



October 17, 2022

Kathy Shreve
Department of Environmental Quality
Water Quality Division
200 West 17th Street, 4th Floor
Cheyenne, WY 82002

RE: Town of Jackson Wastewater Lagoon, Permit No. WY0021458

Dear Ms. Shreve:

On behalf of Protect Our Water Jackson Hole (POWJH), I am pleased to submit this letter in response to the WDEQ's September 16, 2022 public notice inviting comments on the above-referenced pollution discharge permit renewal.

POWJH is a locally-based nonprofit organization dedicated to serving Teton County, Wyoming, as a powerful advocate for restoring and protecting the surface and groundwater in our watershed.

The Town of Jackson wastewater treatment facility (hereinafter the "facility") was constructed in the late 1970s and expanded in 1990s. It consists of a series of aerated lagoons which discharge treated effluent into the Snake River (class 2AB) via a borrow pond and constructed wetlands. We understand that the point of compliance is immediately below the UV disinfection facility. We note that this facility is the largest point source of water pollution in Teton County and as such it deserves close scrutiny.

Per Chapter 1 of the DEQ's Water Quality Rules and Regulations, designated uses of the Snake River include drinking water, game and non-game fish, fish consumption, aquatic life other than fish, recreation, agriculture, wildlife, industry and scenic value. Of particular note, the Snake River a few miles downstream of the facility has been designated a National Wild and Scenic River. Water quality was identified as one of many "outstanding remarkable" values that prompted Congress to add the Snake River to the National Wild and Scenic Rivers System.

The proposed permit establishes both technology based and water quality-based limits on pollutant concentrations in the effluent. Technology based limits derived from the National Secondary Treatment Standards address carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), and pH. Water quality-based limits, which are set to ensure that water quality and ecosystem function in the receiving waters are protected, include limits on E.coli and total residual chlorine.

We have the following questions and concerns regarding specific attributes of the draft permit:



I. Flow Diagram

- a) It would be helpful for the public to understand the flow of effluent through the facility by illustrating a flow path with a simple arrow through each pond/facility component.
- b) It appears that the unnamed tributary below the borrow pond, that receives effluent from this facility, either contains or could support fish (and would therefore be considered Class 2AB). What evidence does DEQ have indicating this segment does not contain fish and other aquatic life?

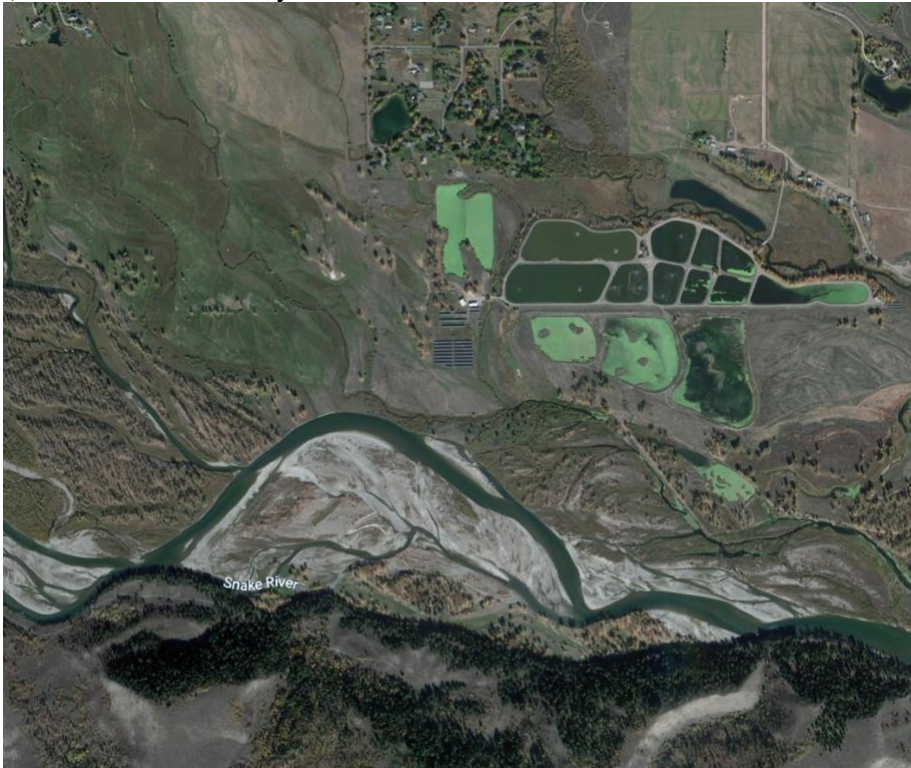
II. Snake River Monitoring Data

- a) Water quality data collected at the Moose gauge, just south of Grand Teton National Park, are not necessarily representative of water quality immediately upstream of the facility. The segment of the Snake River south of GTNP flows through mostly private lands where it is exposed to a variety of chemical pollutants from sources like agricultural operations, golf courses, home sites, residential and large capacity septic systems. We request that an upstream “ambient conditions” sampling location be established closer to the facility.
- b) Given that meteorological conditions and land use have changed in the fifty years since this monitoring baseline begins, especially over the course of our current drought, we request that a more recent timeframe be established for baseline ammonia, temperature, and pH concentrations.

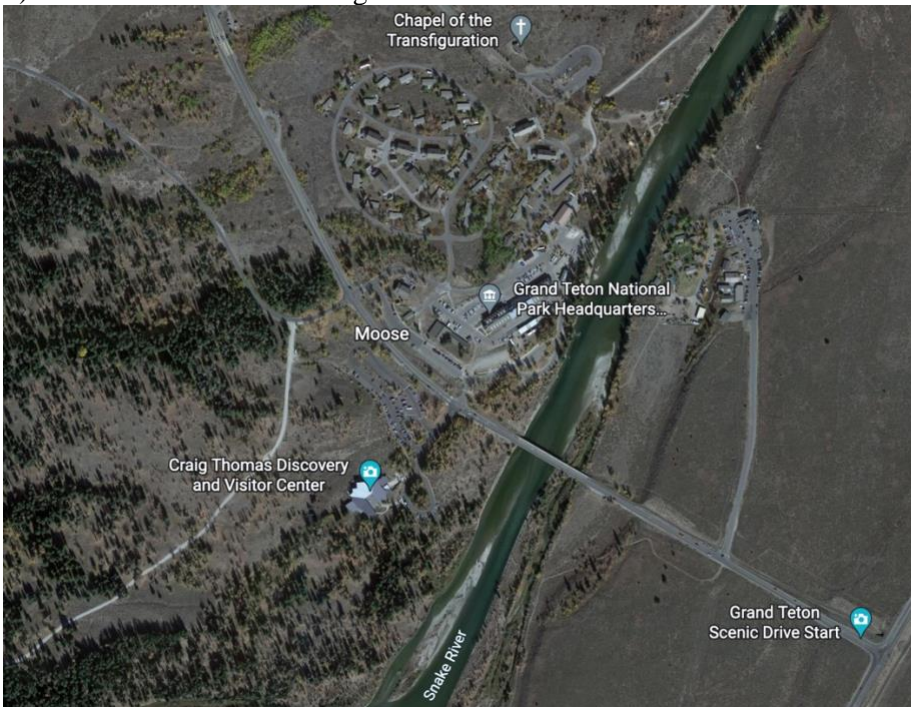
III. Mixing Zone

- a) Flow data from the Moose gauge is used to justify the exclusion of an official mixing zone. As evidenced by the included pictures (Google Earth), the nature of the Snake River near the facility (i) is different than at the Moose Gauge (ii). How are the braided nature and variance of flows in the Snake River taken into account when calculating dilution?
- b) This permit states (on Statement of Basis page 5) that water quality based effluent limits for ammonia are being established per mixing zone rules, but this statement appears to be inaccurate as no effluent limit exists for ammonia.

i) Snake River at facility



ii) Snake River at Moose Gauge





IV. E.coli

- a) Primary contact recreation occurs year-round in the Snake River, and the seasonal increase in permissible E.coli concentrations fails to account for that. The current (and proposed) E.coli limits of 630 colonies/mL from October - April do not provide adequate protection for kayakers and other boaters during this time of year. Accordingly, we request that the limit on E.coli concentrations be set at the more protective summertime standard: monthly average 126 colonies/100mL, daily maximum 235.

V. Nutrients

- a) Our organization has been focused on reducing nutrient pollution in surface waters of Teton County for over a decade. Per the attached memo from the EPA: “Excess nutrients contribute to many problems in harmful algal blooms, areas of low oxygen known as “dead zones,” and high levels of nitrates that contaminate waters used for recreation, drinking water, wildlife, pets and livestock, and aquatic life—while also damaging the economy in many communities.” We request that DEQ include a reasonable potential analysis for nutrients, as referenced on page 8 in the attached EPA memo.
- b) How was it determined that TKN is of limited value to monitoring?

VI. Total Suspended Solids (TSS)

- a) We are pleased to see additional information presented in the draft permit explaining why the facility qualifies for an exemption from the National Secondary Treatment Standard of 30 mg/L monthly average for TSS. The draft permit sets an alternate limit on TSS of 100 mg/L. Given that the highest-reported measurement was 58.4 mg/L, and that only 5% of the 179 measurements were above 45 mg/L, why not establish a more protective, and still attainable, limit of 45 mg/L?
- b) It appears that the weekly average and daily maximum limits from the 2017 permit have been removed. Can DEQ provide technical justification for this change?
- c) Is it possible to utilize a more descriptive sampling assay (able to elucidate between organic and inorganic materials)?

VII. Metals Monitoring

- a) The existing permit contains metals monitoring that was only added as a requirement in 2017. What is the current WYPDES permitting practice that allows the removal of metal monitoring from this new permit?

VIII. Whole Effluent Toxicity (WET) Testing

- a) We would like to see a clear reference to DEQ’s policy and procedures for the implementation of the WET Testing program.
- b) We suggest that you identify the two species (*Ceriodaphnia dubia* and *Pimephales promelas*) in the statement of basis.
- c) It is not clear whether acute WET testing is performed on both species quarterly or whether the facility alternates between the two species for each quarterly test. EPA recommended that WDEQ



utilize testing on two species concurrently for all permitted facilities to help ensure that protections remain in place for all sampled discharges, since the species utilized in WET testing are sensitive to different parameters and the alternating species regimen did not provide complete information on the WET impacts from the facilities functioning discharges.

IX. BOD/CBOD

- a) Given that BOD results capture DO depletion from both carbonaceous and nitrogenous actors (vs. CBOD which only measures that of carbonaceous actors), this nuance will be missed by only sampling for CBOD. We therefore request that DEQ includes BOD sampling requirements in this permit.

X. Reasonable Potential Analysis

- a) We commend the DEQ for recognizing the potential of this facility to adversely affect water quality in Flat Creek and fully support the monitoring system proposed in the draft permit.

XI. Antidegradation review

- a) Please provide a copy of the staff's antidegradation review and attach it to the permit file.

Finally, we wish to commend the Town of Jackson for its commitment to clean water in our community. In particular, the staff of this facility deserve special recognition for keeping this 40-year-old lagoon system functioning as well as it does. In the not-to-distant future, we would like to see this antiquated facility replaced by a modern state-of-the-art mechanical wastewater treatment plant such as the one recently approved by the City of Green River. In the meantime, we appreciate all efforts to achieve compliance with effluent limits established in the permit, and more representative water quality monitoring above and below the facility.

We appreciate the opportunity to provide comments on permit no. WY0021458, and we look forward to DEQ's response to our specific questions and comments.

Sincerely,

Matt Bambach
Water Quality Advocate

CC: EPA Region 8