

Kelsey Jolley
Spirit Lake NEPA Coordinator
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Vancouver, WA 98661

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submitted via electronic portal at www.fs.usda.gov/project?/project=66482

Re: Spirit Lake Outflow Safety Improvement Project Scoping

Dear Kelsey Jolley:

These are my comments regarding the scope of analysis for the Spirit Lake Outflow Safety Improvement Project (Project).

Purpose and Need

There seems to be a revision of history supporting the purpose and need for the project presented by the Forest Service contractor, Catalyst Environmental Solutions.

At the March 8, 2024, meeting of the Spirit Lake/Toutle-Cowlitz River System Collaborative, the contractor presented a slide show on the purpose and need for the Project. Slide number 9 contained this text:

“Tunnel was built in an emergency capacity after the eruption in 1980. It was never meant to be a long-term solution to managing Spirit Lake’s levels. USFS has been considering permanent/long-term solutions for roughly 20+ years.”

In my archives, however, I have a copy of **Alternative Strategies for a Permanent Outlet for Spirit Lake Near Mount St. Helens, Washington Final Environmental Impact Statement, April 1984** (FEIS) prepared by the U.S. Army Corps of Engineers (Corps). Note the word “Permanent” in the title.

The FEIS provides this background:

On August 19, 1982, President Reagan declared a state of emergency so the Corps could implement an “interim solution to the threat of catastrophic flooding from a breach of the Spirit Lake blockage, and then with developing a long-term solution.” (FEIS p. 1-3)

As an interim solution, the Corps constructed a temporary pumping facility on Spirit Lake and began pumping on November 5, 1982. The water was pumped from the lake through a 3,650-foot-long pipe to a stilling basin and released into the North Fork Toutle River. (FEIS, p. 1-3)

Two years later, the Corps issued this FEIS in April 1984. Six alternative strategies were evaluated in that FEIS, including (1) an open channel across the debris blockage; (2) a gravity-fed conduit buried in a trench in the debris blockage; (3) a permanent pumping facility with a buried pipe; (4) a tunnel to the North Fork Toutle River; (5) a tunnel to South Coldwater Creek (the preferred alternative); (6) a

tunnel to Smith Creek in the Lewis River watershed. The Corp subsequently constructed the preferred alternative.

This is a lengthy preamble to point out that there seem to be misstatements of fact in the current public outreach. The Corps never said in 1984 that the current tunnel to South Coldwater Creek, the implemented preferred alternative, was a temporary solution to manage the water level in Spirit Lake. The FEIS is titled “Permanent Solution” and those words are used throughout the document.

Please explain why history has been revised to now tell the public that the Corps only meant the current tunnel to be temporary, even when it said “permanent” in its decision documents.

Mount St. Helens National Volcanic Monument Recognition and Protection

Spirit Lake and all the alternative engineering options are located within the Mount St. Helens National Volcanic Monument established by Public Law 97-243 (Monument Act). This law, which should be acknowledged in this decision process, directs that the national monument will be left in a near-natural state, except as specifically needed to control downstream flooding, while providing for research, public understanding, use and enjoyment.

The Monument Act directs the Forest Service to manage the monument to protect the significant geological, ecological, and cultural resources allowing geologic forces and ecological succession to continue substantially unimpeded. Although the Monument Act permits measures “to ensure public safety and prevent loss of life and property,” planning for a Spirit Lake outlet must consider the objectives of preservation and protection of natural resources within the national monument. [See Section 4 of the Monument Act]

The public safety provision should not be used to run roughshod over the preservation and protection objectives in the Monument Act. Rather, the objectives should be used as screens to filter the engineering options to find the one that meets the public safety needs while protecting the geological, ecological and cultural resources in a substantially undisturbed condition. The engineering options should also be evaluated by their ability to protect the integrity of on-going research and the visual, emotional and aesthetic experiences of both visitors and indigenous people.

Access Roads and Support Infrastructure Impacts

In addition to analyzing the environmental impacts of the six engineering options themselves, each is accompanied by various needs for temporary construction and year round road access and support infrastructure like electricity and equipment storage which would further contribute to the environmental and visual impacts of the alternative. Please describe in detail what access roads and support infrastructure would be associated with each alternative, the nature of the roads and support infrastructure, what risks they would entail from future seismic and geologic activity, and how they would impact the natural and human environments and the monument purposes. Please evaluate the impacts of roads on hiking trails and the experiences of hikers.

Geologic and Environmental Risk Evaluation

Recurring volcanic activity has been documented at Mount St. Helens over the last 40,000 years. All the major events seen in the 1980 eruption have occurred in the past. All of the engineering options should be evaluated against their vulnerability to blockage or disruption from future seismic and volcanic events in the current on-going eruption.

The options also much be evaluated against the physical risks of sediment mobilization and flooding downstream. The Corps representatives have been adamant in the Collaborative meetings that they will not issue a Clean Water Act Section 408 permit for any project that mobilizes additional sediment in the North Fork Toutle River.

The options should be evaluated for their environmental risks of spreading invasive New Zealand mud snails (*Potamopyrgus antipodarum*) (NZMS) from Spirit Lake into the Toutle River system and the negative impacts of NZMS on anadromous fish recovery. Dense NZMS populations become the dominant macroinvertebrate through displacing and outcompeting native species. High density NZMS populations are likely to cause substantial negative impacts on fisheries by replacing preferred, nutritious foods. Researchers at Spirit Lake have documented trout starving to death with bellies full of New Zealand mudsnails (Charlie Crisafulli, personal communication). According to the Washington Department of Fish and Wildlife, NZMS are nearly impossible to remove from a lake or stream without damaging other aspects of the habitat so the first line of defense is containment.

Visual Impacts

The Corps' 1982 FEIS analyzed the visual effects of engineering alternatives that are the same as or similar to the engineering options being proposed in 2024: open channel, buried conduit, several tunnel alignments, and a permanent pumping facility. The Corps predicted that the open channel alternative would have the most severe visual impact for visitors. "The completed work would include a 4,800-foot-long trench up to 800 feet wide at the top. Two broad-crested earth dams with flow-control structures would be located 2,000 feet apart in the channel. Approximately 3 MCY of excavated material would be disposed of on the debris avalanche. This alternative would result in the most extensive disturbance of the debris avalanche..." (FEIS, pp. 4-14 and 4-15)

Elsewhere in the FEIS, the open channel is described as being approximately 140 feet deep at its deepest point, 40 feet wide at the bottom, and up to 800 feet wide at the top. (FEIS, p. 2-4) Flow from the channel would be discharged into a rock stilling basin lined with concrete to prevent headcutting from occurring. Overhead power transmission lines to support infrastructure and a power substation would detract from the visual quality of the national monument. The FEIS concluded that the tunnel options would produce the least visual impacts.

Please evaluate the current engineering options for their visual impacts to both Monument visitors at the Johnston Ridge Observatory and Windy Ridge, to hikers on the Loowit, Boundary, Truman and other trails in the Monument, and to indigenous people visiting the Traditional Cultural Property on 12,501 acres of the Monument.

Volitional Fish Passage to Spirit Lake

The purpose and need for this Project is specifically to provide for the safety of downstream communities by reducing the risk of flooding and mudflows from a failure of the Spirit Lake debris blockage. Fish recovery advocates see this decision process as their only opportunity to get a commitment for fish passage, however, and argue that they need an alternative that explicitly commits to such a future action.

The desire for volitional fish passage between the Pacific Ocean and Spirit Lake comes with conundrums:

1. The lack of a fish ladder over the Sediment Retention Structure (SRS) hampers fish recovery in the North Fork Toutle River. The priority goal is fish passage over the SRS, but it will not

happen until the Corps is given changed or additional congressional authorization and funding. Meanwhile, fish recovery advocates promote the return of anadromous fish to Spirit Lake.

2. Options B., C., E., and F. offer the opportunity to set the stage for a controlled breach of the Debris Avalanche using the Engineering with Nature (EWN) concept at some future time by allowing lake draw down first to remove the risk of a catastrophic flood. The Corps says, however, that the Forest Service cannot use Spirit Lake water to scour the EWN outlet channel that would provide natural fish passage because it will mobilize additional sediment into the North Fork Toutle River and the Corps will not issue a Clean Water Act Section 408 permit.

Please evaluate whether accommodating volitional fish passage in any option is compatible with the purpose and need of the Project, or should be deferred to a future time when EWN may be feasible, to be analyzed is a supplemental EIS.

My Values Related to Mount St. Helens

I have been visiting the Mount St. Helens area for the past 50 years. Prior to the eruption, I swam in chilly Spirit Lake and slept at the Mount St. Helens Club's Loowit Lodge on the north shore. I have hiked, backpacked, cross-country skied, snowshoed, birded and botanized all around the Monument. I have volunteered to maintain and build trails. When I lost the pre-eruption landscape, entirely new landscapes replaced the old. I embraced the post-eruption landscape as a new and exciting place. I value the wildness of the blast zone landscape and the incredible discoveries of wildflower blooms, wildlife sightings, evidence of change and renewal, and scenic beauty at every turn of the trail. A friend describes the blast zone as "the greatest show on Earth." Landscapes tell stories: of geological processes, ecological forces, biological legacies, human responses to volcanic eruption. The landscape speaks of resilience, the toughness and fragility of life, permanence and transience, and healing over time. I seek to learn about the work of scientists, whose knowledge keeps accumulating, feeding more insights into ecosystems that are not merely going back to a pre-eruption condition, but enlarging the richness and diversity of life on the mountain. It is not about recovery to some future forested state but about natural evolution. Wherever the Monument's management objectives have kept human interference away, renewal is on a broader scale than any human "salvage" or "restoration" project could ever create. The intellectual, physical, emotional and spiritual experiences inspired by Mount St. Helens are valued and treasured. The potential environmental impacts of this Project could alter "the greatest show on Earth" depending on the option that is selected.

Sincerely,

A handwritten signature in cursive script that reads "Susan M. Saul". The signature is written in dark ink on a white background.

Susan M. Saul