



State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Southwest Region 5 • 5525 South 11th Street, Ridgefield, WA 98642
Telephone: (360) 696-6211

Oct. 28, 2025

Kelsey Jolley
Spirit Lake NEPA Coordinator
987 McClellan Road
Vancouver, WA 98661

RE: WDFW comment on draft EIS for the Spirit Lake Outflow Safety Improvement Project

Dear Kelsey Jolley:

Thank you for providing the Washington Department of Fish and Wildlife (WDFW) the opportunity to comment on the **draft environmental impact statement (EIS) for the Spirit Lake Outflow Safety improvement Project**. We appreciate being included in the decision-making process.

WDFW has a long history of involvement in the Spirit Lake/Toutle River system, including ownership of Mount St. Helens Wildlife Area units located approximately 11 miles downstream of Spirit Lake on the North Fork Toutle River. WDFW has also been an active participant in the Spirit Lake/Toutle-Cowlitz River Collaborative since its formation following the National Academies of Sciences, Engineering, and Medicine (NASEM) sessions. More recently, WDFW has participated in the Spirit Lake Outflow Engagement (SLOPE) workgroup — a subgroup of the larger collaborative — focused on identifying alternative methods to ensure the safety of downstream communities.

In addition to our involvement in these workgroups, WDFW provided written comment on the scope of analysis for the Spirit Lake Outflow Safety Improvement Project in a letter dated Nov. 12, 2024. WDFW has consistently supported solutions that minimize reliance on engineered structures — an approach that could ultimately allow the system to transition back to natural processes and reduce the need for ongoing maintenance. As noted in the 2024 letter, WDFW also strongly recommends an alternative that would establish fish passage to Spirit Lake and its tributaries by using carefully managed water to erode a natural channel suitable for fish passage. This action is now included in the draft EIS as Alternative 7: Phased Natural Habitat Channel Formation, combined with a new pressurized tunnel and minor repairs to the existing tunnel. **WDFW supports Alternative 7.**

Alternative 7 is one of two preferred alternatives described in the draft EIS, and WDFW agrees with its designation as a preferred alternative. Alternative 7 could be strengthened through a robust monitoring and adaptive management plan, as noted in the draft EIS.¹ We also noted

¹ Draft EIS section 2.4.1.5.2 (page 83)

that the draft EIS describes Alternative 7 as one that “would allow for”² and “set the stage for”³ future channel construction. Because the natural channel would serve as neither the primary nor the redundant outflow — those roles would be filled by the new pressurized tunnel and the repaired existing tunnel — and because the natural channel would require an extended time period to create,⁴ WDFW remains concerned about funding and long-term assurance for the natural channel element. WDFW supports Alternative 7 for several reason but believes it could be strengthened through specific commitments ensuring funding and follow-through by the federal action agencies.

The other preferred alternative identified in the draft EIS is Alternative 2 (Full Repair and Rehabilitation of Existing Tunnel) combined with Alternative 9 (Lake Storage). While Alternative 2 would have a low environmental impact, it also offers limited environmental benefits because it does not include a natural habitat channel. In addition, the tunnel would likely require periodic repairs in the future.⁵ WDFW is unclear how this alternative represents an improvement, as it could simply return the system to its current state and lead to another cycle of costly repairs. Based on our institutional memory, these recurring expenses were a major factor leading to the NASEM sessions, which sought alternatives for long-term outflow management. Although the draft EIS does not include an analysis of long-term costs under the NEPA process, this concern should not be overlooked.

WDFW input on weighting of factors

Fish and wildlife

The draft EIS uses a multi-criteria decision analysis tool to weigh the various factors under consideration. Within this framework, Alternative 7 is identified as “among the safest alternatives”⁶ while also providing fish passage to Spirit Lake from the North Fork Toutle River. Alternative 7 is rated “moderate” for its impacts on fish and wildlife.⁷ WDFW believes that reopening fish passage from the North Fork Toutle River to Spirit Lake would provide long-term benefits for ESA-listed fish populations. Not only would coho and steelhead — and potentially spring Chinook — be able to access Spirit Lake, but they would also regain access to tributary habitats that have long been blocked. Therefore, the “moderate” impact rating may underestimate the potential benefits to fish populations.

Table 3.5-1 (page 142) indicates that coho and steelhead are likely present in the study area because they are collected at the Fish Collection Facility (FCF) and released upstream of the Sediment Retention Structure (SRS). Spring Chinook are also being reintroduced to areas above the SRS and could be present in the study area. WDFW anticipates future returns to the FCF from this effort within the next three to four years.

² Section 2.4.1.5.2 (page 83)

³ Table 2.2-12, first row, third column (page 48)

⁴ 10-20 years, DEIS section 2.2.7.1.6 (page 47)

⁵ “future repairs to the tunnel”, section 2.4.1.5.2 (page 81)

⁶ Section 2.4.1.5.2 (page 83)

⁷ Figure 2.4-5 (page 84)

If the Truman Trail were converted into a permanent road for vehicle access, it would require several stream crossings, some of which would occur on fish-bearing streams. Those crossings should therefore be designed in accordance with established fish passage design guidelines.⁸

Sediment mobilization

WDFW and others have previously raised concerns that constructing an open channel could send sediment downstream. The concern centered on potential impacts to the SRS, the level of protection for downstream communities, and habitats within the Wildlife Area. The draft EIS states that the expected sediment mobilization from a natural channel — estimated at 100,000 tons per year — is within the range of normal variation.⁹ Therefore, excess sediment delivery should not be a concern under Alternative 7. A sediment monitoring and adaptive management plan would help verify this outcome. In addition, the wood pile dikes on WDFW's Wildlife Area serve as a model that could be used to slow or capture sediment in several problematic areas of the upper North Fork Toutle River, further improving downstream safety.

Source of water for natural channel

The description of natural habitat channel construction under Alternative 7 includes the potential use of water sources other than Spirit Lake¹⁰ to carve the channel, specifically mentioning the Loowit Channel as one possible source. Please note that some of these streams may be fish-bearing, and if diverted, precautions need be taken to avoid harming resident fish. WDFW requests an analysis of fish use in any streams proposed for diversion, along with information on their hydrology and whether adequate flows for resident fish could be maintained during diversion.

One significant advantage of using Spirit Lake outflow to carve the channel is the ability to control that flow through the pressurized tunnel. If an existing natural stream were used instead, its flows would not be subject to the same control mechanism, which could present a disadvantage.

Suitability of natural channel for fish passage

Under Alternative 7, the level of Spirit Lake would be lowered by installing a pressurized tunnel with an intake level of 3,400 feet (current elevation = 3,440 feet). The habitat channel would be formed and regulated by controlling flow through the new pressurized tunnel. The layout and slope of the channel would be affected by the “topography of the contact between the highly erodible pyroclastic flow and ash deposits and the underlying, less easily erodible landslide deposit.”¹¹

While the habitat channel could provide fish passage from the North Fork Toutle River to Spirit Lake, several unknown factors remain that must be addressed to ensure passage is possible. With the lowered lake level, it will be important to maintain sufficient base flow in the channel to allow movement for both adult and juvenile fish. The draft EIS does not appear to include

⁸ Barnard, R. J., J. Johnson, P. Brooks, K. M. Bates, B. Heiner, J. P. Klavas, D.C. Ponder, P.D. Smith, and P. D. Powers (2013), *Water Crossings Design Guidelines*, Washington Department of Fish and Wildlife, Olympia, Washington.

⁹ Table 2.4-1, Item 3.10 (pages 93-94)

¹⁰ Section 2.2.7.1.1 (page 46)

¹¹ Section 2.2.7.1 (page 45)

information on expected flow levels modeled for fish passage. WDFW recommends additional study and design work to better predict habitat conditions necessary to support effective fish passage.

In addition to flow, WDFW would like more information on the target slope of the habitat channel. Although the slope will likely depend on the topography between erodible and nonerodible soil layers, it should be controlled to the extent necessary to provide a channel with a slope that fish can successfully navigate.

Equally important, monitoring and adaptive management should ensure that the habitat channel remains free of physical barriers, such as vertical drops, boulders, confined high velocity reaches, or other obstructions.

Effects of new infrastructure

WDFW previously raised concerns about how new infrastructure could affect wildlife species and their habitats. We appreciate that the draft EIS acknowledges these issues¹² and that gates would be installed on any permanent access roads to prevent unauthorized vehicle access.¹³ We remain interested in learning more about measures to minimize disturbance during both construction and operation.

Again, thank you for the opportunity to provide input. Please contact WDFW's Southwest Region Habitat Program Manager Dave Howe by phone at 360-742-7423, or by email at david.howe@dfw.wa.gov, with any questions or requests for additional information.

Sincerely,



Rian Sallee
Southwest Region Director
Washington Department of Fish and Wildlife

CC Dave Howe

¹² Section 3.5.2.3.1.1 (starting on page 148)

¹³ Section 3.5.2.3.2.1 (page 158)