

RESEARCH ABSTRACT

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Study Title: Riparian/wetland classification for wetlands

Key Words: plant vegetation succession terrestrial riparian
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Abstract: The wetland sampling within the Mount St. Helens National Volcanic Monument is part of a larger study on the Gifford Pinchot National Forest. Information gathered will be used to classify riparian/wetland sites into identifiable ecological units that can be used to understand their environmental characteristics and prescribe appropriate management schemes. Study areas in the Monument are Coldwater Lake, Toutle River debris avalanche, and Goat Marsh Research Natural Area. Sample plots were selected to represent different community types (based on species composition and vegetation structure). Wetlands at Coldwater Lake and Toutle River debris avalanche were created as a result of the May 1980 eruption of Mount St. Helens, and thus can provide unique insight into the development of wetlands and plant succession.

Primary data collected includes percent cover of plants by species and vegetation type and topographic site information. Standard floristic clustering techniques will be used to classify plots into community types, using plant species, productivity, and environmental attributes as classification criteria. Coldwater Lake and Toutle River debris avalanche plots will be sampled again in following years to monitor plant succession and re-invasion.

Type of Measurement(s):

Plant cover: by species - % cover (at sampled area) grouped by plant type - % cover (at sampled area)

Substrate: % cover (of sampled area) of water, rock, gravel, bare ground.

Slope: % slope

Aspect: azimuth

Soil: depth and color and texture of layers

Slope shape: concave/convex/flat/undulating

Observations: wildlife, topographic position

Frequency of Measurement(s): Plots were installed and read in 1988; plots at Coldwater Lake and Toutle River debris avalanche were re-sampled in 1991. Future sampling schedule is to be determined, possibly 3-5 year intervals.

Data Storage:

Primary: Data are in ORACLE and IS/CLI files on mainframe computer

Secondary: Original field notes

Long-term plans: Data available for collaborative efforts: The Coldwater Lake and Toutle Debris wetland areas should be revisited periodically. Wetland plots should be remeasured, photos re-taken and data compared to that collected by Area Ecologists in previous years.

Area Ecology staff and data are available for collaborative efforts.