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Comments: To whom it may concern;

I understand the importance of stabilizing the water so downstream flooding does not occur.

I have concerns about one of the options because of increased potential for spread of invasive species and affects on research projects.

Invasive species spread so very fast. Invasive species can be introduced by equipment that was not adequately washed. Are construction monitors required? What may be more long lasting is the change in the soil from equipment. Additional road traffic disturbs surface layer of soil and expose underlying soils and their respective seedbanks. In a study by S. Tsuyuzaki on Seedling Establishment in the Pumice Plain, many native and invasive seeds are buried in the soil. Exposure and scarification of many seeds induces germination. A truck running over seeds would certainly both expose and induce germination. I think one of the plants in the Pumice Plain general area is *hypochaeris radicata*. *Hypochaeris radicata* is windblown as far as 100 meters from the parent plant (Soons 2004). So direct impacts from potential invasive spread are 300 feet, not 33 to 100 feet. Finally, Mr. Tsuyazaki learned weed plants seem to grow in disturbed eroded soil. Vehicles will exposure of soil and its associated seedbank, erode and compact soil, and induce germination of the as yet apparently unknown seed bank. It is unclear whether forest service has surveyed vegetation along the Truman Trail, including seedbank. So we don't know what would invade. Measures to control spread of wind generated seed are unclear.

Secondly, apparently a few research projects occur in the vicinity of the proposed road.

Some of these research projects have far ranging implications and practicality For instance, Carri LeRoys work on riparian succession inform salmonid and wetland restoration projects.

I help others collect and identify willow for salmon restoration projects across the northwest. Willow livestakes are installed in riparian zones in Western Washington to enhance salmon streams. Specifically, willow rapidly stabilizes eroding banks, improving egg to fry survival. Willow leaves provides food for insects, salmonid food. And for beaver, which stabilize water levels, creating rearing and feeding areas for young coho and frogs. However, even in one species of willow, we see differences in resistance to insects disease. Then, after planting, some seem to survive better. I attempt to look up information on variation in genetics in willow by willow 'gender'. But, there's very little understood about willow genetics and how genetics affects willow survival, disease resistance and riparian succession. Learning how different varieties (genetics) of willow affect riparian succession is critical to the success of salmon restoration projects. I understand that her project is special because the streams are newly created. This is a unique situation that somewhat mimics salmon restoration projects.

Other projects underway that highly inform wetland restoration are the canvas strip degradation test strips which apparently are in some of the streams in the project area. These are interesting studies with further implications. Canvas is somewhat of a surrogate for cellulose. When cellulose decomposes it may turn into greenhouse gases. We have very limited local understanding of how fast cellulose decomposes under differing conditions. Any research on how fast canvas and cellulose decompose will inform our understanding of greenhouse gas release from organic matter decomposition. Moreover, all natural plants are primarily comprised of cellulose. Degradation of cellulose in different streams and wetlands tells us how fast natural plants will decompose after they die. To learn about degradation of cellulose they use the canvas strips. Plants may decompose to muck or to recalcitrant plant matter (thats hard to break down further). Farmers highly value muck because its rich in nutrients, but ecologists are concerned muck has excessive nutrients and may lower dissolved oxygen. so I hope

the forest service can support projects like genetic understanding of willow and the canvas test strip decomposition assays. I assume other studies are underway. The effects of vehicle traffic near research sites should be more understood.

I urge you to consider using helicopters to deliver equipment and persons to the project sites.

Soons 2004. Determinants of long distance seed dispersal by wind in grasslands.

Tsuyuzaki. S. 1997. Seedling establishment patterns on the Pumice Plain, Mount St. Helens, Washington.