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Mr. Jim Roden
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RE: Comments on South Fork Thinning Preliminary Assessment

Dear Mr. Roden:

November 23, 2005

Thank you for the opportunity to comment on the South Fork Thinning project preliminary assessment (South Fork PA) on the Clackamas Ranger District. This project proposes to commercially thin 423 acres in matrix land allocation, and 74 acres of riparian reserves. PA, 3. Alternative B would utilize regeneration harvest techniques, Alternative C would encompass some regeneration harvest and some changes to the original harvest methods as well as the construction of 2800 feet of new road, and Alternative D would be similar to Alternative C but would use helicopter logging techniques. Given the nature of the planning area and the harvest methods proposed, Bark cannot currently support the South Fork project.

The Forest Service (USFS) claims that the purpose and need of the South Fork project is to provide an output of commercial timber (PSQ), "increase health and vigor and enhance growth that results in larger wind firm trees," "enhance and restore diversity," and "enhance Riparian Reserves." PA, 4. This goal is illusory and the analysis in the PA is unsound. The "forest health" justification for this project is inherently flawed due to the belief that logging a bruised landscape that is recovering from historic logging can correct past bad management practices. The underlying assumption that human intervention is required in the South Fork planning area in order to accelerate the development of old growth characteristics is similarly unsupported by fact, as the area is already developing these features without intervention. Most notably, the Forest Service has offered no scientific justification for the contention that thinning many of the proposed stands will have the desired future effect.

Once vast stretches of mature and old-growth forest habitat have been reduced to a fragmented patchwork that is now sparsely woven together by remnant stands of late successional and old-growth forest and degraded riparian corridors. The degradation of forest habitat has caused the precipitous decline of not only spotted owl populations, but also many other species dependent on large areas of interior old-growth forest habitat such as marten, fisher, salmon, and numerous vascular and non-vascular plants. These species continue to be pushed towards extinction by additional cutting and fragmentation of native forest. Since the Mt. Hood National Forest has done

little monitoring of sensitive and rare species on the forest, there are almost no studies on which the USFS or the public can rely for decision-making about resource use and allocation.

While the Clackamas Ranger District does not seem to dispute that the impacts of logging have been significant, the MHNH has failed to adequately quantify and qualify the impacts of the current proposal to log the critical threads of forest habitat connecting the planning area and other intact forest. The South Fork PA insufficiently identifies the impacts of the project and does not justify the proposed logging.

Given both the significant impacts of this project and the lack of evidence supporting the statements that there will be no significant impacts from the South Fork timber sale, the decision to implement the proposed project is arbitrary and capricious and violates the Administrative Procedures Act. The South Fork project would also violate the Clean Water Act, the Endangered Species Act, the National Environmental Policy Act, the National Forest Management Act, and the amended Mt. Hood National Forest Land and Resource Management Plan (Forest Plan, MHFP, or LRMP).

I. The South Fork Timber Sale Does Not Meet the Stated Purpose and Need of the Project.

The preliminary assessment for the South Fork Timber Sale states that the purpose and need of the proposed sale is to increase tree size in the planning area through mechanical thinning, and to meet PSQ targets. PA, 4. While unstated in the purpose and need section of the PA, the South Fork project must also comply with all applicable environmental laws. As demonstrated *infra*, the project does not comply with all applicable laws and should not go forward.

A. The South Fork Timber sale will not achieve desired future conditions.

As stated previously, the majority of the purpose and need of the proposed sale is to address forest health concerns within the South Fork planning area. We are concerned that thinning 423 acres of forest, and 74 acres of Riparian Reserves, without considering the site-specific need of this treatment does nothing to contribute to species and structural diversity that the Forest is seeking to obtain. Many of these stands are already structurally diverse and provide habitat for a myriad of species. Given the degraded condition of the watershed because of past logging and roading, these stands in some cases provide the *only* habitat for a variety of species. Nothing in the record indicates that the harvest prescriptions proposed for this project contribute to species and structural diversity.

Of particular concern to Bark is the Forest Service's assessment that because the planning area is outside of historical conditions for certain seral classes, logging is the only way to correct this situation. PA, 6. In fact, there are multiple pathways by which forests can develop late-successional characteristics, but the Forest Service assumes that the only way to obtain these features is by logging.

In this case, the Forest Service has failed to demonstrate that the South Fork project will meet the stated purpose and need of developing late-successional conditions across the planning area by removing mid-seral forest. Approving a project that does not meet the purpose and need of that project is arbitrary and capricious. 5 U.S.C. § 706(2)(A).

B. Riparian Reserve harvest is inappropriate to meet PSQ targets.

The PA states that “the project would be a commercial thinning that would supply forest products consistent with the Northwest Forest Plan goal of maintaining the stability of local and regional economies.” PA, 4. However, the Northwest Forest Plan prohibits counting riparian reserve volume towards the PSQ for a National Forest. The Standards and Guidelines state that “Riparian Reserve acres shall not be included in calculations of the timber base.” S&Gs, C-31. However, the South Fork timber sale appears to count 74 acres of riparian reserve harvest towards the attainment of PSQ targets, in violation of the Northwest Forest Plan. This is arbitrary and capricious. 5 U.S.C. § 706(2)(A).

In order to remain consistent with the NFP and MHFP, Bark recommends that the Forest Service drop the proposed harvest in riparian reserves.

C. The South Fork Timber Sale focuses on economic outputs, not restoration of the planning area.

Bark applauds the Forest Service that it is considering restoration for the planning area. Traditional funding mechanisms – commercial timber sales – are not appropriate for this type of work because a commercial byproduct is not (or should not be) a driving factor for the project. In many situations, without the commercial aspect of a project, the project is unlikely to take place absent other funding.

In the South Fork timber sale, the Forest Service has linked restoration with a commercial timber sale. Indeed, providing commercial wood fiber as a commodity is a purpose and need of the proposed project.¹ However, as described below, the agency is proposing to harvest stands that are well on the path to late-successional habitat, and do not need thinning to expedite this process. Due to the overly aggressive nature of the sawtimber component of the South Fork project, and because the sawtimber harvest is bundled with restoration work, Bark cannot support the restoration work outlined in the PA.

In the future, we urge the Forest Service to propose restoration-only projects that seek to restore the degraded landscape and consider the Native Forest Network, *Forest Restoration Principles and Criteria* (visited Nov. 21, 2005) < www.nativeforest.org/pdf/Restoration_Principles.pdf>. Continuing to bundle worthwhile restoration projects with commercial timber sales will only result in extended delay and unfavorable public critique of the agency’s intentions for the land.

Second, Bark is also concerned that the project does not include all costs incurred by the proposed project. There is also little indication in the PA whether or not the USFS included costs such as sale administration, monitoring, and sale lay-out in the “cost” of this project. It is omissions such as these that led the General Accounting Office to conclude that the annual costs of the Forest Service’s timber sale program are not determinable. GENERAL ACCOUNTING

¹ Bark recognizes that the Northwest Forest Plan allows commodity production from some timberlands. However, given that the overriding need of the South Fork is to accelerate the development of late-successional characteristics, commodity production should not be a competing interest. If anything, timber production should be an incidental by-product of restoration, not its focus.

OFFICE, FINANCIAL MANAGEMENT: ANNUAL COSTS OF FOREST SERVICE'S TIMBER SALES PROGRAM ARE NOT DETERMINABLE (2001), GAO-01-110R Forest Service Timber Costs.

The USFS has not substantiated that recovering the economic value of the trees and providing timber to the economy was necessary, even though this issue has been raised repeatedly by Bark. Notably, the price for timber has dropped dramatically over the past several years. Timber prices are extremely low, and show no signs of increasing. There is no indication that there is any demand for the trees that would be logged under the South Fork project.

Moreover, while timbering is still an important sector of the economy, the communities in Clackamas county are no longer timber-dependent: that is, timber production and milling, while still sources of income, are no longer the primary source of income for these localities. Specialized professions, administrative support, and other service industries now provide greater revenue to these counties than the forest products industry.

Similarly, in assessing the impact of the agency's Roadless Area Conservation policy, the Forest Service also concluded that there are no timber dependent communities located within or affected by activities on the Mt. Hood National Forest. *See generally* United States Forest Service, *Roadless Area Conservation Specialists Reports* (visited May 18, 2003) <http://roadless.fs.fed.us/documents/feis/specprep/socioecon_specialist_entire.pdf>. Therefore, Bark seriously doubts the validity of the claim that the proposed project is "necessary" to provide timber to local economies.

Even if the South Fork sale is sold – a dubious assumption, given the falling prices of timber and the low quality of timber in the planning area – there is no support in the PA that the timber will be milled in the counties from which it is harvested, or that the project will result in a positive return to the United States Treasury. Without a complete disclosure of the economic consideration of the propose project, the PA is incomplete, and the decisionmaker is without adequate information to issue a finding of no significant impact. 40 C.F.R. § 1502.23 (requiring a cost-benefit analysis in analogous situations).

- D. The South Fork Timber Sale does not capture the highest present net value of the timber resource.

Conspicuously absent from the agency's economic analysis for the South Fork Timber Sale project are factors that are more difficult to quantify, but that are equally applicable to the decision whether or not to log on public land. These include the economic benefits associated with:

- 1) Recreational opportunities and tourism;
- 2) Commercial and recreational fisheries within the boundaries of the Mt. Hood National Forest and downstream and offshore;
- 3) Habitat for important game species and hunting both within and outside of the Mt. Hood National Forest;
- 4) Water for cities, industries, businesses, and individual households downstream from the Mt. Hood National Forest;

- 5) The regulation of water flowing through rivers and streams, including flood control;
- 6) Non-timber forest products such as wild mushrooms, herbs, and medicinal plants;
- 7) Mitigation of global climate change through absorption and storage of vast amounts of carbon;
- 8) Enhancing the quality of life of neighboring communities;
- 9) Harboring biological resources that either have value now or have as yet unknown but potentially large economic and social value;
- 10) Harboring biological and genetic resources that can improve the long-term productivity of all forest land;
- 11) Pest-control services provided by species that prey on agriculture and forest pests, and;
- 12) Pollination services provided by species that pollinate important forest and agricultural crops.

These are important economic benefits generated by national forests in every part of the nation, including the Mt. Hood National Forest. The Forest Service has extensive literature and sources of data that it can rely upon to quantify the magnitude of these economic benefits at the national, forest, and project level. The Forest Service seems able to place a value on standing timber when the federal government pursues private parties that have damaged or illegally removed forest products, generally assessing “replacement costs” to the offending party. It is curious that the agency seems able to do this only when it believes that it has been unlawfully deceived, but not when it offers subsidized public timber for sale.

Despite Forest Service claims to the contrary, it *is* feasible to accurately predict the economic value of recreation, scenic resources, and other resources derived from a forest without logging it. ECONorthwest, *Seeing the Forests for their Green* (visited Nov. 21, 2005) <http://www.econw.com/pdf/logging_economics.pdf>. Another study prepared by John Talberth and Karyn Moskowitz explains that from a social and economic prospective, our national forests are far more valuable standing, growing, dying, and regenerating as standing forests rather than as converted paper and wood products. While lumber and wood products are readily available from the 80% of forested land in the United States outside of national forests, clean water, recreation, wildlife, and other public uses and values of great economic benefit generally are not. The small share of the forested land base included in the national forest system must bear nearly 100% of the burden of providing these uses and values. We encourage the Forest Service to read this report, which should be considered part of the administrative record for this project and is incorporated by reference here. John Talberth & Karyn Moskowitz, *The Economic Case Against National Forest Logging, Executive Summary* (visited Nov. 21, 2005) <<http://www.google.com/search?sourceid=navclient&ie=UTF-8&rls=DVXA,DVXA:2005-16,DVXA:en&q=Forest+Restoration+Principles+and+Criteria>>.

Moreover, the Forest Service failed to incorporate externalized costs into planning the South Fork Timber Sale. In making the site-specific decision to implement the South Fork Timber Sale, the Forest Service failed to incorporate information about externalized costs passed on to communities, businesses, and individuals when national forests are logged. These include the direct, indirect, and cumulative economic costs associated with:

- 1) Lost recreational opportunities and decreased tourism;
- 2) Degraded commercial and recreational fisheries within the boundaries of the Mt. Hood National Forest and downstream;
- 3) Degraded habitat for important game species and loss of hunting opportunities both within and outside of the Mt. Hood National Forest;
- 4) Increased pollution of water for cities, industries, businesses, and individual households downstream from the Mt. Hood National Forest and increased costs of water filtration;
- 5) Increased flooding and disruption of the normal flows in rivers and streams.
- 6) Loss of non-timber forest products such as wild mushrooms, herbs, and medicinal plants;
- 7) Exacerbation of global warming through release of greenhouse gasses;
- 8) Diminished quality of life of neighboring communities;
- 9) Loss of biological resources that either have value now or have as yet unknown but potentially large economic and social value;
- 10) Loss of biological and genetic resources and species that can improve the long-term productivity and aesthetic qualities of all forest land;
- 11) Diminished pest-control services provided by species that prey on agriculture and forest pests;
- 12) Diminished pollination services provided by species that pollinate important forest and agricultural crops.
- 13) Lost jobs and income associated with timber production on private lands that is displaced by Mt. Hood National Forest timber sales;
- 14) Lost jobs and income associated with the production of alternative and recycled products that is displaced by subsidized Mt. Hood National Forest timber sales;
- 15) Death, injury, and property damage associated with logging on the Mt. Hood National Forest, and;
- 16) Increased risk of severe wildfires caused by adverse changes in microclimate, increased human access, and slash generated by timber sales.

These externalized costs are generated by national forest logging in every part of the nation, including the Mt. Hood National Forest. The Forest Service has extensive literature and sources of data that it can rely upon to quantify the magnitude of these externalized costs at the national, forest, and project level. However, this information was not utilized in the economic analysis for the South Fork Timber Sale. Failure to incorporate externalized costs into the South Fork Timber Sale decision violates numerous statutes, regulations, and rules governing Forest Service management activities described *infra*.

Even without the ECONorthwest and Talberth & Moskowitz studies and reports to guide the economic analysis of the Forest Service, existing statutes, regulations, and government guidance indicate that the economic analysis in the South Fork Timber Sale project is inadequate. First, the National Environmental Policy Act (NEPA) requires the agency to develop some method of assessing the value of standing timber as opposed to timber processed as lumber and other more traditional consumer products. NEPA states that “all agencies of the Federal Government shall...identify and develop methods and procedures...which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations.” 42 U.S.C. § 4332(B). The

regulation implementing this statutory section states that while a cost benefit analysis is not *required* for a project, if it is “relevant to the choice among environmentally different alternatives being considered for the proposed action, it *shall be* incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences.” 40 C.F.R. § 1502.23 (emphasis added).

In approving the South Fork Timber Sale, the Forest Service failed to meet NEPA’s requirements to fully disclose the direct, indirect, and cumulative economic impacts of the timber sale program and to give appropriate consideration to environmental amenities in decision-making by failing to incorporate important natural resource benefits and externalized costs into the South Fork Timber Sale PA. 42 U.S.C. §§ 4332(C), 4332(B). By failing to utilize appropriate professional expertise found in the ECONorthwest and Talberth & Moskowitz studies that are capable of disclosing all natural resource benefits and externalized costs, the Forest Service is in violation of NEPA’s mandate to rely upon a systematic and interdisciplinary approach to decision making. *Id.* § 4332(A). By ignoring important natural resource benefits and externalized costs, the Forest Service also runs afoul of regulations implementing NEPA that require full disclosure of direct, indirect, and cumulative economic impacts, identification of environmental effects and values in adequate detail so that they can be compared with economic and technical analyses, rigorous analysis of the benefits of implementing the “no action” alternative in timber sales, and use of appropriate professional expertise. 40 C.F.R. §§ 1501.2(a); 1501.2(b); 1502.6; 1502.16; 1502.24; 1507.2(a); 1507.2(b); 1508.7; 1508.8; 1508.27.

Second, the National Forest Management Act (NFMA) imposes additional requirements on the Forest Service in terms of conducting an economic analysis for timber sales. The regulations implementing this statute state that Land and Resource Management Plans (LRMPs) “shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner.” 36 C.F.R. § 219.1(a). In turn, the regulations define “net public benefit” as

an expression used to signify the overall long-term value to the nation of all outputs and positive (benefits) less all associated inputs and negative effects (costs) *whether they can be quantitatively valued or not. Net public benefits are measured by both qualitative and quantitative criteria rather than a single measure or index.*

Id. § 219.3 (emphasis added). Although these regulations refer to LRMPs specifically, because site-specific projects must comply with larger land management plans, the requirement that LRMPs must incorporate values such as recreation and watershed health into a cost-benefit analysis is equally applicable to site-specific projects. *Id.* § 219.10(e); 16 U.S.C. § 1604(i).

NFMA regulations go on to explain that land management plans must be implemented through site-specific projects that are sensitive to changing economic realities. They state that national forest lands must be managed “in a manner that is sensitive to economic efficiency,” and that managers must be responsive “to changing conditions in land and other resources and to changing social and economic demands of the American people.” 36 C.F.R. §§ 219.1(b)(13), (b)(14). As the ECONorthwest and Talberth & Moskowitz studies indicate, there are in fact ways to calculate the economic value of standing forests, which denotes a change in the way that

the American public demands that their public lands are managed. The Forest Service has failed to address these studies or the methodologies cited in them.

The Forest and Rangeland Renewable Resource Planning Act (RPA), as amended by the National Forest Management Act, imposes similar requirements on the Forest Service. 16 U.S.C. §§ 1600–1614 (2000). The RPA requires the agency to: incorporate natural resource benefits and externalized costs into decisions affecting the national forests; secure the maximum benefits of multiple use sustained yield management; conduct comprehensive economic assessments of all National Forest resources; identify all costs and all benefits associated with RPA Program outputs; insure consideration of the economic aspects of renewable resource management; improve Forest Service accountability when it prepares annual budgets and reports to Congress on the costs and benefits of its programs; and conserve forests and promote the use of recycled products. 16 U.S.C. §§ 1600(7); 1601(d)(1); 1600(3); 1602(2); 1604(g)(3); 1606(a); 1606(b); 1606(c); 1606(d). Regulations implementing both NFMA and the RPA require the Forest Service to maximize net public benefits, evaluate the relative values of all National Forest resources, consider all market and non-market costs and all benefits of management decisions, and assign monetary values to goods and services to the extent that they can be assigned. 36 C.F.R. §§ 219.1; 219.4(a)(1); 219.4(b)(1)(ii); 219.12; 219.13; 219.14. In this case, the Forest Service does not mention these statutes and regulations, and the South Fork Timber Sale does not comply with them.

Third, the Forest Service violated the Multiple Use, Sustained Yield Act (MUSYA) by failing to incorporate important natural resource benefits and externalized costs into the South Fork Timber Sale timber sale PA. 16 U.S.C. § 528–531 (2000). Without incorporating natural resource benefits and externalized costs into these decisions, the Forest Service cannot meet MUSYA’s requirements to administer National Forests for all of their resources, to maximize public benefits, and to give due consideration to the relative resource values of all National Forest resources. 16 U.S.C. §§ 528, 529, 531.

Fourth, the South Fork Timber Sale violates the Global Climate Change Prevention Act. 7 U.S.C. § 6701 (2000). Logging national forests exacerbates adverse changes in global climate by reducing the carbon absorption function of national forests and by releasing carbon stored by these forests into the atmosphere. The adverse ecological and economic effects of increases in atmospheric carbon caused by national forest timber sales has not been disclosed nor incorporated into decision-making by the Forest Service when it prepared and authorized the South Fork Timber Sale. This failure is a violation of the Global Climate Change Prevention Act.

Finally, other federal guidance explains the types of factors that should be considered in any cost-benefit analysis undertaken for a federal project. The Office of Management and Budget has stated that cost-benefit analyses

should include comprehensive estimates of the expected benefits and costs to *society* based on established definitions and practices for program and policy evaluation. Social net benefits, and not the benefits and costs to the Federal Government, should be the basis for evaluating government programs or policies that have effects on private citizens

or other levels of government. Social benefits and costs can differ from private benefits and costs as measured in the marketplace because of imperfections arising from: (i) *external economies or diseconomies* where actions by one party impose benefits or costs on other groups that are not compensated in the market place; (ii) monopoly power that distorts the relationship between marginal costs and market prices; and (iii) taxes or subsidies.

OFFICE OF MANAGEMENT AND BUDGET, CIRCULAR A-94 § 6 (1992) (emphasis in original). As applied to the management of the timber sale program, this guidance clearly indicates the need not only for analysis of the socioeconomic benefits of unlogged forests in areas where logging is contemplated, but also an analysis of the rate of return that could be achieved if timber sale monies were spent on other projects such as recreation, wildlife, or watershed restoration.

While not binding to the same extent as statutes and regulations, the Forest Service Handbook and Manual also provide guidance regarding conducting an adequate economics analysis for timber sales. The agency's Economic and Social Analysis Handbook requires the Forest Service to maximize net public benefits and fully account for all market and non-market benefits and costs in the context of market studies, economic efficiency analysis, and economic impact assessments of its plans and programs. FSH 1909.17.11.1; 1909.17.14.1; 1909.17.14.11; 1909.17.14.6; 1909.17.23. The Forest Service's Timber Sale Preparation Handbook requires the agency to address all marketed and non-marketed costs and benefits in analyses of the financial and economic efficiency of individual timber sales and the timber sale program as a whole. FSH 2409.18.13.1; 2409.18.32. Similarly, the Forest Service Manual requires the Forest Service to: manage the timber sale program so that total benefits exceed total costs; account for non-timber economic effects in its timber sale analyses; ensure that economic values used in economic efficiency and economic impact assessments adequately reflect biological, economic, and social conditions; and base its decisions on the economic and social impacts and costs and benefits. FSM 2403.4; 2403.5; 1971.5; 1970.1(1), (2), (3); 1970.2; 1970.3(1), (5). The South Fork Timber Sale PA and associated documents neither mention nor comply with these recommendations.

In sum, these studies, statutes, regulations, and other guidance indicate that the economics analysis conducted for the South Fork Timber Sale is inadequate, and that the preferred alternative will not capture the highest present net value of the timber resource. Instead, the analysis in the PA fails to consider the economic value of standing forests. Had the Forest Service conducted the economics analysis required by law, the agency should have concluded that the value of the planning area in its natural state far outweighs logging it. The decision to implement the proposed project despite this information is arbitrary and capricious and violates the Administrative Procedure Act. 5 U.S.C. § 706(2)(A).

II. The Preliminary Assessment Violates the National Environmental Policy Act, the National Forest Management Act, the Clean Water Act, and the Endangered Species Act.

The South Fork Timber Sale preliminary assessment violates the National Environmental Policy Act and its implementing regulations. National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4370d (1994 & Supp. III 1997); 40 C.F.R. § 1500–1508.28 (1998). The decision notice and finding of no significant impact are arbitrary and capricious in violation of the

Administrative Procedures Act. Administrative Procedure Act, 5 U.S.C. §§ 551–559, 701–706, 1305, 3105, 3344 (1994 & Supp. III 1997).

A. The South Fork Timber Sale PA Does Not Include a Reasonable Range of Alternatives.

NEPA mandates that an agency “shall to the fullest extent possible: use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” 40 C.F.R. § 1500.2(e). NEPA also requires the USFS to “study, develop, and describe appropriate alternatives to the recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses available resources as provided by section 102(2)(E) of 40 C.F.R. § 1501.2 (c).” *Id.* The South Fork PA, however, fails to give a meaningful evaluation of alternatives to the proposed action.

Environmental analysis documents must “[r]igorously explore and objectively evaluate all reasonable alternatives” to the project. 40 C.F.R. § 1502.14(a). The Council on Environmental Quality (CEQ), which promulgated the regulations implementing NEPA, characterizes the discussion of alternatives as “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. A decisionmaker must explore alternatives in sufficient enough detail to “sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public.” *Id.* § 1502.14. All reasonable alternatives must receive a “rigorous exploration and objective evaluation..., particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects.” *Id.* § 1500.8(a)(4). The analysis of the alternatives must be “sufficiently detailed to reveal the agency’s comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative.” *Id.*

The Ninth Circuit stated in *California v. Block* that “[a]s with the standard employed to evaluate the detail that NEPA requires in discussing a decision’s environmental consequences, the touchstone for our inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” *California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982).² The purpose of the multiple alternative analysis requirement is to insist that no major federal project be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means. *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810 (9th Cir. 1987), *rev’d on other grounds*, 490 U.S. 332 (1989) (agency must consider alternative sites for a project). The Ninth Circuit has concluded that “the existence of a viable

² Although an PA need not conform to the same requirements as an EIS, it must nevertheless include sufficient information to determine what the impacts of a proposed action will be, and “must support the reasonableness of the agency’s decision not to prepare” a full EIS. 40 C.F.R. § 1508.9; *Southern Oregon Citizens Against Toxic Sprays v. Clark (SOCATS)*, 720 F.2d 1475, 1480 (9th Cir. 1983), *cert. denied*, 469 U.S. 1028 (1984). The court has stated that “were an EA simply a statement that an agency can take an action without filing an EIS, it would not fulfill the mandate of NEPA nor provide the decision-maker or the public with information about the choice.” *Sierra Club v. Watkins*, 808 F. Supp. 852, 871 (D.D.C. 1991).

but unexamined alternative renders an environmental impact statement inadequate.” *Alaska Wilderness Recreation & Tourism v. Morrison*, 67 F.3d 723, 729 (9th Cir.1995).

Other courts have stated that in order to comply with NEPA, “the discussion of alternatives ‘must go beyond mere assertions’ and provide sufficient data and reasoning to enable a reader to evaluate the analysis and conclusions and to comment on the EIS.” *Citizens Against Toxic Sprays v. Bergland*, 428 F. Supp. 908, 933 (D. Or. 1977). A detailed and careful analysis of the relative merits and demerits of the proposed action and possible alternatives is of such importance in the NEPA scheme that it has been described as the “linchpin” of the environmental analysis. For this reason, the discussion of alternatives must be undertaken in good faith; it is not to be employed to justify a decision already reached. *Id.*

NEPA requires the agency to include a no action alternative as the environmental baseline for a project. 40 C.F.R. § 1502.14(c). However, NEPA also requires the agency to “rigorously explore and objectively evaluate all reasonable alternatives.” *Id.* § 1502.12(a). In this case, the agency has clearly failed to explore all reasonable alternatives. By narrowly defining the action alternative, the USFS forecloses other potential projects in the planning area.

1. The Forest Service failed to assess a non-commercial, restoration alternative for the proposed project.

Reasonable and practicable alternatives to the proposed action exist and have been identified in earlier comments by Bark and include a non-commercial restoration-only alternative including road removal and other noncommercial activities. In contrast, the South Fork project proposes to treat stands showing little sign of “needing” timber harvest in order to develop late-successional characteristics. The alternatives considered in the PA were unreasonably narrow and did not allow a meaningful discussion of other means of achieving the purpose and need of the project. The highly restricted range of alternatives evaluated and considered violates the very purpose of NEPA’s alternative analysis requirement, which is to foster informed decision-making and full public involvement. 42 U.S.C. §§ 4331, 4332(2)(E); 40 C.F.R. § 1508.9(b). *See also Robertson v. Methow Valley Citizen’s Council*, 490 U.S. 332, 349 (1989).

The courts have held that the failure to consider a restoration-only alternative is fatal to the government’s environmental analysis of a timber sale:

Plaintiffs also raise serious questions as to whether the BLM adequately provided the public with a restoration alternative. The AR discloses that a “rehabilitation-only” alternative was considered initially, but the EA presented three action alternatives, and each included salvage logging. Although defendants respond by referring to elements of a restoration alternative that can be found in the EA, and by arguing that a rehabilitation-only alternative would be “inconsistent” with the applicable Resource Management Plan, which calls for commercial logging in the Timber Basin area, these arguments fail to dispel the serious questions plaintiffs raise on this issue. Undisputed testimony at the preliminary injunction hearing indicated the Resource Management Plan does not preclude rehabilitation-only alternatives. There is a serious question as to whether the BLM’s failure to include a restoration-only alternative thwarted NEPA’s two primary

goals: insuring the agency has fully contemplated the environmental effects of its action; and insuring the public has sufficient information to challenge the agency. *Idaho Sporting Congress*, 137 F.3d 1146, 1151 (9th Cir. 1998).

League of Wilderness Defenders – Blue Mountains Biodiversity Project et al. v. Zelinski, 187 F.Supp.2d 1263 (D. Or. 2002). By narrowly defining the action alternative, the USFS forecloses other potential projects in the planning area. The highly restricted range of alternatives evaluated and considered violates the very purpose of NEPA’s alternative analysis requirement, which is to foster informed decision-making and full public involvement. 42 U.S.C. §§ 4331, 4332(2)(E); 40 C.F.R. § 1508.9(b). *See also Robertson v. Methow Valley Citizen’s Council*, 490 U.S. 332, 349 (1989).

One purpose and need of the proposed South Fork Timber Sale is to attempt to return the planning area to a more “natural” condition. In all projects involving “forest health” goals, the Forest Service Manual explicitly requires consideration of alternatives without commercial logging. The Manual states, “where timber harvest is proposed primarily for the purpose of achieving forest stewardship purposes...a full range of alternatives, including practical and feasible non-harvest options, must be analyzed in the environmental analysis process.” UNITED STATES FOREST SERV., FOREST SERVICE MANUAL 2432.22c.

The Forest Service is also required to analyze a non-logging alternative under NEPA. Because commercial logging causes undesirable impacts on the environment, the agency must include an alternative that does not include such impacts. The regulations implementing NEPA explain that the agency must “develop other alternatives fully and impartially. Ensure that the range of alternatives does not prematurely foreclose options that might protect, restore, and enhance the environment. Consider reasonable alternatives even if outside the jurisdiction of the Forest Service.” 40 C.F.R. § 1502.14(c). The agency must develop such an alternative even if implementing the same would not meet current policy. The NFMA regulations note that “reasonable alternatives which may require a change in existing law or policy to implement shall be formulated if necessary to address a major public issue, management concern, or resource opportunity identified during the planning process.” 36 C.F.R. § 219.12(f)(5).

The agency has failed to comply with these mandates. Instead, the MHNF proposed a project that would log 4.3 MMbf and construct or reconstruct roads. There is very little in this timber sale to suggest that it is truly a “restoration” project. As such, the proposed project should not go forward.

The Forest Service had before it many potential alternatives for the proposed project, but unreasonably rejected those that did not contain a commercial timber harvest component. For example, the PA did not include a restoration-only alternative that proposed no commercial timber harvest, as Bark proposed in previous commenting opportunities. Disregarding this viable alternative that would meet the purpose and need of the project is inconsistent with NEPA’s requirement that a range of alternatives be considered in an environmental analysis, especially when given the repeated public requests that a restoration alternative be fully considered. *California v. Block*, 690 F.2d 753 (9th Cir. 1982).

Bark repeatedly requested that the USFS consider an alternative that would not simply leave alone an area that has been heavily impacted by Forest Service management for years, but actively work to restore the ecosystems in the planning area without further impairing the ecosystem with more unnecessary logging and road building. For example, road densities in the area currently exceed recommended standards and the effects of past logging activities continue to impact the site. An alternative should have been fully considered that consisted of removal and restoration of Forest Service roads, control of exotic invasive species established as a result of past Forest Service logging activities, sediment control activities, and other measures that would help recover the area. The proposed South Fork project does not constitute forest restoration.

The Mt. Hood Forest Plan and associated documents clearly indicate that restoration is needed on the forest. Given these goals of the Forest Plan, it is inconsistent for the Forest Service not to include a genuine restoration alternative. Without considering an alternative that would help restore habitat conditions with the least amount of negative impacts, the Forest Service is not heading in the direction of improved ecosystems, but instead contributing to the decline of sensitive terrestrial and aquatic species and their habitat.

2. The South Fork timber sale PA did not consider diverse alternatives.

Bark points out that all of the action alternatives considered in the PA have nearly identical project design features and environmental effects. For example, the acreage logged and volume produced is identical among all action alternatives. *PA*, 20. Consequently, in assessing the PA, Bark found it impossible to distinguish among the environmental effects of the action alternatives. The effects of the action alternatives for the South Fork timber sale are indistinguishable from one another, which is likely the result of the nearly identical nature of the action alternatives.

As stated previously, reasonable alternatives to the proposed alternatives existed, but were not addressed by the Forest Service. For example, the agency could have considered an action alternative that proposed no new road re/construction, logged fewer and different acres in the planning area, retained higher canopy closure post-project, or only produced commercial volume as a by-product of restoration silviculture. However, none of these options were analyzed in the South Fork PA. 40 C.F.R. § 1502.12(a).

A PA must contain a range of alternatives sufficient to “sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public.” *Id.* § 1502.14. All reasonable alternatives must receive a “rigorous exploration and objective evaluation..., particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects.” *Id.* § 1500.8(a)(4). The analysis of the alternatives must be “sufficiently detailed to reveal the agency’s comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative.” *Id.* In this case, the agency has clearly failed to explore all reasonable alternatives and to clearly distinguish among the proposed alternatives. Consequently, the South Fork PA is inadequate and must be withdrawn.

B. The South Fork Timber Sale PA Does Not Adequately Consider the Impacts of this Project.

The South Fork PA does not provide enough information to determine the extent of indirect, direct, or cumulative environmental impacts associated with the project. Moreover, the PA does not furnish substantive and quantitative evidence showing this project will not cause serious and irreversible damage to soils, forest productivity, plant diversity, water quality, and wildlife habitat. In fact, the evidence strongly suggests that the project will cause significant impacts to these resources that preclude the implementation of the proposed project. An EA (presumably what will follow the South Fork PA) is – a “concise public document” – must contain “sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. § 1508.9. In this case, the South Fork PA does not contain the required information, and does not refer to anything in the analysis file to support its conclusion of no significant impact.

NEPA requires the Forest Service to document and disclose its internal analyses that led to its conclusion of no significant impact. Failing to document and disclose agency decisionmaking process vitiates NEPA’s goal of providing information to the decisionmaker and the public “before decisions are made and actions are taken.” 40 C.F.R. §§ 1500.1(b), 1502.24. As the courts have held, “allowing the Forest Service to rely on expert opinion without hard data either vitiates a plaintiff’s ability to challenge an agency action or results in the courts second guessing an agency’s scientific conclusions. As both of these results are unacceptable, we conclude that NEPA requires that the public receive the underlying environmental data from which a Forest Service expert derived her opinion.” *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150 (9th Cir. 1998).

Until the Forest Service can verify its PA analysis with supporting documentation, the South Fork timber sale must be withdrawn as the decision to proceed with the project is arbitrary and capricious. 5 U.S.C. 706(2)(A).

1. The South Fork Timber Sale PA fails to adequately consider the cumulative environmental impacts of the proposed project and past, present, and future federal and non-federal activities.

The South Fork PA fails to identify and evaluate the cumulative impacts of the project. Under NEPA, “significance exists if it is reasonable to anticipate cumulatively significant impacts on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” 40 C.F.R. § 1508.27(b)(7). Furthermore, NEPA requires the agency to evaluate “cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” *Id.* § 1508.24(a)(2).

The South Fork PA does not actually analyze the cumulative impacts of this project and other past, current, and foreseeable future projects, including federal timber sales, state and private industrial logging, herbicide use, off-road vehicle use, and other management activities. There is

no indication that the agency has assessed the nature of the cumulative impacts to species, soil, and aquatic resources within the planning area.

Several projects in the same watershed have *cumulative impacts*, which are defined as “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. When these impacts are significant, an EIS is required. *Id.* § 1502.4. Under NEPA, “significance exists if it is reasonable to anticipate cumulatively significant impacts on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” 40 C.F.R. § 1508.27(b)(7). NFMA also makes clear that “cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” 36 C.F.R. § 1508.24(a)(2).

a. Cumulatively significant impacts on the environment.

The Ninth Circuit has been especially clear regarding the requisite showing that the Forest Service must make when it comes to discussing the cumulative effects of past, present, and future timber harvests. In *Lands Council v. Powell*, the appellate court remarked that “for the public and agency personnel to adequately evaluate the cumulative effects of past timber harvests, the Final Environmental Impact Statement should have provided adequate data of the time, type, place, and scale of past timber harvests and should have explained in sufficient detail how different project plans and harvest methods affected the environment.” *Lands Council v. Powell*, 379 F.3d 738, 745 (9th Cir. 2004). Similarly, the Ninth Circuit in *Klamath-Siskiyou Wildlands Ctr. v. BLM* observed that a table purporting to examine the cumulative effects of timber harvest was inadequate because “the problem with the entire table is that it does not provide any objective quantification of the impacts” of the past logging. *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 994 (9th Cir. 2004) (*KS Wild*). The court in *KS Wild* went on to state that regarding future projects, “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.” *Id.* at 995.

In this case, the South Fork PA has even less information than the Ninth Circuit found inadequate in *KS Wild* and *Lands Council*. The PA only states that “the time scale includes the effects of all past activities beginning in approximately 1940,” and “includes other recently completed timber sales that overlap the analysis area including Clack, Clear, Fork, Guard and Orchard.” PA, 21. Allegedly, “the analysis considers the impacts of activities on other ownerships,” including BLM and industrial forestlands. *Id.* The Forest Service claims that future thinning sales are also included in the effects analysis for South Fork. *Id.* Despite these claims, there is no *analysis* in the PA that describes what these effects were, or are likely to be in the future. The Ninth Circuit has specifically found such a discussion inadequate to meet the requirements of NEPA.

Of particular interest, the Forest Service states that pertaining to cumulative aquatic effects,

A numerical cumulative effects analysis that would include BLM and other private lands is not necessary in this case because the incremental effect of South Fork Thinning would still be negligible regardless of what management was to occur on other lands. It is clear that the South Fork Thinning would have no direct, indirect or cumulative detrimental effects to forest hydrology. Thinning would result in long-term health of the watersheds by increasing health and vigor and enhancing growth that results in larger wind firm trees.

PA, 33. This claim is unsupported by the law. Assuming *arguendo* that the proposed thinning is beneficial to the watershed, NEPA still requires the Forest Service to assess the synergistic effects that this project will have with other past, present, and reasonably foreseeable future projects. However, given that the South Fork watershed has been extensively logged and managed, it is dubious at best that this project will not have an incremental effect on the watershed. See, http://www.bark-out.org/tsdb/image_detail.php?sale=sfthin&image=Clear_Creek_Watershed.

The PA also mentions that “Heavy Off Highway Vehicle (OHV) use of skidtrails and roads in the Goat Mountain area has resulted in ongoing erosion.”³ PA, 55. The cumulative effects of OHVs and timber harvest – including that proposed here, which may include construction of new skid trails and other roads – is one kind of cumulative effect that should have been considered in the PA. Bark requests that this analysis occur in future NEPA documentation.

Similarly, the PA notes that multiple entries into the matrix stands may occur in order to obtain the desired stand composition. PA, 9. The PA also states that many stands will be reentered that have been ground-based logged in the past. *Id.* at 18. Given that it is reasonably foreseeable that these matrix stands will be entered again to either thin or regenerate them, and that they have been logged in the past, NEPA requires the Forest Service to conduct a cumulative impacts analysis. 40 C.F.R. § 1508.7.

Because there is no indication that the agency has assessed the nature of the cumulative impacts to species, soil, and aquatic resources within the planning area, the South Fork timber sale must be withdrawn. In the alternative, the Forest Service should prepare an EIS that assesses the cumulative impacts of this sale in conjunction with other projects in the same watershed.

The Forest Service’s analysis of the cumulative impacts of the South Fork Timber Sale is inadequate and fails to meet NEPA’s requirement for high quality scientific analysis that would satisfy the “hard look” standard. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208 (9th Cir. 1998) *cert. denied*, *Ochoco Lumber Co. v. Blue Mountains Biodiversity Project*, 119 S.Ct. 2337 (1999). The courts have also held that the failure to conduct a cumulative impacts analysis is fatal to a project. *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372 (9th Cir. 1998); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir. 1998); *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800 (9th Cir. 1999).

³ The PA also notes that this use is likely to continue and expand in scope and effect. PA, 68.

In addition, there is no analysis in the South Fork PA regarding how logging and roading activities affect the planning area. NEPA requires this analysis, and the failure to provide it violates the law. 40 C.F.R. § 1508.7. The lack of an adequate cumulative impact analysis to assess the fragmentation of habitat corridors, degradation of water quality, impacts to plant and animal species, and soil health is especially problematic given the cursory admissions throughout the administrative record that the analysis area has been highly impacted by past logging and other management activities. Again, simply stating that other activities are occurring or will occur does not suffice as an adequate cumulative impacts analysis.

- i. Cumulative, direct, and indirect impacts on watershed integrity.

According to the Clean Water Act (CWA) Section 313, all federal agencies “shall comply with all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution, and federal actors must comply with all record keeping, recording and permitting requirements.” 33 U.S.C. § 1323(a). The Ninth Circuit has interpreted this provision to mean that the U.S. Forest Service must comply with all state water quality standards when carrying out its road-building and logging activities. *Northwest Indian Cemetery Protective Ass’n v. Peterson*, 795 F.2d 688 (9th Cir. 1986). This means that the Forest Service cannot claim that the agency’s own policies and regulations supersede state water quality standards. In *Northwest Indian Cemetery*, the Forest Service claimed that its Best Management Projects (BMPs) were the only water quality standards applicable. 759 F.2d at 697. The Ninth Circuit held that adherence to BMPs did not automatically ensure that state water quality standards were met. The Ninth Circuit has reiterated this standard. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998), *cert. denied*, *Ochoco Lumber Co. v. Blue Mountains Biodiversity Project*, 119 S.Ct. 2337 (1999).

Accordingly, the Forest Service must describe how the selected alternative for the South Fork Timber Sale complies with Oregon’s water quality standards. The PA does nothing to indicate how logging the South Fork planning area – in addition to logging other timber projects in the area – will meet water quality standards. Despite acknowledging that there have been timber projects in the past in the planning area, that there are currently projects ongoing in the planning area, and that projects are likely to take place in the planning area in the future, the PA does not analyze these projects and their impacts on water quality. NEPA simply does not allow the agency to forgo a cumulative impacts analysis of these events. 40 C.F.R. §§ 1502.16 (environmental consequences), 1508.7 (cumulative impact).

The PA acknowledges that there is very little baseline data for water quality in the planning area. Without a scientific benchmark describing the condition of aquatic systems (measured in terms of temperature, turbidity, pH, fecal coliform, etc.), direct and indirect impacts cannot be determined. Furthermore, the PA failed to address the cumulative impacts from the proposed action in terms of past, other present, and future timber sales within the area. These actions are related temporally and spatially, and should be addressed in a comprehensive EIS.

- ii. Cumulative, direct, and indirect impacts on forest fragmentation, biological corridors, and dispersal of late-successional species.

The South Fork PA fails to adequately assess the cumulative impacts of the present project and other proximate projects on forest fragmentation, loss of habitat connectivity, and dispersal of late-successional species. First, the PA fails to support the conclusion that the cumulative and direct impacts to species migration and dispersal would not be significantly affected by the South Fork Timber Sale. In fact, the South Fork Timber Sale would cause significant environmental impacts.

Fragmentation is an important factor in declining biological diversity. Wilcove et al. 1986; Goodman 1987. Habitat fragmentation also seriously threatens the stability and persistence of wild populations because the size and isolation of remaining habitats increases the probability of extinction through demographic, environmental, or genetic stochasticity. Wiens 1976; Soule 1986. Additionally, habitat corridors have been identified as important features of landscape management that allow movement, and thus recolonization, among high-quality habitats. Fragmented corridors may actually serve as a selective filter, allowing movement by some species and blocking movement of others. Noss 1991. Joshua J. Tewksbury et al., *Corridors Affect Plants, Animals, and Their Interactions in Fragmented Landscapes* (visited Nov. 21, 2005) < <http://www.pnas.org/cgi/content/abstract/99/20/12923>>.

The Northwest Forest Plan requires the Forest Service to maintain connectivity for aquatic and terrestrial species through the Aquatic Conservation Strategy Objectives (ACSOs), maintenance of connectivity corridors, and implementation of the Late Successional Reserve system. *Northwest Forest Plan Standards and Guidelines (NFP S&Gs)*, B-13. The NFP also requires the agency to “maintain and restore spatial and temporal connectivity within and between watersheds.” *Id.* at B-11. The Forest Service has failed to meet these requirements for at least two reasons.

First, the Forest Service states that

Late-seral habitat is limited and connectivity of late-seral habitats is poor in all three watersheds (USDI 1995, USDA 1997, and USDI 1999). A combination of the loss of suitable habitat and increase in fragmentation has substantially reduced the amount of suitable habitat for spotted owls currently present within these watersheds.

PA, 40. Other than this admission, however, there is no indication in the PA regarding how increasing fragmentation in the planning area will affect connectivity for a variety of species. The PA also does not discuss how this project will comply with the NFP when fragmentation is already a significant problem in the watershed.

Second, while Bark agrees that riparian reserves should function as connectivity corridors, the Forest Service does not indicate whether or not they are serving this function. Without this information, the public and decision maker cannot assess whether the proposed treatments in the riparian reserves are appropriate or necessary. Similarly, the public and decision maker cannot

determine whether or not Aquatic Conservation Strategy Objectives (ACSOs) will be met by the proposed project, as meeting ACSOs in riparian areas is a purpose and need of the South Fork timber sale.

Clearly the planning area is already suffering the effects of poor land management, but the agency failed to demonstrate that the proposed project will be consistent with the Aquatic Conservation Strategy Objectives that measure watershed connectivity: simply stating that the project is consistent with the ACSOs does not make it so. Not only is the planning area already very fragmented, but the proposed project also will remove more than 4.3 million board feet of habitat from the landscape. The Forest Service has failed to support the contention that the South Fork project will not exacerbate the fragmented condition of the habitat in the planning area. Given the significant fragmentation in the planning area, the decision to implement the South Fork project is arbitrary and capricious. 5 U.S.C. § 706(2)(A).

Because timber harvest has eliminated nearly all of the connectivity capacity in the planning area, it is unreasonable to log the remaining forest that is providing the meager connectivity in the watershed. 5 U.S.C. § 706(2)(A). Moreover, the Forest Service has provided no rationale for eliminating connective features from the landscape, and how this decision is consistent with the legal requirement that the agency provide for well-distributed viable populations of species across the forest. 36 C.F.R. § 219.19. If connectivity corridors are eliminated, it is impossible for species to disperse across the landscape.

Although it seems reasonable to conclude that further division of the already highly fragmented areas would be a significant impact in and of itself, no USFS document addressed how the South Fork timber sale – combined with adjacent timber and road building projects – would affect species dependent on late-successional forest. The PA neither adequately considered how increasing the existing level of fragmentation would affect these species' population levels, reproduction, or long-term viability in the watershed and adjacent lands, nor discussed how such fragmentation would affect species requiring large areas of intact forest.

In conclusion, the PA inadequately evaluated the impact of the proposed timber project on habitat fragmentation, biological corridors, and the dispersal of late-successional and wide-ranging species. Intentionally creating barriers to species dispersal fundamentally violates the NFP and MHFP, and is arbitrary and capricious. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e); 5 U.S.C. § 706(2)(A).

NEPA requires the Forest Service to provide adequate information upon which the public and decision maker can evaluate a project and make a decision about its environmental consequences. 40 C.F.R. § 1500.1. In this case, however, the agency has not met this burden. Consequently the South Fork project should not go forward.

2. The South Fork PA does not have adequate survey data to support its findings.

The Mt. Hood National Forest has failed to survey for sensitive and listed species and therefore lacks the necessary information on which to base a decision for the South Fork Timber Sale.

Bark does not believe that the MHNH has to survey for every species that may be present in a project area in order to sign a decision. However, surveys for sensitive, listed, proposed for listing/rare, and management indicator species that have been reported or are likely to utilize the project area should be conducted if reliable population estimates are not available. OFFICE OF THE INSPECTOR GENERAL, FOREST SERVICE TIMBER SALE ENVIRONMENTAL ANALYSIS REQUIREMENTS, EVALUATION REPORT NO. 08801-10-AT, 20 (1999). Such monitoring is required under NFMA, and NEPA requires the agency to use only high quality science and to obtain data when it is missing yet necessary to make an informed decision. 36 C.F.R. § 219.27(a)(6); 40 C.F.R. §§ 1503.24 (scientific accuracy), 1502.22 (incomplete or unavailable information). The failure to complete such monitoring means that the data are not collected, and the approximate population levels or trends of species on the Forest are unknown. Without such data, the MHNH lacks the informed ability to issue a decision. 40 C.F.R. § 1500.1.

C. The Forest Service Improperly Relies on Mitigation Measures to Reach a Finding of No Significant Impact for the South Fork Timber Sale.

1. The PA does not contain an adequate discussion of mitigation measures.

The proposed project will have significant impacts on the quality of the human environment, thereby necessitating the preparation of an environmental impact statement. However, in cases where an environmental assessment may be the appropriate environmental document, the Forest Service should consider and adopt mitigation measures or alternatives even though the impacts of the proposal may not be “significant.” 40 C.F.R. §§ 1501.3(b), 1508.9(a)(2). In such cases, the PA should include a discussion of these measures or alternatives to “assist agency planning and decision making” and to “aid an agency’s compliance with (NEPA) when no environmental impact statement is necessary.” Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations (40 Questions), 46 Fed. Reg. 18,037.

The Supreme Court has upheld the agency’s duty to consider mitigation measures in preparing environmental documents. *See Robertson v. Methow Valley Citizen’s Council*, 490 U.S. 332, 353 (1989). More generally, omission of a reasonably complete discussion of possible mitigation measures would undermine the “action forcing” function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.

The Forest Service’s perfunctory description of mitigation measures is inconsistent with the “hard look” it is required to undertake pursuant to NEPA. *See generally, PA*, 15 – 19. The Ninth Circuit has held that “mitigation must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *Carmel-By-the-Sea v. United States Dep’t of Transp.*, 123 F.3d 1142, 1154 (9th Cir. 1997). The court has also noted that “a mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.” *Northwest Indian Cemetery Protective Ass’n. v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986), *rev’d on other grounds*, 485 U.S. 439 (1988); *see also Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372 (9th Cir. 1998). More recently, the Ninth Circuit held that the Forest Service may not rely on mere conjecture or agency claims without presenting the

background and supporting data for those conclusions. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir. 1998).

There is no discussion in the PA of the implementation of mitigation measures, their use, efficacy, or anything beyond their mere existence. Instead, the PA merely lists the proposed mitigation measures with bullet points. *See generally*, PA, 15 – 19. This sort of environmental assessment does not satisfy NEPA. *Sierra Club v. Austin*, No. CV-03-22-M-SWM (D. Mont. Apr. 30, 2003).

2. Mitigation measures do not obviate the need to prepare an EIS.

Where an environmental assessment relies on mitigation measures to reach a finding of no significant impact, that mitigation must be assured to occur and must “completely compensate for any possible adverse environmental impacts.” *Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson*, 685 F.2d 678, 682 (D.C. Cir. 1982). If the effectiveness of such mitigation is not assured, then the Forest Service cannot sign a FONSI and must prepare an EIS. *Foundation for North American Wild Sheep v. U.S. Dep't of Agric.*, 681 F.2d 1172, 1178 (9th Cir. 1982). In *Northwest Indian Cemetery Protective Ass'n. v. Peterson*, the court determined that NEPA requires agencies to “analyze the mitigation measures in detail (and) explain how effective the measures would be...A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.” 764 F.2d 581 (9th Cir. 1985).

In an explanation of its regulations, the CEQ has stated that mitigation-based FONSI are inappropriate in most situations:

Mitigation measures may be relied upon to make a finding of no significant impact only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal. As a general rule, the regulations contemplate that agencies should use a broad approach in defining significance and should not rely on the possibility of mitigation as an excuse to avoid the EIS requirement.

46 Fed. Reg. 18,038. If a proposal appears to have adverse effects that could be significant, and certain mitigation measures are then developed during the scoping or PA stages, the existence of such possible mitigation does not obviate the need for an EIS. Therefore, if scoping or the PA identifies certain mitigation opportunities without altering the nature of the proposal itself, the agency should continue the EIS process and submit the proposal, and the potential mitigation, for public and agency review and comment. This is essential to ensure that the final decision is based on all the relevant factors and that the full NEPA process will result in enforceable mitigation measures through the Record of Decision. *Id.* at 18,026.

The courts have held that even though the procedural requirements of an EIS are more strict than those required for an EA, an EA requires more substantial proof that the mitigation will in fact result in no significant impact than an EIS. The Ninth Circuit has held that if the plaintiff “raises substantial questions whether a project may have a significant effect, an EIS must be prepared.” *Steamboaters v. FERC*, 777 F.2d 1384 (9th Cir. 1985). The court will not accept conclusory statements that mitigation measures are effective: the agency must be able to support its

conclusions with information in the administrative record. *Sierra Club v. Peterson*, 717 F.2d 1409 (D.C. Cir. 1985).

The test for whether mitigation is adequate is not whether it will avoid listing of a species, but rather whether it will completely avoid impacts to the species or reduce those impacts to the level of insignificance. *Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson*, 685 F.2d at 682. There is no assurance that planned mitigation measures for the proposed project will completely compensate for environmental impacts.

A USDA Office of the Inspector General Report concluded that reliance on speculative mitigation measures in order to reach a FONSI significantly compromised environmental quality. OFFICE OF INSPECTOR GENERAL, U.S. DEPT' OF AGRIC., EVALUATION REPORT No. 08801-10-AT: FOREST SERVICE TIMBER SALE ENVIRONMENTAL ANALYSIS REQUIREMENTS (1999). The OIG concluded that:

Applicable mitigation measures contained in 10 of 12 decision notices and referenced environmental assessments reviewed, were not always implemented. In addition, mitigation measures were either omitted or incorrectly incorporated into 4 of 12 accompanying timber sale contracts. These mitigation measures are designed to reduce the adverse impacts of timber sale activities on the environment. Generally, mitigation measures were not implemented due to district personnel (a) not being familiar with the mitigation measure contained in the environmental documents, (b) not adequately monitoring actual implementation of the mitigation measures, (c) not comparing timber sale contract clauses with the applicable environmental documents and, (d) oversight. As a result, streams, wildlife habitat, heritage resources, water quality, and visual quality were or could be adversely affected. In addition, "Findings of No Significant Impact" conclusions (i.e. that there was no significant effect on the quality of the human environment) were questionable... Timber sale field visits disclosed that mitigation measures designed to protect key resource areas were not adequately implemented. The measures involved mitigation of riparian areas and stream management zones, wildlife habitat, heritage resource sites, visual quality, and soils.

Until the USFS is able to substantiate its proposed mitigation measures – i.e., that they are appropriate, will be implemented, and will be effective – the agency must withdraw the proposed project.

3. The PA must include a detailed monitoring and mitigation plan.

Monitoring is increasingly important in sound forest management, and is considered a cornerstone of proper management of public lands. Bark notes that a monitoring and mitigation plan is missing in the PA, even though NEPA requires such a plan and Bark specifically inquired whether or not funding would be sufficient to monitor the effects of the proposed project. Given the experimental nature of the proposed activities in the South Fork project, a detailed monitoring and mitigation is required.

The regulations implementing NEPA require that agencies “state whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.” 40 C.F.R. § 1505.2(c). Additionally,

agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation (§ 1505.2(c)) and other conditions established in the environmental impact statement or during its review and committed as part of the decision shall be implemented by the lead agency or other appropriate consenting agency. The lead agency shall: (a) Include appropriate conditions in grants, permits or other approvals; (b) Condition funding of actions on mitigation.

Id. § 1505.3.

Despite the clear requirements that the USFS must state whether the agency has undertaken all practicable means to minimize or avoid environmental harm, and that the agency prepare a detailed mitigation plan, the Mt. Hood National Forest has not done so. Until the agency prepares a mitigation plan for the proposed project, the South Fork Timber Sale must be withdrawn.

III. The South Fork PA Inadequately Analyzes the Impact to Aquatic Systems.

The analysis of existing conditions of the creeks and rivers in the planning area is not based on high quality science, fails to adequately describe the current conditions of these aquatic systems, and does not accurately represent the impacts on these systems from the proposed action.⁴ Beneficial uses in the watershed have been adversely affected by past management activities on federal and private lands.

Given this situation, the Forest Service acknowledges that the water quality, quantity, and timing within the watershed have been altered. Consequently, there is no support for the contention that there would be no changes to water quality with any of the action alternatives.

A. Lack of Quantitative and Qualitative Data on Water Quality Preclude a Finding of No Significant Impact.

Bark points out that there is a general lack of sufficient information surrounding the water quality in the planning area. A General Accounting Office study indicates that federal and state land management decisions are limited by the lack of information about the aquatic systems at issue. GENERAL ACCOUNTING OFFICE, KEY EPA AND STATE DECISIONS LIMITED BY INCONSISTENT AND INCOMPLETE DATA, GAO/RCED-00-54 (March 2000). There is no indication that the Mt. Hood National Forest has assessed the implications of this report or changed its management practices so as to comply with the recommendations in the GAO report. If adequate baseline data are missing, NFMA requires the agency to obtain it. 36 C.F.R. §

⁴ Impacts to watershed integrity from logging are described in numerous scientific articles. *See generally*, Jones and Grant 1996; Harr 1975; Harr 1979; Harr 1996; Wemple and Grant 1996; Beschta 1997; Beschta 1984; and Beschta and Taylor 1988.

219.12(d). The Ninth Circuit has also held that “general statements about ‘possible’ effects and ‘some risk’ do not constitute a ‘hard look,’ absent a justification regarding why more definitive information could not be provided.” *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

Until the MHNH obtains the missing information on stream conditions, the South Fork sale must be withdrawn. In the alternative, the USFS should prepare an EIS to fully disclose and discuss the impacts to the environment from the proposed project. The failure to follow one of these courses of action will violate NEPA.

The regulations implementing the National Forest Management Act (NFMA) also require compliance with state water quality requirements. National Forest Management Act of 1976, 16 U.S.C. §§ 472a, 521b, 1600, 1611–1614 (1994 & Supp. III 1997) (amending Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476); 36 C.F.R. § 219.23(d). The courts have upheld this mandate. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1211 (9th Cir. 1998), *cert. denied*, *Ochoco Lumber Co. v. Blue Mountains Biodiversity Project*, 119 S.Ct. 2337 (1999). Because the USFS does not possess sufficient data to determine whether or not the streams in the planning area are meeting Washington State standards, the USFS may violate NFMA if the South Fork project is implemented. 36 C.F.R. § 219.23(d).

B. Sedimentation Will Increase because of the South Fork Timber Sale.

The PA does not indicate the extent of impairment of water quality, and fails to disclose the direct and cumulative impacts of the sale. The Ninth Circuit has held that “general statements about ‘possible’ effects and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

The agency is also unable to quantify the extent of the sediment that will be produced as a result of the project: this information simply does not appear in the PA. Instead, the agency claims – without proof – that the proposed mitigation measures will prevent any increases in sedimentation. If the USFS cannot assess the impacts to aquatic systems as a result of the proposed timber project, then NEPA demands that the agency prepare an environmental impact statement. 40 C.F.R. § 1508.27 (requiring an EIS when the effects on the human environment are “highly uncertain or involve unique or known risks”).

1. Direct impacts from sediment on the planning area.

The proposed project will contribute additional sediment to an already degraded aquatic system due to timber harvest and road construction. These effects will be exacerbated by existing conditions. Although the Forest Service maintains that there would be no change in water quality with any of the alternatives, the agency also admits that “the effect, if any, would be short-term and undetectable at the watershed scale.” PA, 21. Landings and new temporary road construction would also introduce sediment to aquatic systems. *Id.* at 18, 28.

It is impossible for the public and the decisionmaker to have a clear understanding of the project's effects on aquatic systems from sedimentation. First, there is no "analysis" in the PA that discusses why the South Fork project would contribute limited amounts of sediment to the aquatic environment. Instead, the PA simply states that it is so, without support in the record. Second, simply because the sedimentation input would be "undetectable at the watershed scale"⁵ does not mean that there would not be a detectable input at the stream or project level.

Although it seems plain that the proposed project will *not* maintain or restore the sediment regime of the South Fork planning area, the PA has failed to demonstrate consistency with the ACS – especially for the activity proposed within Riparian Reserves – which prohibits changes in sediment regimes. The failure to implement projects that are inconsistent with the area forest plan violates NFMA. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e). Such projects are arbitrary and capricious, and unlawful. 5 U.S.C. § 706(A)(2). If the USFS cannot assess the impacts to aquatic systems from the proposed timber project, then NEPA demands that the agency prepare an environmental impact statement. 40 C.F.R. § 1508.27 (requiring an EIS when the effects on the human environment are "highly uncertain or involve unique or known risks").

Of particular concern is the increase in sedimentation as a result of road re/construction associated with the South Fork timber sale. The Ochoco National Forest has indicated that "about two-thirds of the sediment delivered to streams from surface erosion comes from within 200 feet of the channel and more than 90 percent comes from within 400 feet." *Hash Rock Environmental Assessment, Prineville Ranger District, Ochoco National Forest*, 52. The Forest Service on the Clackamas Ranger District did not identify this information, assess it in terms of the South Fork project, or make a determination of how the proposed project will affect sediment delivery to all of the waterways in the planning area. The MHNH should have considered this information. 40 C.F.R. § 1502.24 ("methodology and scientific accuracy").

Other than assuring the public that there will be little possibility of sediment input to streams that are already heavily impacted, the PA does not indicate the extent of impairment of water quality from the South Fork sale, and fails to disclose the direct and cumulative impacts of the project. The Ninth Circuit has held that "general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

Despite poor site conditions and vague predictions of effects from the South Fork project, the USFS is proposing commercial logging in impaired areas rather than urgently needed restoration. By failing to include an adequate discussion in the PA of the effect that these projects will have on sediment input, the USFS violates NFMA, which requires the agency to conserve aquatic resources. 36 C.F.R. § 219.27(a)(1). The failure to evaluate the impacts to aquatic systems from all potential sources of sediment violates NEPA, which requires the USFS to assess the impacts

⁵ The Forest Service's statement appears to refer to the 2004 ROD "clarifying" the applicability of the Aquatic Conservation Strategy to apply only at the watershed scale, and only at the distant temporal scale. Bark believes the 2004 ROD to be unlawful, and maintains that the ACS requires compliance with the nine ACS Objectives at each temporal and spatial scales. The South Fork PA has failed to meet these requirements.

of all activities associated with the proposed project in a single environmental document. 40 C.F.R. § 1502.16.

Moreover, by failing to discuss the cumulative sediment input because of the South Fork Timber Sale and its associated actions, the USFS violates the Mt. Hood Forest Plan, which requires the USFS to drop projects that will not or do not meet Washington water quality standards. If the proposed project violates Forest Plan standards, then the project will also violate NFMA's requirement that site-specific projects remain consistent with area forest plans. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e).

2. Cumulative impacts from sediment on the planning area.

It is clear from the PA and other documentation that the South Fork planning area has been dramatically affected by historic logging and roading. However, other than explaining that this activity is occurring, there is no actual analysis of how the effects of these activities combine to affect the environment. NEPA requires the agency to address the impacts "on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions...cumulative impacts can result...by collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The courts have also held that the failure to conduct a cumulative impacts analysis is fatal to a project. *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372 (9th Cir. 1998); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir. 1998); *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800 (9th Cir. 1999).

The Forest Service should have included in its cumulative impacts analysis a discussion of how ongoing logging projects, urban development, private land logging, and the proposed project all combine to affect the planning area. The Ninth Circuit has held that "general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

3. The South Fork Timber Sale PA is flawed because it does not include adequate mitigation measures for aquatic systems.

Although the PA lists several mitigation measures for the South Fork Timber Sale, it does not indicate whether these measures are required in the timber project contract, how it intends to ensure compliance with the measures if they are in fact required, or whether these measures will be effective. Moreover, the PA does not indicate how enforcement will be funded or what the agency will do if it discovers that the BMPs are not properly functioning. NEPA requires the USFS to include in the environmental analysis a discussion of all aspects of a proposed project, including mitigation plans. 40 C.F.R. § 1502.14(f). The courts have held that the USFS is obligated to detail in an EA the mitigation measures for the project. *Robertson v. Methow Valley Citizen's Council*, 490 U.S. 332, 353 (1989).

4. The reliance on Best Management Practices (BMPs) as sufficient mitigation for sediment impacts to aquatic systems is flawed.

The USFS claims that the direct sediment input from timber harvest in addition to any other sources of sediment will be sufficiently mitigated by the use of Best Management Practices (BMPs). While the use of BMPs is to be encouraged in timber projects, Bark notes that the use of these measures are not themselves sufficient to ensure compliance with the Clean Water Act (CWA). *Northwest Indian Cemetery Protective Ass'n v. Peterson* 795 F.2d 688, 697 (9th Cir. 1986) (holding that compliance with BMPs does not equate to compliance with the CWA). BMPs are simply a method of management practices, not mitigation measures themselves. Indeed, the USFS assumes that the implementation of BMPs will sufficiently mitigate any problems that the proposed project will have on aquatic systems, but offers no proof of this assertion. Consequently, this assumption is flawed and violates the law.

5. The South Fork environmental assessment is inadequate because it does not include a monitoring requirement or a mechanism to deal with water quality violations.

The PA does not state whether water quality impacts will be monitored to ensure that water quality standards are met, when this evaluation will occur, or what the USFS intends to do if the effects on aquatic systems are greater than anticipated. The courts have held that all analysis of the effects of a project must be assessed in the contemporary environmental document. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990). Bark points out that the USFS was required to conduct comprehensive monitoring on other timber projects in order to assure that water quality standards were being met, and the MHFP requires monitoring to assure that site-specific projects comply with the Mt. Hood Forest Plan. However, the USFS has failed to conduct systematic monitoring in the past, and is unlikely to do so in this case.

6. The South Fork Timber Sale PA is flawed because it requires the construction of unnecessary roads.

For this project, approximately 2800 feet of road will be constructed to access the proposed harvest units, and 10,950 feet of roads will be reopened. PA, 52. Bark has several concerns regarding roads construction and water quality. One of our most significant concerns regarding this project – as well as others on the Forest – is the Forest Service’s practice of re/constructing considerable road mileage as part of timber harvest, but failing to account for the environmental impact of this road work. In particular, the Forest Service frequently proposed road re/construction as part of timber harvest and states that the road removal (including closure, decommissioning, etc.) will take place immediately after logging is complete, but fails to actually undertake this work post-project. Regardless of the reason – lack of funding, enforcement, or initiative – the Forest Service cannot legally or ecologically continue to delay effective road closure.

- a. Road re/construction will contribute to sedimentation in the planning area.

The Forest Service concedes that the majority of sediment input to streams in the planning area comes from roads. *Hash Rock Environmental Assessment, Prineville Ranger District, Ochoco National Forest*, 52. Given the existing open road density in the planning area and the degradation those roads are causing, Bark finds the “need” to build more roads disingenuous. Moreover, the Forest Service never made a showing that *more* roads were necessary to reach any of the treatment units. The agency failed to demonstrate that building more roads would benefit the water quality in the planning area, as required by the Northwest Forest Plan. Until the Forest Service can meet these requirements, the South Fork project should be withdrawn.

- b. Undemonstrated ability to close roads.

While Alternative C would also close some roads, the MHNH has a poor record of successfully closing roads and restoring them to a hydrologically stable condition. Despite the current high road density and the certain degradation that existing open, “closed,” and new roads will cause, the USFS failed to discuss this issue in the PA as required by law. *Sierra Club v. Morton*, 510 F.2d 813, 824 (5th Cir. 1975) (requiring the agency to “disclose the history of success and failure of similar projects”). Instead, the USFS relies on closing roads as mitigation for impairment that the South Fork project will cause. Road closure in the past has been haphazard at best and rarely effective on the MHNH. *Attachment 1, Bark Road Closure Report*.

The USFS offers no assurances in the PA that the roads slated for closure in conjunction with the South Fork project will actually occur. In addition, the USFS does not indicate how it intends to compensate for the short- and long-term damage to the watershed caused by reconstructing, upgrading, and building roads in a watershed that already has an excessive road density. The project should not go forward until the USFS can ensure compliance with the applicable standards designed to protect water quality.

- c. “Temporary” road construction and road reconstruction result in new system road and associated impacts.

The PA notes that roads will be reconstructed to facilitate timber harvest. PA, 9, 12 –14. Road reconstruction includes activities such as cutting and disposal of roadway vegetation; replacement of culverts; placement of rip-rap material; recondition of roadbeds; and placing aggregate on some road surfaces. In addition, “road closure” also includes water-barring, pulling of culverts, scarification to a depth of 12 inches, and seeding. Bark points out the similarity between road reconstruction and temporary road closure. Reconstruction involves the same activities as road closure, which suggests that closing roads and reconstructing them have similar impacts to the environment.

- d. Road density.

The PA notes that the Forest Plan specifies that the open road density for large game wintering areas (which encompasses the planning area) must not exceed 2 miles/miles², even though

scientific literature recommends a density of less than 1 mile/mile². *PA*, 51. The document then states that the open road density is up to 3.5 miles/miles² in the planning area. *Id.*

As stated previously, the MHNH has a poor record of actually closing roads. Consequently, Bark is not assuaged that the road density in the planning area – which already exceeds LRMP standards – will be reduced. As such, this project should not go forward because it violates LRMP standards for open road density. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e).

Furthermore, Bark points out that the Northwest Forest Plan requires the Forest Service to “reduce existing system and nonsystem road mileage.” *S&Gs*, C-7; B-19. The South Fork project fails to comply with this mandate. The agency has failed to prove that this project is consistent with the requirements of the NFP.

C. Riparian Reserve timber harvest.

1. Undemonstrated need for riparian reserve harvest.

The South Fork project proposes 74 acres of riparian reserve harvest, including yarding. Approximately 80 trees per acre will be left post-harvest. *PA*, 9. The Northwest Forest Plan permits timber harvest in riparian reserves only when needed to meet ACS Objectives. *S&Gs*, C-32. However, since the USFS has not demonstrated whether the streams affected by this activity are meeting the ACS, or how logging in riparian areas will contribute to meeting the ACSOs, it is unproven whether or not this timber harvest is appropriate.

Because the Forest Service has failed to justify the proposed riparian reserve timber harvest in the South Fork planning area, which violates NEPA. 40 C.F.R. § 1502.24. Proceeding without adequate justification is arbitrary and capricious, and violates the APA. 5 U.S.C. § 706(2)(A).

2. Commercial extraction from riparian reserves.

The NFP allows for timber harvest in riparian reserves only to meet the objectives of the ACS. *S&Gs*, C-32. However, the Forest Service is proposing riparian reserve harvest for commercial extraction. The PA notes that “the timber *to be harvested* is primarily Douglas-fir and western hemlock....” *PA*, 23 (emphasis added).

Bark does not understand the intent of the Forest Service. If logging 74 acres within riparian reserves is for the purpose of increasing retained tree diameter and for stocking control (*PA*, 9), then this purpose is belied by the commercial value of the trees that are removed from the riparian area. If the purpose is to “cherry pick” large trees out of the riparian reserves, then this activity violates the NFP.

D. Peak Flows May Increase because of the South Fork Timber Sale.

In addressing the peak flow issue, the Forest Service turns to a watershed disturbance model. This model indicates that the planning area is “more stable and not affected by rain on snow events.” *PA*, 32. However, the model also “does not include other ownerships such as BLM or

private lands.” *Id.* at 33. Given that the watershed is checkerboarded with these land ownerships – many of which have clear cut all of their holdings – it is irresponsible to only consider forested National Forest land in the agency’s analysis of changes to peak flow. Because NEPA requires the Forest Service to assess the cumulative effects of federal and nonfederal actions in conjunction with the proposed project, the Forest Service must also assess how activities conducted by other owners in the same watershed will affect the planning area. Bark requests that the peak flow analysis is re-run with the effects of BLM and private ownership included in the model.

III. The South Fork PA Inadequately Analyzes the Impact to Species.

The South Fork PA conducts a woefully inadequate review of impacts to wildlife from the proposed sale. The South Fork PA fails to adequately identify impacts that the sale would have on a number of wildlife species (including threatened and sensitive species) by removing the trees associated with this project. Consequently, the USFS cannot ensure that it is providing for the viability for the species in the planning area. 36 C.F.R. §§ 219.19, 219.26.

The preliminary assessment for the South Fork project claims that the proposed project will move the planning area closer to the historic range of variability, which will benefit forest species. Not only is this statement unsupported by scientific fact as required by NEPA, but it also overlooks the fact that the planning area already supports all of the species that the PA claims will be benefited by logging and removing their habitat. 40 C.F.R. § 1502.24 (requiring the agency to “make explicit reference by footnote to the scientific and other sources relied upon for the conclusions in the statement”). Bark recognizes that the planning area has been adversely affected by past management activities, but dispute that the South Fork Timber Sale is the appropriate way to restore the area. Because the agency has not substantiated the appropriateness of the proposed project, the Forest Service should not implement the South Fork Timber Sale.

Bark has additional general wildlife concerns. First, it appears as though the Forest did not adequately survey for all threatened or sensitive species. This is problematic for several reasons. First, it is impossible for the agency to conclude in a FONSI that there are no significant impacts to listed or proposed species when it fails to analyze the project in terms of impacts to these species, or even mention them in its environmental assessment. Simply pretending that these species do not exist in the planning area does not alleviate the agency’s duties under the Endangered Species Act. Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544 (1994).

Second, the Endangered Species Act (ESA) requires the USFS to use the best available scientific and commercial data in assessing the impacts to species, which includes surveying for them. 16 U.S.C. § 1536(a)(2). Since population studies are lacking for the South Fork planning area, the USFS is precluded from determining that the project is not likely to adversely affect the listed species under section 7 of the ESA. *Id.* § 1536(b). Basing a decision on “non-information” is unreasonable and violates the Administrative Procedure Act (APA). 5 U.S.C. § 706.

Third, impacts to wildlife species in the short and midterm are not insignificant, and the agency failed to assess what these impacts would be. Because habitat will not be available for many

years post-project, it is unclear how wildlife species will be affected in the meantime (although habitat conditions can be expected to have been degraded). Again, NFMA does not recognize this outcome as legally acceptable.

The South Fork project would cause nonlisted species to trend towards listing, and listed species to trend toward jeopardy. Northern spotted owls and some salmon species are species about which the District lacks adequate information to conclude that the proposed project would not make their populations trend downwards, in violation of the ESA. *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999). There is no evidence to support the conclusion that removing what remains of suitable habitat for wildlife species will benefit them. Indeed, the facts suggest that these species will be adversely affected in the short and long term.

A. Threatened, Endangered, and Sensitive species.

It is the stated policy of Congress that all Federal departments and agencies “shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of [this] purpose.” Endangered Species Act of 1973, 16 U.S.C. § 1531(c)(1). The Supreme Court has clearly restated congressional policy stating that, “The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.” *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 184 (1978). The USFS’s decision to proceed with the South Fork timber sale is inconsistent with the congressional mandate of the ESA.

Under the ESA, the Forest Service has the responsibility to “insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.” 16 U.S.C. § 1536(a). As described *infra*, the record does not support the finding that the proposed sale would not likely adversely affect at least marbled murrelets, northern spotted owls, and anadromous fish. The proposed sale would significantly exacerbate the degraded habitat conditions for these species that already exists on the MHNF. The near absence of any information from surveys or monitoring of listed species makes a reasonable analysis of how this project and others proposed will cumulatively affect these species impossible.

1. Northern spotted owl.

- a. Lack of current spotted owl population baseline for the Mt. Hood National Forest precludes implementation of the South Fork timber sale.

To avoid the taking or otherwise jeopardizing of listed species and/or the destruction or adverse modification of critical habitat, the ESA creates a process whereby all federal action agencies must consult with the FWS before the action agency engages in actions that may affect critical habitat or a threatened or endangered species that may be present in the project area. 16 U.S.C. §§ 1536(a)(2). The action agency – here, the USFS – must prepare a biological assessment that describes the anticipated impacts to the target species because of the project. *Id.* § 1536(c)(1).

FWS then must issue a biological opinion that “shall...[e]nsure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat.” *Id.* §§ 1536(a); (b).

As part of a biological opinion, the FWS must quantify the extent of the incidental take and the effect that the proposed action will have on a listed species’ critical habitat. 16 U.S.C. § 1536(b)(4)(A)(i); (B)(i). To this end, the FWS must consider the impacts to the listed species from the proposed action in conjunction with past and present actions: the “effects of the action.” 50 C.F.R. §§ 402.14(g)(2) – (4); 402.02. In nearly all cases of consultation on the MHN, FWS has adopted the USFS’s biological assessment as FWS’s determination of effect on the listed species.

The FWS has an affirmative obligation to independently assess the status of the spotted owl, as well as the proposed project’s effect on the species. Consistently deferring to the USFS’s assessment of that agency’s impact to a listed species vitiates the consultation requirement of the ESA. 16 U.S.C. § 1536(b). Similarly, the Forest Service violates its own ESA requirement to independently ensure against jeopardy of a listed species and to use its authority to conserve listed species when it fails to require the FWS to adequately assess a proposed project’s impacts to those species. 16 U.S.C. § 1536(b).

The condition of the species and its habitat prior to the proposed action is known as the “environmental baseline” for the species. 50 C.F.R. § 402.02. The environmental baseline “includes all past and present impacts of all Federal, State, or private actions and other human activities in the action area; the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation; and the impact of State or private actions which are contemporaneous with the consultation in progress.” 50 C.F.R. § 402.02. Without an adequate environmental baseline, FWS has no way of evaluating the present status of a listed species, and thus cannot rationally decide whether additional impacts on the species may not jeopardize its continued existence.

The failure to make a population-based analysis creates a significant level of uncertainty regarding the level of impact that this project will have on owls in the planning area, adjacent roadless areas, and nearby lands. NEPA requires that when data are not available an agency should recognize the lack of data and explain why obtaining it was not feasible. 40 C.F.R. § 1502.22. The ESA prohibits the Forest Service from going forward with the proposed sale without ensuring that the project will not result in jeopardy to the species. In light of this, the FONSI was not reasonably supported, and an EIS should have been prepared that addressed population trends in relation to South Fork and adjacent sales.

- b. Direct and indirect impact to spotted owls precludes implementation of the South Fork timber sale.
 1. Programmatic consultation is unlawful absent site-specific consultation on project effects.

The Forest Service has inappropriately tiered to a programmatic biological opinion for spotted owls in support of its conclusion that this project will have no effects on the spotted owl. In *Pacific Rivers Council v. Thomas*, the Ninth Circuit Court of Appeals held that not only does the ESA require the Forest Service and National Marine Fisheries Service to consult on site-specific timber sales, but also on the larger management plan that directed where the site-specific actions would be allowed to occur. *Pacific Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1994). Similarly, in *Connor v. Burford*, the Ninth Circuit held that “incremental consultation” on oil and gas leases was unlawful, because it deferred consultation to later stages in development of the resource and therefore obscured the cumulative impacts to listed species. *Connor v. Burford*, 848 F.2d 1441 (9th Cir. 1988). The court explained that

The biological opinions of the FWS, which concluded that leasing itself was not likely to jeopardize the protected species, did not assess the potential impact that post-leasing oil and gas activities might have on protected species. Rather, the FWS opinions relied on “incremental-step consultation,” contemplating that additional biological evaluations would be prepared prior to all subsequent activities and that lessees’ development proposal would be modified to protect species.

Id. at 1452. As it did in *Pacific Rivers*, the Ninth Circuit in *Connor* required the FWS to prepare not only a comprehensive biological opinion on the USFS’s oil and gas leasing program, but also on subsequent leases themselves.

The court also addressed this issue in *North Slope Borough v. Andrus*, 515 F. Supp. 961 (D.C. Cir. 1981). There the DC court distinguished the Outer Continental Shelf Leasing Act (OCSLA) – which specifically allows for segmentation of projects by statute – from the Mineral Leasing Act (MLA), at issue in *North Slope*. The court explained that the OCSLA was not incompatible with the ESA, because the statute provided for “checks and balances,” which were absent in the MLA statute. The court was clear that the ESA will allow incremental consultation only when provided as such by the authorizing statute; in the absence of such allowance, consultation at the programmatic and site-specific level is required. In this case, there is no authorization in any underlying statute that would permit incremental consultation.

In *Lane County Audubon Society v. Jamison*, the Ninth Circuit confronted a similar issue to that in *Pacific Rivers*. *Lane County Audubon Soc’y v. Jamison*, 958 F.2d 290 (9th Cir. 1992). In *Lane County*, the BLM failed to consult with FWS on the Jamison Strategy, which set aside some old growth habitat but allowed much of the remaining habitat to be logged, and instead consulted on individual timber sales implemented pursuant to the Strategy. The court opined that “the impact of each individual sale on owl habitat cannot be measured without reference to the management criteria established” at programmatic levels. *Id.* at 316. Moreover,

Certainly a full accounting for impacts must be *cumulative as well as project specific*, and in particular circumstances...that assessment may not be made with confidence. It is also true that decisions made at the planning level may have significant effects if implemented over time, a good reason for requiring consultation at this stage. However, no automatic judgment can be made that individual projects will undermine typically general and long run planning options. Where there is a reasonable basis for concluding that individual and cumulative impacts of a project are unlikely to prejudice a species of concern, significant programmatic error is remote.

Id. at 317.

The District Court for the Western District of Washington squarely addressed the scope of analysis issue in *Pacific Coast Federation of Fishermen's Association v. National Marine Fisheries Service* (1999). *Pacific Coast Fed. of Fishermen's Ass'n v. National Marine Fisheries Serv.*, 71 F. Supp.2d 1063 (W.D. Wash. 1999). In that case – the second of three eventual challenges to 24 timber sale biological opinions – the court struck down NMFS' attempt to offset the short-term, site-specific impacts of old growth logging by claiming that the impacts would be nonexistent at the watershed scale (even if very evident at the site), and that “passive restoration”⁶ would minimize any adverse effects from timber harvest. Specifically, the agency argued that timber harvest was consistent with the Aquatic Conservation Strategy (ACS) of the Northwest Forest Plan, and that because the ACS was designed to protect listed fish species pursuant to the ESA, compliance with the NWFP was compliance with the ESA. *Id.* at 1068.

The court accepted NMFS' contention that compliance with the Plan equaled compliance with the ESA, but subsequently held that the agency had not complied with the ACS in permitting the degradation of water quality and fish habitat at the stream level. The court agreed with the plaintiffs' contention that “focusing on so large a landscape [in consultation] masks each sales' impacts...by focusing on the watershed level, NMFS has ensured that few if any projects will create sufficient degradation at the watershed level to be deemed inconsistent with the ACS.” 71 F. Supp.2d at 1069.

There is no statement anywhere in the South Fork PA that indicates why tiering this project to a programmatic BiOp is appropriate, or legal. Indeed, in the South Fork PA, the Forest Service makes the same argument that the courts found unlawful in *Pacific Rivers, Connor, North Slope Borough, Jamison*, and *Pacific Coast Federation of Fishermen's Association*. The agency maintains that so long as a programmatic biological opinion has been prepared that addresses the same type of activities that may occur on a site-specific basis, and it has completed the “programmatic biological assessment project consistency forms,” the USFS has met its ESA obligations. However, this approach does not take into consideration the site-specific particularities of the South Fork planning area, the management history of the area, or the status of the species in the planning area, and therefore violates the ESA and is arbitrary and capricious. 16 U.S.C. § 1536; 5 U.S.C. § 706(2)(A).

⁶ NMFS argued that the adverse effects of logging trees would be mitigated by the positive effects of trees regrowing in the same vicinity of the timber sale. The agency called this effect “passive restoration.”

2. Removal of dispersal habitat.

In addition to severing connectivity corridors and removing suitable habitat, the proposed sale will remove dispersal habitat from the planning area. PA, 41. Bark has several concerns with this approach. First, the PA states that “dispersal habitat described below is a combination of nesting/roosting/foraging (NRF) and dispersal-only habitat (i.e., All NRF habitat meets the requirements of dispersal habitat).” *Id.* at 41. Bark seeks clarification of this statement. Notably, “dispersal” habitat is *not* NRF habitat. *Compare*, USDA & USDI, DRAFT RECOVERY PLAN FOR THE NORTHERN SPOTTED OWL, 649 (defining “dispersal habitat”) and 654 (defining “NRF habitat”) 1992. NRF habitat contains all habitat elements for nesting, roosting, and foraging for the owl; but dispersal habitat does not contain all of these habitat elements. *Id.* Therefore, describing the habitat in the planning area – which is severely degraded from past management – as NRF is simply incorrect. Bark asks the Forest Service to correct this statement in future NEPA documents, and to clarify what kind of habitat will be logged under the South Fork project. For example, if the “dispersal habitat” referenced by the PA contains NRF, this is a much different sale than if the only habitat that will be logged is dispersal-only habitat.

Second, as stated earlier, the planning area is severely lacking in connective habitat. Given this situation, the Forest Service has unreasonably approved a project that will exacerbate an already fragmented landscape that is contributing to the decline of a listed species. 5 U.S.C. § 706(2)(A); 16 U.S.C. § 1536(b). Regardless of whether dispersal (connective) habitat is “declining,” because it is critical to the survival of the owl in the planning area, the Forest Service has an affirmative obligation to preserve this habitat. 16 U.S.C. § 1536(a).

Third, the Forest Service has failed to assess how the South Fork project will affect the spotted owls in the project area. Because the agency is relying on a programmatic BiOp for this project, and because the programmatic BiOp does not consider the site-specificity of the South Fork project, it is impossible for the Forest Service to explain to the public how this project will affect the species. For example, the PA contains a paragraph on “effects to spotted owl on a province scale (Willamette Province)” and a paragraph on “effects to spotted owl on the entire range of the species (Washington, Oregon, and California),” but contains no discussion on how the project will affect the spotted owls in the planning area. PA, 41 – 42. This is what NEPA, and the ESA require. Until this analysis is conducted, the Forest Service cannot implement the South Fork project.

Bark is cognizant that approval from FWS to implement a project indicates that FWS has determined that the project will not lead to jeopardy of the species. However, as stated previously, neither FWS nor the USFS have the environmental baseline to make an accurate assessment of whether the South Fork sale will in fact lead to jeopardy of the owl. We therefore urge the decision maker to withdraw the South Fork project and to modify the sale to protect all dispersal, NRF, and interior forest habitat.

c. Project design failure.

Bark understands that the Forest Service must make a difficult decision regarding the design of the South Fork timber sale in terms of forest health and spotted owl viability. However, when

such a management decision must be made, the ESA compels conservation of listed species over treating some overstocked forested areas. Consequently, the USFS failed to design South Fork to reverse the downward spotted owl population trend. Bark questions the prudence of a timber sale that results in the potential incidental take of spotted owls (the PA does not quantify the number of owls incidentally taken) as well as the degradation of the critical habitat.

Bark does not contest that the NFP recognized that spotted owl numbers would continue to decline. However, we remain unconvinced by any scientific evidence that the MHNF is *not* contributing to the decrease in the viability of this species across the species' range. Moreover, we maintain that the ESA – which is stronger authority than the NFP or NFMA – in fact prohibits this decline. Bark has repeatedly requested scientific data that support the conclusion that timber harvest practices on the MHNF are not contributing to the loss of habitat for the spotted owl, consistent with the ESA and NFMA. However, this confirmation has not been forthcoming. Therefore, Bark can only assume that no such data exist, and that the Forest is operating in direct opposition to the ESA and NFMA.

d. Interspecies competition.

Bark is also concerned that the Forest Service has failed to assess the effects of interspecies competition on spotted owl viability. Notably, the NFP and its EIS did not assess how spotted owls would be impacted by interspecies competition: it only addressed the impacts to the species because of habitat loss.

The FWS has recognized the importance of interspecies competition with spotted owls, and the role that barred owls play in spotted owl survival. *A Range Wide Baseline Summary and Evaluation of Data Collected through Section 7 Consultation for the Northern Spotted Owl and its Critical Habitat: 1994-2001*, 11. This document, prepared in response to litigation and dated June 26, 2001, should be incorporated into the administrative record in its entirety by this reference. In it, the FWS states that “the barred owls’ increasing expansion into the range of the spotted owl may eventually pose a serious threat” to spotted owl survival. *Id.* The mainstream media have also raised the question of interspecies competition and spotted owl viability.

Indeed, it is clear that past timber harvest has led to the increase in barred owl populations in the planning area. However, the South Fork PA only states that

The barred owl has been expanding into northern spotted owl territory from northeastern Canada since about 1900, moving into Washington, Oregon and Northern California and in some cases has been displacing spotted owls. Barred owls are known to be present on the Forest. Barred owls may be expanding their range because of changes to forest structure from logging, wildfire, or climate change.

PA, 40. Other than this disclosure, however, the Forest Service does not assess how barred owls, in addition to the South Fork project, will affect spotted owls. This uncertainty should have been enough to compel the Forest Service to complete an EIS. *National Parks and Conservation Assoc. v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001).

2. Listed Fish Species.

The PA indicates that there are several species of listed fish present in, or immediately downstream from, the planning area including chinook and coho. PA, 23 – 24. Many other fish species' populations are depressed or at risk of extinction. The Forest Service concludes that even though the planning area is “functioning at risk” or “functioning at unacceptable risk” for several parameters related to fish habitat and survival, the proposed project nonetheless will not adversely affect listed and non-listed fish species.

As stated previously, the courts have repeatedly held that this type of finding precludes implementation of the project because the project's effects violate the ACS. *Pacific Coast Fed'n of Fishermen's Assn's v. National Marine Fisheries Serv.*, 71 F. Supp. 2d 1063 (W.D. Wash. 1999), *aff'd*, *Pacific Coast Fed'n of Fishermen's Assn's v. National Marine Fisheries Serv.*, 265 F.3d 1028 (9th Cir. 2001). Indeed, the courts have also recently held that when the water quality in the planning area is not meeting state water quality standards, and when the proposed project will contribute to the degradation of water quality and fish viability, the project violates the Clean Water Act. *Sierra Club v. Austin*, No. CV-03-22-M-SWM (D. Mont. Apr. 30, 2003); 33 U.S.C. § 1323.

Because it is clear from the PA that the South Fork timber sale will contribute to aquatic degradation, it is reasonable to assume that fish and their habitat will be degraded as well. This violates the ACS, which in turn violates NFMA. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e); 5 U.S.C. § 706(2)(A).

B. Management Indicator Species.

NFMA requires the Forest Service to ensure animal and plant diversity in the national forests. 16 U.S.C. § 1604(g)(3)(B). USFS regulations implementing this requirement direct the Forest Service to manage forests for viable populations of native vertebrate and desired non-native species. 36 C.F.R. § 219.19. The regulations define viable populations as a population that has “the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area.” *Id.*

To ensure that viable populations are maintained, the Forest Service regulations also require that the Service identify management indicator species (MIS) and that “[p]opulation trends of the management indicator species will be monitored and relationships to habitat change determined.” 36 C.F.R. § 219.19(a)(6). This monitoring is “essential to verify and, if necessary, modify the forest plan's assumptions about the effects of timber harvesting and other management activities on wildlife...In order to meet the monitoring requirement, planners will need to obtain adequate inventories of wildlife populations and distribution.” Charles F. Wilkinson and H. Michael Anderson, *Land and Resource Planning in the National Forests*, 304 (1987).

The Ninth Circuit has stated that the duty to ensure viable or self-sustaining populations “applies with special force to “sensitive” species.” *Inland Empire Public Lands Council v. United States Forest Serv.*, 88 F.3d 754 (9th Cir. 1996) (citing *Oregon Natural Resources Council v. Lowe*, 836 F.Supp 727, 733 (D.Or. 1993)). NFMA clearly directs the Forest Service to create regulations to

“insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land.” 16 U.S.C. § 1604(g)(3)(C); *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999).

In light of this direction, NFMA’s regulations require inventorying and monitoring on the National Forests under 36 C.F.R. §§ 219.12(d) and (k) as well as 36 C.F.R. §§ 219.19(a)(6), 219.26, and 219.19(a)(2). The regulations state “each Forest Supervisor shall obtain and keep current inventory data appropriate for planning and managing the resources under his or her administrative jurisdiction.” *Id.* § 219.12(d). The regulations further require that “at intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied.” *Id.* § 219.12(k). To ensure biological diversity, the regulations specifically require that “[i]nventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition.” *Id.* § 219.26.

Although NFMA clearly requires the monitoring of MIS populations, the Forest Service has traditionally relied upon the availability of suitable MIS habitat, rather than population surveys, to meet NFMA’s viable populations requirement. *Inland Empire Public Lands Council v. United States Forest Serv.*, 88 F.3d 754 (9th Cir. 1996). Recently, however, the Ninth Circuit has revisited its holding in *Inland Empire*, and held that if the Forest Service utilizes a “proxy-on-proxy” approach to meeting the agency’s NFMA obligations, any habitat models must be grounded in fact and field verified. *Idaho Sporting Congress v. Rittenhouse*, 305 F.3d 957 (9th Cir. 2002). The court also acknowledged that other courts have expressly disavowed the holding in *Inland Empire*, casting additional doubt on the validity of that case. *See generally*, *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999), *Utah Environmental Congress v. Zieroth*, 190 F. Supp. 2d 1265, 1272 (D. Utah 2002) (holding that § 219.19 unambiguously requires collection of population data), *Forest Guardians v. U.S. Forest Service*, 180 F. Supp. 2d 1273 (D.N.M. 2001) (same).

On the Mt. Hood National Forest, the Forest Service has failed to survey for any management indicator species, or even to assess their viability based on habitat availability (but only if a certain MIS was difficult to survey for). Given the developing reinterpretation of the legal requirements attendant to management indicator species, it is questionable at best whether the multiple mandates in NFMA and its implementing regulations requiring population monitoring and surveying are being met for the South Fork timber sale. Given this situation, we recommend that the USFS immediately withdraw the PA until the appropriate information can be gathered for this project.

C. Migratory Birds.

The South Fork timber sale would significantly impact migratory birds in violation of the Migratory Bird Treaty Act. 16 U.S.C. §§ 703—712 (1994). The South Fork sale would likely directly kill nesting migratory birds and reduce migratory bird habitat that exist in the planning area. The proposed sale would additionally fragment migratory bird habitat. Unlogged areas would also be negatively impacted by generalist bird species favored by the environmental

conditions created in highly fragmented forest. The impact these abundant and highly competitive bird species would have on sensitive bird species dependent on intact and less fragmented forests should have been evaluated in the PA. Instead, the PA only states that “the effects of commercially thinning 497 acres of young plantations would most likely have a combination of positive, neutral, and negative impacts on migratory songbird use....” PA, 54. This statement is inadequate to describe the project’s effects on these species.

The impacts that the sale would have on migratory birds are supported by multiple scientific studies. Forest fragmentation is considered to be a primary cause behind declines observed in many forest songbird species and further loss or fragmentation of habitat could lead to a collapse of regional populations of some forest birds. Robinson *et al.* 1995. As landscapes become increasingly fragmented, regional declines of migrant populations may result. *Id.* In the Pacific Northwest, researchers have found that late-successional forests are integral to the survival of migratory birds. Sharp, B. E. 1996. *Avian population trends in the Pacific Northwest*. BIRD POPULATIONS 3: 26-45. This information was unaddressed in the South Fork PA.

In August 1999, the FWS outlined what it perceived to be the agency’s legal obligation in terms of migratory birds and timber harvest. FWS stated that agencies should take “an extremely cautious position with respect to the intentional take of migratory birds by federal agencies.” *Letter from Acting Director, United States Fish and Wildlife Service, to Regional Directors, Regions 1–7 and Assistant Director, Refuges and Wildlife (August 17, 1999)*, 3. FWS also cautioned that “the Service should not assert in any communication or correspondence that federal agencies are not covered by the prohibitions of the MBTA [Migratory Bird Treaty Act].” *Id.*

In July 2000, the Eighth Circuit Court of Appeals held that federal agencies are required to obtain a take permit from FWS prior to implementing any project that will result in take of migratory birds. *Humane Soc’y of the United States v. Glickman*, 217 F.3d 882 (8th Cir. 2000). Due to this litigation, the FWS is operating under the assumption that the Migratory Bird Treaty Act applies to the Forest Service and its activities. 16 U.S.C. § 703 et seq. The Act states that “it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill . . . any migratory bird.” 16 U.S.C. § 703.

In January 2001, President Clinton signed Executive Order 13,186 that outlined the federal government’s responsibility to comply with the Migratory Bird Treaty Act. Exec. Order No. 13,186, 66 Fed. Reg. 3,853 (2001). President Bush has not rescinded this Order. Recent legal analysis confirms that the Forest Service must actively prevent the take of migratory birds, or obtain a permit for incidental take of individual species. Helen M. Kim, *Chopping Down the Birds: Logging and the Migratory Bird Treaty Act*, 31 ENVTL. L. 125 (2001).

The Forest Service has ignored these legal and scientific obligations. Until the agency can demonstrate that it has complied with the requirements of the Migratory Bird Treaty Act, the South Fork timber sale should be withdrawn.

D. Survey and Manage Species.

The PA indicates that surveys for survey and manage species have been completed and that some species were located. PA, 60. Bark reminds the agency that sufficient buffers are required for all survey and manage C-3 species, and that these buffers must be identified in sale and NEPA documentation. The PA did not indicate how the Forest Service will manage the located species. We request that the agency make this disclosure in forthcoming NEPA documents.

IV. The South Fork PA Inadequately Analyzes the Impact to Soil Resources.

The proposed project also violates NFMA because it will permanently impair the productivity of the area due to degradation of soil productivity, significant changes to watershed functions, the introduction of exotic invasive weeds, and the increase in the already high rates of erosion and sedimentation. 36 C.F.R. §§ 219.14 (a)(2); 219.27(a)(1). There is no scientific support in the PA that these impacts can be adequately mitigated. Therefore, the project must be withdrawn until compliance with NFMA can be obtained.

The PA only briefly describes the types of impacts that logging can cause to soil resources generally; it does not provide a site-specific analysis of how the South Fork sale will affect soils within the planning area. The Forest Service is required to conduct a site-specific analysis, and to document how the proposed project will affect the resource at issue. 36 C.F.R. § 219.27(a)(1). The agency has failed to do so in this case.

A. Mycorrhizae.

The South Fork PA did not recognize the importance of mycorrhizal fungi on forest growth and productivity, and failed to discuss how mycorrhizae will be impacted by the proposed timber project. In fact, this resource's important function in forest ecology was completely overlooked.

The PA failed to address how past logging has affected mycorrhizae in areas within the analysis area that have been logged. Scientific evidence suggests that mycorrhizae and other soil organisms and processes are extremely important and are easily destroyed by ground-based logging. Without a discussion of the impacts to soil mycorrhizae, Bark and the decisionmaker are precluded from making an informed decision regarding the proposed project, and the USFS cannot assert that there will be no permanent impairment of the soil. 30 C.F.R. §§ 219.27(a)(1), 219.14(a)(2) (prohibiting activities unless technology is available to prevent impairment of soil or water resources).

B. Soil Compaction and Disturbance.

Bark is concerned about the lack of analysis regarding soil compaction and disturbance. A discussion of site-specific soil compaction and disturbance levels in the proposed units is absent from the PA, other than the assertion that no adverse soil conditions will result post project. This statement is belied by the fact that historic logging has resulted in soil conditions that exceed the 15% cumulative effects threshold for soil resources. PA, 55. Other than these disclosures, there

is no discussion of how soil disturbance will affect the area's ability to remain productive, or even where this disturbance will take place in the South Fork planning area.

Bark is not assuaged by assurances by the agency that it can prevent adverse impacts to already damaged soil resources in the planning area, or that mitigation can resolve "some" of these impacts. What is the MHN's record of adhering to BMPs and preventing soil displacement and erosion? Given the fact that the planning area is experiencing a high level of adverse soil effects from historical logging, it is improbable that administration of the South Fork timber sale will be any different than past entries.

Indeed, the PA discloses that several units will exceed the 15% threshold for cumulative soil effects post-project. In fact, some units will reach 22% detrimental soil conditions post-project, and a total of six units will not be consistent with LRMP standards. PA, 56 – 57. Given that such percentages will violate the LRMP, the Forest Service must drop these units from harvest; there is no legal authority for "exceptions" from LRMP standards. 16 U.S.C § 1604(i); 36 C.F.R. § 219.10(e). In addition, mitigation measures designed to minimize detrimental soil conditions are ineffective and inappropriate for forest conditions and soils. *Attachment 2, Assessing the Use of Subsoiling within the Upper Chewaucan Watershed.*

Given the fact that the USFS has a demonstrated inability to conserve soil resources and protect soil from detrimental compaction and disturbance, the agency should be precluded from conducting any ground-based logging in the South Fork planning area. Similarly, given the fact that the USFS does not adequately address the impacts on soils in the planning area, it is impossible to determine whether the USFS will violate Forest Plan standards, as well as NFMA standards that require the conservation of soil resources. 36 C.F.R. § 219.27(a)(1).

C. Coarse Woody Debris Retention.

Maritime forests of western North America are notable for the very large amounts of living and dead biomass which they accumulate over long periods. The presence of coarse woody debris (CWD) in large amounts, as well as large standing volume, is a frequently cited indicator of late-successional forest conditions.

The PA notes that there is a significant lack of CWD in the planning area. There seem to be no plans to remedy this situation, other than some attempts to avoid some concentrations of CWD. Bark recommends that the Forest Service consider replicated CWD in areas deficient of this material, such as by bundling small diameter trees together to form larger "logs." While not as beneficial as large down wood naturally occurring in late-successional stands, these structures can mimic some of the function provide by natural down wood. All efforts should be made to retain CWD where it is found in South Fork units.

No published evidence exists directly on the long-term effects of one-time thins on rates and levels of total CWD and biomass accumulation in stands as old as those that are present in the South Fork planning area. Some strong inferences can be made, however, based on thinning trials involving repeated light thins. Compared to one-time thins, repeated light thins leave less unoccupied growing space for less time, increasing the likelihood that the residual canopy trees

can reclaim the freed-up growing space. They also deliver less abrupt, hence less traumatic, shocks to the residual forest.

The results of repeated light thin trials thus offer what is likely to be an optimistic picture of the effects of single heavy thins. Most such thinning trials have started with very young stands which have not yet reached crown closure. However, the McLeary Trial in Southwest Washington, which started on a 57-year-old natural, predominantly Douglas-fir stand, provides probably the most relevant published evidence. The thinning regime was of three relatively light thins at five-year intervals: a first thin removing about 13% of the standing volume, and subsequent thins removing roughly two thirds of the newly accrued gross volume growth.

At the end of a fifteen-year interval, the unthinned stand had produced about 14% more total volume (including thinning removals and mortality) than the thinned one. The remaining live wood volume, thanks to the removals, was 64% greater on the unthinned stand. The unthinned stand had also produced about twice as much dead wood (mortality) as the thinned stand. King, “*Review of Douglas Fir thinning trials*” in Oliver et al., Eds., 1986.

It is not just the standing volume which is diminished by these thins, but also the rate at which future biomass accumulates. Residual trees do sometimes experience growth release, but it doesn't begin to make up for all the biomass accumulators, i.e. trees, which have been removed. Data from unpublished stand exams of commercial thin sites on the Olympic National Forest also typically reveal large falloffs in rates of total volume accumulation. Jan Henderson, Address at Olympic National Forest Service Headquarters (2003).

Published results for repeated light thins starting with very young stands prior to canopy closure, reveal a slightly different picture. For example, in their latest report on the LOGS trials, Marshall and Curtis (1992) report that at stand age 60, total standing live volume in unthinned controls is now less than that of the lightest thinning treatments, and the rate of accumulation is less. Gross periodic annual increment (biomass accumulation) continues to be greatest in the unthinned control, however; the difference is due to large amounts of ongoing competitive mortality in the unthinned stand. Thus even under the sorts of early and repeated light thinning regimes most favorable to tree growth response and biomass accumulation, the result holds true that thinning still marginally reduces biomass accumulation rates.

Given the preceding discussion, it is clear that the likely effects of a relatively heavy one-time thin in relatively old forest are not consistent with the stated purpose and need of creating and maintaining late-successional forest. A significant drop in the stock of standing biomass reduces present and future biomass available for snag recruitment, and, through reduced competition, immediately reduces tree mortality. In a commercial context, tree mortality is a waste; in an ecological context, it is a desirable and complexity-augmenting event.

The Forest Service cannot claim that the purpose and need of the South Fork timber sale is to create late-successional habitat conditions when it simultaneously reduces the present and future pool of biomass from which snags and CWD are derived, and also creates snags by topping the largest trees in the stand. Snags and CWD are stages in an ongoing process of decadence, mortality, and decomposition, not a fixed stock. If the process fails to operate at natural levels

because large amounts of biomass have been removed, one-time creation of artificial snags is a poor substitute because it is highly uncertain whether wildlife uses created snags, or whether they function as surrogates for naturally-occurring snags and CWD. USDA FOREST SERVICE, CREATED SNAG MONITORING ON THE WILLAMETTE NATIONAL FOREST, PSW-GTR-181 (2002).

D. Snags.

Much like CWD, the planning area is deficient in snag habitat. The PA is unclear regarding its treatment of snag habitat, and whether forest plan standards would be met post-project. The PA first states that the MHFP requires a 60% biological potential for snag habitat. PA, 48. The PA states that this standard would not be met post-project. *Id.* The PA then states that “the standard for landscapes is 40% biological potential,” which also would not be met post-project. *Id.* at 50. However, the PA finally concludes that “the analysis shows that within the snag analysis areas, the snag levels after the past, present and foreseeable future harvest activities occur would still be above the 100% biological potential level for all alternatives. This exceeds the Forest Plan standard of 40% biological potential (FW-216).” *Id.* at 51.

Bark requests clarification of: 1) what the LRMP requirement for snag habitat is; 2) what the biological potential will be post-project; 3) and whether this will be consistent with LRMP standards.

E. Noxious Weeds.

The South Fork PA inadequately discusses the status of noxious weeds in the planning area. Disturbed soils – such as those created through logging and road construction – provide ideal habitat for noxious weed introduction and spread. Indeed, the PA notes that “the action alternatives would have a risk rating of high....” PA, 62. However, there is no analysis in the PA of how the Forest Service proposes to deal with this issue, other than the standard listing of mitigation measures (i.e., washing logging equipment), that has been ineffective in the past.

The courts have recently held that failing to address an action alternative that would *prevent* the introduction of noxious weeds is arbitrary and capricious, and violates NEPA for failing to consider a reasonable range of alternatives. *Blue Mts. Biodiversity Project v. United States Forest Serv.*, 229 F. Supp. 2d 1140, 1147 (D. Or. 2002). That case also held that the USFS erred in tiering its analysis of noxious weed spread and introduction to the 1988 FEIS and Record of Decision on Managing Competing and Unwanted vegetation, and that the Forest Service violated NEPA in failing to prepare a supplemental EIS for the 1988 FEIS and ROD. *Id.* at 1148 – 1149.

Given this legal interpretation of the Forest Service’s obligations vis-à-vis noxious weed introduction and spread, the USFS must withdraw the South Fork PA. Failing to do so is arbitrary, capricious, and not in accordance with law. 5 U.S.C. § 706(2)(A).

V. The South Fork PA Inadequately Analyzes Roadless Areas.

The PA fails to discuss the location and presence of uninventoried roadless areas in the planning area, and how the proposed project will affect the roadless nature of much of the planning area.

Bark notes that the USFS should prepare an EIS for the South Fork project because it proposes logging in de facto roadless areas that could be added to existing roadless areas or Wilderness Areas at any time.

There is overwhelming consensus among academic and agency scientists that roadless areas are irreplaceable national resources that have extremely high ecological values. Unroaded areas serve as reservoirs of ecological diversity, benchmarks for restoring ecological health, critical elements for aquatic resource conservation, areas with the highest water quality, sanctuaries for species detrimentally affected by road building and logging, and strongholds for species recovery efforts. *See generally*, Lee et al. 1997; USDA and USDI 1995; USFWS, NMFS, and EPA 1995; Henjum et al. 1994; Rhodes, McCullough, and Espinosa 1994; Wissmar et al. 1994; Anderson et al. 1993; FEMAT 1993.

Political and agency leaders alike have agreed that it is simply common sense to avoid roadless and other controversial areas. *See generally*, Regional Forester memo to Forest Supervisors of May 2, 1997. Indeed, Forest Service Chief Mike Dombeck also acknowledged the public outcry to protect unroaded areas: “the unfortunate reality is that many people presently do not trust us to do the right thing. Until we rebuild that trust and strengthen those relationships, it is simply common sense that we avoid riparian, old growth, and roadless areas.” *Hearings on the Roadless Area Conservation Rule Before Senate Energy & Natural Resources Committee* (1997) (statement of Michael Dombeck, Chief of the Forest Service).

Roadless areas greater than 1,000 acres, whether they have been officially inventoried or not, provide valuable natural resource attributes that must be recognized and protected. The benefits of roadless areas include: water quality; healthy soils; fish and wildlife refugia; centers for dispersal, recolonization, and restoration of adjacent disturbed sites; reference sites for research; non-motorized, low-impact recreation; carbon sequestration; refugia that are relatively less at-risk from noxious weeds and other invasive non-native species, and many other significant values. These values were recently recognized in the Forest Service’s Roadless Area Conservation Plan. 64 Fed. Reg. at 7,299 (“the potentially damaging ecological effects of a first entry into an unroaded area is [sic] often proportionately greater than the effects of similar construction or reconstruction in an already roaded area”); 64 Fed. Reg. at 7,291 (suspension of road building in ecologically important roadless areas); 63 Fed. Reg. 4,352 (ecologically important and unique qualities of roadless areas); 65 Fed. Reg. 30,280 (roadless values considered in forest planning process).

While the Forest Service claims that the South Fork project will not enter inventoried roadless areas, there is no admission or acknowledgment in the PA that the project would log in unroaded areas that fall outside the official set of “inventoried” roadless areas.⁷ Unroaded areas are a long-standing public concern, going back even before the Wilderness Act of 1964 to efforts of Bob Marshall and other visionaries to designate Forest Service administrative Wilderness Areas and Primitive Areas to protect intact wild backcountry.

⁷ To avoid confusion, we will use the following terms. “Roadless Area” means an area that has been inventoried at some point by the Forest Service under RARE I, RARE II, or the MHNF LRMP EIS. “Unroaded Area” means “undeveloped federal land within which there are no improved roads maintained for travel by means of vehicles intended for highway use,” but that fall outside of the inventoried Roadless Areas.

NEPA requires agencies to analyze the environmental impacts of major federal actions that will have a significant impact on the quality of the human environment in an environmental impact statement. 42 U.S.C. § 4332(2)(C). The agencies may prepare a lesser environmental assessment and Finding of No Significant Impact only when the action will not have a significant effect on the human environment. 40 C.F.R. § 1508.13. There is no question that roadless areas contain significant biological values, and that logging those areas has significant and adverse environmental impacts. NEPA also requires that an EIS fully analyze the cumulative, adverse environmental impacts of a proposed action. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.

The Oregon federal district court has dealt with this issue in the past. In *National Audubon Society v. U.S. Forest Service*, the court held that

The designation of an area as “roadless” for the purpose of determining the broad category of future development possibilities is not synonymous with an assessment of whether an area is in fact roadless or an analysis of whether significant environmental consequences will result from the development of the area...It is the on-the-ground situation which determines whether an area is roadless and undeveloped for purposes of assessing compliance with NEPA.

National Audubon Society v. U.S. Forest Service, 21 ELR 20828, No. 90-811-MA (D. Or., 1990). Similarly, the Ninth Circuit has held that NEPA requires the USFS to take a hard look at the impact of timber sales on an area’s roadless qualities. *Smith v. U.S. Forest Service*, 33 F.3d 1072, 1079 (9th Cir. 1994). These cases address both inventoried roadless areas from RARE II or LRMPs, as well as uninventoried unroaded areas that nevertheless have similar values to the public and would likewise be irreversibly altered by logging.

Utilizing this case law, members of the conservation community filed suit in 2001 to compel the Gifford Pinchot National Forest to consider the roadless characteristics of the planning areas of several timber sales. *Northwest Ecosystem Alliance et al. v. United States Forest Service*. In April 2003, the Federal District Court for Montana held that under the guidance of *Smith* and *California v. Block*, 690 F.2d 753 (9th Cir. 1982), the Forest Service is obligated under NEPA to address the roadless characteristics of unroaded areas in timber sale proposals. *Sierra Club v. Austin*, No. CV-03-22-M-SWM, slip op. at 17 (D. Mont. Apr. 30, 2003).

VI. The Decision Notice Failed to State whether all Practicable Means to Avoid or Minimize Environmental Harm Have Been Adopted.

NEPA’s regulations explicitly require that agencies state in a NEPA decision whether all practicable means to avoid or minimize environmental harm have been adopted and, if not, why. 40 C.F.R. § 1505.2(2). The South Fork PA made no such finding.

NFMA requires that “management prescriptions that involve vegetative manipulation of tree cover for any purpose shall: Be best suited to the multiple-use goals established for the areas with potential environmental, biological, cultural resource, aesthetic, engineering, and economic impacts, as stated in the regional guides and forest plans being considered in this determination.”

36 C.F.R. § 219.27(b)(1). The South Fork Timber Sale violates NFMA since the extensive logging and associated impacts continue to cause soil erosion, soil compaction, loss of mycorrhizae, increased peak flows, and adverse impacts to water quality. Consequently, logging techniques that cause the least amount of soil disturbance should have been used.

VII. Scientific Controversy Surrounding Thinning to Increase Stand Diversity and Create Late-Successional Characteristics Compels the Preparation of an Environmental Impact Statement.

Over the past few years, a debate has begun to form around the efficacy of thinning overstocked forest stands. Some researchers argue that this practice is beneficial, while others claim that the practice of “restoration silviculture” is too new to hold up as a panacea for past mismanagement of forestlands. Nevertheless, the Forest Service maintains that there is only “one way” to “create” old growth, and laments natural processes that may take more time. This overlooks the fact that old growth *should* take significant time to develop. *FEMAT*, IX-20.

As mentioned previously, NEPA has two primary goals: (1) to insure that the agency has fully contemplated the environmental effects of its action; and (2) to insure the public has sufficient information to challenge the agency. The failure of the South Fork PA to disclose and discuss the directly applicable and conflicting science on restoration silviculture foreclosed meaningful public participation and involvement for the project. A concerned member of the public reviewing the South Fork PA would have no notion whatsoever that there is considerable scientific evidence that counsels against broad scale application of thinning to “create” old growth habitat.

NEPA requires that the Forest Service support its conclusions with scientific information and analysis. The Ninth Circuit in *Idaho Sporting Congress v. Thomas* stated that “we conclude that NEPA requires that the public receive the underlying environmental data from which a Forest Service expert derived her opinion.” 137 F.3d 1146, 1150 (9th Cir. 1998). Similarly, NEPA does not allow an agency to simply disregard contrary science that is directly applicable to its proposal. *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973) (“[NEPA] helps insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug”); *Seattle Audubon Society v. Lyons*, 871 F.Supp. 1291, 1318 (W.D. Wash. 1994), *aff’d sub nom. Seattle Audubon Society v. Moseley*, 80 F.3d 1401 (9th Cir. 1996) (NEPA requires the agency to “disclose responsible scientific opinion in opposition to the proposed action, and make a good faith, reasoned response to it”); *Seattle Audubon Society v. Moseley*, 798 F.Supp. 1473, 1479 (W.D. Wash. 1992), *aff’d sub nom. Seattle Audubon Society v. Espy*, 998 F.2d 699 (9th Cir. 1993) (The failure to disclose and respond to the opinions held by well respected scientists concerning the hazards of a proposed action “is fatally deficient”).

In this case, there is significant scientific debate about the efficacy of thinning to create stand diversity, especially as this practice might apply to the South Fork planning area. The courts have held that a discussion of the scientific controversy must either be found within the individual NEPA document, such as the South Fork PA, or at least summarized and incorporated by reference, as required by NEPA. *Blue Mountains Biodiversity*

Project v. Blackwood, 161 F.3d at 1214 (“The PA contains virtually no references to any material in support of or in opposition to its conclusions. *That is where the Forest Service’s defense of its position must be found*”) (emphasis added); *League of Wilderness Defenders v. Forsgren*, 184 F.Supp.2d at 1069; *League of Wilderness Defenders v. Zelinski*, 187 F.Supp.2d at 1271; *Sierra Club v. Bosworth*, 199 F.Supp.2d at *10-*11. See also 40 C.F.R. §§ 1508.27(b)(4); 1508.27(b)(5); 1502.24.

Here, the USFS failed to either disclose the controversy in the PA or to summarize and incorporate by reference the relevant studies. Consequently, the PA is fatally flawed and must be withdrawn. In the alternative, the USFS may prepare an EIS that carefully addresses all scientific evidence surrounding restoration silviculture and whether this treatment is appropriate for the South Fork planning area.

A. Understory Regeneration.

Excessive monospecific understory regeneration is an increasingly acknowledged problem of forest thinning in many plant associations. Such outcomes typically diminish the habitat value and fine-scale diversity of thinned forests. In the southern part of the region, this often takes the form of dense clonal salal shrub layers. Tappeiner et al, 1991. In the hemlock-dominated portions of the pacific slope forests (from northern Washington on through the Alaska panhandle) the commonest problem is hemlock seedling regeneration at densities of many thousands per acre. This problem is well described in published literature for sites in SE Alaska. Alabeck and Tappeiner 1991; Hanley and McKendrick, 1985.

In western Washington, area ecologist Jan Henderson has observed and reported this phenomenon on many thinning sites in the Olympic and Mount Baker-Snoqualmie National Forests. Under heavier thinnings, a common outcome is a dense second canopy layer of hemlock, which virtually eliminates shrub or forb layers in the forest. Under lighter thinnings, the canopy may re-close tightly and early enough, so that the developing hemlock understory, once established, fails to grow into a second canopy. Rather it persists for long periods as a low, dense shrub-like layer.

Adolescent stands with a high hemlock component in the initial cohort typically lack significant understory forb or shrub development. Such stands are at greatest risk for this phenomenon. Following thinning, a dense hemlock seed rain encounters no established competitors, and light and moisture levels and organic litter well suited to hemlock seedling establishment. On mesic, productive sword-fern association sites, excessive hemlock regeneration can occur even in the presence of substantial preexisting forb and shrub understories.

Such adverse regeneration outcomes matter little under a commercial thinning regime, since biodiversity is not an objective, and since later entry (i.e. felling of all or most residual members of the thinned cohort) typically occurs within twenty years, at which point the forest development clock is effectively re-set to zero. Under extended rotations, however, such as the 120-150 year rotations advocated by so-called “biodiversity pathway” thinning or one-time

thinning entries for LSR lands, these outcomes matter; they effectively defeat the biodiversity rationale for this thinning in the first place. Carey et al., 1996.

B. Thinning Regularity.

Natural disturbance regimes are disorderly and occur on a continuum of scales. Partly in consequence of their long exposure to these disturbance regimes, old forests, and old trees, have a characteristic, but hard-to-describe, irregularity. This irregularity has a fractal, scale-independent feel: at any scale one cares to examine, complex mixtures of order and disorder, with irregular boundaries, can be discerned. Conventional thinning, in contrast to natural disturbances, is regular and simplifying in its effects, and can “result in reduced patterns of spatial heterogeneity in plant species composition, function, and structure – the reverse of most natural stand development processes.” Lindenmayer and Franklin, 1983.

Thinning patterns characterized by skips (completely unthinned patches), gaps (small openings such as might be created naturally by laminated root rot or windthrow), and multiple thinning densities, all applied irregularly, not according to some regular pattern, are a partial answer to this failing. The “biodiversity pathway” management proposal takes a very small step in the right direction by calling for alternation of two different densities in one-acre patches. Carey et al, 1996. While less homogenizing than uniform density thins, this remains a highly regular and unnatural landscape pattern.

The thinnings planned for most units at South Fork do not take even this small step. They differ little from traditional homogenizing silvicultural thins designed to promote uniformly large, merchantable trees. “Thinning from below” can be expected to narrow the range of tree sizes in these stands. The harvest prescriptions proposed in South Fork are to a homogeneous relative density (Curtis), lacking even a minimal effort at patchiness, skips, and gaps, or multiple densities. The laminated root rot treatments proposed will enlarge and tidy up existing canopy gaps, not create new ones.

We cannot see how these traditional silvicultural thinning patterns serve to “accelerate late-successional habitat conditions through silvicultural harvest.” Late successional habitat is about more than just regularly spaced large trees, but the Forest Service has failed to take this into consideration.

VIII. Use of Fertilizer.

The PA indicates that the Forest Service intends to use fertilizer on 178 acres to facilitate regeneration and growth. PA, 7, 27. Application would be accomplished with helicopters. Id. at 9. Bark has three concerns with this proposal.

First, the PA does not demonstrate that there is a need to facilitate growth of vegetation in thinned stands. Indeed, given that this project has been proposed as a “remedy” to overstocked stands, there is no evidence that these areas cannot grow new vegetation without chemical applications. The Forest Service must explain why it is necessary to fertilize any of the proposed stands.

Second, the PA does not address the environmental effects of fertilizer use. Although the PA does state that the soils in the planning area are porous and likely to absorb the fertilizer, there is

no discussion of application to aquatic areas, even if by “mistake.” Riparian buffers will not prevent misplaced applications from reaching streams. Forthcoming NEPA documents should address the environmental effects of fertilizer application on aquatic resources.

Finally, it does not appear that the Forest Service has obtained a National Pollution Discharge and Elimination System (NPDES) permit for the aerial application of fertilizer as required by law. In *League of Wilderness Defenders/Blue Mts. Biodiversity Project v. Forsgren*, the Ninth Circuit held that the Forest Service violated the Clean Water Act when it aerially applied pesticide without a NPDES permit. *League of Wilderness Defenders/Blue Mts. Biodiversity Project v. Forsgren*, 309 F.3d 1181 (9th Cir. 2002). The court also held that the Forest Service was required by NEPA to assess how the effect of pesticide drift from applications would affect natural resources. 309 F.3d at 1192.

In this case, the Forest Service has not demonstrated neither that it has obtained a NPDES permit for fertilizer application, nor that it has assessed the environmental consequences of fertilizer drift from aerial applications. The law requires such an analysis, as well as a NPDES permit for the proposed action. Until the Forest Service has demonstrated that it has accomplished both, the South Fork project must be withdrawn.

IX. The Preliminary Assessment for the South Fork Timber Sale is Inconsistent with Applicable Laws and is Arbitrary and Capricious in Violation of the Administrative Procedure Act.

The Administrative Procedure Act requires reviewing courts to “hold unlawful and set aside agency action, findings, and conclusions found to be...arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.” 5 U.S.C. § 706(2)(A). The court will look to see if the USFS decision was “based on a consideration of the relevant factors... Moreover, it must engage in a ‘substantial inquiry’ into the facts, one that is ‘searching and careful’.” *Northern Spotted Owl v. Hodel*, 716 F.Supp 479, 482 (W.D. Wash. 1988), quoting *Ethyl Corp. v. EPA*, 541 F.2d 1, at 34 (D.C. Cir.), *cert. denied*, 426 U.S. 941 (1976). The PA for the South Fork timber sale was not based on a consideration of relevant factors. The decision not to consider a full range of alternatives in an EIS was arbitrary and capricious.

The failure to eruditely consider all relevant environmental impacts in the PA was arbitrary and capricious. This decision contravenes the clear intent of NEPA as well as NEPA’s implementing regulations that require the USFS to fully consider the direct, indirect, and cumulative impacts of this project in conjunction with other past and future impacts in the area. 40 C.F.R. §§1500.1(b), 1508.25(2), 1508.27(b)(7); *Sierra Club v. United States Forest Service*, 843 F.2d 1190, 1193 (9th Cir. 1988).

CONCLUSION

The South Fork Timber Sale analysis area provides important aquatic and terrestrial habitat for a multitude of species. However, the proposed project and adjacent past and present projects would log a significant remaining stretch of forest that facilitates wildlife movement in a

landscape that has been highly fragmented by the pursuit of native timber at the cost of multiple use values such as wildlife and recreation.

Information about non-game sensitive and listed wildlife species is seriously lacking. Habitat conditions strongly indicate that the MHNH is not providing for viable populations of spotted owl, marbled murrelet, salmon, and numerous other species affected by high road densities and the loss of interior forest habitat in almost all sub-basins. Water quality information is lacking. Exotic weeds are spreading throughout the forest and decreasing wildlife habitat values.

In light of these existing conditions, the proposed project will have significant cumulative impacts when viewed in conjunction with other past, present and future timber projects. The poor condition of areas of the forest is aggravated by non-federal activities on adjacent lands. An EIS should be prepared in order to completely address all of these issues.

The MHNH should withdraw the South Fork Timber Sale PA and prepare an EIS analyzing South Fork and proposed adjacent timber projects and other federal and non-federal projects. The MHNH should also begin surveys of MIS, listed, and sensitive species on a forest-wide basis. Anything short of this ignores the multiple use objectives of NFMA, and the ESA's and NEPA's requirement of high quality science, leaving the MHNH with little basis for concluding the Forest is meeting the requirements of the National Environmental Policy Act, Clean Water Act, Endangered Species Act, National Forest Management Act, Northwest Forest Plan, and the Mt. Hood National Forest Land and Resource Management Plan.

Thank you for the opportunity to comment on this project. As stated above, we are concerned about the native stands, road construction, high road density, spotted owl populations and other resources that are at risk as a result of this sale. We are concerned that this project as outlined will cause more damage than good in this sensitive and highly degraded watershed, and we are not convinced that commercial logging is the best way to address the problems that exist in this planning area. For this reason, we ask that a complete Environmental Impact Statement be prepared, and that issues raised in this letter be specifically addressed. We would like the opportunity to work with you to turn this project into a truly restoration based proposal and are interested in working together with you to find resources to make this kind of project possible.

Sincerely,

Susan Jane M. Brown, Board President
Bark