

SPIRIT LAKE OUTFLOW SAFETY IMPROVEMENT PROJECT

Existing Environment: Resources and Values

Spirit Lake plays an important role in the hydrologic, ecologic, and human environments of the Mount St. Helens region. Numerous resources and values are present in the area, including public safety, fish and wildlife, research opportunity, heritage, and recreation. These resources require active management by federal, tribal, state, and local governments, each with their own priorities and mandates. The overarching objective of the proposed tunnel safety project is to protect downstream communities from a potentially catastrophic flood/release event. The Project must balance the varying stakeholder interests to arrive at a solution (Alternative) that addresses the long-term use and values of the area. This figure illustrates some of the key stakeholder values present around Spirit Lake, Mount St. Helens, and the Toutle River system.

Brief examples of resources and values include:

1. Public Safety: Cowlitz County
 - a. Ensure safety of downstream communities and focus on economic stability and growth.
2. Sediment and Flood Control: US Army Corps of Engineers
 - a. Manages eruption-related sediment in the North Fork Toutle and Cowlitz rivers to prevent downstream flooding and provide for the safety of downstream communities.
3. Sensitive Biological Resources
 - a. Wetlands, trout, and plants are just some of the sensitive biological resources in the area.
4. General Wildlife
 - a. Elk are a focus of conservation as well as a cherished game animal and elk viewing is a popular activity among Monument visitors.
5. Recreation
 - a. Johnston Ridge Observatory provides stunning views of the volcano, lake, and pumice plain and receives thousands of annual visitors. Education and interpretive materials teach visitors about the history of the Monument. Many trails crisscross the Giord Pinchot National Forest providing numerous vantage points and experiences to visitors and recreation users.
6. Debris Blockage
 - a. The eruption caused a landslide of debris that fully blocked the natural outlets of Spirit Lake and Castle and Coldwater creeks to the North Fork Toutle River.

7. Cultural Resources

- a. This active volcano has been listed as a Traditional Cultural Property in the National Register of Historic Places due to the sacred significance of the site to tribes from time immemorial.

8. Public Safety

- a. U.S. Forest Service manages Spirit Lake Tunnel and infrastructure to regulate outflow of Spirit Lake for safety of downstream communities.

9. Pumice Plain

- a. The pumice plain is an area important to study how nature and wildlife recover from and adapt to a volcanic devastation zone.