

September 17, 2023

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Cc: Carol Hatfield, Acting Supervisor FNF; Leanne Martin, Region 1 Forester; Chris Dorrington, Director Montana DEQ; James Fehr, Deputy Director Montana DEQ; Randy Moore, Chief USFS; Shannon Therriault, Environmental Health Director, Missoula County; David Strohmaier, Missoula County Commissioner; Juanita Vero, Missoula County Commissioner; Josh Slotnick, Missoula County Commissioner

Re: Holland Lake WWTF

Dear Ms. Thomas and Mr. Abrahamson,

Save Holland Lake (SHL) has reviewed your letter to the USFS requesting a water balance test to evaluate likely leakage from the Forest Service's wastewater lagoons at Holland Lake in Missoula County, Montana, and the USFS's subsequent letter to DEQ requesting an extension until November 15, 2023 to complete the water balance testing. We are dismayed by the Forest Service's request to delay testing until October and November.

The Forest Service's request for an extension in completing the water balance test is merely the latest episode in their continuing effort to ignore and avoid addressing this potentially serious threat to water quality, human health, and the ecological integrity of a highly sensitive lake and watershed. In addition, the Forest Service's request to delay testing until autumn will very likely invalidate testing results due to freezing temperatures disrupting the ability to accurately measure changes in lagoon levels and cumulative evaporation. As a result, the request for delay indicates that the agency may not understand the basic procedures for a water balance test to evaluate wastewater lagoon leakage.

Montana DEQ should require that the Flathead National Forest carefully follow commonly accepted professional wastewater engineering principles and USEPA-endorsed guidelines to ensure application of reliable and credible testing methods. As detailed more thoroughly below, this must include Montana DEQ review and approval of a leakage test procedure plan, along with prompt public disclosure of the test plan and results. If it is not feasible due to weather or other factors to implement reliable, professionally endorsed testing methods in the timeframe proposed by the Forest Service, we ask that Montana DEQ require that the FNF not allow any additional inflow into the lagoons until reliable testing methods can be carried out and test results reviewed by Montana DEQ and other independent experts. In addition, Montana DEQ should require FNF to install a system of groundwater wells designed to

accurately monitor for potential groundwater contamination from the Holland Lake wastewater treatment system.

The Holland Lake wastewater lagoons sit atop a shallow, unconfined groundwater aquifer in the Holland Creek subwatershed less than 1000 feet from nearly pristine Holland Lake. Montana DEQ classifies the Holland Creek subwatershed and the Swan River as a B-1 watershed under the Administrative Rules of Montana (17.30.623). According to B-1 classification standards, water in the Holland Creek subwatershed is suitable for drinking, culinary and food processing purposes after conventional treatment, bathing, swimming, and recreation; and growth and propagation of salmonid fishes and associated aquatic life. Public water supply systems at Holland Lake Lodge and Holland Lake Campground are found less than 1000 feet down gradient from the Holland Lake sewage lagoons. Holland Lake is a popular location for swimming, boating and other water-based recreation activities. The U.S. Fish & Wildlife Service has designated Holland Lake and Holland Creek as critical habitat for bull trout, a species listed as threatened under the Endangered Species Act. The Flathead National Forest Plan identifies Holland Lake and the Swan River Headwaters (which includes Holland Creek) as part of the Conservation Watershed Network, “a collection of watersheds where management emphasizes habitat conservation and restoration to support native fish and other aquatic species. The goal of the network is to sustain the integrity of key aquatic habitats to maintain long-term persistence of native aquatic species.” (Flathead Forest Plan Appendix E, page E-7).

Due to the shallow water levels, high permeability of the alluvium and glacial gravel underlying the surface, and other hydrogeologic conditions, the Holland Creek subwatershed has high source water sensitivity to contamination. Discharges from wastewater treatment facilities are a significant potential contaminant source and are considered by Montana DEQ as a high hazard to water quality (See e.g., Source Water Delineation and Assessment Reports for Swan Valley Elementary School District 33 [PWS ID #MT0002491] and Holland Lake Lodge [PWS ID #MT0000841]). In addition to creating human health hazards, one of the main concerns regarding the likely leakage from the Forest Service’s Holland wastewater lagoon is the potential for long-term chronic nutrient, pollutant, and bacterial loading to Holland Lake. Bacteria, degradable organic compounds, synthetic detergents, and other pollutants can contaminate water and increase eutrophication of the Lake with devastating effects on the aquatic ecosystem including bull trout and other species.

The Holland Lake wastewater treatment facility has a previous history of leaks. WGMs noted in memos to Brian Stewart of POWDR on February 9, 2021 and forwarded to the Flathead National Forest: “WGM performed an evaluation to upgrade the lagoon treatment system in 1999. The report identified that the existing system was functioning marginally at the time and that the lagoon liner had holes that may be allowing untreated effluent to percolate into the ground.” As far as we have been able to determine, this known leaking was not addressed until the plant was upgraded in 2003.

WGM and POWDR expressed additional concerns about the system to the Flathead National Forest around the same time: *Brian Stewart, POWDR to Darlene Bridges USFS, cc Chris Dowling USFS - February 10, 2021, “Sewer – This is a problem. Based on WGMs work, the system that’s shared between the lodge and campground is 60+ years old [this was incorrect] and no longer in compliance. It would need to be upgraded and expanded. I’m not sure what to do about this as it’s not in the permit area and is a FS provided utility. Is it possible for USFS to upgrade this facility and cost share over the term of the permit? Other options? Let’s discuss...”*

There were other indications throughout the investigation of the potential expansion project that there were issues with the system including noted water seepage into the tank at the lodge (direct groundwater contact with untreated sewage) and water flowing in the manhole near the plant from an unknown source (July 21, 2021 WGM site visit).

There were also earlier known concerns about the integrity of the liner discussed within the USFS review team: Patrick Siers Civil Engineer Forest Service Flathead National Forest - April 6, 2021: *“WGM began consulting on Holland Lake’s wastewater system back in 1999. Robin said that she believes the liner is leaking? And the memo questions the sufficiency of HLL-I to meet current MT-DEQ standards. “*

Save Holland Lake (SHL) reached out to the Forest Service to highlight this potential issue and work on a solution in early 2023. SHL first addressed this concern to Kurt Steele, Supervisor FNF and Tami MacKenzie, Deputy Supervisor FNF at a meeting at the FNF headquarters on January 23, 2023. SHL also reached out to discuss these issues with Patrick Siers, the Civil Engineer in charge of the plant, but he had been instructed not to discuss it with us. SHL also had a subsequent phone meeting with Beth Pargman, Permit Administrator for Holland Lake Lodge and with Peter Borgensen, PE West Zone Environmental Engineer Forest Service Northern Region on February 17, 2023 to discuss this issue.

Save Holland Lake submitted a request for additional wastewater treatment facility records and information on February 17, 2023. The general records requested are the operating records required by the permit issued through Missoula County and reviewed by DEQ. To date, as of September 17, 2023 seven months later, no records have been released. These would give everyone a more accurate picture of how the plant has operated over the last 20 years.

After these discussions produced no action by the USFS, SHL filed an initial complaint with DEQ in May 2023 to encourage evaluation and any needed remedial action prior to another season of potential damage to water quality.

As Kurt Steele moved out of his position and Carol Hatfield became the acting Supervisor of FNF, SHL again reached out to the FNF repeatedly to offer to partner on this issue to come up with a solution that adequately protects the watershed. We suggested independent testing and a discussion on a more reliable and publicly transparent monitoring and testing protocol. We have again been rebuffed.

We have also asked basic questions regarding wastewater treatment facility operations this year, including whether any irrigation has occurred to date this year, or whether any volume has been removed from the lagoon by pumping. If so, when and how much? Again, SHL has not received any response to these questions.

And now the Flathead National Forest is asking at the last minute to delay an inadequate testing protocol into a timeframe that will result in unreliable testing methods and invalid test results. This is unacceptable.

Since Montana DEQ’s simple request for a water balance test was ignored until September 6 when the FNF’s requested to delay testing, and this request only became known to the public on September 14, SHL requests the Montana DEQ take the following actions:

1. Deny the FNF's request to delay implementation of a water balance test until the period between October 1 and November 17, 2023. It is our understanding from professional literature and USEPA-endorsed guidelines that a water balance test to evaluate sewage lagoon leakage requires detailed measurements of changes in lagoon depth and cumulative evaporation over 5 to 15 days. Freezing temperatures interfere with these measurements and will invalidate a water balance test. The daily average low temperature in nearby Seeley Lake is freezing or below every day in October and November. Thus, conducting a water balance test during the period now requested by the FNF will not be reliable or produce credible results.
2. Require the FNF to follow commonly accepted professional testing methods and USEPA-endorsed guidelines for evaluating wastewater lagoon leakage such as [State of Idaho, Department of Environmental Quality 2016, "Guidance for Evaluating Wastewater Lagoon Seepage Rates"](#) and [State of Oregon Department of Environmental Quality "Guidelines for Estimating Leakage from Existing Sewage Lagoons."](#) This should include:
 - a. Preparation of a testing procedure, with review and approval by Montana DEQ and made available to the public prior to test implementation, that documents: lagoon information, performance history, and site characteristics including values at risk; lagoon isolation and stabilization procedures; equipment including precipitation measurement devices, temperature recorders for lagoon surface temperature and temperature probes for evaporation measurement equipment; a quality assurance project plan, etc..
 - b. A data quality and sufficiency plan
 - c. A leakage test report submitted to Montana DEQ for review and concurrently made available to the public.
3. If the reason for the delay is Cell 1 cannot be isolated from incoming flows, cease incoming flows. Pump the tanks at the campground and the lodge (or the septic tanks at the plant from the lodge) as needed to isolate the cells. Get the work done. Per the permit on file with Missoula County 2004-215, there is already an established **contingency plan** although installed septic tanks should allow pumping at campground without closing:
 - 2.10 Contingency Plan

No untreated or inadequately treated wastewater shall be delivered to the disposal area. Should any part of the wastewater system fail and cannot be repaired in a reasonable time, the following action shall be taken:

 1. Close campground, flush toilets in Bay Loop and close travel trailer sanitation station.
 2. Restrict Holland Lake Lodge usage. Since the lodge has septic tanks, require the lodge to pump their tanks and use them as a holding tank until the wastewater system is functioning properly again.
4. If the test cannot be performed this fall due to the delay and subsequent weather, do not allow additional inflow until adequate testing can be performed.
5. Install a series of groundwater monitoring wells downgradient of the plant and test the groundwater for contaminants. This could still be accomplished this fall, but should be an ongoing program.

6. Require the USFS to install new real time monitoring gages for inflow before resuming operation.
7. Require the USFS to perform all required monitoring and testing per the operating manuals attached to their permit.
8. Make all O&M Plan and monitoring records publicly available in real time. This information should be generally available to the public and not require seven months of bureaucratic delay to receive.

SHL is seeking only simple results. Protect water quality. Protect the environment. We ask that you follow your mission:

Montana DEQ's mission is to champion a healthy environment for a thriving Montana. At DEQ, we believe Montana communities and businesses thrive when environmental protections are implemented effectively in a consistent and transparent way.

Allowing the FNF to further delay testing and remediation of a likely issue endangering a pristine watershed is not an acceptable action.

Sincerely,

David Roberts, Save Holland Lake

For Reference:

Per EPA cited documents on Leakage from Existing Sewage Lagoons and specifically water balance tests:

These guidelines provide for relatively inexpensive test equipment and procedures to be used for prioritizing problem lagoons used for treating domestic sewage. Such tests are not definitive. They should be considered preliminary and approximate

Tests based on these guidelines can only indicate whether the seal on an existing lagoon probably remains intact, or approximately how much it may be leaking. Preliminary tests of this type are not suitable for sewage lagoons where there is a strong likelihood of contamination, or an immediate urgency to protect a priority aquifer.

In critical groundwater pollution situations, where lagoon seepage is a known concern, immediate installation of monitoring wells and a formal program of groundwater monitoring are normally warranted. In such situations, no program of leak testing is probably accurate enough to substitute for direct groundwater monitoring. Leak testing would only delay the definitive determinations that must be made.

Leak testing should be restricted to July and August, when rainfall is minimal and the ground is dry enough to exclude significant runoff. Tests conducted at other times will have more variables and may

underreport seepage due to runoff effects. (Note – per original timeline without extension this would have occurred in an appropriate period)

Freezing temperature may cause issues of uncertainty during seepage testing. The seepage rate test period should be planned to avoid freezing temperatures and ice. Freezing temperatures may cause water in the lagoon to freeze (may have ice) and will nullify test data and therefore nullify the data collected during that 24-hour period. Freezing temperatures may cause water in the evaporation pan to freeze. If the water in the pan partially or completely freezes, the evaporation data are nullified and cannot be used in the data analysis (Note- the timing now proposed virtually assures repetitive freezing temperatures on the site).