

Appeal Decision

Notice of Appeal

Cascadia Wildlands we like it wild.

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Mr. Bschor

Pursuant to 36 CFR 215, on behalf of Cascadia Wildlands, a public-interest non-profit conservation organization, I hereby appeal the Logjam Timber Sale Final EIS and Record of Decision, signed by Tongass Forest Supervisor Forrest Cole in June, 2009 .

Standing

Cascadia members and staff use and enjoy the Tongass National Forest, Prince of Wales island, and the Logjam project area for personal recreation, education, commercial fishing and tourism, photography, and other uses. We fear our continuing enjoyment of the area would be adversely impacted by the decision. We are also taking this action in the interests of conservation of these opportunities for ourselves, for future generations, and for the intrinsic worth we find evident in a healthy, functioning wildland.

We have participated in this project NEPA process from the beginning, including lengthy comments on the Draft EIS. The Decision is very disappointing, and, we believe, plainly illegal.

Remedy

Please reverse the Decision, and either direct that a Supplemental Draft EIS be prepared that meets the requirements of NEPA, the Clean Water Act, NFMA, the Forest Plan, and other pertinent laws and regulations as described below, or that the timber sale project be scrapped altogether.

Incorporation by Reference

We hereby adopt in full, and incorporate by reference, the appeal being filed by Greenpeace, particularly as it relates to the project's erroneous treatment of wolves.

Statement of Reasons

I. APPEAL OVERVIEW

The ROD and FEIS violate the Clean Water Act (CWA), the National Forest Management Act (NFMA) and the Tongass Land Management Plan (TLMP), Forest Service BMPs, and the National Environmental Policy Act (NEPA). The ROD violates the CWA making a 404 permit required to continue timber operations in the Logjam

project area. In violation of NEPA, the FEIS analyses of the direct, indirect, and cumulative effects upon watersheds and aquatic habitat, and from transportation, are insufficient. The cumulative impact statements in the FEIS failed to take into account relevant factors, so the resulting decision is arbitrary and capricious and must be set aside per 5 USC 706(2)(A).

A. Governing Law

NEPA mandates that cumulative effects be analyzed in the EIS. “[S]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component parts.”¹ A cumulative impact is the impact on the environment that results from “the incremental impact of the action when added to the other past, present and reasonably foreseeable future actions....”² The agency needs to use good science and take a “hard look” at the environmental consequences of proposed actions.³ Further, NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.”⁴ NEPA documents must address, among other things, any adverse unavoidable environmental effects resulting from the proposed action.⁵ “When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.”⁶ NEPA also requires consideration and disclosure of information necessary to determine compliance with other legal requirements.⁷ “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference...to the scientific and other sources relied upon”⁸

¹ 40 C.F.R. § 1508.27(b)(7).

² 40 C.F.R. § 1508.7.

³ 40 C.F.R. § 1502.16.

⁴ 40 C.F.R. § 1500.1(b).

⁵ 42 U.S.C. § 4332(2)(C).

⁶ 40 C.F.R. § 1502.22.

⁷ See 40 C.F.R. § 1508.27(b)(10).

⁸ 40 C.F.R. § 1502.24.

The Supreme Court defines an agency action as arbitrary and capricious where the agency has failed to “articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”⁹ An agency action is arbitrary and capricious if “the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”¹⁰ Although the arbitrary and capricious standard “is narrow and presumes the agency action is valid. . . it does not shield agency action from a ‘thorough, probing, in-depth review.’”¹¹ A decision based on an incomplete consideration of the relevant factors or a decision contrary to the governing law is arbitrary and capricious and must be set aside as per 5 USC 706(2)(A).¹²

B. Cumulative Effects

Cumulative effects analyses are the most important part of an EIS, and to simply categorize a vast array of impacts as minor or insignificant is failing to take a hard look at the cumulative impact the proposed action will have on the environment. The National Research Council identifies why this is important:

[W]hen numerous small decision about related environmental issues are made independently, the combined consequences of those decision are not considered. As a result, the patterns of the environmental perturbations or their effects over large areas and long periods are not analyzed. This is the basic issue of cumulative effects assessment.¹³

For example, in the Transportation section, the FEIS merely describes what roads are included in the project area and some of the techniques used for road improvement, then claims that maintenance of NFS roads is ongoing and that the

⁹ *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto Insurance.*, 463 U.S. 29, 43 (1983).

¹⁰ *Id.*

¹¹ *Northern Spotted Owl v. Hodel*, 716 F.Supp. 479, 481-82 (W.D. Wash. 1988).

¹² *Id.* at 82.

¹³ National Research Council, *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope*. The National Academies Press; Washington DC, March 2003, 25.

POW ATM plan proposes roadwork.¹⁴ What is lacking is a consideration of combined consequences—of the combined effects throughout the time period the Forest Service has been clear-cutting POW Island. The Forest Service is attempting to pass off construction descriptions as cumulative effects analysis. “To conduct an analysis of how effects accumulate, one must understand what would occur in the absence of a given activity. The accumulated effects are the difference between that probable history and the actual history or projected effects of the action.”¹⁵ Cumulative impacts to POW Island needs to begin by looking at what the island would be like absent the Forest Service constructing and leaving roads, and then proceed to analyze the cumulative impact of those constructed and unmaintained roads upon the land.

A variety of processes contribute to cumulative effects, and the National Research Council identifies the most important ones below:

Time crowding—frequent and repeated effects on a single environmental medium. This would be the case, for example if repeated oil spills occurred on an area of tundra before that area had recovered from previous spills. Time crowding also can result if there are long delays before the effects of an action are fully manifest. An increase in the melting of permafrost might not become apparent until decades after the actions that caused it were initiated.

Space crowding—high density of effects on a single environmental medium, such as a concentration of drilling pads in a small region so that the areas affected by individual pads overlap. For example, air pollution from temperate latitudes can interact with local sources of contamination to increase atmospheric haze on the North Slope.

Compounding effects—synergistic effects attributable to multiple sources on a single environmental medium, such as the combined effects of gaseous and liquid emissions from multiple sources on a single area, or nonlinear effects, or interaction of natural and anthropogenic effects, such as the *Exxon Valdez* oil spill and El Niño events.

Thresholds—effects that become qualitatively different once some threshold of disturbance is reached, such as when eutrophication exhausts the oxygen in a lake, converting it to a different type of lake.

Nibbling—progressive loss of habitat resulting from a sequence of activities, each of which has fairly innocuous consequences, but the consequences on the environment accumulate, for example by causing the extirpation of a species from the area.¹⁶

¹⁴ Logjam Timber Sale, FEIS 3-127 to 3-128

¹⁵ National Research Council, 27.

¹⁶ National Research Council, 26.

The time and space crowding issues can readily be integrated into the FEIS. An EIS must provide more than just a catalogue of past projects, it must discuss those environmental consequences to the project area.¹⁷ To merely list the date and acres harvested in an appendix of the EIS is inadequate to constitute a discussion of past projects.

Compounding effects is where the FEIS is most lacking, and is the primary discussion of this appeal. To separate watershed cumulative effects into component parts— streamflow, sedimentation, turbidity, and temperature— and to discuss transportation and road effects in a different section, only to leave out maintenance issues, is a failure to see how the individual processes interact.

The Forest Service provides a discussion in the FEIS of how watershed harvest thresholds have been reached, but provides no information about the resulting impact from such environmental degradation. The FEIS instead relied on general, unscientific, one-sided, and conclusory statements about when full hydrological recovery may be expected.

Nibbling is an issue that should be addressed under the concern for unmaintained roads and red culverts in the project area. Compounding a maintenance backlog of \$20 million on POW Island, worsening chronic sedimentary problems in fish streams, causing red culverts to be left in the project area, and failing to honestly address how road density interacts with wolf mortality while planning a timber sale of this mammoth size is irresponsible management. The Forest Service fails to address cumulative environmental impacts in the FEIS.

II. Red Culverts

A. Red Culverts are Impeding Fish Passage in the Project Area

Red culverts are a widespread problem throughout the Tongass that are causing serious harm to aquatic habitat and fisheries in the Logjam project area. The Forest Service states fish passage is important because:

Fish residing in the streams of Alaska's national forests require unhampered access up and down the stream for various reasons. Adult anadromous fish returning from the ocean require access to spawning habitat while juvenile anadromous fish often move during their freshwater life stage in response to seasonal differences in available food and shelter. Resident (non- anadromous) fish, which spent their entire lives in freshwater,

¹⁷ *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 815 (9th Cir. 2005) (quoting *Lands Council v. Powell*, 395 F.3d 738, 1027 (9th Cir. 2004)).

also move within the stream seeking food, shelter and access to spawning habitat.

Barriers to fish movements may not need to be complete barriers to fish to drastically affect fish populations.

- Even if stronger swimming adult fish can obtain passage, juvenile fish may not be able to, and habitat important to them on a seasonal basis will not then be available.
- Under-utilization of available habitat may be the result if passage is provided only to the stronger individuals of a population or if passage is only possible at high or low stream flows.
- Barriers to spawning migrations may cause fish to deplete their stored energy prior to spawning or delay spawning later than optimal for egg survival.
- Failure to provide fish passage at roads can reduce the genetic diversity of stranded resident fish populations or their complete loss after extreme flood or drought.¹⁸

State agencies expressed concern over the red culverts in their comments. They said the Logjam sale did not meet fish passage requirements under law and urged all red culverts repaired during the course of the Logjam project.¹⁹

Incorporating maintenance and restoration of areas that are being ruined for generations should be prioritized over funding timber sales. Instead, past harvest areas are left in disrepair, as a direct result of this timber sale and others like it, and cause further environmental degradation. The Tongass Road Condition Survey Report found that culverts impeded fish passage at 85% of Class II, and 66% of Class I fish stream crossings.²⁰ Culverts impeding fish passage at such a high rate is a bright-line example of how the Forest Service continuously violates road construction techniques and fails to successfully implement and monitor BMPs.

The FEIS attempts to pass off road management problems as, essentially, beyond the scope of the Logjam analysis. Rather than address transportation impacts in this EIS, ongoing maintenance, annual road maintenance plans, and the POW ATM are all invoked. But in fact the relationship between this ROD and red culverts in the project area is a direct, causal one. The ROD worsens the problem of red culverts, has the effect of preventing red culverts from being fixed, and is therefore the proximate cause of a continuing violation of the CWA. But for the

¹⁸ United States Forest Service, *Minimizing the Blockage of Fish at Road Culverts*, Available at: www.fs.fed.us/r10/ro/policy-reports/.../fish_blockage_at_culverts.pdf

¹⁹ FEIS Appendix B, B-123

²⁰ *The Tongass Road Condition Survey Report* (Flanders & Cariello 2000)

decision, the red culverts would be fixed under the normal course of road maintenance, and under the POW ATM plan. The ROD is therefore *causing* the red culverts to exist; but for this sale, the roads would be fixed and the Forest Service would achieve compliance with the CWA. Also, because of the ROD, these culverts *cannot* be fixed because the ROD commits them to being used for timber haul on this timber sale. Furthermore, and very importantly, the ROD deepens the hole of the maintenance backlog. It commits road funding for support of this timber sale, where the same dollars would otherwise be spent fixing red culverts. If the no action alternative had been selected, then the culverts could be fixed and legal compliance could be achieved. The FEIS never analyzes these effects.

At minimum, if the Logjam Timber Sale lasts for five years (a conservative estimate) and the culverts are fixed afterwards, (1) the FEIS needs to analyze the impact of five years of not providing fish passage, and (2) the Forest Service needs to obtain a 404 permit for the duration of the sale while passage is not being achieved.

B. Forest Service Treatment of Fish Passage at Culverts Violates the CWA, Forest Service BMPs, NFMA and TMLP Provisions, and NEPA.

The Forest Service's silviculture exemption from the CWA §404 permitting requirements applies only so long as Forest Service BMPs are being followed. The CWA at 33 CFR § 323.4(a)(6) stipulates:

Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained in accordance with best management practices (BMPs) to assure that flow and circulation patterns and chemical and biological characteristics of waters of the United States are not impaired, that the reach of the waters of the United States is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized. These BMPs which must be applied to satisfy this provision shall include those detailed BMPs described in the State's approved program description pursuant to the requirements of 40 CFR 233.22(i), and shall also include the following baseline provisions. . .

In addition to waters not being impaired, the CWA specifies that 15 baseline provisions at 33 CFR § 323.4(a)(6), which are incorporated into the FSH 2509.22 as BMP 12.5, must be followed at all times. This list includes provision (vii), where "[t]he design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body."²² Because the Logjam Timber Sale does not

²¹ 33 C.F.R. § 323.4(a)(6).

²² 33 C.F.R. § 323.4(a)(6)(vii).

achieve compliance with this provision, a 404 permit is necessary under the ROD.

Under NFMA, all site-specific activities must comply with the governing forest plan.²³

The TLMP Standards and Guidelines violated by the issue of red culverts and aquatic habitat degradation include: FISH2, FISH3, FISH4, RIP1, RIP2, TRAN2, TRAN3, TRAN4, TRAN5, and TRAN6. It also violates TLMP objectives for the LUDs. Because the Forest Service is acting in violation of the TLMP, the decision should set aside until compliance with governing laws and regulations can be achieved.

Under Road System Management regulations, improperly maintained and active red culverts proposed for storage following the sale violate 36 C.F.R. § 212.5(b)(1), which requires:

For each national forest, national grassland, experimental forest, and any other units of the National Forest System (Sec. 212.1), the responsible official must identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. In determining the minimum road system, the responsible official must incorporate a science-based roads analysis at the appropriate scale and, to the degree practicable, involve a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments. The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.²⁴

Even where red culverts are proposed for storage after the timber sale, leaving red culverts in place while carrying out the sale amounts to absolutely no effort to minimize adverse environmental impacts associated with road construction, reconstruction, and decommissioning. The decision should be set aside until compliance with these regulations is achieved.

The FEIS violates NEPA by not disclosing the impacts of actively using red culverts, and of causing unmaintained red culverts to be left in the project area. NEPA requires consideration of the direct, indirect and cumulative impacts of decisions.²⁵ It also requires consideration and disclosure of compliance with other legal

²³ National Forest Management Act, 16 U.S.C. § 1604(i).

²⁴ 36 C.F.R. § 212.5(b)(1).

²⁵ 40 C.F.R. § 1502.16.

requirements such as the CWA and NFMA.²⁶ NEPA requires a detailed statement of the environmental impacts of the proposed action, not mere “conclusory statements which do not refer to scientific or objective data supporting them.”²⁷ NEPA requires that where “several actions have a cumulative...environmental effect, this consequence must be considered in an EIS.”²⁸ The decision should be set aside until the sale complies with NEPA.

C. The Red Culverts Violate the CWA and Forest Service BMPS; A CWA § 404 Permit is Required

1. CWA and BMP Violations

The ROD is in violation of the CWA, and a CWA 404 permit is necessary to proceed with the timber sale. The red culverts in the Logjam project area violate the CWA baseline provisions and Forest Service BMPs, yet the Forest Service’s BMPs. In addition to violating baseline provision (vii) of the CWA, The ROD violates numerous Forest Service BMPs including 12.5(g), 12.6, 13.16, 14.6(a), 14.17, 14.20, and 11.63. By violating its own BMPs, the Forest Service has in turn violated the CWA, and needs a § 404 permit to proceed.

The Forest Service is acting in direct violation of BMP 12.5 which incorporates the baseline provisions from 33 CFR 322.4(a) to mirror CWA requirements: “The design, construction and maintenance of the road crossing shall not disrupt the migration or other movement of those species of aquatic life inhabiting the water body.”²⁹ The construction of the red culverts were, evidently, initially in violation of the CWA § 404 baseline provisions and applicable BMPs. To use the violating culverts for the Logjam Timber Sale is a further violation of CWA § 404 and Forest Service BMPs. The Forest Service cannot exclude baseline provisions or BMPs simply because funds are lacking for maintenance on the red culverts in the project area. If the BMPs are solely considered in construction and then ignored when problems arise during construction and maintenance (and the monitoring process indicates there

²⁶ See 40 C.F.R. 1508.27(b)(10).

²⁷ *Citizens Against Toxic Sprays v. Bergland*, 428 F.Supp. 908, 922 (D.C. Or. 1977).

²⁸ *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir. 1990).

²⁹ 33 C.F.R. § 323.4(a)(6)(g); FSH 2509.22—Soil and Water Conservation Handbook, BMP 12.5

have been many red culvert problems), then BMP implementation is inadequate. This clearly violates the intent of the CWA.

The Forest Service does not lack funds to fix red culverts, as the FEIS intimates (without providing any citation or evidence). It simply fails to spend available funds on it. This is plainly a consequence of decisions like the ROD, which prioritize new road construction and timber sale subsidies over road maintenance. The ROD makes the maintenance shortfall worse by spending more money on new roads, and by adding maintenance obligations during and following the sale. The Logjam Timber Sale allocates \$3.5 million for road construction under this Alternative, which is funding from Congress that is being spent on clear-cutting the project area at the expense of addressing existing maintenance problems. This tradeoff, and the environmental consequences, are entirely ignored in the FEIS in violation of NEPA.

The Forest Service past and current management practice in the Logjam Project Area is in direct violation of BMP 12.6: “[r]oad construction techniques used to cross wetlands must have minimal effects on wetland hydrology, chemistry or biology, and meet all 33 CFR Best Management Practices.”³⁰ Instead of having minimal effects to wetland hydrology, chemistry, and biology, the past actions had major impacts at implementation, and continue to have major impacts because corrective BMPs are not utilized.

The Forest Service management practice in the Logjam Project Area is in direct violation of BMP 12.6: “[n]o management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment shall be permitted within these areas which seriously and adversely affect water conditions or fish habitat.”³¹ The following provisions are articulated as minimum considerations for Forest Service policy:

1. Manage riparian areas in relation to various legal mandates, including, those associated with floodplains, wetlands, water quality, dredged and fill material, endangered species, wild and scenic rivers, and cultural resources.

³⁰ FSH 2509.22—Soil and Water Conservation Handbook, BMP 12.5.

³¹ FSH 2509.22—Soil and Water Conservation Handbook, BMP 12.6.

2. Manage riparian areas under the principles of multiple-use, giving preferential consideration to riparian dependent resources when conflicts among land use activities occur.
3. Delineate and evaluate riparian areas prior to implementing any project activity.
Determine geographic boundaries of riparian areas by onsite characteristics of water, soil, and vegetation.
4. Give special attention to adjacent terrestrial areas to assure adequate protection for the riparian dependent resources.
5. Manage riparian areas to provide for long-term conservation, productivity, biological diversity, and ecosystem integrity.³²

The CWA is a legal mandate that needs to be considered in management of the riparian areas. The red culverts are effectively blocking water courses and causing serious adverse impacts to fish habitat. This violates the multiple use principle; the roads in the project area are managed exclusively for timber, and there is a complete disregard for the health of fisheries dependent upon the Forest Service to protect fish habitat. The current management is acting with disregard for long-term conservation of fish habitat, disregard for future fishery productivity, and furthermore, threatening the integrity of the ecosystem. These are minimum considerations—baseline floors in place to determine where policy should fall in relation. Policy should be at least at, if not above these minimums, and any policy carried out below the minimum considerations is a direct violation of BMP 12.6. BMP 12.6 orders the deferment or adjustment of the sale in order to alter the management activities into compliance.

The Forest Service past and current management practice in the Logjam project area is in direct violation of BMP 13.2: “[w]here adverse water quality, soil productivity impacts, or undesirable stream flows are likely to result, the harvest unit design must be modified, special mitigation measures identified, individual units deleted, and/or the natural recovery rate accelerated by using watershed improvement measures.”³³

The Forest Service management practice in the Logjam project area is in direct violation of BMP 13.16, detailing objectives to protect stream channels:

- (1) [M]aintain the natural flow regime; (2) provide for unobstructed passage of storm flows; (3) maintain integrity of the riparian buffer to filter sediment and other pollutants; (4) restore the natural course of any stream

³² *Id.*

³³ FSH 2509.22—Soil and Water Conservation Handbook, BMP 13.2.

that has been diverted as soon as practicable; (5) maintain natural channel integrity to protect aquatic habitat and other beneficial uses; and (6) prevent adverse changes to the natural stream temperature regime.³⁴

Maintaining natural channel integrity means exactly what it says, maintain the stream to protect aquatic habitat. Red culverts are the antithesis of a protected stream channel. To restore the stream as soon as practicable means when the equipment is available and the roads are being constructed, not 20 years later if and when the sale is completed.

The FEIS and ROD are in violation of BMP 14.6a: “[i]nstallation or removal of drainage facilities and performance of other contract work which will contribute to the temporary or permanent control of erosion and sedimentation will be carried out concurrent with earthwork operations as closely as practicable.”³⁵ The transportation BMP advocates removal of the red culverts concurrently during roading operations. This is as closely as practicable. While the equipment is readily available and sedimentation is being increased temporarily during road construction, this is the practicable period to remove and install complying drainage structures.

The Forest Service past and current practices in the Logjam project area are in direct violation of BMP 14.17: “[w]hen the stream crossing has served its purpose and is no longer needed, the structure and associated fill will be removed. This work will be accomplished in accordance with BMPs 13.16, 14.6, 14.11 and 14.14 as applicable.”³⁶ This BMP is extensively violated in the project area. There are many old temporary roads that were never closed and unused NFS system roads where culverts are still in place, exemplifying the inadequacy of the BMP implementation, monitoring, and corrective processes. The FEIS fails to identify or analyze these roads. Furthermore, as argued below, the FEIS expectation that all proposed new temporary and NFS roads will be decommissioned or stored at the conclusion of the sale, is not a reasonable one.

The Forest Service management practices in the Logjam project area are in direct violation of BMP 14.20:

Inspect all new culverts within 6 months of initial fall and winter high flow events. Identify "critical culverts", where there is a substantial risk of failure or risk of water quality impairment. Inspect these critical culverts at least annually or place on the annual Road Maintenance Plan for Action/Correction. Also inspect culverts in and below timber harvest units at least annually for approximately 3-4 years following timber harvest activities,

³⁴ FSH 2509.22—Soil and Water Conservation Handbook, BMP 13.16.

³⁵ FSH 2509.22—Soil and Water Conservation Handbook, BMP 14.6.

³⁶ FSH 2509.22—Soil and Water Conservation Handbook, BMP 14.17.

or until vegetation is firmly established in the vicinity of all drainages and ditches feeding the culvert.³⁷

The FEIS makes no mention about “critical culverts.” The project record does not include inspections of roads in the project area up to these standards—in fact most roads were last inspected a decade ago.³⁸ There is no reasonable way to expect the Forest Service has the willpower, intent or capacity to conduct inspections at this level. The FEIS fails to analyze the environmental impact of red culverts in the Road Maintenance Plan or the timeframe for their removal.

In addition to the substantive violation of BMPs, there is a NEPA violation where the FEIS fails to analyze the impacts of any BMPs. This is not sufficient to constitute taking a hard look at the environmental impact or to provide a detailed statement.³⁹ At best, the FEIS lists off the number of the BMPs with no analysis, and the Road Cars exemplify this. The FEIS completely fails to consider or disclose the violations of these BMPs, or their effectiveness at implementation.

2. BMP Monitoring is Inadequate; A CWA § 404 Permit is Necessary

The BMPs are not being successfully implemented or monitored. The Forest Service cannot be blindly relied on BMPs to mitigate impacts because their effectiveness is indeterminate. From the 2007 monitoring report:

Fish Habitat Question 2: Are Fish Riparian Standards and Guidelines being implemented?

Fish Riparian Standards and Guidelines are being implemented based on two types of assessments for Best Management Practices (BMPs): 100 percent monitoring of units closed out and roads complete and Interdisciplinary Team (IDT) quality control monitoring. This monitoring covered about 444 acres in 20 harvest units and 18 road segments including 5 bridge and 1 culvert replacement sites.

Best Management Practices are successfully being implemented on the Tongass. Significant lengths of stream channels were reported as protected during unit harvest in the implementation monitoring effort in FY 2007. During this monitoring Best Management Practices relative to fisheries habitat showed no corrective actions and no departures from full BMP implementation reported. During the layout and sale administration of the units, measures were taken to ensure that stream protection measures were correctly prescribed and implemented. Recommendations include modification of the monitoring process to transition to monitor a smaller subset of units and roads since implementation is being completed successfully.⁴⁰

³⁷ FSH 2509.22—Soil and Water Conservation Handbook, BMP 14.20.

³⁸ See Road Condition Survey .xls spreadsheet, in project file.

³⁹ 40 C.F.R. § 1502.16; see *Muckleshoot Indian Tribe*, 177 F.3d at 811.

⁴⁰ 2007 Annual Monitoring & Evaluation Report, Fish Habitat, http://www.fs.fed.us/r10/tongass/projects/tlmp/2007_monitoring_report/index2007.shtml.

Of 1200 surveyed red culverts in the Tongass, monitoring for FY 2007 covered 1 culvert, and prescribed there were no corrective actions or departures from full BMP implementation.

Fish Habitat Question 3: Are Fish and Riparian Standards and Guidelines effective in maintaining or improving fish habitat?

Upstream Passage of Juvenile Fish at Road Crossings

No additional work was completed on this monitoring during FY2007. Recommendations follow that monitoring of the hydraulic and structural conditions continue at culverts recently installed (i.e., designed and installed under the direction of the Forest Plan) in fish bearing streams. This monitoring effort will assess fish passage and will assist in the evaluation of the success of design, maintenance and other management actions. Monitoring the structural and hydraulic conditions of new culverts installed in fish bearing streams is especially important as the Forest applies innovative design concepts and criteria in its aggressive program to restore and improve fish passage.⁴¹

In other words, on the whole forest only one culvert was monitored during FY 2007, and in the future, there will be monitoring of recently installed culverts, ignoring culverts installed since the inception of logging in the Southeast that are currently contributing to an exponentially increasing maintenance backlog. Consider the information produced from FY2006 monitoring:

Fish Habitat Question 3: Are Fish and Riparian Standards and Guidelines effective in maintaining or improving fish habitat?

Fish Passage

Upstream Passage of Juvenile Fish at Road Crossings

It is important to emphasize that fish are assumed able to pass through most of the crossings identified in the Red and Gray categories most of the year. Results from a Tongass National Forest survey which evaluated habitat conditions and fish presence upstream of approximately 1,200 Red culverts indicated that 84% of these crossings do have fish located upstream of them. Through more intensive sampling, fish may eventually be found upstream of more of the crossings. Also, it is possible that some of the stream sections upstream of the identified Red and Gray crossings never supported fish and is not actually fish habitat. The determination of fish habitat upstream of the culverts currently without fish was based on stream characteristics. Specialists are mostly concerned that passage may not be possible for juvenile fish during periods of high stream flow. The results presented are for juvenile fish passage, and it is likely that stronger swimming adult fish are not restricted in many of the structures.⁴²

The monitoring from FY2006 is clear; juveniles are being restricted from passage in 1008 of the 1200 red culverts

⁴¹ *Id.*

⁴² 2006 Annual Monitoring & Evaluation Report, Fish Habitat, http://www.fs.fed.us/r10/tongass/projects/tlmp/2006_monitoring_report/index2006.shtml.

evaluated, yet there is no mention of a proposal to do anything about those red culverts or fix the problem; rather, the analysis overlooks the studies and assumes that fish can pass through most of the year, and there might not even be fish upstream of the red culverts.⁴³ This conclusion is without scientific basis. The fish assumed able to pass through most of the year is an irrelevant assumption that is not based on a scientific finding, nor is it an assumption that tells what the red culverts may be doing to fish populations. Even if they could pass through “most of the year,” the study gives no indication *when* juveniles need to pass through. “Most of the year” isn’t good enough if the fisheries are dependant upon the fish needing to pass through at a specific time to complete their spawning cycle. Considering the problems reported in FY2006, it would make sense to continue studying and monitoring culverts during FY2007, but instead, the monitoring report has inadequate rhetoric about what is going to happen to roads with recently installed culverts.

The fundamental purpose of monitoring the BMPs is to ensure legal compliance. This is clearly not being met by passing a blind eye to the red culverts.

“Monitoring and evaluation are designed to improve knowledge of the link between land management activities and the resulting impacts on soil and water resources. Monitoring and evaluation provide an early warning system where research information may not exist for guidance. If site specific application of BMPs is based on sound research that addresses water quality issues, monitoring and evaluation can be less intensive.”⁴⁴

Here the monitoring and evaluation has not only been based on unsound research (projections and assumptions about fish passing sometimes, or possibly not being habitat upstream is not sound research), but the monitoring has become less intensive, though the problems persist. The BMPs in place to protect aquatic life are not adequate to determine if the roads are harming fisheries; the decision needs to be set aside and a CWA § 404 permit is necessary to proceed.

The FEIS totally fails to disclose or analyze these shortcomings of the BMPs in violation of NEPA.

3. The Decision Should be Set Aside Until Legal Compliance is Achieved

The Forest Service cannot comply with BMPs and the decision should be set aside until the Forest Service obtains a CWA 404 permit. There are guidelines within 11.63 to halt the project depending on the scale and impact:

⁴³ *Id.*

⁴⁴ FSH 2509.22—Soil and Water Conservation Handbook, BMP 11.62.

If monitoring and evaluation indicates evaluation criteria are not being met, an adjustment of the site-specific application of BMPs is needed, and/or the BMP itself needs modification. . . Adjustments vary depending on the type and severity of the impact to the soil and water resource or designated beneficial use. For minor to moderate impacts, the application of site-specific BMPs are redesigned or upgraded to assure the criteria are not exceeded. If the impact is major, the project activity is re-evaluated, redesigned, or terminated. Corrective actions to prevent or minimize significant negative resource impacts will be initiated immediately.”⁴⁵

A moderate impact contains “[e]ffects [that] would be measurable at the stream reach or subwatershed scale, and last more than a week.”⁴⁶ A major effect (similarly defined in the fish resource report) is defined as having “effects [that] would be readily measurable at the watershed scale and would last for years.”⁴⁷ A red culvert’s impact lasts far longer than a week; it lasts for years. The 11 culverts proposed for storage and 14 culverts placed in the maintenance backlog abyss, respectively will be around for the duration of the sale (possibly 20 or more years until storage) and indefinitely. Compound the project area’s lengthy impact with the scope of the problem around the Tongass; with 1200 (surveyed) red culverts, road conditions surveys where culverts block “fish passage at 85% of class II, and 66% of class I fish stream crossings,” there is a major cumulative impact being caused to fish habitat at the watershed scale.

The BMP itself calls for the project activity to be re-evaluated to take care of the red culvert so corrective action can be immediately taken. Since the major impact being caused by red culverts to aquatic habitat is not being considered or corrected, the Forest Service BMPs amount to little more than self-serving rhetoric. The project needs to be set aside, and a CWA 404 permit needs to be obtained for the Logjam Timber Sale.

D. The ROD Violates the TLMP

The ROD violates the TLMP by causing red culverts and not achieving site-specific criteria for aquatic habitat. From the 2008 Forest Plan, the desired conditions for aquatic organisms and their habitats are:

To maintain native fish species and their habitats and prevent any species from becoming threatened or endangered.

To maintain the overall aquatic habitat quality as good or excellent and keep fish thriving in the lakes and

⁴⁵ FSH 2509.22—Soil and Water Conservation Handbook, BMP 11.63.

⁴⁶ FEIS 3-18.

⁴⁷ FEIS 3-18.

streams due to good water quality and other habitat features.

To provide world-class fisheries for sport anglers and opportunities for rural residents to participate in subsistence activities and to harvest subsistence resources now and into the future.

In the event that a natural catastrophic event happens that the improved condition of watersheds and riparian areas, and careful design and location of roads, would minimize any resource degradation due to such an event.

It is the goal of the Tongass National Forest to maintain or restore the natural range and frequency of aquatic habitat conditions on the forest to sustain the diversity and production of fish and other freshwater organisms.⁴⁸

The blatant disregard of these regulations in the ROD is inexcusable; there is no reason why the timber sale should go forward while the Forest Service both utilizes red culverts on open roads and leaves unmaintained red culverts in place. The TLMP Transportation Standards and Guidelines require the Forest Service to “maintain ditches and culverts to keep water effectively flowing, and minimize sediment entering stream courses.”⁴⁹ The proposal to remove the culverts is not only a sound ecological and economical decision, it is consistent with the TLMP. The TLMP requires that roads be operated and maintained so as to meet the “ecological objectives for the landscape. . . [C]onsider protection needs of adjacent resources when planning and conducting road maintenance activities. . . [C]onsider incorporating design features which will protect water quality by minimizing long term maintenance needs. . . .”⁵⁰ The way to follow the ecological objectives of the landscape and minimize long term maintenance needs would be to spend funding on maintenance now, not deferring it in favor of yet another boondoggle timber sale. The Forest Service needs to follow the TLMP Transportation Standards and Guidelines and close roads where “use causes unacceptable damage to roadway or adjacent soil and water resources.”⁵¹ The Forest Service needs to follow the TLMP Transportation Standards and Guidelines and pull all the red culverts prior to the sale; the TLMP advocates “repair of situations where use will cause environmental impacts inconsistent with Forest Plan direction.”⁵² The Forest Service needs to follow the TLMP Transportation Standards and Guidelines to “[m]eet fish passage directions

⁴⁸ USDA Forest Service, Tongass National Forest: Land and Resource Management Plan, 2008, 2-4, Appendix D.

⁴⁹ TLMP, TRAN6 4-85 to 4-86.

⁵⁰ TLMP, TRAN6 4-85 to 4-86.

⁵¹ TLMP, TRAN2 4-80.

⁵² TLMP, TRAN5 4-85.

at locations where roads cross fish streams,⁵³ and decommission all the red culverts (and all unmaintained roads for that matter) in the project area following the sale: “[d]ecommission roads identified through environmental analysis in a condition that maintains stream connectivity and minimize impact to the watershed.”⁵⁴ The ROD does none of these things, and further, the FEIS fails to consider these inconsistencies of the Forest Plan.

The Forest Service needs to follow the TLMP Riparian Standards and Guidelines and “[d]esign and coordinate road management activities to provide for the needs of wildlife and provide passage of fish at road crossings.”⁵⁵ The Forest Service needs to “[e]nsure long-term fish passage through structures at road crossings on Class I and II streams as described in Process Group direction and the Fish Standards and Guidelines.”⁵⁶

Under the TLMP, in Fish Habitat Planning, the Forest Service needs to “maintain, restore, or improve, where feasible⁵⁷ . . . stream conditions that support the migration or other movement of aquatic organisms inhabiting a stream body.”⁵⁸ In violation of the TLMP and NEPA, there was no analysis in the FEIS about the feasibility of removing all the red culverts and allowing aquatic habitat to be restricted.⁵⁹ Numerous considerations are given in the TLMP to determine feasibility. Consideration needs to be given to “known sensitive, isolated, or unique fish populations. . . [c]umulative impacts of restricting fish passage at multiple sites in the same watershed,” advice from the ADF&G and

⁵³ TLMP, TRAN4 4-82.

⁵⁴ TLMP, TRAN7 4-86.

⁵⁵ TLMP, RIP1 4-50.

⁵⁶ TLMP, RIP2 4-53.

⁵⁷ “Feasible” is defined in the glossary at 7-12 as “[c]apable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, technical, and safety factors. In evaluating feasibility, the following are considerations: 1) the effectiveness and practicality of the measures being considered; and 2) the long- and short-term costs of the measures and the effect of those costs on long- and short-term economic viability of projects or programs.” The most feasible response would be to take care of the problematic culverts in the present to maximize short-term costs and environmental problems to ensure good long-term economic practices. The costs of taking the culverts out now are minimal in comparison to the long-term effects the red culverts will wreck upon fisheries and aquatic habitat in the watershed if they are left open for 20+ years during the timber sale, and the rest unmaintained in the backlog following the sale. If the Forest Service were following the TLMP, this would be the obvious option in terms of “feasibility.” In practice, however, “feasibility” plays out quite differently, with culverts left in disrepair and deferred maintenance.

⁵⁸ TLMP, FISH 2 4-11.

⁵⁹ TLMP, FISH 2 4-12.

ADNR needs to be taken into account (which has been given⁶⁰), consideration needs to be given for the length of time that a stream structure will restrict movement, a cost benefit analysis of providing ideal conditions versus non-ideal conditions needs to be given, and consideration needs to be given to the availability of cost effective mitigation projects.⁶¹ None of these considerations were mentioned. Removal of all red culverts certainly is feasible, yet the FEIS provides no reason why it is not feasible to remove all red culverts.

The Forest Service needs to follow the TLMP Fish Habitat Restoration and Improvement Standards and Guidelines to give priority to restoration and improve and restore fish habitat per the habitat objectives of the Forest Plan.⁶² The Forest Service needs to be cost-efficient when constructing projects, including timber sales; the cost effective manner to deal with red culverts would be to take care of them in the present while the equipment is available rather than adding to the growing maintenance debt.⁶³ The Forest Service needs to follow the TLMP Fish Habitat Maintenance Standards and Guidelines and provide for maintaining fish habitat—including funding existing projects before new ones, and including “funding for maintenance in the planning and budgeting for all projects.”⁶⁴ This information was conspicuously absent from the Logjam FEIS, ROD, and the POW ATM plan.

E. The FEIS Violates NEPA by Failing to Consider Red Culverts; The ROD is in Violation of NEPA

Since the FEIS did not disclose any type of direct, indirect, or cumulative effect of leaving the red culverts in place while carrying out this timber sale, did not study habitat affected by the red culverts, relies on conclusory statements with no objective scientific basis, and failed to disclose the impact of open and unmaintained red culverts on other actions in the project area, the FEIS violates NEPA.

⁶⁰ FEIS Appendix B, B-123.

⁶¹ TLMP, FISH 2 4-12.

⁶² TLMP, FISH 3 4-13.

⁶³ TLMP, FISH3 4-13.

⁶⁴ TLMP, FISH4 4-13.

The Forest Service has violated NEPA by not disclosing any direct, indirect, or cumulative impacts of the red culverts in the project area. The FEIS instead relies on conclusory statements that fail to take into account relevant information. Mere numerical calculations are a necessary part of describing cumulative effects, but insufficient in describing actual environmental effects to a project area.⁶⁵ The court in *Klamath-Siskiyou Wildlands Center v. BLM* explains that certain factors, such as owl habitat and road density, are clearly variables that can be quantified.⁶⁶ However, an EIS section that estimates the number of acres to be harvested and lists the reasonable foreseeable projects in the area is not sufficient to describe cumulative environmental impacts.⁶⁷

Applying the reasoning to this sale, merely quantifying red culverts does not suffice in the FEIS. The FEIS makes no attempt to analyze the cumulative impact of reconstructing, maintaining, or using red culverts left in place, or the impact of failing to fix red culverts upon fisheries or aquatic habitat. The FEIS states: “there are 25 red crossings in the project area and 88 percent of them have fish populations upstream. There is approximately 14 miles of habitat upstream of these red crossings, which represents 3 percent of the known habitat in the project’s watersheds.”⁶⁸ Recognizing fish habitat upstream is a good first step, but the FEIS fails to take a hard look at what kind of an impact the red culverts have caused and will cause over time. The FEIS states most streams have been surveyed at least once, and even if a stream may be red, it “may not impede larger fish and may even pass fish of all sizes during certain stream flow levels.”⁶⁹ This conclusory statement is purely speculation. Because it fails to take into account relevant factors, it is arbitrary and capricious.⁷⁰ Aquatic habitat and fisheries are dependant upon many factors to ensure that fish populations remain healthy and unaffected; simply counting percentages and red crossing is an insufficient analysis of the environmental impacts of open and unmaintained red culverts in the Logjam project area.

⁶⁵ *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 996 (9th Cir. 2004).

⁶⁶ *Id.* at 994, fn 1.

⁶⁷ *Id.* at 994-95.

⁶⁸ FEIS 3-139.

⁶⁹ FEIS 3-139.

⁷⁰ 5 U.S.C. 706(2)(A).

The FEIS violates NEPA because it fails to analyze the impacts of the ROD's management decisions dealing with red culverts on open roads remaining open. The cumulative impact needs to be analyzed in a single EIS. NEPA mandates that where "several actions have a cumulative . . . environmental effect, this consequence must be considered in an EIS."⁷¹ The Forest Service cannot break the action of leaving red culverts blocking fish passage into component parts and past projects; currently there are red culverts being left until after the timber sale, red culverts being utilized and driven upon during the timber sale's lifespan, and red culverts being placed on the Road Maintenance Plan and deferring maintenance. All these environmental impacts need to be analyzed so that public officials and citizens can take into account all the relevant information before making a decision.

Stating that red culverts "will be prioritized on a forest level to determine the appropriate management plan"⁷² does not absolve the Forest Service from analyzing the environmental impact in the Logjam FEIS. The FEIS does not explain the who what or where of this "forest level" decision to prioritize road management. This ROD *is* the management plan. Under the CEQ regulations, agencies are told that 'public scrutiny [is] essential,' 40 C.F.R. § 1500.1(b), and are charged to 'encourage and facilitate public involvement in decisions,' *id.* § 1500.2(d), so that 'environmental information is available to public officials and citizens before decisions are made,' *id.* § 1500.1(b).⁷³ Applying NEPA, the prioritization needs to be disclosed along with the environmental effects. Deferring the maintenance problem to another action in the same project area violates NEPA by not disclosing the environmental impact in the Logjam FEIS. In prioritizing the open culverts, the Forest Service does not allow the public to fully consider the environmental impacts in order to make an informed decision about the timber sale. Neither is the EA for the POW ATM adequate under NEPA, because that is an EA, whereas the Logjam project has significant impacts and is a more robust EIS. None of the other levels of decision (road maintenance, budgeting, ATM plans, etc.) accomplish the NEPA analysis needed for the Logjam timber sale. This ROD has direct, indirect and cumulative impacts on fish habitat by causing continuing fish passage problems on red culverts. The ROD causes red culverts by

⁷¹ *City of Tenakee Springs*, 915 F.2d at 1312.

⁷² FEIS 3-139.

⁷³ *Klamath-Siskiyou Wildlands Center*, 387 F.3d at 996.

adopting road maintenance practices that fail to fix them, precluding removal of culverts by committing the roads to the Logjam timber sale, increasing use of the roads and therefore increasing wear and tear, and by spending limited road money on this timber sale rather than fixing existing roads. By contrast, under the “No Action” alternative, red culverts could be fixed and the roads maintained up to standard. That is the choice this ROD presents: spend limited resources fixing problem roads, or building new ones? The comparison between these impacts are not considered.

F. The FEIS Violates NEPA by Failing to Consider BMP and CWA Compliance Issues

The Forest Service has not disclosed how the red culverts in the project area relate to compliance with the CWA, NFMA, or the TLMP. The FEIS says BMPs will be implemented, so a §404 permit is not necessary. That is manifestly untrue—BMPs are violated all over the place under the ROD and the CWA exemption does not apply. The FEIS repeatedly offers BMPs as mitigation against watershed impacts, while conveniently forgetting to mention that the Forest Service is in regular, heinous violation of these same BMPs.⁷⁴

NEPA requires disclosure of compliance with other legal requirements.⁷⁵ The Forest Service in the FEIS states the CWA permit 404 procedural exemption applies when CWA BMPs at 33 CFR § 323.4(a) are followed to ensure aquatic passage.⁷⁶ The FEIS states that all fish stream crossings will be designed to pass fish, and that all new roads will be stored following the sale—actions that “are expected to result in no direct or indirect effects to fish passage in the project area, as all fish crossings will be crossed with log culverts or bridges.”⁷⁷ Yet, of the 25 red culverts left in place, 11 are proposed for storage following the timber sale, and 14 are proposed to stay open—possibly indefinitely.⁷⁸ This is a violation of the CWA baseline provision that structures cannot disrupt fish migration.⁷⁹ Simply saying “[a]ll fish stream crossings in all action alternatives will be designed to pass fish” does not take into

⁷⁴ See ROD Road Cards, Appendix 2.

⁷⁵ See 40 C.F.R. 1508.27(b)(10).

⁷⁶ See e.g. FSH 2509.22—Soil and Water Conservation Handbook, BMP 12.5.

⁷⁷ *Id.*

⁷⁸ FEIS 3-139.

⁷⁹ 33 C.F.R. § 323.4(a)(6)(vii).

account the red culverts being utilized and left unmaintained in the project area.⁸⁰ Further, the FEIS fails to include the information from the project file: “red crossings will continue to impede fish migration at certain flows and life stages until they are replaced or removed.”⁸¹ This is a clear violation of fish passage as defined by 33 CFR § 323.4(a)(6)(vii). Since the Forest Service has not provided passage, a CWA 404 permit must be obtained.

For the reasons stated above, the Forest Service should set aside the decision until a 404 permit is obtained and compliance with the CWA, Forest Service BMPs, TLMP, and NEPA can be achieved.

III. The FEIS Violates NEPA by Failing to Adequately Disclose Cumulative Effects Upon Watersheds

A. NEPA Regulations

The direct, indirect, and cumulative impact section of the FEIS watershed analysis violates NEPA. The analysis of cumulative effects needs to contain a detailed statement that is more than a one-sided analysis and “very broad and general statements devoid of specific, reasoned conclusions.”⁸² “Conclusory statements which do not refer to scientific or objective data supporting them do not satisfy NEPA’s requirement for a ‘detailed statement.’”⁸³

Under NEPA, the agency must consider the cumulative environmental impact that “results from the incremental impact of the action when added to other past, present and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”⁸⁴ An EIS must include a “useful analysis of the cumulative impacts of past, present and future projects” in sufficient detail to be “useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts.”⁸⁵

B. The FEIS Analysis of Watershed Impacts is Insufficient Under NEPA

⁸⁰ FEIS 3-141.

⁸¹ Logjam TS FEIS Fisheries Resource Report, 45

⁸² See *Muckleshoot Indian Tribe*, 177 F.3d at 811.

⁸³ *Citizens Against Toxic Sprays*, 428 F.Supp. at 922.

⁸⁴ *Muckleshoot Indian Tribe*, 177 F.3d at 809.

⁸⁵ *Natural Resources Defense Council*, 421 F.3d at 814 (quoting *id.* at 810 (quoting *City of Carmel-by-the-Sea v. U.S. Dep’t of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997))).

The direct, indirect, and cumulative impact section of the FEIS watershed analysis violate NEPA by (1) failing to contain a detailed statement and instead making general and conclusory statements based on a model that consists of aggregations, (2) failing to conduct a useful, comprehensive analysis of the effects of past, present, and future projects, and (3) by discarding effects as temporary and not requiring detailed analysis.

First, the estimation of cumulative effects on aquatic habitat violates NEPA by failing to provide a detailed statement. The information cannot be merely numerical calculations and aggregations: "[a] calculation of the total number of acres to be harvested in the watershed is a necessary component of a cumulative effects analysis, but it is not a sufficient description of the actual environmental effects that can be expected from logging those acres."⁸⁶ The FEIS aggregates and fails to provide sufficient models and data for measuring the impacts of streamflow, sedimentation, and fish passage.⁸⁷ The effects on stream flow from harvesting and roads are measured by the total harvested acres, past harvested acres, and the percent harvested in each watershed basin.⁸⁸ This data is then used to support a conclusion that harvesting will increase peak flows in the watershed, and "effects on streamflow in Logjam and Trumpeter Creek could be moderate; but it is unlikely that streamflow increases could be measured."⁸⁹ Streamflow increases cannot be measured not because there are negligible effects to the watershed and streams from past and proposed harvesting, but because there is nothing to compare it to—"baseline data for project area watersheds is lacking."⁹⁰ While the Forest Service cites studies that show "changes in streamflow following timber harvest and road building are commensurate with the proportion of watershed harvested,"⁹¹ this is a necessary but insufficient step in the impact analysis process. Increased stream flow from canopy removal is one piece of a puzzle. What the FEIS misses entirely is how this effect might interact cumulatively with other aspects of the problem. For example, increased peak flows would interact with red and grey culverts that have velocity barriers or blockages,

⁸⁶ *Klamath-Siskiyou Wildlands Center*, 387 F.3d at 996.

⁸⁷ FEIS 3-8 to 3-24 (watershed), 3-139 to 3-143 (red culverts)

⁸⁸ FEIS 3-10, Table 2; Table 5.

⁸⁹ FEIS 3-18.

⁹⁰ FEIS 3-10.

⁹¹ Logjam Timber Sale Watershed Report, 22 (Harr 1986, Jones and Grant 1996, Jones 2000, Moore and Wondzell 2005).

making those problems worse. The Forest Service cites studies done not in Alaska, but in Oregon, where regeneration is substantially superior, climate is different, and soil composition is different. The Forest Service applies the Oregon study to the Tongass: “[r]ecover of pre-harvest streamflow conditions is reported to occur at between 10 and 30 years in the Pacific Northwest (Jones 2000). Road effects on water yield may not recover until flow paths are reclaimed during road decommissioning.”⁹² In conclusion, the Forest Service finds that “[a]s the forest canopy begins to close in by about stand age of 30 years, we anticipate recovery of pre-harvest streamflow conditions.”⁹³ If no further harvests occur within the watersheds, the Forest Service estimates that full hydrological recovery would occur by early 2020s.⁹⁴ The FEIS is incorrect to term stream flow impacts “temporary,” because that presumes the Logjam timber sale will be the one and only one in the area. Yet this is timber LUD, and roads are being kept up for reopening, so additional, ongoing disturbance should be expected. There is no reason why, given the maintenance backlog, the impact of unmaintained roads is not being analyzed, the adequacy of storage techniques is not considered, and the impact of temporary roads are not being considered in the watershed analysis.

The Forest Service needs to change the model and study the forest canopy and hydrological recovery of old growth in the Tongass. Next, the FS needs to use the best available science for site-specific locations rather than rely on conclusory statements that fail to consider relevant factors. The Forest Service assumes that because pre-harvest studies were not done to determine baseline provisions, clear-cutting impacts on watersheds are impossible to measure. Additionally, the Forest Service assumes such a project is futile as climate changes are confounding measurements.⁹⁵ By this logic, since there is nothing to study, clear-cutting is not harming watersheds and everything will return to pre-harvest conditions in a few years. Under NEPA, the Forest Service needs to use the best available science and take a hard look at the environmental consequences of the proposed action.⁹⁶ Measuring only the

⁹² Logjam Timber Sale Watershed Report, 9; The Forest Service is relying on decommissioning to mitigate environmental effects and absolve the need to analyze the impact in the EIS.

⁹³ Logjam Timber Sale Watershed Report, 22.

⁹⁴ Logjam Timber Sale Watershed Report, 10.

⁹⁵ Logjam Timber Sale Watershed Report, 19.

⁹⁶ 40 C.F.R. § 1502.16.

numerical harvested acreage within the watershed is necessary, but alone is an insufficient method of measuring the environmental impact to the affected area.

Second, the FEIS watershed analysis violates NEPA because the cumulative effects section merely locates the past, present, and future projects in Appendix D rather than providing a useful and comprehensive analysis.⁹⁷ At minimum, the EIS must provide a “catalog of past projects” and a “discussion of how those projects (and differences between the projects) have harmed the environment.”⁹⁸ The Ninth Circuit has recognized the inadequacy of separating statements and sections out in order to label the impacts minor or negligible, rather than viewing the cumulative impact on a larger scale:

Cumulative impacts of multiple projects can be significant in different ways. The most obvious way is that the greater total magnitude of the environmental effects—such as the total number of acres affected or the total amount of sediment to be added to streams within a watershed—may demonstrate by itself that the environmental impact will be significant. Sometimes the total impact from a set of actions may be greater than the sum of the parts. For example, the addition of a small amount of sediment to a creek may have only a limited impact on salmon survival, or perhaps no impact at all. But the addition of a small amount here, a small amount there, and still more at another point could add up to something with a much greater impact, until there comes a point where even a marginal increase will mean that no salmon survive.⁹⁹

Relating to streamflow, the FEIS states that harvest in the watersheds will “continue to exceed the 20 percent in 30-year threshold.” Yet this does not amount to a useful discussion of how the current project and past projects have harmed the environment, in combination with maintenance issues causing chronic sedimentation problems, red culverts restricting passage, unmet road management objectives, improperly stored roads, turbidity issues, increases in peak flow, and above average temperatures—all affecting aquatic habitat, yet inadequately analyzed in the FEIS.¹⁰⁰ In the FEIS, the Forest Service needs to utilize scientific studies, rather than merely providing a catalogue, in order to provide an adequate discussion of how these practices are harming aquatic habitat. The FEIS needs to consider the interplay among and between various watershed effects. For example, what is the impact of road 3030710-2 crossing

⁹⁷ FEIS 3-28.

⁹⁸ *Natural Resources Defense Council*, 421 F.3d at 815 (quoting *Lands Council*, 395 F.3d at 1027).

⁹⁹ *Klamath-Siskiyou Wildlands Center*, 387 F.3d 989 at 995.

¹⁰⁰ FEIS 3-12 to 3-28.

18 streams which feed into Class I streams, considering there are 6 crossings blocked by red culverts, past riparian management area harvest, increased water yield, and increased temperature from past clear-cuts?¹⁰¹ When broken down into component parts as the FEIS does, these effects may be individually minor. However, taken in combination, their effect may be exceptionally significant in this location. The current method of disclosure in the FEIS fails to take a hard look at the environmental consequences of these impacts, and under NEPA, fails to provide a useful analysis of the impacts to the project area.

C. Sedimentation

The sedimentation section of the FEIS, in violation of NEPA, fails to provide a detailed analysis, fails to take a hard look at the environmental consequences of the action, fails to analyze the cumulative effects of past, present, and reasonably foreseeable future actions, and fails to take into account relevant factors in the cumulative impact. The FEIS states “no sediment data [sic] are available for the affected watersheds”¹⁰²; the affected environment section is simply a failure to take a hard look at the environmental impact of the proposed action or to analyze the cumulative impact of sedimentation in the project area.

The project file document entitled “Logjam Road Problems,” as well as the hydrologist report “1547 Gier 2008” contain the table WA-11 which identifies sedimentation problems as a cumulative risk for watersheds. These problems must be analyzed in the FEIS.¹⁰³ This is relevant data that needs to be included and analyzed in the FEIS in order for the public to make an informed decision about the timber sale.

Table WA-11: Cumulative Sediment Risk for Watersheds.

¹⁰¹ ROD Appendix 2, A2-37 to A2-41.

¹⁰² FEIS 3-12.

¹⁰³ where “several actions have a cumulative...environmental effect, this consequence must be considered in an EIS.” *City of Tenakee Springs*, 915 F.2d at 1312.

Watershed Name	Road Number	Site Description	Treatment Description	Type of Road
Logjam	2054120	-Multiple road failures -Holes in road -Water eroding road	-Stabilize road	System
Logjam	2300500	-Crushed and unraveling culvert	-Replace culvert	System
Logjam	2360	-Slides blocking drainage system -Sediment plugged culvert	-Remove landslide debris and restore drainage -Unplug or replace culvert	System
Logjam	3035240	-80% blocked culvert	-Unplug culvert	System
Logjam	3035245	-Blocked road drainage system	-Add 3 culverts	System
Logjam	3035350	-100% plugged culvert -Slide across road	-Unplug culvert -Remove slide material	System
Logjam	3035600	-Slide on road -Smashed culvert	-Remove slide material -Replace culvert	System
Hatchery	3035000	-Smashed culverts -Plugged culverts	-Unplug or replace culverts	System
Hatchery	3035100	-Ditch and road prism erosion	-Install culvert or waterbar	System
Trumpeter	3030700	-Undersized culverts -6' diameter culvert splitting -Plugged or partially blocked culverts	-Replace existing culverts	System
Trumpeter	3030700 spurs	-Road wash-out -Plugged road drainage system	-Unplug existing drainage system	Temporary
Trumpeter	3030720	-Road prism failure -Buried or plugged inlets of ditch-relief culverts -Slide on road prism	-Unplug existing drainage system	System
Trumpeter	3030720 spur	Slide onto road	-Remove slide material	Temporary
Trumpeter	3030725	-Blown out road and buried culvert	-Unplug existing drainage system	System
Trumpeter	3030740	-Landslide plugged culvert and blocks the road prism	-Unplug existing drainage system -Replace lost culvert	System
Trumpeter	3030740	-Plugged drainage	-Unplug existing	Temporary

Watershed Name	Road Number spur	Site Description system	Treatment Description drainage system	Type of Road
Sweetwater Lake	3000000	-Rutting down road prism -Plugged Class I culverts	-Unplug or replace culverts	System
Sweetwater Lake	3000398	-Beaver plugging Class I streams	-Unplug culverts	System
Sweetwater Lake	3000860	-Road washout -2' ditch erosion -Plugged inboard drainage system	-Replace large 8' diameter washed out culvert -Unplug culverts and allow for ditch-relief	System
Sweetwater Lake	3030500	-Plugged culvert	-Unplug culvert	System
Galligan	3000401	-Crushed culvert inlet	-Unplug or replace culverts	System

The sedimentation model and analysis fails to provide a detailed analysis. The FEIS approach adds the amount of newly constructed roads and counts stream crossings to determine sedimentation, with no consideration of site-specific factors, or a discussion of the cumulative effects of the actions. Road cards in the ROD simply list what BMPs will be implemented. Measuring increased sediment by the total acres of new road construction is insufficient under NEPA and fails to take into account relevant factors in the cumulative effects analysis. The cumulative effects section of Alternative 2 concludes: “[b]ecause reasonably foreseeable activities are consistent across all alternatives, Alternative 2 would have the highest level of cumulative effects on sedimentation and aquatic habitat in all watersheds.”¹⁰⁴ This is a legally insufficient discussion of the cumulative impact to the project area; it is simply adding the miles of roads and stream crossings to determine the impact rather than giving a detailed statement. There needs to be site-specific analysis of the impact resulting from unmaintained roads dumping sediment into the streams. All available factual evidence from the FEIS suggests the problem is severe and will only worsen with the ROD.¹⁰⁵

¹⁰⁴ FEIS 3-25.

¹⁰⁵ See FEIS 3-23.

In the same section the FEIS concludes there is no sediment data, the FEIS acknowledges that “[l]ack of road maintenance presents chronic sediment sources at 88 sites in the Logjam project area. . . The effects of road-related sediment sources at the watershed scale probably cannot be measured, but they represent a chronic source of sediment and do not meet road management objectives at some sites.”¹⁰⁶ The FEIS does not attempt to provide recent surveys of this information or provide passably adequate ground data. The FEIS does not attempt to quantify, analyze such information, or discuss the interplay with other effects (increase in peak flows, increased road use, etc.) into an impact statement. This results in a general and conclusory statement; it is not a site-specific analysis, nor is it a detailed statement or hard look at the environmental impact of “chronic sedimentation” under NEPA.

In the cumulative effects section of Alternative 2, the FEIS acknowledges there could be “moderate (though difficult to measure) impacts when combined with past and anticipated road construction” in the Logjam watershed. The other watersheds are absent from the analysis. This general and conclusory statement is not supported with objective scientific data that exists in the project file and the FEIS itself.¹⁰⁷ A moderate impact is defined as lasting over a week with effects measurable at the sub-watershed scale. This “moderate impact” fails to provide a useful statement under NEPA; it fails to include the cumulative impact of clear-cutting in the project area over many years; it assumes the affected environment is in pristine condition devoid of unmaintained roads. A “moderate impact” fails to include the chronic sedimentation problem from unmaintained roads on POW Island; this problem exists on the watershed scale, has existed for many years, and is reasonably foreseeable to continue to exist for many years as evidenced by the \$20 million maintenance backlog on POW Island.¹⁰⁸ The sedimentation analysis is in violation of NEPA because it fails to provide a detailed statement or useful analysis of past, present, and reasonably foreseeable project impacts upon the Logjam project area.

The FEIS entirely fails to consider the ways in which this project would make chronic sedimentation worse. First, by delaying road storage under the POW ATM, the ROD causes these problems to persist for years or decades.

¹⁰⁶ FEIS 3-23.

¹⁰⁷ See Road Problems: Table WA-11: Cumulative Sediment Risk for Watersheds.

¹⁰⁸ POW Roads Analysis, 43.

Second, by spending money on timber sale support, rather than fixing these locations. Third, by increasing the amount of traffic using the road.¹⁰⁹

IV. The Transportation / Maintenance Analysis is Insufficient Under NEPA

First, the Forest Service simply does not have adequate information about roads. The most recent Road Condition Surveys available for the vast majority of roads are over 10 years old.¹¹⁰ This in itself violates Forest Service monitoring and inspection practices for road maintenance.¹¹¹ This lack of quality data taints consideration of all kinds of effects. Are road density measures accurate, when the Forest Service does not have an accurate catalogue of roads? Is the listing of red culverts complete? What has happened to the chronic sediment locations over the years? The FEIS proceeds as though these questions were answered, when in fact the lack of survey data is one of the critical problems.

Second, in addition to the FEIS violating NEPA by not providing a detailed statement on the impact of unmaintained roads in the project area concerning sedimentation, the FEIS Transportation section violates NEPA by failing to consider the direct, indirect, and cumulative impacts of the proposed action on road maintenance. Because the Forest Service receives a batch sum from Congress to spend on roads, the ROD is in effect, pursuing the Logjam Timber Sale at the exclusion of road maintenance objectives. Yet the Forest Service has not analyzed the impact carrying out this sale will have on the over \$15 million in critical maintenance and over \$20 million in deferred maintenance costs.¹¹²

If the No Action Alternative is selected, a great deal of additional road maintenance work will be done. Because maintenance is prioritized to the areas with greatest impacts, cuts when funds are inadequate come from a subset of the most important maintenance tasks. The FEIS does not address this issue head on. That funds are short is implicit in the section, but numbers are never given. Vague references are made to “forest level prioritization” of road

¹⁰⁹ Thompson & Tucker (2007); FEIS at 3-23.

¹¹⁰ See Logjam Timber Sale 1309_rcs_events_logjam_102008.xls.

¹¹¹ See FSH 2509.22—Soil and Water Conservation Handbook, BMP 14.22: “Inspect [MN] level 1 roads at least bi-annually, except inspect roads with a high risk of erosion annually and after major hydrologic events.”

¹¹² POW Roads Analysis, 43.

maintenance—although there is no telling what this might mean. The Forest Service has claimed that ATM plans are geared to bringing road systems back within budget, but in the context of this timber sale FEIS that begs the question. Can the Forest Service afford to implement this sale? All available evidence is that it cannot.

Under NEPA, the EIS must provide a “catalog of past projects” and a “discussion of how those projects (and differences between the projects) have harmed the environment.”¹¹³ Where “several actions have a cumulative...environmental effect, this consequence must be considered in an EIS.”¹¹⁴ The FEIS in Appendix D provides the catalogue of past projects, and maps where past cuts took place, but there has not been a discussion of the past projects and their impacts on the environment in the project area. This is especially important where there will be a great deal of acres cut along existing roads, and where the road density is high. The FEIS acknowledges the transportation has many factors to take into account in the impact, “The cumulative effects analysis area for the transportation system includes the project area and road segments leading into the project area.”¹¹⁵ Yet the rest of the cumulative impact section provides little more than a discussion of highway improvements for easier access and a description of maintenance that may take place during the life of the sale.¹¹⁶ But what are the impacts of those things? This fails to provide an adequate discussion of how past, present, and reasonably foreseeable future projects impact the area, or to provide a detailed statement of environmental impacts caused by unmaintained roads. A discussion of the lack of road maintenance contributing to the chronic sedimentation problem is conspicuously absent as well.¹¹⁷

The sedimentation problems from unmaintained roads are not being discussed. “Road effects on streamflow may not recover until flow paths are reclaimed during road decommissioning. . . additional road construction will compound the effects of extended stream networks until progress is made on road storage and decommissioning.”¹¹⁸ “All action alternatives will include pre-haul maintenance on existing roads and would repair some road drainage

¹¹³ *Natural Resources Defense Council*, 421 F.3d at 815 (quoting *Lands Council*, 395 F.3d at 1027).

¹¹⁴ *City of Tenakee Springs*, 915 F.2d at 1312.

¹¹⁵ FEIS 3-127.

¹¹⁶ See FEIS 3-127 to 3-128.

¹¹⁷ FEIS 3-23.

¹¹⁸ FEIS 3-18.

problems, but not all.”¹¹⁹ The existing roads with red culverts is more than what the Forest Service considers a “moderate” problem with effects at the stream and watershed level lasting more than a week under Alternative 2; rather, it is a major problem for all alternatives. Road problems last for many years; the existing roads will not be revisited or stored when maintenance is dependant upon funding (which the Forest Service still demotes in priority below inefficient timber sales). The problem of existing roads being left unmaintained is an extremely relevant cumulative environmental effect that is not addressed in the FEIS. It is not sufficient to rely on the Cederholm study from 1980 finding “a relationship between road surface area and the accumulation of fine sediment in streambeds.”¹²⁰ Where there is a chronic sedimentation problem that is neither being addressed in the FEIS nor analyzed at the project level, the Forest Service is making decisions that violate NEPA and are arbitrary and capricious.

The Forest Service states in the FEIS that budgetary concerns limit and cause maintenance to be deferred because Congress allocates limited funds for maintenance. This attempt to dodge accountability is clumsily done and incorrect. Funding is based on a batch sum given by Congress. Funding for upkeep and construction of timber sale roads comes out of the same pot as other road maintenance, storage, decommissioning, and restoration projects. In reality, the Forest Service is using their congressionally allocated “limited funds” toward timber sales, road construction and reconstruction, *rather than* spending it on fixing fish passage, addressing the acid leaching, restoring damaged karst, fixing chronic erosion of sediment into salmon streams, and other pressing maintenance needs. It is a Forest Service decision to spend the money this way, not a congressional decision. More specifically, this ROD makes the decision to commit a great (though unrevealed) sum to roads for the Logjam timber sale. The FEIS therefore entirely ignores this. The purpose and need of having a timber sale is not a reason to put on blinders. There are environmental impact on aquatics, karst, and wildlife resulting from the forest level prioritization of huge subsidies for old-growth timber sales over maintenance needs. These impacts need to be analyzed.

¹¹⁹ FEIS Appendix B-71.

¹²⁰ FEIS Appendix B-42.

“Road construction, reconstruction, and maintenance bear substantial costs and strongly affect timber sale economics.”¹²¹ If the Forest Service adequately analyzed the environmental impact under NEPA of pursuing construction and reconstruction at the expense of maintenance, the agency would have an idea of where funds should be effectively allocated in order to be reduce maintenance cost in the future. Currently, the Forest Service is operating under a massive road maintenance backlog. Total maintenance cost for NFS roads on POW Island was \$4.16 million in 2005, 30% of which was ML 3 & 4. Yet the budget for the same period was only \$1,009,692.¹²² And, despite growing recognition of the problem, the situation is only getting worse. There was over \$15 million in critical maintenance costs, and 20.7 million deferred maintenance.¹²³

There are important ecological, economic and social costs to deferring maintenance. Increasing deferred maintenance has implications for aquatic habitat, recreation, wildlife, karst, hydrology, wetlands, and soils. The POW Roads Analysis recognizes: “[w]hen allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, an increase in the costs to repair, and a decrease in asset value.”¹²⁴

Unmaintained roads in this area are currently causing damage to fish and watersheds, a problem that would be made worse by the proposed action. The POW Roads Analysis states:

1. The existing road system is a source of sediment into streams. Inadequate maintenance budgets have not kept up with the maintenance needs of the road system to control this problem. Problems identified during the road condition surveys include both road surface erosion and mass soil movement problems.
2. The road condition surveys identified a high number of fish stream crossing structures that currently do not meet fish passage standards. These crossings are barriers to upstream movement of fish.
3. There are structures on improperly stored roads that are not accessible to maintain.
4. Open road densities are above Forest Plan standards in 9 of the 26 wildlife analysis areas (WAA) based upon standards and guidelines for wolves.
5. Open roads increase hunting pressure on wildlife.
6. Open roads increase the spread of non-native, invasive plants throughout Area. However, closing roads that have a population of invasive plants along the road reduces opportunities to control or eradicate the population.¹²⁵

¹²¹ FEIS 3-79.

¹²² POW RA 18-19.

¹²³ POW RA 43.

¹²⁴ POW RA 44.

¹²⁵ POW RA 22 .

The Forest Service cannot rely on the ATM to resolve this concern. The ATM will not, in a vacuum, balance the roads maintenance budget. Even the POW Roads Analysis's full recommendations, which are quite ambitious, would only cut annual maintenance to \$2,331,000, still more than twice the funding available.¹²⁶

Violating NEPA, the environmental impact from unmaintained culverts is not adequately addressed in the FEIS, neither is the issue of budgeting for critical culverts:

Survey, design, and construction for fixing complex passage problems have recently been estimated to cost \$25,000 to \$100,000 with an average cost of about \$36,000. At the lower end of the range, culverts would be re-engineered or replaced with a larger or different type of culvert. At the upper end, a culvert would be replaced by a bridge. The total costs to the Forest for ML 3, 4, and 5 roads are estimated to be approximately \$32.1 million. Using this average cost, the deferred costs for solving all passage problems at ML 3, 4, and 5 road-stream crossings could be as high as \$30 million.¹²⁷

In addition to the legal violations posed by leaving red culverts in the project area, there is an immense and costly task of maintaining culverts to pass fish that is not addressed in the FEIS under maintenance issues. This problem will only worsen from the sale because funding is being diverted away from fixing past deferred culverts. From the project file, there are numerous problems with road-stream crossings, and the lack of funding will continue to have a significant impact to the Logjam project area:

Fish passage at road-stream crossings is perhaps the most important fish habitat issue on the Tongass that receives substantial attention by newspapers, environmental and timber industry groups, and the State legislature. Forest-wide, 715 culverts (or about 0.55 culverts per mile; 67 percent of surveyed culverts with complete assessments) are considered to have passage problems on ML 3, 4, and 5 roads.¹²⁸

Road-stream crossings influence local stream channels and water quality by contributing coarse road fill material, fine sediment, chemical pollutants, and changes in stream hydrology. Existing roads may have road-stream crossings that were designed before current standards and may be at risk during flood events. Problems may include under-sized and too few drainage structures. Road-stream crossings can become major sources of coarse and fine sediment to stream systems if culvert failures occur during a flood event. Any time a road is built within the floodplain of a stream (e.g. at road-stream crossings), it will affect the ability of the channel to migrate, isolate portions of the floodplain, and constrict flow through that location. Stream crossings can also limit the movement of woody debris, which is an important component to fish habitat.¹²⁹

¹²⁶ POW RAP 45.

¹²⁷ Logjam Timber Sale, 1308 Tongass Road Analysis 091603, 57.

¹²⁸ Logjam Timber Sale, 1308 Tongass Road Analysis 091603, 36

¹²⁹ Logjam Timber Sale, 1308 Tongass Road Analysis 091603, 37

Violating NEPA, the transportation analysis in the FEIS entirely fails to consider the relevant factors of red culverts blocking fish passage and introducing fine sediment and changes in stream hydrology resulting from the ever-expanding maintenance backlog

The Forest Service has failed to analyze, during any of the several transportation planning documents or the FEIS, the impact of the proposed action on delaying road closures that would otherwise take place under the ATM plan. In the project file's IDT notes, "any roads management concerns within project. . .will defer to pending ATM."¹³⁰ This is an unacceptable dismissal of concurrent projects that needs to be included in the FEIS per NEPA.¹³¹ There are existing roads that will need to be kept open and maintained for the 20+ years of this sale (EIS through closeout regeneration surveys), which are otherwise scheduled for storage or decommissioning in the ATM plan. These maintenance costs, as well as impacts on wildlife (especially wolves), fish and water need to be included among the consequences of the proposed action. Road Maintenance budgets are insufficient; from the Transportation Report: "[d]eferred maintenance: road maintenance budgets have been only 60% of what is needed to maintain existing road system."¹³² Maintenance attached to timber sales has decreased significantly, and this needs to be reflected in the cumulative environmental impact statement to be in compliance with NEPA. As it stands, the FEIS violates NEPA, and the ROD fails to take into account relevant factors that are available and need to be disclosed, rendering the decision arbitrary and capricious.

IV. Temporary Roads: The FEIS Violates NEPA; The ROD Violates the CWA

The Forest Service is labeling the majority of roads being constructed in the Logjam project area "temporary" to get around a NEPA analysis and future maintenance and environmental responsibility. Under NEPA, "[s]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component

¹³⁰ Logjam Timber Sale, Logjam DEIS IDT Meeting 10/31 through 11/02, 2007.

¹³¹ *City of Tenakee Spring*, 915 F.2d 1312.

¹³² The Specialist Report doesn't say where the 60% figure comes from. On its face it seems inconsistent with the POW RA, which shows budgets are 24% of what is necessary on Prince of Wales as a whole.

parts.”¹³³ The significance of adding to the road density on POW Island cannot be dismissed as temporary under cumulative effects, and a hard look needs to be taken to analyze the environmental effects of adding more roads that will not be kept in the NFS road system.¹³⁴ There is no direct, indirect, or cumulative impact analysis of temporary roads in the FEIS considering relevant factors such as wolf mortality, fish passage, or sedimentation. Though the FEIS is unconcerned, temporary roads, as well as NFS roads, are an environmental concern:

System roads are recognized by the Forest Service, and maintained to a certain standard. Temporary roads were built to access timber sales and subsequently closed. There are problems associated with each of these road types. Oftentimes, system roads are not maintained at their proper level necessary due to decreasing funds which [sic] is related to the decrease over time in timber harvest activities. Such conditions often result in road inaccessibility through vegetative growth or removal of stream crossing structures (bridges and large culverts). Due to operational costs in the past, temporary roads were often blocked off where they connect to system roads. This has resulted over time in many roads, both temporary and system, no longer accessible for maintenance yet [still] retain their structures such as stream-crossings. Such roads are at a higher risk for supplying sediment to stream channels.¹³⁵

The definition of what constitutes a temporary road is legally squishy; what are being proposed are not truly “temporary roads,” as defined in 36 CFR 211.1. Roads being called “temporary” are in fact Forest Roads that are abandoned between timber sales. With the Forest Service looking to second-growth timber management, and given the long and consistent history of timber harvest on POW Island, this timber sale is more than a one-time event. The duration of a timber sale is not temporary; a road actively used by the NFS for harvest for 20 years while the project area is partitioned off to meet demand is also used by residents, hunters, and recreational users during that time. Following the sale, if the public wishes to have a temporary road built into the system, it will be integrated into the NFS system via the ATM plan.

Temporary roads, as defined in the CFR, are built under emergency conditions, contract, or written authorization. Yet they still exist years after the timber sale, and experience shows they will be re-opened when

¹³³ 40 C.F.R. § 1508.27(b)(7).

¹³⁴ 40 C.F.R. § 1502.16; 40 C.F.R. § 1508.27(b)(7).

¹³⁵ Logjam Timber Sale, 1547 Gier 2008, 23.

necessary in the future; the Logjam Timber Sale is re-opening 3 miles of “decommissioned temporary roadbed.”

Decommissioning is not taking place as envisioned, and though anticipated in the FEIS, is not reasonably foreseeable.

The POW Roads Analysis found 208 miles of road that are classified as “stored,” but for which drainage structures have not in fact been removed:

“One condition that was noticed was the occurrence of road maintenance problems located on stored road systems, many behind pulled bridges. These problems include culverts that do not allow fish passage on class 1 and 2 streams. This is an indication that roads have not been properly stored in the past. A list of the road segments identified as Operational Maintenance Level 1 for which the RCS data indicated structures were still in place is provided in Table B.3 (Appendix B). It is anticipated that in some of these cases, the road condition surveys were completed prior to proper closure and storage of roads. However, this is not expected to be the situation in most cases. A review by District maintenance staff should be able to determine which roads were properly stored after the RCS data was taken. It is recommended that an update be made to the RCS data on these stored roads to obtain an up-to-date inventory of which roads need to be properly stored to minimize the impacts these roads have on watershed functions.¹³⁶

Given past practices, and given the maintenance backlog, it is not reasonably foreseeable that the temporary roads will be decommissioned by timber purchasers, but will instead become the responsibility of the Forest Service only to fall off the list of maintenance priorities. The FEIS needs to analyze this reasonably foreseeable outcome under NEPA; terming an action “temporary” does not remove any significance pertaining to the environmental analysis.¹³⁷

The problems associated with failing to decommission roads, failing to remove all the culverts, and failing to remedy the maintenance backlog grow exponentially with time, and this is not considered in the FEIS.

Where roads intersect streams, there is the potential for large amounts of sediment to be released into the stream system. If a culvert is plugged with debris, the result is often a washout where the streamflow overtops the road and erodes to the original stream grade. These washouts can then cause other downstream culverts to fail in a domino effect. When a blocked culvert does not result in a local washout, streamflow may be diverted down the roadbed itself or along the slope-side ditch, causing large amounts of gully erosion along the roadbed and hill slopes below the road. For example, in northern California, Best et al. (1995) recorded that only 15 stream diversions produced 64 000 mt of sediment (about 4000 dump trucks’ worth) over a 25-year period.¹³⁸

¹³⁶ PW RA 31-32.

¹³⁷ 40 C.F.R. § 1508.27(b)(7).

¹³⁸ TA Switalski et al. *Benefits & Impacts of Road Removal: The Ecological Society of America*, 2004, www.frontiersinecology.org.

Given the high numbers of culverts that do not pass fish in the Tongass, and the compounding cumulative effects resulting over time, there needs to be a NEPA analysis of the Forest Service's failure to decommission roads properly.

In addition to the failure to straightforwardly address available maintenance budgets, there is some question whether *all* culverts will be removed under road storage and decommissioning. That is the best management practice, is what is required under State Forest Practices laws, and is what has been practiced by the Forest Service in the recent past. However, on other recent timber sales (specifically the 2009 Navy Timber Sale), storage practices have been changed to allow some culverts to remain in place on stored roads, and only to remove structures over larger streams. The Logjam FEIS and ROD don't make clear which practice will be followed. If the ROD prescription is to leave culverts in place on stored &/or decommissioned roads, then the FEIS has failed to consider the effects of this departure, in violation of NEPA. There would be important aspects of such a decision that demand consideration, such as:

- Industry gets no access;
- The public gets no access (however, taxpayers write the checks for maintenance);
- It locks the Forest in to a long-term obligation to reopen those roads. Decommissioned temporary roads can be left alone or reopened as you choose, depending on future timber demand. Stored roads, by contrast, if culverts are in place will have to be reopened whether they're used again, or to decommission them;
- It would saddle the Forest Service with an ongoing maintenance burden, and be a monitoring nightmare. BMP for monitoring culverts on ML1 roads is every two years (FSH 2509.22, BMP 1420). You will have to bush whack the large streams to inspect the culverts over little ones, on miles and miles of road. Ugh.
- The environment will suffer when abandoned culverts block, causing road washouts, landslides, and channel diversions. For this reason removing culverts is a key part of State Forest Practices regulations. Referencing

the study in northern California, 15 stream diversions contributed 4,000 dump truck loads of sediment over a 25-year period. (Switalski et al. 2004). It is not a small issue.

Even where temporary roads are decommissioned and NFS roads are stored properly, this does not mean stream impacts go away absolving the need for a NEPA analysis. Just because the action is termed “temporary” does mean the action is not significant or remove the need for a NEPA analysis.¹³⁹ There are site-specific environmental effects, specifically pertaining to culvert removal, that persist following decommission and storage: “[f]ive to 20 years after culvert removals, pool habitat in excavated streams had only partially recovered (Madej 2001b), but a riparian zone of young red alder (*Alnus rubra*) was providing a closed canopy and shade over the streams (Madej et al. 2001).”¹⁴⁰ Sedimentation problems persist following even properly decommissioned roads, and the Forest Service needs to analyze this impact in the FEIS. Because the FEIS violates NEPA by failing to adequately disclose cumulative effects of temporary roads in the project area, the Logjam Timber Sale should be set aside.

Violating the CWA, the ROD was issued without a CWA 404 permit for temporary road fill. NEPA requires consideration and disclosure of compliance with other legal requirements; here the FEIS has failed to disclose how the constructions of temporary roads are in compliance with the CWA. Within the CWA and BMP 12.5 is the requirement that “[a]ll temporary fills shall be removed in their entirety and the area restored to its original elevation.”¹⁴¹ Temporary roads are, by definition, built of temporary dredge and fill material and *shall* be removed in their entirety to restore the area to its original elevation. The ROD proposes to leave temporary fills in place, permanently reducing the reach of wetlands, by “decommissioning” temporary roads only by pulling culverts (or some of them, at least) and digging water bars. In practice this is identical to what is being done on permanent roads. To the extent these are considered to be temporary roads proposed for this timber sale, they must be considered temporary fills under Section 404. The FEIS, while making clear that all temporary roads will be decommissioned,

¹³⁹ 40 C.F.R. § 1508.27(b)(7).

¹⁴⁰ TA Switalski et al. *Benefits & Impacts of Road Removal: The Ecological Society of America*, 2004, www.frontiersin ecology.org.

¹⁴¹ CWA 404r; FSH 2509.22—Soil and Water Conservation Handbook, BMP 12.5.

violates the CWA by not restoring the wetland area to its original elevation, and violates NEPA by failing to comply with the CWA.

IV. Conclusion

The ROD fails to correct the red culverts that exist in the Logjam project area, violating the CWA, the NFMA and TLMP, Forest Service BMPs, and NEPA. A 404 permit is required to proceed in the project area. The cumulative effects analysis for the watershed and transportation sections in the FEIS use inadequate models that fail to provide detailed statements, fail to provide a useful analysis of past, present, and reasonably foreseeable projects, fail to consider relevant information from the project record, and have in turn led to decisions that are arbitrary and capricious. The decision should be set aside according to 5 USC 706(2)(A).

Sincerely,

A handwritten signature in black ink, appearing to read "Gabriel Scott", is written over a light gray rectangular background.

Gabriel Scott
Alaska Field Rep
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POB 853
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Reviewing Officer Recommendation

Offer to Meet and Resolution

Correspondence