet IDAPA requirements"

The report does not state the timeline for installation of standby power. IDAPA 58.01.501.07 requires new community water systems constructed after April 15, 2007 are required to have sufficient dedicated on-site standby power, with automatic switch-over capability, or standby storage so that water may be treated and supplied to pressurize the entire distribution system during power outages. During a power outage, the water system shall be able to meet the operating pressure requirements of Subsection 552.01.b. for a minimum of eight (8) hours at average day demand plus fire flow where provided. In addition, Furthermore, 501.07.c requires new sources and booster pumps intended to increase system capacity shall be provided with standby power or equivalent. The Department cannot approve Well No. 2 until compliance can be demonstrated with Section 501.07.

1.2 Site Selection, page 4. “Keller Associates has recommended to Teton Reserve HOA that the well lot be separated from the open space as a designated well lot and placed in the control of the HOA as owner of the water system.” The Department concurs with Keller Associates so that siting and construction of the well will comply with IDAPA 58.01.08.510.

2.1 Existing System, page 6. The reports states the “Teton Reserve Homeowner’s Association and Subdivision utilizes a public water system that currently contains one culinary well. The system has not been classified as a community water system or assigned a public water system number as of this writing (2014).” A public water system number, ID7410049, was assigned to the water system in 2004. The water system did not report to the Department the number of connections or the population served by the water system when the water system expanded to serve 15 connections or 25 people.

2.3 Water Quantity, page 6. A discussion of the average day demand, peak day demand, peak hour demand, and fire flow demand of the existing system needs to be included.

2.3 Water Quantity, page 7. The report states “the combined capacity of Well #1 and Well #2 will be approximately 1,350 gpm. This flow rate is sufficient to meet peak hour and fire flow demand for approximately 50% of full buildout. However Idaho code states that peak hour plus fire flow demand must be met with the largest pump out of service. Teton Reserve HOA does not currently have the resources available to provide redundancy in fire protection water production capacity.”

IDAPA 58.01.08.501 requires public water systems that provide fire flow shall be designed to provide maximum day demand plus fire flow. Fire flow requirements and system adequacy shall be determined by the local fire authority or by a hydraulic analysis. Pumping systems supporting fire flow capacity must be designed so that fire flow may be provided with any pump out of service. Well No. 2 cannot be approved until redundant fire flow can be achieved.

Section 8 - Well Construction, page 12 and 13. The report says Well Nos. 1 and 2, “operating in tandem, will supply demand requirements but fail to meet redundancy requirements according to IDAPA. As build out continues, Teton Reserve HOA will upgrade their system with additional water supply capabilities to meet additional demand and redundancy requirements. As the development reaches full buildout, the flow capacity

of the system will be increased to meet demand and fire flow requirements by upgrading to a 500 gpm pump.”

Further detail is needed for the timelines or criteria with proposed pump upgrade. Even with the upgrade of the pump, the water system will not be in compliance with ground water source and fire flow redundancy as required by IDAPA 58.01.08.501.17 and 18.

New public drinking water systems must comply with the design and construction requirements of the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08). Teton Reserve Home Owners Association needs to address the issues discussed in this letter. We would also like a completed DEQ General Plan and Specification Review Checklist accompanying additional submittals. If you have any questions, please contact me at (208) 528-2650.

Sincerely,

A handwritten signature in blue ink that reads "Greg Eager". The signature is fluid and cursive, with the first name "Greg" and last name "Eager" clearly distinguishable.

Greg Eager, PE
Engineering Manager

C: Eastern Idaho Public Health District
Dennis Dunn, IDWR