April 23, 2018

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**Re: Scoping Comments on Powder River Watershed Mining Plans EIS**

Dear Mr. Tomac:

Thank you for the opportunity to provide scoping comments on the Forest Service's proposed Powder River Watershed Mining Plans Environmental Impact Statement (EIS). The undersigned reserve the right to supplement these comments during the Forest Service's review process (such as additional comments pertaining to the mining plan of operations summaries which were made available to the public on April 13, 2018).

**Greater Hells Canyon Council** is a non-profit organization with approximately 1,000 members and supporters. Greater Hells Canyon Council's mission is to connect, protect, and restore the wild lands, waters, native species and habitats of the Greater Hells Canyon Region, ensuring a legacy of healthy ecosystems for future generations.

**Oregon Wild** represents 20,000 members and supporters who share our mission to protect and restore Oregon's wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded. This can be accomplished by moving over-represented ecosystem elements (such as logged and roaded areas) toward characteristics that are currently under-represented (such as roadless areas and complex old forest).

**Western Watersheds Project** is a non-profit organization with more than 5,000 members and supporters. Our mission is to protect and restore western watersheds and wildlife through education, public policy initiatives and legal advocacy. Western Watersheds Project and its staff and members use and enjoy the public lands and their wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes. Western Watersheds Project also has a direct interest in mineral development that occurs in areas with sensitive wildlife populations and important wildlife habitat.

The **Center for Biological Diversity** (the Center) is a 501(c)(3) nonprofit organization founded in the 1990s that is based in Tucson, Arizona. The Center also has offices across the country including in Portland, Oregon. The Center has over 16,000 members and supporters that live in and recreate in Oregon. Since its founding, the Center had been dedicated to protecting and restoring imperiled species and natural ecosystems. The Center uses science, policy, and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats in Oregon.

## I. The Forest Service Cannot Assume Mining Proponents Have a Right to Mine.

According to the Forest Service's scoping letter, this EIS is to "cover 22 mining Plans of Operations (PoOs) within the Powder River Watershed, an area of approximately 126,831 acres of National Forest System lands, in Baker County." 83 Fed. Reg. 12714 (Mar. 23, 2018). The scoping notice does not discuss the validity of the mining claims at issue. Under the 1872 Mining Law, only claims that have shown to be valid provide a claim holder the "statutory right" to permanently develop and occupy public lands. Except for limited rights to explore for minerals (not at issue here), absent the discovery of a valuable mineral deposit on a mining claim, the claim is not valid, and the claimant holds no rights under the Mining Law to use or occupy the claim:

> Thus, although a claimant may explore for mineral deposits before perfecting a mining claim, without a discovery, the claimant has no right to the property against the United States or an intervenor. 30 U.S.C. § 23 (mining claim perfected when there is a "discovery of the vein or lode"); *see also Cole v. Ralph*, 252 U.S. 286, 295–96 (1920); *Waskey v. Hammer*, 223 U.S. 85, 90 (1912) (noting that discovery is "a prerequisite to the location of the claim"); *Am. Colloid Co. v. Babbitt*, 145 F.3d 1152, 1156 (10th Cir.1998) ("Before one may obtain any rights in a mining claim, one must 'locate' a valuable deposit of a mineral."); *Mineral Policy Ctr. v. Norton*, 292 F.Supp.2d 30, 48 (D.D.C.2003) ("'A mining claim does not create any rights against the United States and is not valid unless and until all requirements of the mining laws have been satisfied.'" (*quoting Skaw v. United States*,13 Cl.Ct. 7, 28 (1987))).

*Freeman v. U.S. Dept. of Interior*, 37 F.Supp.3d 313, 319-20 (D.D.C. 2014). As such:

> [U]npatented claims amount to a potential property interest, since it is the discovery of a valuable mineral deposit and satisfaction of statutory and regulatory requirements that bestows possessory rights. S*ee Ickes v. Underwood*, 141 F.2d 546, 548–49 (D.C.Cir.1944) (until there has been a determination that there has been a valuable discovery, claimants had only a gratuity from the United States); *Payne v. United States*, 31 Fed. Cl. 709, 711 (1994) (rejecting plaintiff's argument that in the absence of a challenge to validity, the court must take at face value their assertion that claims are supported by an adequate mineral discovery).

*Id*. at 321. "[A] mining claimant has the right to possession of a claim only if he has made a mineral discovery on the claim." *Lara v. Secretary of Interior*, 820 F.2d 1535, 1537 (9th Cir. 1987) (emphasis added).

"Before an operator perfects her claim, because there are no rights under the Mining Law that must be respected, BLM has wide discretion in deciding whether to approve or disapprove of a miner's proposed plan of operations." *Mineral Policy Center v. Norton*, 292 F.Supp.2d 30, 48 (D.D.C. 2003). As held by the Interior Board of Land Appeals: "Rights to mine under the general mining laws are derivative of a discovery of a valuable mineral deposit and, absent such a discovery, denial of a plan of operations is entirely appropriate." *Great Basin Mine Watch*, 146 IBLA 248, 256 (1998), 1998 WL1060687, *8.

Accordingly, the Forest Service's proposal to develop an EIS for these 22 PoOs is putting the cart before the horse. Instead of moving forward with the EIS, the Forest Service must first conduct this examination for each mining claim subject to the 22 PoOs. Any invalid claims would need to be excluded from the Forest Service's analysis. Without this preliminary evidence that each and every claim is valid under the Mining Law, the entire basis for the EIS is legally flawed.

Although it is firmly the undersigned position that the Forest Service cannot move forward with the EIS process before undertaking the validity process discussed in this section, the remainder of the comments discuss the analysis the Forest Service must take to comply with the National Environmental Policy Act (NEPA).

## II. Any Project the Forest Approves Must Comply with Forest Service Mining Regulations, the Organic Act, and Federal and State Environmental Laws.

Even if the Forest Service reviews the PoOs under the erroneous assumption that any (or all) of the PoO project proponents are "entitled" under the 1872 Mining Law to use their claims for waste dumping, tailings, and other activities, any proposed approval of any action alternative must comply with the Organic Act and the Forest Service's implementing mining regulations at 36 C.F.R. Part 228. The Forest Service's authority to regulate mining operations is governed by the Organic Act, among other laws, which authorizes the agency to promulgate rules and regulations for the National Forests in order "to regulate their occupancy and use and to preserve the forests thereon from destruction." 16 U.S.C. § 551. Under the Organic Act, the Forest Service is able to place limitations and other requirements on a project proponent with unpatented mining claims to protect forest resources. Such measures are particularly critical here, where Bull trout critical habitat would adversely impact this species and their habitat.

The leading case on the Forest Service's authority over mining, *Clouser v. Epsy*, makes it clear that the Organic Act "specifies that persons entering the national forests for the purpose of exploiting mineral resources 'must comply with the rules and regulations covering such national forests.'" 42 F.3d 1522, 1529, n.7 (9th Cir. 1994). The Organic Act provides that:

> The Secretary of Agriculture shall make provisions for the protection against destruction by fire and depredations upon the public forests and national forests . . . and he may make such rules and regulations and establish such service as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forest thereon from destruction.

16 U.S.C. § 551.

At the same time, the Organic Act notes that the agency may not categorically prohibit mining if conducted on valid claims, stating that "[n]othing in section . . . 551 of this title shall be construed as prohibiting . . . any person from entering upon such national forests for all proper and lawful purposes, including that of prospecting, locating, and developing the mineral

resources thereof." 16 U.S.C. § 478.

In 1974 and 1981, the agency adopted regulations under this authority, now known as the "36 C.F.R. Part 228 regulations." The Supreme Court noted the connection between the Organic Act and the 36 C.F.R. Part 228 regulations:

> Through this delegation of authority, the Department of Agriculture's Forest Service has promulgated regulations so that "use of the surface of National Forest System lands" . . . "shall be conducted so as to minimize adverse environmental impacts on National Forest System surface resources."

*California Coastal Comm'n v. Granite Rock Co.*, 480 U.S. 572, 582 (1987) (*quoting* 36 C.F.R. §§ 228.1, 228.3(d)).

In *United States v. Richardson*, the Ninth Circuit Court of Appeals discussed the relationship between the Organic Act and mining rights, affirming a District of Oregon decision enjoining a particular prospecting method. *United States v. Richardson*, 599 F.2d 290 (9th Cir. 1979) (limiting mining proponent to non-destructive exploration methods). Both courts upheld the Forest Service's prohibition against "destructive" methods, noting "the Forest Service may require the locator of an unpatented mining claim on national forest lands to use nondestructive methods of prospecting." *Id*. at 291. Since the dispute arose just before the adoption of the current Forest Service mining regulations, the court based its decision on the "interrelationship of federal statutes concerning the national forests and mining on public lands [namely] 30 U.S.C. § 26, 30 U.S.C. § 612, 16 U.S.C. § 551, and 16 U.S.C. § 478." *Id*. at 291-92.

In *Clouser*, the Ninth Circuit affirmed the Forest Service's authority to impose significant restrictions on a mining operation, in that case limiting the claimant to access via pack horse only. 42 F.3d at 1522. The court rejected the claimant's argument that such a restriction violated federal mining laws:

> In light of the broad language of [Organic Administration Act] § 551's grant of authority, [Organic Administration Act] § 478's clarification that activities of miners on national forest lands are subject to regulation under the statute, and this substantial body of case law, there can be no doubt that the Department of Agriculture possesses statutory authority to regulate activities related to mining—even in non-wilderness areas—in order to preserve the national forests.

*Id*. at 1530 (*citing* 16 U.S.C. § 551).

More recent caselaw has further reinforced the Forest Service's broad authority over mining. "[T]he Secretary of Agriculture has long had the authority to restrict motorized access to specified areas of national forests, including to mining claims." *Public Lands for the People v. U.S. Dep't of Agric.*, 697 F.3d 1192, 1198 (9th Cir. 2012) (upholding denial of access routes to mining claims in travel management plan) (*citing Clouser*, 42 F.3d at 1530).

Indeed, in *Clouser*, the court affirmed the ability of the agency to restrict mining even to the point that the project would no longer be economically viable. **"Virtually all forms of**

**Forest Service regulation of mining claims—for instance, limiting the permissible methods of mining and prospecting in order to reduce incidental environmental damage—will result in increased operating costs, and thereby will affect claim validity**." *Id*. (emphasis added). In fact, under the 1872 Mining Law itself, the expense associated with compliance with environmental regulations may so increase the cost of mining as to render a claim not valuable. *See United States v. Kosanke Sand Corp.*, 12 IBLA 282, 299 (Aug. 3, 1973); *see also Great Basin Mine Watch et al.*, 146 IBLA 248, 256 (Nov. 9, 1998).

Thus, any argument that the agency is precluded from meeting its statutory and regulatory obligations because they allegedly make a mine operation "too expensive" is not supported by federal law and applicable court decisions and thus can be rejected.

The Forest is also under the obligation to ensure that all federal and state environmental laws are met before authorizing any disturbance on federal land. In addition to the agency's regulations, under the Clean Water Act ("CWA"), the Forest Service cannot approve any activity that may result in a violation of a water quality standard or requirement.

Under the CWA, all federal agencies must comply with state water quality standards, including a state's antidegradation policy. 33 U.S.C. § 1323(a). Judicial review of this requirement is available under the Administrative Procedure Act. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1153 (9th Cir. 1998) (*citing Or. Natural Resources Council v. U.S. Forest Serv.*, 834 F.2d 842, 852 (9th Cir. 1987)). Further, under the Organic Act and the 36 C.F.R. Part 228 regulations, the agency cannot approve a mining plan of operations *unless* it can be demonstrated that all feasible measures have been taken to "minimize adverse impact" on National Forest resources, including all measures to protect wildlife and habitat. 36 C.F.R. § 228.8. The "operator shall take all practicable measures to maintain and protect fisheries and wildlife habitat." 36 C.F.R. § 228.8(e).

This language has been relied upon by the federal courts in overturning a Forest Service-approved mining operation that did not adequately protect wildlife. "The operator also has a separate regulatory obligation to 'take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations.' 36 C.F.R. § 228.8(e)." *Rock Creek Alliance v. U.S. Forest Serv.*, 703 F.Supp.2d 1152, 1164 (D. Mont. 2010) (Forest Service Plan of Operations approval violated the Organic Act and 228 regulations by failing to protect water quality and fisheries.). "Under the Organic Act the Forest Service must minimize adverse environmental impacts where feasible and must require [the project applicant] to take all practicable measures to maintain and protect fisheries and wildlife habitat." *Id*. at 1170; *see also Save Our Cabinets v. U.S. Dep't of Agric.*, 2017 WL 2345667 (D. Mont. May 30, 2017) (Forest Service approval of mining project when predicted to violate state water quality standards violates the CWA, Organic Act, 228 regulations, and the National Forest Management Act).

In summary, the Forest Service's Organic Act requires that the agency "*must* . . . ensure that its approval of a plan or project does not result in the 'destruction' and 'degradation' of the public forests." *Clouser v. Madigan*, 1992 WL 694368 at *4 (D. Or. Dec. 22, 1992), *aff'd sub nom. Clouser*, 42 F.3d at 1522, (*citing* 16 U.S.C. § 551 and 16 U.S.C. § 1131).

Although we have yet to access the 22 PoOs that are at the basis of the EIS, it is expected that each proposed PoO is likely to include a structure and/or facilities that result in a point source discharge. Such discharges may only occur under a CWA National Pollution Discharge Elimination System. In practice, such sites often, however, result in perpetual pollution from the site—something that the Forest Service cannot authorize.

Under 36 C.F.R. Part 228 regulations, the Forest Service can *only* approve a mine that can be reclaimed. In detailing the reclamation requirements, the regulation states that the:

> [O]perator shall, where practicable, reclaim the surface disturbed in operations by **taking such measures as will prevent or control onsite and off-site damage to the environment and forest service resources** including:
>
> (1) Control of erosion and landslides;
> (2) Control of water runoff;
> (3) **Isolation, removal or control of toxic materials*;***
> (4) Reshaping and revegetation of disturbed areas, where reasonably practicable; and
> (5) **Rehabilitation of fisheries and wildlife habitat.**

36 C.F.R. § 228.8(g) (emphasis added).

Thus, the Forest Service's EIS must "minimize all adverse impacts" and cannot authorize the creation of perpetual water pollution sources (even if covered by a NPDES permit) or pit lakes *unless* any discharge will comply with water quality standards in perpetuity. Given the Forest Service must ensure CWA compliance, we strongly encourage that a Record of Decision is not issued until any and all Clean Water Act permits for the proposed PoOs have been received. Without the issuance of such approval, it is not clear how the Forest Service can be certain of its CWA compliance.

Due to previous mining, a number of the proposed PoOs include areas that are still un-reclaimed, after apparently years, if not decades, of sitting idle. *E.g.* Barbara 1 Lode claim which is one of the PoOs and a mine that has been idle for at least 15 years yet is still un-reclaimed. The Forest Service must ensure that all PoOs are not only covered by sufficient bonds for the proposed mining and related activities but also for previous mining disturbances that have yet to be reclaimed. 36 C.F.R. § 228.13 (Forest Service bonding authority for locatable minerals). Failure to do so is irresponsible as it leaves tax payers holding the cleanup bag instead of the operator. According to the EPA, mining has polluted at least 40 percent of stream reaches in headwaters of western watersheds from abandoned mines. Should any of the PoOs as part of this EIS move forward, the Forest Service must guard against further unabated degradation by ensuring sufficient bonds (does not include self-bonding) are in place to cover complete reclamation and any perpetual water treatment that would be necessary.

## III. The Forest Service Must Comply with the Forest Plans and NFMA When Approving Any Project.

The Forest Service's EIS and any authorization of mining must comply with the Wallowa-Whitman National Forest Land and Resource Management Plan and the National Forest Management Act ("NFMA") requirements. *Hells Canyon Preservation Council v. Haines*, 2006 U.S. Dist. LEXIS 54884 *7-10 (D. Or. Aug. 4, 2006) (finding Record of Decision for mining operations violates Forest Plan/Inland Native Fish Strategy and other standards) (*HCPC*). As held by the federal court in *Hells Canyon*, the fact that operations are proposed on an unpatented mining claim does not override the Forest Service's duty to comply with the Forest Plans' standards under the NFMA. *Id*.; *see also Save Our Cabinets v. U.S. Dep't of Agric.*, 2017 WL 2345667 at *11-13 (D. Mont. May 30, 2017) (Forest Service approval of mining project when predicted to violate state water quality standards violates the water quality desired conditions and objectives in the Forest Plan and thus NFMA). The duty to comply, and be consistent, with the Forest Plan includes ensuring consistency with all standards, guidelines, desired conditions, and objectives contains in the Forest Plan. *Id*.

This duty includes protecting water quality and aquatic habitat. These operations are proposed for the Powder River watershed, which includes areas listed on the State of Oregon's 303(d) list as being water quality limited for exceeding state temperature, bacteria and heavy metals standards. *See* Powder Basin Status Report and Action Plan, Oregon DEQ (2013) (Attachment A).

Mining roads reduce shade to streams and increase stream temperatures by directly destroying riparian vegetation or retarding temperature recovery by preventing trees from growing due to vehicle use and compaction. Ponds used for gold processing sometimes discharge sediment into adjacent streams or breach during high water events resulting in severe sedimentation of downstream aquatic habitat. Remote cabins used by miners also often lack septic systems and long-term campsites lack facilities for adequate treatment of human waste. Trailers are often hauled to mining sites along streams and the potential exists for wastewater to be discharged onto the ground or into streams. Mining activities also result in sediment concentrations of heavy metals such antimony, arsenic, cadmium, copper, lead, mercury, nickel, and zinc. A 2001 investigation by Oregon Department of DEQ found that sediment concentrations of antimony, arsenic, cadmium, copper, lead, mercury, nickel, and zinc exceeded Department of Environmental Quality ecological risk screening criteria in the Upper Powder River basin. Sediment concentrations of antimony, arsenic, and cadmium exceeded screening values in all three reaches, and arsenic concentrations exceeded the screening values by 1-2 orders of magnitude. Arsenic was found in high concentrations in water discharges, waste rock, and mill tailings at several of the historic mine sites located upstream of the sample locations, and it is likely that this is the source of the metals contamination. Powder Basin Status Report and Action Plan at 106.

This is of particular concern because the summaries of the PoOs disclose that the proposed mining activities will disturb historical mining tailings. In addition, proposed placer mining and suction dredging have the potential to stir up heavy metal contamination in stream sediment. Given the DEQ's discovery of heavy metals contamination in stream sediment in the Upper

Powder River Basin, the EIS must disclose existing heavy metals contamination at and downstream of the project areas, and the EIS must analyze the potential impacts to human communities and wildlife of the proposed operations stirring up existing heavy metals contamination. We note that Oregon DEQ's Powder Basin Status Report and Action Plan states, "the potential sources of contamination identified within drinking water source areas that pose the greatest risk to source water for the three public water systems (PWSs) are:

- Historic mining activities, and
- Forest management activities including roads and harvesting.

*Id.* at 17.

As the U.S. District Court of Oregon made clear in *HCPC v. Haine*s, any mining activity that may result in a discharge of pollutants into navigable waters requires Sec. 401 certification pursuant to the Clean Water Act (CWA), 33 U.S.C. § 1341(a)(1). 2006 U.S. Dist. LEXIS at *13-14. Without affirmatively demonstrating that there is no possibility for a sediment discharge, the Forest Service will fail to demonstrate compliance with the CWA's anti-degradation policy for 303(d) listed streams. Section 313 of the CWA requires all federal agencies to comply with water quality standards, including a state's anti-degradation policy, 33 U.S.C. § 1323(a). This mandate requires the Forest Service to affirmatively demonstrate in its NEPA analysis/Record of Decision that the agency's approved actions will protect water quality and not result in any further degradation to a state listed water quality impaired stream. This includes no measurable increase in sedimentation.

As you know, the Wallowa-Whitman Forest Plan was amended by two regional aquatic conservation strategies, commonly referred to as PACFISH and INFISH, to protect anadromous and inland native fish species. To achieve riparian goals, the plans set Riparian Management Objectives (RMOs) as "criteria against which attainment or progress toward attainment of the riparian goals is measured." INFISH DN at A-2. The RMOs are "good indicators of ecosystem health, are quantifiable, and are subject to accurate, repeatable measurements." *Id*. at A-3. The RMOs include: pool frequency; water temperature (no measurable increase in maximum water temperature, which must be below 59 degrees F in adult holding habitat and below 48 degrees F in spawning and rearing habitats); bank stability (more than 80% stable); lower bank angle (more than 75% of banks must have an angle of less than 90 degrees); and width/depth ratio (the mean wetted width divided by mean depth must be under ten). *Id*.

To achieve the RMOs, INFISH Minerals Management standards require the Forest Service to:

> Minimize adverse effects to inland native fish species from mineral operations . . . For operations in a Riparian Habitat Conservation Area ensure operators take all practicable measures to maintain, protect, and rehabilitate fish and wildlife habitat which may be affected by the operations. When bonding is required, consider (in the estimation of bond amount) the cost of stabilizing, rehabilitating, and reconstructing the area of operations."

MM-1.

Structures, support facilities, and roads are to be located outside RHCAs (unless no other alternative exists and facilities can be constructed in a way that avoids adverse impacts). MM-2. Roads are to be kept to the absolute minimum and should be closed, obliterated, and revegetated after use. *Id*. Solid and sanitary waste facilities are prohibited in RHCAs. MM-3. INFISH mining standards also require the Forest Service to develop inspection, monitoring, and reporting requirements for mineral activities. MM-6.

The EIS should analyze, discuss, and require the AIM National Aquatic Monitoring Framework. This protocol was compiled by Scott W. Miller of BLM/Utah State University National Aquatic Monitoring Center as well as other aquatic analysts and aquatic ecologists. BLM AIM National Aquatic Monitoring Framework: Field Protocol for Wadeable Lotic Systems Technical Reference 1735-2 (Attachment B). To our knowledge, it is the best available quantitative aquatic monitoring framework and has been used by the Forest Service in the Pacific Northwest. Consistent and quantitative monitoring is essential should any of the PoOs move forward given the proximity to bull trout critical habitat. If training is needed in order for Forest Service staff to properly execute this monitoring protocol, the PoO proponents should cover the cost.

As the District Court in *HCPC v. Haines* held, settling ponds are considered structures for the purpose of this standard. 2006 U.S. Dist. LEXIS at *13-14. Consequently, the Forest service must affirmatively demonstrate that any settling ponds, as well as new roads, and any other support facilities cannot be located outside RHCAs. If no such alternative location exists, then the Forest Service must affirmatively demonstrate that such construction is limited to the absolute minimum necessary to carry out the mining activities. The Forest Service must also affirmatively demonstrate that stream buffer widths for activities within RHCAs are adequate to minimize adverse impacts to native fish and that those activities further incorporate all practicable measures to protect and restore affected habitat. The Forest Service must describe how it will meet these obligations in the EIS and any future decisions.

This duty also encompasses protecting public water systems and supplies. The Baker City Municipal Watershed is located within the project area and takes public water from 7 intakes from creeks in the project area. Management direction for the watershed can be found in the Wallowa-Whitman Forest Plan and the Baker City Watershed Management Plan. The City of Sumpter also has a public water system serviced by surface water in the Power River Watershed with intakes off of McCully Fork and O'Farrel Creek.

The Wallowa-Whitman Forest Plan requires monitoring of "all activities having the potential to affect water quality to determine if objectives are met." WWNF LRMP, 4-27. This includes the objective that "all domestic supply watersheds will be managed to maintain or improve water quality and streamflows." *Id*. at. 4-1. Additionally, the Baker City Watershed Management Plan states that "development within the Watershed, adversely affecting the water quality of the Watershed, will not be permitted." Baker City Watershed Mgmt. Plan 9-10 (1991) (Attachment C).

The forthcoming NEPA analysis must look at all proposed activities and assess the impacts to Baker City's and Sumpter's public water systems. If any of the proposed activities may adversely affect water quality or stream flows within the Baker City watershed or either city's water systems, they must be dropped from the proposal. Further, monitoring to ensure these objectives will be met must be included. Accordingly, the EIS must discuss how potential impacts to the watershed will be assessed and monitored.

The Forest Service's duty also includes meeting open road density guidelines and restricting off highway vehicle (OHV) use. Access roads and associated dust can cause sedimentation of adjacent streams. Miners use motorized vehicles to access camps and streams via roads, unmaintained routes, and cross country travel. Impacts associated with mining roads and unmaintained routes are increasing. New roads are sometimes constructed or reconstructed by miners with no notification of federal land managers. Both temporary roads and use of OHVs increase the risk of sediment entering the stream-system, facilitate the spread of noxious weeds, and disturb wildlife. The Upper Powder River Watershed Assessment identified roads and off road vehicle use as contributing to water quality issues, specifically sedimentation. Upper Powder River Watershed Assessment, Powder Basin Watershed Council S-4 (2001) (Attachment D).

We strongly recommend against increasing temporary road mileage or OHV use. Such activities can also facilitate increased unauthorized OHV use by non-miners, increasing resource impacts. Given the scarcity and ineffectiveness of enforcement measures to control current unauthorized OHV use, the Forest Service should make every possible effort to avoid adding to this problem.

Forest Plan open road density guidelines provide that the Forest Service must "[m]eet the specific open-road density guidelines found in the direction for individual management areas unless a specific exception is determined, through the Forest Service NEPA process, to be needed to meet management objectives." As the court in *HCPC v. Haines* also made clear, the Forest Service cannot rely on speculative road closures or decommissioning to meet road density standards. 2006 U.S. Dist. LEXIS at *30-31. If these proposed plans call for a specific exception from the Forest Plan's open-road density guidelines, the Forest Service must affirmatively demonstrate that such exceptions are warranted in order to achieve management objectives and must do so in this EIS process.

## IV. The Forest Service Cannot Restrict the "Purpose and Need" Statement.

Under NEPA, "an agency cannot restrict its analysis to those 'alternative means by which a particular applicant can reach *his* goals,'" requiring instead that agencies have "the duty under NEPA to exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project." *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 669 (7th Cir. 1997) (internal citations omitted). "One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration (and even out of existence)." *Id*. at 666. An unlawfully stated purpose and need is a NEPA violation independent of the other violations that may flow from a contrived purpose. *Id*.

The Forest Service's scoping notice contains the following statement of purpose and need:

> The purpose and need for action is to (1) respond to the proposed Plans of Operations (Plans) to conduct mining activities within the Powder River watershed; (2) ensure that the selected alternative, where feasible, would minimize adverse environmental impacts on National Forest System (NFS) surface resources; and (3) ensure that measures would be included that provide for reclamation of the surface disturbance.

83 Fed. Reg. 12714 (Mar. 23, 2018). As the purpose and need is currently stated it does not account for validity determination on the underlying mining claims, which must be undertaken first and foremost. The Forest Service has no obligation to respond to PoOs that have been submitted for invalid mining claims. To our best knowledge, no such examination has been completed for the mining claims that are the basis of these PoOs. Thus, the current purpose and need is improperly assuming validity of these claims.

The current purpose and need also appears to be improperly narrowing the scope of alternatives and the type of resource protections the Forest Service can require. Number 2, for example, needs to be drafted more broadly to reflect the Forest Service's broad authority to not only require that impacts are minimized but also that the Forest Service can require impacts be avoided and mitigated.

## V. The Forest Service's EIS Must Provide Baseline Data and Analysis.

The Forest Service is required to "describe the environment of the area(s) to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process and is critical to any NEPA analysis. "Without establishing the baseline conditions which exist . . . before [a project] begins, there is simply no way to determine what effect the [project] will have on the environment and, consequently, no way to comply with NEPA." *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988) *quoted in Great Basin Resource Watch v. Bureau of Land Mgmt.*, 844 F.3d 1095, 1101 (9th Cir. 2016). "[W]ithout [baseline] data, an agency cannot carefully consider information about significant environment impacts. Thus, the agency 'fail[s] to consider an important aspect of the problem,' resulting in an arbitrary and capricious decision." *Northern Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1085 (9th Cir. 2011) (internal citations omitted).

As a practical matter, this necessarily requires that all baseline data/analysis be completed before the public comment period on the Draft EIS begins to allow for full public review. This means that the public must have full access to all data, in order to properly meet the Forest Service's public comment duties under NEPA. Courts have held that such baseline information includes the Forest Service obtaining baseline groundwater studies, data, and analysis when reviewing a mine-related drilling plan under NEPA and the agency's mining regulations at 36 C.F.R. Part 228. For example, in *Idaho Conservation League v. U.S. Forest Service*, the court concluded that the Forest Service acted arbitrary and capriciously by authorizing exploratory mineral drilling without fully analyzing the baseline groundwater and hydrology. 2012 WL

3758161 at ¶17 (D. Idaho Aug. 29, 2012). Such analysis should include "a baseline hydrogeologic study to examine the existing density and extent of bedrock fractures, the hydraulic conductivity of the local geologic formations, and [measures of] the local groundwater levels to estimate groundwater flow directions." *Id*. at 16; *see also Shoshone-Bannock Tribes of the Fort Hall Reservation v. U.S. Dep't of Interior* , 2011 WL 1743656 at ¶10 (D. Idaho May 3, 2011). "Ninth Circuit cases acknowledge the importance of obtaining baseline condition information before assessing the environmental impacts of a proposed project." *Gifford Pinchot Task Force v. Perez*, 2014 WL 3019165 at *28 (D. Or. July 3, 2014) (The court found that the Forest Service/BLM EA for a mineral exploration project failed to obtain and analyze baseline water quality data in violation of NEPA).

Accordingly, the EIS must contain full and complete data sets, and analysis, for the following resources (at a minimum): (1) detailed water quality and quantity data for all potentially affected surface and ground waters, including full parameter/pollutant data sets, and hydrological conditions on the surface and subsurface; (2) air quality data and analysis for all potentially emitted pollutants including but not limited to all criteria pollutants subject to National Ambient Air Quality Standards, hazardous air pollutants, and Volatile Organic Compounds; (3) fish and wildlife populations, including data/analysis on migrations/movements and population trends for all endangered, threatened, sensitive, and indicator species that may reside in, or travel to/through the area. This would include data/studies of benthic macroinvertebrates and other aquatic life necessary for a sustainable stream environment and is related to the baseline conditions for surface water quality noted above; (4) all endangered, threatened, sensitive, and indicator plant species; (5) springs and seeps; and (6) recreational and cultural usage of the site and surrounding area.

In order to accurately reflect current conditions, this baseline data gathering and analysis should fully cover multiple years and seasons for each parameter and resource covered. For example, for surface and groundwater quality, this would necessarily encompass detailed data gathering and analysis of conditions during spring runoff, late summer low flows, winter conditions, etc., and covering multiple years in order to ascertain yearly fluctuations.

Importantly, the Forest Service cannot rely on future monitoring or mitigation measures to avoid full compliance with NEPA's baseline data/analysis requirements. This tactic has been repeatedly rejected by the federal courts. "NEPA clearly requires that consideration of the environmental impacts of proposed projects take place *before* any licensing decision is made. The very purpose of NEPA's requirement that an EIS be prepared for all actions that may significantly affect the environment is to obviate the need for speculation by insuring that available data is gathered and analyzed prior to the implementation of the proposed action." *LaFlamme v. FERC*, 852 F.2d 389, 400 (9th Cir. 1998) (internal quotations and citations omitted).

## VI. The Forest Service Must Include a Mitigation Plans and Assess Mitigation Effectiveness in the EIS.

The Forest must fully review all potential mitigation measures, as well as the effectiveness of all mitigation measures, in each alternative in the EIS. Under NEPA, the Forest Service must have an adequate mitigation plan to minimize or eliminate all potential project impacts.

NEPA requires the agency to (1) "[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives" and (2) "include discussions of . . . [m]eans to mitigate adverse environmental impacts (if not already covered under § 1502.14(f))." 40 C.F.R. §§ 1502.14(f), 1502.16(h). NEPA regulations define "mitigation" as a way to avoid, minimize, rectify, or compensate for the impact of a potentially harmful action. 40 C.F.R. § 1508.20(a)-(e). "[O]mission 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." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989). NEPA requires that the agency discuss mitigation measures, with "sufficient detail to ensure that environmental consequences have been fairly evaluated . . .." *Id*. "An essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective. . . . A mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." .." *South Fork Band Council of West Shoshone of Nevada v. U.S. Dep't. of Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (citations omitted) (EIS for mining project failed to conduct adequate review of mitigation and mitigation effectiveness). An EIS violates NEPA if it "fails to address the effectiveness of the mitigation measures." *Gifford Pinchot Task Force v. Perez*, 2014 WL 3019165 at *39 (D. Or. July 3, 2014).

In order to comply with NEPA, the Forest Service must identify and describe appropriate mitigation measures associated with the PoOs, specify measures committed by the mine operator(s) and/or required by the Forest Service and/or other federal, state, or local agencies. The Forest Service must address how each measure would specifically mitigate the targeted impact, provide substantial detail on the means of implementing each mitigation measure, identify who would be responsible for implementing it (including long-term), indicate whether it is enforceable, and describe its anticipated effectiveness. For some impacts, there may be several appropriate and effective measures. Conversely, some measures may turn out to be less effective than anticipated; therefore, implementation and effectiveness monitoring should be conducted and contingency measures should be considered and discussed. For each impact area, the EIS should describe the specific mitigation implementation thresholds, any mitigation implementation and effectiveness monitoring deemed necessary, and the criteria by which success would be determined once mitigation is fully implemented. If impacts are not mitigated by existing required measures, the Forest Service should require additional measures within the limits of its regulatory authority to protect forest resources.

## VII. NEPA Requires the Forest Service to Adequately Analyze All Direct, Indirect, and Cumulative Impacts.

Under NEPA, an EIS must fully review all direct, indirect, and cumulative environmental impacts of the Project. 40 C.F.R. §§ 1502.16, 1508.8, 1508.25(c). Direct effects are caused by the action and occur at the same time and place as the proposed project. 40 C.F.R. § 1508.8(a). Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. 40 C.F.R. § 1508.8(b). Types of impacts include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." *Id*. Cumulative effects are defined as:

> [T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7.

It is incumbent that the Forest Service meaningfully analyzes cumulative impacts of all past, present, and reasonably foreseeable future activities/actions. In a leading mining and NEPA case dealing with two mining projects, the Ninth Circuit held that, even though the two mines were not "connected actions" under NEPA, the NEPA review document for each mine had to fully review the cumulative effects/impacts of the two mines together on the regional environment. *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 968-74 (9th Cir. 2006). In its cumulative impact analysis, an agency must take a "hard look" at all actions:

> [A]nalysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. . . . Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.

*Te-Moak Tribe of Western Shoshone v. U.S. Dept. of Interior*, 608 F.3d 592, 603 (9th Cir. 2010) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations).

The Ninth Circuit has repeatedly faulted federal land management agencies' failures to fully review the cumulative impacts of mining projects. In the most recent case, vacating BLM's approval of a mine, the court stated that "'in a cumulative impact analysis, an agency must take a 'hard look' at *all* actions that may combine with the action under consideration to affect the environment.'" *Great Basin Resource Watch v. BLM*, 844 F.3d 1095, 1104 (9th Cir. 2016) (emphasis in original) (quoting *Te-Moak Tribe*). BLM violated NEPA because it "did not 'identify and discuss the impacts that will be caused by each successive project, including how

the combination of those various impacts is expected to affect the environment.'" *Id*. at 1105, *quoting Great Basin Mine Watch*, 456 F.3d 973-74.

In *Great Basin Mine Watch*, the Ninth Circuit required "mine-specific . . . cumulative data," a "quantified assessment of their [other projects] combined environmental impacts," and "objective quantification of the impacts" from other existing and proposed mining operations in the region. *Id*. at 972-74. The agency cannot "merely list other [projects] in the area without detailing impacts from each one." *Id*. at 972. *See also ONRC v. Goodman*, 505 F.3d 884, 893 (9th Cir. 2007).

In addition to the fundamental cumulative impacts review requirements noted above, NEPA regulations also require that the agency obtain missing "quantitative assessment" information. 40 C.F.R. §1502.22. "If there is 'essential' information at the plan- or site-specific development and production stage, [the agency] will be required to perform the analysis under § 1502.22(b)." *Native Village of Point Hope v. Jewell*, 740 F.3d 489, 499 (9th Cir. 2014). Here, the adverse impacts of the 22 PoOs when added to other past, present, or reasonably foreseeable future actions is clearly essential to the Forest Service's determination (and duty to ensure) that the EIS complies with all legal requirements and minimizes and mitigates all adverse environmental impacts.

It is not sufficient for the Forest Service's cumulative impacts analysis to provide a mere list and/or short description of other mining projects, grazing, timber projects, recreation, energy development, construction, population/development, roads, and other activities that will have cumulative impacts. Such information is not the "hard look" that NEPA requires, which is a detailed analysis of cumulative impacts. The Forest Service's EIS must actually analyze cumulative impacts from all past, present, and reasonably foreseeable future projects in the area on water and air quality including ground and surface water quantity and quality, recreation, cultural/religious, wildlife, including listed species and their critical habitat such a bull trout, transportation/traffic, scenic and visual resources, etc.

## VIII. The EIS Must Analyze the Cumulative Impacts of Adding the Proposed Mining Operations to Existing Livestock Grazing and Analyze Changes to Permitted Grazing as a Mitigation Measure.

Livestock grazing can harm bull trout by trampling redds (interfering with reproductive success), breaking down stream banks (jeopardizing survival by increasing sediment loading), and shallowing waterways (jeopardizing survival by raising water temperatures). Livestock can also compete with native wildlife for forage and reduce cover for native wildlife.

The scoping materials published by the Forest Service do not discuss whether the proposed mining operations would take place in areas that currently are grazed by livestock. However, we understand through conversation with Robert Macon at the Whitman District office that there is at least one Forest Service-administered grazing allotment within the planned mining operations area. (Personal communications between Robert Macon (Forest Service) and Kelly Fuller (Western Watersheds Project), Apr. 23, 2018).

The EIS should disclose current livestock grazing on both public and private lands and analyze the cumulative impacts of adding mining operations. The EIS should also analyze mitigation measures related to grazing that could reduce the cumulative impacts of the proposed mining operations. These could include, but are not limited to, seasonal timing restrictions on grazing, reducing allowed Animal Unit Months (AUMs), and retiring grazing permits.

## IX. The Forest Service's EIS Must Analyze a Reasonable Range of Alternatives.

In addition to the proposed agency action, every EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives" to that action. *Ctr. for Biological Diversity*, 623 F.3d 633, 642 (9th Cir. 2010) (*citing* 40 C.F.R. § 1502.14(a)). The alternatives analysis is "'the heart of the environmental impact statement.'" *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114, 1121 (9th Cir. 2008) (*quoting* 40 C.F.R. § 1502.14). "The existence of reasonable but unexamined alternatives renders an EIS inadequate." *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998). Accordingly, NEPA requires agencies to "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E).

To comply with this mandate of NEPA, the Forest Service's alternatives analysis must have a clear discussion and robust assessment of each alternative and be supported by robust and substantive alternatives assessment. The EIS must discuss potential environmental impacts of the alternatives in comparative form, in order to clearly define the issues among the options for decisionmakers and the public. 40 C.F.R. § 1502.14. Reasonable alternatives could include but are not necessarily limited to: alternative siting, designs, or configurations for major mining facilities, such as underground mining rather than open pit; waste rock piles, including waste rock pile liners to collect leachate; different types of tailings facilities (dry v. wet), access roads; or storage ponds; smaller projects so only some of what has been proposed in the PoOs would be approved; modifications to proposed reclamation and closure methodologies and timelines; and alternatives to suction dredge operations upstream or within bull trout critical habitat.

The Forest Service should analyze an EIS alternative that maximizes wildlife protection by avoiding, minimizing, and fully mitigating all direct, indirect, and cumulative impacts to wildlife and wildlife habitat to at least a no-net loss standard.

## X. The Forest Service Must Take a Hard Look at Wildlife and/or Comply with the Endangered Species Act.

The Forest Service must analyze in detail direct, indirect and cumulative impacts from the proposed PoOs on wildlife and wildlife habitat.

Mining and mining-related facilities can harm or kill migratory birds by creating bodies of water that are attractive to birds but contain toxic substances or have dangerous pH levels. Deaths of migratory birds in toxic ponds at the Morenci copper mine in Arizona led to prosecution under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) for natural resources damage resulting from the release of hazardous substances. In

2012, the mining company agreed to pay $6.8 million to restore the natural resources damage. *See* U.S. Fish & Wildlife Service, Natural Resource Injury Case Settled for Freeport-McMoRan Morenci Mine (July 2, 2012) (Attachment E).

The PoOs propose to create new mining tailings and a variety of ponds, as well as to disturb historic tailings and ponds. Lode mining also has a history of acid drainage. Thus, there is potential for the proposed operations to harm or kill migratory birds, as well as potential for prosecution under CERCLA related to the loss of those natural resources.

In addition, the U.S. Forest Service has obligations to advance migratory bird conservation resulting from its Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service implementing Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. The MOU commits the Forest Service to "[p]rotect, restore, and conserve habitat of migratory birds" and "[w]ithin the NEPA process, evaluate the effects of agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors." USDA-USFWS MOU at 4 and 6 (Attachment F). The MOU also states that the Forest Service shall

> Consider approaches, to the extent practicable, for identifying and minimizing take that is incidental to otherwise lawful activities, including such approaches as:
> 1. altering the season of activities to minimize disturbances during the breeding season;
>
> 2. retaining snags for nesting structures where snags are underrepresented;
>
> 3. retaining the integrity of breeding sites, especially those with long histories of use and;
>
> 4. giving due consideration to key wintering areas, migration routes, and stopovers.
>
> 5. ***minimizing or preventing the pollution or detrimental alteration of the environments utilized by migratory birds whenever practical by assessing information on environmental contaminants and other stressors relevant to migratory bird conservation***.
>
> *Id.* at 7, emphasis added.

The EIS should analyze the direct, indirect, and cumulative impacts of the PoOs to birds and their habitats, including ESA-listed and ESA-candidate species, Forest Service Sensitive Species, U.S. Fish and Wildlife Service Birds of Conservation Concern for Bird Conservation Region (BCR) 10 (Attachment N), and State of Oregon Conservation Strategy species (Blue Mountains ecoregion), as well as priority species and habitats identified through the Eastern Oregon Working Group and Oregon Habitat Joint Venture. The Coordinated Implementation Plan for Bird Conservation in Eastern Oregon, of which the Forest Service is a partner, identifies the Powder River as a bird conservation area in Oregon's Blue Mountains ecoregion.

Coordinated Implementation Plan at 26 (Attachment G).

The Forest Service should also require full bird surveys before authorizing any development or operations at the PoO sites. The PoO's Conditions of Approval should include special protective measures to protect birds, including but not limited to seasonal activity restrictions to protect nesting birds and measures to keep birds out of project ponds and other project-created water sources.

ESA Legal Background

The ESA is both procedural and substantive. The ESA sets out a substantive duty for agencies to ensure that their actions do not jeopardize the continued existence of threatened or endangered species or destroy or adversely modify endangered species' designated critical habitat. 16 U.S.C. § 1536(a)(2). The ESA's definition of critical habitat includes "specific areas within the geographical area occupied by the species, at the time it is listed in accordance with [section 4 of the ESA], on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection." 16 U.S.C. § 1532(5)(A)(i). Thus, by the definition of habitat being designated as critical habitat it is "essential to the conservation of the species" and "may require special management considerations or protection." *Id*. The ESA also prohibits the "take" of threatened or endangered species. 16 U.S.C. § 1538(a)(1)(B) & (G).

Section 7 of the ESA requires that each federal agency (the "action agency") "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 listed species' designated critical habitat. 16 U.S.C. § 1536(a)(2); *see also* 50 C.F.R. § 402.1(a) (implementing Section 7). Agencies are required to use the best scientific and commercial data available for this consultation. 16 U.S.C. § 1536(a)(2).

To assist action agencies in complying with this provision, Section 7 and its implementing regulations set out a detailed consultation process for determining the impacts of the proposed agency action. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402 *et seq*. When an action agency determines that an action it proposes to take "may affect listed species or critical habitat," that agency must prepare a biological assessment ("BA") on the effects of the action. 50 C.F.R. §§ 402.12; 402.14(a); 16 U.S.C. § 1536(c). If, after preparing a BA, the agency determines that the proposed action is "not likely to adversely affect" any listed species or critical habitat, then the agency need not initiate formal consultation with the FWS. 50 C.F.R. § 402.14(b)(1).

The process of determining whether formal consultation may be required is referred to as "informal consultation," which is described in implementing regulations as follows:

> Informal consultation is [a] . . . process that includes all discussions, correspondence, etc., between the [FWS] and the Federal agency or the designated non-Federal representative, designed to assist the Federal agency in determining whether formal consultation or a conference is required. If during informal consultation it is determined by the Federal agency, with the written concurrence of the [FWS], that the action is not likely to

> adversely affect listed species or critical habitat, the consultation process is terminated, and no further action is necessary.

50 C.F.R. § 402.13.

To conduct ESA-compliant consultation, agencies must also analyze the "entire" agency action. *Conner v. Burford*, 848 F.2d 1441, 1452-53 (9th Cir. 1988) (*citing* 16 U.S.C. § 1536(b)(3)(A)); *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1155 (D. Ariz. 2002). This means that a biological opinion's (or BA's) analysis of effects to listed species and critical habitat "must be coextensive with the agency action." *Conner*, 848 F.2d at 1458; *Greenpeace v. Nat'l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1143 (W.D. Wash. 2000) (agency "must prepare a . . . biological opinion equal in scope" to action consulted upon); *Rumsfeld*, 198 F. Supp. 2d at 1156 ("breadth and scope of the analysis must be adequate to consider all the impacts"). Accordingly, courts strike down biological opinions (BOs) that fail to perform a comprehensive analysis of the entire action, including analyses that omit key areas or impacts. *See, e.g., Conner*, 848 F.2d at 1453-54 (analysis of entire agency action for oil and gas leasing must also include impacts from development); *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 902-03 (9th Cir. 2002) (overturning Forest Service's Section 7 analysis because it omitted key geographic area affected by proposal). Further, in designating an "action area" for analysis, the agency must consider "all areas to be affected directly or indirectly by the Federal Action and not merely the immediate area involved in the action." 50 C.F.R. § 402.02; *Native Ecosystems Council*, 304 F.3d at 902 (emphasis added).

The requirement that agencies must analyze the "entire" agency action "does not permit the incremental-step approach" of consultation because "biological opinions must be coextensive with the agency action." *Sw. Ctr. for Biological Diversity v. Bartel*, 470 F. Supp. 2d 1118, 1142 (S.D. Cal. 2006) (*citing Conner*, 848 F.2d at 1457-48) (internal quotations and citations omitted); *accord Rumsfeld*, 198 F. Supp. 2d at 1155; *Greenpeace*, 80 F. Supp. 2d at 1143-44. "[T]he ESA requires that all impacts of agency action – both present and future effects on the species – be addressed in the consultation's jeopardy analysis." *American Rivers v. United States ACOE*, 271 F. Supp. 2d 230, 225 (D.D.C. 2003) (emphasis in original).

In addition, the ESA and FWS regulations require every agency to ensure that "any action [the agency] authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species." 50 C.F.R. § 402.01. The regulations define "action" to include any "action[] directly or indirectly causing modifications to the land, water, or air." 50 C.F.R. § 402.02 (emphasis added). The effects of the agency action which must be evaluated include "the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action." *Id*. "Indirect effects" include effects "that are caused by the proposed action and are later in time, but still are reasonably certain to occur." *Id*. These direct and indirect effects must be considered together with a separate category of impacts known as "cumulative effects," which are "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." *Id*.

Courts have repeatedly found that impacts are "reasonably certain to occur" – and thus must be analyzed under the ESA as "indirect effects" in a BA or BO – where federal actions induce private or off-site development. For example, when considering the potential effects of the operation of a military base, a court required the U.S. Army to consider the indirect impacts caused by groundwater pumping required by its operation and people the base attracted to the area. *Rumsfeld*, 198 F. Supp. at 1139. *See, e.g., Fla. Key Deer v. Paulison*, 522 F.3d 1133, 1144-45 (11th Cir. 2008) (finding FEMA's flood insurance program may cause jeopardy to endangered Florida key deer by encouraging development); *Nat'l Wildlife Fed'n v. Fed. Emergency Mgm't Agency*, 345 F. Supp. 2d 1151, 1173-74, 1176 (W.D. Wash. 2004) (Section 7 consultation on FEMA flood insurance program must address harmful impacts of induced property development in flood zone because "development [was] reasonably certain to occur as a result of" the program, even though FEMA did not "authorize, permit, or carry out the actual development that causes the harm."); *Sierra Club v. U.S. Dep't of Energy*, 255 F. Supp. 2d 1177, 1187-89 (D. Colo. 2002) (agency consultation concerning approval of right-of-way must address indirect impacts of a mine the construction of which was made possible by the right-of-way); *Riverside Irr. Dist. v. Andrews*, 758 F.2d 508, 512 (10th Cir. 1985) ("To require [an agency] to ignore the indirect effects that result from its actions would be to require it to wear blinders that Congress has not chosen to impose" under the ESA); *Nat'l Wildlife Fed'n v. Coleman*, 529 F.2d 359, 373 (5th Cir. 1976) ("indirect effects" of highway construction include "the residential and commercial development that can be expected to result from the construction of the highway.").

Consultation must also consider the value of critical habitat for recovery. *Gifford Pinchot v. U.S. Fish and Wildlife Serv.*, 378 F.3d 1059 (9th Cir. 2004). As the Ninth Circuit noted in that case, "it is logical and inevitable that a species requires more critical habitat for recovery than is necessary for the species survival." *Id*. at 1069. The court determined that the Fish and Wildlife Service's regulation on "destruction or adverse modification" was in violation of the ESA because it read out the value of critical habitat being for more than just the survival but for the recovery of a listed species. *Id*. at 1070-72. "Conservation is a much broader concept than mere survival. The ESA's definition of conservation speaks to the recovery of a threatened or endangered species." *Id*. at 1071-72 (*quoting Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441-42 (5th Cir. 2001) (footnotes and internal quotations omitted).

<u>The Forest Service Must Complete ESA Section 7 Consultation Prior to Issuing a ROD and/or Authorizing Mining Activities.</u>

Due to the presence of bull trout and their critical habitat within the proposed EIS area, the Forest Service must consult with U.S. Fish and Wildlife Services and NOAA Fisheries (wildlife agencies) regarding the direct, indirect, and cumulative impacts the proposed PoOs would have on the species and their critical habitat. This analysis and procedure must be completed prior to the issuance of a ROD to comply with the mandates of the ESA, as well as NEPA.

The FWS listed bull trout as Threatened under the Endangered Species Act in 1998 due to declining populations. 63 Fed. Reg. 31647 (June 10, 1998). As salmonids, bull trout require cold water to survive and, according to the FWS are rarely found in water temperatures that exceed 59 to 64 degrees F. Fish & Wildlife Serv. Bull Trout (Salevelinus confluentus) *available at* https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8212. In addition to cold water, bull

trout "require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors." *Id*. A final recovery plan for the species was issued September 30, 2015, setting specific goals, objectives, and criteria that should be met to remove the species from the list of Endangered and Threatened Wildlife. 80 Fed. Reg. 58767 (Sept. 30, 2015). Critical habitat for bull trout was established in 2004, including 1,748 miles and 61,235 acres of the species habitat in the Columbia and Klamath River basins. 75 Fed. Reg. 63898 (Oct. 18, 2010). In this Federal Register notice, the Fish & Wildlife Service pointed out that the decline of the species was due to, among other things, habitat degradation and fragmentation, poor water quality, dams, and water diversions. *Id*. The proposed EIS is located within the Mid-Columbia Recovery Unit that was identified in the final recovery plan. U.S. Fish & Wildlife Serv. Bull Trout Recovery Planning Map *available at* https://www.fws.gov/pacific/bulltrout/Planning.html.

Of native salmonids in the Pacific Northwest, bull trout "have the most specific habitat requirements, which are often referred to as 'the four Cs': Cold, Clean, Complex, and Connected habitat." Fish & Wildlife Serv. Final Bull Trout Recovery Plan at 4 (2015) (Attachment H). This requires, among other habitat qualities, "the cleanest stream substrates" and "complex stream habitat including deep pools, overhanging banks and large woody debris." *Id*. at 5. One of the top three categories of threats to bull trout includes destruction, modification, or curtailment of its habitat or range from impacts such as dewatering, sedimentation, thermal modification, and water quality degradation. *Id*. at 11. Spawning and rearing habitat for this species requires loose, clean gravel with minimal fine sediment, cold water, excellent water quality, low-gradient stream segments with stable challenge structure, and presence of complex cover. *Id*. at 25. Accordingly, actions that would cause fine sediments to enter streams beyond the normal background level can degrade spawning gravels and reduce the survival of eggs and embryos (mine tailings, suction dredging, road and vegetation clearing, including routes that cross stream within and/or above bull trout habitat). This degradation decreases access to oxygenated water, which can also negatively affect other life stages of the species and their ability to persist. *Id*. In addition to sedimentation loading negatively affecting bull trout and their habitat, pH changes and heavy metal contamination from mines, oil from roads, and other activities that otherwise degrade habitat are a threat to the species' recovery. *Id*. Impacts that increase water temperature are also a great threat given the species particularly low tolerance for warm water. *Id*.

The undersigned are greatly concerned that the proposed PoOs will jeopardize the continued existence of bull trout and/or result in the destruction or adverse modification of designated bull trout critical habitat. Recovery of the Mid-Columbia unit requires that threats are effectively managed in at least 75 percent of all core areas, which represents 75 percent or more of bull trout local populations within the recovery unit. *Id*. at 46. The Forest Service must, through formal consultation, determine whether this criterion is being met as a baseline matter as well as fully analyze the impacts the proposed action would have on this Unit. Approval of mining and related activities raises significant concerns that the recovery criteria for this Unit will be hindered. The EIS as well as related biological opinion must sufficiently discuss the risks and impacts from the proposed PoOs on bull trout and their critical habitat.

At the same time, the Forest Service and the federal wildlife agencies cannot use the size of the recovery unit to dilute the impacts of the PoOs on the species and their habitat. Thus, there must also be a robust discussion and analysis of the habitat baseline for the habitat within the proposed action area as well as what impacts the proposed PoOs would have. This analysis must necessarily include maps depicting the habitat overlaid with the proposed action area, mining claims at issue, and other relevant information for determining the impact to bull trout and their habitat. The Center has developed a preliminary map that is attached. Attachment I. The map demonstrates that many stream segments within the proposed action area as well as the location of the alleged mining claims are within and/or upstream of designated critical habitat. It is anticipated that activities related to the mine PoOs would result in indirect impacts to downstream bull trout critical habitat.

## XI. Resource Protection Measures Must be Site Specific.

The Forest Service should not rely on blanket mitigation requirements. Each PoO needs site-specific protection measures based on the specific resource concerns at that site. This EIS should be at least as robust as the Granite Mining FEIS, and include conservative site-specific resource protection measures, *e.g.* Granite Mining FEIS Appendices 1, 2, 3, 9, and 11 *available at* https://www.fs.usda.gov/project/?=2209.

**Soils.** The NEPA analysis must disclose soil types, expected level of soil disturbance (spatial extent and depth), soil condition, etc. There are ashy soils in this planning area that are very sensitive to disturbance, loss of soil structure, and irreversible loss of productivity. The Forest Service must analyze and disclose how soil productivity will be maintained and restored as required by the LRMP. Soils may be a bigger resource concern than in other mining FEIS' this forest has conducted. The analysis here must be commensurate with the level of concern.

**Vegetation.** The EIS must disclose the current condition of vegetation and habitat at sites that will be disturbed by mining and associated activities. How much vegetation disturbance and loss of overstory forest habitat? How big are the trees? What is the baseline for invasive and noxious weeds? What is anticipated if activities under the PoOs were to move forward? What mitigation, minimization, and avoidance measures will be undertaken to reduce impacts from the establishment and spreading of such weeds?

**Water Quality.** What protection measures will prevent discharge of heavy metals and sediment into perennial or intermittent streams? How will this project maintain consistency with the Clean Water Act? The EIS must disclose as well as minimize, mitigate, and avoid risks of surface AND subsurface movement of heavy metals and sediment.

**Water Quantity.** Do any of the PoOs intend to withdraw water? If so, how much, when, and where? Do they have valid water rights? Will this affect water quality, especially temperature?

**RHCAs**. As mentioned above, mining and associated activities in RHCAs must comply with INFISH. The EIS needs to provide site-specific analysis of all activities including

"structures" such as roads, ponds, fords, and processing areas in RHCAs. These require site-specific protection measures. The Forest Service must follow standards and guidelines at MM1.

**Roads**. The EIS needs to provide site-specific analysis of the location and extent of "minor created roads" to implement these PoOs, as well as the environmental impacts and required mitigation measures.

## XII. The Forest Service Must Conserve the Character of Roadless and Unroaded Areas and Consider Impacts and Alternatives to These Values in the EIS.

Large intact expanses of habitat that were once quite common are now rare. Species evolved in the context of the large habitat patches that result from the natural disturbance regime. New science confirms that roads and logging tend to be contagious on the landscape (managed areas beget more management until little remains unmanaged), so to conserve the habitat values associated with wild places we have to prevent the first intrusions.

The NEPA analysis for this project should identify as part of the purpose and need restoration of large undeveloped areas to help restore the historic range of variability with respect to large blocks of undeveloped habitat. The analysis should discuss whether the project will push the landscape toward or away from the natural range of variability for large-scale habitat patches. The analysis should disclose whether any of the mining or support activities will occur within the unroaded/undeveloped areas in the map provided below, where those activities overlap with unroaded areas, and the likely effects of those activities. Since unroaded areas provide disproportionate ecological benefits and ecosystems services, it is likely that mining, roads, and ground disturbance will have disproportionate adverse impacts on those values. These effects need to be disclosed.

Boakes et al (2009) explained why it is important to retain large unroaded areas.

> Habitat clearance remains the major cause of biodiversity loss, with consequences for ecosystem services and for people. In response to this, many global conservation schemes direct funds to regions with high rates of recent habitat destruction, though some also emphasize the conservation of remaining large tracts of intact habitat. If the pattern of habitat clearance is highly contagious, the latter approach will help prevent destructive processes gaining a foothold in areas of contiguous intact habitat. Here, we test the strength of spatial contagion in the pattern of habitat clearance. Using a global dataset of land-cover change at 50x50 km resolution, we discover that intact habitat areas in grid cells are refractory to clearance only when all neighbouring cells are also intact. The likelihood of loss increases dramatically as soon as habitat is cleared in just one neighbouring cell, and remains high thereafter. This effect is consistent for forests and grassland, across biogeographic realms and over centuries, constituting a coherent global pattern. Our results show that landscapes become vulnerable to wholesale clearance as soon as threatening processes begin to penetrate, so actions to prevent any incursions into large, intact blocks of natural habitat are key to their long-term persistence.

Elizabeth H. Boakes et al., Extreme Contagion in Global Habitat Clearance, Proceedings of The Royal Society (Nov. 25, 2009) *available at* http://rspb.royalsocietypublishing.org/content/royprsb/early/2009/11/25/rspb.2009.1771.full.pdf (Attachment J).

According to Ibisch et al. (2016):

> The planet's remaining large and ecologically important tracts of roadless areas sustain key refugia for biodiversity and provide globally relevant ecosystem services. . . . Global protection of ecologically valuable roadless areas is inadequate. International recognition and protection of roadless areas is urgently needed to halt their continued loss.
> . . .
> The impact of roads on the surrounding landscape extends far beyond the roads themselves. Direct and indirect environmental impacts include deforestation and fragmentation, chemical pollution, noise disturbance, increased wildlife mortality due to car collisions, changes in population gene flow, and facilitation of biological invasions (1–4). In addition, roads facilitate "contagious development," in that they provide access to previously remote areas, thus opening them up for more roads, land-use changes, associated resource extraction, and human-caused disturbances of biodiversity (3, 4). With the length of roads projected to increase by >60% globally from 2010 to 2050 (5), there is an urgent need for the development of a comprehensive global strategy for road development if continued biodiversity loss is to be abated (6). To help mitigate the detrimental effects of roads, their construction should be concentrated as much as possible in areas of relatively low "environmental values" (7). Likewise, prioritizing the protection of remaining roadless areas that are regarded as important for biodiversity and ecosystem functionality requires an assessment of their extent, distribution, and ecological quality.
> . . .
> There is an urgent need for a global strategy for the effective conservation, restoration, and monitoring of roadless areas and the ecosystems that they encompass. Governments should be encouraged to incorporate the protection of extensive roadless areas into relevant policies and other legal mechanisms, reexamine where road development conflicts with the protection of roadless areas, and avoid unnecessary and ecologically disastrous roads entirely. In addition, governments should consider road closure where doing so can promote the restoration of wildlife habitats and ecosystem functionality (4).
> . . .
> To achieve global biodiversity targets, policies must explicitly acknowledge the factors underlying prior failures (13). Despite increasing scientific evidence for the negative impacts of roads on ecosystems, the current global conservation policy framework has largely ignored road impacts and road expansion.
> . . .
> In the much wider context of the United Nations' Sustainable Development Goals, conflicting interests can be seen between goals intended to safeguard biodiversity and those promoting economic development (14).
> . . .

> Enshrined in the protection of roadless areas should be the objective to seek and develop alternative socioeconomic models that do not rely so heavily on road infrastructure. … Although we acknowledge that access to transportation is a fundamental element of human well-being, impacts of road infrastructure require a fully integrated environmental and social cost benefits approach (15). Still, under current conditions and policies, limiting road expansion into roadless areas may prove to be the most cost effective and straightforward way of achieving strategically important global biodiversity and sustainability goals.

Pierre L. Ibisch, et al., A Global Map of Roadless Areas and Their Conservation Status, SCIENCE (Dec. 16, 2016) *available at* http://science.sciencemag.org/content/354/6318/1423 (Attachment K).

The Forest Service defines unroaded areas as any area without the presence of classified roads, and of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition. http://web.archive.org/web/20010729111100/http://roadless.fs.fed.us/documents/feis/glossary.shtml. Unroaded areas greater than about 1,000 acres, whether they have been inventoried or not provide valuable natural resource attributes that must be protected. These 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. *See* Forest Service Roadless Area Conservation FEIS, November 2000. The PNW Regional office issued a memo from Lisa Freedman 11-24-04 that instructs the Forest Service to give consideration to "special" features of undeveloped areas regardless of size.

Oregon Wild's Inventory of Unroaded Areas

Oregon Wild's Citizen Roadless Inventory is shown on interactive statewide map available at http://www.oregonwild.org/explore-oregon/oregon-wild-map-gallery by following the link for "All Potential Forest Wilderness." We generally define these areas as those that meet the criteria for inventoried roadless areas set forth by the USFS but based on new science showing the significant ecological values of unroaded areas >1,000 acres, we applied the criteria to federal land areas over 1,000 acres. They are generally in fairly good shape with no substantial/obvious logging, development, or roads.

These areas have wilderness qualities and may qualify for Wilderness protection. There are many other significant values that make these areas worthy of special attention including (but not limited to) their value as places where natural processes can do the ecological work and as a control to experiments (intentional and otherwise) being done across a landscape dominated by human activities including commercial logging, mining, grazing, road building, and other development.

The Forest Service defines unroaded areas as any area without the presence of classified roads, and of a size and configuration sufficient to protect the inherent characteristics associated

with its roadless condition. http://web.archive.org/web/20010729111100/http://roadless.fs.fed.us/documents/feis/glossary.shtml. While we refer to Forest Service guidelines in identifying these areas, FS inventories such as RARE II are not the final word. In addition to errors made during the inventory, there are a number of exclusionary biases in defining potential wilderness area's and the roadless inventory. Furthermore, science has evolved since that time to recognize significant ecological value in areas smaller than 5,000 acres.

To identify these areas, Oregon Wild started with a GIS query. Using the most current data layers available for existing roads, we identified all polygons >1,000 acres bounded by those roads. Using GIS layers, we excluded non-federal lands, clearcuts, and heavy thins. We then used aerial images to further refine boundaries based on obvious developments, roads, quarries, and other logging areas not previously identified. We then recruited volunteers to "adopt" candidate unroaded areas and ground-truth them to the extent possible by adding and subtracting areas based on ground reconnaissance. While not every area has been ground-truthed, we update the inventory as we receive information from individuals and agencies during project planning and at other times. Our inventory of unroaded areas is a work-in-progress with a fairly high level of accuracy.

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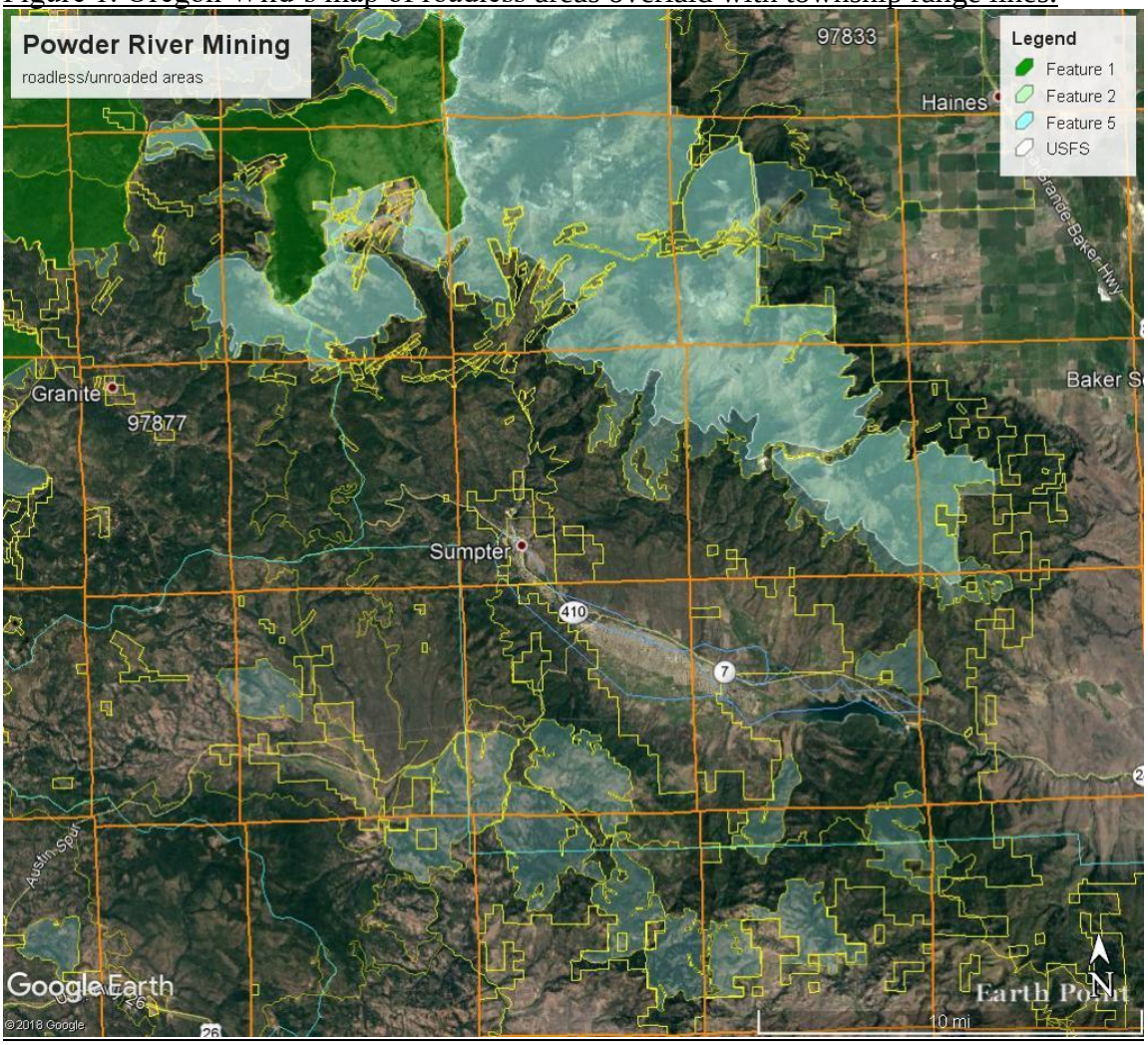
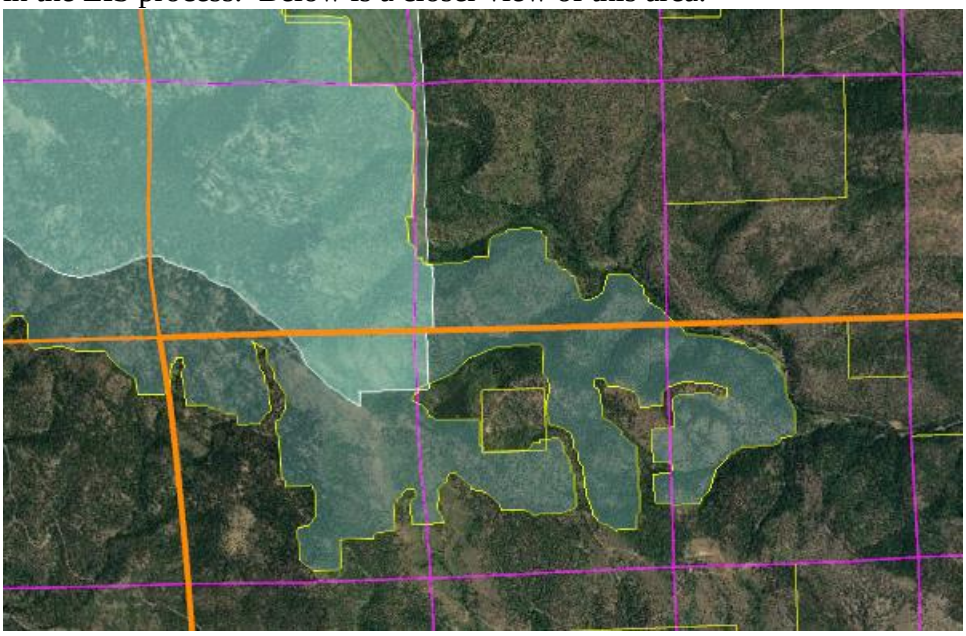
Figure 1. Oregon Wild's map of roadless areas overlaid with township range lines.




["Feature 1" is wilderness. "Feature 2" is IRAs, inventoried roadless areas "Feature 3" is URAs, uninventoried roadless areas (generally >1,000-<5,000 acres (or an extension of an IRA), which are ecologically valuable and worthy of NEPA analysis but the Forest Service often discounts or ignores their existence).]

From our initial review, it looks like the Amigo Mine may be located in an uninventoried roadless area connected to the 9,227-acre Marble Point IRA. The EIS must further flesh this out in the EIS process. Below is a closer view of this area:



The NEPA analysis should also consider the conclusions and recommendations of the interagency Road Density Analysis Task Team:

> Unroaded and low road density areas potentially represent areas in which the aquatic ecosystems are still operating with minimal human disturbances. Areas like these that provide for high quality habitat and stable fish populations are important refugia and a cornerstone of most species conservation strategies.
> . . .
> Even well engineered roads act as conduits for sediment (Filipek 1993). Lee et al. (1997), also note that although improvements in road construction and logging methods can reduce sediment delivery to streams, sedimentation increases are unavoidable even when using the most cautious logging and construction methods.
>
> As stated in the Biological Opinion for bull trout (USFWS 1998), there is no positive contribution from roads to physical or biological characteristics of watersheds. Under present conditions, roads represent one of the most pervasive impacts of management activity to native aquatic communities and listed fish species.
> . . .
> RDAT Recommendation (4): The Regional Executives provide direction to the field units that allow for road construction in undesignated low road density areas only after completion of the mid/fine scale analysis of these areas.
>
> Regional Executive Decision: While we agree that avoiding road construction in low road density areas with high to very high fish values may be desirable, we also recognize that providing direction precluding such development could conflict in some instances with our legal obligations under laws such as the Alaska National

Interest Lands Conservation Act (ANILCA) and the 1872 Mining Laws. Rather than totally precluding such development, the BLM State Directors and Regional Foresters, through this transmittal letter, direct field units as follows:

A. Avoid new road construction in low road density areas to the extent practical, consistent with existing authorities and LRMPs, but keep in mind that in some cases the need to remove hazardous fuels may be paramount for long term watershed restoration,
B. Decisions to allow new road construction in low road density areas should not be made without an assessment of environmental effects, including any changes to the value of the low road density area as a current or potential stronghold for listed aquatic species. This assessment and/or analysis should also consider the amount of acreage within the watershed already in Wilderness and inventoried roadless areas, and
C. Where new road development in low road density areas cannot be avoided, road location and design should minimize effects to aquatic resources and incorporate practical mitigation measures, including closure or decommissioning of the road if the need for the road is temporary.

Road Density Analysis Task Team, Land Management Recommendations Related to The Value of Low Road Density Areas In the Conservation of Listed Salmon, Steelhead, and Bull Trout (Jan. 30, 2002) *available at* http://web.archive.org/web/20021123151942/http://www.blm.gov/nhp/efoia/or/FY2002/IB/ib-or-2002-134.htm (Attachment L).

New information on Unroaded Areas >1,000 acres

The Forest Service cannot limit its analysis of roadless areas to inventoried areas >5,000 acres, because smaller roadless areas that were not inventoried are ecologically relevant and potentially significant. The NEPA analysis must reflect the growing scientific evidence (cited below) indicating the significant value of roadless areas smaller than 5,000 acres and larger than 1,000 acres. Recent scientific literature emphasizes the importance of unroaded areas greater than 1,000 acres as strongholds for the production of fish and other aquatic and terrestrial species, as well as sources of high quality water. Commercial logging and/or road building within large unroaded areas threatens these significant ecological values.
World Wildlife Fund and the Conservation Biology Institute summarized the important attributes of small roadless areas (1,000-5,000 acres).

Small roadless areas share many of attributes in common with larger ones, including:

- Essential habitat for species key to the recovery of forests following disturbance such as herbaceous plants, lichens, and mycorrhizal fungi;
- Habitat refugia for threatened species and those with restricted distributions (endemics);
- Aquatic strongholds for salmonids;
- Undisturbed habitats for mollusks and amphibians;
- Remaining pockets of old-growth forests;

• Overwintering habitat for resident birds and ungulates; and,
• Dispersal "stepping stones" for wildlife movement across fragmented landscapes.

WWF CBI 200x. Importance of Roadless Areas in Biodiversity Conservation: A Scientific Perspective - Executive Summary.

In a 1997 letter to President Clinton, 136 scientists said:

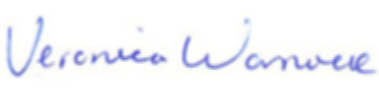
> There is a growing consensus among academic and agency scientists that existing roadless areas–irrespective of size–contribute substantially to maintaining biodiversity and ecological integrity on the national forests. The Eastside Forests Scientific Societies Panel, including representatives from the American Fisheries Society, American Ornithologists' Union, Ecological Society of America, Society for Conservation Biology, and The Wildlife Society, recommended a prohibition on the construction of new roads and logging within existing (1) roadless regions larger than 1,000 acres, and (2) roadless regions smaller than 1,000 acres that are biologically significant. . . . Other scientists have also recommended protection of all roadless areas greater than 1,000 acres, at least until landscapes degraded by past management have recovered. . . . As you have acknowledged, a national policy prohibiting road building and other forms of development in roadless areas represents a major step towards balancing sustainable forest management with conserving environmental values on federal lands. In our view, a scientifically based policy for roadless areas on public lands should, at a minimum, protect from development all roadless areas larger than 1,000 acres and those smaller areas that have special ecological significance because of their contributions to regional landscapes.

Letter to President Clinton from 136 scientists (Dec. 10, 1997) *available at* https://docs.google.com/open?id=0B4L_-RD-MJwrRzhFcm5QcFR0MHM (Attachment M).

## XII. Conclusion

Thank you again for this opportunity to provide scoping comments on the Powder River Watershed Mining Plans Environmental Impact Statement. Please add our groups to the notification list for this project, with the contact information below.

Sincerely yours,



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BLM AIM National Aquatic Monitoring Framework: Field Protocol for Wadeable Lotic Systems Technical Reference 1735-2. (Attachment B)

Center for Biological Diversity Bull Trout Critical Habitat Map (2018). (Attachment J)

Eastern Oregon Working Group and Oregon Habitat Joint Venture, Coordinated Implementation Plan for Bird Conservation in Eastern Oregon (2005) *available at*

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Fish & Wildlife Serv. Final Bull Trout Recovery Plan (2015). (Attachment I)

Letter to President Clinton from 136 scientists (Dec. 10, 1997). (Attachment M)

Pierre L. Ibisch, et al., A Global Map of Roadless Areas and Their Conservation Status, SCIENCE (Dec. 16, 2016). (Attachment H)

Powder Basin Status Report and Action Plan, Oregon DEQ (2013) *available at* https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjwhqKuhNHaAhVOIqwKHUs-B8kQFggpMAA&url=http%3A%2F%2Fwww.oregon.gov%2Fdeq%2FFilterDocs%2FBasinPowderSRAP.pdf&usg=AOvVaw1Bo_zXWdgcnerELFsFStnm (last visited Apr. 23, 2018). (Attachment A)

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U.S. Fish & Wildlife Service, Natural Resource Injury Case Settled for Freeport-McMoRan Morenci Mine (July 2, 2012) *available at* https://www.fws.gov/southwest/es/arizona/Documents/ECReports/Morenci_Settlement_fNR(AESO-AGFD-ADEQ-joint).pdf (last visited Apr. 23, 2018). (Attachment E)

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