

## **Project Information Sheet**

**Applicant: Nisqually Community Forest**

**Strategic Initiative: Habitat**

**Priority Near-Term Action: Nisqually Community Forest Acquisition**

### Ecosystem threat summary

The Mashel River is the largest tributary to the Nisqually River, and contains the Nisqually River Watershed's uppermost spawning and rearing location for Chinook, coho, and pink salmon and steelhead trout.

The upper Mashel River Watershed Administrative Unit (WAU) remains in intensive commercial forestry while still in a state of recovery from massive clearcut logging operations in the early and mid-1900s. It has been damaged by extensive sediment loads filling pools and spawning gravel, reduced water retention, elevated stream temperatures, and poor large-woody-debris recruitment. Recently, with increased domestic and export demand for timber, the Ohop and Mashel sub-basins have been undergoing another round of intensive logging, threatening the recovery of critical watershed processes.

Adverse conditions for salmon related to timber management in the Mashel WAU are well documented. The Mashel Watershed Analysis (Bohle et al., 1996) assessed unstable slopes and geomorphology in the Mashel. Specialists reviewed aerial photos from 1942 to 1993, field verified the results, and determined that timber-related activities in the Mashel WAU can trigger debris avalanches on steep-sloped forests. The soils in this area are Eocene and Oligocene andesite, volcanoclastic, and sedimentary rocks that are very weathered and fractured at the surface. Smaller, relatively frequent debris avalanche events were initiated from steep road-fill slopes that failed at stream crossings. Assessors noted that the volume of sediment generated relative to large natural events is small but large enough to impact anadromous fish, particularly with increased rates of timber harvest. Debris avalanches scour, widen, and simplify the channel shape, fill pools, and increase aggradation, reducing the quality of spawning, rearing, and holding habitats. Road-building and stream-crossing techniques have improved hydraulic conveyance, but this is an area with high precipitation, steep slopes, and weak soils, making it prone to failing when tree-root strength is removed and culverts and fill slopes fail.

The Nisqually Chinook Recovery Plan ranks protection and restoration of the Mashel River basin just after the Nisqually estuary and mainstem as the top priority for salmon recovery. Additionally, the draft Nisqually Winter Steelhead Recovery Plan ranks protection and restoration of the Mashel River as highest priority for restoration and second highest for protection, just behind the Nisqually River mainstem. The key habitat attributes in need of protection and restoration are directly related to forestry in the upper Mashel WAU. The impaired habitat conditions in need of passive and active restoration include high fine sediment load, increased summer stream temperature, reduced key habitat quantity (pools), lack of large woody debris input, increased scour caused by peak stream flows, lack of food (including returning salmon inputs and terrestrial insects from nearby forests) and low summer base flows. The Washington Department of Ecology's Puget Sound Watershed Characterization classifies the Busy Wild sub-basin in the Mashel WAU as needing the highest level of protection for sediment supply.

The benefits of this protection project and subsequent restoration will be seen throughout the Mashel River. It will especially benefit the lowest several miles of the Mashel River, a section that is used for spawning-ground survey index counts because it is the most heavily used tributary spawning area for Chinook salmon and steelhead trout.

#### Project Description

This project's goal is to permanently protect habitat for threatened Nisqually steelhead trout and Chinook salmon and to protect the recovery trajectory of Mashel sub-basin through acquisition of sensitive properties under threat of forestry practices that could result in excessive erosion. Acquisition of this forestland will ensure that the watershed continues to recover from past forestry practices. It will protect a portion of the watershed critical for sediment-supply processes from intensive logging that could result in devastating erosion, and it will protect forestland in the Mashel WAU while providing future opportunities for active forestland restoration, including road abandonment and riparian enhancement.

This project will build on current efforts to acquire land for the Nisqually Community Forest. Funding is already in place for purchase of the first 1,920 acres of the community forest in the upper Busy Wild section of the Mashel sub-basin. Purchase is slated for the first quarter of 2016. This project will add approximately 2,000 acres to the community forest as the Nisqually Community Forest organization works to achieve the goal of a total community forest of 30,000+ acres.

#### Major Tasks

The tasks are those normally associated with acquisition of a large timber property (title research; timber cruise, property appraisal and review; etc.) An initial appraiser's estimate of value will need to be done on target properties. If funding is awarded, the estimated valuation will be ground-verified within six months, depending on site conditions (specifically, access limitations due to snow). A purchase and sale agreement will then be negotiated and the sale completed.

#### Budget

The total budget for this project is \$8,750,000.

\$8,000,000 for property acquisition

\$450,000 for administrative costs related to the purchase and sale including appraisal costs (\$50,000)

\$300,000 for property restoration and educational and outreach projects

#### Project Schedule

An 18-36 month completion window has been identified. This is to allow for the possibility that the current landowners will need to structure any sales in two or more parts, to conform to federal tax requirements based on its corporate status as a timber investment management organization (TIMO) and the timing of the sale relative to its fiscal year.

#### Project Partnerships and Roles

Nisqually Community Forest – Property acquisition, ownership, and management

Nisqually Land Trust – Consultant for purchase and sale, holds expertise in property acquisition and

management. The Nisqually Community Forest is a wholly owned subsidiary non-profit of the Land Trust

Nisqually River Council – The Nisqually River Council provides interagency and agency to public coordination for activities in the Nisqually Watershed. Membership includes: the NRC Citizens Advisory Committee, Pierce and Thurston Conservation Districts, Gifford Pinchot National Forest, Joint Base Lewis McChord, Lewis County, Mt. Rainier National Park, City of Roy, Town of Eatonville, City of Yelm, Nisqually Indian Tribe, Nisqually National Wildlife Refuge, Pierce County, Puget Sound Partnership, Tacoma Public Utilities, Thurston County, UW Pack Forest, WA Conservation Commission, WA Department of Ecology, WA Department of Fish and Wildlife, WA Department of Natural Resources, WA Parks and Recreation