Data Submitted (UTC 11): 5/17/2021 9:15:34 PM
First name: Douglas
Last name: Huddle
Organization:
Title:
Comments: 25 April 2021

Jody Weil, Forest Supervisor
Mt. Baker-Snoqualmie National Forest
2930 Wetmore Ave, Suite 3A
Everett, WA 98201

Reference: Deadhorse Road Relocation Project (No. 57167) Draft Environmental Assessment and the Draft ROD with a Finding of No Significant Impact

Dear Supervisor Weil;

I appreciate this opportunity to make comments on the Deadhorse Road Relocation Environmental Assessment and Draft Decision Notice with its selection of Alternative #3 from the EA as the designated action to be undertaken.

Please note a brief statement at the end of these comments detailing my personal history concerning and familiarity with this locale its natural and cultural history.

Environmental Assessment and ROD _ Some Observations and Criticisms

1.Assertion _ the need and purpose of the project is to provide sustainable transportation through the area for recreation and equally as important, eliminate the roads vulnerability to damage or destruction from river processes and the need to rebuild it.

When the route pictured in the EA (Figure 3) is transcribed onto scaleable orthophotos with known accurate geo-referenced landmarks, it is obvious that this project is inadequate to accomplish the asserted goal. The upstation tie-in of the alternative 3 route at MP 3.47 to the current roadbed still leaves the overall route exposed to an active left bank meander bend which, using historic photos, can be determined to have moved more than 500 feet downstream between 1993 and 2016 as well as effectively closer to the current (old) road. The distance from the road to the active bank cutting arc at MP 3.61 is now about 100 feet.

2.Work Plan _ five significant project components.

With five major elements included in this process, the Forest Service should be able to lay out for public review the order in which they are going to be completed. Also included in such an outline would be an explanation of the funding mechanism(s) and what would be dropped from the effort if 100 percent of needed monies are not obtained.
In fact if the Forest Service at the outset states that all steps will be done and then fails for any reason to perform or complete one or more due to budget constraints or other complications, it would technically be out of compliance with its initial ROD.

3.Assertion _ the need to remove riprap point groins and a log structure previously installed at river level in the vicinity of the Boyd Creek Interpretive Trail parking area because they are not working (also implied is that the structures actually qualitatively impair river habitat).

A photo lab exercise comparing a sequence of historic photos over the past 25 years demonstrates that the

structures in fact are 'working' properly and compatibly with stream processes. They immediately resisted and continue to do so, further bank ablation after there had been a steady migration of the thalweg meander arc to close proximity of the Deadhorse road prism. Such an examination with historic photos to arrive at _ or disprove _ this assessment is part of the Forest Service's due diligence obligation. Also it actually appears that the bank point groins mimic the effect that an exposure of natural bedrock has on river flow, creating a hard point which deflects water flow energies. There is in fact a left bank bedrock contact point downstream from this location that protects the 37 Road embankment toe at that location. There are five other active floodway bedrock contacts in this upper Nooksack River reach which impart the same effect naturally the same as manmade structures do. Also in doing so, scour pools with significant depth form which are a crucial part of beneficial instream habitat providing breaks in flow velocity where adult fish can hold and either rest before continuing upstream or later move out into other channel habitat to find a location in which to spawn. The low-profile log jam has actually facilitated settling of fine mineral and organic material sufficient to encourage alder sprouting providing shade and cover to the groundwater emanating from near-by wall-base channels. Both area enhancements of beneficial river floodway habitat characteristics.
4.Assertion _ a geotechnical feasibility assessment was done (summer 2019) to enable delineating three alternative routes for the new road segment.

With the exception of a brief assurance the route choices allow flexibility in selection due to unanticipated complications, the EA's discussion of the physical description of the road construction phase, at best, can be termed generalized and vague. Therefore they do not bolster confidence that the Forest Service has a demonstrated command of site-specific engineering and environmental challenges. Any such referenced feasibility report should in its entirety accompany the EA as an addendum in the same manner that the other professional (wildlife, fisheries, cultural, etc.) evaluations were. This begs the same conclusion as was borne out of the Baker Lake (FSR 11) road relocation, where that proposed project in reality presented so much complication that it eventually had to be dropped as a viable undertaking.

5.Conflicting nomenclature _ stream names cited in the EA and ROD.

The Deadhorse project EA relies on specific geographic place names to focus attention on the project's locale. In researching background information for the area, conflicting nomenclature specifically stream names was found in a variety of federal and state government agency. For example, several U.S. Geological Surveys topographic quadrangle series apply different names to some streams and the U. S. Geological Survey's National Water Information System, specifies that "Cascade Creek" actually enters the North Fork Nooksack River at River Mile 63.1 almost a mile upstream from this road relocation project. Washington State's Water Resources Inventory Area Atlas known as the 'stream catalog' shows "Boyd Creek" as the only stream in the project area bearing a place name.
The conflicting place name problem affects hampers and even confounds researching of databases by the Forest Service or the public concerning historic salmon and steelhead spawning ground fish counts rendering results either incomplete or inadequate.
The Washington Department of Fish and Wildlife has a significant salmon and steelhead spawning ground record dating back decades for 'Boyd' Creek above the 37 Road culvert (identified variously as a 'partial barrier' or simply 'barrier' in the Forest Service EA) located at MP 3.14. Throughout this period pink, coho, spring chinook and sockeye salmon, as well as winter-run steelhead and anadromous bull trout all have been found and documented spawning upstream of the 37 Road pipe. For its spawning escapement estimates, the state refers to 'Boyd' Creek is one of its indexes of abundance in the Nooksack basin.
The Forest Service in the Deadhorse EA identifies the same stream reach channel as 'Cascade' Creek. In the state's spawning ground database there are very few entries and those are not relied upon to estimate stock spawning abundance.
Where such ambiguity occurs, the issuer of the EA and ROD has an obligation under due diligence to explicitly identify from what source it obtained critical accurate basic assumptions, why it chose that source and what others were ruled out. This is to eliminate confusion.

6.Confusing conclusion _ the classification of the culvert at MP 3.14 which passes 'Boyd/Cascade' Creek under Deadhorse Road and conflicting information not cited by the Forest Service.

In the body of the Deadhorse Road Relocation EA, the MP 3.14 corrugated pipe is referenced as a 'partial fish barrier' but there is no further elucidation as to which aquatic organisms can make it through and which can't. On page 4 of the EA (including the Figure 4 caption) in two instances the pipe is simply referred to in an unqualified manner as a 'barrier' implying that no aquatic organisms can get through. The state's spawning ground survey record contradicts the implied conclusion that it's a barrier. Also there is no discussion of the physical characteristics of the culvert (gradient, back-flooding, inside surface corrugations) all of which, along with other factors, influence relative passability or lack thereof. Federal Highway Administration and the State of Alaska Department of Fish and Game studies have found that juvenile salmonid fry actually use water flow turbulence along the inside of pipe induced by corrugation to successfully transit through pipes are various flow volumes. Natural processes also influence 'passability' in unaltered as well as human-altered channels. Insofar as passability is concerned the EA does not mention of the effect of a mid-slope, high-angle, accretion formation in the 'Cascade' Creek sub-basin more than a mile upstream from the road relocation site where flow can naturally shift out of Cascade' Creek channel and descend to the river via another watercourse. This reduces the flow volume through the Deadhorse culvert. This phenomenon was originally documented by U.S. Forest Service forestry technician Michelle Fisher and reported to USFS biologist Brady Green.
The hydraulic capacity of the pipe for the stream sub-basin location not meeting the 100-year event standard is in fact the only sustainable conclusion that justifies replacement of the pipe.

7.Odd Relationship to Proposed Primary Action _ alternative 3 calls for installing large wood debris structures in the active flood plain of the Nooksack River.

If the road is to be relocated out of the North Fork CMZ to reduce its vulnerability to damage for the purpose of maintaining continuity of recreational access, why is it necessary to install log structures in the river? While this may be justified in terms of qualitatively improving instream habitat, what is the link to what is ostensibly an 'upland' project?
Furthermore, in choosing to arbitrarily combine the two projects, The Forest Service is obligated to make a reasonable demonstration beyond generalities that the agency has an accurate understanding of the current dynamics of basin hydraulic process. Neither the EA nor the ROD reference possession of timely studies of river channel migration behavior or sediment budget for the North Fork Nooksack. Understanding of both processes is considered essential, indeed a best management practice, in designing and doing of instream projects.
Increased bedload traceable to Bar Creek in the Wells Creek basin due inner gorge slope instability from the ¼ mile recession of Bar Glacier since 1993 may be sending greater amounts of gravels to the North Fork. Exemplifying the instream dynamics here, just upstream in the 63-mile mainstem reach above Deadhorse Creek there has been significant bank cutting in the past 20 years resulting in conspicuous widening of the floodway. Also in the project vicinity (62-mile mainstem reach) remnants of a standing riparian forest in the form of stumps have been recently exposed by channel scouring after having been covered for decades by fluvial gravel deposition.
Also in the past 30 years, North Fork hydraulics processes have prompted three major highway protection projects between river mile 61 and 63 including one road relocation (opposite Bridge Camp and two bank (highway fillslope) hardening projects (river miles 60.8 and 63.9) to keep the state route from failing.

8.Eliminating Interpretive Infrastructure _ removal of the Boyd Creek Interpretive Trail which was under utilized by the Forest Service in conveying to the public the importance of aquatic environments.

Significant investments of volunteer time and grant monies plus additional Forest Service resources went into creating this unique opportunity for the public to look in on and learn about small streams and their role in the forest ecology. Biologist Brady Green and members of the Fourth Corner Flyfishers with their construction skills

are to be commended for their efforts to bring the Boyd Creek site into being.
There has never been a time, including now, when it wasn't crucial for humans to understand and mitigate their influence on the environment. I unequivocally oppose losing this interpretive site, urge the Forest Service not only to keep but make much better use of it.

9.Prioritization Process _ the decision to do this project in light of the severely deteriorated general condition of the entire Deadhorse Creek/Skyline Divide route.

This proposed relocation project affects .68 miles or five percent of the overall 12.87 miles of Forest Service Road 37. The agency is not yet in a position to estimate the cost of this project but for the purposes of discussion of this contention, a sum of at least a half million dollars is likely to be needed to build the bypass with two bridges on a high-angle slope with bedrock exposures plus dismantle the interpretive site, decommission several road segments and remove the instream structures.
An infrastructure condition survey done of the entire route done by volunteers in 2011 that was submitted to and accepted by Forest Service Engineering. It found these issues:
*37 percent (52 count) of the 139 culverts inspected were deficient, requiring replacement including 18 determined to be undersized (as cross drains) and eight plugged with gravel.
*241 ditch segments requiring cleanout and 11 needing full reconstruction were found between MP 2.0 and MP 12.87.
*1,261 chuckholes were counted between MP 1.0 and 4.85. The road no longer can be safely driven by low clearance vehicles.
*Between MP 5.5 and 11.00 on 35 percent of the aggregate surfacing material has partially or fully ablated exposing cobble and larger subgrade stone. And loss of gravel chip seal has only gotten worse.
*A significant roadbed instability problem at MP 10.7 which failed previously was again slumping due to an unmitigated saturation problem and is at risk of failure. This is on a switchback slope where the first debris slide cut the road on two lower segments, then plugged Deadhorse Creek with the subsequent debris torrent finally washing out a multiplate culvert on the road at the lower creek crossing. In total the road was cut in four places by one road failure.
A thorough system restoration of the road resolving all these issues could easily equal and probably even exceed the cost of this one project.
It can also be argued with the culvert deficiencies alone the road could fail at multiple stations nullifying for an undetermined amount of time the investment in this relocation if it is done first.

10.Protection of cultural site _ the Boyd Creek bathing site.

During the 27 years I had occasion to survey Boyd Creek I became familiar early on with the significance of the site to members of the Nooksack and Lummi tribes. I also knew that the representatives from both tribes participated in planning of the interpretive trail recommending that it not approach the cascade or falls area.
On several occasions when I arrived to do a survey, I found tribal members on site. I postponed my walk of the stream channel so as to not intrude on the ritual ceremony.
For the record, I note that the upslope route actually passes above and appears to be closer to the ceremony locale than the existing 37 Road segment.

My professional and personal affiliation and familiarity with this area dates back to the 1970s. For 27 years as the principal stock assessment investigator I did spawning ground surveys in the North Fork Nooksack and numerous named and unnamed tributaries for the state fish and wildlife department and its precursor agencies. I also managed off-station releases of cultured-origin native North Fork spring chinook juveniles for the state agency in the 1990s.
Since my retirement from the state in 2010 I have done volunteer road maintenance work for the Forest Service Engineering Department including approximately 525 cumulative hours of handwork, motorized and foot surveys

and snow reconnaissance on 37 Road itself, including a major logout effort in 2017 following a silver thaw event.

Signature attached

Douglas R. Huddle