

May 21, 2020

Regional Forester (Reviewing Officer)
Pacific Northwest Regional Office
Attn: 1570 Objections
P.O. Box 3623
Portland, OR 97208-3623

From: Dr. John Bishop, PhD.



I am submitting this objection in accordance with 36 CFR part 218. I submitted timely, specific written comments on the Notice of Proposed Action for this project on Jan. 16, 2020. Issues I raise in this objection are based on those comments, and new information arising after that comment opportunity in the project Environmental Assessment (EA) and associated appendices, Finding of No Significant Impact (FONSI), and Draft Decision Notice (DN).

As a preliminary matter, I would like to hereby incorporate into this letter all comments on the EA made in the following letters, and adopt them as mine:

- 1) Submitted objection letter by Susan Saul (a copy accompanies this)
- 2) Submitted objection letter by Sarah Madsen (appended)
- 3) Submitted objection letter by Lucy Brookham/Cascade Forest Conservancy

In addition, I have attached letters from the following as testimony to the impacts of this project on research

1. Roger del Moral
2. Jonathon Titus
3. Cynthia Chang
4. Tom Hinckley.

I would like acknowledge the need to protect public health and safety through the replacement of the Spirit Lake tunnel intake gate and I support the Forest Service's goal to protect downstream communities. However, the goals do not have to be incompatible with protecting the ecologically and geologically unique sites on the Pumice Plain, and the values they represent. It is unfortunate that throughout this process the Forest Service has never expressed the goal of preserving Monument values while simultaneously protecting downstream communities.

In my comments on the NOPA, I raised numerous issues either directly or by adoption of the timely comment letters submitted by Cascade Forest Conservancy, Carri LeRoy, and the Washington Native Plant Society. I find that few of the issues that were raised have been addressed. Explanations of these issues and how they were ignored can be found in the three letters adopted above. These letters raise numerous troubling responses in the FONSI and draft Decision Notice.

While my concerns are not limited to the following, I highlight a few issues here:

- 1) The cursory and inaccurate assessment of the project's impact on the long term scientific value of the site and of the studies conducted there. As noted in Dr. del Moral's letter (attached), the work done there is unique, immensely valuable, and world-renowned. The project will directly destroy many active research plots, including some of mine. However, the impacts on invasive species, hydrological processes, erosion, dust deposition, and the natural colonization processes of native species will render many additional plots and studies useless, including some of Dr. del Moral's and Dr. Cynthia Chang's (see Dr. Chang's attached letter). I am especially concerned about the impact on the unique and absolutely unapparelled work conducted by Charlie Crisafulli, documented in numerous papers and two books that he has edited and authored much of. An especially large number of his research plots, which have been studied for up to 40 years, will be irrevocably altered and made useless. There are no other data sets in the world that rival those of Mr. Crisafulli's, Dr. del Moral's, and my own for investigating regeneration in a newly initiated ecosystem.
- 2) The project team must investigate and seek consultation as to whether the trout in Spirit Lake are wild steelhead.
- 3) The EA and FONSI claim that the road does not cross any wetland as defined by the Clean Water Act. This claim does not pass the laugh test and alone renders the entire EA process suspect. It seems plain that the authors of the EA must not have even visited the site, much less conducted a survey of the wetlands. There are extensive wetlands along the route and these connect directly to Spirit Lake and hence are connected to navigable waterways. Moreover, these wetlands contain rare vegetation assemblage types, provide extremely valuable habitat (including as rearing sites for the possibly ESA-protected steelhead), are functionally important and constitute biological hotspots that change the ecology of the entire area. The USFS must delineate and rate these wetlands.
- 4) The EA and FONSI downplay the high risk that the project will introduce invasive species. These claims are not warranted and do not seem to be supported by the Specialist Input for Botany report. Indeed it seems unlikely that the methods proposed will be able to prevent the introduction of invasive species, even if they are followed.
- 5) The proposed amendment of the Mt. St. Helens National Volcanic Monument's Comprehensive Management Plan (MSHVNM Plan) is inappropriate in its ad hoc nature.
- 6) Plans for restoration are unrealistic and will not mitigate the impact on research, because they cannot replicate the unique and historically contingent vegetation patterns of the Pumice Plain.

As outlined in the adopted letters by Cascade Forest Conservancy, Susan Saul, and Sarah Madsen, the proposed action warrants an EIS. I will

I urge the USFS to drop the drilling project and focus on the tunnel gate repair project, and to consider alternative routes and methods to accomplish the project.

A handwritten signature in black ink that reads "John Bishop". The signature is written in a cursive style with a large, looping "J" and a stylized "B".

Sincerely,
John Bishop

Letter from Sarah Madsen

May 21, 2020

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Objection to the Spirit Lake Tunnel Intake Gate Replacement and Geotechnical Drilling Project located on the Mount St. Helens National Volcanic Monument, Gifford Pinchot National Forest, Skamania County, Washington (Responsible Official: Thomas A. Torres, Gifford Pinchot, Acting Forest Supervisor)

Dear Regional Forester:

I am submitting this objection in accordance with the requirements of 36 CFR 218. I submitted timely, specific written comments on the Notice of Proposed Action for this project, which were received electronically on January 13, 2020. Issues I raise in this objection are based on those comments, and new information arising after that comment opportunity in the project Environmental Assessment (EA) and associated appendices, Finding of No Significant Impact (FONSI), and Draft Decision Notice (DN). The following issues raised in my comments were not adequately addressed in any of those documents:

- A hard look at the actual risks of Spirit Lake outflow failure, and providing a complete and transparent disclosure to the public of these risks;
- Consistency with direction of Public Law 97-243 creating the Mount St. Helens National Volcanic Monument that it **be managed to “protect the geologic, ecologic, and cultural resources...allowing geologic forces and ecological succession to continue substantially unimpeded;”**
- A detailed disclosure and analysis of what specific research projects would be impacted by construction of the road across the Pumice Plain;
- Impacts of the proposed road across the Pumice Plain on streams and ephemeral and seasonal drainages;
- Recreational and visual impacts of the road across the Pumice Plain;
- Introduction of invasive species that are known to disrupt natural ecological processes and impact native species; and
- Development of a new alternative, or modification of Alternative C, that does not require construction of a road across the Pumice Plain.

Without question, the most significant piece of new information worthy of objection is the FONSI, written in tone and language that is clearly aimed toward minimizing and marginalizing the numerous significant impacts of the project to justify a decision that an environmental impact statement would not be prepared.

To set the stage in the “Context” section (Page 1), the conclusion is offered that the “selected alternative activities will have impacts that are smaller in scale to what occurs during periods of volcanic activity, elevated runoff, increased stream flow from precipitation, and rain on snow events.” Comparing impacts of the project with **natural** processes is completely inappropriate and absurd. As is stating that the 160-acre area of direct impacts of the project represents only a small percentage of the entire Monument---failing to mention that those acres are within the Pumice Plain, a geologically and ecologically unique and sensitive area that is designated as a Class 1 Research Area in the Mt. St. Helens National Volcanic Monument’s Comprehensive Management Plan (MSHVN Plan). The last paragraph contains many misleading and inaccurate statements that “the context of the project is limited to the project area,” “the project will not pose significant short or long-term effects,” “the small scale of the project limits its effects,” and “no aspect of the selected alternative will result in any significant impact.” Just stating these things over and over does not make them true. The EA as well as the Specialist Input Reports identify both short-term and long-term impacts to multiple resources. The FONSI is flawed (page 3) in its conclusion in the “Intensity” section that an EIS is not required because the project does not impact any “ecologically critical areas,” the term in one of the Council of Environmental Quality factors that must be evaluated in analyzing significance of project impacts. Justification is provided that no areas within the Monument were designated as “ecologically critical” within Public Law 97-243 designating the Monument, or the MSHVN Plan, or the Gifford Pinchot National Forest Land and Resource Management Plan. This statement is misleading because “ecologically critical” is not a land designation in ANY national monument, nor is it a designation used in federal land management plans. Whether the Pumice Plain has a **designation** of “ecologically critical” is not an appropriate standard for evaluating this factor.

Among the facts that clearly recognize the Pumice Plain is an “ecologically critical” area:

- The designation within the MSHVN Plan of the Pumice Plain as a “Class I Research Area” which is considered the “most scientifically important and sensitive area in the Monument” (quote from the Final Research Specialist Report in the EA,) with the goal of providing “maximum opportunity for natural processes and features to continue unimpeded in the most sensitive areas.”
- The Pumice Plain was protected through in the MSHVN Plan by placing it within Category A/semi-primitive non-motorized status and Closure Area 1 to protect sensitive biological communities and ongoing scientific investigations by prohibiting overnight camping, campfires, off-trail travel pets, bicycles and horses. There are also strict regulations on the introduction of organisms (which would include invasive species);
- International recognition that this unique and fragile landscape exists nowhere else, and has allowed research that is not possible anywhere else in the world;

- Millions of public and scientific foundation dollars spent over the past 40 years to support hundreds of research studies in the Pumice Plain that have documented unprecedented discoveries about succession and other ecological processes in a devastated landscape. This research has been significant both in its invaluable contribution to science, and in how it has engaged, excited and informed the public.

The FONSI is also flawed in its conclusion (Page 4) that the effects on the quality of the human environment associated with project are not highly controversial. The rationale provided is that the “science” behind the need for action and protection of downstream communities is not highly controversial. There **IS** a high level of scientific controversy, as documented in extensive comments provided on the Notice of Proposed Action, about the significant impacts of this project both to the sensitive and unique Pumice Plain landscape and the irreversible destruction of research plots associated with ongoing research. Furthermore, the “science” behind the need for action is controversial because scientists disagree with the Forest Service’s conclusion that the tunnel and debris blockage is in imminent risk of catastrophic failure (U.S. Geological Survey Assessment and the 2017 General Technical Report (PNW-GTR-954). Although these documents are cited in the EA, the conflicting conclusions are not discussed. The FONSI fails to adequately demonstrate that the context and intensity of significant effects of the project do not compel a decision to prepare an environmental impact statement. I object to the conclusion that an environmental impact statement will not be prepared. The following is a summary of my additional objections to the project:

1) Inadequate analysis and unsupported conclusions about impacts of the road across the Pumice Plain. The road is repeatedly characterized as “temporary” when it will leave a permanent scar across the landscape that cannot be mitigated. The EA repeatedly makes the unsubstantiated claim that the Pumice Plain “is expected to return to pre-project conditions 2 to 5 years after project implementation” (although this is contradicted by the statement that original soil layers and properties will be permanently altered.) The watersheds that were created following the eruption and associated streams and ephemeral and seasonal drainages will be irreparably damaged by erosion and sedimentation.

2) Inadequate analysis and disclosure of impacts on research. In my previous comments, I requested that detailed information on what specific research projects would end or be compromised by construction of the road across the Pumice Plain. The Final Specialist Report for Research does not fully disclose direct, indirect and cumulative effects on ongoing research, and fails to identify lost opportunities of projects that have been funded but cannot be implemented due to the road construction. A mere tabulation of plots impacted does not adequately assess impacts to irreplaceable, long-term research projects. What are the full implications of 10 researchers stating that their studies would likely not continue as intended or designed, or would be impaired and potential value decreased? Plots affected by indirect effects of dust and ash plumes were not adequately disclosed, and mitigation measures are inadequate or infeasible (such as “encouraging work crews to minimize the number of vehicles used and the number of trips made by vehicle.”) Furthermore, there is no scientific basis to speculative, unsubstantiated statements in the report concerning impacts to research: “effects to hydrology will occur over the active 2 to 5 year field seasons and

potentially a few years after;” “effects to soils on the landscape will potentially occur for 2 to 5 years after rehabilitation and soil recovery restoration actions, based on experience with soil disturbance in timber sale logging and burned area rehabilitation;” and “the physical environment is expected to return to pre-project conditions in 2 to 15 years after project implementation.”

3) Introduction of invasive species. The high volume of wheeled vehicles needed to implement Alternative B will significantly increase introduction of invasive species (such as New Zealand mud snails) that are known to disrupt natural ecological processes and impact native species. Mitigation measures identified will not adequately reduce or eliminate these effects.

4) A full range of reasonable alternatives as required by NEPA was not developed. In my previous comments, I urged development of a new alternative, or modification of Alternative C, to complete the project without road construction in the Pumice Plain. Neither Alternative B nor C addresses this concern. I agree that Alternative A, No Action, is not acceptable due to the need to replace the tunnel intake gate to manage Spirit Lake water levels to protect public safety. However, my conclusion in reviewing the EA is that it is possible to develop an alternative using helicopters to transport equipment in and out of Duck Bay for the tunnel intake gate replacement, and utility terrain vehicles and boats for personnel traveling daily to the intake structure. The geotechnical drilling component of the project is not as high of a priority and appears to be driving the need for the road across the Pumice Plain and limiting development of reasonable alternatives. Additional alternatives in an environmental impact statement should be developed that separate these two actions to eliminate the unacceptable and irreversible impacts of the road on the Pumice Plain. Thank you for considering my objection. I request an objection resolution meeting to discuss the full range of objections to the project, and ways they can be resolved. Sincerely,

Sarah J. Madsen

Letter from Dr. Jonathon Titus

I am strongly opposed to the construction of a 3.5-mile gravel road across the Pumice Plain. Below are just a few of the reasons that the road is a bad idea and would cause irreparable damage to this unique area of global biological significance. The proposed road is to be 16 feet wide and would close the Truman Trail across the Pumice Plain for up to 5 years.

Roads and vehicles are conduit for non-native invasive species. Every construction vehicle that works on road construction or travels down the road is a potential vector for non-native invasive species to enter the Pumice Plain. Because of the high level of disturbance in road construction there would also be new disturbed habitat created ideal for invasions by invasive species.

The road would disrupt the complex and ever changing water flow and erosional patterns across the Pumice Plain. This could lead to greatly increased erosional rates as well.

The road would be inviting for ATVs and mountain bikes and would undoubtedly increase problems with these recreational devices.

The underground biology at the Pumice Plain is still developing and is quite fragile. For example heavy trampling and disturbance can disrupt mycorrhizal networks. The succession belowground would be permanently altered by the construction and presence of this road.

A wide variety of research which is greatly increasing our knowledge and understanding of successional processes would be disrupted by the construction and traffic on the road. Insect and other forms of wildlife are sensitive to disturbance and their presence and activities would be profoundly disrupted. How the trophic cascades, involving both plants and animals, function and develop on the Pumice Plain are still being unraveled. These ecological processes also increase our understanding of ecology worldwide.

These are just a few of the reasons why I urge you to NOT build a road across the Pumice Plain. Thank you.

Jon Titus
Biology Dept.
SUNY-Fredonia



Letter from Dr. Roger del Moral.

Re: Spirit Lake Tunnel Intake Gate Replacement and Geotechnical Drilling Project #57259

I am writing to object to the decision to build a road across the base of the Pumice Plain. Roads of any kind will encourage visitors with no authorization to enter sensitive research areas, travel across active study plots and compromise plots that have been followed for over 3 decades. The results to date of these studies have improved our understanding of primary succession and have fostered more informed restoration practices.

Early in my career, I was directly involved in several US Environmental Impact Statements concerning Nuclear Power Plants in northern and southern California, North Carolina and Connecticut. In each case, after we carefully evaluated the potential ecological impacts, we published a DRAFT statement, then carefully revised it in response to active input from citizens and various agencies. I do not see that suitable responses to legitimate comments have been made.

It does appear to me that the objective is to build an access road, and that there is no compelling argument that would either cause the road not to be built nor even to effect modifications that would limit damage to the heart of the Mount St. Helens research area. Rather, the flawed proposal is dismissive of objections and condescending in the extreme.

I fail to note a thoughtful analysis of the potential impacts to either terrestrial or aquatic habitats. There is no value placed on the cumulative value of the research enterprise. This research has provided the Monument with the best (not exaggerating here) and soundest input into the interpretive program of any National Park or Monument of which I am aware. In my own field, this research has informed and modified how ecosystem restoration has been undertaken. For example, the book 'Primary Succession and Ecological Restoration' (L. R. Walker and R. del Moral, 2003), explicitly showed how the lessons of primary succession as revealed by studies on Mount St. Helens have improved practical ecosystem restoration. This book, according to ResearchGate has been cited over 700 times, more than 99% of papers archived on this global site.

The research being done on Mount St. Helens is unique (a word I do not use lightly). Nowhere in the world, ever, and probably never again, has so much first-rate science been conducted in one large ecosystem by so many dedicated and accomplished scientists. Never have so many scientists been trained in such an exciting, meaningful habitat. The project, as constituted will seriously compromise future work in ways we cannot fully appreciate. One example: much of my work focused on the effects of distance and isolation as factors structuring vegetation composition. The introduction of the road will provide corridors for invasion of many species not able to reach these sites and thus alter the course of succession and the conclusions we might draw from continuing to observe natural processes.

I would think that at the very least, an EIS should be prepared so that, at the very least, we will have an idea of what stands to be lost by this project. I believe that one way to reach a solution would be to have an objection resolution meeting to explore alternatives to the access road.

Sincerely,

Roger del Moral

Roger del Moral, Ph. D.
Emeritus Professor of Biology
University of Washington



Letter from Dr. Tom Hinckley, Professor Emeritus, University of Washington.

Date submitted (Pacific Standard Time): 5/19/2020 10:40:10 AM

First name: Tom

Last name: Hinckley

Organization: UWBG

Title:

Comments:

I am concerned about the proposed impacts to the Pumice Plain. I have a long history associated with Mt. St. Helens: first climbed in 1969, last ski toured in 1995, the site of my first research project as a newly hired associate professor at University of Washington (NSF - July 1980), continued research funding from NSF, US Forest Service, and Weyerhaeuser over the next decade and one half involved research sites associated with the eruption, and as a place where I have taken students, friends, colleagues, professional land managers, and others since September 1980 to learn about and witness the multiple effects of disturbance and responses to disturbance by flora and fauna. Research at Mt. St. Helens has done more to shape our scientific and professional ideas about terrestrial and aquatic disturbances than any other location in North America. I wrote letters, attended public meetings and gave testimony in the process leading to the formation of the Mt. St. Helens National Monument. The Pumice Plain continues to serve this critical applied and basic role in knowledge generation. The impacts in the draft EIS ignore and dismiss too easily this critical place.

Letter from Dr. Cynthia Chang, University of Washington, Bothell

Date submitted (Pacific Standard Time): 5/18/2020 9:01:50 PM

First name: Cynthia

Last name: Chang

Organization: University of Washington Bothell

Title: Assistant Professor

Comments:

I am a plant ecologist and faculty member at the University of Washington-Bothell. I received my PhD in Ecology and Evolution in 2011 and have been conducting research on Mount St. Helens studying plant succession in the blast zone, mainly on the Pumice Plains since 2012. In addition to starting my own research program out on the Pumice Plains, I have taken over monitoring Roger del Moral's long-term permanent plots which has documented plant community diversity yearly from 1980-2010. These long-term plots are part of a larger collaborative network of permanent plots where together with 9-10 other ecologists and researchers, we monitor plant community diversity in the blast, blowdown, and tephra deposit areas on Mount St. Helens. The proposed road-building actions will negatively impact my ability to do this research by disturbing (or destroying) plants growing in or near these permanent plots.

My main ecological concern about the proposed action is that the road will either completely destroy my existing research plots (including the historical permanent plots) and/or severely destroy the surrounding plant community. Erosion due to any new roads will also likely destabilize areas where some plots are located. Finally, new roads increase the spread of invasive species. The natural recovery on the Pumice Plains has thus far, luckily not seen the invasion of many non-native, weedy species. However, roads and construction equipment and crews are all known factors for greatly increasing the spread of invasive species. This could have a severe negative, long-term, and unknown impact on this delicate and valuable ecosystem.

Like many other researchers on Mount St. Helens, I am an early career ecologist who has built the foundation of my career on doing research on Mount St. Helens. I have had the good fortune of being able to harness a wealth of data and existing network of long-term research plots. Furthermore, the plots on the Pumice Plains are part of a larger network of plots. Together with Drs. Dylan Fischer (Evergreen State College), Abir Biswas (Evergreen State College), Joseph Antos (University of Victoria), Don Zobel (Oregon State University), Mark Swanson (Washington State University), Andres Holz (Portland State University), Robert Pabst (Oregon State University), Charles Halpern (University of Washington), and James Cook (University of Wisconsin-Stevens Point), we have recently published a synthesis paper on plant succession on Mount St. Helens in the *Journal of Ecology* that include these plots. This paper highlights the value of long-term coordinated datasets, and by irreversibly damaging these long-term plots, these actions will destroy the history and legacy much of the research. It is without a doubt that any proposed actions that greatly damage any of these Pumice Plains plots and/or the surrounding plant community will have a significant impact on both my own personal career, as well as the greater ecological scientific community.

Finally, my research involves a large number of undergraduate researchers from the University of Washington-Bothell. I have mentored 8 undergraduate students over the past 4 summers, many of who have chosen career pathways in ecology and science based on their research experiences with me. In addition, the data from these research plots are used in several of my courses here at UW-Bothell. They are also the location of future class field trip sites. Furthermore, each summer I have volunteered with the Mount St. Helens Institute and taken high schoolers out with us to do research on the Pumice Plains. The research sites on Pumice Plains have great value in not only research, but also education and outreach.

This proposed action would negatively influence irreplaceable research, and have severe consequences to the scientific and educational community, as well as the public. I strongly encourage you consider other proposed options (e.g. alternative route from Johnston Ridge Observatory or UTV road to Duck Bay) that would protect the delicate and valuable ecosystem on the Pumice Plains.

Thank you for your time and consideration.