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## **DECISIONS APPEALED**

Appellants San Juan Citizens Alliance *et al.* file this appeal of the Record of Decision (“ROD”) approving the Northern San Juan Basin Coal Bed Methane Project (“Project”) under 36 CFR § 215. The decisions being appealed – as listed on page 51 of the ROD – include:

1. Amendment of the San Juan National Forest and Land and Resource Management Plan.
4. Approval of surface use associated with gas field development plans and environmental protection measures for NFS lands.
6. Authorizing BLM to waive, except, or modify specific oil and gas lease stipulations.
8. Approval of surface use plans of operation (“SUPOs”) and other use authorizations on NFS lands.

## **APPELLANTS**

The San Juan Citizens Alliance is based in Durango, Colorado, with over 500 members in La Plata, Montezuma, and Archuleta counties, among others. The San Juan Citizens Alliance and its members have had an active interest in impacts of natural gas development across the San Juan Basin since 1986, and our members have been extensively involved in management decisions affecting the HD Mountains for over 20 years.

The Wilderness Society (“TWS”) has been involved in land management since 1935, and has a vested interest in the HD Mountains roadless area and other lands impacted by the Project. With over 300,000 members and supporters nation-wide, TWS represents a diverse range of citizens. TWS’s goal is to protect public lands as wilderness and to ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained. TWS provided comments on the Project Draft Environmental Impact Statement (“DEIS”).

The Colorado Environmental Coalition (“CEC”) is the largest state-based citizens’ group committed to conserving our clean air, water and open spaces for generations to come. By strengthening the effectiveness of Colorado’s environmental community, the Coalition has a legacy of success for our state’s wild places and quality of life. With the help of its thousands of members across the state who recognize that the economic value our wild places offer is as important to Colorado as the spiritual fulfillment these public lands provide residents and visitors, the Coalition is a powerful voice for our state. CEC has a longstanding interest in the protection of the HD Mountains roadless area and other lands impacted by the Project. CEC provided comments on the Project DEIS.

Colorado Wild is a non-profit environmental conservation organization based in Durango, Colorado whose primary interests and goals are the protection and restoration of forested wildlife habitat throughout the Southern Rocky Mountains, including the San Juan National Forest and BLM San Juan Public Lands. Colorado Wild’s more than 800 members have a great interest in the management of the San Juan NF and BLM lands for this purpose. Colorado Wild provided comments on the Project DEIS.

Oil and Gas Accountability Project (“OGAP”) is a non-profit organization based in Durango, Colorado, with a network of 550 individual and organizational members throughout the United States and Canada. Many OGAP members reside in the San Juan Basin of Colorado. OGAP was founded in 1999 to work with individuals, groups, and communities to prevent and reduce the social, economic and environmental problems caused by oil and gas development. OGAP actively participates in public processes to ensure that oil and gas leasing and development complies with federal law and has participated in the Northern San Juan Basin CBM project. OGAP provided comments on the Project DEIS.

Bill Vance owns and operates a 360-acre farm in the HD Mountains along the Fruitland Formation outcrop in Archuleta County. He draws his irrigation and domestic water from springs and runoff originating within the HD Mountains. His home is located less than one mile from the Fruitland outcrop. Vance has hiked and hunted in the HD Mountains roadless area for the past 30 years. He commented extensively at every phase of the public process on the Northern San Juan Basin CBM project.

Mike Murphy operates T Bar M Outfitters in Durango, CO. He has an outfitting permit from the Forest Service to guide within the HD Mountains roadless area. He relies on the undisturbed wildlife habitat of the HD Mountains to benefit the big game animals his clients seek. He commented at numerous occasions on the Northern San Juan Basin CBM project.

Dr. W. James Judge, PhD, is Professor Emeritus, Department of Anthropology, Fort Lewis College, Durango, CO. Dr. Judge has over 40 years of experience in the field of archaeology, including 30 years of teaching at the college or university level. He has conducted archaeological research in all major time periods in the Western U.S., from the Paleoindian to historic periods. He directed a major archaeological research project in Chaco Canyon, New Mexico, for the National Park Service and the University of New Mexico for 10 years. Judge has been involved in the Environmental Impact Statement (EIS) process for the Northern San Juan Basin throughout the entire process. Specifically, he has reviewed and provided expert comments on portions of the EIS relevant to cultural resources and archaeology at every step of the process. Judge also gave a public educational presentation about the archaeology in the HD Mountains on February 23, 2004.

The Archuleta County Commission is the duly elected local government with jurisdiction over the private lands contained within the project area, specifically along the eastern Fruitland

Formation outcrop. The Archuleta County Commission has expressed continuing concerns about the impacts of the project to their constituents with homes and property along the outcrop.

## **STATEMENT OF REASONS**

### **I. HD MOUNTAINS ROADLESS AREA.**

#### **A. The Decisions Violate the National Forest Management Act, its Implementing Regulations, and the San Juan National Forest Plan.**

The Forest Service's decision to allow coalbed methane development to proceed according to the preferred Alternative 7 in the FEIS, as modified by conditions in the ROD, would violate the National Forest Management Act ("NFMA"), its implementing regulations, and the San Juan National Forest Plan. The decisions are arbitrary and capricious and contrary to law because they would allow development that will likely result in violations of the Plan's standards to protect old growth Ponderosa pine, wildlife habitat, floodplains, riparian areas and streams. The decisions would also violate NFMA, its regulations, and the Plan because they are inconsistent with the Plan and NFMA and its regulations' requirements for the monitoring of management indicator species ("MIS").

#### **1. NFMA Requires That the Forest Service Ensure that Project-Level Decisions Comply with the Forest Plan.**

NFMA was enacted in 1976 to guide the management of the national forests by providing for the "development and maintenance of land management plans for use on units of the National Forest System." 16 U.S.C. § 1604(b); *see also Lamb v. Thompson*, 265 F.3d 1038, 1042 (10th Cir. 2001). Such forest plans guide site-specific projects, such as that approved here, within each forest. *Ohio Forestry Ass'n, Inc. v. Sierra Club*, 523 U.S. 726, 729 (1998). Site-specific projects must be consistent with the governing forest plan. 16 U.S.C. 1604(i); *Neighbors of Cuddy Mountain v. Alexander*, 303 F.3d 1059, 1062 (9th Cir. 2002) ("Specific projects, such as

the Grade/Dukes timber sale, must be analyzed by the Forest Service and the analysis must show that each project is consistent with the plan.”); *Lamb*, 265 F.3d at 1042 (“the Forest Service is required to implement the forest plan by approving or disapproving specific projects. Projects must be consistent with the governing forest plan”); *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1377-78 (9th Cir. 1998) (Forest Service held in violation of NFMA where its site-specific project was inconsistent with the forest plan standard for protection for old growth forest). This requirement specifically applies, via regulation, to the agency’s approval of surface use plans of operation. 36 C.F.R. § 228.108(a)(2) (Forest Service must ensure that any “surface use plan of operations is consistent with . . . the applicable current approved forest land and resource management plan.”). In order to demonstrate that the Project will be consistent with the Plan, the Forest Service must “confirm and document that the proposed management decisions are consistent with the management direction in the forest plan.” *See* FS Manual 1922.41(1) (emphasis added).

If the Forest Service seeks to approve a project that is inconsistent with the applicable forest plan, it must: (1) amend the plan; (2) modify the action to comply with the plan; or (3) disapprove the action that is inconsistent with the plan. *See* Forest Service Manual 1926.5 (effective Jan. 31, 2006). Any other course of action is arbitrary and capricious. *See Ecology Center v. Austin*, 430 F.3d 1057, 1069-70 (9th Cir. 2006) (“The Forest Service does not explain how it can be certain that the Project complies with NFMA if the Project was not developed in accordance with the Standard”); *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 961 (9th Cir. 2005) (“If the Forest Service thinks any provision of the [forest] plan is no longer relevant, the agency should propose amendments to the plan altering its standards, in a process complying with NEPA and NFMA, rather than discount its importance in environmental

compliance documents”).

**2. The Proposed Action Violates the Plan Requirement that 5% of Forested Areas Must Be In Old Growth.**

The SJNF Forest Plan contains the following standard: “In forested areas of a unit, 5 percent or more should be in old growth.” Forest Plan at IIII-11.<sup>1</sup>

The Final EIS acknowledges four important facts concerning the Project’s impacts to old growth ponderosa pine forests. First, the project area contains significant old growth resources. *See* Exhs. 1 and 2. The Final EIS states that old growth ponderosa pine constitutes an “important biological resource,” because of the unusual diversity of the forest itself and of the understory, and because old growth ponderosa stands provide “important” habitat for rare species such as the northern goshawk. FEIS at 3-231 – 3-232. Perhaps most significantly in this period of global warming and historic drought, “old growth trees and stands contain tremendous genetic diversity, having survived and adapted to many droughts and other small climatic changes.” *Id.* at 3-232. Forest Service surveys found that the rarest old growth stands are those with trees more than 400 years old, only seven of which exist on the forest, and that at least one such stand exists in the project area: “Tree ages measured in the old growth stands in the Project Area range from 200 to more than 435 years. Of the 12,061 stands surveyed for old growth across the SJNF, seven have trees over 400 years old.” *Id.* Thus, stands with 400+ year old trees represent the hardiest genetic stock, but less than 1/16<sup>th</sup> of 1 per cent of ponderosa stands on the forest.

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<sup>1</sup> The ROD refers to this provision of the Forest Plan as a “guideline.” ROD at 16. This provision, however, appears under the header “Standards & Guidelines.” Forest Plan at III-11. Given that the provision contains mandatory language – “should” being the past tense of “shall” – this provision is properly identified as a standard and guideline, as the Forest Service identified it in the FEIS. *See, e.g.*, FEIS at 3-270 (“These reductions in the old growth stage would move the Project Area further away from the Standard and Guideline that the Project Area is currently not meeting.”) (emphasis added). Whether it is a standard or guideline or both, however, is

Second, the Final EIS admits that while the project area's stands contain significant old growth, less than 5% of the ponderosa pine forest in the area is old growth. FEIS at 3-231 (old growth ponderosa pine stands in the project area "represent 3.8 percent of the total area of ponderosa pine on NFS lands in the project area").

Third, the Final EIS indicates that the SJNF's approval of Alternative 7 will result in the destruction of old growth forest, including the rarest, oldest trees. "Of the 746 acres of old growth in the HD Mountains, approximately 13 acres could be removed during implementation of this decision, and six of fifteen old growth stands could be impacted." ROD at 16 (citation omitted); *see also* FEIS at 3-252 – 2-253, 3-270. The chosen alternative will destroy one of only seven stands identified on the forest that contains trees more than 400 year old. *Id.* at 252 ("well pad and road construction along the Pine-Piedra Stock Driveway cannot totally avoid old growth and would eliminate a number of very old and large trees, or clumps of trees (some aged 400 years+)"). The FEIS acknowledges the significant nature of the loss of old growth the project will cause, and the fact that the number of acres of trees chainsawed will underestimate the damage to forest and wildlife values:

The changes in the percent of old growth described above are important considering the rarity of old growth stands for the ponderosa pine forest type in the Project Area, across the SJNF, and throughout the Southwestern U.S (Romme et al. 2003, SJNF Old Growth Inventory), and considering the timeframes (centuries in many cases) for other forested lands in the Project Area, which currently are in younger seral stages, to succeed into the old growth stage.

It should also be noted that the actual number of acres of old growth affected by the alternatives only includes a 40-foot-wide swath of land running through the old growth stand (in the case of road construction) and a 1 acre well pad, not the total acres of the whole old growth stand. Dissecting or fragmenting an old growth stand by road or well pad construction would adversely affect the ecological integrity of the whole old growth stand by removing ecological

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irrelevant for purposes of NFMA, which requires that project-level decisions comply with the applicable forest plan, and makes no distinction between standards and guidelines.

components that change the composition and structure of the stand (Angermeier and Karr 1994). Removing any of the large and old ponderosa pine trees that are rare components within this project area would eliminate the genetic diversity that these individuals contain and would greatly slow the successional process of Gambel oak-dominated shrublands succeeding back to ponderosa pine forests, since these seed-producing trees would be removed in a landscape where ponderosa pine seed-producing trees are not abundant and not well distributed.

*Id.* at 270. The Final EIS concludes that this loss as “an irreversible commitment because restoring old growth stands would be an extremely long-term process.” *Id.* at 3-271.

Finally, the Final EIS indicates that Alternative 7 could also result in the destruction of hundreds of acres of structural class 4 ponderosa pine forests, the forest stands most likely to, over decades if not centuries, acquire the characteristics of old growth forest. FEIS at 3-245.

The sum of these facts, as the Final EIS and ROD make clear, is that the proposed action will worsen the current non-compliance with the Forest Plan standard for old growth.

The alternatives would impact 36 acres of old growth pine or less. Consequently, old growth would be reduced to between 2.2 and 3.1 percent of forested areas on NFS lands in the Project Area or between 3.6 and 3.8 percent of ponderosa pine stands on NFS lands in the Project Area, depending on the alternative selected. These reductions in the old growth stage would move the Project Area further away from the Standard and Guideline that the Project Area is currently not meeting. The changes in the percent of old growth described above are important considering the rarity of old growth stands for the ponderosa pine forest type in the Project Area, across the SJNF, and throughout the Southwestern U.S (Romme et al. 2003, SJNF Old Growth Inventory), and considering the timeframes (centuries in many cases) for other forested lands in the Project Area, which currently are in younger seral stages, to succeed into the old growth stage.

....

The lack of compliance with the Forest Plan Standard and Guideline associated with the old growth stage implies that the structural diversity of vegetation (as described in the General Direction for Diversity on National Forests) in the Project Area (diversity unit) is not adequate. Additional loss of old growth stands through the implementation of alternatives as described above would mean that achieving the desired vegetation structural diversity for the Project Area and conforming to the Standard and Guideline of 5 percent would take even longer to achieve than it would if no actions are implemented. This could have adverse effects on wildlife species that utilize and rely on old growth habitats to some

extent (see wildlife section of this document).

FEIS at 3-270-71 (emphasis added). *See also* FEIS Appendix O at 246 (admitting Forest Plan rule “are currently not being met” and that predicted impacts will “move us further away from Forest Plan conformance.”). The ROD itself further admits that the project will cause a “deviation from the current guideline.” ROD at 17 (emphasis added).

The Forest Service’s analysis and admissions demonstrate that the proposed action will result in a violation of the 5% old growth standard and guideline. The project will move the Forest Service further out of compliance with the standard, worsening what the Forest Service admits is a “lack of compliance.” The ROD itself characterizes the approval of the destruction of old growth as a “deviation” from the rule.

Despite this “lack of compliance with the Forest Plan Standard and Guideline associated with the old growth,” FEIS at 3-271, the Forest Service takes the position that it need neither amend its plan or disapprove or modify the proposed action. This is arbitrary and capricious and violates NFMA. 16 U.S.C. 1604(i); *Lamb*, 265 F.3d at 1042 (“Projects must be consistent with the governing forest plan”).

Furthermore, at the time the Forest Service issued the leases at issue, it was required to ensure that development on those leases could occur in conformity with the Forest Plan. This means that, to comply with the law, the Forest Service was required to ensure at the time it issued these leases that they could be developed while meeting the Forest Plan’s standards and guidelines, including that for old growth. 36 C.F.R. § 228.102(e) (requiring consistency determination prior to leasing). If we assume the Forest Service complied with the law when it issued the leases, they must be developed without affecting old growth. If not, the Forest Service violated the law when it issued the leases in question and they must be rescinded.

The ROD provides four reasons in an attempt to excuse the inconsistency with the Forest Plan, each of which is without merit. First, the ROD argues that: “The old growth guideline [sic] describes desirable, though not mandatory, conditions that help guide our overall management of projects and vegetation.” ROD at 17. NFMA’s command that each project comply with the plan, however, is mandatory. Even assuming that the ROD’s statement is true, and the Plan states only a desirable condition, the FS could not approve a decision that it admits will move the SJNF further away from that “desired” condition. If the condition is indeed desired, it is arbitrary and capricious for the Forest Service to adopt a course of action that it admits irreversibly moves the Forest away from that desired condition. The ROD effectively seeks to do here what the Court of Appeals found was improper in *Native Ecosystems Council v. U.S. Forest Service*, 418 at 961, in which the Forest Service excused plan non-compliance by arguing that a certain standard was no longer relevant.

Second, the ROD states that: “To achieve old growth goals, we have implemented Forest-wide strategies to promote old growth characteristics in pine forests and we generally avoid old growth harvest, tending to promote natural forest succession.” ROD at 17. This statement does not address the plan standard itself which addresses the percentage of old growth required to be maintained “[i]n forested areas of a unit.” Forest Plan at IIII-11. The SJNF, in adopting its plan, chose to adopt a standard that a minimum amount of old growth should exist in each unit, a standard that emphasizes maintenance of old growth in each part of the forest as opposed to percentage across the entire forest. Protecting old growth forest outside the project area may have important benefits, but it does not substitute for meeting the Plan’s standard. Further, the SJNF does not explain why, for this project and in this unit, it has decided to ignore its Forest-wide strategy and will instead approve actions that will not avoid destruction of old

growth.

Third, the ROD explains: “I find the potential effects to old growth in the HD Mountains, however, are an acceptable deviation from the current guideline because of the relatively small amount of acres impacted.” ROD at 17 (emphasis added). In other words, the ROD seeks to excuse the plan violation on the grounds that it is only a small violation of the standard. We are aware of no caselaw that permits the agency to approve a decision that violates a forest plan standard or guideline on the grounds that it is only a little bit illegal. Such a decision would effectively render the forest plan standards meaningless. Deviations from the plan require either plan amendment or project modification. In addition, the ROD’s characterization of the amount of old growth to be destroyed as “relatively small” is arbitrary and a mischaracterization, given that the Forest Service itself found the 400+ year old trees to be destroyed among the rarest, and arguably most genetically significant, old growth ponderosa pine stands on the forest, and found that the loss of old growth character would far exceed the actual acreage of old growth cut down. *See* FEIS at 3-270.

Finally, the ROD excuses the “deviation from the current guideline ... because we will have the opportunity to further reduce this potential impact during field siting of facilities as permits are processed.” *Id.* The ROD does not indicate that the Forest Service will be able to eliminate the destruction of old growth, or even that the agency will be able to substantially reduce the destruction of old growth. Again, this argument ignores the fact that the 5% old growth standard bars the destruction of any old growth here.

In sum, the proposed action cannot be approved unless it is modified to comply with the 5% old growth standard. At present, because the proposed action will result in a violation of the standard, its approval violates NFMA’s consistency requirement and is therefore arbitrary and

capricious and contrary to law.

### **3. The Decisions Fail to Ensure Consistency with the Plan's Standards for the Protection of Streams.**

The Forest Service's decision is also arbitrary and capricious because it failed to ensure that development would not violate the Plan's water quality standards. The Plan requires that water quality be improved or maintained to meet state water quality standards, and that increased sediment yields may not exceed threshold limits. Plan at III-47. The Project must also "comply with policy and direction given through the Region 2 Soil and Water Conservation Practices Handbook (FSH 2509.25)." FEIS at 3-179.

The Project threatens significant degradation to the area's streams. According to the FEIS:

Stormwater runoff from exposed surfaces can increase streamflow and sediment loads in local drainages. Peak runoff rates can increase as a result of vegetation removal and soil compaction during construction of well pads and access roads. The degree of impact depends on the location of the new facilities and their distance from drainages, rivers and other water bodies. Construction near surface water drainages has the greatest potential to change patterns of streamflow or to alter the channel. Increased runoff and erosion may affect stream channels by increasing bank erosion, channel scour, and sediment loads.

Direct impacts to streams are particularly acute where construction occurs in channels and at sites where roads or pipelines cross perennial streams. The channel has been altered by bridges or culverts in these areas, and sediment is easily transported to streams. The existing road network outside of the watershed influence zone (WIZ) may contribute sediment and chemical contaminants either directly into adjacent streams or indirectly by routing water and sediment through ditches and culverts into streams.

Where CBM roads cross steep, landslide-prone areas, mass failures can result. Mass failures are large sources of sediment that may enter streams directly, especially in steep, dissected terrain.

Surface-disturbing activities, such as construction of the well pad, road, and pipeline reduce vegetative cover in the watershed. This loss of cover increases erosion potential and, consequently, sediment loads in surface streams.

FEIS at 3-115.

As a result of these impacts, the FEIS admits that the Project “may not conform to Direction and standards for the SJNF LRMP or to FS Region 2 Policy and Direction (FSH 2509.25).” FEIS at 3-179. In fact, the FEIS presents a catalog of development that is included in the Preferred Alternative 7 and authorized by the ROD that could violate multiple Plan standards. FEIS at 3-179 to 3-181. For example, under the preferred alternative, “[n]ew road and pipeline construction in Lange Canyon over steep, dissected landslide terrain ... poses a high risk of pipeline failure which can result in substantive [sic] negative watershed impacts.” The Forest Service admits that this action “may conflict” with two Plan standards. FEIS at 3-180. The agency similarly admits that wells and infrastructure in Zabel Canyon, in the Goose Creek watershed, in the WIZ of Fosset Gulch Creek, and adjacent to Pole Creek may similarly violate Plan standards that protect streams and floodplains. *Id.* at 3-180 to 181.

In addition, as part of Decision Points 6 and 8 , the Forest Service has authorized “one time exception[s]” to lease stipulations on leases COC 64933 and 34, ROD at 45, that were imposed on the leases to avoid landslide areas, steep slopes, riparian areas, and floodplains. ROD at Table 1, Summary of Decisions Pertaining to 2001 Leases. These leases are depicted, with proposed development, on the attached Exhibit 3 entitled HD Mountains Roadless Area: Selected Leases and Proposed Development. The Forest Service has likewise failed to ensure that these exceptions would not violate Plan Standards.

In sum, the FEIS states that authorizing development under Alternative 7 could violate numerous plan standards to protect the San Juan National Forest’s watersheds, riparian areas and floodplains. The FEIS and ROD fail to state how the Forest Service will address these violations, either by modifying the project or the Forest Plan. In the absence of a decision

amending the Forest Plan, authorizing such development is illegal. 16 U.S.C. 1604(i); *Lamb*, 265 F.3d at 1042 (“Projects must be consistent with the governing forest plan”); *Neighbors of Cuddy Mountain*, 303 F.3d at 1062 (“Specific projects... must be analyzed by the Forest Service and the analysis must show that each project is consistent with the plan.”).

#### **4. The Decisions Fail to Ensure Consistency with Forest Plan Standards for Wildlife Habitat.**

The decisions also fail to ensure consistency with Forest Plan’s standards for Habitat Capability. The Forest Plan prescription for Management Area 4B provides: “[m]anagement emphasis is on the habitat needs of one or more management indicator species.... The goal is to optimize habitat capability, and thus numbers of the species.” Forest Plan at III-140. In these areas, “[r]ecreation and other human activities are regulated to provide optimum habitat for the selected species.” *Id.* To meet this prescription, the Forest Service must “maintain habitat capability at a level at least 80 percent of potential capability” in Management Prescription 4B areas. Plan at III-145. Further, the SJNF in 4B areas must maintain at least 90 percent of the habitat needed to support the State population goals for each species. *Id.* At least part of the area proposed for development is within a 4B prescription area.

Other areas within the Project area are 5B prescription areas, in which the “[e]mphasis is on big game winter range in forested areas.” Forest Plan at III-159. This prescription requires that the Forest Service “maintain habitat capability at a level at least 80 percent of potential capability.” *Id.* at III-165. In addition, in 5B areas, the Forest Service must “maintain habitat effectiveness during winter of at least 90 percent.” *Id.*

The Forest Service has failed to ensure that these standards will be met. Because the management direction requirements vary by prescription area, the Forest Service must conduct a consistency analysis that analyzes habitat effectiveness by examining habitat effectiveness

within each management prescription area within the larger Project area. *See* Decision on Appeal 00-02-04-0046 (July 8, 2000). The Forest Service failed to do so, and thus has provided no evidence that development in these management areas will conform to the Forest Plan.

In fact, under the Preferred Alternative, development likely will not conform to these standards. The Forest Service has only recommended, but not required, mitigation measures to reduce impacts to wildlife habitat,. FEIS at 3-272 (“the following mitigation measures are recommended to reduce or minimize effects of CBM development and production on wildlife and their habitats”) (emphasis added); *id.* at 3-287 (“The following mitigation measures are recommended, in addition to general mitigation measures presented in Section 3.9.3, for individual MIS species and the wildlife they represent.”) (emphasis added). All of these optional measures “would be funded by the companies.” *Id.* Neither the FEIS nor the ROD provides any rational basis for assuming that any of these optional measures would be implemented given their the fact that it would be in the companies’ economic interests not to fund them.

Furthermore, even if the measures are implemented, there is no basis for assuming that they would reduce habitat impacts to an extent required to comply with the standards and guidelines for Management Prescriptions 4B and 5B. For example, the first recommended measure for the protection of deer and elk habitat states: “[w]here possible, select non-critical and lower use wildlife habitats over critical, important, and high use habitats.” FEIS at 3-289. There is no assessment of where it may be possible to implement this measures, and thus no assessment of whether the Forest Service will “maintain habitat capability at a level at least 80 percent of potential capability” and “maintain habitat effectiveness during winter of at least 90 percent.” Forest Plan at III-165.

Most of the recommended measures to reduce impacts to wildlife and their habitat are

couched in similar conditional language and therefore similarly offer no assurance that the Forest Plan's standards will be met. Another example is the measure for black bear, a MIS, recommending that companies "[t]o the extent practical, avoid facility construction on or adjacent to (within 150 feet) large diameter (greater than 3 inches) Gambel oak stands." FEIS at 3-290. Again, given the qualifier "to the extent practical," there is no basis for assuming that this measure will ensure that the Project will conform to the Plan's requirements to "maintain habitat capability at a level at least 80 percent of potential capability" and maintain at least 90 percent of the habitat needed to support the State population goals for each species. Plan at III-145.

**5. The Decisions are Inconsistent with the Plan's Standards and the NFMA and its Regulations' Requirements for the Monitoring of MIS.**

The Forest Service admits that "[d]irect loss of MIS habitat would occur under each alternative" and that "[h]abitats next to those directly disturbed may be degraded by changes in vegetation, including the invasion of noxious weeds." FEIS at 3-281. "Most of the new habitat impact would be on national forest in the HD Mountains, because it is currently the least developed and would experience the most new development." *Id.* at 3-282. Yet the agency failed to comply with its duties to monitor MIS species in the Project area prior to issuing the ROD. This violates NFMA, its implementing regulations, and the San Juan National Forest Plan.

**a. The Forest Service violated NFMA by not Monitoring Population Trends.**

The Forest Service violated NFMA, 16 U.S.C. § 1600 *et seq.*, specifically 16 U.S.C. § 1604(i), in approving the Project by failing to collect actual population data for management indicator species as required by NFMA, its regulations, and the Land and Resource Management

Plan for the San Juan National Forest.

The Forest Plan for the San Juan National Forest requires monitoring of “population and habitat trends of management indicator species.” Forest Plan at IV-4. The National Forest Management Act requires the Forest Service to ensure that site-specific projects are consistent with the applicable forest plan. 16 U.S.C. § 1604(i). In addition, the Forest Service must ensure that any “surface use plan of operations is consistent with . . . the applicable current approved forest land and resource management plan.” 36 C.F.R. § 228.108(a)(2).

The Forest Service adopted these “Monitoring Requirements,” *id.*, in the 1983 Forest Plan to comply with 1982 Regulations. The 1982 Regulations required the Forest Service to collect actual, quantitative population data to effectuate its MIS monitoring obligations. 36 C.F.R. § 219.19(a)(1); *id.* § 219.19(a)(6); *id.* § 219.26; *Utah Environmental Congress v. Bosworth*, 372 F.3d 1219, 1226 (10th Cir. 2004) (“UEC I”). The requirements of the Forest Plan and 1982 regulations under which the Forest Plan was prepared are thus congruent. Because these “Monitoring Requirements” are part of the San Juan National Forest Plan, the Forest Service violated NFMA’s consistency provision by failing to carry out the requisite population monitoring before approving the Project.

In 1982, the Forest Service promulgated regulations detailing the specific process for “developing, adopting, and revising” forest plans, and laying out guidelines and principles upon which forest plans must be based (“1982 Regulations”). NFMA requires the Forest Service to provide for diversity of plant and animal communities. 16 U.S.C. § 1604(g)(3)(B). Further, NFMA requires that the Forest Service evaluate the effects of forest projects through continuous field monitoring. *Id.* § 1604(g)(3)(C). The 1982 Regulations implementing these statutory mandates require the Forest Service to maintain the “diversity of plant and animal communities”

and “viable populations of existing native and desired non-native vertebrate species.” 36 C.F.R. § 219.26; *id.* § 219.19.

To achieve this substantive mandate, the 1982 Regulations required the Forest Service to select “management indicator species” (“MIS”) and monitor their actual populations to determine the impacts of projects on the forest. *Id.* § 219.19(a)(6) (“[p]opulation trends of the management indicator species will be monitored and relationship to habitat changes determined”); *id.* § 219.26 (“[i]nventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition”). The Forest Service must select species for which changes in population indicate the effects of project activities on other species in the forest. *Id.* § 219.19(a)(1) (species selected “because their population changes are believed to indicate the effects of management activities”). This monitoring provides a “management shortcut” that allows the Forest Service to gauge overall forest health and wildlife trends without incurring the expense and time of studying each species individually. *UEC I*, 372 F.3d at 1224 (Forest Service is able to assess impact of specific management actions “by evaluating a ‘class representative’ without having to evaluate each species individually”) (citations omitted); *Sierra Club v. Martin*, 168 F.3d 1, 5 n.7 (11<sup>th</sup> Cir. 1999) (MIS are “selected representative species used to estimate the effects of the forest plans on forest ecosystems.”).

In order to gauge the effects of projects on the forests and their wildlife, the agency must collect actual population data for MIS. This Court has made this obligation clear: “219.19 [of the 1982 Regulations] requires the Forest Service to use actual, quantitative population data to effectuate its MIS monitoring obligations.” *UEC I*, 372 F.3d at 1226. Reliance on habitat trend data is “inconsistent with the regulation’s plain meaning,” and is not sufficient. *Id.* at 1226-27, (citing *Forest Guardians v. U.S. Forest Serv.*, 180 F.Supp.2d 1273, 1281 (D.N.M. 2001))

("[NFMA] regulations clearly preclude reliance 'solely on habitat trend data as a proxy for population data or to extrapolate population trends'").<sup>2</sup>

The San Juan National Forest Plan thus requires MIS population monitoring in accordance with the 1982 Regulations. The Forest Service is required to comply with this Forest Plan's mandates in accordance with NFMA's consistency requirement, 16 U.S.C. § 1604(i). It has not done so.

The Forest Service's failure to do so is apparently based on two erroneous conclusions. The first is that the Forest Plan "establishes monitoring and evaluation requirements that do not require population monitoring for MIS...." FEIS at J-1. The plain language of the Forest Plan reveals that to be false. The Forest Service also relied upon the regulations it promulgated in 2005 to replace the 1982 Regulations ("2005 Regulations") to avoid population monitoring for MIS. *Id.* at J-1 (citing 36 C.F.R. 219.14(f)). However, the Forest Service cannot change the terms of a Forest Plan or the agency's mandate under the Forest Plan without amending the plan itself. *See, e.g., Idaho Wildlife Fed'n v. Tower*, 2006 WL 988494, at \*1 (D. Idaho April 13, 2006) ("[t]he Forest Service cannot later dilute its MIS obligations by passing new regulations without also amending the [forest plan]").

Even if the 2005 Regulations could have abrogated the Forest Services' duties, those Regulations were enjoined prior to the issuance of the Record of Decision for this Project. *Citizens for Better Forestry v. U.S. Dep't of Agric.*, No. 05-1144 and *Defenders of Wildlife v. Johanns*, No. 04-4512 (March 30, 2007). We notified the Forest Service of this development

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<sup>2</sup> The required actual population data must be collected prior to approving a site-specific project such as this. *Utah Envtl. Cong. v. Bosworth ("UEC II")*, 439 F.3d 1184, 1191 (10th Cir. 2006) (concluding that "the regulations anticipate application of § 219.19 to project level as well as plan level management actions. . . . [T]his approach is consistent with other circuits."); *Utah Envtl. Cong. v. Zieroth*, 190 F.Supp.2d 1265, 1270 n.1 (D. Utah 2002) (section 219.19 applies at

and specifically noted that the agency could no longer rely upon 36 C.F.R. 219.14(f) to excuse its duty to conduct population monitoring for MIS. *See* Exh. 4, April 3, 2007 Letter from Mark Pearson to Mark Stiles re: *Citizens for Better Forestry v. U.S. Dep't of Agric.*, No. 05-1144 and *Defenders of Wildlife v. Johanns*, No. 04-4512. On April 27, 2007, the Forest Service issued guidance pursuant to this injunction (attached). The guidance provides that the agency “may not implement activities specific to the 2005 rule . . . .” *See* Exh. 5, April 27, 2007 Letter Re: Compliance with District Court Decision in *Citizens for Better Forestry v. USDA and Defenders of Wildlife v. Johanns*.

Additionally, the guidance declares that due to the injunction, the 2000 planning rule, including the 2004 interpretive rule, is in effect. Even if these Rules could override the Forest Plan requirements, which they cannot, this still would not save the MIS analysis. The 2000 rule, as clarified by the 2004 interpretive rule, requires the Forest Service to use the “best available science” in approving a site-specific project. The Forest Service’s decision in this case should be reversed because there is no evidence the Forest Service utilized the best available science standard in approving the project. *See Utah Env'tl. Cong. v. Richmond (“UEC V”)*, No. 06-4059 (April 30, 2007); *Utah Env'tl. Cong. v. Troyer*, -- F.3d --, 2007 WL 841637 (10<sup>th</sup> Cir. 2007); *Ecology Center, Inc. v. U.S. Forest Serv.*, 451 F.3d 1183 (10<sup>th</sup> Cir. 2006). In fact, with respect to one MIS species – the Northern goshawk – evidence demonstrates that the agency did not utilize the best available science in developing its mitigation measures. *See infra* at 46.

**B. The Forest Service Failed to Legally Amend the Forest Plan.**

NFMA mandates that “[r]esource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land

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site specific level for proposed projects); *Forest Guardians*, 180 F.Supp.2d at 1282-85 (same).

management plans.” 16 U.S.C. § 1604(i). The Land Resource Management Plan (“LRMP”) Handbook requires that consistency findings be made and documented as activities are planned and undertaken on national forest lands, including oil and gas leasing activities. If the action is not consistent, the LRMP Handbook provides that the Forest Service must either modify the action or amend the LRMP. As described below, Federal statutes, caselaw, and the LRMP Handbook specify the steps that must be taken for an LRMP to be legally amended, depending upon whether the amendment is deemed to be “significant.” The Forest Service ignored these requirements here.

Decision Point 1 of the ROD contains a proposed amendment to the San Juan National Forest Plan which does not follow the required policy and law procedures for amending an LRMP described above. Specifically, the proposed amendment would allow local road construction in 5B management areas where winter range management is emphasized -- construction that is generally prohibited in 5B areas by the LRMP. The ROD states:

I am amending the Forest Land and Resource Management Plan direction (LRMP pg. III-176) to allow local road construction in those 5B project areas where winter range management is emphasized. As prescribed in the environmental protection measures for the project, CBM development activities and activities other than routine facility maintenance will not be permitted in winter range during the period December 1 to April 30 each year (FEIS Section 3.9.3 and Appendix B.3). Current LRMP management direction reads:

“Allow new roads in the management area only if needed to meet priority goals outside the management area or to meet big-game goals on the management area.”

Within the area of the HD Mountains (Turkey Creek, Goose Creek, Ignacio Canyon, Bull Creek and Green Creek areas), this direction is amended to read:

“Allow new roads in the management area only if needed to meet priority goals within or outside the management area or to meet big-game goals on the management area.”

### **Rationale for Decision Point 1**

Current LRMP direction discourages road construction in winter range emphasis areas unless roads are needed to meet priority goals outside of the management area. The LRMP, when developed, established a management conflict by making lands in winter range available for mineral leasing with standard stipulations while simultaneously applying construction restrictions to 5B management areas. Also, some areas were leased under standard stipulations previous to the LRMP. The analysis in the FEIS determined that oil and gas development can proceed in winter range in an environmentally acceptable manner with appropriate mitigation. Access will typically be restricted for roads constructed in winter range, so traffic will be limited to light use by industry vehicles, and no off-road travel will be permitted. Well site telemetry will reduce overall well site visits, including those during the critical winter management period.

This change in LRMP direction applies to the HD Mountains. This change constitutes a nonsignificant amendment to the LRMP. Whether to apply this change in management direction Forest-wide will be addressed in the LRMP revision which is currently underway.

ROD at 16.

Rather than changing the project to conform with the duly-adopted LRMP, the ROD amends the Forest Plan to accommodate the project. While the Forest Service is permitted to amend the LRMP, it can do so if and only if it follows established protocol for doing so. Further, the Forest Service failed to properly determine whether the proposed amendment to the LRMP constitutes a “significant change.” If the Forest Service so determines after the required analysis, then any such amendment is subject to the same procedures as the formulation of the LRMP itself. In the event the Forest Service concludes that the proposed change is “not significant,” then the Forest Service must conduct an environmental assessment of the proposed change and provide the public with an opportunity to meaningfully comment on this proposed Federal decision making.

Because the Forest Service failed to provide for public involvement and failed to provide a reasoned analysis for its decision, the proposed revisions to the LRMP violate NEPA, NFMA, and are arbitrary and capricious in violation of the APA and therefore must be set aside.

**1. The Forest Service May Amend the Forest Plan Where It Abides by Law, Regulations and Policy, and Where Its Decision Is Supported by the Record.**

Federal courts hold that agencies may alter their decisions and reverse previously adopted policies only under certain conditions. While an agency may reverse itself and change its policies, it must do so without being arbitrary or unreasonable. *Advanced Micro Devices v. C.A.B.*, 742 F.2d 1520, 1524 (D.C. Cir. 1984). An agency which chooses to reverse a previously held position must supply a “reasoned analysis” of its decision. *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 42 (1983) (there is a presumption “against changes in current policy that are not justified by the rulemaking record”). The requirement of notice and comment before a rule is rescinded or disregarded permits interested parties to comment upon the proposed agency action, and allows the agency to benefit from outside suggestions. *Environmental Defense Fund, Inc. v. Environmental Protection Agency*, 716 F.2d 915, 920 (D.C. Cir. 1983).

As described above, NFMA requires public participation in the review of Forest Plan amendments. 16 U.S.C. § 1604(d); 36 C.F.R. § 219.10(f) (1982). The statute requires that any action which constitutes a “significant change” in the Forest Plan be subject to the same procedure necessary to formulate the Forest Plan itself. *Southern Timber Purchasers Council v. Alcock*, 779 F. Supp. 1353, 1357 (N.D. Ga. 1991) *vacated on other grounds* 993 F.2d 800. Even “[i]f the change resulting from [an] amendment is determined to be not significant for purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.” 36 C.F.R. § 219.10(f) (1982) (emphasis supplied). “If an amendment is found to be not significant, then the amendment is subject only to a thirty day notice requirement and the completion of an

environmental assessment.” *Alcock*, 779 F. Supp. at 1357.

Finally, because whether an amendment is significant decides the scope of the relevant environmental review and public comment, the Forest Service must make a *reasoned* determination of significance. A Forest Service internal policy guide, the LRMP Handbook (or “FSH”), directs the Forest Service to consider at least four factors in determining whether a proposed change to a forest plan is significant or not significant. FSH 1909.12, ch. 5 (1995).<sup>3</sup>

The four enumerated areas of analysis are:

1. Timing;
2. Location and Size;
3. Goals, Objectives and Outputs; and
4. Management Prescription.

FSH 1909.12, ch. 5.32(3) (1995). “Other factors may also be considered depending on the circumstances.” *Id.*<sup>4</sup>

Federal courts have upheld non-significant amendments to forest plans where the Forest Service has prepared separate environmental analysis on the amendment itself, and fully disclosed the impacts of the proposed amendment on the human environment under NEPA. In *Alcock*, timber purchasers challenged a Forest Service amendment of the Region VIII Regional Guide to restrict timber cutting within three-quarters of a mile of a colony site of red cockaded woodpeckers. 779 F. Supp. at 1353. The Forest Service adopted the amendment after (1) publishing a notice of intent to implement the amendment in the Federal Register; (2) preparing

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<sup>3</sup> Because the FS Handbook adopted January 31, 2006 is based on planning regulations that have been enjoined by Court order, that revision of the Handbook is also invalid.

an environmental assessment (an “EA”); (3) preparing a biological evaluation; and (3) consulting with the Fish and Wildlife Service (“FWS”) under the Endangered Species Act. *Id.* at 1355.

Accordingly, the *Alcock* court found that the Forest Service had complied with law.

In *Sierra Club v. Cargill*, 11 F.3d 1545 (10th Cir. 1993), the Bighorn National Forest adopted an amendment changing its regeneration standard from seven to five years. The Forest Service determined that the amendment did not constitute a "significant" change in the Forest Plan under NFMA and implementing regulations only after the agency issued an EA and Finding of No Significant Impact with respect to potential impacts of the proposed change. *Id.* at 1548. The agency's conclusion was upheld upon review.

As discussed below, the Forest Service here failed to meet the standards for revising a LRMP for a significant or not significant amendment specified by Federal law, emphasized in the FSH and endorsed by the *Alcock*, *Cargill* and other courts.

**2. The Forest Service Adopted the Forest Plan Amendment Regarding Local Road Construction in 5B Project Areas in Violation of NFMA and NEPA, and the Amendment Is Invalid.**

In adopting this amendment to the Forest Plan, the Forest Service failed to comply with its NFMA and NEPA obligations by: (1) failing to provide public notice and comment in connection with the amendment; and (2) failing to adequately analyze the amendment’s significance.

The Tenth Circuit made clear in *Citizens Committee to Save our Canyons v. United States Forest Service*, 297 F.3d 1012 (10th Cir. 2002), that it will read the notice, comment and “significance of LRMP amendment analysis” as requirements that must be functionally met

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<sup>4</sup> See also FS Manual 1926 (“Land Management Planning Using Planning Regulations In Effect Before November 9, 2000”) at 1926.52 (requiring evaluation of similar factors in determining whether an amendment is significant).

rather than a checklist of requirements which if not strictly complied with render an LRMP amendment void. In *Citizens Committee*, two conservation groups challenged the legal sufficiency of Forest Service actions which preceded an amendment to the relevant LRMP as well as the failure of the ROD to “indicate *expressly* that it was applying” the four FSH enumerated factors for determining if the proposed amendment was significant.

With respect to the issue of notice and comment requirement, the non-profit organizations argued that the Forest Service gave notice of the proposed amendment for the first time in the FEIS and ROD and by doing so, they were denied the NEPA and NFMA mandated opportunity to comment on the proposed amendment prior to it being implemented. The Court held that the

NEPA's disclosures during the DEIS process provided sufficient notice and opportunity for public comment. During this process, for instance, the Forest Service discussed how any structure on Hidden Peak would violate existing Forest Plan guidelines and would require “[a] WCNF Forest Plan amendment to the site's [Visual Quality Objective].” Additionally, even under the no-action alternative, an amendment would be required because the existing Hidden Peak structures violated the Forest Plan's guidelines, the document explained. ***Moreover, by placing the discussion of the amendment in the DEIS, the Forest Service gave the general public an opportunity to comment on the proposed amendment.***

*Citizens*, 297 F.3d at 1034 (emphasis added).

This case is distinguishable from *Citizens* because the inclusion of the discussion of the proposed amendment to the LRMP in the DEIS in *Citizens* provided the public with notice thereof and the opportunity to comment thereon as part of the process leading to the FEIS. Here, the DEIS merely notes the potential for a Forest Plan violation:

Roads to access well locations would ... be constructed in Management Areas 5B, which are present in Spring Creek and Fossett Gulch. These roads are not consistent with general direction and guidelines for Management Area 5B, which allow for new roads within the management area only to meet priority goals outside the management area.

DEIS at 3-360. The DEIS does not address whether the Forest Service will consider amending the project to comply with the plan, or take the opposite approach. Nor does the DEIS, on its face, specifically address the need for, or the nature of, any potential amendment – be it a forest-wide amendment or one limited to the particular areas at issue. In sum, the DEIS failed to provide any information to the public as to whether, or how, the Forest Service might address the proposed lack of consistency with the Forest Plan.

Indeed, only after receiving critical comments on the DEIS did the Forest Service address this issue in the FEIS and ROD. The FEIS – published after public comment closed on the Forest Service’s decision – noted for the first time that the Forest Service must address “[w]hether to amend the [Forest Plan] to achieve Plan conformance for ... transportation system management in winter range, depending upon the alternative selected.” FEIS at 1-2; *compare with* DEIS at 1-2 (failing to contain such a statement). Again, the FEIS did not indicate what type of Plan amendment the agency was considering.

With respect to the issue of whether the Forest Service adequately analyzed the four factors identified in the FSH for determining whether a proposed change to a forest plan is significant or not significant, the *Citizens’* court concluded that “although the Forest Service did not explicitly identify the four factors the FSH indicates ‘are to be used’ when determining whether a forest plan amendment is significant, FSH 1909.12 § 5.32(3), a review of the ROD and the administrative record demonstrates that the Forest Service considered the FSH factors when deciding whether to...” amend the Forest Plan. *Citizens*, 297 F.3d at 1035. In addition, the court quoted the ROD which contained a “terse” discussion of the reasons why the Forest Service concluded that the amendment was not significant. Thus, although the Forest Service in the *Citizens’* case did not explicitly apply each of the four factors that “are to be used” when

determining whether a proposed amendment to a LRMP, it did expressly address the issue of whether the amendment was significant and articulated reasons that it had conclude that it was not significant. The 10<sup>th</sup> Circuit found that this approach sufficiently informed “the court and the petitioner of the grounds of decision and the essential facts upon which the administrative decision was based” to satisfy the Forest Service’s legal duty. *Citizens*, at 1034-35, quoting *Bagdonas v. Department of Treasury*, 93 F.3d 422 (7th Cir. 1996).

Here, the Forest Service did not even *acknowledge* that it must make a reasoned decision as to whether or not the proposed change is significant let alone attempt to inform the public of “the grounds of decision and the essential facts upon which the administrative decision was based.” Rather, the Forest Service merely stated, without any explanation as to its rationale, that the “change constitutes a non-significant amendment to the LRMP.” ROD at 16. The *Citizens* case provides no support for the position that this sort of conclusory statement satisfies the NEPA and NFMA requirements that a reasoned basis for an agency decision on this important issue be provided. In fact, there is absolutely no evidence in either the DEIS or FEIS or ROD that the Forest Service examined the consequences of the amendment by analyzing the four factors outlined in its policy manual. Even if the FS Handbook had provided no factors for the agency to address, the Forest Service’s conclusion here would be arbitrary and capricious because it is supported by no basis whatsoever.

The ROD implicitly recognizes the significance surrounding the proposed amendment when it states that “[w]hether to apply this change in management direction Forest-wide will be addressed in the LRMP revision which is currently underway.” ROD at 16. The fact that a proposed change in the LRMP that has significant implications on critical wildlife issues may be under study as part of the 15 year update to the LRMP provides no legal basis for the Forest

Service's failure to currently assess the implications of a change that the ROD intends to impose immediately on the 5B project areas which are the subject of this controversy.

In this instance, the record clearly demonstrates that the lack of notice, public participation, and environmental review of the amendment at issue here is deficient when compared to that upheld by the courts in *Alcock*, *Cargill* and *Citizens*'.

**C. The Decisions Violate NEPA and its Implementing Regulations.**

The Project also violates NEPA and its implementing regulations in numerous respects. The Forest Service did not adequately analyze the effects of the Project on the HD Mountains' old growth, streams, wildlife and cultural resources. The agency attempted to avoid this analysis by relying upon mitigation measures of unknown effectiveness. This also violates NEPA's requirement to analyze the effectiveness of the proposed mitigation measures for development in the HD Mountains area. As a result, the Forest Service failed to provide a reasoned basis for choosing to implement Alternative 7, as modified in its ROD.

**1. The Forest Service Failed to Analyze the Impacts to the HD Mountains' Resources and the Effectiveness of the Proposed Mitigation Measures.**

The National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, is the "basic national charter for protection of the environment." 40 C.F.R. § 1500.1. As the Tenth Circuit and Supreme Court have recognized, "NEPA's intent is to 'focus[ ] the agency's attention on the environmental consequences of a proposed project,' to 'guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role' in forming and implementing the agency's decision, and to provide other governmental bodies that may be affected with 'adequate notice of the expected consequences and the opportunity to plan and implement corrective measures in a timely manner.'" *Davis v. Mineta*, 302 F.3d 1104, 1114 n.5

(10<sup>th</sup> Cir. 2002) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989)) (alterations in original).

To fulfill these purposes, NEPA requires that federal agencies prepare an environmental impact statement (“EIS”) before undertaking “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). In the EIS, agencies must take a “hard look” at the potential environmental impacts of their proposed actions and disseminate the conclusions of its analyses to the public. *Robertson*, 490 U.S. at 350. Through this process, an agency must prepare a “coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that ‘the agency will not act on incomplete information, only to regret its decision after it is too late to correct.’” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9<sup>th</sup> Cir. 1998) (quoting *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989)). Under NEPA, agencies may not “postpone analysis of an environmental consequence to the last possible moment. Rather, ... [i]f it is reasonably possible to analyze the environmental consequences in an EIS ..., the agency is required to perform that analysis.” *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1072 (9<sup>th</sup> Cir. 2002).

The Council on Environmental Quality has promulgated regulations that federal agencies must follow in implementing NEPA. NEPA requires federal agencies to consider and disclose to the public all direct, indirect, and cumulative impacts of its actions. 42 U.S.C. § 4332(2); 40 C.F.R. § 1508.9. Direct effects are those “which are caused by the action and occur at the same time or place.” 40 C.F.R. § 1508.8(a). Indirect effects are those “caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.” *Id.* § 1508.8(b). Cumulative impacts are impacts from “past, present and reasonably foreseeable future actions regardless of what agency (federal or non-Federal) or person undertakes such other action.” *Id.*

§ 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id.* Among the factors agencies are required to evaluate are impacts – including cumulative impacts – to “ecologically critical areas,” and threatened and endangered species. *Id.* at §§ 1508.27(b)(3), (7), & (9).

Based on these regulations, an EIS must provide useful analysis of past, present, and future actions that pose cumulative impacts. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 809-810 (9th Cir. 1999). The fact that a project may result in even a small incremental increase in the overall impacts to a resource is meaningless if “there is no way to determine . . . whether [this small increase] in addition to the other [impacts], will ‘significantly affect’ the quality of the human environment.” *Grand Canyon Trust*, 290 F.3d at 346.

A meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions – past, present, and proposed, and reasonably foreseeable – that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate.

*Id.* at 345 (citations omitted).

NEPA also mandates that an agency “shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.” 40 C.F.R. § 1502.9(b). “This disclosure requirement obligates the agency to make available to the public high quality information, including accurate scientific analysis, expert agency comments and public scrutiny, before decisions are made and actions are taken. 40 C.F.R. § 1500.1(b).” *Center for Biological Diversity v. U.S. Forest Service*, 349 F.3d 1157, 1167 (9<sup>th</sup> Cir. 2003). In addition, as part of its

analysis, agencies are required to “state how alternatives considered in it and decisions based on it will or will not achieve the requirements of [NEPA] and other environmental laws and policies.” *Id.* § 1502.2(d) (emphasis added).

That agencies will mitigate the adverse environmental impacts of their actions is implicit in NEPA’s statutory language. *Robertson*, 490 U.S. at 351-52; *Holy Cross Wilderness Fund v. Madigan*, 960 F.2d 1515, 1522 (10<sup>th</sup> Cir. 1992). Mitigation measures are required by NEPA’s implementing regulations, 40 C.F.R. § 1502.14(f), 1502.16(h). The Tenth Circuit has held that an agency’s analysis of mitigation measures “must be ‘reasonably complete’ in order to ‘properly evaluate the severity of the adverse effects’ of a proposed project prior to making a final decision.” *CEC*, 185 F.3d at 1173 (*quoting Robertson*, 490 U.S. at 352). Mitigation “must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *City of Carmel-by-the-Sea*, 123 F.3d at 1154 (*quoting Robertson*, 490 U.S. at 353). A “perfunctory description,” of mitigation, without “supporting analytical data” analyzing their efficacy, is inadequate to satisfy NEPA’s requirements that an agency take a “hard look” at possible mitigating measures. *Neighbors of Cuddy Mountain*, 137 F.3d at 1380 ; *Idaho Sporting Congress*, 137 F.3d at 1151 (“Without analytical data to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a ‘mere listing’ of good management practices.”). Moreover, in its final decision documents, an agency must “[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.” 40 C.F.R. § 1505.2 (c).

**a. The Forest Service failed to Analyze the Impacts to the HD Mountains’ Old-Growth Ponderosa Pines and the Effectiveness of Mitigation Measures to Reduce Impacts to Old Growth Stands and Individual Old Trees.**

The FEIS fails to disclose properly impacts to old growth ponderosa pine and other forest

types in at least three ways.<sup>5</sup>

First, based on a review of maps, which are of small scale and not entirely clear, the alternative selected in the ROD appears to enter about half of the 15 identified old-growth stands in the project area. However, due to the map's scale, and the fact that for the easternmost block of old growth, well pad locations are identified but the transportation network is not, it is extremely difficult for the public to determine the number of old growth stands that will be damaged under the adopted action. By failing to disclose impacts to old growth by stand (as opposed to by acre), the FEIS violates NEPA's requirements.

The failure to disclose which old growth ponderosa pine stands will be impacted – and the individual characteristics of each stand – is particularly egregious given that, as the FEIS notes, habitat impacts from roads and well pads extend two to three times the average tree height of the stand.

Depending on the ultimate location of roads and well pads and the size and shape of the stands, old growth stands may be impacted in various ways. Beyond direct removal, the functions and values of affected stands may be decreased or lost. Roads and well pads may fragment up to 80% of existing stands of old growth, increase the amount of edge, and change the physical and biological environment of the stands — the portion of the stand nearest the disturbed areas would become warmer and dryer and more light and wind would penetrate the stand.

FEIS at 3-252. The FEIS fails to disclose whether the 80% figure relates to all alternatives, or to the alternative chosen in the ROD, another NEPA violation. The FEIS may be purposefully vague about the extent of impacts to old growth ponderosa pine stands because the Forest Service does not know exactly where roads, well pads, and other structures will be built.

The extent of these potential impacts [to old growth forest] would depend on the size and configuration of the impacted old growth stand and the location of the impacting structure. Steps would be taken to avoid old growth stands where

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<sup>5</sup> Each of these issues was raised in comments on the FEIS. *See* FEIS Appendix O at 242-46.

terrain limitations do not create unacceptable tradeoffs.

FEIS at 3-253. The FEIS fails to address where terrain limitations might create “unacceptable tradeoffs,” nor does it provide any discussion of the “size and configuration of the impacted old growth stand and the location of the impacting structure” in relation to each stand. By failing to define where forest will be destroyed in relation to the size and configuration of each old growth stand, the FEIS makes it impossible for the public – or the Forest Service – to evaluate the impacts to such critical forest resources.

Second, the FEIS does not accurately portray the true impacts of the various alternatives because its old growth inventory data is not complete. For example, the cover type in DEIS Figures 3-33 and 3-36 for some locations shows as oak, but in many cases this is actually widely-scattered large ponderosa pines. The canopy cover is apparently not great enough to be mapped as ponderosa pine in aerial photo interpretation. A specific examples includes Section 22 in the Turkey Creek watershed, which contains giant, ancient ponderosa pines, and will be . significantly degraded by proposed roads, gas pads, and compressor stations.<sup>6</sup> While this failure was pointed out in comments on the DEIS submitted by San Juan Citizens Alliance, the Forest Service did not attempt to field verify the presence of this and other potential old growth stands in order to determine a more accurate assessment of impacts to old growth forest. In its response to comments, the FEIS simply admits that “there may be instances” where ponderosa pine old growth may be interspersed with other forest types but that “the cover type classification is based on predominant characteristics.” FEIS Appendix O at 245. In other words, the Forest Service will not disclose the location of what may be genetically important 200+ year old ponderosa pine

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<sup>6</sup> There is also a stand of trees having old growth characteristics in the northwest quarter of Sec. 24U that is proposed for chainsawing to facilitate a well pad. A photo of the stand is attached at Exhibit 1.

trees or the impacts to such trees because disclosing such impacts would not fit in with how the agency evaluates “cover type classification.” *See* discussion of genetic importance of old growth trees, *supra*. The FEIS’s approach is clearly arbitrary and capricious.

Third, the FEIS admits that “the importance of *pinus edulis* trees” or pinyon pine “is elevated” due to attacks from the ips beetle and that it is “an important tree species culturally and provides habitat for a unique set of wildlife.” FEIS Appendix O at 245. Despite these facts, the Forest Service admits that it “does not have inventory data for old growth pinyon-juniper woodlands.” *Id.* The FEIS therefore contains no data on potential impacts on such woodlands, which the FEIS attempts to excuse by stating that the agency will attempt to avoid such stands and old individual trees “wherever practical.” *Id.* Because the FEIS does not disclose if and where such avoidance might be “practical,” neither the public nor the Forest Service can know the potential impacts to old growth pinyon woodlands. The failure to disclose these impacts – while admitting the importance of such trees – violates NEPA’s disclosure requirements.

The FEIS proposes several mitigation measures related to reducing impacts to old growth forests, but it fails to evaluate or disclose their effectiveness. The FEIS identifies those most relevant to protecting old growth and old trees as follows:

[T]he ... requirements listed below are standard mitigation practices that are used on a wide range of projects that have repeatedly demonstrated effectiveness. The effectiveness of mitigation approaches would be monitored by mineral program managers and adjustments or repeat treatments would be prescribed as field conditions warrant. Unless otherwise stated, the following measures would be funded by the companies.

- Minimize disturbance to vegetation by clearing and otherwise disturbing vegetation within the smallest area needed for safe and efficient development, production, and maintenance.
- Avoid old growth ponderosa pine stands wherever possible, and minimize impacts to individual large, old trees when avoidance is not possible.
- Protect snags and down-dead logs to the extent possible. Snags and logs outside of disturbance areas should be removed only when they pose

a hazard to the human life and property.

FEIS at 3-265 (emphasis added). Here, the FEIS states that the effectiveness of these mitigation measures has been “repeatedly demonstrated,” but fails to provide any information whatsoever as to what studies, monitoring data, or reports concluded these methods were effective. In addition, the Forest Service does not state how effective (or ineffective) the measures would be. For all the public can tell, the measures have repeatedly been demonstrated to be of minor or low effectiveness because the FEIS does not state how effective the measures will be.

In addition, the measures themselves are so vague, it would be impossible to tell if they will be applied and whether they will reduce impacts at all. Statements that avoidance and protection will occur “wherever possible” or “to the extent possible” only beg the question: will these measures be effective at all if the Forest Service (or the energy company) determines, for whatever reason, that avoidance or protection is not possible? Indeed, while the FEIS section quoted arguably implies that these measures are proven effective, other parts of the FEIS conclude that it is impossible to tell how effective these measures will be:

Avoidance mitigation would be utilized during road and well pad staking to reduce the extent of this impact. However, until actual well pad locations are proposed during APD submittal, the ability to move facilities to avoid old growth impact is unknown. For some staked locations along the old stock driveway, field reviews have found that total avoidance is not possible.

FEIS at 3-253. In other words, the Forest Service has no idea whether avoidance is possible at all in most cases, and is sure that it avoidance is doomed to failure in at least one instance. These failings – which violate the agency’s duty to evaluate the effectiveness of mitigation measures – are especially problematic because the FEIS is apparently the only and final environmental review document that the Forest Service will release to the public before approving site-specific destructive activities.

**b. The Forest Service failed to Analyze the Impacts to the HD Mountains' Streams and the Effectiveness of Mitigation Measures.**

As detailed above, the FEIS demonstrates that the Project poses significant threats to the area's streams, riparian areas and floodplains in that it threatens to violate Forest Plan standards and policies that protect these resources. *Supra* at 13-15. The fact that the agency has approved the Project without determining whether Plan standards can be met not only violates NFMA, if violates NEPA because it shows that the Forest Service failed to sufficiently analyze the direct, indirect and cumulative effects on the HD Mountains streams. Furthermore, the admission of possible violations of standards demonstrates that the discussion of mitigation to prevent impacts to the resources they protect likewise fails to meet NEPA's requirements.

The ROD admits that "the FEIS finds that the surface disturbance required for proposed CBM development in much of the area of the HD Mountains poses significant risks of degrading water quality, mass soil movement..." and that "[t]he inventoried roadless area includes the portion of the HD Mountains where these concerns are the greatest." ROD at 21. Nevertheless, despite the fact that appellants pointed this out in DEIS comments, the analysis of sedimentation in the DEIS does not include contribution from landslides and slope failures, but is only calculated based on average tons/acre soil loss from various soil types. Given that the agency has admitted that development "in much of the area of the HD Mountains poses significant risks of ... mass soil movement," the agency violated NEPA by not including these reasonably foreseeable impacts in its quantitative analysis of sedimentation.

Furthermore, as Elm Ridge points out in a letter to the Forest Service, the FEIS failed to analyze the use of the Spring Creek Road as a transportation and pipeline corridor. *See* Exh. 6 September 8, 2006 Letter from Elm Ridge Resources to Walt Brown. This is a road to the top of

the HDs and provides access for all of the wells along the stock driveway and into the roadless area. The Forest Service cannot authorize wells and roads along the top of the HDs into the roadless area without analyzing the Spring Creek Road transportation and pipeline corridor sought by Elm Ridge, which is a connected action.

The analysis is further flawed because it is not detailed enough to determine the sources and effects of the sediment within the watersheds. The analysis relies upon large-scale watershed analysis that does not take a hard look at the effects on particular areas of the HD Mountains' streams. To accurately calculate sediment contribution, the agency must improve the analysis to incorporate sediment landslides or erosion prone slopes based upon their occurrence within the project area. Given that the Forest Service has mapped both landslides and erosion-prone areas, this is an analysis that can and should be done.

Furthermore, the agency's analysis of mitigation fails to meet NEPA's requirements. The Forest Service has stated that "the most effective mitigation measure for construction on unstable slopes is avoidance." DEIS at 3-52; *see also* FEIS at 3-80 ("Avoidance of unstable sites is the most effective form of mitigation."). The ROD states: "[a] primary method of minimizing impacts has been the total avoidance of particularly sensitive areas such as steep slopes or highly erosive soils." ROD at 4. The agency has used "total avoidance" in three of the "analysis zones" depicted on Figure 2-6 "where access roads overlay areas with high potential for landslides and mass wasting." FEIS at xvii-xviii.

Nonetheless, the agency has approved development outside of these zones that would likewise impact areas of steep slopes and erosive soils, including "eight miles of new roads [that] would cross high landslide areas on national forest and BLM public lands" where "[s]urface disturbance could exacerbate existing landslides and cause new landslide hazards in the Project

Area.” *Id.* at xxi. For example, Alternative 7 “would require pipeline construction on National Forest in a tributary to Lange Canyon within the WIZ and on steep (>40 percent), erosive slopes, old landslide deposits, and landslide hazard areas, creating a high likelihood for mass slope failure and large quantities of sediment to enter Lange Canyon Creek. The risk of environmental impacts, even with geotechnically-engineered facilities, would be high as a result of the proposed pipeline location.” FEIS at 3-141.

A comparison of the FEIS’s maps further demonstrates that while some landslides are included in the zones not approved for development, other landslides are not. *Compare* Figure 2-6 (depicting Alternative 7 with “zones”) with Figure 3-14 (depicting “Landslide & Landslide Hazards”). In addition, comparing Figure 2-6 (depicting Alternative 7 with “zones”) with Figure 3-31 (depicting “Areas of High Potential for Wind & Water Erosion”) similarly demonstrates that while the zones contain a substantial amount of these highly erosive areas, they exclude significant areas as well. The map entitled “HD Mountains Roadless Area: Slope and Proposed Development,” attached as Exhibit 7, overlays the development proposed in Alternative 7 with steep slopes and shows that significant amounts of these steep slopes occur outside of the zones and would be traversed by roads and impacted by proposed wells.

Thus, while mitigation by avoidance has been used in certain “zones” in the roadless area, it has not been used outside of the identified “zones” where there are similarly significant risks of landslides and stream degradation. The Forest Service has provided no analysis in the FEIS upon which to base its decision to rely upon mitigation that puts certain high risk areas in the zones off-limits to development while allowing development to go forward in other, similarly high-risk areas. The Forest Service provides no data or scientific analysis for the delineation of these areas and the exclusion of similarly vulnerable lands.

In addition, as part of Decision Points 6 and 8 , the Forest Service has authorized “one time exception[s]” to lease stipulations on leases COC 64933 and 34, ROD at 45, that were imposed on the leases to avoid landslide areas, steep slopes, riparian areas, and floodplains. ROD at Table 1, Summary of Decisions Pertaining to 2001 Leases. The Forest Service has likewise failed to provide data and analysis supporting these exceptions. Indeed, the FEIS does not contain the SUPOs, despite the fact that the ROD approves them. There is no way the public, or any other agency or stakeholder, can evaluate and the impacts of these exceptions without being able to review them. The agency’s failure to provide these SUPOs prior to approving them in the ROD thus violated NEPA.

As discussed above, in the absence of such an analysis the Forest Service cannot know whether the Project will comply with Forest Plan standards. *Supra* at 12-14. With these admitted possible violations of the Plan’s standards, there is no basis upon which to determine to what extent the proposed mitigation will be successful in reducing impacts or whether the Project will comply will applicable law and regulation, including State water quality standards. 40 C.F.R. § 1502.2(d) (agency must analyze how “decisions based on [the EIS] will or will not achieve the requirements of [NEPA] and other environmental laws and policies.”).

Instead, the Forest Service proposes mitigation to address landslide and erosion risks outside of the zones that includes the following to mitigate landslides: “Where avoidance is not possible, the geotechnical engineer shall design stabilization measures....” FEIS at 3-80. While the FEIS states these measures are “generally effective,” “the risk of landslides or other catastrophic failure cannot be completely eliminated.” *Id.* Indeed, the Forest Service admits with respect to Lange Canyon that the measures will likely not be effective, finding a “high likelihood for mass slope failure and large quantities of sediment to enter Lange Canyon Creek”

“even with geotechnically-engineered facilities.” FEIS at 3-141.

The FEIS also provides an extensive laundry list of BMPs and mitigation measures to reduce sedimentation impacts from CBM development. FEIS at 167-175. The Forest Service, however, fails to analyze how effective they will be in reducing impacts to the HD Mountains area. Instead, the agency provides that “[e]ffectiveness for the majority of mitigation measures is documented in FSH 2509.25.” That section of the Forest Service Handbook does indeed contain many of the measures listed by the agency in the FEIS, but it does not provide the necessary analysis. The Handbook does not, and could not, provide any analysis of how effective they will be in reducing impacts in the very steep and highly erosive HD Mountains. “Without analytical data to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a ‘mere listing’ of good management practices.” *Idaho Sporting Congress*, 137 F.3d at 1151.

Indeed, the language of the measures themselves is often so conditional as to render their ability to mitigate serious environmental damage suspect. For example, one “recommended standard mitigation measure[,]” FEIS at 3-167, for “new well pads on terrain steeper than 20 percent with erosive soils” recommends that operators “[l]imit fill slope length, to the extent possible, to less than 10 feet or maintain slopes at or less than a 3:1 slope.” *Id.* at 3-169 (emphasis added). They are similarly instructed to “[a]void crossings of stream, wetland, and riparian areas during construction of infrastructure (pipelines, roads, and power lines) to the extent practicable.” *Id.* at 3-171 (emphasis added). Thus nothing in the measures actually specifies what mitigation will be performed where or under what circumstances. The Forest Service thus violated NEPA because the stipulations provide at best a “mere listing” of mitigation measures that may be applied, with no assessment of their efficacy. *Colo. Env’tl*

*Coal. v. Dombeck*, 185 F.3d 1162, 1173 (10th Cir. 1999) (“[i]t is not enough to merely list possible mitigation measures”); *see also Nat’l Audubon Soc’y v. Hoffman*, 132 F.3d 7, 17 (2d Cir. 1997) (agency may rely on mitigation measures only when “the adequacy of proposed mitigation measures is supported by substantial evidence”).

Further, even if the mitigation could be applied to such an extent that they were adequate to protect the HD Mountains streams, their enforcement is speculative. A recent Government Accounting Office (GAO) Report shows that federal agencies have been unable to ensure oil and gas mitigation measures will be implemented or successful.<sup>7</sup> GAO Report at 1 (“BLM and FWS have not been effectively carrying out their important responsibilities for ensuring that ... oil and gas operations occurring on their lands do not cause unnecessary environmental harm.”).

In sum, the FEIS and ROD are both afflicted by a “paucity of analytic data to support the [agency’s] conclusion that the mitigation measures would be adequate in light of the potential environmental harms.” *Nat’l Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 734 (9<sup>th</sup> Cir. 2001).<sup>8</sup> The Forest Service’s failure to consider the extent to which they may not be effective in avoiding or minimizing harms, 40 C.F.R. § 1502.16(d), violated the “requirement that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *Robertson*, 490 U.S. at 352; *see also Wilderness Soc’y v. Bosworth*, 118 F. Supp. 2d 1082, 1106-07 (D. Mont. 2000) (reversing and remanding Forest Service EIS in part because mitigation measures were not “assessed for their effectiveness”).

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<sup>7</sup> *See* Department of the Interior: Major Management Challenges, GAO-07-502T, Feb. 16, 2007 (visited March 15, 2007) <<http://www.gao.gov/new.items/d07502t.pdf>>.

<sup>8</sup> The Ninth Circuit went on to note that the Park Service “did not conduct a study of the anticipated effects of the mitigation measures nor did it provide criteria for an ongoing examination of them or for taking any needed corrective action (except for the plan to conduct

**c. The Forest Service failed to Analyze the Impacts to the HD Mountains' Wildlife and the Effectiveness of Mitigation Measures.**

The FEIS likewise failed to adequately analyze impacts to the HD Mountains' wildlife species. The FEIS admits “[c]onstruction and operation of project-related facilities would result in the fragmentation of habitats in the Project Area and on NFS land.” FEIS at 3-279. It recognizes that “[m]ost of the new habitat impact would be on national forest in the HD Mountains because it is currently the least developed and would experience the most new development.” FEIS at 3-282. It also states:

In response to increased human activity, equipment operation, vehicular traffic, and noise associated with all phases of gas field development and operations, wildlife may avoid these activities and prefer other locations. This avoidance would result in the under-utilization of otherwise suitable habitats; therefore, the effectiveness of these habitats in supporting wildlife would be diminished. Similarly, the displacement of wildlife from disturbed areas may lead to the overuse of suitable habitats in undisturbed areas, increasing competition for limited resources. Wildlife distribution patterns would be altered. The degree of habitat avoidance would vary between species and among individuals of any particular species....

FEIS at 3-285.

Despite recognizing the likelihood of habitat fragmentation and that habitat effectiveness would be compromised next to areas directly affected by development, the FEIS nonetheless represents that the “Amount of Habitat Available and Affected by each Alternative for each MIS on NFS Land in the Project Area” as only directly affected habitat, *i.e.* acres bulldozed and paved for wellpads and roads. FEIS at 3-284. It fails to make any projection of the amount of habitat that will be indirectly affected by nearby development through reduced habitat effectiveness and fragmentation. The Forest Service attempts to excuse this misrepresentation

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“studies”). As with the rest of its proposal, it planned to act first and study later.” *Nat’l Parks & Conservation Ass’n*, 241 F.3d at 734. This parallels what the Forest Service is doing here.

with the statement that the scientific literature only supports quantitative analysis of habitat effectiveness for elk and deer. *Id.* at 3-285. Even if true, that does not excuse the Forest Service from analyzing and disclosing to the best of its ability habitat impacts it admits will occur. Agencies must consider and disclose to the public all direct, indirect, and cumulative impacts of their actions, not simply “note” that impacts may occur. 42 U.S.C. § 4332(2); 40 C.F.R. § 1508.9. As demonstrated above, such an analysis is necessary not only to satisfy the agency’s NEPA duties but also to ensure compliance with Forest Plan standards. *Supra* at 15-17.

Instead of analyzing habitat fragmentation and effectiveness, the agency, as with the HD Mountain’s other important resources, lists mitigation measures. This is insufficient. “Increasing the mitigation package ... does not resolve the inadequacy of the FEIS's wildlife impact analysis.” *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1180 (10<sup>th</sup> Cir. 2002). That is especially true in this case, where the efficacy of the majority of measures is entirely speculative.

As we pointed out in the NFMA discussion, *supra* at 15-17, many of the mitigation measures for wildlife are conditional and therefore neither we nor the Forest Service can know where and when they will be applied and what effect, if any, they may have in reducing impacts. For example, mitigation for Abert’s squirrel is to “[m]inimize impacts to squirrel nesting habitat to the extent practical....” FEIS at 3-289. For Hairy Woodpecker and Bluebird, to protect all large-diameter trees “where possible.” *Id.* at 3-290. And for turkey, “limit the extent of vegetation clearing” “if possible.” *Id.* Despite making the measure entirely dependent on whether it may be possible in any particular circumstance, and not defining what constitutes possible, the agency nonetheless concludes that the measure “would effectively protect turkey roost trees.” *Id.* at 3-291. As with the speculative measures to protect old growth and water

resources, the effectiveness of these measures is entirely unknown due to their conditional language.

Other measures are not so speculative. A number of these, however, are likely not to protect wildlife. For example, the FEIS prohibits construction within 1/4 mile radius of active goshawk nests between April 1 and August 15, and relocates construction to avoid a 30-acre area surrounding active and vacant nests. FEIS at 3-291. A quarter mile would produce an area of 125 acres, which is substantially less than the buffer the Forest Service puts around goshawk nests in Region 3. As was pointed out in DEIS comments, the FEIS does not proffer data or analysis that support the rationale that 125 acres is as good as the 600 acres required by Region 3, and thus fails to “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24.

Furthermore, the 30-acre buffer does not appear supported by the Region’s own practice. The FEIS states: “The most common protective measure used in Region 2 is to create no-use or limited use buffer zones around known nest sites. These buffer zones can range from 182-400 m from known nest sites. Seasonal restrictions (restricted activity during the breeding season) may be applied to activities that occur near the buffer zone boundaries.” Given a typical buffer of 182-400 meters, there is no support for the statement that the 30-acre buffer “will protect sufficient nesting habitat characteristics for the site to remain effective.” *Id.* at 3-291.

Furthermore, the Forest Service failed to ensure the integrity of this analysis when it failed to consult a number of the most important goshawk references in the scientific literature, including the Region 3 standard reference (Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce, Jr., G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management recommendations for the northern goshawk in the southwestern United States.

USDA Forest Service General Technical Report RM-217); a report by the San Juan National Forest's own biologist Chris Schultz (Schultz, C., A. Allen, J. Mastel, and T. Snowden. 2000. Region 2 northern goshawk strategy team status report. Unpublished USDA Forest Service report. February 11, 2000); and a report by Crocker-Bedford, D.C. and B. Chaney. 1988. Characteristics of goshawk nesting stands. Pages 210-217 in R.L. Glinski, B.G. Pendleton, M.B. Moss, M.N. LeFranc, Jr., B.A. Millsap, and S.W. Hoffman, eds. Proceedings of the southwest raptor management symposium and workshop, 21-24 May 1986, University of Arizona, Tucson. National Wildlife Federation Scientific and Technical Series No. 11. National Wildlife Federation, Washington, DC. The Forest Service's failure to consider these documents, and its own Region 3 practice, in spite of appellants' comments on the DEIS, violated its duty to "discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised." 40 C.F.R. § 1502.9(b).

**d. The Forest Service Failed to Analyze the Impacts to the HD Mountains' Archaeological Resources and the Effectiveness of Mitigation Measures.**

Appellants noted that the DEIS failed to mention any of the additional or expanded archeological districts in the HD Mountains that were recommended by Forest Service public working groups during the beginnings of the LRMP revision several years ago. Two of these additional concentration areas are located in the project area, in Armstrong and Bull Canyons. The analysis area includes the Spring Creek National Register District. The existing National Register District currently consists of 2,500 acres at the mouth of Spring Canyon that includes 95

sites of Ancestral Puebloan and Basketmaker III origin. Spring Creek is a remote and pristine site that also lends itself to a discovery experience for visitors. No previous research has occurred in the area. A significant conflict exists with potential oil and gas development that would bring new roads and increased accessibility. The positive correlation between access and vandalism is well-documented at numerous cultural sites throughout the southwest (Nickens *et al.* 1981; Williams 1977).

The FEIS states that 57 known sites are within areas of proposed disturbance and estimates that 43 additional sites may be there as well. FEIS at 3-568. It recognizes that “avoidance and protection are the preferred management measures for historic properties.” *Id.* It states that “it will be feasible to avoid and protect the majority of the historic properties.” *Id.* However, given that comprehensive surveys have not yet been done, and 43 more sites may exist, the Forest Service has no data or analysis to provide a basis for its claim that most of these sites will be avoided. Without such an analysis, the agency has violated NEPA and the NHPA (see below) because it cannot accurately determine the likely impacts of the Project on cultural resources.

**e. The Forest Service Failed to Analyze Connected, Cumulative and Similar Actions.**

In the an EIS, agencies must consider three types of actions. 40 CFR § 1508.25(a).

These include:

1. Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:
  - (i) Automatically trigger other actions which may require environmental impact statements.
  - (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

- (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.
2. Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.
  3. Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. An agency may wish to analyze these actions in the same impact statement. It should do so when the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement.

40 CFR § 1508.25(a).

The FEIS here failed to analyze two connected, cumulative and similar actions. As Elm Ridge points out in a letter to the Forest Service, the FEIS failed to analyze the use of the Spring Creek Road as a transportation and pipeline corridor. *See* Exh. 6 September 8, 2006 Letter from Elm Ridge Resources to Walt Brown. This is a road to the top of the HDs and provides access for all of the wells along the stock driveway and into the roadless area. The Forest Service cannot authorize wells and roads along the top of the HDs into the roadless area without analyzing the Spring Creek Road transportation and pipeline corridor sought by Elm Ridge, which is a connected action.

Similarly, the FEIS does not analyze the relocation and/or reconstruction of the Fossett Gulch Road (FSR 613) necessary for access by drilling rigs and completion equipment to all of the proposed wells on the east side of the project area. The FEIS also does not analyze the impacts of a pipeline corridor along this route. These actions are apparently under consideration as a separate NEPA action, but clearly are a connected action. As pointed out in correspondence to the Forest Service from Petrox, a Fossett Gulch pipeline is required to get its gas to a market

pipeline and a reconstructed road is required for access for drilling, completion, and fracturing. See Exh. 21, Feb. 2, 2007 letter to Forest Service from Bjork, Lindley, Little PC.

**D. The Decisions Violate the NHPA and its Implementing Regulations.**

The National Historic Preservation Act (“NHPA”) requires, prior to any federal undertaking, that a federal agency “take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register” and “afford the Advisory Council on Historic Preservation ... a reasonable opportunity to comment with regard to such undertaking.” 16 U.S.C. § 470f. The NHPA requires a federal agency to make a reasonable and good faith effort to identify historic properties, 36 C.F.R. § 800.4(b); determine whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; assess the effects of an “undertaking” on any eligible historic properties found, 36 C.F.R. §§ 800.4, 800.5, 800.9(a); determine whether the effect will be adverse, 36 C.F.R. §§ 800.5, 800.9(b); and avoid or mitigate any adverse effects, 36 C.F.R. §§ 800.8(e), 800.9. Additional NHPA provisions apply to Indian tribes: “In carrying out its responsibilities under Section 106, a Federal Agency shall consult with any Indian Tribe ... that attaches religious and cultural significance to properties described in Subparagraph (A).” 16 U.S.C. § 470a(d)(6)(B).

Once a historic property has been identified, the agency must “[s]eek information, as appropriate, from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area, and identify issues relating to the undertaking's potential effects on historic properties.” 36 C.F.R. § 800.4(a)(3). Consulting parties are defined as including Indian tribes, 36 C.F.R. § 800.2(c)(2), and the public. 36 C.F.R. § 880.2(d) (“The agency official shall seek and consider the views of the public in a manner that

reflects the nature and complexity of the undertaking and its effects on historic properties, the likely interest of the public in the effects on historic properties....”).

The NHPA is a procedural statute that has been characterized as a “stop, look and listen” provision. *Muckleshoot Indian Tribe v. U.S. Forest Svc.*, 177 F.3d 800, 805 (9<sup>th</sup> Cir. 1999). In order to effectuate its purposes, an agency must comply with the NHPA’s provisions before permitting oil and gas development, including offering oil and gas leases for sale. *Montana Wilderness Assoc.*, 310 F.Supp.2d at 1153 (“The plain language of NHPA requires consultation once an agency embarks on an undertaking. The sale of oil and gas leases is an undertaking. I am therefore granting Plaintiffs' motion for summary judgment that BLM violated NHPA by failing to follow the prescribed NHPA process prior to selling the leases herein.”); *see also* 36 C.F.R. § 800.16(y).

The FEIS therefore does not indicate that the Forest Service made the requisite reasonable and good faith effort to identify historic properties in the Project area as required by 36 C.F.R. § 800.4(b); that it determined whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; that it assessed the effects of the proposed oil and gas development on any eligible historic properties found, as required under 36 C.F.R. §§ 800.4, 800.5, 800.9(a); that it determined whether those effects would be adverse, as required by 36 C.F.R. §§ 800.5, 800.9(b); or that it has avoided or mitigated any adverse effects, 36 C.F.R. §§ 800.8(e), 800.9.

## **II. DEVELOPMENT WITHIN 1 ½ MILES OF THE FRUITLAND OUTCROP.**

### **A. The Forest Service Violated NEPA by Failing to Analyze the Impacts to Landowners and the Effectiveness of Mitigation from Drilling Within 1 ½ Miles of the Outcrop.**

The Forest Service violated NEPA by failing to analyze and disclose the impacts of the

projected CBM production on the health and welfare of those living on the Fruitland outcrop in Archuleta County. The agency failed to adequately analyze the effects of allowing development within 1 ½ miles of the eastern edge of the outcrop, and failed to develop feasible mitigation measures. Furthermore, the FEIS neither adequately analyzed nor disclosed the impacts that CBM development could cause to domestic water wells, and fails to consider whether its proposed measures would effectively mitigate water well losses. These failures violated NEPA.

The Forest Service split the outcrop, and its approach, between east and west. On the west, in La Plata County, the agency took a cautious approach to allow within 1 ½ mile of the outcrop “only those development proposals that provide substantial evidence that the proposed action would reduce or otherwise mitigate outcrop effects existing at the time an application is filed.” ROD at 29. In contrast, in Archuleta County to the east, development will be allowed unless it can be proven, by a yet-to-be funded monitoring scheme, that such development will create outcrop effects such as methane seeps and domestic well losses already seen to the west.

The basis for the difference, according to the agency, is that wells near the outcrop in Archuleta County have produced less water than those in La Plata County and that methane seeps existed in La Plata County, but not Archuleta County, prior to natural gas production. ROD at 29. Based on these differences, the Forest Service determined that development within 1 ½ miles of the outcrop on the eastern side need not comply with the same precautionary approach it plans to use in the west.

This conclusion does not find support in the FEIS, which states with respect to development near the outcrop in Archuleta County: “Future CBM development of this relatively undeveloped area may trigger increased methane seepage or groundwater impacts, as has been experienced in the western Project Area.... These groundwater impacts and methane seepage in

turn, could de-water and/or contaminate the domestic water wells proximal to the Fruitland outcrop in the eastern Project Area.” FEIS at 3-24 to 25. The Forest Service simply does not know whether the impacts will be similar to those in the west. All it can conclude is that “[g]iven these apparently different coal characteristics, there may be a lower potential for CBM production to trigger methane seeps” on the eastern side of the Project area. FEIS at 3-24 (emphasis added). Yet in light of this uncertainty, the Forest Service is gambling with people’s lives and livelihoods by allowing development near the outcrop in Archuleta county.<sup>9</sup>

Furthermore, the analysis suffers serious deficiencies. The FEIS lacks geological information for the Kirtland Formation, and no coring is planned to determine if the shales in the Kirtland are fractured. If they are, methane seepage will occur within the 1 ½ mile setback no matter what monitoring or mitigation is implemented. Second, the FEIS has failed to mention and analyze existing methane contamination of near-outcrop wells. BLM monitoring identified such contamination in at least one and perhaps two wells beginning at least as early as 2001. Further deficiencies of analysis are detailed in our attached Position Paper on and Response to the Final Environmental Impact Statement for the Northern San Juan Coal Bed Methane Project with a Focus on the Fruitland Outcrop in Portions of La Plata and Archuleta Counties, Colorado, which we submitted to COGCC Chair Peter Mueller on September 7, 2006. *See* Exh. 8.

The result of this analytical failure is that the Forest Service, instead of attempting to prevent methane seeps from occurring on the outcrop in Archuleta County, proposes measures to ameliorate their effects after they happen. The agency offers no analysis of their effectiveness either. One of these measures requires operators to prove they have offered property owner

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<sup>9</sup> Furthermore, there is an absence of information in the FEIS about abandoned coal mines. The FEIS provides no data on the number or location of abandoned underground coal mines situated along the outcrop in Archuleta County, and consequently cannot have accurately portrayed the potential impacts caused by coal fires ignited at these locations.

agreements. “The goal of requiring operators to provide evidence of offering property owner agreements is to effectively and equitably address the possible adverse effects of drilling and producing CBM near and along the Fruitland Formation outcrop.” FEIS at 3-46. The Forest Service fails to provide any analysis that this measures will meet either goal. *Id.* Indeed, other evidence in the FEIS indicates it will not. The agreements only apply to property or water well owners within 1 ½ mile of a well bore. *Id.* Given the well-established hydraulic continuity of the formation, it is highly likely that a particular well’s effects could spread well beyond that distance. There is no data or analysis provided in the ROD to support this 1 ½ mile cutoff and thus no basis for assuming it will address possible adverse affects of drilling near the outcrop.

Indeed, the DEIS admitted it could offer no "technically and economically feasible" mitigation for methane seeps. DEIS at 3-27. Given the extreme risks to public health and property, and given the absence of any feasible mitigation methods, the Forest Service cannot justify, based on a speculation about different geology and effects, diametrically opposed approaches in La Plata County versus Archuleta County.

The Forest Service also failed to reasonably discuss the efficacy and cost of measures that purport to mitigate impacts to water wells. First, if the water well mitigation is similarly limited to 1 ½ mile from a wellbore, there is no data or analysis showing how many of the 40 wells that might be affected, FEIS at 3-105, would be covered by the mitigation. The FEIS notes that “a large body of peer-reviewed literature supports the conclusion that the Fruitland Formation is a regional confined aquifer.” FEIS at 3-87. One “indicates that coal beds remain interconnected and capable of actively transporting groundwater” throughout the area, and another, “coupled with previous work by [the Colorado Geological Service], illustrate[s] the overall regional hydraulic continuity of the Fruitland coals.” *Id.* The hydraulic continuity of the

formation – established by “a large body of peer-reviewed literature” – would make water withdrawal from the formation likely to result in water loss beyond 1 ½ miles.

Furthermore, the mitigation for groundwater impacts to domestic water wells is stated as providing “an alternative permanent water source (i.e., new well or a cistern with water delivery service provided by the operator indefinitely).” FEIS at 3-101. The FEIS provides no analysis of the effectiveness of these measures. To drill a new well, there must be sufficient water left in the Fruitland Formation, or there must be another formation that can be tapped by a domestic water well that can provide water of similar quality and quantity. This is not the case in many other areas experiencing coalbed methane impacts, and there is no data regarding the availability of replacement water, its quantity or quality, nor the costs of maintaining and servicing new wells and possibly necessary water treatment facilities in the FEIS. In addition, these groundwater levels may not return to pre-project levels for centuries. At the very least, the effects on water wells “are expected to occur beyond the life of the project.” FEIS at 3-105. There is no rational basis for the Forest Service to rely upon a mitigation measure that requires operators to haul water for an indefinite time period as a feasible or realistic means of mitigation. While appellants pointed this out in comments, the measure remains unchanged. The Forest Service must demonstrate, or at least properly evaluate, the reliability of the proposed mitigation, and one that depends upon a small “mom and pop” oil company to provide a commitment to haul water for decades if not centuries, well beyond the project’s life, does not pass legal muster.

The Forest Service’s failure to address these deficiencies or provide any analysis of the efficacy of these mitigation measures violates NEPA’s requirement that mitigation be discussed “in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *Robertson*, 490 U.S. at 352. Instead of providing any analysis of the measures’ efficacy, the

agency provided only a “perfunctory description” of mitigation, without “supporting analytical data” analyzing their efficacy, that is inadequate to satisfy NEPA's requirements that an agency take a “hard look” at possible mitigating measures. *Cuddy Mountain*, 137 F.3d at 1380.

**III. THE PROJECT VIOLATED NEPA BECAUSE IT FAILED TO ANALYZE IMPACTS TO ROADLESS LANDS, WILDERNESS-SUITABLE LANDS, AND POTENTIAL RESEARCH NATURAL AREAS, AND THEREBY UNLAWFULLY LIMITED THE ALTERNATIVES UNDER CONSIDERATION IN THE SAN JUAN NATIONAL FOREST PLAN REVISION.**

The San Juan National Forest Plan is currently being revised. The scoping for the Forest Plan revision predated scoping for this NEPA process by almost a year. 64 Fed. Reg. 51504 (September 23, 1999). The Plan scoping notice specifically identified key issues of concern for the LRMP revision and noted that significant new information about these issues was a primary driving consideration for the LRMP revision. *Id.* During this revision, NEPA requires that the Forest Service refrain from “actions that . . . that limit the choice of alternatives for the EIS, or that constitute an ‘irreversible and irretrievable commitment of resources.’” *Conner v. Burford*, 848 F.2d 1441, 1446 (9th Cir.1988). This requirement stems from NEPA’s regulations, which state:

*Limitations on Actions During NEPA Process*

(a) Until an agency issues a record of decision . . . no action concerning the proposal shall be taken which would:

- (1) Have an adverse environmental impact; or
- (2) Limit the choice of reasonable alternatives.

(c) While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major federal action covered by the program which may significantly affect the quality of the human environment unless such action:

- ...
- (3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine

subsequent development or limit alternatives.

40 C.F.R. § 1506.1.

Here, the Project is not covered by “an existing program statement.” To ensure Plans are kept current, NFMA requires that each forest plan must be revised “from time to time when the secretary finds conditions in a unit have significantly changed, but at least every fifteen years.” 16 U.S.C. § 1604(f)(5) (emphasis added); 36 C.F.R. § 219.10(g) (“A forest plan shall ordinarily be revised on a 10-year cycle or at least every 15 years.”). As appellants pointed out, the San Juan Forest Plan has not been revised in almost a quarter century. The Plan expired in 1998. In the meantime, the Forest Service has continued to manage the San Juan NF under the 1983 Plan. In particular, decisions about impacts to the HD Mountains Roadless Area continue to be tiered to the 1983 programmatic plan EIS.

Since the 1983 Plan has expired, and the 1983 programmatic EIS is no longer current, the Forest Service is violating NFMA and NEPA by authorizing development on a scale that is neither consistent with the Plan nor analyzed by its accompanying NEPA documents. The 1983 Plan and its major 1992 Amendment never analyzed the impacts of large-scale coalbed methane development on the San Juan National Forest, and in fact never contemplated coalbed methane development at all. The Forest Plan’s decision to allow oil and gas development in virtually the entire national forest (83% of the forest, as provided in Table IV-42) was predicated on the assumption that future rates of development would likely continue at or near levels seen at the time the Plan was adopted in 1983. The Plan assumed “an average of nine exploratory or development wells per year will be drilled” with a success rate of 25 percent. Plan at IV-116, IV-117. In contrast, the Project would allow drilling of 185 CBM wells on federal minerals in the next few years at a success rate approaching 90-100 percent, a pace of development vastly

exceeding the assumed 9 wells per year with 25 percent success ratio in the Plan's analysis.

**A. Development in and around the HD Mountains Roadless Area Would Prevent the Forest Service from Selecting Any of the Alternatives in its Forest Plan Revision.**

As part of its ongoing Forest Plan Revision, the Forest Service's current boundary of the HD Mountains inventoried roadless area extends beyond the RARE II boundary, encompassing significant additional acreage, especially to the east. *See* Exh. 9, Forest Service Map entitled "San Juan National Forest Wilderness and DRAFT Inventoried Roadless Areas Including RARE II Boundaries" (April 13, 2006). This is not reflected in any of the maps provided in the FEIS, perhaps as a result of not being mentioned whatsoever in the text. The current roadless area includes all or part of leases COC 064932, 33, and 34.

In decision point 8, the Forest Service approves SUPOs for development within leases COC 064933 and 34. ROD at 43-45. These SUPOs have been approved pursuant to a "one-time exception from the special lease stipulations for these two leases" that are designed to protect numerous important resources in the areas. As we demonstrated, this decision is arbitrary and capricious in that it does not ensure compliance with Plan standards, *supra* at 15-17, and has not been adequately analyzed under NEPA, *supra* at 38-44. In addition, approval of these SUPOS would presumably allow road-building to access the wells, and thus allow roads in these currently unroaded areas. This in turn would prevent the Forest Service from choosing an alternative in its FEIS that would include the current, Forest Service identified- and inventoried-IRA. That, in turn, would violate NEPA.

**B. Development in the HD Mountains Roadless Area Would Prevent the Forest Service from Recommending the Area as Wilderness.**

As was pointed out in comments on the DEIS, the HD Mountains meet Wilderness Act requirements for roadlessness, naturalness, special ecological values, and outstanding

opportunities for solitude and primitive recreation. The area is clearly capable of wilderness designation. In addition, appellants noted that old-growth ponderosa pine is the most underrepresented ecosystem type in Region 2's wilderness system. The HD Mountains include some of the highest quality old-growth ponderosa pine left in the San Juan Mountains, and in Colorado for that matter. Inclusion of this representative old-growth ponderosa ecosystem would significantly enhance the National Wilderness Preservation System and meet the needs identified in the Region's Wilderness Needs Assessment.

Comments on the DEIS noted that it omitted any mention of the ongoing, congressionally-mandated, wilderness suitability review for the HD Mountains. Instead, the DEIS erroneously implied that Congress considered and rejected the HDs for wilderness designation. As was pointed out, the DEIS failed to mention that Congress directed the Forest Service to again analyze wilderness suitability when Forest Plans are revised (most likely by 1993 according to the Chief's testimony at the time). The San Juan NF, in response to this congressional direction, is currently analyzing wilderness suitability for the HD Mountains and other roadless areas in the ongoing Forest Plan revision. The FEIS, like the DEIS, utterly fails to analyze this issue despite the fact that it is currently preparing its own wilderness suitability analysis and appellants repeatedly raising this issue in countless scoping comments and meetings over the past 4 years. This violates NEPA.

Where a government agency seeks to develop a 5,000 acre+ roadless area, NEPA requires that the agency "at the very least" acknowledge or "take into account" the area's roadless character and the proposed action's impact thereon. *See Smith v. U.S. Forest Service*, 33 F.3d 1072, 1073-75, 1079 (9th Cir. 1994). Otherwise the agency has failed to take the required "hard look." *Id.* In the *Smith* case, the Ninth Circuit emphatically underlined this principle:

[T]he decision to harvest timber on a previously undeveloped tract of land is an 'irreversible and irretrievable decision' which could have 'serious environmental consequences.'" [citing *National Audubon Soc'y v. U.S. Forest Service*, 4 F.3d 832, 842 (9th Cir. 1993)] That the land has been released by Congress [from further wilderness consideration] does not excuse the agency from complying with its NEPA obligations when implementing a land use program. (*Id.* at 1078)

One of the key requirements of NFMA and its implementing regulations is that forests, in revising plans, must analyze the availability of roadless lands for recommended wilderness or other protective status. 16 U.S.C § 1604(g)(3)(A); 36 C.F.R. § 219.17 (1982); 36 C.F.R. § 219.9(b)(8) (2000); 36 C.F.R. § 219.27(b) (2000). Because the San Juan National Forest has failed to complete its Forest Plan revision as required by NFMA, the Forest has failed to review whether its initial decision not to recommend RARE II and adjacent unroaded lands at HD Mountains for wilderness designation is still valid, given new information, new input from citizens, and other values on the Forest.

Nonetheless, the Forest Service refused to analyze whether to amend the Plan to recommend the HD Mountains roadless area for wilderness designation. The Forest Service states that “[a]s a project level gas development analysis, it is outside of the scope of the EIS to analyze and address wilderness suitability.” FEIS App. D at 318. This statement is without basis in law or fact.

Given the expiration of the Forest Plan and its current revision, the Project “is not covered by an existing program statement,” and therefore the Forest Service cannot “undertake in the interim any major federal action covered by the program which may significantly affect the quality of the human environment.” 40 C.F.R. § 1506.1 (c). A wilderness suitability analysis needs to be disclosed, analyzed and considered in this Project analysis. Otherwise the agency is ignoring a relevant factor and suppressing data and evidence in its possession necessary to a complete analysis of the Project’s direct, indirect and cumulative effects. The

failure to even acknowledge, much less analyze, these impacts in the FEIS frustrates NEPA's goals.

The Forest Service's position is likewise contradicted by the actions taken by other agencies and the courts. The BLM often undertakes wilderness suitability analyses when its Plans are outdated to determine whether to proceed with oil and gas development in areas that contain wilderness attributes but that also are open to oil and gas development. Indeed, in a number of these areas, the agency performed wilderness suitability analyses prior to or as part of their NEPA analyses treating oil and gas development. *See, e.g.*, Exhs. 10 and 11 (South Shale Ridge Roadless Review Public Comments and Mngt. Summary and Final Wilderness Review). In areas where facts showed that wilderness suitability existed, and the BLM has ignored those facts and not prepared NEPA documentation, it has been reversed. *Southern Utah Wilderness Assn. v. Norton*, 2006 WL 2222359 \* 12 (D. Utah Aug. 1, 2006) ("BLM cannot reasonably rely on its outdated planning to documents to argue that [wilderness] values were previously identified or that impacts of oil and gas development on them were previously evaluated.").

Moreover, the Forest Service's decisions contradict its assertion that such an analysis is beyond the scope of the Project. Here the Forest Service has purported to amend the San Juan National Forest Plan – with no notice and comment – through its decision on the Project to lessen protection for wildlife in the HD Mountains roadless area. *Supra* at 21-29. At the same time, the agency stated that wilderness suitability, RNA and other special area designation cannot be considered because it is outside of the scope of the Project. As we pointed out in our comments on the DEIS, the agency's rationale for not considering these options is clearly inconsistent with the Forest Service's actions. The Forest Service cannot have it both ways. If the Plan can be amended through the Project decision to lessen protection for wildlife, it can also

be amended to increase protection for the same and other resources.

**C. The Modification and Waiver of Stipulations on Leases COC 64932 Could Prejudice the Ability of the Forest Service to Designate Resource Natural Area in Deep Canyon and Archuleta Creek.**

The Forest Service, as part of Decision Point 6, plans to authorize BLM to modify and except or waive certain lease stipulations. In particular, the Forest Service proposes to modify the stipulations attached to Lease COC 64932. ROD at 31. A No Surface Occupancy stipulation was attached to this lease for the purpose of, inter alia, the “[p]rotection of lands included in proposed Research Natural Area[s]....” *Id.* The Forest Service modified this stipulation for the reason that “[m]ost of the area included in the original stipulation is no longer identified as a RNA candidate.” ROD at 31. The Forest Service has provided no rationale or scientific basis for why most of the area is no longer identified as a RNA candidate. Indeed, it admits that the EIS “does not evaluate research natural area suitability – a process that is conducted as part of the Forest Plan revision.” FEIS App. D at 325. This refusal to evaluate RNA suitability is both illegal under NEPA and renders the decision to modify the stipulations for this lease arbitrary and capricious.

As was pointed out in appellants’ DEIS comments, these areas contain highly important natural resources and biotic communities. Archuleta Creek and Deep Canyon encompass some of the lowest elevations (6,300 feet) on the San Juan National Forest. They also include some of the largest acreages of ponderosa pine, pinyon-juniper and Douglas-fir found in any potential RNA on the Forest. The RNA ecological evaluations are attached as Exhibits 12 and 13. These areas “best represent the ecological conditions needed to complete the natural area system” of RNAs, Forest Service Manual 4063.2, because there are few, if any, other identified RNA candidates in the ponderosa pine, pinyon-juniper and Douglas-fir ecosystem type on the San

Juan National Forest. Furthermore, as was pointed out in appellants' comments on the DEIS, the Forest Service has made identification of RNAs a high priority: "Forests and Districts should make the completion of the Environmental Assessments (EAs) and Establishment Records (ERs) required for RNA establishment a high priority. The completion of these documents should not be delayed because of Plan Revision schedules." November 1, 1993 Regional Forester Memo. Despite the passage of more than a decade, the San Juan National Forest has yet to establish a single additional RNA in response to this direction.

Before the San Juan NF can commit unique ecological resources that qualify for RNA designation in the HD Mountains to industrial development, the Forest must consider designating these areas RNAs consistent with Regional direction and the Forest Service Manual and provide data and analysis supporting its decision whether or not to do so. It must also provide an opportunity for the public to comment on this change in RNA identification in the context of the Project NEPA process. Otherwise, the effect of this arbitrary decision that the area no longer deserves protection as an RNA is to prejudice the alternatives under consideration in the Forest Plan revision, in violation of NEPA. Furthermore, given the Forest Service's admission that the EIS "does not evaluate research natural area suitability" for Deep Canyon and Archuleta Creek, the Forest Service admits that it has conducted no analysis of the impacts of modifying the lease stipulations, as required by NEPA, and has therefore provided no rational basis for modifying them.

#### **IV. AIR POLLUTION.**

The Project will cause air pollution as a result of construction activities, well completion and testing, drilling rig exhaust, well production equipment, pipeline compression engine exhaust and fugitive dust, among others. FEIS at 3-525. The San Juan Basin, of which this

Project is a part, already contains thousands of oil and gas wells that contribute to air pollution in the region. The Final Environmental Impact Statement for Oil and Gas Development on the Southern Ute Indian Reservation (July 2002) (Southern Ute FEIS) states that there are currently more than 26,000 wells in the entire San Juan Basin. That figure was most likely based on the level of development at the time the draft EIS was prepared in early 2001. Pollutant emissions from these existing energy developments have already impacted air quality in the region. Ozone levels are high – at levels that impair health – in the region, and they are in danger of exceeding standards set by the EPA. Levels of nitrogen oxides, precursors to ozone as well as pollutants in their own right, are likewise nearing EPA limits. Visibility is impaired in National Parks and Wilderness Areas.

The Project's air pollution will exacerbate these problems, but the decisions do not sufficiently analyze the air pollution impacts of the Project, nor do they require mitigation measures adequate to ensure compliance with the Clean Air Act. The decision to proceed with development according to the ROD is therefore arbitrary and capricious and contrary to law. Attached is an in-depth analysis of the Project's air quality analysis prepared by Vicki Stamper, who also submitted comments on our behalf on the DEIS. *See* Exhs. 14 and 15. We hereby incorporate those comments in their entirety into this appeal, and request that the Forest Service respond to each and every point contained therein. We provide the legal basis for some of the most serious issues and discuss them below.

**A. The Decisions Violate NEPA and its Implementing Regulations and the Clean Air Act.**

NEPA requires that the Forest Service demonstrate that the Project will comply with air quality standards. In preparing an EIS, the Forest Service must describe the environmental consequences of a proposed action, including impacts on air quality, 40 C.F.R. § 1502.16, and

must “state how alternatives considered in it and decisions based on it will or will not achieve the requirements of [NEPA] and other environmental laws and policies.” *Id.* § 1502.2(d) (emphasis added). Thus, NEPA requires the Forest Service to determine whether its approval of the Project will provide for compliance with air quality standards established by the Clean Air Act or other laws. In so doing, the Forest Service must “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24; *see also Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1181 (10th Cir. 2002) (holding that § 1502.24 “imposes an affirmative duty on federal agencies”). In addition, as the agency has recognized, “the federal CAA and FLPMA require all federal activities ... to comply with all applicable local, state, tribal and federal air quality law, statutes, regulations, standards and implementation plans.” FEIS at 3-547.

**1. The Forest Service failed to Analyze the Impacts of the Project on NO<sub>x</sub> levels, Failed to Analyze the Effectiveness of Mitigation Measures in reducing NO<sub>x</sub>, and Failed to Ensure Compliance with the Clean Air Act.**

Nitrogen oxides (“NO<sub>x</sub>”) are a group of highly reactive gases containing nitrogen and oxygen in varying amounts, including nitrogen dioxide (“NO<sub>2</sub>”). *See* <http://www.epa.gov/air/urbanair/nox/what.html>. NO<sub>x</sub> react with other compounds in the atmosphere to form ozone, which poses serious human health and environmental threats. *Id.* They typically form when fuel is burned at high temperatures. *Id.* There are numerous sources of NO<sub>x</sub> emissions associated with the Project, including drill rig engines, wellhead compressor engines, centralized compressor stations, gas processing plants, glycol dehydrators, and separators, as well as tailpipe emissions from the increased vehicular traffic needed to construct, operate and maintain each well and the associated production facilities.

The Forest Service erred in concluding that NO<sub>x</sub> emissions from the Project, in

combination with other present and reasonably foreseeable development, will not exceed the Clean Air Act's limit on increased NO<sub>2</sub> concentrations in this area. The PSD increment for NO<sub>2</sub> in Class II areas, such as the Project area and surrounding communities, limits increases in NO<sub>2</sub> pollution over the baseline concentration to no more than 25 micrograms per cubic meter (µg/m<sup>3</sup>).<sup>10</sup> See 40 C.F.R. § 52.21(c). “[U]nder the federal CAA and Federal Land Policy and Management Act (FLPMA), federal agencies cannot authorize any activity which does not conform to all applicable local, state, tribal and federal air quality laws, statutes, regulations, standards, and implementation plans.” FEIS at 3-258. Accordingly, the Forest Service cannot approve any development that would cause NO<sub>2</sub> concentrations in this Class II area to exceed the 25-µg/m<sup>3</sup> PSD increment.

Part C of the Clean Air Act limits increases of pollutant concentrations, including NO<sub>2</sub> and ozone, in any area designated as “attainment” or “unclassifiable” for that pollutant. 42 U.S.C. § 7471. The Clean Air Act's limits on increased concentrations of these pollutants flow from the statute's Prevention of Significant Deterioration, or “PSD,” program. See 42 U.S.C. § 7470 *et seq.* “The PSD part of the statute, by its title and by its terms, is designed to prevent significant deterioration of air quality in the nation's ‘clean air areas’ in general, those areas that have or are presumed to have air quality better than that specified in the applicable primary and secondary national ambient air quality standards (NAAQS).” *Alabama Power Co. v. Costle*, 636 F.2d 323, 361 (D.C. Cir. 1979).

The statute seeks to achieve this goal in part by limiting increases in air pollution concentrations in such “clean air areas.” The allowable increases for ozone are set by the

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<sup>10</sup> Class II areas constitute all portions of areas designated as attaining NAAQS standards under the PSD program except for large national parks, wilderness areas, and similar designations, which are Class I areas. See 42 U.S.C. § 7472.

national ambient air quality standards, or NAAQS, for this pollutant. *See* 42 U.S.C.

§ 7473(b)(4). The NAAQS establish the maximum concentration of regulated pollutants that is permitted by law. *Id.*

NO<sub>2</sub> emissions are limited by a “maximum allowable increase” (known as the “PSD increment”) established by EPA pursuant to 42 U.S.C. § 7476. *See* 40 C.F.R. § 52.21(c) (increments for nitrogen dioxide). “The increment concept incorporates the idea of a baseline from which deterioration is calculated, by models or monitors, to determine whether it is permissible.” *Alabama Power*, 636 F.2d at 374. This baseline is the ambient concentration of a relevant pollutant that exists “at the time of the first application for a permit by a major emitting facility.” *Id.*; *see also* 42 U.S.C. § 7479(4) (defining “baseline concentration”); 40 C.F.R. § 52.21(b)(13)(i) (same). A “major emitting facility” generally is any source with the potential to emit 250 tons per year or more of any air pollutant. *See* 42 U.S.C. § 7479(1). The date on which this first PSD permit application is submitted is known as the “minor source baseline date.” 40 C.F.R. § 52.21(b)(14)(ii). This baseline date then applies to the “baseline area,” which for NO<sub>2</sub> was set for the entire state of Colorado on March 30, 1989 and for northwestern New Mexico on June 6, 1989. The Clean Air Act’s PSD requirements limit increases in the concentrations of certain pollutants over the level in the baseline area as of the baseline date.

Once the baseline is established the resulting increment limitation on increased pollutant concentrations applies to any source emitting the regulated pollutant, including the compressor stations, well-site production equipment, and other sources of air pollution associated with development of CBM in the Project area. *See Natural Resources Defense Council v. U.S. Env’tl. Protection Agency*, 937 F.2d 641, 647 (D.C. Cir. 1991) (“Although the PSD rules are triggered only by a major source, they require control – to keep the affected area within permissible PSD

‘increments’ – of any source.’”) (emphases in original); *Alabama Power*, 636 F.2d at 362-63 (holding that PSD increments apply to, *inter alia*, “increased emissions from unregulated minor sources”).

Air quality modeling performed for the Project predicts NO<sub>2</sub> concentrations in excess of the Class II NO<sub>2</sub> PSD increments. Specifically, the FEIS states that, for purposes of comparison to the PSD increment, the “maximum predicted direct annual NO<sub>2</sub> impact was 24.8 µg/m<sup>3</sup>, which is nearly equal to the applicable annual PSD Class II increment of 25 µg/m<sup>3</sup>.” FEIS at 3-535. Further, the cumulative NO<sub>2</sub> analysis prepared for the Project, considering Project sources and a subset of other existing and reasonably foreseeable development, predicted a combined total maximum NO<sub>2</sub> concentration of 29.3 µg/m<sup>3</sup>. See June 2004 Draft Environmental Impact Statement Northern San Juan Basin Coal Bed Methane Project Air Quality Impact Assessment Technical Support Document, prepared by RTP Environmental at 52. It must be noted that the predicted NO<sub>2</sub> impacts of other existing and reasonably foreseeable sources reported in the NSJB CBM Technical Support Document only reflected the concentration predicted at the receptors with maximum concentration due to the NSJB CBM Project alone. *Id.* at footnote (1). In other words, there are likely higher overall peak concentrations modeled when existing and reasonably foreseeable sources are added to the mix (especially due to the growth in gas development allowed under the Farmington RMP). However, those predicted concentrations were not reported as the Project modeling was focused primarily on evaluating maximum impacts from only Project sources.

These numbers demonstrates that the NO<sub>2</sub> Class II increments will soon be, or are already being, violated in northwestern New Mexico and southwestern Colorado. Yet the FEIS did not evaluate all NO<sub>2</sub> increment-consuming emissions from stationary sources or from mobile and

area source growth in the region. Despite the fact that a NEPA analysis must evaluate whether a proposed action will comply with all Clean Air Act standards, neither the Forest Service, BLM nor BIA have conducted a cumulative NO<sub>2</sub> increment analysis (considering all increment consuming emissions) as part of any EIS for the region, including this one. Instead, the agencies have attempted to pass the buck to the states and EPA, stating that the responsibility for a PSD increment analysis lies with the permitting authority when issuing a PSD permit or with the agency responsible for implementing the PSD program in the area. FEIS at 3-528 - 3-530. This violates NEPA. The Forest Service is required to ensure compliance with CAA. To do so in this case, it must analyze the direct and cumulative impacts of the Project, and in so doing must ensure the ensure the scientific integrity of any analysis performed in a NEPA review. *See* 40 C.F.R. §1502.24. It has failed to meet any of these requirements. Indeed, the Forest Service has itself stated, specifically with respect to large-scale CBM development, that “[c]umulative effects analysis in NEPA is the only tool we currently have to determine the larger big picture potential problems from these fields.” *See* Exh. 16, U.S. Forest Service, Air Resource Management ARMnews, Volume 1 #5, at 4.

Furthermore, as Ms. Stamper points out, flaws in the air emissions inventory, meteorology, and modeling techniques used make it likely that the air impacts of the Project by itself and/or cumulatively with other existing and reasonably foreseeable sources will cause additional significant air quality impacts that would exceed those disclosed in the FEIS and that would likely violate Clean Air Act standards. *See* Exhs. 14 & 15.

The FEIS assumes certain NO<sub>x</sub> emission rates for both wellhead and central compressor engines in its air quality analysis. Specifically, the USFS/BLM assumed wellhead compressors would emit NO<sub>x</sub> at 10 g/hp-hr and that central compressor engines would emit NO<sub>x</sub> at 1.5 g/hp-

hr, stating that “these assumptions reflect emissions levels for recently permitted equipment.” See FEIS at 3-532. The USFS/BLM did not provide any information on the data sources used to reflect “recently permitted equipment.” In the air analyses conducted for the Farmington RMP, the BLM assumed a NO<sub>x</sub> emission rate from wellhead compressors of 15.8 g/hp-hr, or more than 10 times higher than that predicted for this Project.<sup>11</sup>

Furthermore, there are no enforceable requirements that would assure that wellhead and central compressor engines will produce these extremely low levels of NO<sub>x</sub> as assumed in the air quality analysis. USFS/BLM have mandated that all new and replacement small gas field engines (i.e., wellhead engines) greater than 40 design-rated horsepower (hp) and less than or equal to 300 design-rated horsepower meet a nitrogen oxides (NO<sub>x</sub>) emission limit of 2.0 grams per horsepower-hour (g/hp-hr) or lower. See ROD at 19 and 26. Further, the USFS/BLM have mandated that all new and replacement internal combustion gas field engines greater than 300 design-rated horsepower (i.e., central compressor engines) meet a NO<sub>x</sub> emission limit of 1.0 g/hp-hr or lower. *Id.*

However, these NO<sub>x</sub> emission rates will not apply to all wellhead and central compressor engines utilized under the NSJB CBM Project, but only to “new and replacement” engines (a term that is not defined in the ROD). The Forest Service recognized in 2003 that “Colorado and New Mexico ... are becoming the ‘race to the bottom’ locations for industry to dump their old, dirty compressors.” See Exh. 16, U.S. Forest Service, Air Resource Management ARMnews, Volume 1 #5, at 4.

In addition, these requirements will not apply to new engines smaller than the specified horsepower design rate. There is no data provided to justify this horsepower limit. Further, the

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<sup>11</sup> See May 2002 Air Quality Modeling Analysis Technical Report for the Farmington RMP at 9.

ROD provides for an exemption from meeting the emission limits if a proponent can demonstrate that a higher emission rate will not cause or contribute to exceedences of “applicable air quality impact thresholds” (another term that is not defined in the ROD).

There are also implementation and enforceability issues with the NO<sub>x</sub> emission levels specified in the ROD. With respect to central compressor engines, it is unclear whether the Forest Service has authority to impose specific emission limits for sources not located on federal lands. State and private lands make up more than half of the Project Area (*see* FEIS at 1-2), so it is probable that many compressor engines will be located on such lands where they may be exempt from the NO<sub>x</sub> emission levels specified in the ROD. The FEIS does not address this issue, rendering its analysis in violation of NEPA.

Furthermore, the Colorado Air Pollution Control Division specifically indicated that it “does not currently have the regulatory authority to impose the emission control measures used in the air quality modeling analysis for larger central compressor engines.” Letter of M. Perkins, Colo. Air Pollution Control Division to M. Stiles, USFS (Sep. 3, 2004) at 3, reprinted in FEIS at Appendix O. This comment regarding central compressor engines was also raised in the National Park Service’s September 1, 2004 letter to the USFS/BLM, at 2 (in Appendix O of the FEIS). For similar reasons, the Colorado Air Pollution Control Division does not generally have regulatory authority to impose NO<sub>x</sub> emission limits on small wellhead compressor engines either. This issue regarding small wellhead engines was also raised in the November 30, 2004 comment letter submitted by the Superintendent of Mesa Verde National Park, at 3. FEIS at Appendix O.

In evaluating the impact of the wellhead engine NO<sub>x</sub> mitigation measure, the USFS/BLM have assumed that all wellhead engines that operate under the Farmington Resource Management Plan (RMP) would also meet this mitigation measure. *See* FEIS at 3-540 – 3-541.

Although the Record of Decision for the Farmington RMP indicates that additional air quality mitigation measures “may be required” as a result of the cumulative far-field air impacts analyses conducted for the NSJB CBM Project (*see* Farmington ROD at 15), the ROD for the NSJB CBM Project does not state that the mitigation measures will also apply to Farmington RMP sources. Thus, the public has no guarantee that the NSJB CBM Project mitigation measures will apply to Farmington RMP sources.

Further, the Farmington Field Office of the BLM currently has no program in place to monitor NO<sub>x</sub> emissions and does not foresee developing one until after the Four Corners Air Quality Task Force completes a report, hopefully by the end of this year. *See* Exh. 17, May 8, 2007 Letter from Steve Henke, BLM Farmington Field Office District Manager to San Juan Citizens Alliance. In the meantime, the BLM has “no records of how many new engines placed in the field actually meet the NO<sub>x</sub> emission limit.” *Id.* Given the Forest-Service identified “race to the bottom” in the San Juan Basin, Exh. 16, U.S. Forest Service, Air Resource Management ARMnews, Volume 1 #5, at 4, this number is likely low.

In addition, it also is unlikely that the New Mexico Environment Department (NMED) would be able to impose or enforce such measures, especially since the state has indicated most small wellhead engines would be exempt from New Mexico permitting requirements. *See* NMED August 6, 2004 letter at 2, in FEIS, Appendix O.

Thus NO<sub>x</sub> emissions from some Project sources, as well as many other regional sources, will likely be much higher than what was modeled in the air analyses and higher than the mitigation measures specified in the ROD. As discussed in the FEIS for the NSJB CBM Project, a NO<sub>x</sub> emission rate for central compressors of 1.5 g/hp-hr reflects close to 90% control (*see* FEIS at 3-543) and thus the uncontrolled emissions from central compressors could range from

10-15 g/hp-hr. Wellhead engine NO<sub>x</sub> emissions could also be higher than the assumed 10 g/hp-hr emission rate. Exh. 15. Without enforceable requirements that are mandatory for all wellhead and central compressor engines used for NSJB CBM Project sources, actual NO<sub>x</sub> emissions especially from engines with no or outdated NO<sub>x</sub> controls (such as older, existing engines) could be much higher than what was modeled. Ms. Stamper raised this comment in her DEIS comment letter at 3-4. This comment was also raised by the Colorado Air Pollution Control Division. Letter of M. Perkins, Colo. Air Pollution Control Division to M. Stiles, USFS (Sep. 3, 2004) at 1-2, reprinted in FEIS at Appendix O.

Significantly, the USFS/BLM also received comments, apparently from the oil and gas industry, that question the bases for the assumed NO<sub>x</sub> emission rates used in the modeling analyses. Specifically, the USFS/BLM reported in the FEIS:

Some respondents request that the Forest Service and BLM should reassess the assumption that all central compressors would meet 1.5 grams/horsepower-hour emission rates of NO<sub>x</sub>. They suggest that it is not economically feasible and current regulations do not require the use of low-NO<sub>x</sub> engines, stating, ‘We are opposed to adoption of strict NO<sub>x</sub> emission limits for engines at these remote exploration and production sites. The control technology for small engines is not sufficiently available and proven to be imposed through this EIS.’

FEIS, Appendix O, at 10-11. These comments, which question the feasibility of the limits assumed by the agency, make clear that enforceable requirements on NO<sub>x</sub> emissions from all compressor engines operated by NSJB CBM Project sources are needed in order for the USFS/BLM’s assumptions regarding NO<sub>x</sub> emission rates from these sources to actually be implemented by all operators.

Furthermore, given the likelihood that some of the central compressor engines will be located on private or state lands rather than federal lands in the NSJB CBM Project area, it is probable that the NO<sub>x</sub> emission rates from central compressors will be higher than what was

assumed in the NSJB CBM modeling analysis (*i.e.*, 1.5 g/hp-hr) and higher than the mitigation measure specified in the ROD for new and replacement compressor engines (*i.e.*, 1.0 g/hp-hr). As a result, the USFS/BLM likely underestimated NO<sub>x</sub> emissions from at least some of the central compressor engines modeled. Without any enforceable requirements in place mandating otherwise, NO<sub>x</sub> emissions from some central compressor engines could be uncontrolled, *i.e.*, up to ten times the amount of emissions modeled by the USFS/BLM.<sup>12</sup> Given that the USFS/BLM's analyses already show adverse impacts on visibility in Class I areas (even when a 2.0 g/hp-hr NO<sub>x</sub> emission limit for small wellhead compressor engines is taken into account – *see* FEIS at 3-615), NEPA's "hard look" requirement demands that the USFS/BLM properly assess the likely NO<sub>x</sub> emissions from central compressor and wellhead engines. Clearly, as indicated by comments from regulatory authorities and from the oil and gas industry, the USFS/BLM's assumption regarding NO<sub>x</sub> emissions from compressor engines was not "reasonable but conservative" and instead greatly underestimated NO<sub>x</sub> emissions at least from the sources that won't be required to meet the mitigation measures of the ROD. As previously stated, there is no guarantee that such emission limits will be consistently met because such measures are not mandatory or enforceable for all wellhead and central compressor engines associated with the NSJB CBM Project sources. Thus, in the absence of enforceable and mandatory requirements on NO<sub>x</sub> emissions from all wellhead and compressor engines, the USFS/BLM likely underestimated maximum impacts on visibility and on NO<sub>2</sub> concentrations in the region. In sum, given the flaws in the analysis, the Forest Service has violated NEPA and potentially the Clean Air Act by failing to conduct a thorough analysis of the effects of NO<sub>x</sub> emissions from the Project.

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<sup>12</sup> This is based on the assumption that a NO<sub>x</sub> emission rate of 1.5 g/hp-hr reflects 90% NO<sub>x</sub>

## 2. The Forest Service Failed to Analyze the Impacts of the Project on Ozone Levels and Ensure Compliance with the Clean Air Act.

The Project will be a major source of ozone precursors. The FEIS states that the Project will emit significant amounts of NO<sub>x</sub>, and as shown above, this underestimates likely NO<sub>x</sub> emissions. In addition, engines associated with the Project – including well-head compressors, other compressors, and vehicles – will produce volatile organic compounds (“VOCs”). EPA has identified both of these pollutants as precursors to ozone formation. *See* 40 C.F.R. §52.21(b)(1)(ii) as amended on November 29, 2005 (70 Fed. Reg. 71612).

The American Lung Association has identified ozone as a “powerful respiratory irritant” that can lead to reduced lung function, “greatly increas[ing] the risk of asthma attacks, need for medical treatment and for hospitalization in persons with asthma.” American Lung Association, “Ozone Fact Sheet” at 1 (2006) (<http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=50328>). The Environmental Protection Agency (“EPA”) cautions that “even at very low levels” ground-level ozone “triggers a variety of health problems including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.” U.S Environmental Protection Agency, “Six Common Air Pollutants, Chief Causes For Concern” at 1-2 (2006) (<http://www.epa.gov/air/ozonepollution/index.html>) (emphasis added). Ozone is a particular threat to people with respiratory conditions or diseases, senior citizens, people who work outdoors, and children. *Id.* at 2. Symptoms of ozone exposure include wheezing, coughing, and pain when breathing. *Id.*

In addition to these severe human health impacts, ozone damages plants and ecosystems, making them “more susceptible to disease, insects, other pollutants, and harsh weather.” *Id.* In this way, ozone can “ruin[ ] the appearance of cities, national parks, and recreation areas.” *Id.*

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control, as shown in Table 3-193 of the FEIS (at 3-543).

Because ozone can also blight crops and forest yields, it can have major adverse economic impacts. *Id.* Finally, ozone is a primary chemical agent that contributes to formation of the brown haze that obscures visibility in many areas, even remote wilderness areas and National Parks. *Id.* at 3. Because ozone forms at a regional scale and can impact air quality substantial distances from facilities emitting ozone-forming pollutants, the Project will contribute to ozone pollution in communities near and far as well as in Class I airsheds such as Mesa Verde National Park.

To protect public health and the environment from the potentially severe impacts of ozone pollution, EPA has developed National Ambient Air Quality Standards (“NAAQS”) for ozone exposure pursuant to § 109(b) of the Clean Air Act. *See* 42 U.S.C. § 7409(b). For ozone, the NAAQS are set at 0.08 ppm for an 8-hour average concentration. EPA, National Ambient Air Quality Standards, <http://www.epa.gov/air/criteria.html#6>.<sup>13</sup> This “primary standard” was set “to protect public health, including the health of ‘sensitive’ populations such as asthmatics, children, and the elderly.” *Id.* Under the Clean Air Act, the NAAQS must be set at a level that is “requisite to protect the public health,” with an adequate margin of safety, and at a level “requisite to protect the public welfare.” 42 U.S.C. §§ 7409(b)(1)-(2). Thus, compliance with the NAAQS is necessary to avoid subjecting the public to untenable health risks.

Furthermore, this standard is likely to be lowered in the near future. The Clean Air Science Advisory Committee has recommended that the current NAAQS for ozone needs to be lowered to no more than 70 parts per billion. *See* Exh. 18, October 24, 2006 letter to the EPA from Dr. Rogene Henderson, Chair, Clean Air Scientific Advisory Committee with CASAC’s

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<sup>13</sup> To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

Peer Review of the Agency's 2nd Draft Ozone Staff Paper, at 2; Exh. 19 EPA Ozone NAAQS Presentation (April 17, 2007). San Juan County has exceeded this level of ozone pollution which in recent years. See <http://www.nmenv.state.nm.us/aqb/projects/Ozone.html>. Mesa Verde National Park has been experiencing high levels of ozone pollution, and nearby San Juan County, New Mexico has the highest measured ozone concentrations of any county in New Mexico. It is therefore imperative that the Forest Service provide a sufficient analysis of the Project's impact on ambient ozone concentrations in the region.

The Forest Service has provided no such analysis of impacts from air emissions sources on ground level ozone concentrations. Emissions of ozone precursors, including VOCs and NO<sub>x</sub>, from the Project could have a significant impact on the area's compliance with ambient ozone standards in the near future, especially when considered with all other cumulative growth in ozone precursor emissions expected in the region. The EIS altogether fails to address this potentially significant environmental impact.

Again, numerous agencies and stakeholders raised this issue with the Forest Service. This issue was raised in Ms. Stamper's November 16, 2004 DEIS comment letter (at 15-16), the September 3, 2004 comment letter submitted by the Colorado Air Pollution Control Division (at 1, 5-6), and related issues were raised in the November 30, 2004 comment letter submitted by EPA Region VIII (at 6 in Enclosure to EPA's letter, in Appendix O of FEIS).

The USFS/BLM's response to these comments was that coal bed methane contains very little volatile organic compounds (VOCs) and thus "ozone formation is unlikely." FEIS, Appendix O at 263. This misses the point. As noted by EPA, while the coal bed methane itself may contain little VOCs, sources associated with coal bed methane development - such as engines - emit VOCs. See the November 30, 2004 comments submitted by EPA at 6. The

Forest Service should have quantified VOC emissions to comply with NEPA's "hard look" requirement.

The USFS/BLM also responded to a comment that a ground level ozone monitoring site be established as follows: "[g]iven the potential increase in oxides of nitrogen emissions during construction and production (with a minimal reactive hydrocarbon emissions increase only during construction), 'significant, adverse' ozone impacts are not likely to occur." FEIS, Appendix O at 277. Yet, the USFS/BLM failed to provide any information supporting this conclusion. No ozone analysis was provided in the June 2004 NSJB CBM Air Quality TSD. The total NO<sub>x</sub> emissions from coal bed methane production provided in the June 2004 NSJB CBM Air Quality TSD indicates that production NO<sub>x</sub> emissions would range from 588 tons per year to 2,087 tons per year. *See* June 2004 NSJB CBM Air Quality TSD at 19. This is not an insignificant amount of NO<sub>x</sub> emissions. Further, as discussed above, the USFS/BLM underestimated NO<sub>x</sub> emissions from the NSJB CBM Project.

Considering that the Clean Air Science Advisory Committee has recommended that the current NAAQS for ozone needs to be lowered to no more than 70 parts per billion,<sup>14</sup> a level of ozone pollution which has been exceeded in Mesa Verde National Park and in San Juan County, New Mexico in recent years<sup>15</sup>, it is imperative that the USFS/BLM properly assess the potential impacts on ozone concentrations due to the NSJB CBM Project both by itself and with other existing and reasonably foreseeable development in the region. The NSJB CBM Project EIS is

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<sup>14</sup> *See* October 24, 2006 letter to the EPA from Dr. Rogene Henderson, Chair, Clean Air Scientific Advisory Committee with CASAC's Peer Review of the Agency's 2<sup>nd</sup> Draft Ozone Staff Paper, at 2.

<sup>15</sup> *See* June 2004 NSJB CBM Air Quality TSD at 30. *See also* <http://www.nmenv.state.nm.us/aqb/projects/Ozone.html>.

significantly incomplete without this information. Without such an analysis, the USFS/BLM has failed to provide government officials with a full understanding of the environmental consequences of the Project as required by NEPA.

**3. The Forest Service Failed to Analyze the Impacts of the Project on Visibility in All Class I Airsheds.**

The USFS/BLM only evaluated air quality impacts at Mesa Verde National Park and the Weminuche Wilderness Area for the NSJB CBM Project EIS. FEIS at 3-539. Other Class I areas could be impacted by the NSJB CBM Project, especially given the underestimates in likely NO<sub>x</sub> production described above, including the La Garita Wilderness in Colorado, the San Pedro Parks Wilderness, Bandelier National Monument, and Pecos Wilderness Area in New Mexico, and Canyonlands National Park in Utah. This issue was raised by numerous parties in comments on the DEIS, including Ms. Stamper's November 16, 2004 DEIS comment letter at 12, the National Park Service's November 30, 2004 comments, the Colorado Air Pollution Control Division in its September 3, 2004 comment letter, and by the New Mexico Environment Department in its August 6, 2004 comment letter (at 1-2) (in FEIS, Appendix O). In sum, "[a] complete Environmental Impact Statement must analyze the impacts that may occur at all nearby Class I areas." New Mexico Environment Department August 6, 2004 comment letter at 2 (in FEIS, Appendix O). The FEIS listed this issue as one upon which the public commented, App. O Chapter 5 at 259, but failed to provide any respond. The FEIS failed to analyze these reasonably foreseeable impacts, and thereby violated NEPA.

**4. The Forest Service Failed to Ensure Compliance with Colorado's SO<sub>2</sub> Standard.**

The air quality modeling analyses conducted for the NSJB CBM Project indicated that the SO<sub>2</sub> emissions from drilling rigs and other diesel engines could cause violations of the

Colorado 3-hour average SO<sub>2</sub> standard of 700 µg/m<sup>3</sup>. FEIS at 3-534. The Forest Service states that these are unlikely given that the analysis used “conservative assumptions.” As we demonstrated above, the assumptions were anything but conservative, excluding significant sources of air pollution and offering no rationale for assuming that control technologies will be implemented to the extent relied upon in the analysis. The Forest Service thus violated NEPA and potentially the Clean Air Act by failing to conduct a thorough analysis to ensure that SO<sub>2</sub> emissions from the Project will not violate the Colorado 3-hour average SO<sub>2</sub> standard of 700 µg/m<sup>3</sup>.

**5. The Forest Service Failed to Ensure Compliance with the Class II NO<sub>2</sub> PSD increment.**

Last, the USFS/BLM’s modeling analysis showed that, on a cumulative basis considering other reasonably foreseeable and existing sources not assumed to be reflected in the background concentration, the Project could contribute to violations of the Class II NO<sub>2</sub> PSD increments. Specifically, NO<sub>2</sub> increment consumption was predicted to be 83.79 to 83.41 µg/m<sup>3</sup> (with variations based on the alternative that was modeled).

The USFS/BLM did not disclose the predicted NO<sub>2</sub> increment violations in the FEIS. However, this can be readily ascertained from the June 2004 NSJB CBM Air Quality TSD. Specifically, in the cumulative modeling assessments, the Project sources were modeled along with other existing and reasonably foreseeable sources to predict impacts on NO<sub>2</sub> concentrations primarily for comparison to the NAAQS for NO<sub>2</sub>. Because all of the existing and reasonably foreseeable sources would consume the available NO<sub>2</sub> increment as discussed below, one can also take the results of the USFS/BLM’s modeling presented in the June 2004 NSJB CBM Air Quality TSD and compare to the PSD NO<sub>2</sub> increments. The results predict significant violations

of the Class II NO<sub>2</sub> PSD increment. The USFS/BLM has failed to present any revised modeling with the NO<sub>x</sub> mitigation measures of the ROD to discount these predicted violations.

The PSD increments, also known as “maximum allowable increases over baseline concentration,” are ambient standards that apply under the PSD program of the Clean Air Act. These ambient standards are different than the NAAQS. The NAAQS reflect the maximum concentration of a pollutant that is allowed to occur in the ambient air. Any concentration above those levels has been determined by EPA to be adverse to public health or welfare. The purpose of the PSD program is to keep clean air areas clean and to not allow significant degradation of air quality in these areas so that air quality does not deteriorate to the level of the NAAQS. The increments are the primary mechanism employed to meet this purpose.

Under the definition of “baseline concentration” of the PSD regulations at 40 C.F.R. §52.21(b)(13)(ii) (also at Colorado Regulation No. 3, Part D, Section II.A.6.c), actual emissions from any major source constructed after the “major source baseline date” and actual emissions increases and decreases at any stationary source after the “minor source baseline date” are counted against the available PSD increment. All other emissions are considered part of the baseline concentration and thus do not affect the amount of available increment.

All of the emissions from the forthcoming Project sources would consume the available PSD increment because these sources would be constructed and increase emissions after the applicable baseline dates (*i.e.*, after 1988 for major sources and after 1989 for minor sources).<sup>16</sup>

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<sup>16</sup> The NO<sub>2</sub> major source baseline date is February 8, 1988 (see 40 C.F.R. §52.21(b)(14)(i)(b); Regulation No. 3, Part D, Section II.A.23.b.). The NO<sub>2</sub> minor source baseline date is March 30, 1989 in Colorado, and is June 6, 1989 in New Mexico. *See* State of Colorado’s Air Quality Modeling Report, Periodic Assessment of Nitrogen Dioxide Increment Consumption in Southwest Colorado, Phase I (October 29, 1999) at 19, available at <http://apcd.state.co.us/permits/psdinc/>.

For similar reasons, the reasonably foreseeable development modeled would also consume the available PSD increment. The existing sources modeled in the USFS/BLM's analyses would also be considered as "increment-consuming" sources because each source modeled either had obtained an emission permit to construct or was operational after 1999<sup>17</sup>, *i.e.*, after the applicable PSD major and minor source baseline date for NO<sub>2</sub>. Adding the predicted maximum Project impacts to the predicted impacts of the other existing and reasonably foreseeable sources modeled in the far field analysis shows total NO<sub>2</sub> concentrations ranging from 83.79 to 83.41 µg/m<sup>3</sup> (annual average) depending on the EIS alternative modeled.<sup>18</sup> These NO<sub>2</sub> concentrations are all well in excess of the Class II NO<sub>2</sub> PSD increment of 25µg/m<sup>3</sup> (annual average)<sup>19</sup>. Thus, these predicted NO<sub>2</sub> PSD increment violations should have been highlighted as an additional significant impact of the NSJB CBM Project, but the USFS/BLM failed to do so.

The issue of potential NO<sub>2</sub> increment violations was discussed in Ms. Stamper's November 16, 2004 comment letter, at 10-12, in the November 30, 2004 letter from the Superintendent of Mesa Verde National Park (FEIS, Appendix O), in the November 30, 2004 comments submitted by EPA Region VIII (FEIS, Appendix O), and in the September 3, 2004 comments submitted by the Colorado Air Pollution Control Division (at 1, FEIS, Appendix O).

While the ROD specifies mitigation measures that include lower NO<sub>x</sub> emission rates than assumed in the original air quality analysis done for the FEIS, the USFS/BLM has not provided any demonstration that the lower NO<sub>x</sub> emission rates – even if consistently met by all NSJB

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<sup>17</sup> See June 2004 NSJB CBM Air Quality TSD at 24.

<sup>18</sup> This was determined from Table 7-3 of the June 2004 NSJB CBM Air Quality TSD, by adding the predicted NO<sub>2</sub> impacts from "maximum direct annual impact" of the NSJB CBM sources to the "other existing and RFS impact."

<sup>19</sup> See 40 C.F.R. §52.21(c); Colorado Regulation No. 3, Part D, Section X.A.1.b.

CBM Project and Farmington RMP sources – will remedy the predicted NO<sub>2</sub> increment violations. Nitrogen dioxide concentrations would need to be reduced by 70% in order to avoid a violation of the PSD NO<sub>2</sub> increment. Because it is unlikely that the NO<sub>x</sub> mitigation measures will be met at all NSJB CBM Project and all Farmington RMP sources for the reasons discussed in sections 1-4 above, it appears likely that Class II NO<sub>2</sub> PSD increment violations could occur as a result of the Project and reasonable foreseeable development in the region.

The USFS/BLM's response to comments regarding potential increment violations due to the NSJB CBM Project was that its analysis was "not a regulatory increment consumption analysis." *See, e.g.*, FEIS, Appendix O at 260. The USFS/BLM also placed the responsibility on the state air agency to address any PSD increment compliance problems. *See* FEIS, Appendix O at 263. However, these issues are not relevant here. What is relevant is that the USFS/BLM is required by NEPA to evaluate potential significant environmental impacts from its proposed project by itself and cumulatively with other existing and reasonably foreseeable development. The NO<sub>2</sub> PSD increments are ambient air standards that apply in clean air areas including southwest Colorado. *See* 40 C.F.R. § 52.21(c); Section X.A.1.b. of Part D of Colorado Regulation No. 3. These PSD standards should be treated similarly to the NAAQS in the USFS/BLM's NEPA analyses. That is, if there could be a violation of the PSD increments based on emissions from the project by itself or cumulatively with other reasonably foreseeable sources, then that should be considered a significant and adverse impact on air quality. The Forest Service thus violated NEPA and potentially the Clean Air Act by failing to conduct a thorough analysis to ensure that air pollution from the Project will not contribute to NO<sub>2</sub> PSD increment violations.

**B. The Decisions Violate the Clean Air Act and its Implementing Regulations.**

**1. The Project's Nitrogen Oxide Emissions Would Unlawfully Degrade Visibility at Mesa Verde National Park and the Weminuche Wilderness.**

The Forest Service's decision also violate the Clean Air Act because the ROD fails to protect Class I airsheds, which include national parks and wilderness areas. The Clean Air Act imposes on the Secretaries of the Interior and Agriculture, as Federal Land Managers, "an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a Class I area and to consider, in consultation with the Administrator, whether a proposed major emitting facility will have an adverse impact on such values." 42 U.S.C. § 7475(d)(2)(B).

The Project is predicted to cause significant adverse impacts on visibility at the Weminuche Wilderness Area. *See* July 2006 Air Quality Technical Support Document Errata at 64 and Table 7-8; FEIS at 3-536-8. The predicted visibility impacts from the project alone exceed 0.5 deciviews at Mesa Verde National Park, an impact typically considered by the Federal Land Managers to be a level of concern. *See* July 2006 Air Quality Technical Support Document Errata, Table 7-7. On a cumulative basis, considering some (but not all as discussed above) of the existing and reasonably foreseeable sources, significant adverse visibility impacts are predicted to occur at both Mesa Verde National Park and at the Weminuche Wilderness Area. The air modeling predicted between 34 and 62 days per year of a 1.0 deciview change in visibility or greater at Mesa Verde and 15 to 47 days per year of a 1.0 deciview change or in visibility or greater the Weminuche Wilderness Area. *See* July 2006 Air Quality Technical Support Document Errata at 64-65.

Thus the USFS/BLM's analyses - even using underestimates of NO<sub>x</sub> production - admit adverse impacts on visibility in two Class I areas, the Weminuche Wilderness and Mesa Verde

National Park. In addition, the FS/BLM failed to analyze impacts to other Class I areas that could be impacted by the Project, including the La Garita Wilderness in Colorado, the San Pedro Parks Wilderness, Bandelier National Monument, and Pecos Wilderness Area in New Mexico, and Canyonlands National Park in Utah. The Forest Service's decision to approve the Project does not fulfill its responsibilities under the Clean Air Act to protect these Class I areas and that the failure to provide an accurate analysis of impacts to all Class I areas likely to be affected violates NEPA. 40 C.F.R § 1508.25.

**C. The Decisions Violate the Wilderness Act.**

Under the Wilderness Act, the Forest Service "shall be responsible for preserving the wilderness character of" the Weminuche Wilderness. 16 U.S.C. § 1133(b). As discussed above, the Project is expected to cause significant visibility impairment in the Weminuche Wilderness, which in turn would impair the area's wilderness character. The Project is also predicted to contribute to significant impacts on acid neutralizing capacity at Upper Grizzly Lake in the Weminuche Wilderness Area. FEIS at 3-541. This would harm the Lake's capacity to support fish and change its ecology, harming the wilderness character of the Weminuche Wilderness, in violation of the Wilderness Act.

**REQUEST FOR RELIEF**

Based on the foregoing Statement of Reasons, Appellants hereby request the following relief:

1. The Regional Forester must withdraw the Record of Decision ("ROD") approving the Northern San Juan Basin Coal Bed Methane Project and all activities approved under Decision Points 1, 4, 6 and 8;
2. If the Forest Service intends to proceed with the Northern San Juan Basin Coal Bed Methane Project, it must prepare NEPA documentation (including opportunities for public involvement and appeal) that complies fully with NEPA, NFMA, the CAA, the Wilderness Act, and the APA, and that addresses all of the

issues raised in this appeal. Any subsequent ROD must demonstrate compliance with the Forest Plan and remedy the deficiencies raised in the Statement of Reasons;

3. Any review of this appeal must include an issue-by-issue “statement of reasons” responding to each issue raised in the appeal.
4. Direct the Forest Supervisor to refrain from committing any further agency resources to implementing the Northern San Juan Basin Coal Bed Methane Project.

Appellants further request that all communications concerning this appeal be delivered to Appellants’ attorneys – Keith Bauerle and Edward Zukoski – and to Lead Appellant San Juan Citizens Alliance. Addresses of attorneys and appellants are provided below.

Respectfully submitted May 21, 2007 on behalf of Appellants,

BY:



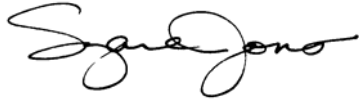
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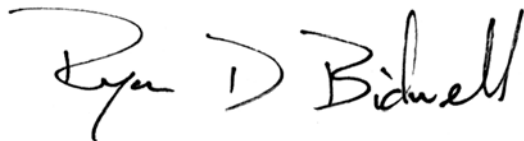
and other appellants,



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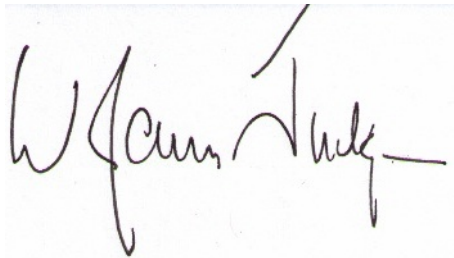
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