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APPEAL TO THE REGIONAL FORESTER OF THE U. S. FOREST SERVICE
INTERMOUNTAIN REGION

IDAHO CONSERVATION LEAGUE, SIERRA CLUB, IDAHO RIVERS UNITED, And GOLDEN EAGLE AUDUBON SOCIETY, Appellants, v. CECILIA SEESHOLTZ, Supervisor, BOISE NATIONAL FOREST, Responsible Official	)	**NOTICE OF APPEAL OF 2/11/2011 DECISION NOTICE, EA, AND FONSI FOR CUMO EXPLORATION PROJECT**

TO: APPEAL DECIDING OFFICER, HARV FORSGREN, REGIONAL FORESTER, USDA FOREST SERVICE, INTERMOUNTAIN REGION, 324 25Tth STREET, OGDEN, UTAH 84401, FAX -- 801-625-5277; EMAIL: appeals-intermtn-regional-office@fs.fed.us

NOTICE OF APPEAL

DECISION APPEALED: On February 11, 2011, Boise National Forest Supervisor Cecilia Seesholtz issued a Decision Notice and Finding of No Significant Impact (DN/FONSI) selecting Alternative B for the CuMo Exploration Project from the final Environmental Assessment (EA) prepared for the Project.

The DN/FONSI authorize the construction of up to 10.2 miles of temporary road, the use of 4.7 miles of unauthorized roads, the crossing of 16 streams, and the clearing of 137 drill pads for up to 259 individual drill holes, for purposes of further exploration of the proposed CuMo Mine project in the upper Grimes Creek area of the Boise National Forest, which is located within the Boise River watershed.

Notice is hereby given pursuant to 36 C.F.R. 215 that the Idaho Conservation League, Sierra Club, Idaho Rivers United, and Golden Eagle Audubon Society appeal the CuMo Exploration Project EA, Decision Notice, and FONSI; and request that the Regional Forester vacate and remand the challenged actions.

The DN/FONSI and EA, including the adoption of Alternative B, are not in accordance with the legal requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 et seq., and its implementing regulations, the National Forest Management Act (NFMA) 16 U.S.C. 1600 et seq., and its implementing regulations, the Administrative Procedure Act, (APA) 5 U.S.C. Sec. 706, the Forest Plan for the Boise National Forest, the Forest Service Organic Act, and its implementing regulations, and the Mining Law of 1872, among other requirements detailed below.

As a result of the Decision Notice's adoption of Alternative B, the Appellants would be directly and significantly affected by the road construction, mechanized access,

surface disturbance, mineral exploration operations, stream sedimentation, increased stream temperature, contamination of groundwater, and degradation of wildlife habitat.

Appellants are leading conservation organizations working to ensure protection of biological diversity, ecosystem integrity and watershed health in the Rocky Mountain bioregions, including the Boise National Forest and the Grimes Creek/Boise River watershed where the CuMo Exploration Project is located. The Appellants' members and staff use the general Project area and areas downstream of those proposed for road construction and mineral exploration for recreation, volunteer riparian restoration projects, and other forest related activities; and they use the water that originates in the project area. The mineral exploration activities, if implemented, would adversely impact and irreparably harm the natural qualities of Boise National Forest and would degrade the watershed and wildlife habitat. Appellants have previously participated in the USFS decision-making process and submitted comments to the agency on this Project.

STATEMENT OF REASONS

I. NFMA AND FOREST PLAN VIOLATIONS

The Decision Notice, FONSI, and EA do not ensure that all requirements of the National Forest Management Act ("NFMA") will be met at all times. Congress enacted NFMA in 1976 to establish a new legal framework for managing natural resources on Forest Service lands. 16 U.S.C. §§ 1601 *et seq*. Among other things, NFMA requires the Forest Service to prepare a land and resource management plan (hereinafter "Forest Plan") for each national forest, 16 U.S.C. § 1604(a), and include in the plan certain standards and guidelines for how the forest shall be managed. 16 U.S.C. §§ 1604(c) &

1604(g)(2) & (3). Once a Forest Plan is adopted, all resource plans, permits, contracts, and other instruments for use of the lands must be consistent with it. 16 U.S.C. § 1604(i).

NFMA requires all site-specific actions authorized by the Forest Service to be consistent with Forest Plan standards and guidelines. Friends of Southeast's Future v. Morrison, 153 F.3d 1059, 1068 n.4 (9th Cir. 1998). Forest Service authorization of mining and mineral exploration must comply with all Forest Plan and NFMA requirements. Hells Canyon Preservation Council v. Haines, 2006 WL 2252554, *7-*10 (D. Oregon 2006) (finding ROD for small-scale mining violated Forest Plan and other standards).

The Forest Plan for the Boise National Forest contains numerous binding standards which must be applied in the approval of the CuMo Exploration Project. As stated by the Forest Plan:

> Standards are binding limitations placed on management actions. Standards are typically action restrictions designed to prevent degradation of resource conditions, or exceeding a threshold of unacceptable effects, so that conditions can be maintained or restored over time. …A project or action that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard.

Boise Forest Plan, Management Direction, at p. III-3.

A. RCA Standards Violated.

One of the most important Standards in the Boise Forest Plan concerns the protection of Riparian Conservation Areas ("RCAs"). *See* Appendix B of the Boise Forest Plan. RCAs are directly relevant to the Project. As the EA discloses: "Numerous small ephemeral, intermittent and perennial tributaries of Grimes Creek dissect the Project Area." *See* CuMo EA, at 42.

RCAs are designed to help protect streams from increased sediment and temperature, both of which have been identified by the State of Idaho as pollutants. The width of RCAs vary depending on the type of stream (*e.g.*, forested vs. non-forested, perennial vs. intermittent). Based on the Forest Plan, the width of protected RCAs for the perennial reaches of Grimes Creek and its tributaries is 600 feet (300 feet on either side), and 300 feet (150 on either side) for intermittent streams. Boise Forest Plan at B-33.[1] The reach of Grimes Creek within the project area is listed by EPA and the State of Idaho as water-quality impaired under Section 303(d) of the Clean Water Act because of higher-than-standard water temperature; and 303(d) listed for sediment farther downstream.

Regarding current sediment sources within the project area, the EA notes: "The Project Area is vegetated and there are few existing disturbances that could result in increased sediment delivery to Grimes Creek or its tributaries." EA at 42. In the EA's discussion of water quality, the Forest Service notes that activities in the watershed could increase erosion and sediment delivery to streams and selects total pounds of sediment as the main indicators. However, the Forest Service discounts and fails to analyze temperature, the actual pollutant of greatest concern in this stream reach.

The Idaho Department of Environmental Quality has prepared a Total Maximum Daily Load (TMDL) for Grimes Creek, which EPA has approved pursuant to the Clean Water Act. The Grime Creek TMDL is contained in the Project Record for the CuMo

[1] The 600 and 300 foot RCA widths are subject to slight variation based on local conditions, such as amending the width based on tree-heights. Boise Forest Plan at B-33.

Exploration Project. *See* Project Record # 2212, Boise-Mores Creek Subbasin Assessment and TMDL.

As discussed further in Section II below, the U.S. Forest Service is required by NFMA and Section 313(a) the Clean Water Act to adhere to the TMDL requirements. *See* 33 U.S.C. § 1323(a) (requiring federal agencies to conform to federal and state water quality standards and regulations); Marble Mountain Audubon v. Rice, 914 F.2d 179, 182 (9th Cir. 1990); ONRC v. US Forest Service, 834 F.2d 842, 848 (9th Cir. 1987); Northwest Indian Cemetary v. Block, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439 (1988) (all holding that federal land management agencies must comply with state WQS under CWA § 313). This requirement extends to both "point source" and "non-point source" activities permitted by federal agencies which affect water quality standards. Id.; see also Citizens Interested in Bull Run v. Edrington, 781 F. Supp. 1502, 1510 (D. Or. 1991).

The Grimes Creek TMDL relies on the percentage of shade provided by Potential Natural Vegetation (PNV), *i.e.*, vegetation in an undisturbed state, as the main metric for controlling stream temperature. Because this TMDL is based on loading that does or would occur under PNV, which is equivalent to background load, the load allocation is essentially the desire to achieve background conditions. *See* Grimes Creek TMDL, *supra*, Project Record # 2212, p. 166.

Due to the nonpoint characteristics of this form of thermal pollution, the TMDL directs responsible parties to focus on management activities that may affect stream shading:

> However, in order to reach that objective, load allocations are assigned to nonpoint source activities that have affected or may affect riparian

> vegetation and shade as a whole. Load allocations are therefore stream reach-specific and are dependent upon the target load for a given reach.

Id., p. 166. Furthermore, the TMDL requires knowledge of baseline or background conditions, as well as current conditions:

> Additionally, because this TMDL is dependent upon background conditions for achieving WQS, **all tributaries to the waters examined here need to be at natural background condition in order to prevent excess heat loads to the system.**

Id. (emphasis added).

The TMDL provides a map showing both existing conditions as well as target conditions for sections of both Grimes Creek and Charlotte Gulch (which is within the Project area, and tributary to Grimes Creek), none of which were referenced in the EA. This is a notable deficiency and violation of NEPA, because this information indicates places where restoring riparian shade is most needed and other places where the shade is provided by Potential Natural Vegetation and meeting TMDL goals:

> Although the following analysis dwells on total heat loads for streams in this TMDL, it is important to note that differences between existing shade and target shade, as depicted in Figure 45, are the key to successfully restoring these waters to achieving WQS. Target shade levels for individual reaches should be the goals that managers strive for with future implementation plans. Managers should key in on the areas with the largest differences between existing and target shade as locations to prioritize implementation efforts.

Id.

The TMDL notes that this information is from a limited number of data points along the major streams, such as Grimes Creek, and that data gaps exist. To improve the accuracy of the TMDL, it directs that additional information regarding the shade structure along tributaries is needed:

> <u>Data Gaps for Temperature:</u>

> Vegetation and percent shade characterization **for tributary reaches** and shade curves developed using native subbasin vegetation.

Id., p. 108 (emphasis added).

Implicit in the TMDL is the assumption that vegetation adjacent to streams is not reduced through management activities:

> The MOS (Margin of Safety) in the temperature TMDL is considered implicit in the design. Because the target is essentially background conditions, loads (shade levels) are allocated to lands adjacent to these streams **at natural background levels**.

Id., p. 168, emphasis added.

The Project Record reveals that the Forest Service, however, has not conducted the needed baseline studies; and is basing the effects determination on speculation, not data: "Water temperatures in the project area are probably close to natural range of conditions." *See* Project Record # 2162. Site specific monitoring shows that there are temperature exceedances in the Project Area. The TMDL noted that water temperatures at Grimes Creek at the Golden Age Mine, which is adjacent to the Project Area, exceeded the 13 degree daily maximum water temperature for spawning redband trout for 14 days and the 9 degree daily average temperature for 23 days. Project Record # 2212, Boise-Mores Creek Subbasin Assessment and TMDL, p. 220.

Understanding the baseline conditions and of maintaining shade structure in riparian areas is critical because road construction and drill pad construction at stream crossings and in RCAs will certainly remove vegetation along Grimes Creek and its tributaries and helps regulate stream temperatures. This question was originally raised by the Forest Service in initial internal discussions but was discounted later:

> "Would the construction of roads and/or drill pads remove enough vegetation to affect stream temps? Can we really say none when there are some road and drill pads within the RCAs?"

See Project Record #151.

While Alternative B avoids construction of 0.62 miles roads within the Grimes Creek RCA, this alternative still approves construction of 10 drill pads and 16 stream crossings, four for the first time, through the RCAs and across smaller perennial and intermittent streams, in violation of the Forest Plan RCA Standards noted above. By focusing primarily on Grimes Creek, the EA fails to recognize the importance of smaller tributary streams – in violation of NEPA – despite the fact that the Boise Forest Plan highlighted their relative significance:

> Small streams are more affected by hillslope activities than are larger streams because there are more smaller than larger streams within watersheds (actual area and extent); smaller channels respond more quickly to changes in hydrologic and sediment regimes; and streamside vegetation is a more dominant factor in terms of woody debris inputs and leaf litter **and shading**. Small perennial and intermittent non-fish bearing streams are especially important in routing water, sediment, and nutrients to downstream fish habitats.

See Boise Forest Plan, Appendix B, p. 40 (emphasis added). The importance of understanding these effects is stressed in the Forest Plan:

> Projects in watersheds with 303(d) listed water bodies should be supported by the appropriate scale and level of analysis sufficient to permit an understanding of the implications of the project within the larger watershed context.

Boise Forest Plan, SWGU07.

The importance of maintaining the shade component to regulate temperatures in these smaller tributary streams within CuMo Project area was originally discussed by the

Forest Service, along with the fact that any project-related increases in stream temperatures could be problematic:

> If we reduce shade (not sure that would occur at this point in process) from intermittents, but particularly perennials in project area that feed Grimes, then we have an effect. Just keep it in mind so you don't totally dismiss. **We need to say we are not affecting stream temp in project area.**

Project Record #1663 (emphasis added).

In that same correspondence, the Forest Service and contractors conclude that because Grimes Creek is not impaired for sediment, temperature impacts do not warrant detailed analysis:

> Upon further review and discussion today with Hana West, it has been determined that Grimes Creek is not 303(d) listed for sediment/siltation, and **therefore the 303(d) listing (for temperature) is not relevant to Project effects.**

Project Record #1663 (emphasis added).

Likewise, the 2010 Fisheries Technical Report states that, "Some riparian vegetation will be removed at two road crossings and at numerous drill pads sites in RCAs, however this amount, in terms of percentage of the total, should not have measurable effects on stream temperature." Project Record # 1269.

In each of these cases, there is no data and no analysis provided to support the speculative assertion that because sediment is not currently impairing beneficial uses at this reach, concerns about temperature can also be dismissed. Moreover, the Forest Service's correspondence concludes with the statement that, because there will not be any tree clearing next to Grimes Creek – which is 303(d) listed for temperature – temperature effects are not worth pursuing at all, in spite of probably effects from tributaries:

> It has been determined through mapping and subsequent discussions of road construction and drilling that tree clearing would not be proximal to

> Grimes Creek and temperature effects could be eliminated from analysis. What I intended to say was that therefore the temperature listing, even though a concern for Grimes Creek, was not relevant to project activities/effects.

Project Record #1663.

In short, the Forest Service recognized the potential project impact on stream temperature in the tributaries, yet then dismissed the issue without further analysis. The Forest Service's failure to analyze temperature impacts of the Project is not justified and violates NEPA as well as NFMA and the Clean Water Act.

B. Approval of Roads And Structures In RCAs Violates Forest Plan and NMFA.

The DN/FONSI also violate the Boise Forest Plan Standards, noted above, by approving roads and structures associated with drill pad operations and water pumps within RCAs. The Forest Plan has established strict standards for mineral operations in RCAs. Under Standard MIST08, all agency approvals of mineral operations, such as the current Project, are subject to the following restrictions:

> Locate new structures, support facilities, and roads outside RCAs. Where no alternative to siting facilities in RCAs exists, locate and construct the facilities that avoid or minimize degrading effects to RCAs and streams, and adverse effects to TEPC species. Where no alternative to road construction in RCAs exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate, and revegetate such roads if no longer required for mineral or other management activities.

Boise Forest Plan at III-49 (emphasis added). Thus, the primary requirement of this Standard prohibits the agency from authorizing the company to "locate new structures, support facilities, and roads" within an RCA. Only when "no alternative exists" can the agency consider approving roads, structures, etc. in an RCA.

The DN/FONSI and EA violate the MIST08 Standard, as well as NEPA. There is little, if any, discussion of how roads, drill pads, structures, etc., will be precluded from RCAs; nor is there discussion of alternatives for siting roads, drill pads, and other structures within the RCAs. At most, the EA mentions that BMPs will be applied in RCAs:

> Within Riparian Conservation Areas (RCAs), BMPs will be implemented to ensure that sediment generated by drilling activities is minimized and liquids used during drilling are properly stored and distributed.

EA at 26. This does not meet the MIST08 Standard, or NEPA.

Here, the EA acknowledges that roads, structures, drill pads, drill holes and other facilities will be located in RCAs. *See, e.g.,*, EA at 43-44.[2] In addition to roads and drill pads in RCAs, the Project approves "lined mud pits" for each drilling site. EA at 43. Although less than Alternative A, Alternative B still approves numerous roads, structures, support facilities, and stream crossings within various RCAs. *See* EA map at 22.

The leading federal court decision dealing with RCAs and mining is Hells Canyon, *supra*. In that case, the court ruled that the Forest Service's approval of mining operations with Riparian Habitat Conservation Areas (RHCAs) under INFISH violated INFISH and the Forest Plan. The INFISH Standard at issue in that case (MM-2) is essentially the same as the MIST08 Standard in the revised Boise Forest Plan. The court described the legal issues in that case as follows:

> Plaintiffs argue that the Forest Service did not comply with standard MM-2 and therefore acted inconsistently with the Forest Plan when it

[2] Although Alternative B reduces the placement of roads and structures within the Grimes Creek RCA (*see* EA at 44), it does not discuss how the Project will avoid similar roads, structures, etc. in the RCAs surrounding the perennial and intermittent tributaries of Grimes Creek and other waters. The same sediment and temperature issues are relevant to these tributaries.

> authorized road and settling pond construction within RHCAs. Standard MM-2 provides that structures, support facilities, and roads should be located outside of RHCAs unless no alternative exists, and where no alternative to road construction exists, such construction must be limited to the minimum necessary for the approved mineral activity. AR 02298. The Forest Service argues that the ROD does not "locate" any new roads, and that MM-2 does not apply to settling ponds.

Hells Canyon, *supra*, 2006 WL 2252554, *8 (emphasis added). Regarding the placement of roads in RHCAs, the court ruled that, if any roads will be constructed within the RHCA:

> [T]he Forest Service is responsible for analyzing the necessity of these new roads, whether alternatives exist, and providing more specific assurances that new road construction will be limited to the minimum amount necessary to comply with MM-2. The Forest Service must provide a more thorough analysis on the issue of new road construction in RHCAs to satisfy the mandate of MM-2.

Hells Canyon, at *8.

Since a virtually identical Standard applies here under the Boise Forest Plan, the Hells Canyon decision is squarely on point, and confirms that the Forest Service must prohibit all roads in the various RCAs, unless there is no alternative. Here, the agency did not consider that it had to meet this Standard; and did not require the location of all roads outside the RCAs. At a minimum, the agency did not determine whether there was no alternative to locating each road within a RCA. This duty, while similar to the overall NEPA alternatives analysis for the entire Project, is much more rigorous, as it applies a duty on the agency to determine that absolutely no alternative exists to locating roads within RCAs. As it did in Hells Canyon, the Forest Service failed to meet these strict requirements.

Furthermore, instead of requiring reclamation of roads and drill pads upon the completion of drilling activities, the EA allows from 60 to 80% of these roads to be

operational throughout the life of the Project, with the remaining either awaiting construction or in a state of "interim stabilization." DN/FONSI at 13. This caveat is at the request of the minerals exploration company in case there is an interest in revisiting an area for more information at some future date within the 5-year exploration period. This lack of sideboards does not balance the need to allow for exploration with protection of other resource values and also fails to minimize impacts.

While road construction entails a significant amount of environmental impact, the continued existence of the road bed provides a continuous source of sediment that can bleed into perennial and intermittent streams. Every year the road bed remains open is one more year for noxious weeds to become established and one less year for the soils and vegetative community to become reestablished. The vegetative community within the RCAs is particularly important because it shades the creeks and maintains cool water temperatures, as mandated by the Mores Creek and Grimes Creek TMDL.

The Forest Service makes the argument that it is less damaging to keep 60 to 80% of the roads open throughout the entire life of the project instead of obliterating roads after use and then possibly having to reopen them (and again obliterate them). However, the Forest Service provides no analysis of environmental effects of sediment, stream temperature, wildlife disturbance, and noxious weeds if roads were closed after initial drilling efforts were completed compared with Alternatives A and B. Allowing 60 to 80% of the roads to remain intact as approved in Alternative B is excessive, and it is completely unacceptable to keep roads and drill pads open within RCAs for this time period. Alternative B violates Forest Plan standard for minimizing impacts. Where an exploration road crosses an RCA, the Forest Service must consider an alternative that

closes this route or, if necessary, provide an alternate (even if it is longer) route around the RCA instead of allowing this disturbance throughout the life of the project.

Regarding the prohibition against locating any "structures or support facilities" within a RCA, Hells Canyon is again controlling. The court first described the legal dispute:

> Plaintiffs argue that the record contains no evidence that the Forest Service did the required analysis as to whether alternatives existed to locating settling ponds in RHCAs. The Forest Service argues that MM-2 applies only to structures, support facilities and roads, and that settling ponds are none of these such that MM-2 does not apply to the location of settling ponds.

Hells Canyon, at *8. After rejecting the agency's argument against applying the Standard to such structures in a RHCA, the court concluded:

> This court finds that the settling ponds in this case are subject to INFISH standard MM-2. The Forest Service must perform the required analysis under MM-2 as to whether alternatives exist to locating settling ponds in RHCAs.

Hells Canyon, at *9.

The situation is very similar in this case. Here, the EA admits that "lined mud pits" and other structures and support facilities will be located at most, if not all, of the over 200 drilling sites. EA at 43. However, there is no discussion about locating these structures/facilities outside the RCAs. Further, and similar to the above discussion regarding roads, there is no analysis as to whether "no alternative exists" to locating these structures within a given RCA. As noted above, simply considering the "less roads" Alternative B does not come close to satisfying the strict requirements of Forest Plan Standard MIST08.

C. Allowing Mine Wastes In RCAs Violates Forest Plan.

In addition, Boise Forest Plan Standard MIST09 applies here, and requires a series of strict limitations on the placement of mine waste (such as drilling muds and other materials resulting from the drilling operations). Similar to MIST08, it "prohibit[s] solid and sanitary waste facilities in RCAs." Forest Plan at III-50. Also similar to MIST08, such prohibition is binding unless there is "no alternative" to locating these activities in a given RCA. *Id.* Even if there is no alternative, MIST09 requires an extensive analysis of the materials and strict technological limitations on the placement of the materials. *Id.*

None of these requirements have been met for the waste materials associated with the drilling operations approved here. There is no discussion in the EA or DN/FONSI of placing these materials outside RCAs, nor any review of alternative locations for disposing of the waste from a given drilling site. Further, outside of generalized statements regarding the alleged non-toxic nature of the drilling waste, there is no evidence that the agency or the company performed the required "analy[sis] [of] waste material using the best conventional methods and analytic techniques to determine its chemical and physical stability characteristics," among other requirements. MIST09.

Aside from the nature and effects of drilling materials themselves, there is no substantive discussion of the chemical and biological properties of the materials which are to be deposited in the "mud pits" or dumped back into the wells – all in violation of MIST09. At most, the EA states, "Any drilling additives utilized in the drill mud will be biodegradable and non-toxic to aquatic resources." EA at 26, 43-44.

However, assessments of similar drilling activities elsewhere made similar

assumptions, but additional analyses revealed the potential for water contamination from both the drilling fluids themselves and from the mobilization of hazardous metals contained within certain aquifers (see section on arsenic below). The Project Record reveals that Forest Service staff recognized these issues, raising questions including:

> This information needs to be part of the project record and an effects analysis to fisheries. Are these drilling additives toxic to fish? Is there a potential link with ground water and Grimes Creek, especially within the RCA?

Project Record # 2119. And:

> My understanding of additives is that these products will be down the drill hole. I am uncertain of the depth of the drill holes and where ground water may be. Question is, would these additives (down the drill hole) reach fish or fish habitat via groundwater? If so, would there be an effect to fish and/or fish habitat?

Project Record #1261. However, these questions are not answered, or even addressed in the EA and DN/FONSI, showing that the Forest Service summarily rejected evaluating these impacts, in violation of NEPA and NFMA.

D. Failure To Address Groundwater Hydrology Or Potential Impacts.

Exploratory drilling of this nature has had unexpected consequences before, particularly if the drill hole is not completely cemented top to bottom:

> Improperly plugged wells compromise aquifer integrity by destroying its natural isolation, and exposing it to potentially toxic materials from nearby formations.[3]

While the EA states that the drill holes will be sealed, it does not describe the potential negative effects if the drill holes are not adequately sealed. Furthermore, there is no information on the track record for fully sealing drill holes or how the Forest Service will

[3] R. Kubichek, J. Cupal, S. Choi, W. Iverson and M. Morris. Identifying Groundwater Threats from Improperly Abandoned Boreholes, Electrical Engineering Department, University of Wyoming, Laramie, WY.

determine if drill holes are securely sealed. Factors to consider are the type of rock (particularly sulfide), whether the area is fractured, whether aquifers are encountered. Contamination can be from a variety of sources, including introduction of fuel into the hole that stimulates bacterial growth and changes the redox potential which can lead to mobilization of metals, opening up reactive rock (like sulfides) to water and oxygen, and effects of introducing the mud itself which can result in pH changes, introduction of arsenic[4], salts[5] and oxygen into a formerly anaerobic environment, acid mine drainage,[6] and cation exchange . In addition, lime and other additives from the cement mix may have adverse impacts on water quality. *See* Fate and Effects of Whole Drilling Fluids and Fluid Components in Terrestrial and Freshwater Ecosystems: A Literature Review, to EPA Marcy 13, 1981, by John G. Ferrante, Lisa Sumi, Research Director, Oil and Gas Accountability Project, Chemical Release Incidents, attached.

The Forest Service has not done its due diligence in addressing these issues. Even if the record contained the required analysis of the "drilling additives" as required by MIST09 (which the record does not show), a full analysis of the chemical and physical nature of the materials brought to the surface by the drilling itself, must be completed as described in the next section.

The Idaho Department of Environmental Quality (IDEQ) conducted Preliminary Site Assessments of 12 different mine groupings (some consisting of up to 10 different mines) in Boise County, including several mines surrounding the project area (see Map in

[4] Effect of Water Use on Arsenic Release to Well Water in a Confined Aquifer, M.B. Gotkowitz et al. Groundwater 42, no. 4: 568-575.
[5] Impact of Abandoned Wells on Groundwater, Tyler Gass, Lehr, J, and Heiss, H, EPA-600/3-77-095, August 1977, Ecological Research Services,
[6] Plaintiffs' Proposed Findings of Fact and Conclusions of Law Reply
Nunamta Aulukestai, et al. v. State of Alaska, 3 AN-09-9173 CI, Pebble Trustees Plaintiffs Findings of Fact Reply FINAL2011 3 24. pdf

Project Record #1860). The IDEQ found significant contaminants of concern at the Enterprise Group, which includes the Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines, Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth Lode, and Red Flag Mill Site patented mining claims:

> The level of arsenic in all of the soil sample locations poses an excess cancer risk and a hazard for all residential receptors and a moderate risk for non-residential receptors. All of the soil/sediments samples showed elevated arsenic, cadmium at mill site, and lead concentration, particularly at the former millsite.[7]

The Baby and Enterprise historic mine sites are directly adjacent to the Project Area and were recently purchased by Mosquito Gold, the Project proponent. The Forest Service failed to conduct a baseline groundwater study and determine the potential for these contaminants to become mobilized through groundwater movement as a result of drilling activities.

The Preliminary Assessment assessed the potential risks to user groups from these historic workings:

> This site is infrequently visited by mountain bikers, hikers, hunters, snowmobile operators, off-road vehicles, or various other outdoor recreation enthusiasts. Humans may receive very small doses of heavy metals, especially arsenic and lead. Aerial dispersion of waste particulates from the tailings or waste dumps may occur. Direct contact with the wastes appears to be the most significant route of exposure to humans for elevated constituents.

Id., p. 39. Even though IDEQ concluded that the risk to members of the public is currently low, it added the following caveat:

> The exposure levels do not appear to pose a substantial risk, **based upon current**

[7] *See* Preliminary Assessment Report for the Enterprise Group (a.k.a. Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines; Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth lode & Red Flag millsites), Idaho Department of Environmental Quality, December 2008, p. 39.

property uses.

Id. (emphasis added).

This caveat underscores the Forest Service's obligation to fully assess and analyze changes in the "current property uses" of the area as result of the CuMo Exploration Project and the recent transfer of ownership of the adjoining mine properties to Mosquito Gold. In particular, there is a potential to use some of the roads through this property as part of the CuMo Mineral Exploration. The EA does not describe if portions of this area may also be utilized for equipment storage, a rock source to armor the roads at stream crossings (a required BMP), or other uses which may mobilize these hazardous materials. Even thought the Forest Service has a map of these mine sites (Project Record #1860), the Forest Service has not stated if these are reasonably foreseeable events and has not reviewed and disclosed these risks. At a minimum, the Forest Service has violated NEPA by not addressing these potential impacts.

E. Sensitive Species Violations Of Forest Plan And NMFA.

The EA also violates Boise Forest Plan standards regarding sensitive species, particularly with respect to goshawks, great gray owls, and wolverines; and thus violates NFMA (as well as NEPA).

Both great gray owls and goshawks are particularly sensitive to human disturbance. See EA, pp. 124 and 130. Studies have found that noise and disruption associated with timber harvest operations (e.g., harvesting, log truck traffic, road construction, timber cruising) can cause nest failure, especially during pair bonding, nest-building and incubation (US Forest Service 1992, Boal and Mannan 1994, Squires and Reynolds 1997). Regarding disturbance, the Klamath National Forest Guidelines restrict

habitat modifying activities between March 1 and Aug. 31 within the primary nest zone-0.5 mile radius, restrict loud and/or continuous noise within 0.25 miles of an active nest site for the same time period.

While the Forest Service focused on road construction as the major impact here, the agency neglected to take into account the length and intensity of human disturbance related to the drilling activities and their impacts on sensitive species, including goshawk, great gray owls, lynx and wolverines. But as the Forest Service wildlife specialist acknowledged in the Project Record, such drilling impacts are the central concern about the Project's potential impacts on sensitive wildlife:

> Habitat modification is not the primary concern/issue with this project, with the exception of any indirect impacts/effects to reproductive habitat (loss of nest trees, nest snags, or dens), disturbance associated with implementation activities – road construction, **drilling operations** - is.

See Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974 (emphasis added).

The Project Record also discloses that goshawks have been seen adjacent to the project area:

> A male northern goshawk was detected within 1 mile of the southern Cumo project boundary (T8 R6 Sec 30). He was not aggressive, indicating we were in a territory area, but no their the nest site. He came in to the crew from the NW, and left towards that direct. My guess there is an active nest in section 19 or T8 R5 Sec 24.

Project Record #1490.

The EA states that, if goshawk or great grey owl nests are found, the project proponent Mosquito Gold would implement "the protective measures, as needed." *See* EA, p. 130. Specifically, a 150' buffer would be maintained around any nest tree found for these species. However, this buffer is designed to avoid impacts to only the nesting

tree itself, and would not be sufficient to avoid disturbing or displacing birds with associated human activity – such as the lights and noises associated with drilling operations to be conducted on 24-hour basis – particularly with regards to goshawks. Again, the Project Record reveals that this mitigation measures was only intended to address nest trees, and not prevent adverse impacts to sensitive species from noises or other impacts of the drilling operations themselves:

> we do not have specific lit cites to say that is adequate. purpose and intent of the buffer is to protect the immediate canopy cover and structure of forest veg surrounding the nest tree. given that the action, overall, will result in negligible modifications to forest structure, overall nest stand function would likewise not be impacted. This simply insures that the few trees that may be removed/dozed over don't occur immediately adjacent to a nest tree. . . .

Project Record #1918.

Likewise, the Project Record reveals the wildlife specialist's concerns that relying solely on protecting nest trees from being felled may not be adequately protective:

> Disturbance issues can affect nesting northern goshawk, for instance, up to ¼ to 1/2 mile depending upon topography and vegetation.

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974.

By contrast to the mitigation measures approved here, the Forest Service's own management guidelines for the northern goshawk recommend a 30-acre buffer around each nest where no adverse impacts may occur.[8] In addition, the timing of human activities in the larger Post Fledging Family Area should be limited to the period from

[8] *See* "Management recommendations for the northern goshawk in the southwestern United States," Reynolds, Richard T.; Graham, Russell T.; Reiser, M. Hildegard (1992). Gen. Tech. Rep. RM-217, Ft. Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 90 pp.

October to February. While the EA and Response to Comments state that timing restrictions, in addition to the protection of structure features would be enacted, the mitigation measures on 2.3.3 do not describe any timing restrictions whatsoever. Instead the EA notes that Mosquito Gold would only modify or relocate road and drilling locations to prevent direct disturbance of the nest site "**when feasible**." EA, p. 36 (emphasis added).

Furthermore, it appears from the Project Record that surveys for great gray owls may not be conducted in advance of project activities due to lack of access:

> some questions are being raised about the ability to implement the protocols, particularly for great gray owl, given the early season survey needs (march/april) and snow/access concerns.

Project Record #1727.

Instead of fully disclosing this, the EA states that surveys for raptor presence would be conducted "**as conditions allow.**" EA p. 124, emphasis added.

Regarding impacts to wolverines, approximately half the project area supports suitable denning habitat and the latter half of the denning period may overlap with the start of drilling activities:

> Wolverines: Data indicates roughly 1⁄2 of the project area contains persistent snow levels such that reproduction could occur and be successful... the window for possible activity (april 15-dec 15) overlaps the back end of the denning period (critical denning period – march-early may), and thus, potential for impacts to denning wolverine.

Project Record #1727. The final EA, however, concludes that there is no overlap and thus no conflict:

> Season of operation typically would avoid impacts between December 16 and April 14, and activities between April 15 and mid-May are unlikely to affect wolverine denning.

EA, p. 134. It is unclear how the critical denning period for the wolverine shifted to accommodate mining activities.

Overall, the numerous violations of the Forest Plan (and thus the NFMA) identified above warrant the granting of this appeal and the vacation and remand of the DM/FONSI and EA by the Regional Forester's Office.

II. VIOLATIONS OF CLEAN WATER ACT

The DM/FONSI and EA fail to ensure that the Project, and the agency, has met all of the requirements of the federal Clean Water Act (CWA). First, federal agencies are prohibited from issuing a federal license or permit for any activity that may result in a discharge into navigable waters until the permit applicant has obtained certification pursuant to Section 401 of the CWA. 33 U.S.C. § 1341(a)(1). Under Section 401, an applicant for a federal license or permit to conduct any activity which may result in any such discharge must first obtain a certification from the state in which the discharge originates stating that the discharge will comply with Sections 301, 302, 306, and 307 of the CWA. 33 U.S.C. § 1341(a)(1). Sections 301, 302, 306, and 307 of the CWA set forth the permitting, pollutant treatment, and water quality compliance requirements applicable to point sources under the CWA. 33 U.S.C. §§ 1311, 1312, 1316, 1317; *see also* PUD No. 1 of Jefferson County v. Washington Dep't of Ecology, 511 U.S. 700, 713 (1994) (noting that Section 301 incorporates Section 303's water quality standards by reference). Federal agencies are prohibited from issuing federal licenses or permits, such as a mining Plan of Operations, until applicants have obtained certification from the state stating that discharges resulting from federally permitted activities will adhere to the permitting and water quality requirements of the CWA. 33 U.S.C. § 1341(a)(1).

Second, Section 313 of the CWA requires all federal agencies to comply with state water quality standards, including a state's antidegradation policy. 33 U.S.C. § 1323(a). The Ninth Circuit has repeatedly affirmed that federal agencies must, consistent with this statutory provision, ensure that any activity on federal lands complies with water quality standards. *See* Idaho Sporting Cong. v.Thomas, 137 F.3d 1146, 1153 (9th Cir. 1998); Nat'l Wildlife Fed'n v. U.S. Army Corps of Engrs., 384 F.3d 1163, 1167 (9th Cir. 2004); Hells Canyon Preservation Council v. Haines, 2006 WL 2252554 (D. Or. 2006) (Forest Service ROD and PoO approvals overturned because they did not comply with CWA requirements and standards).

A. CWA Section 401 Violation.

The Forest Service violated the CWA when it authorized the Project without first complying with CWA Section 401. 33 U.S.C. § 1341(a). Applicants for federal licenses and permits must obtain Section 401 certification "before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters." PUD No. 1 of Jefferson County v. Wash. Dep't of Ecology, 511 U.S. 700, 707 (1994). Thus, the triggers for the Section 401 certification requirement are 1) a request for a federal license or permit authorizing 2) any activity that may result in the discharge of pollutants into navigable waters.

Section 401 applies to activities that may result in "any discharge into the navigable waters." 33 U.S.C. § 1341(a)(1). The CWA defines "discharge" to include "a discharge of a pollutant." 33 U.S.C. § 1362(16). Discharge of a pollutant, in turn, is defined as (1) any addition of any pollutant (2) to navigable waters (3) from any point

source. 33 U.S.C. § 1362(12). The operations authorized under the DM will result in a discharge of pollutants into such waters within the Project area.

At a minimum, the discharges from culverts associated with the new roads are considered point source discharges under the CWA. *See* Northwest Environmental Defense Center v. Brown, 617 F.3d 1176 (9th Cir. 2010). The record does not show that the Project applicant sought or obtained 401 certification from the State of Idaho prior to seeking approval of the exploration plan. By authorizing construction and operation of roads and associated culverts as part of the DN/FONSI without first obtaining a water quality certification, the Forest Service violated and remains in violation of Section 401 of the CWA. As the federal courts have ruled:

> While the Forest Service disputes whether the ROD is a license or permit that would trigger § 401, it is undisputed that the Forest Service has approved and will continue to approve PoOs without first requiring applicants to receive § 401 certification from the State of Oregon. Section 401 intends state certification to precede approval of a discharge-causing activity by a federal agency. California Trout, Inc. v. FERC, 313 F.3d 1131, 1138 (9th Cir. 2002), cert. denied, 540 U.S. 818 (2003); Natural Resources Def. Council v. U.S. EPA, 279 F.3d 1180, 1183 (9th Cir. 2002); Ackels v. U.S. EPA, 7 F.3d 862, 865-67 (9th Cir. 1993). The agency's responsibility under the CWA is clear and, as here, the Forest Service has not complied with the § 401 requirement of certification prior to permitting miners to begin mining operations. See 33 U.S.C. § 1341(a)(1) ("No license or permit shall be granted until the certification required by this section has been obtained[.]"). **Regardless of how the permit or licensing process is defined, the record shows, and the Forest Service admitted at oral argument, that it has not and will not require § 401 certification prior to final approval of PoOs. Thus, mining activities that may result in discharges of pollutants into navigable waters will commence without § 401 certification, a violation of the CWA.**

Hells Canyon, *supra*, 2006 WL 2252554, *4 (D. Or. 2006). Thus, without the required 401 Certification, the agency's DN/FONSI violated the CWA and cannot stand.

B. Section 402 Violation.

Also under the CWA, the applicant/operator is required to obtain the necessary NPDES permit for each of the Project's point source discharges, such as the road culverts. *See* Dubois v. U.S. Dept. of Agriculture, 102 F3d 127, 1300 (1st Cir. 1996) ("the Forest Service was obligated to assure itself that an NPDES permit was obtained before permitting the [requested activity]."). Indeed, this has been the position of the Forest Service in Idaho, as it has previously refused to process or approve a mining plan of operations without the required NPDES permit and 401 Certification.

This position was upheld by the federal district court in Idaho. *See* Dan Templeton v. U.S. Dept. Agriculture, CV02-320-C-EJL, ORDER denying plaintiffs' motion for judgment on the Pleadings (Sept. 28, 2004). The court upheld the Forest Service's position, which the court summarized as:

> [T]hat it [USFS] could not continue processing his Plan of Operations until he obtained permits required by the Clean Water Act ("CWA") or until the Environmental Protection Agency ("EPA") determined mitigation measures that would be required as conditions of the permits.

Id., at 2. In another case, the Forest Service informed a mining claimant that:

> [T]he Forest Service's decision on your plan of operations is dependent upon your obtaining the necessary NPDES permit from EPA. If certification is denied or EPA does not grant the NPDES permit, the Forest Service cannot continue processing or approve your plan of operations. Because of this contingency, we are unable to complete processing of your plan of operations and EIS preparation until we are notified you have received an NPDES permit, or have applied for an NPDES permit and EPA has informed you what alternatives and mitigation measures you will be required to follow to comply with the Clean Water Act.

Letter from Kevin Martin, Red River District Ranger, Nez Perce National Forest, to Ed Kelly, owner of the Genesis Placer Claim (Jan. 30, 2001), *quoted in* Flynn & Parsons, The Right to Say No: Federal Authority Over Hardrock Mining on Public Lands, 16

JOURNAL OF ENVIRONMENTAL LAW & LITIGATION, 249, 316 (2001). Thus, it is clear that the agency should suspend review and approval of the CuMo Exploration Project until all of these CWA requirements have been met.

Furthermore, the Forest Service cannot meet its duty under 36 CFR 228.8 to ensure that the project will comply with the CWA without an understanding of the specific nature of the discharges. From the EA analyses, it is clear much more information is needed. Similar to the lack of a Section 401 Certification, there record does not contain the required showing that the Section 402 NPDES permits have been obtained.

At most, the EA states that the operator will submit a stormwater plan and apply for stormwater permits in the future. EA at 43. However, such as-yet-unspecified plans and permit applications do not satisfy the Forest Service's duty to ensure that such plans and permits are in place, and the public is assured that all CWA standards and requirements will be met at all times (something which has not been shown on the record to date) before ending the NEPA process and approving the Project.

The increases in sediment load to Grimes Creek as a result of permitted activities in the Grimes Creek RCA and on tributaries will violate Forest Plan and the Clean Water Act:

> New road construction (11.9 miles of road) will cross at least two intermittent streams draining to Grimes Creek. During construction of new roads and crossing of two intermittent 1st order streams, there is a potential for an undetermined amount of sediment entering Grimes Creek. Although most new road construction is on slope less than 30%, 3.5 miles of construction is on steep side slope greater than 30%. The construction of the roads, especially on steep side slopes and across two intermittent streams, will probably result in temporary and possibly long-term increases in sediment in Grimes Creek. However, the volume of sediment produced should be minimal as long as the typical BMPs are in place.

See Project Record # 151, Fisheries Survey Specialist Report CuMo Molybdenum Exploration and Drilling Project, Prepared by Biohouse LLC.

While the Water Erosion Prediction Project (WEPP) modeling showed no adverse, long term impacts from sedimentation, other sources found that there would be adverse impacts:

> Bob House needs to work w/hydrogeo to ensure consistency. BH indicates adverse sed release.WEPP modeling does not.

Project Record #2104.

There are known limitations with WEPP and its related modeling program, Forest Road Erosion Predictor or FREP, that apply directly to situations here where roads cross riparian areas:

> It should be noted that the FREP model is designed to predict sediment delivery from a given length of road within a range of distances downslope to a receiving water body. The model does not specifically address sediment delivery to drainage crossings that intersect roadways.

Dale Kerner to Robert Kramer, Project Record # 1669.

As part of its full disclosure duties, the Forest Service failed to state the limitations of the models or if contrary data exist.

While the study goes on to state that the probability of measurable amounts of sediment changing downstream habitat conditions in the 6th field HUC is low as long as BMPs are in place, this sediment will still be transported downstream into the 303d-listed stretch of Grimes Creek. While the segment of Grimes Creek in the project area is not listed for sediment impairment, there is a TMDL-established load allocation set for the downstream impaired sections. One portion of this allocation is for sediment being transported down Grimes Creek and its tributaries upstream of the sediment-limited

section. The Forest Service failed to acknowledge that this load limit exists and did not demonstrate compliance with the CWA. The Forest Service will be in violation of the Clean Water Act if the project activities exceed this load allocation.

III. VIOLATIONS OF NEPA

The Forest Service's EA and DN/FONSI failed to comply with numerous requirements of the National Environmental Policy Act (NEPA). NEPA is an action-forcing statute designed to ensure that agencies take a "hard look" at the environmental impacts of any federal action. *See* Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1211 (9th Cir. 1998). NEPA's analysis and disclosure goals are two-fold:

> It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). *See also* Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1151 (9th Cir. 1998). By focusing the agency's attention on the environmental consequences of its proposed action, NEPA "ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast." Robertson, 490 U.S. at 349.

The Forest Service is required under NEPA to prepare an environmental impact statement ("EIS") for any "major federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). The agency must consider direct, indirect, and cumulative environmental impacts of the proposed action. 40 C.F.R. § 1502.16; 40 C.F.R. § 1508.8; 40 C.F.R. § 1508.25(c). Direct effects are caused by the

action and occur at the same time and place as the proposed project. *Id*. § 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. *Id*. § 1508.8(b). Both 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 the impacts resulting from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions. 40 C.F.R. § 1508.7. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. *Id.*

Analysis of site-specific impacts under NEPA must "contain a reasonably thorough discussion of the significant aspects of the probable environmental consequences." California v. Block, 690 F.2d 753, 761 (9th Cir. 1982). NEPA mandates a "hard look at a decision's environmental consequences." *Id*. The hard look doctrine bars "[g]eneral statements about 'possible effects' and 'some risk' . . . absent a justification regarding why more definitive information could not be provided." Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1380 (9th Cir. 1998).

"A threshold question in a NEPA case is whether a proposed project will 'significantly affect' the environment, thereby triggering the requirement for an EIS [Environmental Impact Statement]." Blue Mountains Biodiversity Project, 161 F.3d at 1212 (*citing* 42 U.S.C. § 4332(2)(C)). "As a preliminary step, an agency may prepare an EA [Environmental Assessment] to decide whether the environmental impact of a proposed action is significant enough to warrant preparation of an EIS." Id. (*citing* 40 CFR § 1508.9). "The purpose of an EA is to provide the agency with sufficient evidence

and analysis for determining whether to prepare an EIS or to issue a [Finding of No Significant Impact]." Metcalf v. Daley, 214 F.3d 1135, 1143 (9th Cir. 2000) (*citing* 40 CFR § 1508.9). "Because the very important decision whether to prepare an EIS is based solely on the EA, the EA is fundamental to the decision-making process." Id.; *see also* 40 CFR § 1500.1(b); Idaho Sporting Congress, 137 F.3d at 1151. "[T]he public must be given an opportunity to comment on draft EAs and EISs." Anderson v. Evans, 314 F.3d 1006, 1016 (9th Cir. 2002); Citizens for Better Forestry v. U.S. Dept. of Agriculture, 341 F.3d 961, 970 (9th Cir. 2003).

In this case, BLM prepared an EA, but instead of preparing an EIS, issued its Finding of No Significant Impact, or FONSI.

> A plaintiff seeking to show that an agency should have prepared an EIS instead of a FONSI "need not demonstrate that significant effects *will* occur," but rather must show only that "there are *substantial questions* whether the project may have a significant effect of [sic] [on] the environment." *Anderson [v. Evans*], 350 F.3d 815, 831 (9th Cir. 2003).

Western Land Exchange Project, 315 F.Supp.2d at 1087 (emphasis in original). "If several actions taken together have a cumulatively significant effect, this must be analyzed in an EIS. Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1214 (9th Cir. 1998)." Western Land Exchange Project, 315 F.Supp.2d at 1094. *See also* Te-Moak Tribe of Western Shoshone v. Department of the Interior, 608 F.3d 592, 602 (9th Cir. 2010) ("NEPA requires that where several actions have a cumulative ... environmental effect, this consequence must be considered in an EIS.").

Here, the agency failed to take the required "hard look" at all direct, indirect, and cumulative impacts, failed to review all reasonable alternatives, failed to prepare the required EIS, failed to ascertain the baseline conditions for the Project, and improperly deferred analysis of critical Project aspects until the future.

A. Failure Of Scoping Notice To Accurately Describe Scale of Activities.

The Forest Service's original scoping notice (Project Record 043) stated that there would be 122 drill holes, whereas the Draft EA called for 256 drill holes and the Final EA allowed 259 drill holes. In addition, the area that could be impacted by the project increased from 1200 acres in scoping to 2848 acres in the EA. Project Record # 1696. While the main issue regarding drilling relates to the construction of access roads in riparian areas, the number of drill holes affects many aspects of the project. Drill holes require the construction of drill pads which require clearing vegetation and compacting soils in an area 60' long by 25' wide. Even if the number of drill pads had remained the same between the scoping notice and EA, the number of drill holes is a significant issue in and of itself. At a core sampling rate of 100 feet/day, it would take approximately 30 days for one drill rig to drill down to the maximum desired depth of 3,000 feet. By more than doubling the amount of drill holes, the amount of total drilling time potentially expands from 3,660 drilling days to 7,770 drilling days (we recognize that with four drill rigs operating at any one time and with potentially fewer holes being drilled, the actual number of days of work could be approximately be a quarter or less than that amount). This increase also causes proportional increases in the duration of the mineral exploration, the amount of fuel for drill rigs (at 100 gallons/drill rig/day, DN/FONSI p. 7) and drilling fluid additives, traffic, including fuel transport, potential impacts to groundwater, and duration of disturbance to wildlife. In particular, the disturbance to species such as northern goshawks, great gray owls, lynx, gray wolves, elk and deer has been identified as a primary concern:

> Habitat modification is not the primary concern/issue with this project, with the exception of any indirect impacts/effects to reproductive habitat (loss of nest

> trees, nest snags, or dens), disturbance associated with implementation activities – road construction, **drilling operations** - is.

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974 (emphasis added).

> Effects to calving and fawning is less an issue of habitat change and more so an issue of disturbance and animals not having access to suitable calving and fawning habitat as a result of implementation disturbance.

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974.

The Forest Service originally expressed concerns that the increase in number of drill holes would, in fact, double impacts or length of the impacts and perhaps necessitate rescoping. Project Record #1793.

Furthermore, by keeping 60 to 80% of roads open at any one time and the remainder either waiting construction or in "interim stabilization", the increase in time also delays reclamation efforts, including the reestablishment of shade structure in disturbed areas. Even if the disturbed areas has the same size footprint on the landscape as originally scoped, the duration of the disturbance, and the associated effects are more than doubled. This doubling of the scale and effects of a project from scoping to the DN/FONSI is in direct violation of NEPA.

B. Failure To Respond To Comments And Fully Disclose Information About Fire Risk.

The appellants expressed concern that clearing vegetation and placing it in windrows along temporary roads could increase fire risk. Project Record #945. The Forest Service responded that the increased road network would enable increased access for fire fighting and would balance out any increased fire risk effects. DN/FONSI

Attachment B Responses to Comments, p. 81. However, Interdisciplinary Team members had also previously raised this issue:

> I also question the analysis of effects relative to elevate risks due to increased fuels from slash plus exploration activities...the conclusion that 'nominal precautions' mitigate fire danger appears speculative and unsupported at best...relative to temp roads it simply says they will offer increased capabilities for fire suppression??? which really side steps the issue/concern and doesn't recognize that the very act of construction and use of these roads combined with increased fuel loading adjacent these roads likely increase the fire danger.

Dan Schlender to Russ Hicks, Project Record #1925.

The Forest Service failed in its obligation to inform the public of these risks.

C. Failure to Obtain and Disclose Baseline Information.

The EA lacks substantial evidence regarding baseline conditions in the Project area. The Forest Service is required to "describe the environment of the areas 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:

> NEPA clearly requires that consideration of environmental impacts of proposed projects take place *before* [a final decision] is made." *LaFlamme v. FERC*, 842 F.2d 1063, 1071 (9th Cir.1988) (emphasis in original). **Once a project begins, the "pre-project environment" becomes a thing of the past, thereby making evaluation of the project's effect on pre-project resources impossible**. *Id.* **Without establishing the baseline conditions which exist in the vicinity … before [the project] begins, there is simply no way to determine what effect the proposed [project] will have on the environment and, consequently, no way to comply with NEPA.**

Half Moon Bay Fisherman's Mark't Ass'n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988) (emphasis added). "**In analyzing the affected environment, NEPA requires the agency to set forth the baseline conditions**." Western Watersheds Project v. BLM, 552

F.Supp.2d 1113, 1126 (D. Nev. 2008) (emphasis added). "The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process." Council of Environmental Quality, Considering Cumulative Effects under the National Environmental Policy Act (May 11, 1999).

Here, the DN/FONSI authorize over 200 drilling operations, many to a depth of thousands of feet that will intersect groundwater, yet there is no data, analysis or baseline studies of current groundwater conditions (e.g., quality, quantity, flow, geochemistry, etc.). The Forest Service acknowledges that impacts to groundwater were not analyzed in the soil tech report. *See* Project Record # 253.

In addition to a basic NEPA violation for lack of baseline information, this failure renders speculative the agency's conclusion that the Project will not materially degrade water resources. In other words, how can the operator and the agency proclaim that the Project will not degrade water when there is no baseline condition to gauge this prediction against?

The Idaho Department of Environmental Quality conducted a series of Preliminary Assessments of mine sites adjacent to the project area, cited the presence of significant levels of contaminants, and suggested that groundwater may be a possible pathway for contamination from ore bodies to reach downgradient surface springs:

> Ground water flow is expected to be controlled structurally within faults and fracture zones in the country rock and be expressed at the surface as drainage from adits, springs or seeps. Though the source was not observed, surface water was flowing in Charlotte Gulch directly southwest of the Enterprise Group. A seep was emanating from beneath the collapsed Blackbird No. 5 tunnel. Recharge of regional aquifers by surface and ground water in the Charlotte Gulch area is unknown.

> According to Idaho Department of Water Resources July 2002 records, there is one private drinking water well located within a 1-mile radius of the site; approximately 0.75 miles to the northwest near the Golden Age mine. No wells were sampled during this assessment. Drinking water wells are illustrated in Figure 7.
>
> Although no wells were sampled, IDEQ did collect a sample from the adit seep and surface water samples from the creek in Charlotte Gulch. The seep water exceeded IDEQ's Drinking Water Standard and Ground Water Standard for cadmium and lead, though downstream samples did not show elevated levels of these metals. However, it is not known whether either of these sources is used for drinking water.
>
> During the cleanup activities of mining and milling properties, the first concerns are related to potential human health risks as a result of contamination of public and private drinking water supplies. Generally speaking, contamination of drinking water systems was thought likely to occur from two types of sources (ore bodies and waste dumps) and along three pathways, as illustrated by the following three scenarios. First, heavy metals are leached from mine waste dumps, enter ephemeral or perennial drains and then contaminate the area's shallow ground water system. Second, heavy metals leach from the local ore bodies and are transported through the geologic structure to the shallow ground water. Third, heavy metals could leach out of the ore bodies, and be discharged from the underground workings as adit water, that is then conveyed through ephemeral and perennial drains to the shallow ground water systems.[9]

The geology adjacent to the project area contains potentially hazardous levels of arsenic and other contaminants. These contaminants may be securely bound within the surrounding rock matrix or may be leaching into groundwater. The Boise-Mores Watershed Subbasin Assessment and Total Maximum Daily Loads found elevated metals in springs and seeps at the Golden Age Mine and Blackbird Mine in Charlotte Gulch. The report found elevated levels of arsenic, barium, cadmium, copper, lead, mercury, and zinc compared to upstream sources. While metal loads in perennial streams were within water

[9] Preliminary Assessment Report for the Enterprise Group (a.k.a. Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines; Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth lode & Red Flag millsites), Idaho Department of Environmental Quality, December 2008, p. 33.

quality standards, CuMo drilling activities have the potential to increase the metal loads or water quantity coming from these springs. As reported by Mosquito Gold, the 2010 drilling program altered groundwater flow as shown by increased stand pipe flows following drilling activities at higher elevations:

> Only a small amount comes from the stand pipe, when we are drilling higher up the hill, the flow increases so there is circulation occurring.

Shawn Dykes, Mosquito Gold, Project Record #2256.

The Forest Service is in error when it states that there will be no changes or impacts to groundwater as a result of drilling operations and, as a result, that there is no need for a groundwater baseline study. The exploratory rigs are using a rotary turntable with a mud circulating system to drill and recover core samples down to approximately 3,000 feet below surface level. While the drill holes will supposedly be sealed after coring goals are achieved, contamination could occur any time during the 20 to 30 days that each drill will be running at each drill pad and continuously pumping drilling fluids into leaking core holes. During a field trip to the site last year, members of the drilling crew stated that the granite here can be so fractured that it was difficult to keep fluids in the well, indicating that leakage is a common occurrence with these wells. If it the rock is fractured, water could penetrate the fractures causing minerals, such as arsenic, to leach from the surrounding rock and create higher concentrations in the local water supply; the additional water could lubricate any fault lines creating a potential for destabilizing landforms in the immediate area. With a hole drilled to 3000 feet, a full column of water would exert a force of approximately 1300 psi at the bottom of the hole, which is enough pressure to potentially cause hydraulic fracturing, especially with fractures already present in the rock. If water loss occurs in the lower part of the hole, it is unclear which

aquifers it contaminates. If Mosquito Gold is using creek water for drilling process, it is unknown what, if any, pathogens, bacteria, or water borne contaminates would contaminate the groundwater and potentially downgradient water supplies. It is impossible to determine if or how the CuMo drilling program would have any impact on downstream well users without a more thorough baseline groundwater analysis.

A baseline analysis is especially critical in light of the company's stated intention to submit a full mining plan in the future based on the results of the exploration drilling. Without pre-exploration baseline analysis, any future review of a mining proposal will be based on groundwater conditions that have already been impacted by the exploration. A permit first, review baseline-conditions-later approach violates NEPA at its core.
The groundwater issue is significant because the drilling activity is in the headwaters of the drainage and there are several groundwater wells used by Idaho residents downstream of the project.

The same lack of baseline data and analysis applies to surface water, air quality, snag densities, wildlife, recreation, and other affected resources. For example, although the EA mentions that some water quality sampling was conducted in Grimes Creek in 2007, little information is given and no mention is made of baseline information for other waters (including tributaries).

Baseline information is also lacking regarding shade structure along RCAs and water temperature in tributaries that may be affected by drilling operations. *See* temperature discussion, supra.

D. Misleading The Public By Changing The Definition Of "Concurrent Reclamation."

The Forest Service changed the definition of "concurrent reclamation" for exploration roads from that provided in the Draft EA to that provided in the Final EA. In our scoping comments, Appellants ICL *et al.* recommended the use of "concurrent reclamation" to minimize environmental impacts. Concurrent reclamation, according to our understanding, consists of reclaiming roads as they are utilized instead of waiting until the completion of the project. Concurrent reclamation is commonly used to decommission temporary roads for timber harvest as soon as yarding activities are complete.

In the July 20, 20110 EA, the Forest Service rejected developing an alternative for concurrent reclamation of roads:

> Concurrent reclamation of all unused roads may not be practical, as the necessity to return to specific locations may arise as the resource evaluation progresses; thus proposing concurrent reclamation of all roads was not considered a viable alternative.

July 20, 2010 EA p. 29.

Thus we understood that this alternative was rejected. However, at the DoubleTree Riverside Open House on August 12, 2010, Forest Service staff told members of the public that concurrent reclamation would take place throughout the project.

In the July 20, 2010 Draft EA, we were surprised to find that "concurrent reclamation" is in fact being utilized throughout the project. However, upon closer examination it appears that the definition has changed dramatically:

> A total of 60-80% of the proposed temporary roads will be constructed and operational at any one time. As a result, the total length of the temporary roads in service at any given time will be reduced by 20 to 40%. Concurrent reclamation (final reclamation conducted during exploration operations) and interim stabilization will be implemented in order to remain within 60-80% threshold for permitted temporary roads open at one time.

What was once "concurrent reclamation" is now "immediate reclamation." Concurrent reclamation is now defined as "final reclamation conducted during mining explorations," but does not define *when* during those operations. As long as a road is reclaimed before the end of mining operations, it is deemed "concurrent." This appears to have been as confusing to Forest Service personnel as the public:

> If the reclamation is concurrent, then by definition it is happening at the same time as the operation and therefore is not a separate period of time.

Jim Curtis, Mining Engineer, Project Record 234.

In the Responses to Comments, the Forest Service notes that in the July/August 2010 Draft EA immediate reclamation was inadvertently described as "one involving concurrent reclamation." DN/FONSI Attachment B – Responses to Comments, p. 88. Thus, it appears that whatever concurrent reclamation means, it will not be immediate.

Roads now appear to fall under four categories: 1) awaiting construction, 2) actively in use (from 60-80%), 3) interim stabilization, and 4) concurrent reclamation (reclaimed before the end of mining operations). Immediate reclamation, as an alternative, was rejected (Final EA, p. 42). "Interim stabilization" appears to mean some partial form of reclamation that would easily allow the road to be put back in use again and may not include the form of revegetation, soil rehabilitation or recontouring that would occur under immediate reclamation. Out of the 20- 40% of the roads not in active

use, it is unclear what percentage will be awaiting construction, in interim stabilization or in the process of final reclamation. There is nothing to prevent the Forest Service from placing all the used roads in "interim stabilization" for up to 5 years, which is far less environmentally protective than immediate reclamation or even concurrent reclamation. Feb. 11, 1011 DN/FONSI Cover Letter. Based on this confusing and misleading "bait and switch," the Forest Service has failed to properly disclose the environmental effects as required by NEPA.

E. Failure to Provide Important Information To The Public Relating To Purpose and Need.

The primary purpose of the mineral exploration activity is to further delineate the ore body by drilling for core samples in specific areas of potential interest that the exploration company has already identified. The only need for the road system is to provide access to the drill pads at the desired locations. The mineral exploration company submitted a map of desired drill pad locations. In responding to this request, and because roads were a significant issue, the Forest Service developed an alternative road access network based on the total length of these roads. As part of the NEPA process, the Forest Service solicited comments on the length of this road network, but did not allow public examination of the desired drill hole and drill pad locations that had been identified by the mining company.

While total road length is an important factor, it is not the only issue. Roads are simply a means to an end, specifically to provide access to the drill hole and drill pad locations. The Project Record confirms that locations of the drill holes are viewed by the Forest Service as important to its environmental analysis:

> Herb thinks that showing the drill holes is important for the Level 1 team and their review of the BA. He feels that if we don't show the hole locations, the Level 1 team will almost certainly ask to see them. . . .
>
> Herb felt that we could explain easily why the hole locations are an important fishery issue and thus why the hole locations are shown for fisheries only. The rationale being that because drilling involves fuel, lubricants, drilling mud, water use, and wider spots in the roads, and these activities in proximity to waterways could affect fish, we need to show hole locations with respect to the RCAs.

Project Record # 1255.

The Forest Service should have described the desired drill hole locations and then solicited public comments on what type of minimal road network is needed to access these locations. In this way, members of the public could have commented on routes that minimized impacts to stream crossings, Riparian Conservation Areas, *Lewisia sacajaweana* plants, birds and other wildlife, while factoring total road length at the same time. By failing to disclose the actual destinations of these roads (the main purpose and need) the Forest Service presented the false case that all roads presented were warranted. While the length of roads is an important factor, the Forest Service should have developed alternatives focused on the primary purpose (accessing drill pads). In some cases, there may be fewer environmental impacts from a longer road network in a less sensitive location than a shorter road network through more sensitive habitat. In short, the public did not have adequate information to provide substantive comments.

F. Failure to Fully Analyze Cumulative Impacts From All Past, Present, And Reasonably Foreseeable Future Actions/Projects

The EA's discussion of cumulative impacts is very minimal. Although the EA lists a variety of past, present, and reasonably foreseeable future actions/projects, no detailed analysis is given regarding the impacts from these other actions/projects. Regardless of whether the agency prepares an EIS or an EA (and as noted herein an EIS

is required), CEQ regulations require federal agencies to consider "connected actions," "similar actions," and "cumulative actions" together with "direct," "indirect," and "cumulative" impacts. 40 C.F.R. §§ 1508.7, 1508.8, 1508.25(a)(2).

"The CEQ regulations require agencies to discuss the cumulative impacts of a project as part of the environmental analysis. 40 C.F.R. § 1508.7." Davis v. Mineta, 302 F.3d at 1125 (10th Cir. 2002). "Of course, effects must be considered cumulatively, and impacts that are insignificant standing alone continue to require analysis if they are significant when combined with other impacts. 40 C.F.R. §1508.25(a)(2)." New Mexico ex rel. Richardson, 565 F.3d at 713, n. 36.

> In a cumulative impact analysis, an agency must take a "hard look" at all actions. An EA's analysis 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, 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).

A cumulative impact analysis must provide a "useful analysis" that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure. Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1066 (9th Cir. 2002); Ocean Advocates v. U.S. Army Corps of Engineers, 361 F.3d 1108 1118 (9th Cir. 2004). The NEPA requirement to analyze cumulative impacts prevents agencies from undertaking a piecemeal review of environmental impacts. Earth Island Institute v. U.S. Forest Service, 351 F.3d 1291, 1306-07 (9th Cir. 2003).

The NEPA obligation to consider cumulative impacts extends to all "past," "present," and "reasonably foreseeable" future projects. Blue Mountains, 161 F.3d at 1214-15; Kern, 284 F.3d at 1076; Hall v. Norton, 266 F.3d 969, 978 (9th Cir. 2001) (finding cumulative analysis on land exchange for one development failed to consider impacts from other developments potentially subject to land exchanges); Great Basin Mine Watch v. Hankins, 456 F.3d 955, 971-974 (9th Cir. 2006)(requiring "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).

Thus, in this case, the USFS must consider the cumulative impacts from all past, present, and reasonably foreseeable future projects in the region on, at a minimum, water and air quality, recreation, wildlife, scenic and visual resources, etc. As held by the court decisions noted above, this means that the impacts from other projects – not just the current project under review – must be fully reviewed.

Past and present actions/projects in the area have or may result in cumulative impacts – impacts that the EA does not analyze.

The surrounding area consists of a mix of public, private and state ownership which is managed for logging, mining, motorized recreation, and grazing. The Idaho Department of Environmental Quality surveyed surrounding historic mine sites and found elevated levels of arsenic at the Baby and Enterprise Mines as well as sedimentation

issues.[10] Even though Forest Service staff originally stated concerns about the effects these historic mines may have, the EA does not analyze this critical aspect:

> Historic mining not mentioned in existing condition of soil report. There may not be current impacts from past mining but it isn't stated. Either drop it as an issue or needs to be analyzed.

Project Record # 253.

Rather than analyze historic mining, the Forest Service decided to simply "drop it as an issue" and those avoid addressing cumulative effects – thus violating NEPA. The Forest Service does describe the minerals (including sulfides, which can generate acid-mine drainage) but completely overlooks the arsenic and other heavy metals issues in the adjacent mine workings at the Baby and Enterprise Mine Groups:

> All of these workings intersected sulfide mineralizion. Minerals consisted mainly of pyrite, with some chalcopyrite, sphalerite, and galena. This translates into mainly iron sulfide with some copper, zinc, and lead. There's a little antimony around, but it's in tetrahedrite (silver ore) and was probably shipped. There's no arsenopyrite (arsenic and iron) mentioned in the literature. I estimate the sulfide rich component of the waste rock at 5% or less.

Project Record #1860.

In addition, Mosquito Gold has also been constructing roads and drill pads on private properties adjacent to the project area. Depending on the length of this activity into the future, it may have cumulative effects on permitted exploration in terms of sediment loading to Grimes Creek and tributaries, stream shading and water temperature, groundwater hydrology, RCAs, wildlife disturbance (such as goshawks) and noxious

[10] Preliminary Assessment Report for the Enterprise Group (a.k.a. Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines; Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth lode & Red Flag millsites), Idaho Department of Environmental Quality, December 2008, p. 39.

weed establishment, which again are not addressed in the EA. Recent logging and land disturbance has also occurred in the project vicinity.

Notably, it is the agency's duty under NEPA to conduct this analysis, not the public:

> We conclude that in order for Plaintiffs to demonstrate that the BLM failed to conduct a sufficient cumulative impact analysis, they need not show what cumulative impacts would occur. To hold otherwise would require the public, rather than the agency, to ascertain the cumulative effects of a proposed action. Such a requirement would thwart one of the "twin aims" of NEPA-to "ensure that the *agency* will inform the *public* that it has indeed considered environmental concerns in its decisionmaking process." *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983) (emphasis added). Instead, we conclude that Plaintiffs must show only the potential for cumulative impact.

Te-Moak Tribe of Western Shoshone, 608 F.3d at 605 (other citations omitted).

The failure of the EA to fully analyze the impacts from all of the past, present, and reasonably foreseeable future actions and projects violates NEPA.

G. Improper Deferral Of Analysis Of Critical Project Components And Impacts.

In numerous instances, the EA defers analysis of critical Project impacts and parameters to some future, as-yet-undetermined time. Such deferral violates the agency's duties to take a "hard look" at all project impacts and aspects. "NEPA procedures must ensure that environmental information is available to public officials and citizens **before** decisions are made and **before** actions are taken." 40 CFR § 1500.1(b)(emphasis added).

> NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment. Rather, it is designed to require such analysis as soon as it can reasonably be done. *See Save Our Ecosystems v. Clark,* 747 F.2d 1240, 1246 n. 9 (9th Cir.1984) ("Reasonable forecasting and speculation is ... implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under

> NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry'.")

Kern v. BLM, 284 F.3d 1062, 1072 (9th Cir. 2002).

Here, for example, the EA defers analysis on critical vegetation issues. Regarding the *Lewisia sacajaweana* plant, the EA defers analysis and mitigation measures:

> The Project Botanist **will identify** these locales on a map and will work with the District Geologist and the mining claim permittee to develop means of avoidance and reduction of impacts to the greatest extent practicable for *Lewisia sacajaweana.*
>
> In addition to the reclamation information provided in the Plan of Operations, **a more detailed written plan for reclamation (roads, drill holes, water crossings, etc.) will be submitted to and approved** by the Project Botanist and Biologists prior to project implementation, including any use of seed/plant propagules, mulch, soil amendments or fertilizer.

EA at 27 (emphasis added). Thus, these plans and reviews "will be" submitted in the future, instead of during the already-completed public NEPA process as required.

For the critical water discharges, the EA also defers detailed analysis to the future: "Mosquito … is required to develop and implement a Stormwater Pollution Prevention Plan which would further reduce potential sediment generation." EA at 43. This critical Plan was not part of the NEPA process and not subject to public review – as required by NEPA.

The EA also fails to disclose information regarding the source and quantity of water for drilling activities, dust abatement and other uses. The Forest Service states that the first option is an existing standpipe or well on old drill site No. 12 within the project area and the second option is from Grimes Creek itself, at a still-to-be-determined location:

> Water will be drawn from either an existing stand pipe with a turn-valve adjacent to a road in the northeast quarter of the northeast quarter of Section 17, T8N, R6E, or it would be drawn from Grimes Creek.

DN/FONSI p. 7

However, Mosquito Gold states only a small amount of water comes from the stand pipe and that they will be reapplying for a water right for Charlotte Gulch, which has not been analyzed as a water source, as well as from Grimes Creek. Project Record # 2256. According to the record, Mosquito Gold is planning on diverting up to 10-acre feet per year of water from Grimes Creek and Charlotte Gulch. Project Record # 2256. There will be impacts to riparian areas and stream flow (which in turn affects water temperature), but the location (or even which water body), and the related impacts, are still unknown and unanalyzed. Because of the potential impacts to Riparian Conservation Areas, water quality, perennial streams, and groundwater hydrology are major issues, the Forest Service has an obligation under both NFMA and NEPA to take a hard look and disclose potential impacts before making a decision. As the Boise Forest Plan provides:

> To protect soil, water, and riparian resources, and their occupied habitat, water supply points, service areas, and other needs for road and facility construction projects should be specified in project planning and used in project implementation.

Boise Forest Plan, Standard FRGU01.

Regarding unknown impacts to Riparian Conservation Areas, locating a diesel-powered water pump within the RCA (a "support facility" under MIST08 per above NFMA discussion) is illegal. By failing to discuss or disclose potential pump locations in Grimes Creek or Charlotte Gulch, the Forest Service is violating the Forest Plan and NEPA.

Furthermore, the Forest Service has not done an analysis on how the removal of water (from either Grimes Creek or Charlotte Gulch) will affect stream temperatures or heavy metal levels in the springs. For example, if water is removed from Charlotte Gulch upstream of the Enterprise Mine group, pumped down a nearby drill hole, it may increase flows to those springs and heavy metal contaminants. At the same time, there may be less water remaining in the stream to dilute the heavy metals. Likewise, water pumped from streams can reduce streamflows and make these streams more susceptible to increased stream temperatures, particularly if the shade is reduced in the RCA.

In addition to vegetation, streambank disturbance, and sedimentation issues, the Forest Service is violating the Forest Plan by relying on a to-be-determined response plan to deal with a fuel spill at this location. Even Forest Service personnel noted this inconsistency:

> Comment [r7]: Herb says: "please identify the mitigation measure and the effectiveness of no spill."

Project Record # 151. However, the Forest Service defers any details on the mitigation measures until some future time:

> The 20 drill sites located in the RCA on existing roads will have additional measures to prevent any leakage of the drill material from the sumps. The operation will be conducted in a manner where the sumps will contain all drill fluids to prevent from reaching the stream channels. Project Record 151.

In the Forest Service's response to comments about the need to disclose the location of the pump, the Forest Service simply states that the Spill Prevention and Control and Countermeasure Plan (SPCC) will address this risk, inferring that with the SPCC in place, there is no need to review the issue of location. *See* DN/FONSI Attachment B – Response to Comments, p. 94. Again, this violates NEPA.

The Forest Service has also failed to identify the source of crushed rocks to be used at stream crossings to reduce sediment impacts. The Idaho Department of Environmental Quality has identified several waste rock piles at nearby mine sites, some of which are now owned by Mosquito Gold, that are heavily contaminated with toxic metals. If this material is used to help armor stream crossings, water could become contaminated. No matter how unlikely this possibility, because these details are left unanswered, we have no assurances that this hazardous material will not be utilized in such a manner.

The Forest Service has also failed to define the term, "interim stabilization" which effectively replaces "immediate" reclamation (as soon as drilling at one site is finished) and "concurrent" reclamation (before mining exploration ceases).

In addition, the Forest Service is permitting up to four different drill rigs to be operating across the entire project area, with up to 15 personnel on site at any one time, yet allows for just one sanitation facility, in spite of our recommendations for multiple facilities. The Forest Service is again relying on on-the-fly consultations to address an issue which should have been addressed as part of the EA.

H. Improper Geographic Scope of Analysis.

In considering effects, the EA limits its review of potential impacts to the very narrow Grimes Creek subwatershed. The agency failed to consider impacts beyond this very limited geographic area. This "blinders-on" approach violates NEPA's mandate to review all direct, indirect, and cumulative impacts. *See* Idaho Sporting Congress v. Rittenhouse, 305 F.3d 957 (9th Cir. 2002) (discussing need to review impacts on a

"landscape scale"); Utahns for Better Transp. v. United States Dep't of Transp., 305 F.3d 1152 (10th Cir. Sept. 2002).

In particular, the Forest Service failed to analyze effects of two very different transportation routes. The routes from either Garden Valley or New Centerville may have very different effects in terms of risk of fuel spills into waterways, dust impacts to vegetation and water quality, conflicts with recreationists, and impacts to private property owners.

In other instances, the Forest Service selects a study area so large to make what would normally be significant effects on a localized scale seem immaterial across an overly broad study area. In the analysis of impacts to elk and deer, the Forest Service states that having 60-80% of roads open at any one time has no impact because the project area represents only 0.1% of the entire Boise National Forest (Project Record 1974) and 0.2% of IDFG Big Game Management Unit 39 (EA p. 145). In addition, the analysis minimized impacts by referring to the physical footprint of disturbance, rather than the much larger area affected by 24/7 noise, lights, and odors. Forest Service staff had noted these discrepancies in earlier discussions:

> Internal discussions 3/5 to 4/5 of proposed roads being open at any one time seems pretty substantial to me. Is this really good rationale for the impacts?? Is the Forest level scale an appropriate scale to do such an analysis?
>
> Effects to calving and fawning is less an issue of habitat change and more so an issue of disturbance and animals not having access to suitable calving and fawning habitat as a result of implementation disturbance. . . .
>
> Scale would not be the BNF, but would be the Big Game Management Unit IDFG has identified around the project area (Unit 39) But even there, scale makes this concern immeasurable and impacts negligible.

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974.

The Forest Service is misrepresenting negative effects to wildlife by minimizing the impacts (citing the disturbance footprint instead of the actual range animals will be displaced by human activity) and maximizing the scale (the Project Area represents only 0.1% of Boise National Forest).

The issue of scale is also relevant to the discussion of Large Woody Debris and temperature. The Fisheries Survey Technical Report states the following:

> Disturbance in these RCAs would have no measurable effects on LWD and water temperatures when analyzing these changes over the entire project activity area or subwatershed.

Project Record # 2162.

The problem is that the TMDL does not gauge or assess compliance simply at the project level scale, the subwatershed, or Grimes Creek, but specifically at individual tributaries:

> Additionally, because this TMDL is dependent upon background conditions for achieving WQS, all tributaries to the waters examined here need to be at natural background condition in order to prevent excess heat loads to the system.

Project Record # 2212, Boise-Mores Creek Subbasin Assessment and TMDL, p. 166

This also is relevant to issues of sediment. Even though the section of Grimes Creek adjacent to the Project is not impaired for sediment, there is a load allocation for sediment in that section included in the TMDL. Load allocations for sediment are assigned to 1st and 2nd order of Grimes Creek that the Forest Service must abide by.

There are a number of other past, present, and reasonably foreseeable actions/projects in the larger area on federal and nearby non-federal lands. The agency

cannot self-constrict its analysis when there are cumulative impacts from these activities, both within and just outside the small "study area."

As previously discussed, the Idaho Department of Environmental Quality conducted site Preliminary Site Assessments of 12 different mine groupings (some consisting of up to 10 different mines) in Boise County, including several mines surrounding the project area (see Map in Project Record #1860). The Department of Environmental Quality found significant contaminants of concern at the Enterprise Group, which includes the Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines, Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth Lode, and Red Flag Mill Site patented mining claims:

> The level of arsenic in all of the soil sample locations poses an excess cancer risk and a hazard for all residential receptors and a moderate risk for non-residential receptors. All of the soil/sediments samples showed elevated arsenic, cadmium at mill site, and lead concentration, particularly at the former millsite.[11]

The Baby and Enterprise historic mine sites are directly adjacent to the Project Area and were recently purchased by Mosquito Gold. By failing to conduct a baseline groundwater study, the Forest Service neglected to analyze the potential for these contaminants to become mobilized through groundwater movement as a result of drilling efforts.

The Preliminary Assessment assessed the potential risks to user groups from these historic workings:

> This site is infrequently visited by mountain bikers, hikers, hunters, snowmobile operators, off-road vehicles, or various other outdoor recreation enthusiasts. Humans may receive very small doses of heavy

[11] Preliminary Assessment Report for the Enterprise Group (a.k.a. Blackbird No. 5 Tunnel, Diana Mines, Mineral Mines & Baby Mines; Blackbird, Enterprise Fraction, Enterprise, Red Flag & Commonwealth lode & Red Flag millsites), Idaho Department of Environmental Quality, December 2008, p. 39.

> metals, especially arsenic and lead. Aerial dispersion of waste particulates from the tailings or waste dumps may occur. Direct contact with the wastes appears to be the most significant route of exposure to humans for elevated constituents.

Id., p. 39.

Even though DEQ concludes that the risk to members of the public is currently low, it adds the following caveat:

> "The exposure levels do not appear to pose a substantial risk, **based upon current property uses."**

Id. (emphasis added).

Failing to analyze these potential effects is a violation of NEPA because it is reasonably foreseeable that these current property uses of the area could change with the recent transfer of ownership to Mosquito Gold. There is a potential to use some of the roads through this property as part of the CuMo Mineral Exploration. The Forest Service acknowledges that additional drilling has or will occur on private property. The EA does not describe if portions of this area may also be utilized for equipment storage, a rock source to armor the roads at stream crossings (a required BMP), or other uses which may mobilize these hazardous materials. Even though the Forest Service has a map of these mine sites (Project Record #1860), the Forest Service has not conducted an in-depth Cumulative Effects analysis relating to these issues.

I. Failure to Fully Analyze All Reasonable Alternatives.

NEPA requires the agency to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(E); 40 CFR § 1508.9(b). It must "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. City of Tenakee Springs v. Clough, 915 F.2d 1308,

1310 (9th Cir. 1990). Indeed, NEPA's implementing regulations recognize that the consideration of alternatives is "the heart of the environmental impact statement." 40 CFR 1502.14, *quoted in* Alaska Wilderness Recreation and Tourism Ass'n v. Morrison, 67 F.3d 723, 729 (9th Cir. 1995).

In this case, the agency failed to meet this requirement. As noted above, for example, the agency did not consider the alternatives of keeping all "roads, structures, and support facilities" out of the RCAs. Although it may not be possible to keep every road, for example, from crossing an RCA (although the agency never reviewed that alternative, so that question cannot be answered on the present record), the EA never analyzed the reasonable alternative – indeed a required alternative to review under the Forest Plan – of protecting RCAs from these impacts.

The Forest Service disregarded at least two additional alternatives recommended by the Appellants that would both meet Mosquito Gold's need for reasonable mineral exploration and reduce environmental impacts to a greater extent than the proposed action alternatives. While the Forest Service selected the total number of miles of road construction as the main issue driving alternatives, yet the Forest Service accepted without question the proponent's desire to leave 60 to 80% of these roads open at any one time for the five-year life of the project with the remainder either waiting construction or in a state of "interim stabilization." This approach overlooked two other issues with potentially significant impacts and failed to develop alternatives addressing these impacts.

The first issue is related to the impacts from continued presence of roads and human activity on the road system at any one time. The Forest Service accepted the

proponent's proposal to leave 60-80% of exploration roads and drill pads open at any one time. By leaving this percentage of the roads and drill pads fully operational and in place, the Forest Service increases the potential for more impacts, including sedimentation, habitat fragmentation, disturbance to wildlife, and noxious weed establishment, among other impacts. This issue was discussed among the interdisciplinary team but not with the public:

> 3/5 to 4/5 of proposed roads being open at any one time seems pretty substantial to me. Is this really good rationale for the impacts?? Is the Forest level scale an appropriate scale to do such an analysis?

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974.

> Concurrent reclamation. 60-80 percent in of roads would be in service does not sound much like concurrent reclamation. Relative to reducing effects having 80 percent of roads open/in use is relatively meaningless. If we are concerned with road impacts we should have staged construction AND reclamation. Ie stage 1: 20 percent (or specific temp routes identified) of total would be constructed, drilled and reclaimed prior to constructing the next stage. Consider use of 'staged or staggered' construction and associated reclamation. It should be possible to easily identify 3-5 different logical stages, with each being closed, reclaimed prior to initiating the next. Under the current proposal most all of the road and pads could be open most of the 5 years of operation and many up to 7 years. Under a staged proposal it is likely a much smaller amount would be open at any given time.

Review of 3-28 2008 Cumo Draft EA D.Schlender, 4/01/2008 (Project Record # 1908).

As note in Appellants comments, while road construction entails a significant amount of environmental impact, the continued existence of the road bed provides a continuous source of sediment that can bleed into streams. For every year that the road bed remains open in case the mineral exploration company decides to return, that is one more year for noxious weeds to become established and one less year for the soils and vegetative community to become reestablished.

The Forest Service makes the argument that it is less damaging to keep 60 to 80% of the roads open throughout the entire life of the project instead of obliterating roads after use and then possibly having to reopen them (and again obliterate them) in case additional drilling information is needed. However, the Forest Service provides no analysis comparing environmental effects of sediment, stream temperature, wildlife disturbance, noxious weeds if roads were closed after initial drilling efforts or if 60 to 80% of the roads were kept open at any one time. The Forest Service should have analyzed alternatives that address both human disturbances across the project area and the effects of having the majority of roads open at any one time.

The Forest Service also should have analyzed an alternative that increases the amount of immediate reclamation and decreases the amount of open, operational roads to a lesser amount such as up to 20%.

A separate issue is the increased disturbance from Project activity on wildlife, recreationists, and visual resource objectives by allowing mineral exploration and associated infrastructure to potentially occur across the entire project area at any one time. Each drilling operation is associated with significant amounts of noise, lights, vehicles, and associated infrastructure for 24 hours a day, 7 days a week. If four drilling operations occur at the four corners of the project area at any one time, as allowed by the current plan, the range of these impacts is significantly greater than if these operations were clustered more closely together. This sentiment was expressed among the Interdisciplinary Team:

> Habitat modification is not the primary concern/issue with this project, with the exception of any indirect impacts/effects to reproductive habitat (loss of nest trees, nest snags, or dens), disturbance associated with implementation activities – road construction, drilling operations - is.

Forest Service Wildlife Specialist's Mike Feiger's comments on Biological Evaluation, Project Record #1974.

However, the Forest Service neglected to analyze an alternative addressing this issue that would limit all active mineral exploration to one area, quadrant or zone at a time, leaving the remaining areas relatively undisturbed. This approach would have better addressed disturbance to potential wolverine denning locations, goshawk and great gray owl nests (providing nest surveys were conducted previously), and displacement of hunters and other recreationists on popular trails. While this alternative would ideally be integrated with an immediate reclamation program so that roads are only operational where drilling operations are active, the Forest Service should compare the impacts of human activity separately from road presence.

While this high degree of flexibility may be preferable from the perspective of mineral exploration, it does not balance the need to allow for exploration with other resource values and fails to minimize impacts.

Allowing 60- 80 percent of the roads to remain intact as approved in Alternative B is excessive, and it is completely unacceptable to keep roads and drill pads open within RCAs for this time period. While it might make exploration easier, it does not meet the Forest Plan standard for minimizing impacts. Furthermore, where an exploration road crosses an RCA, the Forest Service should consider an alternative that closes this route or, if necessary, provides an alternate (even if it is longer) route around the RCA instead of allowing this disturbance throughout the life of the project. In addition, the EA failed to provide alternatives to minimize locating roads in landslide prone areas.

J. The Agency Should Have Prepared an EIS.

1. Impacts To Groundwater and Water Quality Require An EIS.

As the discussion above demonstrates, the CuMo Exploration Project poses potentially significant risks both to groundwater and surface water resources in many ways, including through direct, indirect, and cumulative impacts; yet the Forest Service has not gathered baseline information nor analyzed these potential impacts adequately. Because of the potentially significant impacts, an EIS is required.

As noted above, if a proposed action, considered along with cumulative and other impacts, "may" have a significant impact, an EIS must be prepared. A "plaintiff need not show that significant effects will in fact occur." Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 1998). Rather, it is enough that "substantial questions whether a project may have a significant effect" on the environment. Id. "If the cumulative impact of a given project and other planned projects is significant, [the agency] cannot simply prepare an EA for its project, issue a FONSI, and ignore the overall impact of the project." Kern v. BLM, 284 F.3d 1062, 1076 (9th Cir. 2002). An EIS "must be prepared if substantial questions are raised as to whether a project may cause significant degradation of some human environmental factor." Klamath Siskiyou Wildlands Center v. Boody, 468 F.3d 549, 562 (9th Cir. 2006) (quoting Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1150 (9th Cir.1998)). The court noted that in Idaho Sporting, "[w]e explained that '[t]he plaintiff need not show that significant effects will in fact occur, but if the plaintiff raises substantial questions whether a project MAY have a significant effect, an EIS must be prepared.' *Id.* at 1150 (emphasis in original). This is a low standard." *See also* Te-Moak Tribe of Western Shoshone v. Department of the

Interior, 608 F.3d 592, 602 (9th Cir. 2010) ("NEPA requires that where several actions have a cumulative ... environmental effect, this consequence must be considered in an EIS.").

It is important to note that the Forest Service has elsewhere determined that mineral exploration projects warrant an analysis through an EIS instead of an EA, such as the Buckhorn Exploration Project on the Okanogan-Wenatchee National Forest.

Here, despite the lack of baseline information or information regarding cumulative impacts, the agency improperly failed to prepare an EIS. In other words, without the required review of potential direct, indirect, and cumulative impacts, the decision not to prepare an EIS is without sufficient evidentiary support. Upon remand, and upon the completion of the required analysis of cumulative impacts, baseline conditions, etc., noted herein, the agency must reconsider its decision that there is no possibility of "significant impacts" and thus an EIS is not warranted.

2. Significant Landslide Risks Require An EIS.

In addition, an EIS is required because the Forest Service has failed to ascertain and disclose important information regarding the potential for landslides as a result of road construction activities. As a result, the Forest Service analysis is insufficient and underestimates both hazards and risks, in violation of NEPA and its EIS requirement.

The Forest Service is overlooking and underestimating landslide prone areas. Soil surveys map areas of similar soil characteristics such as soil depth, property, structure, texture, and slope steepness. As the Boise Forest Plan underscores, these soil surveys can be helpful in assessing slope stability and subsequent landslide risk, among other things:

> Soil depth influences landslide potential. Deeper soils tend to slide on less steep of a slope than shallow soils. Soil properties affect landslide

> potential. Rocky soils with angular rock fragments have a higher internal angle of friction than soils with only minor amounts of rock fragments. The soils with a higher internal angle of friction will be more stable than soils with low internal angle of fiction on the same slope gradient. Soils with coarse angular sands have a higher internal angle of friction than soils composed of fine sands.

Boise Forest Plan, Appendix B-46.

However, only the western half of the project area's soils has been mapped and ground truthed by the National Resources Conservation Service. In the eastern half, the soils are merely extrapolated (EA, page 55) and have not been ground truthed: "Site scale soil analysis was not conducted for the Activity Area." *See* Project Record # 1646. It is within the unmapped eastern half that several roads are proposed for construction across steep slopes and gullies. While the Forest Service's landslide model, SINMAP, identified several low and moderate landslide prone areas, landslide prone areas may be underestimated.

Relying on extrapolated soil surveys in this sensitive area is inappropriate and actual soil surveys are needed before the project proceeds, as the Boise Forest Plan also acknowledges:

> Inventoried landslide data gathered on the ground – such as ground slope, soil depth, soil texture, vegetation, slope shape, slope position, and contributing area – provide valuable information for both modeling and field verification of LSP areas.

Boise Forest Plan, Appendix B-44.

In addition, field surveys were limited to active roads, not abandoned roads, creating the potential that post-closure failures could have been missed:

> During the field review, evidence of historic road activity was observed throughout the west portion of the Activity Area. The historic and reclaimed roads are not accessible to vehicle traffic and have been vegetated and stabilized. As a result, they were not considered as part of

> the baseline conditions contributing to potential sedimentation or degradation of water quality.

Geologic Hazards and Soil Resources Technical Report, Project Record #820.

To help identify potential landslide hazards, the Forest Service utilizes a fairly coarse-scaled landslide modeling program known as SINMAP (Stability Index Mapping) to initially identify potential Landslide Prone areas (LSP). Another component of assessing the potential for landslides is to identify factors that increase landslide risk, such as roads. The Forest Plan notes that roads are primary factors in creating landslides:

> Road construction is the main destabilizing activity related to forest management actions. Megahan et al. (1978) found that 58% of management-related landslides were related solely to roads, while forest vegetation removal accounted for only 9 percent of landslides.

Boise Forest Plan, Appendix B-45.

> Roads have the potential to affect landsliding in several ways. Roads alter the natural ground slope with cuts and fills. Road cuts may destabilize slopes above the cuts by removing material that provided stability to the slope above. Road fills place additional material on slopes that tends to load the slope below the road, increasing the risk of mass failures. Road drainage features such as dips and culverts tend to collect water and concentrate it on slopes below. The additional water can add instability to the slopes. Care should be taken with road drainage so that water is not collected and concentrated on LSP areas below roads.

Id., Appendix B-46.

The Forest Service identified landslide prone areas as a potentially significant issue and looked for ways to relocate roads or assure that risks identified by SINMAP were incorrectly predicted:

> Since roads may be the big issue, should look at this carefully to see if can relocate roads out of these areas, or do more field work to support that what SINMAP predicted as LSP areas, are actually not.

Project Record #253.

Note that the Forest Service approached this issue by stating that either the roads should be moved or that the roads can stay if the field work shows that SINMAP overestimated the hazards.

Interestingly, the Forest Service discovered that there were areas slated for temporary road construction with moderate probability of slope failures:

> Groundwater seeps and saturated surface soils were also observed, particularly at the location DK-Chute 1 indicated in Figure 8. This area was also characterized by relatively immature plant growth. Based on these observations, this area is considered to represent a moderate hazard, i.e. the area exhibits a moderate probability of slope failure. . . . Not sure how we justify putting any roads on a landslide prone area. Usually we avoid these areas. Check with engineering to see if have any road standards and guides on this.

Project Record #820. In particular, the area marked DK-Chute 1 is in the area slated for temporary road construction.

Having confirmed landslide prone areas in proposed temporary road locations, the Forest Service did not act to relocate these roads out of these Landslide Prone areas. Instead, the Forest Service states that simply because landslides have not happened in the past, they cannot happen in the future. The Forest Service also inexplicably adds that road construction will not increase this probability:

> Field work in the area of proposed temporary exploration roads did not reveal evidence of landslide activity or instability (Table 4). The construction of roads under Alternative B will not increase the likelihood of landslides within the Activity Area. The Proposed Action and field work meets SWST12; evaluation of the site has been conducted to meet SWGU03 and SWGU04.

Project Record #820.

The 2008 draft Geologic Hazards and Soil Reports calculated that there were specific risks for landslide potential. The report calculated that there were 1.1 miles of

road in Moderate Risk Landslide Prone Areas and 1.6 miles in High Risk Landslide Prone Areas for Alternative B:

> A total of 2.7 miles of new temporary roads will traverse areas which were predicted to have moderate and high risk landslide potential… The construction of roads under Alternative B results in an inherently higher risk or potential for landslides than the No Action Alternative.

Project Record 1734.

However, in the EA, the miles of roads crossing medium or high risk Landslide Prone Areas have been reduced to 0. It is unclear from the EA why these concerns about road construction in landslide prone areas has suddenly been alleviated. Even if the Forest Service road surveys had concluded that there was no evidence of historic landslides or recent landslide activity, this does not automatically remove the area from being designated "landslide prone."

The Forest Service further justifies allowing road construction in Landslide Prone Areas by distinguishing between areas of landslide "hazard," where there is a possibility of a landslide occurring, from landslide "risk" in which the effects from such a landslide may cause harm to forest resources, public property or other socio-economic consequences:

> Areas of moderate landslide hazard identified in the Activity Area do not constitute a risk, as they are far from populated areas and are located sufficiently distant from Grimes Creek that slope failures in these areas are unlikely to impact aquatic ecosystems.

EA, p. 61.

The Forest Service provides no modeling or data to support the assertion that slope failures are unlikely to impact aquatic ecosystems. Without this information, we are particularly concerned that road construction in landslide prone areas could result in

significant levels of sediment reaching Grimes Creek or tributaries. In addition, even if the Forest Service is correct in assuming that debris could not reach Grimes Creek, the loss of vegetation could reduce the shading of either nearby tributaries or on Grimes Creek itself, leading to increased water temperatures and adverse environmental impacts.

At this point the Forest Service states that, even if a landslide were to reach Grimes Creek, the "risk" of impacts on socio-economic resources and other values is low (as defined by Prellwitz, et al. 1994[12]) because there is no populated area immediately below the landslide prone slope. However, the Forest Service is overlooking several important socio-economic resources that could be adversely affected by a landslide reaching Grimes Creek or its tributaries.

First, a landslide would damage Forest Trail 169 which is the sole trail leaving that drainage and connecting with the Wet Gulch Trail (Forest Trail 170) and FS Road 380 near Jackson Peak (it would also, incidentally, affect mineral exploration activities).

Second, a landslide could have adverse impacts on the intensive watershed restoration project located downstream with which the Appellants have been closely involved. The Grimes Creek restoration effort is a collaborative effort between the Forest Service, non-profit organizations, private citizens, school groups, and private property owners. The goal is to revegetate riparian areas affected by historic mine dredging by planting willows and cottonwoods that stabilize soils and reduce water temperatures. The result of these improved conditions is dramatic improvements in both water quality and fisheries. In the last few years, volunteers from our organizations and others have

[12] Prellwitz, Rodney W, Koler, T.E. and John E. Stewards, 1994, Slope Stability Reference Guide for National Forests in the United States, Vol 1-111, USDA Forest Service, Engineering Staff, Washington D.C., EM-7170-13.

invested hundreds of hours in these efforts and have restored approximately three miles of habitat. Grants supporting these restoration efforts surpass tens of thousands of dollars. This work has been featured in local newspapers, television news channels, and newsletters.

Should a landslide occur upstream, the subsequent increases in stream temperature, sedimentation, turbidity and potentially flow rates could undermine these extensive restoration efforts. Given the significant socio-economic investment this project represents, a landslide at the project area represents a high relative risk to the project, as defined by Prellwitz, et al, 1994 and represents a "significant" potential impact that requires full evaluation in an EIS. As such, the Forest Service needs to apply a greater level of caution regarding road construction in landslide prone areas:

> Restricted Practices (In High Hazard or Moderate Hazard Areas with High Relative Risks): Management Activities are severely restricted or eliminated so as to minimize initiation of landslides and effects to other resources.

Forest Plan, Appendix B-47.

At a minimum, the Forest Service needs to provide a more comprehensive analysis demonstrating that these concerns have been addressed and study this issue through an Environmental Impact Statement.

3. Potential Impacts On Sensitive Species Require An EIS**.**

As noted above, numerous sensitive species are known to be located in and around the Project area, including northern goshawk, great gray owl, wolverines, and various plants. The Project Record materials, as well as EA and DN/FONSI, underscore that the exploration activities may have significant impacts on these sensitive species,

which have not been mitigated – including impacts from noise and lights of drilling activities occurring around the clock which may disturb the wildlife.

As numerous cases hold, federal agencies have duties under NEPA to fully evaluate potential impacts on such sensitive species and their habitats, through an adequate EIS. *See* Native Ecosystems Council v. Tidwell, 599 F.3d 926 (9th Cir. 2010) (Forest Service violated NEPA in failing to address adverse impacts on sensitive sage-grouse and its habitat); ONRC v. Goodman, 505 F.3d 884 (9th Cir. 2007) (failure to adequately study impacts of roads and logging on sensitive fisher and its habitat); Anderson v. Evans, 314 F.3d 1006, 1016 (9th Cir. 2002) (failure to address impacts on sensitive whale population).

In short, the Forest Service violated its basic NEPA duty to prepare an EIS in this case, requiring reversal and remand by the Regional Forester.

IV. THE AGENCY FAILED TO REQUIRE A COMPLETE PLAN OF OPERATIONS AND RECLAMATION PLAN.

Related to the failure to have all required information available to the public (and the agency) during the NEPA process, the agency's failure to require a complete reclamation plan violates its mining regulations at 36 CFR subpart 228A. For example, the EA admits that: "a more detailed written plan for reclamation (roads, drill holes, water crossings, etc.) will be submitted to and approved by the Project Botanist and Biologists prior to project implementation." EA at 27.

Under USFS mining regulations, this complete reclamation plan should have already been submitted, and the agency cannot approve any incomplete plan. "The Plan of operations shall cover the requirements set forth in paragraph (c) of this section, as foreseen for the entire operation for the full estimated period of activity." 36 CFR

228.4(d). Under paragraph (c): "The Plan of Operations shall include: … (3) Information sufficient to describe or identify … measures to be taken to meet the requirements for environmental protection in §228.8." Section 228.8 details the mandated environmental protection requirements, including requirements that the "operator shall take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations," 228.8(e), and that all disturbances be reclaimed, 228.8(g).[13]

Thus, the agency's regulations do not allow the Forest Service to allow the operator to submit "a more detailed plan for reclamation (roads, drill holes, water crossings, etc.)" **after** project approval and **after** the close of the NEPA process. Accordingly, the DM/FONSI and EA violate the public purposes of NEPA as well as the agency's mining regulations and cannot stand.

Lastly, the EA does not disclose "the approximate location and size of areas where surface resources will be disturbed." 228.4(c). Although the EA gives a generalized map of the location of the roads, no information is provided which shows the approximate location of the drill holes. As discussed above, the likelihood that a large number of drill holes, mud pits, etc., will be located in RCAs supports the requirement that the agency and public be apprised of where these facilities will be located.

V. THE FOREST SERVICE FAILED TO MINIMIZE ALL ADVERSE IMPACTS FROM THE PROJECT.

On the National Forests, the Organic Act requires the Forest Service "to regulate their occupancy and use and to preserve the forests thereon from destruction." 16 U.S.C.

[13] In addition to the NEPA concerns noted above regarding the –as-yet-unsubmitted stormwater management plan, this plan certainly relates to water quality protection and thus was required to be submitted as part of a complete plan of operations under subpart 228A.

§ 551. "[P]ersons entering the national forests for the purpose of exploiting mineral resources must comply with the rules and regulations covering such national forests." Clouser v. Espy, 42 F.3d 1522, 1529 (9th Cir. 1994).

The USFS mining regulations require that "all [mining] operations shall be conducted so as, where feasible, to minimize adverse environmental impacts on National Forest resources." 36 C.F.R. § 228.8. In addition, the operator must fully describe "measures to be taken to meet the requirements for environmental protection in § 228.8." 36 C.F.R. 228.4(c)(3). "Although the Forest Service cannot categorically deny a reasonable plan of operations, it can reject an unreasonable plan and prohibit mining activity until it has evaluated the plan and imposed mitigation measures." Siskiyou Regional Education Project v. Rose, 87 F. Supp. 2d 1074, 1086 (D. Or. 1999)(emphasis added), *citing* Baker v. U.S. Dept. of Agriculture, 928 F.Supp. 1513, 1518 (D. Idaho 1996). "This court does not believe the law supports the Forest Service's concession of authority to miners under the General Mining Act in derogation of environmental laws and regulations." Hells Canyon, *supra*, at *6 (finding violation of Organic Act in Forest Service's failure to minimize adverse impacts to streams). *See also* Rock Creek Alliance v. Forest Service, 703 F.Supp.2d 1152, 1170 (D. Montana 2010) (Forest Service violated Organic Act and 228 regulations by failing to protect water quality and fisheries).

As detailed above, the DM/FONSI and EA fail to require adequate protection for riparian areas and other environmental resources. A simple and generalized **reduction** of impacts does not equate to the strict requirements for minimization of impacts and protection of resources. The Forest Service's duty to minimize impacts is **not** met simply by somewhat reducing those impacts. Trout Unlimited v. U.S. Dep't. of Agriculture, 320

F.Supp.2d 1090, 1110 (D. Colo. 2004). In interpreting the Federal Land Policy and Management Act (FLPMA)'s duty on the agency to "minimize damage to … fish and wildlife habitat and otherwise protect the environment," 43 U.S.C. § 1765(a), the court specifically stated the agency's finding that mitigation measures would "reasonably protect" fisheries and habitat failed to meet its duty to "minimize" impacts. Id.

More specifically, the following mitigation and minimization measures are reasonable and should have been adopted in order to meet the agency's statutory and regulatory duties. In addition to the other mitigation and minimization measures discussed in this Appeal, they include, but are not limited to: (1) limiting the total amount of roads that could be open at any one time to 0 to 20%; (2) limiting the number of drill pads; (3) prohibiting actions in RCAs as detailed above; (4) prohibiting operations that would produce harmful sediment or reduce stream shading; (5) limiting drilling activity to one quadrant or region of the project area at any one time; (6) expanding the protections to great gray owls and goshawks.

Lastly there also appears to be a pattern of interpreting the data to support the Proposed Action. While none of these instances is noteworthy in and of itself, together these cases raise substantive concerns about the project analysis. We are raising this issue here to ensure that the facts supporting this rating are actually in the Project Record.

Regarding stream status conditions, the Forest Plan does not allow for long term "degradation." Yet, in reviewing p. 18 of the Biological Assessment and p. 30 of the specialist's report, a contractor states the following:

> Need changes to many of the "Degradation" status conditions. Forest Plan for BNF does not allow for "Degrade" classifications beyond the "temporary" timeframe. The tables do not appear to incorporate data from the sedimentation report, needs to be considered and CITED. Edits needed

> to Tables in areas of Physical Barriers, Substrate Embeddedness, and Road Density. Mostly changing "degrade" classifications to "maintain" or "None" to be in compliance w/forest plan.

Dale A. Kerner, P.G., Project Record # 1660, July 2009.

As a result of this direction, the tables were adjusted accordingly so there were no longer any long term impacts:

> With regard to the former "Degrade" classifications in the document table, In the Sediment section, he suggested referring to the Hydro/Soils tech report to justify the reclassification (with asterisk and footnote at bottom of table). Same comment for Substrate Embeddedness section. For the Road Density section, he stated that the temporary effect could be left as Degrade, but the short and long term should be change to Maintain. The reasoning for this was that initially, the road density would increase, but after that initial stage, roads no longer in use would be reclaimed as new roads are added, kind of a zero-balance description. This could go in the far right column of the table in Comments. Hope that's a little more clear.

Id.

Regarding meeting the Forest Plan, a staff member had inquired about how the reclamation plan meets the Forest Plan standards:

> Enclosed is the most recent version of the Fisheries Report addressing your comments. Regarding your comment number 5, page 4, section 1.2 last paragraph, you asked about the reclamation plan meeting the Forest Plan Standards. We have reviewed the Cumo Project Forest Plan Consistency matrix and couldn't find anything directly stating that this meets this plan. However, comments are provided indicating the proposed activity is consistent with the Revised Forest Plan, thus, we have stated such in this version.

Project Record #1257. The last sentence was thus added to the final Fisheries Report:

> Under Alternatives A and B, exploration activities will be conducted for a period of 5 years and reclamation will take 1 to 2 additional years resulting in an estimated 6-year to 7-year period of detrimental soil disturbance. <u>This plan is consistent with the Revised Forest Plan.</u>

While it may exist, we have not found any information documenting this consistency.

Regarding consistency with Forest Plan Standards and Guides, this exchange surfaced:

> Comments on draft EA, review 3-31-2008, completed 4-02-2008
> REMEMBER THIS IS A MINERAL PROPOSAL- OTHER RESOURCE AREA STANDARDS AND GUIDES HAVE NO BEARING OR SIGNIFICANCE. The M&G Standards and Guidelines are what govern this action.

Project Record #234, Mining Engineer Jim Curtis. This same document from the Project Record also shows that the Forest Service appears to be attempting to minimize *the appearance* of any water quality impacts, instead of disclosing these impacts:

> Comments on draft EA, review 3-31-2008, completed 4-02-2008
> · WATER Page 5 let's eliminate the negative implications.

Id.

Instead of determining the effects of the different alternatives, the Forest Service almost appears to be crafting the EA in a way that no adverse effects are apparent, which is not necessarily the same thing as minimizing or disclosing these effects:

> If we reduce shade (not sure that would occur at this point in process) from intermittents, but particularly perennials in project area that feed Grimes, then we have an effect. Just keep it in mind so you don't totally dismiss. **We need to say we are not affecting stream temp in project area.**

Project Record #1663 (emphasis added).

The 2008 Soils Report found that Alternate B included 1.1 miles of road in Moderate Risk Landslide Prone Areas and 1.6 miles of road in High Risk Landslide Prone Areas:

> A total of 2.7 miles of new temporary roads will traverse areas which were predicted to have moderate and high risk landslide potential… The construction of roads under Alternative B results in an inherently higher risk or potential for landslides than the No Action Alternative; however, due to the .7 mile reduction of roads located on moderate and high LSP areas Alternative B clearly results in a lower risk and potential for land slides than the Preferred alternative.
>
> Alternative B is shown in Figure 7. Under Alternative B new temporary road

> construction will be reduced by 2.7 miles, .7 miles of which are in moderate and high LSP areas.

However, in the EA, the amount of roads in Landslide Prone Areas is now 0. It is unclear from the EA why these concerns about road construction in landslide prone areas have suddenly been alleviated. Even if the Forest Service road surveys had concluded that there was no evidence of historic landslides or recent landslide activity, this does not automatically remove the area from being designated "landslide prone."

There is also uncertainty about whether drill hole additives could reach fish habitat via groundwater that were not addressed to our knowledge:

> My understanding of additives is that these products will be down the drill hole. I am uncertain of the depth of the drill holes and where ground water may be. Question is, would these additives (down the drill hole) reach fish or fish habitat via groundwater? If so, would there be an effect to fish and/or fish habitat?

Project Record 1261. Similar questions were raised at other points:

> The three 20 drill sites located in the RCA on existing roads will have additional measures to prevent any leakage of the drill material from the sumps. The operation will be conducted in a manner where the sumps will contain all drill fluids to prevent from reaching the stream channels. Comment [r7]: Herb says: "please identify the mitigation measure and the effectiveness of no spill" Comment [r8]: Herb says:"what are the drill additives and is there a potential for these additives to get into the groundwater and affect surface water? Comment [r9]: Herb says: "additional analysis please.

Project Record 151. From our review of the EA, the Spill Prevention and Control and Countermeasure Plan has not yet been developed.

In short, the Project Record indicates that there is a pattern here of the Forest Service internally raising concerns – similar to those identified by Appellants – but then make "assumptions" or simply avoiding addressing those troubling issues in detail in its NEPA analysis and decision documents. It is vital that the Regional Forester use this

opportunity to require the Boise National Forest to thoroughly and publicly review all aspects of the proposed CuMo Exploration Project, through a valid EIS and new decision documents that comport fully with NMFA, Clean Water Act, NEPA, and other regulatory requirements.

RELIEF REQUESTED

Because the analysis and decision-making process in the EA, DN and FONSI are inadequate and violate the provisions of law discussed above, the Regional Forester should grant this Appeal; and reverse and remand the EA and DN/FONSI to the Boise National Forest. Given the inadequacies in the analysis regarding groundwater hydrology, landslide risk and hazards, and sedimentation and temperature impacts, the Regional Forester should direct that the Boise National Forest must reanalyze the CuMo Exploration proposal through an Environmental Impact Statement (EIS).

Once the Forest Service adequately addresses these issues in an EIS, the Forest Service has a clear mandate to select the alternative that minimizes adverse environmental effects. Alternative B does not meet these legal obligations to minimize negative impacts and is thus needlessly destructive, and the Regional Forester should so direct in his decision on this appeal.

Dated: April 4, 2011.

Respectfully submitted,

Laurence ("Laird") J. Lucas
Attorney for Appellants

CERTIFICATE OF SERVICE

I hereby certify that on this 4th day of April, 2011, I caused the foregoing Notice of Appeal to be served upon Regional Forester Harv Forsgren, U.S. Forest Service, Ogden UT, via fax sent to 801-625-5277; and via email, sent to: appeals-intermtn-regional-office@fs.fed.us.

Laurence ("Laird") J. Lucas