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Comments: Date: Jun 20, 2025

To: Kim Pierson

Forest Supervisor

Caribou-Targhee Forest

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From: Arthur Melville

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Subject: Grand Targhee Resort DEIS Comments - Karst Aquifer

Dear Forest Supervisor Pierson,

After reading retired hydrologist David Susong's comment letter, I decided to make another comment on the GTR DEIS. David talked about the karst aquifer system, and I'm concerned that the silt we occasionally have in our well, could possibly be coming that aquifer, which originates up on Freds Mountain.

We had a big silt problem a year ago and it continued for some time. Of course, I can't be sure our silt problem is related or not, but Grand Targhee had a large sinkhole appear high on the mountain in September 2023, after several days of heavy rain.

https://www.jhnewsandguide.com/the_hole_scroll/sinkhole-fractures-grand-targhees-slopes/article_b5213ce6-5d63-11ee-be68-93ebc50ee073.html

That sinkhole fits the description retired hydrologist David Susong describes about the aquifer. "Karst aquifers are characterized by cavernous flow systems that respond rapidly to surface inputs."

----- from David Susong's Comment Letter -----

Hydrology:

GTR is located on top of a large karst aquifer system. The most significant hydrologic impacts from the proposed actions will likely be to groundwater systems. The springs from this aquifer system are used for public water supplies as noted in the EIS. Anecdotal reports indicate that sediment reached the Alta spring following the installation of the Sacajawea Lift. Karst aquifers are characterized by cavernous flow systems that respond rapidly to surface inputs. To protect water supplies dye trace studies should be conducted to examine flow paths and travel times before any work commences. Extensive BMPs will be required as noted in the DEIS. I am uncertain why they are not recommended for areas underlying by the Madison Limestone. Surface disturbance will likely affect it as well as other units. Any on mountain sewage treatment systems for new facilities have the strong potential to impact groundwater. Over much of the GTR area there is a thin veneer of soils over bedrock. Engineered septic systems will also likely be problematic. Alternatively, constructing sewage lines across the mountain to the base sewage treatment plant will create a linear infiltration trench for enhanced flow into the underlying karst aquifers. The proposed Mono Trees lift will be in the bottom of the Mill Creek drainage which will increase the likelihood of impacts to the streamflow, water quality and potentially the groundwater system. The DEIS minimizes these potential impacts with proposed simple engineering solutions which are difficult

The karst aquifer at Targhee could possibly be the source of our silt problem however, I wouldn't make that accusation without a study to back it up. While I can't be sure that's the cause, after reading David's account, it seems plausible.

Please take the possibility of ground water infiltration into the karst aquifer seriously, and conduct studies to explore the possible extent of ground water from Grand Targhee, contaminating groundwater and wells in Alta.

Thank you for your consideration,

I may make another comment later.

Arthur Melville
Alta, Wyoming