January 17, 2012

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Navajo Mine Area IV North Mine Permit Revision EA  
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Re: EA for BHP Navajo Coal Company Pre-2016 Mine Plan for Area III and Area IV North [OSM EA# NM-0003-F-Y-01]

Dear Mr. Yellowman:

Thank you for the opportunity to submit comments on the Environmental Assessment (EA) for the proposed BHP-Billiton Navajo Coal Company (BNCC) pre-2016 Mine Plan for Area III and Area IV North (United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement EA #NM-0003-F-Y-01). These comments are submitted by the Western Environmental Law Center on behalf of San Juan Citizens Alliance (SJCA), Diné Citizens Against Ruining our Environment (Diné CARE), the Center for Biological Diversity (Center), the Sierra Club, and Amigos Bravos (collectively, “Citizens Groups”). The Citizens Groups timely submitted comments during the “scoping” phase of the EA process on May 17, 2011 prior to preparation of this EA (released by OSM to the public on the internet on the OSM website on December 1, 2011). The May 17, 2011 scoping comments are incorporated in these comments by reference and, further, attached as Exhibit 1. These comments are once again provided because many of the points made in our scoping comments have been ignored in the EA.

Fundamentally, OSM’s ill-advised choice to prepare an EA for the proposed pre-2016 Mine Plan for Area III and Area IV North project, and to do so in an effective vacuum, obscures the true magnitude of impacts, limits the consideration of alternatives intended to constrain those impacts within acceptable limits, and precludes OSM’s ability to make a reasoned and informed decision. Accordingly, to ensure that the National Environmental Policy Act (NEPA) and other laws are complied with, OSM should immediately begin preparation of a comprehensive Environmental Impact Statement (EIS). As detailed below, that EIS should consider the entire...
mine, the Four Corners Power Plant, and associated infrastructure linking the mine to the power plant, as connected and cumulative actions in that comprehensive EIS.

We also emphasize that OSM’s proposed action implicates a host of resource concerns, that the EA is quite lengthy and, frankly, difficult to understand and evaluate. Given the short time period for reviewing and drafting comments, a time period that has straddled several holidays, we reserve the right to provide subsequent comments.

CITIZENS GROUPS

SJCA is a non-profit organization, with over 500 members in the Four Corners region, actively involved in energy development oversight; advocating for cleaner air quality and better stewardship of our natural systems; promoting reduced energy consumption, energy efficiency and renewable energy; and working for improvements to community health. SJCA members in the Four Corners region live in areas of existing high-density energy development and infrastructure. Our members are adversely affected by mining operations at the Navajo Mine, including this expansion project, as well as from impacts at the Four Corners Power Plant (FCPP).

Diné CARE is an all-Navajo organization comprised of a federation of grassroots community activists in Arizona, New Mexico and Utah who strive to educate and advocate for our traditional teachings derived from our Diné Fundamental Laws. Diné CARE’s goal is to protect all life in our ancestral homeland by empowering local and traditional people to organize, speak out, and determine the outlook of the environment through civic involvement and engagement in decision-making process relating to tribal development. In addition to signing onto these comments, Diné CARE also submits the letter attached as Exhibit 2.

The Center is a non-profit 501(c)(3) corporation with offices in Arizona, New Mexico, California, Nevada, Oregon, Washington, Alaska, Illinois, Minnesota, Vermont, and Washington, D.C. The Center works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. The Center has 320,000 members and online activists throughout the United States, Colorado, New Mexico and the world. The Center is actively involved in species and habitat protection issues worldwide, including throughout the western United States. The Center, its members, and staff members use the lands in and near the BHP Navajo Mine, and in particular the Chaco and San Juan River, for recreational, scientific, and aesthetic purposes. They also derive recreational, scientific, and aesthetic benefits from these lands through wildlife observation, study, and photography. The Center and its members have an interest in preserving their ability to enjoy such activities in the future. As such, the Center and its members have an interest in helping to ensure their continued use and enjoyment of these activities on these lands. The Center is particularly concerned about species and critical habitats that are affected by coal mining at the BHP Navajo Mine.

Sierra Club, has more than 1.4 million members and supporters who work for a safe and healthy community in which to live, smart energy solutions to combat global warming and an enduring legacy for America's wild places. Since 1892, the Sierra Club has been working to protect communities, wild places, and the planet itself. Sierra Club is the oldest, largest, and most influential grassroots environmental organization in the United States. In New Mexico, Sierra
Club has over 7000 members. It has been a priority of the Sierra Club nationally and locally to stop irresponsible coal mining, curb global warming and ensure clean air and clean water for all.

Amigos Bravos is a nonprofit river conservation organization whose mission is to preserve the ecological and cultural integrity of New Mexico’s rivers and watersheds by holding polluters and governments accountable for their actions. Through this work, Amigos Bravos ensures that New Mexico’s rivers and watersheds provide clean water for irrigating, swimming, fishing, and boating. Amigos Bravos’ effort is inspired by New Mexico’s traditional water users and guided by the vision of water as both a cultural and natural resource. Amigos Bravos has members throughout New Mexico that use and enjoy the water resources of New Mexico for irrigation, livestock watering, fishing, recreation, spiritual pursuits, and aesthetic interests. Amigos Bravos is increasingly concerned that the observed and anticipated impacts of global warming and climate change will compromise its interests and the interests of its members.

OVERVIEW OF THE NAVAJO MINE EXPANSION PROJECT

The EA analyzes several actions including: (1) approximately 830 acres of coal-mining in Area IV North of the BNCC Navajo Mine; (2) relocation of 5.2 miles of Burnham Road (Bureau of Indian Affairs Road 3005; Navajo Road N-5082); (3) a Clean Water Act Section 404 Individual Permit (IP) for discharges of dredged or fill materials into waters of the United States from the United States Army Corps of Engineers (USACE); and (4) modifications submitted to the Bureau of Land Management (BLM) concerning the Resource Recovery and Protection Plan (RRPP) required for coal extraction. The December 2011 Navajo Mine Area IV North Mine Plan Revision project Fact Sheet describes OSM hosting of public workshops in April of 2011 and an informal conference in June 2011, “to seek input on the proposed project.” The EA was posted on OSM’s website on December 1, 2011 with a proposed 30 day public comment period to December 30, 2011 that was later extended to January 17, 2012. Printed copies of the EA have not been provided to our organizations.

BNCC Navajo Mine is the sole source of coal (mine-mouth) for FCPP, a 2,040-megawatt (MW) coal-fired power plant located on the Navajo Nation in operation since 1963. The plant, operated by Arizona Public Service Co. (APS), provides power to about 300,000 households in New Mexico, Arizona, California and Texas. Further, as the EA, notes, “APS supplies the mine with power at 69 kilowatts (kV) of electricity.” EA at 23. Water to cool FCPP is drawn from the San Juan River, with a man-made cooling pond, Morgan Lake located adjacent to the power plant. Approximately 24,550 acre-feet of water per year from Morgan Lake (and originally from the San Juan River) is used to cool FCPP. The Navajo Mine delivers coal to FCPP via rail. The Navajo Mine, which has been operating in varying capacities since the 1960s, currently supplies approximately 8.5 million tons of coal per year to the FCPP via rail.

The Navajo Mine is within the San Juan River Basin, less than a 1.5 miles from the San Juan River and adjacent to Chaco Wash. Areas I-III of the Navajo Mine have been mined in a north-south direction from the San Juan River corridor towards Burnham, New Mexico. Through a series of subsequent lease revisions and amendments the lease area for Navajo Mine has been increased from 24,000 to 33,601 acres. EA at 2. Accepted historic practices at Navajo Mine have included the backfilling of Coal Combustion Waste (CCW) generated at FCPP into excavated

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pits at Navajo Mine. EA at 205. This CCW has been delivered from FCPP to Navajo Mine by trucks. Surface disposal of CCW in unlined pits on lands adjacent to the mine and power plant has also occurred. EA at 205; D.A. Zimmerman, A Preliminary Evaluation of the Potential for Surface Water Quality Impacts from Fly Ash Disposal at the Navajo Mine, New Mexico 21-22 (May 25, 2005) (hereinafter Zimmerman Report) (attached as Exhibit 3).

The December 2011 Navajo Mine Area IV North Mine Plan Revision project Fact Sheet provides a section on OSM’s portrayal of the history of the project entitled, “What is the history of project:”

In December 2004, BNCC submitted an application to OSM to revise its approved permit to include mining coal in Area IV North – a 3,800 acre area. BNCC also proposed to relocate approximately 5 miles of the Burnham Road to facilitate mining activities and to improve public safety and access for local residents and others using the Burnham Road.

In October 2005, OSM approved BNCC’s permit revision application based on the review of its associated Environmental Assessment (EA). BNCC began development of the Area IV North to prepare for mining activities. The development included construction work on the several infrastructure projects, such as roads, soil stockpiles, powerlines, ponds and fencing.

In July 2007, Dine CARE and San Juan Citizens Alliance filed a civil suit against OSM in the U.S. District Court of Colorado challenging the approval of BNCC’s revised permit application. The suit claimed that OSM failed to comply with the procedural requirements of the National Environmental Policy Act (NEPA).

In September, 2007, BNCC submitted another application to OSM proposing to permanently relocate approximately five miles of Burnham Road. A separate EA was developed for the Burnham Road relocation in June 2008. In June 2010, OSM approved BNCC’s proposal to relocate the Burnham Road.

In October 2010, the U.S. District Court for Colorado vacated OSM’s approval of the 2005 Area IV North permit revision and ruled that the Burnham Road relocation was a connected action to the 2005 Area IV North permit revision application.

Following the Court’s order, BNCC stopped all work associated with Area IV North and the Burnham Road Relocation.2

The U.S. District Court for the District Of Colorado (Civil Action No. 07-cv-01475-JLK) Final Judgment vacating and remanding the 2005 permit revision application to OSM was filed on November 5, 2010. The Final Judgment (attached as Exhibit 4) provided:

Pursuant to the Memorandum Opinion and Order (Doc. No. 136), entered by the

2 United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement, Western Region, Navajo Mine Area IV North Permit Revision Application Fact Sheet, December 2011.
Hon. John L. Kane on October 28, 2010, it is ORDERED that Defendants’ approval of the 2005 Permit Revision Application is VACATED and REMANDED to the agency for further proceedings consistent with the Memorandum Opinion and Order. Specifically defendants shall:

1. Address the presumption that approval of the 2005 Permit Revision Application is a type of action for which an EIS is normally prepared;

2. Consider the environmental effects of the Burnham Road Realignment in connection with its analysis of the 2005 Permit Revision Application;

3. Include a meaningful discussion of all reasonable alternatives, including approving the 2005 Permit Revision Application with conditions;

4. Discuss the specific mitigation measures proposed in the ethnographic studies in determining the severity of the effects that BHP’s 2005 Permit Revision Application will have on scientific, historic, and cultural resources in Area IV North;

5. Include in their revised EA a discussion of CCW to the extent it is mentioned in the 2005 Permit Revision Application; and

6. Provide meaningful public notice, including but not limited to publication in the Navajo Times and airing advertisements in both English and Navajo on local Navajo radio stations, for all future actions related to its permitting responsibilities at the Navajo Mine.

Critically, the U.S. District Court for the District Of Colorado’s decision sets a foundation for OSM’s consideration of the mine expansion project. It does not, however, obviate OSM’s full obligations to comply with federal law or somehow limit these laws’ application. In any event, the EA neither complies with the Court’s judgment nor with federal law. Relevant to our arguments, set forth below, several pictures of the Navajo Mine, FCPP, and mine-power plant’s vicinity are attached as Exhibit 5.

THE NAVAJO MINE EA VIOLATES NEPA AND OTHER LAWS

1. THE PURPOSE AND NEED STATED IN THE EA IS UNLAWFULLY NARROW AND MUST BE REVISITED TO ACCOUNT FOR OSM’S ENVIRONMENTAL RESPONSIBILITIES, CLIMATE CHANGE, CONNECTED AND CUMULATIVE ACTIONS, AND ENVIRONMENTAL JUSTICE

agencies to take a “hard look” at the environmental consequences of its actions. *Utah Envtl. Congress v. Bosworth*, 439 F.3d 1184, 1195 (10th Cir. 2006); 40 C.F.R. § 1500.1(a). Adequate consideration of alternatives is at “the heart” of the NEPA process. *Id.* at § 1502.14(a).

In conducting a required environmental analysis under NEPA, “[a]n agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality.” *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998). Additionally, agencies must “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. 1502.14(c).

Here, the environmental assessment (EA) states that the proposed extension is needed to “supply sufficient quantities of coal to meet BNCC’s contract obligations to the FCPP through July 6, 2016.” EA at 12. The EA includes three other purposes which, however, receive virtually no analysis: eliminating hazards along Burnham Road, providing revenue for the Navajo Nation, and providing employment opportunities for the Navajo Nation and surrounding communities. EA at 13-14.

By restricting the purpose to meeting the mines contractual coal supply to FCPP, the statement of purpose and need eliminates reasonable alternatives that would create jobs and revenue for the Navajo Nation without the significant health and environmental impacts associated with mining and burning coal.

First, the statement of purpose and need should be revisited and revised to account for OSM’s legal mandates and core responsibility to protect the public interest. The Surface Mining Control and Reclamation Act (SMCRA) was enacted to “establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations,” and to “assure that surface coal mining operations are so conducted as to protect the environment,” and to “wherever necessary, exercise the full reach of Federal constitutional powers to insure the protection of the public interest through effective control of surface coal mining operations,” among other goals. 30 U.S.C. §§ 1202(a), (d), (m). OSM is also subject to Executive Order 12898 (Feb. 11, 1994) which provides that OSM “shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” 59 Fed. Reg. 7629 (Feb. 16, 1994). The Secretary of the Interior has also issued an order compelling OSM “to consider and analyze potential climate change impacts . . . when making major decisions regarding potential use of resources under the Department’s purview.” Sec. Or. 3289 § 3(a) (Sept. 14, 2009). Finally, OSM is obligated to protect water quality in accord with the Clean Water Act. See 33 U.S.C. § 1323(a). Given these legal mandates and orders, OSM must consciously account for its duty to the environment, in particular water resources and the climate, achieve environmental justice in its purpose and need. Only in so doing can OSM ensure that the range of alternatives and actual decision-making process reflect these important considerations.

OSM’s statement of purpose and need, unfortunately, subordinates these considerations to the need to satisfy BNCC’s contractual obligations. This improperly colors the entire NEPA process, in particular the range of alternatives, as it foreordains consideration and selection only of alternatives that satisfy BNCC’s contract obligations. Those contract obligations are BNCC’s
to satisfy, not OSM’s. To the degree that OSM cannot, after completing the NEPA process, authorize activities that satisfy BNCC’s contract obligations, that problem is for BNCC and the other parties to its contract to resolve in accord with contract law.

Moreover, as described below, OSM cannot proceed on the basis of an EA and must, instead, complete a comprehensive Environmental Impact Statement (EIS) to account for myriad connected and cumulative actions, including the mine’s power plant, FCPP. Indeed, OSM concedes this basic obligation as the EA also purports to consider, through NEPA, other aspects of the project, including the relocation of Burnham Road, the CWA 404 IP, and modifications to BLM’s RRPP. OSM, however, cherry-picked what actions it chose to consider, ignoring some of the most important connected and cumulative actions, namely the FCPP itself.

The FCPP is the mine’s sole customer, receives all of its fuel from the mine, and is simultaneously proceeding down a parallel track to secure approval from the Federal Bureau of Indian affairs to renew its lease (which currently ends in 2016) through 2041. EA at 2-3, app. G. The statement of purpose and need must therefore be revised to account for the entire mine-power plant complex, the Department of the Interior’s full range of responsibilities pertaining to that complex (i.e., not just those of OSM’s, but also those of BIA) as well as the broader landscape that it is situated within and the broader communities that inhabit, value, and rely on this landscape. In so doing, Interior will help fulfill a key objective of NEPA, that:

Ultimately, of course, it is not better documents but better decisions that count. NEPA’s purpose is not to generate paperwork – even excellent paperwork – but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

40 C.F.R. § 1500.1(c). In part to achieve this objective, agencies “shall to the fullest extent possible,” “[i]ntegrate the requirements of NEPA with other planning and review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.” Id. at § 1500.2(c).

It is only by revisiting the statement of purpose and need, and properly accounting for the connected and cumulative actions, and the broader landscape and communities around the mine-power plant complex, that Interior can provide a proper, legally-compliant foundation for the NEPA process, in particular consideration of a true range of reasonable alternatives. For example, Interior could consider an EIS-level alternative that ramps down mining operations and provides for renewable energy development (solar or wind) on the mine’s brownfields would provide tax revenue and jobs, without contaminating the region’s land, water, and air, as mining and burning coal does. Such alternatives would also better meet the nation’s energy needs, better account for climate change, and better account for Interior’s responsibility to protect the public interest and to achieve environmental justice. See EA at 12; Sec. Or. 3289.

If the Navajo Nation is to change course and transition to energy production and revenue generation from non-polluting, non-coal sources, the time to do so is now. Otherwise, the massive, intertwined mine-mouth complex consisting of the Navajo Mine and FCPP, and the concomitant health and environmental impacts of that complex to the broader landscape and its communities, not to mention the global climate, could be locked in for several more decades.
2. **OSM MUST PREPARE A COMPREHENSIVE EIS TO CONSIDER CONNECTED AND CUMULATIVE ACTIONS**

a. **The Four Corners Power Plant**

   Agencies must consider connected actions together. *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1182-83 (10th Cir. 2002); *Thomas v. Peterson*, 753 F.2d 754, 758 (9th Cir. 1985); 40 C.F.R. § 1508.25(a). Agencies may not “divid[e] a project into multiple ‘actions,’ each of which individually has a insignificant environmental impact, but which collectively have a substantial impact.” *Id.* The test for determining connected actions is “whether each of two projects would have taken place with or without the other and thus had independent utility.” *Wetlands Action Network v. U.S. Army Corps of Eng’rs.*, 222 F.3d 1105 (9th Cir. 2005); *Conservation Soc’y of S. Vt. v. Sec. of Transp.*, 531 F.2d 637, 640 (2d. Cir. 1976). Under NEPA regulations, actions are considered connected if they “[c]annot or will not proceed unless other actions are taken previously or simultaneously” or if they “[a]re independent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. §§ 1508.25(a)(1)(ii)-(iii). Relevant factors for determining whether actions are connected include, whether the segment (1) “has logical termini”; (2) “has substantial independent utility”; (3) “does not foreclose the opportunity to consider alternatives”; and (4) “does not irretrievably commit federal funds for closely related projects.” *Utahns for Better Transp.*, 305 F.3d at 1183.

   Additionally, agencies must consider “[c]umulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” 40 C.F.R. § 1508.25(a)(2). As explained by the Supreme Court, “when several proposals … that will have cumulative or synergistic impact upon a region are pending concurrently before an agency their environmental consequences must be considered together. Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action.” *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976).

   An agency’s duty to consider cumulative actions within a single NEPA process is, notably, a different obligation from the agencies separate and independent duty to consider cumulative impacts. Compare 40 C.F.R. § 1508.7 (cumulative impacts) with *id.* § 1508.25(a)(2) (requiring consideration of “cumulative actions” in single NEPA analysis). An agency’s duty to address cumulative actions in a single NEPA process is also different from an agency’s duty to consider connected actions; “there may be circumstances in which proposals that are not functionally or economically interdependent may, because of cumulative impacts, trigger the requirement to prepare a comprehensive EIS.” *Friotiofson v. Alexander*, 772 F.2d 1225, 1241 n. 10 (5th Cir. 1985) rev’d on other grounds, *Sabine River Authority v. U.S. Dept. of Interior*, 951 F.2d 669 (5th Cir. 1992) (explaining difference between agency duty to consider “cumulative impacts,” agency duty to complete comprehensive NEPA analysis for “cumulative actions,” and agency duty to complete comprehensive NEPA analysis for “connected actions”). Thus, even if the EA’s cumulative impacts analysis somehow passes muster (though it does not), and even if the mine expansion project is found to be not connected to the FCPP (though it is), this does not obviate OSM’s—and, more broadly, Interior’s—obligation to prepare a comprehensive NEPA analysis to address cumulative actions.

   Burning of the coal in the FCPP, the disposal of the resultant CCW, and BIA’s pending approval of FCPP’s site lease from 2016 through 2041 are connected actions that must be
analyzed together with the proposed mine extension. The statement of purpose and need says that the extension of mining into Area IV North is to meet the BNCC’s “contractual obligations” to supply coal to FCPP. EA at 3. The agency can hardly assert on the one hand that expansion is justified to supply fuel to FCPP, and argue on the other hand that the two actions are not connected. See Great Basin Mine Watch v. Hankins, 456 F.3d 955, 978 (9th Cir. 2006) (Thomas, J., dissenting in part). FCPP was “designed and constructed specifically to burn coal from Navajo Mine.” EA at 3. Additionally, it is not economically or practicably feasible for FCPP to obtain off-site coal. EA appx. 1 at 26. Indeed, “other regional mines are unlikely to have similar coal quality for use at FCPP.” EA appx. 1 at 26. Nor, at present, would it be feasible to ship coal from the Navajo Mine to consumers other than FCPP, because there is no adequate existing infrastructure to do so profitably. See EA appx. 1 (noting that coal could only be transported to (and hence from) Navajo Mine by truck, which would be expensive and difficult to permit). Accordingly, FCPP (specifically, the approval of the lease extension) and the Navajo Mine (specifically expansion of Area IV) are connected actions, and OSM and BIA must evaluate them together.

The burning of coal at FCPP, the disposal of the resultant CCW, including as contemplated by any lease renewal currently under consideration by BIA, are also cumulative actions that require completion of a comprehensive EIS. The entire mine-FCPP complex causes, as described throughout these comments, a host of cumulative impacts to the environment, in particular by contributing to air pollution in the region, climate change, and water quality impacts. Thus, all cumulative actions pertaining to the mine-FCPP complex must be addressed in a single NEPA analysis.

In short, the mine and FCPP are codependent—neither having independent utility—and they are connected and cumulative actions. Accordingly, the environmental impacts of each—and, thus, the development and consideration of alternatives that address the entire mine-FCPP complex—must be addressed in one comprehensive EIS, with Interior exercising oversight over OSM and BIA as joint lead agencies. See 40 C.F.R. §§ 1501.5(a), (b).

b. The Navajo Mine

All the mining at Navajo Mine (Areas I through V) is connected and involves several cumulative actions and therefore must be evaluated together in a single, comprehensive EIS. Id. §§ 1501.5(a), (b), 1508.25(a)(1), (2). Since the Navajo Nation leased 24,000 acres for the Navajo Mine over half a century ago in 1957, the mine has successfully “evaded meaningful environmental review.” Diné C.A.R.E. v. Klein, 747 F. Supp. 2d 1234, 1240 (D. Colo. 2010). Aside from three EISs that indirectly referenced portions of the mine, the mine’s expansion has only been evaluated in a series of piecemeal EAs for individual segments of the mine. EA at 9-10.

Counting the present proposed extension, since 1991, expansion of the mine has been segmented into parcels of 829, 508, 708, 106, and now 830 acres—a total expansion of 2,981 acres—yet each segment has only been subject to evaluation in an EA. EA at 9-10, 17. None of these expansions would have been economically viable if isolated from the other segments of the mine. Moreover, none of these segments in isolation could justify the infrastructure required to mine it (draglines, railroad to FCPP, and associate infrastructure), to burn it at FCPP (the power
plant), or to transport the electricity to load centers in four states (transmission lines). Thus each section is an “independent part[] of a larger action and depend[s] on the larger action for [its] justification.” 40 C.F.R. § 1508.25(a)(1)(iii).

Additionally, the EA admits that extension of the mine to the 10,000 acres that comprise Area IV North and Area IV South is “reasonably foreseeable.” EA at 204, 207. The EA also admits that BNCC expects to mine Area V as well. EA at 205. Finally, the mining expansion contemplated in Area IV North, as well as the other mining activities, are cumulative actions. § 1508.25(b). Thus, the mining of all segments of the Navajo Mine, including Area IV North, as well as Area IV South and Area V, are connected and cumulative actions that must be evaluated together. Id. §§ 1501.5(a), (b).

OSM’s failure to prepare a comprehensive EIS for the entire mine before approving an expansion of mining into Area IV North operates to segment the mine into small projects, each considered in a vacuum, and thus obscures the true magnitude of total, aggregate impacts and improperly avoids preparation of a more rigorous, comprehensive EIS. Indeed, the agency’s unexplained decision to reduce the expansion from over 3,000 acres to approximately 800 appears transparently designed to evade the requirement in the Department of the Interior’s NEPA manual that normally requires an EIS for mining proposals of more than 1,280 acres. DOI Departmental Manual 13.4(A)(4)(b); see also Diné C.A.R.E., 747 F. Supp. 2d at 1251-53 (holding that OSM had failed to show why an EIS was not required for the proposed expansion into Area IV North based on the standard provided by its own manual). Of course, this manual provision does not obviate OSM’s duty to consider connected and cumulative actions or, for that matter, its separate duty to consider cumulative impacts and apply NEPA’s significance factors for context and intensity. 40 C.F.R. §§ 1508.7, 1508.25, 1508.27. OSM’s decision to proceed on the basis of an EA thus flaunts multiple, important aspects of NEPA itself and appears specifically designed to avoid comprehensive environmental review and obscure the true magnitude of the Mine’s impacts from public review, comment, and, ultimately, disclosure. If these segments are not subjected to one comprehensive EIS, then 33,000 acres of coal could be strip-mined and burned over a period of nearly a century without ever undergoing “meaningful environmental review”—an incredible divergence from DOI’s rule that strip mines greater than 1,250 acres that occur over 15 years “normally require the preparation of an EIS,” not to mention bedrock principles of NEPA itself. DOI Departmental Manual 13.4(A)(4); 40 C.F.R. §§ 1508.7, 1508.25, 1508.27.

c. The Desert Rock Energy Project

The environmental impacts of proposed industrial development at the Desert Rock Energy Project (Desert Rock) site must also be considered along with the proposed extension of mining in Area IV North must also be considered.

In 2003, the United States Bureau of Indian Affairs, as lead agency, held scoping meetings for the proposed Desert Rock project, a proposed 1,500 megawatt (MW) coal fired power plant planned to utilize coal from the adjacent BNCC Navajo Mine Areas IV and V. Desert Rock, as proposed in the early 2000’s, was projected to occupy a 592 acre lease site on the boundary of Navajo Mine (generally located on the western edge of the Area IV North and Area IV South border). A Draft Environmental Impact Statement was released for Desert Rock
in 2007, with OSM as a Cooperating Agency. OSM was specifically responsible for approval of a future Surface Mining Control and Reclamation Act (SMCRA) permit to allow coal mining, as well as CCW disposal and reclamation activities, in Areas IV South and Area V of the BNCC Lease Area. Following the loss of the Clean Air Act permit (pertaining to Prevention of Significant Deterioration) for the proposed project, Desert Rock has never had a Final EIS prepared and the project is dormant. It is critical to note, however, that Navajo Mine was the coal source upon which both Desert Rock and FCPP would rely on, with Area IV proposed to provide coal to FCPP and Areas IV and V to provide coal to Desert Rock. By looking at the map of the proposed Desert Rock project (attached as Exhibit 6), it is clearly evident that there are overlapping coal resources that are the subject of this segmented project (under analysis in the BNCC pre-2016 Mine Plan for Area III and Area IV North EA) that are part of a much larger Navajo Mine lease connected to larger actions, including FCPP and the reasonably foreseeable development of Desert Rock.

On April 1, 2011, Navajo Nation President Ben Shelly provided testimony before the Tribal Development of Energy and the Creation of Energy Jobs on Indian Lands Subcommittee on Indian and Alaska Native Affairs in Washington, D.C. President Shelly’s testimony included a section on “Clean Coal Technology,” where he asserted that, “Desert Rock will be one of the newest and cleanest coal generating plants in the country.” In 2011, Navajo Nation President Shelly and his energy policy team conducted six public meetings to explain current Navajo Nation Energy Policy. On June 30, 2011 in Albuquerque, the Navajo Times reported that President Ben Shelly,

[s]aid that the $32.6 billion Desert Rock, which was slated provided electricity for 1.5 million customers in southern Arizona, Las Vegas and California, was never removed as a tribal energy project . . . . Shelly said that he plans to transform Desert Rock into a “coal liquefaction” plant that changes coal into diesel fuel, which is “clean coal” technology.5

Desert Rock thus remains a centerpiece of President Shelly’s energy policy for the Navajo Nation and must be considered a viable, credible, reasonably foreseeable project that has the full support of Shelly’s administration. Put differently, until plans for Desert Rock are abandoned, it remains a connected and cumulative action requiring consideration in an EIS. Any alternative siting of Desert Rock from that deviates from what has been analyzed to date must also be considered under NEPA and all other co-compliant regulations. Of course, any proposal for coal liquefaction or gasification represents a significant departure from the conventional proposed Desert Rock facility and has substantial implications to the entire Burnham to San Juan River corridor, which is the logical location for any such project.

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Additionally, Navajo Mine has long been the subject of coal power electricity generation scenarios. In 1976, Western Gasification Company (WESCO) proposed a coal gasification project and Navajo Mine expansion evaluated in a Final Environmental Statement prepared by the U.S. Department of the Interior, Bureau of Reclamation, in an area then owned by Utah International Inc. (now owned by BNCC) that is on the western side of Navajo Mine Area IV and V, southward towards Burnham, New Mexico. The proposed WESCO Coal Gasification project planned to use the Lurgi Gasification Processes. This facility was never built but is indicative of the long legacy of efforts to exploit coal resources in the area.

Current trends with coal resources in the Western U.S. also suggest the globalization of coal resources from the Navajo Nation with significant implications considering BNCC international stature. Indeed, on February 7, 2011, the Gallup Independent presented an article entitled, “With Desert Rock DOA, Diné Seek Coal Outlets,” where the Navajo Nation was grappling with Desert Rock, in its conventional form, being unpermitted. The article included the following quote concerning the reporting on an update to the Navajo Nation Council:

Right now, if Desert Rock coal can’t be burned here, the international market wants Navajo coal,” Steven Begay, general manager of Dine Power Authority, said. “We’ve had requests from Asian countries - South Korea, India and other places. We’re looking at maybe exporting coal, maybe building a rail, and instead of burning it here, they can burn it in China.

The article continued with another comment attributed to Begay where he said that a rail extension from Burnham to Interstate 40 “can be viable to sell Navajo coal abroad so we can bring revenue even though Desert Rock isn’t built.”

As confirmed by Begay’s statement, Burnham is an integral area in consideration for Navajo Nation coal export. The proximity of Navajo Mine to Burnham makes this an important element of what should be analyzed through a comprehensive EIS of all connected and cumulative actions. At the least, OSM should investigate the prospect of coal exports to accurately gauge the true purpose and need for the mine expansion proposal and to thereby ensure that the scope of its NEPA analysis comports with the law. 40 C.F.R. § 1508.25.

3. THE EA FAILS TO CONSIDER REASONABLE ALTERNATIVES

An EA must consider a reasonable range of alternatives. 40 C.F.R. § 1508.9(b); 42 U.S.C. § 4332(2)(E) (“[A]ll agencies of the Federal Government shall . . . study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources . . . .”). Agencies must also consider alternatives to address “unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(2)(E). “NEPA requires that alternatives be given full and


meaningful consideration whether the agency prepares an EA or an EIS.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Further, agencies must “include reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c).

Here, OSM arbitrarily and capriciously—and contrary to the express languages of 40 C.F.R. § 1502(14)(c)—limited its range of alternatives to only those within its jurisdiction. In the EA, OSM asserts that the “imposition of additional special conditions as part of the permit revision approval process” must be in response to some failure on the part of the permittee. EA at 34. The EA continues by stating that “imposing additional conditions on a SMCRA permit, which are unrelated to the subject of the proposed revision or which address concerns outside the regulatory jurisdiction of OSM is inappropriate.” EA at 34. Finally, the EA states, “In light of the foregoing discussion, OSM has identified two potential permit conditions that could be imposed as part of the permit revision approval process.” EA at 34. That is, in sum, OSM only considered alternatives that are within its jurisdiction. These proposed alternatives solely react to the permittee’s failures, rather than affirmatively prevent those failures (and resulting impacts) from happening in the first place. This decision to limit the range of alternatives analysis was arbitrary and capricious.

As mentioned above, *supra* Part 1, OSM’s statement of purpose and need must be revisited to account for OSM’s broader mission, environmental justice, climate change, and the connected and cumulative actions of the FCPP’s lease approval and future mining expansion projects. In so doing, OSM—and Interior more broadly—will have the opportunity to solicit public input regarding reasonable alternatives that account for that broadened purpose and need. Put differently, the problem with the range of alternatives is, in part, premised on the too-narrow statement of purpose and need and its basic failure to account for the entire mine-power plant complex and serious, chronic problems associated with that entire complex, such as with water resources, greenhouse gas pollution, and coal combustion waste.

Correcting this failure by revisiting the purpose and need and, consequently, the range of alternatives, will ensure that the NEPA process will “foster excellent action” and comply with NEPA’s duty to “[i]ntegrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.” 40 C.F.R. §§ 1500.1(c), 1500.2(c).

But even assuming that the statement of purpose and need is not unlawfully narrow, the EA does not consider several reasonable alternatives. In particular, the EA does not consider the following alternatives:

(1) delaying further mining until a given amount of contemporaneous reclamation has occurred, e.g., full bond release for 50%, 70%, 90% of previously mined lands. Such an alternative would be consistent with OSM’s obligation under the Surface Mining Control and Reclamation Act to withhold a permit renewal if it finds that “present surface mining and reclamation operations are not in compliance with the environmental protection standards of the Act [SMCRA] and regulatory program.” 30 C.F.R. 744.15(c)(ii). Among the environmental standards imposed by SMCRA is the requirement that “all reclamation efforts proceed in an environmentally sound manner and as contemporaneously as practicable.” 30 U.S.C. § 1265(16); *see also id.* § 1202(e);
(2) meaningful mitigation of impacts to cultural resources or impacts to tribal members;

(3) ensuring full compliance with water quality standards and SMCRA’s requirements regarding protection of the hydrologic balance. Under SMCRA, strip mining operations must minimize material damage to the hydrologic balance within the permit area and prevent material damage to the hydrologic balance outside the permit area. 30 U.S.C. § 1265(b)(10). SMCRA provides that “[n]o permit or revision application shall be approved unless the application affirmatively demonstrates and the regulatory authority finds . . . that “the assessment of the probably cumulative impact of all anticipated mining in the area on the hydrologic balance specified in section 1257(b) of this title has been made by the regulatory authority and the proposed operation thereof has been designed to prevent material damage to hydrologic balance outside permit area.” Id. § 1260(b)(3); see also 30 C.F.R. § 773.15(e). Here, no cumulative hydrologic impact assessment (CHIA) has been performed to demonstrate that there will not be damage to the hydrologic balance in or adjacent to the expansion area. It is reasonable—indeed, required—for OSM to consider alternatives that involve a CHIA and appropriate corresponding measures to protect water quality standards and the hydrologic balance; and

(4) mitigating greenhouse gas (GHG) emissions. In draft guidance, the CEQ provides that when proposed actions would directly or indirectly emit more than approximately 25,000 metric tons of CO₂-equivalent (CO₂e) per year, “the agency should also consider mitigation measures and reasonable alternatives to reduce action-related GHG emissions.” CEQ, Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions 5 (Feb. 2010) (hereinafter CEQ, Draft Guidance). The Navajo Mine’s direct GHG emissions are, according to OSM, approximately 75,000 metric tons CO₂e annually and its indirect emissions over 13 million metric tons CO₂e annually. EA at 3 (mine produces 8.5 million tons of coal annually for FCPP); EA at 84 (CO₂e estimates). Even the direct emissions, standing alone, are significant; as the EA notes, “significant amounts of methane are released when overburden removal exposes coal seams and when those seams are then fractured to extract the coal,” “[s]maller amounts of methane are emitted during post-mining activities when the raw coal is processed, handled and then stored (EPA 2011a),” and greenhouse gases are released through the operation of nonroad mine vehicles, coal haul trucks, and plant vehicles. EA at 84.

The mine’s methane emissions—estimated by the EA at 57,801 metric tons per year from the Area IV North expansion alone, EA at 172—are particularly problematic because the global warming potential (“GWP”) of methane has been revised sharply upwards. OSM has used a GWP of 21 for coal (such that a metric ton of methane is 21 times as potent a global warming agent as a metric ton of carbon dioxide over a 100-year time period). EA app. F at Table F-13 n.6. That GWP is, however, premised on the 1996 Intergovernmental Panel on Climate Change’s

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8 See also EPA, GHG Data, Four Corners Steam Elec Station, available at: http://ghgdata.epa.gov/ghgp/main.do#/facilityDetail/?q=Facility%20or%20Location&st=&fid=519937&lowE=0&highE=23000000&g1=1&g2=1&g3=1&g4=1&g5=1&g6=1&g7=1&s1=1&s2=1&s3=1&s4=1&s5=1&s6=1&s7=1&s8=1&s9=1&s301=1&s302=1&s303=1&s304=1&s305=1&s306=1&s401=1&s402=1&s403=1&s404=1&s701=1&s702=1&s703=1&s704=1&s705=1&s706=1&s707=1&s708=1&s709=1&s710=1&s711=1&ss=&so=0&ds=E.
Second Assessment Report. However, this GWP has been superseded by the IPCC’s more recent reports, which find that the GWP for methane, over a 100-year time period, is 25. The IPCC also reports that methane, over a near-term 20-year time period, warms the atmosphere 72 times more than carbon dioxide. Finally, more recent, peer-reviewed science reports even higher GWPs for methane, largely due to interactions between methane and aerosols in the atmosphere. In accord with this science, these authors find that methane is 33 times as potent as carbon dioxide over a 100-year time period and 105 times as potent a warming agent as carbon dioxide over a 20-year time period. Applying the most recent science, this would mean that the mine’s methane emissions contribute not 57,801 metric tons of CO2e annually, but, rather, 90,830 metric tons of CO2e annually (using a 100-year time period to gauge warming impacts) or 289,005 metric tons of CO2e annually (using a 20-year time period to gauge warming impacts).

In any event, because the mine’s direct and indirect emission are well beyond the 25,000 metric ton threshold mentioned by CEQ, the EA should have considered reasonable alternatives and mitigation, in particular given the fact that GHG emissions reflect “unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(2)(E). The EA, however, considered no such alternatives. See EA at 34-38 (describing three narrow alternatives). As CEQ’s draft guidance explains, “Examples of proposals for Federal agency action that may warrant a discussion of the GHG impacts of various alternatives, as well as possible measures to mitigate climate change impacts, include: approval of a large solid waste landfill; approval of energy facilities such as a coal-fired power plant; or authorization of a methane venting coal mine.” CEQ, Draft Guidance at 3. These alternatives are important given the fact the combustion of coal has serious costs that are currently externalized to the broader public.

Reasonable alternatives that the EA should have considered in the GHG context include the following:

(1) requiring the mine and FCPP to obtain offsets for its GHG emissions. This would correct the market failure that occurs when the mine and FCPP are allowed to externalize the costs associated with their GHG emissions;

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10 Intergovernmental Panel on Climate Change, Fourth Assessment Report, Ch. 2, Table 2.14 (2007).
11 Shindell et al., Improved Attribution of Climate Forcing to Emissions, Science vol. 326, 716 (2009) (attached as Exhibit 7).
12 Id.
(2) requiring capture and permanent sequestration of the GHG emissions from the mine;

(3) requiring the mine to mitigate its methane emissions by flaring, capture or drainage, or by delaying mining until the coalbed methane (CBM) can be captured. In particular, Citizens understand that at least one mine in Wyoming (the North Antelope Rochelle Mine) has a methane drainage project, that removes methane via surface wells prior to mining. Furthermore, there is ample indication that significant natural gas operations currently exist in San Juan County, EA app. G. There is no reason that such technology and existing infrastructure could not be used to capture the methane from Area IV North prior to expanded mining, see EPA, U.S. Surface Coal Mine Methane Recovery Project Opportunities 8 (July 2008) (explaining feasibility of capturing methane from surface mines prior to mining) (attached as Exhibit 8);14

(4) requiring the mine to mitigate the impacts of its GHGs by creating a renewable energy fund to finance wind and solar development that would create jobs and generate revenue on the Navajo reservation; this fund could be established by a per ton fee on coal mined; such a fund could serve to leverage renewable energy development on the reservation and aid the Navajo Nation’s eventual and necessary transition away from coal mining;

(5) requiring all mine vehicles to run on alternative fuels.

In sum, the failure of OSM to consider reasonable alternatives renders the EA arbitrary and capricious.

4. THE EA FAILS TO TAKE A HARD LOOK AT ENVIRONMENTAL IMPACTS AND DEMONSTRATE COMPLIANCE WITH LEGAL REQUIREMENTS IMPOSED BY SMCRA, THE CAA, AND THE CWA

NEPA requires agencies to take a “hard look” at the environmental consequences of their actions. Forest Guardians v. U.S. Fish & Wildlife Serv., 611 F.3d 692, 711 (10th Cir. 2010); see also, Citizens’ Committee to Save Our Canyons v. Krueger, 513 F.3d 1169, 1179 (10th Cir. 2008) (mandating that an agency “take a ‘hard look’ at the impacts of a proposed action”) (quoting Friends of the Bow v. Thompson, 124 F.3d 1210, 1213 (10th Cir.1997)); Morris v. U.S. Nuclear Regulatory Commission, 598 F.3d 677, 681 (10th Cir. 2010) (noting that NEPA “requires ... that an agency give a ‘hard look’ to the environmental impact of any project or action it authorizes”). This examination “must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.” Forest Guardians v. U.S. Fish and Wildlife Service, 611 F.3d 692, 712 (10th Cir. 2010) (quoting Metcalf v. Daley, 214 F.3d 1135, 1142 (9th Cir. 2000)); see also 40 C.F.R. § 1502.2(g) (“Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.”); id. § 1502.5 (“The statement shall be prepared early enough so that it can serve practically as an important contribution to the decision-making process and will not be used to rationalize or justify decisions already made.”).

14 Reducing methane lost from coal mines can be an effective means of realizing meaningful and economically beneficial reductions in near-term global warming. See Shindell et al., Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security, 335 Science 183, 183 (2012) (attached as Exhibit 8a).
Here, OSM failed to take the requisite hard look at the consequences of expanding the Navajo Mine and, consequently, extending the operating life of FCPP. This hard look is essential not merely as a matter of procedure, but as a matter of substance. Without a hard look at impacts, we fail to see how OSM can establish a rational connection between its analysis and any determinations that OSM is complying with associated substantive obligations, such as those imposed by SMCRA and by the CWA. See Olenhouse v. Commodity Credit Corp., 42 F.3d 1560, 1574 (10th Cir. 1994) (requiring agency to provide “a rational connection between the facts found and the decision made”). As we have mentioned, NEPA is designed to “foster excellent action” and mandates that agencies “[i]ntegrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.” 40 C.F.R. §§ 1500.1(c), 1500.2(c).

In general, we also find that the EA is premised on conclusory analysis that is neither useful nor meaningful to gauging the true extent of impacts. Instead, it appears that OSM has simply run down a checklist of issues without taking an actual hard look at impacts. In many instances, the EA assumes away impacts with the conceit that other laws will eventually be complied with, that mitigation efforts will actually reduce impacts below significance thresholds, and by merely looking at incremental impacts without properly addressing the true magnitude of cumulative impacts.

**a. Air impacts**

The EA fails to take a hard look at the impacts of air pollution from expanding the mine to Area IV North.

It is arbitrary and capricious for an agency to minimize the impacts of a proposed action on the basis that its environmental impacts will only marginally change from current impacts. Grand Canyon Trust v. F.A.A., 290 F.3d 339, 346 (D.C. Cir. 2002). Here, the EA does precisely this with regard to air impacts, concluding: “In sum, the Proposed Action will not cause a ‘significant’ air emission increase, as defined by the CAA, for any pollutant from the Navajo Mine. Consequently, for purposes of regulatory analysis and permitting the Proposed Action does not result in emissions changes that would warrant in-depth analysis.” EA at 163. The EA then repeats this improper minimization of air impacts when considering cumulative impacts: “The Proposed Action is expected to result in a decrease of PM$_{2.5}$ and small increases in PM$_{2.5}$ [sic.] (3.6 tpy) and NO$_x$ (4.8 tpy) emission from Navajo Mine. Based on these small direct effects, the Proposed Action is reasonably anticipated to cause no discernible impact on regional haze in any Class I area.” EA at 215; see also EA at 214 (also determining insignificant cumulative impact based on incremental change, rather than on total cumulative effects).

The EA’s failure to properly consider the actual impacts of the direct, indirect, and cumulative effects of air emissions is particularly pernicious because it allows the EA to completely gloss over the health impacts caused by energy development in San Juan County, the biggest single contributor to which is the FCPP, which the Navajo Mine supplies. See EA at 212-213 (FCPP and San Juan Generating Station “dominate[]” air pollution in San Juan County). Instead of a meaningful analysis (including cumulative total impacts), the EA again only addresses incremental changes: “The Proposed Action would result in the same levels of ozone precursor emissions. Ambient air modeling found that these emission would not cause a measurable change in ambient PM$_{10}$ or PM$_{2.5}$ concentrations in San Juan County, NM. San Juan
Count is currently in “attainment” status and ambient air quality does not regularly exceed the NAAQS. Therefore, there would be no substantial adverse public health consequences for this alternative.” EA at 194; see also EA at 223 (“Overall, there would be no cumulative public health effects of the Proposed Action because there would be no measurable change to ambient air quality compared to baseline conditions.”).

This misplaced focus on incremental changes in pollution levels is arbitrary and capricious for a second reason: it effectively only quantifies the emissions (or, rather, the changes in emission rates), but it fails to discuss what the actual health and environmental effects of the additional emissions will be. See Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1216 (9th Cir. 2008) (holding that simply quantifying emissions is inadequate and that EA, rather, had to “discuss the actual environmental effects resulting from those emissions”); Grand Canyon Trust, 290 F.3d 339, 342 (stating that an “agency’s EA must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum”).

Additionally, the EA side-steps meaningful analysis of GHG emissions that will result from expansion of the mine to Area IV North by completely ignoring indirect effects, i.e., combustion of the coal at FCPP (which is, ironically, the stated purpose for the expansion, EA at 11): “[T]he Proposed Action will not cause Navajo Mine’s GHG emission to increase, and will more likely result in a longer-term decrease in direct GHG emissions. Therefore, further analysis of direct GHG emission beyond the above quantification is not applicable.” EA at 172 (emphasis added). This complete failure to address the actual impact of indirect GHG emissions was arbitrary and capricious. 40 C.F.R. §§ 1502.16, 1508.8 (agencies must consider indirect impacts of a proposed action). The EA does not rectify this failure when it addresses cumulative GHG impacts. See EA at 215 (considering, again, only direct emissions from Navajo Mine, while ignoring emissions from combustion of 12.5 million tons of coal from Area IV North in FCPP); 40 C.F.R. § 1508.7.

b. Water impacts

OSM has not taken a hard look at water quality and quantity impacts, whether surface or ground water. OSM therefore cannot demonstrate, as it must, that it has complied with substantive water protection requirements imposed by SMCRA and the CWA—and vice versa. Notably, OSM has not, to our knowledge, completed a cumulative hydrological impact assessment CHIA mandated by SMCRA, 30 U.S.C. § 1260(b)(3). Until a CHIA is completed, it seems self evident that OSM cannot determine that there will not be significant environmental impacts to surface and ground water. Accordingly, OSM’s conclusion that the extension of the Navajo Mine will not have significant environmental impacts is arbitrary and capricious. Even absent SMCRA, NEPA imposes a duty on OSM to take a hard look at water quality and quantity impacts to both surface and ground water resources. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8. Indeed, just as we cannot see how the agency has complied with NEPA without completing a CHIA, we cannot see how OSM can comply with SMCRA without completing a proper hard look at impacts to water resources.

Notably, until the CHIA and proper NEPA hard look analysis have been completed, OSM also cannot determine if pollution from the Navajo Mine will comply with water quality standards for surface waters connected to the mine-power plant complex. The CWA requires that
OSM comply with state and Navajo Nation water-quality requirements “in the same manner, and to the same extent as any nongovernmental entity.” 33 U.S.C. § 1323(a). Congress intended this section to ensure that federal agencies were required to “meet all [water pollution] control requirements as if they were private citizens.” S. REP. No. 92-414 (1971), as reprinted in 1972 U.S.C.C.A.N. 3668, 3734. This provision applies to activities resulting in either “discharge or runoff of pollutants.” 33 U.S.C. § 1323(a).

The San Juan River from Navajo Bend at Hogback to Animas River is an impaired water under 33 U.S.C. § 1313(d) (the 303(d) list). OSM freely admits that toxic pollutants, including arsenic, boron, fluoride, and selenium, from CCW buried in Areas 1 and 2 of the Navajo Mine are discharging into the alluvial groundwater of the San Juan River. EA at 206-07. A CHIA and hard look NEPA analysis are necessary to fully analyze this impact, and the mine expansion cannot move forward until this analysis is completed.

EA must also consider the bond release status of previously mined portions of the Navajo Mine to determine water impacts. There is no information in the EA regarding how much of the Navajo Mine has been reclaimed to the point of full bond release, if any. Nowhere does the EA discuss or mention how much of Navajo Mine has received complete bond release. It is hard to fathom that Navajo Mine has successfully and adequately reclaimed any of the previously mined lands – particularly given the fact that CCW has been backfilled into the mine for nearly forty years, causing toxic chemicals and dissolved solids to migrate to the alluvium of the San Juan River, an impaired water under the Clean Water Act (CWA). EA at 2, 207-08.

Finally, the EA never identifies the water supply source for Navajo Mine Area IV North.

c. Coal Combustion Waste

The EA does not take a hard look at the impacts of past, present, and reasonably foreseeable CCW.

For nearly forty years, from 1971 to 2008, CCW was backfilled in mined-out pits of the Navajo Mine and simply dumped in unlined surface “disposal cells” between Lake Morgan and the Chaco River. EA at 2, 205; Zimmerman Report 21-22. As of 2000, BHP had disposed of 50-55 million tons of CCW in the Navajo Mine, covering approximately 230 acres. The CCW was placed in disposal pits with the intention that the pits serve as a permanent repository after final

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16 The EA uses the Orwellian “coal combustion byproduct” to describe and thereby frame this waste as less noxious and problematic than it actually is. We use the more accurate, honest “coal combustion waste.” See also, Dine CARE v. Klein, 747 F.Supp.2d 1334, 1242 n.12 (D. Colo. 2010) (using “coal combustion waste”); see also Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utillities, 75 Fed. Reg. 35,128, 35,137-38, 35,144-45, 35,148 (June 21, 2010) (considering regulating “coal combustion residuals,” i.e., CCW, as hazardous waste due to its toxic properties) (attached as Exhibit 9).
reclamation of the mine. BHP accepted approximately 1.9 million cubic yards (mcyd) of CCW from FCPP annually.

CCW consists of fly ash, scrubber sludge and bottom ash. CCW from the FCPP was historically used as backfill material in the Navajo Mine until the practice was recently ceased at the Navajo Mine. Seventeen potentially toxic elements are commonly present in CCW: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, lead, manganese, mercury, molybdenum, nickel, selenium, vanadium, zinc and radionuclides. When CCW becomes saturated with water, leaching of these toxic elements may occur.

A 2008 TRI (Toxic Release Inventory) Chemical Data Form from BHP Navajo Coal Company and posted on U.S. Environmental Protection Agency’s website\(^{17}\) shows that arsenic, mercury, lead and selenium, amongst many other chemicals, are being permanently dumped into the mine (as part of BHP’s Coal Combustion Waste dumping practice) and are labeled by the TRI as “landfill.”

From 2000-2008, BHP permanently dumped CCW that contains approximately: 1,000,000 lbs of Barium; 150,000 lbs of vanadium; 150,000 lbs. of manganese compounds; 100,000 lbs. of lead compounds; 90,000 lbs. of copper compounds; 70,000 lbs. of zinc compounds; 45,000 lbs. of chromium compounds; 45,000 lbs. of nickel compounds; 10,000 lbs. of selenium compounds; 10,000 lbs. of thalium compounds; 10,000 lbs. of cobalt compounds; 8,000 lbs. of arsenic; and 500 lbs. of mercury compounds. BHP stopped reporting its toxic releases in 2009.

Liner systems with internal monitoring devices are normally used to stabilize, collect, and detect unwanted migration of disposed wastes. The disposal pits at the Navajo Mine were not lined prior to the disposal of CCW. No liner system exists in the CCW pits. There is no leachate collection system under the CCW pits. The CCW is not treated prior to backfill in the disposal pits. The CCW is not tested or analyzed for relevant constituents (i.e., pollution content) prior to backfill in the disposal pits.

The CCW was buried approximately 10 feet below the surface at Navajo Mine. BHP’s CCW disposal pits are located within 50 feet from major surface water drainages (Chaco River) and less than 1.5 miles from the San Juan River. No ground-water monitoring down-gradient of the CCW pits has occurred since 1996. See Zimmerman Report at 34 (noting that BNCC has “no monitoring point in the alluvium below the ash” in Bitsui Wash).

This backfilled CCW is presently leaching toxic substances—arsenic, boron, fluoride, selenium—into adjacent groundwater and the alluvium of the San Juan River. EA at 206; see Zimmerman Report at 35 (“[T]he analysis of BHP’s Bitsui Wash monitoring data presented herein is indicative of ash-constituent migration toward the mine-permit boundary.”). The CCW remaining in surface disposal is likely discharging toxics into both groundwater and surface water in the Chaco River basin during precipitation events. \textit{Id.} (“The Chaco Basin surface water

quality data collected and analyzed in this study are strongly indicative that CCW disposal practices at the mine and power plant have adversely impacted the water quality of the Chaco River.”). Moreover, BNCC and APS have been unwilling to cooperate with an independent investigation of the environmental impacts of historic CCW disposal. Zimmerman Report at 6-10.

CCW was often stockpiled in large quantities on the surface at the Navajo Mine prior to backfill in the disposal pits. The stockpiled CCW became airborne with wind and lead to dust clouds of CCW. CCW dust clouds do not stay within the mine permit area boundary.

Reclamation or remediation (i.e., clean-up) of CCW is not covered by BHP’s reclamation bond. There is no CCW reclamation plan.

Threatened and endangered species are known to occur within the “action area” of the Navajo Mine and “may” be affected by the activities authorized by OSM’s Navajo Mine permit renewal and the resulting mining, transportation and combustion of coal and permanent disposal as CCW minefill.

Since 2008, BHP has contractually ceased accepting CCW generated at FCPP. The EA states that BHP Navajo Coal Company (BNCC) “does not have any current agreements or plans to place [CCW] in the mine backfill for future reclamation.” EA at 2. The EA also notes that CCW “disposal is not included in BNCC’s requested approvals considered in this EA.” EA at 3, 138. However, but for its extraction from the mine, the CCW would not exist, and the CCW, regardless, does not just disappear. Instead, massive amounts of CCW remain at the mine site and, even though additional CCW is not being backfilled into the mine at present, it is still, nonetheless, being created and must be dealt with. But for the mine expansion, the coal currently beneath the ground would not be combusted and turned into CCW. Thus, OSM cannot simply pretend that CCW does not exist and does not have impacts, in particular in consideration of the legacy of CCW disposal at the mine and power plant. The EA, however, does not discuss either the temporary or permanent disposal of the CCW that will be produced by the FCPP when it burns the Navajo Mine coal from Area IV North. The production of CCW from FCPP is a reasonably foreseeable effect of mining coal in Area IV North and must be evaluated in conjunction with past and present CCW impacts. As we understand it, the CCW is now being stored on the northern section of the FCPP lease site, further reinforcing the fact that the mine expansion project does not simply have indirect and cumulative impacts from coal combustion and CCW at the FCPP, but that the combustion of coal and creation of CCW are connected and cumulative actions. See 40 C.F.R §§ 1508.7, 15088(b); 40 C.F.R. 1508.25(a)(1), (2). Accordingly, OSM cannot neglect the environmental impacts of CCW.

d. Environmental Justice and Meaningful Public Participation

Executive Order 12898 requires federal agencies to consider disproportionate environmental impacts to minority and low income populations. The EA fails entirely to take a hard look at the environmental justice impacts of the proposed Navajo Mine extension.

The Navajo Mine and the connected (both physically and legally) FCPP are located entirely on the Navajo Nation Indian Reservation. EA at 1. The minority population is, accordingly, high, which the EA grudgingly concedes. EA at 113. Poverty on the reservation is
epidemic. EA at 106 (“Poverty affects all areas of life, including health, educational attainment, stress, and general well-being. . . . This is especially true for rural areas and parts of the Navajo Nation where poverty is 30 percent or higher.”).

Yet the EA concludes that the extension of the Navajo Mine will not have disproportionate impacts on the proportionately high minority and low-income populations in the surrounding area. This conclusion is arbitrary and capricious because it fails entirely to consider how the cumulative effects of the mine expansion (including combustion of coal and disposal of CCW, as discussed above) will affect minority and low-income populations. Compare EA part 4 (addressing environmental justice in relation to direct effects of expansion) with EA part 5 (not addressing environmental justice in relation to cumulative effects). As discussed elsewhere in these comments, the extraction and combustion of coal have serious costs that are not accounted for and externalized onto the backs of the public, in particular the minority and low-income peoples impacted by the mine-FCPP complex. This failure to consider cumulative effects is all the more glaring because the EA admits that it is required to consider cumulative impacts to minority and low-income populations. EA at 187. Also, as mentioned above, the EA also sidesteps any meaningful discussion of the health impacts from the mine expansion and its connected and cumulative actions by concluding (impermissibly) that only marginal increases in pollution rates will occur. EA at 193-94, 222-23; Grand Canyon Trust, 290 F.3d at 345-46. These deficiencies are only exacerbated by OSM’s failure to acknowledge the true magnitude of impacts by preparing a comprehensive EIS. See infra Part 7.

Additionally, the EA fails to account for fact that Indian tribes will be more susceptible to the impacts of climate change because: (1) they will not be able to move (due to reservation boundaries) to adapt to changing climate; (2) they have “limited capacity to prepare for and respond to the impacts of climate change,” and (3) they will likely have to deal with significant reductions in water availability and quality. U.S. Global Change Research Program, Global Climate Change Impacts in the United States 101 (2009) (hereinafter USGCRP, Impacts) (“Native cultures in the Southwest are particularly vulnerable to impacts of climate change on water quality and quantity.”); id. at 128 (“Native populations on rural tribal lands have limited capacities to respond to climate change.”); id. at 131 (“Competing demands for treaty rights, rapid development, and changes in agriculture in the region, exacerbated by years of drought and climate change, have the potential to spark significant conflict over an already over-allocated and dwindling resource [water].”) (attached as Exhibit 10); see also Wilbanks, et al., U.S. Climate Change Science Program, Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems 64 (2008) (“Even in the United States, the greatest health burdens related to climate change are likely to fall on those with the lowest socioeconomic status.”) (attached as Exhibit 11). The EA’s failure to take a hard look at these factors further renders its analysis arbitrary and capricious.

Finally, OSM has failed conduct adequate public outreach to minority and low-income populations. SJCA, Diné Care and the Center submitted a letter to OSM on December 6, 2011 concerning the December 1 release of the EA. It stated that

Due to the complexity of the EA (including the fact that this document includes regulatory decisions to be made by OSM, Bureau of Land Management, Bureau of Indian Affairs and U.S. Army Corps of Engineers), the amount of material that needs to be reviewed and analyzed, and the unavailability of reviewers between
now and December 30 (Holiday season), it is unreasonable of OSM to expect that the December 30, 2011 comment period deadline is acceptable. In addition, since the community members most impacted by the proposed action are Navajo, we respectfully request that OSM provide a English to Navajo translated version of the EA to Diné CARE so that community members can understand and review the proposal. If OSM cannot provide the translation, the 60 day extension beyond December 30, 2011 (to February 29, 2012) is certainly warranted, particularly if a citizens group (Diné CARE) has the responsibility to translate. As lead agency, OSM has a responsibility to insure meaningful public participation in a manner commensurate with National Environmental Policy Act guidance and spirit, Environmental Justice and impacted community considerations.

OSM’s response, while granting an extension for comments to January 17, 2012 included the following response:

The Navajo Language is currently written in a Romanized fashion which is a phonetic representation of the oral Navajo language. One would be required to read in English to read Romanized Navajo in print. Navajo is also a pastoral language and does not easily provide for direct translation of technical discussions. Translation of technical subjects is often lengthy as the translator has to describe each scientific term in context that is understandable in the Navajo language. To translate the EA would multiply its size significantly and would still not entirely accommodate the population of Navajos that cannot speak or read English. Therefore, OSM will not translate the Area IV North EA into Navajo for print or electronic form. OSM has consulted with the Navajo Nation Surface Mining Program regarding this matter and the Surface Mining Program concurs with OSM’s decision to not translate the EA into Navajo.18

OSM is utilizing the idea that the Navajo Mine Area IV North Mine Plan Revision public workshops in April of 2011 and an informal conference in 2011 suffice as meaningful public participation. Communication from OSM confirmed that there was no intention of OSM to hold public hearings on this EA. On April 12, 2011, SJCA received an email from Bob Postle, Manager, Program Support Division, Western Region, OSM in response to questions posed by SJCA concerning public workshops slate for April 2011. Of particular interest is OSM’s response to questions as follows:

[SJCA] (5) If OSM is not planning to have its NEPA analysis available at the workshop, when will it be available?

[Postle] Response: Once it is completed OSM intends to make it available to the public to comment on OSM’s web page.

[SJCA] Will there be scooping meetings on the NEPA analysis?

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[Postle] Response: These public meetings will serve as “scoping” although scoping is not required for preparation of an EA.

[SJCA] Will there be public meetings once the Draft EA is released?

[Postle] Response: OSM does not intend to hold additional public meetings after its EA is released.19

A full seven and a half months before the EA was released (December 2011) for the project and notably prior to any real analysis of the scope of the project (now including Burnham Road), the OSM deemed that there was going to be nothing in the EA that would warrant public participation. This is blatant disregard for meaningful public participation where the public is not being given an opportunity to analyze or evaluate the EA in an appropriate manner. Given the legal controversy over this project and legal directives concerning remand to OSM to prepare a NEPA document, we are alarmed that OSM has abrogated their responsibilities to fulfill meaningful public participation steps, particularly given the legal history of this project. Furthermore, meaningful public notice to citizens of San Juan County, New Mexico and beyond is not accomplished by posting an EA on December 1, 2012, to OSM’s website. This greatly diminishes the public’s opportunity to even begin to engage in review of the EA, particularly when many of the affected citizens (particularly the most vulnerable) are minority and low-income. Additionally, the 462-page document posted to the OSM web page is far too large and expensive for many citizens to print. Further OSM effectively precluded the public from participating in this EA by predetermining that no significant impacts were going to occur as a result of the proposed action. Even if OSM is willing to ignore public participation responsibilities as Lead Agency for NEPA compliance for the project, the EA clearly defines the role of Cooperating Agencies in requiring opportunities for public interest evaluation. On page 7 of the EA, the following statement is made concerning CWA 404 requirements, “In order for the USACE to issue an IP, NEPA Analysis and public interest evaluation are required.” EA at 7. Evaluation can hardly occur without meaningful opportunity to review a NEPA document.

For these reasons, OSM, BLM, USACE and BIA have failed to take a hard look at the environmental justice implications of the proposed action and failed to conduct minimally adequate public outreach and participation. Our organizations are concerned that OSM, as Lead Agency, and BLM, BIA, and USACE, have fundamentally bypassed the essential steps of public participation and environmental justice considerations with preparation of a marginal EA. In essence, these agencies have concluded that an EA suffices and that they have met their regulatory responsibilities with an EA with no public hearings.

According to the DOI:

DOI's Mission and Commitment to Environmental Justice: The mission of the Department of the Interior (DOI) is “to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to tribes.”

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19 Email from Bob Postle, Manager, Program Support Division, Western Region, OSM to Mike Eisenfeld, New Mexico Energy Coordinator, SJCA April 12, 2011 (attached to previously submitted scoping comments).
Environmental Justice (EJ) is necessarily a part of our mission and therefore continues to grow into a symbiotic relationship with DOI’s activities. DOI has used its information and resources to help devise innovative solutions to environmental justice issues. DOI encourages involvement of minority and low-income communities in our decision making processes. DOI assures public access to our environmental information. Also, DOI strives to institutionalize the progress made in EJ and facilitates continued growth in EJ by appointing an Environmental Justice Coordinator in for each of DOI’s eight bureaus. 20

We note that the DOI has Environmental Justice Coordinators within BIA, BLM, and OSM (Vermell Davis, gvdavis@osmre.gov) who should certainly have been consulted with on this EA for Navajo Mine. Regardless, the EA should disclose and address all communications between OSM, as Lead Agency for this EA, and the Environmental Justice Coordinators for the DOI bureaus involved to provide assurances – or to ensure – their assessments of meeting “involvement of minority and low-income communities in our decision making processes” and assuring “public access to our environmental information.” If this information cannot be provided by OSM and DOI, we fail to see how the EA complies with basic Environmental Justice principles. Exec. Or. 12898.

e. Cumulative Impacts of GHG Emissions

The EA must evaluate the cumulative and indirect impacts from the proposed action. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8(b), 1508.25(c)(2)-(3); CEQ, Considering Cumulative Effects Under the National Environmental Policy Act 1 (Jan. 1997). “The importance of analyzing cumulative impacts in EAs is apparent when we consider the number of EAs that are prepared. The Council on Environmental Quality noted in a recent report that ‘in a typical year, 45,000 EAs are prepared compared to 450 EISs . . . Given that so many more EAs are prepared than EISs, adequate consideration of cumulative effects requires that EAs address them fully.’” Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1076 (9th Cir. 2002).

“The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” Ctr. for Biological Diversity v. Nat’l Highway Transp. Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008). Indeed, for over a decade CEQ has directed agencies to consider cumulative impacts that contribute to climate change. CEQ, Considering Cumulative Effects Under the National Environmental Policy Act at 7, 24 (noting that “the importance of . . . climate change and other cumulative effects problems has resulted in many efforts to undertake and improve the analysis of cumulative effects” and that in evaluating cumulative impacts agencies should address “[r]egional and global atmospheric alterations from cumulative additions of pollutants that contribute to global warming”). Recently, CEQ has provided additional draft guidance to agencies for evaluating climate change impacts. CEQ, Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (Feb. 2010) (hereinafter CEQ, Draft Guidance) (attached as Exhibit 12).

As a rule of thumb, an agency should consider a project’s GHG emissions if they exceed 25,000 metric tons CO2e. Id. at 3. An agency should consider “direct and indirect GHG

emissions,” and where they are significant (i.e., greater than 25,000 tons CO₂e), they should be “quantified and disclosed.” Id. at 5; 40 C.F.R. §§ 1508.25(c)(1)-(3). “Analysis of emissions sources should take account of all phases and elements of the proposed action over its expected life . . . .” CEQ, Draft Guidance at 5. When direct and indirect GHG emissions exceed the relevant threshold (again, 25,000 tons CO₂e), the agency should also consider “mitigation measures and reasonable alternatives to reduce action-related GHG emissions.” Id. When addressing the “cumulative effects of GHG emission related to a proposed action,” an agency should “focus on an assessment of annual and cumulative emissions of the proposed action and the difference in emissions associated with alternative actions.” Id. In addition to quantifying GHG emissions, the EA must “discuss the actual environmental effects resulting from [the proposed action’s] emissions.” Ctr. for Biological Diversity, 538 F.3d at 1216.

Here, the EA fails entirely to consider the indirect and cumulative effects of the GHG emissions that would result from burning the 12.7 million tons of coal that they plan to mine from Area IV North, as well as from the historic mining and combustion of coal since that coal has been produced from the mine, in 1963. EA at 12, 215. The EA also does not account for the GHG emissions from other past, present, and reasonably foreseeable fossil fuel production and combustion sources in the region, including the San Juan Generating Station, San Juan Mine, and the thousands of oil and gas wells that have turned the San Juan Basin into a fossil fuel sacrifice zone.

Moreover, even the calculations of GHG emissions that the EA does provide understates the magnitude of emissions—and thus warming impacts—because the EA uses an outdated GWP of 21 for methane rather than the most recent science, which provides that methane has a GWP of 25 using a 100-year time period and a GWP of 105 using a 20-year time period. See supra Part 3. Applying the most recent science shows that the Area IV North’s methane emissions will directly contribute 90,830 metric tons of CO₂e annually (using a 100-year time period to gauge warming impacts) or 289,005 metric tons of CO₂e annually (using a 20-year time period to gauge warming impacts). EA at 172 (providing, using a GWP of 21, that the mine would emit 57,801 metric tons of CO₂e annually). These GWPs, notably, point to OSM’s need to calculate CO₂e emissions on the basis of not only a 100-year time period, but a 20-year time period. See 40 C.F.R. § 1508.25(a) (providing that agencies must evaluate impacts in the “context” of both “short-term and long term effects . . . .”). The failure to account for methane’s short-term impacts (in the context of a 20-year time horizon) – and to rely solely on long-term impacts (in the context of a 100-year time horizon) – is arbitrary and capricious. Id.

In any event, the EA fails to quantify the past, present, and reasonably foreseeable GHG emissions from combustion of the mine’s coal at FCPP, which has occurred since 1963. EA at 215. Instead, the EA looks at the GHG emissions from mining coal in Area IV North “in a vacuum.” Grand Canyon Trust, 290 F.3d 339, 342. This failure is particularly egregious since provision of coal from Navajo Mine to FCPP is the purported basis of the expansion’s purpose and need. EA at 11-14; cf. N. Plains Resource Council v. Surface Transp. Bd., ___ F.3d ___, 2011 WL 6826409, at **10-11 (9th Cir. 2011) (holding it was arbitrary and capricious for agency to fail to consider cumulative impacts from coal mine that was financial justification of proposed railroad); see also Mid States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 537, 549-50 (8th Cir. 2003) (holding that the agency failed to take requisite hard look by not considering indirect effect of increased air pollution that would result from railroad line which
would increase availability of coal while decreasing cost); *Ctr. for Biological Diversity v. Dept. of Interior*, 623 F.3d 633, 646 (9th Cir. 2010) (agency must not “avert[] its eyes from what is in plain view before it”). Like the EA vacated by the Ninth Circuit in *Center for Biological Diversity*, the EA here fails entirely to discuss the “actual environmental effects” that will result from FCPP’s GHG emissions. 538 F.3d at 1216. This failure underscores and exacerbates the EA’s failure to consider reasonable alternatives, *supra* Part 3, that would reduce foreseeable GHG emissions. EA at 215.

Regarding the mine’s past and reasonably foreseeable GHG emissions, the mine has been producing coal since 1963, producing vast quantities of GHGs, in particular methane, that, as noted above, is an extremely potent GHG. Future mining in Areas IV North, IV South, and V is also reasonably foreseeable. EA at 204 (“Reasonably foreseeable actions . . . are expected to include mining . . . the remainder of Area IV North and Area IV South.”), 205 (noting that Area V could be mined), 207 (Areas IV North and South comprise over 10,000 acres). And FCPP expects to continue to operate—and thus burn the mine’s coal—for “at least” 20 more years. Source Specific Federal Implementation Plan for Implementing Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation, 75 Fed. Reg. 64,221, 64,228 (Oct. 19, 2010). However, none of the GHG emissions from these past and reasonably foreseeable mining operations are addressed by the EA. OSM appears to limit its consideration of these GHG emissions by fixating on the fact that “the Proposed Action is predicted to result in a GHG emissions decrease of 1,890 tpy CO2e” and, without basis, that “[a]ny discussion attempting to relate climate change effects to the Proposed Action’s decrease in GHG emissions, particularly in light of the past, present and reasonably foreseeable actions occurring in the region to reduce/control GHG emissions could not be meaningful.” EA at 215.

As an initial matter, selection of the proposed action will not, in fact, “decrease” GHG emissions because the very act of mining the coal in Area IV North will produce additional GHG emissions—through mining and then combustion—that would not exist but for OSM’s approval of the mine. Thus, it is, in fact, producing – using OSM’s estimates that understate methane’s warming impacts – 57,801 metric tons per year of additional CO2e emissions. EA at 172; *Grand Canyon Trust*, 290 F.3d at 345-46 (arbitrary and capricious for agency to only consider incremental change in environmental effects caused by proposed action). Put differently, any hard look at GHG emissions from the mine must account for the spatial creep of the mine across the landscape, as well as the temporal creep over time caused by the mine’s perpetuation through projects such as the mining expansion project considered in the EA. Under the OSM’s flawed logic, there is no difference, for purposes of evaluating impacts, between a mine that is 50 thousand acres or 500 thousand acres, and no difference between a mine that produces coal for 50 years or 500 years, so long as the mine is expanded incrementally such that emissions, year-in-and-year out, remain relatively static. In the absence of any comprehensive EIS that outlines what total GHG emissions from the mine are, considering the *entire* mine over its *entire* lifespan, such logic fails and contravenes NEPA’s compulsion that agencies take a hard look—not a piecemeal look—at impacts. Furthermore, the fact that there may or may not be activities “to reduce/control GHG emissions” does not obviate OSM’s obligation to evaluate persistent GHG emissions or to take action of its own to reduce or control GHG emissions. EA at 215.

Additionally, the EA failed to assign a monetary value for the GHG emissions that would result from expanded mining in Area IV North and from coal combustion at FCPP. Such
monetization of the costs of GHG emissions is critical to inform decision-makers and the public about the value of the proposed action. There are available methods available to monetize the costs of GHG emissions; in fact, studies show that when the externalities of coal are included in its costs, coal has a net negative value. Nicholas Z. Muller et al., Environmental Accounting for Pollution in the United States Economy, 101 Am. Econ. Rev. 1649, 1664-72 (2011) (attached as Exhibit 13); see also Epstein et al., Full Cost Accounting for the Life Cycle of Coal, Annals N.Y. Acad. Sci. 73, 93 (concluding that externalities from the life cycle of coal, mining to combustion to waste disposal, costs Americans between $175 billion and $523 billion annually) (attached as Exhibit 14). It was arbitrary and capricious for OSM to fail to assign a monetary value for the direct and indirect GHG emissions from the Navajo Mine. Ctr. for Biological Diversity, 538 F.3d at 1200-03 (holding that National Highway Traffic Safety Administration’s “decision not to monetize the benefit of carbon emissions reduction was arbitrary and capricious”). At the least, it was arbitrary and capricious for OSM to simply pretend that the externalized impacts of coal do not exist and to evaluate, in some meaningful capacity, those impacts.

Regarding past, present, and reasonably foreseeable fossil fuel production and use in the San Juan Basin, beyond that at the Navajo Mine-FCPP complex, the largest source of GHG emissions is the San Juan Generating Station (SJGS), a 1,800-megawatt coal-fired power plant located little more than a stone’s throw from FCPP. SJGS is fed coal from the adjacent San Juan Mine, which “has sufficient coal reserves to operate at present levels until 2022.” EA at 199.

Regarding oil and gas development in the San Juan Basin, since the early 1990’s coal-bed methane extraction has proliferated in the San Juan Basin (particularly in the Fruitland Formation) as discussed in the report.21 The EA notes that in 2006, San Juan County alone, exclusive of tribal lands, contained almost 8,300 conventional gas wells, over 3,100 coal-bed-methane wells, and 451 conventional oil wells. EA at 77. Another 300+ wells, mostly conventional oil and gas, were located on tribal lands within San Juan County (Environ 2009).” The EA also notes, from the BLM Farmington Office, the reasonably foreseeable “development of 9,942 new oil and gas wells from 2003 and 2023 in the San Juan Basin,” and “600 natural gas wells in eastern Burnham Chapter extending north into Upper Fruitland and Nenahnezad/San Juan Chapters.” EA app. G. Of note, the last time that BLM’s oil and gas development underwent comprehensive planning and NEPA review, in 2003, BLM did not take a hard look at GHG emissions or climate change, claiming, speciously we would add, that “Methods to determine the effects of the significance of greenhouse gas emissions (GGE) from individual projects to climate change do not exist and this issue is beyond the scope of this NEPA process. However, it is acknowledged that burning of fossil fuels developed through the RMP will produce GGE.” BLM, Proposed Resource Management Plan/Final EIS at app. P-9. Since that point, BLM has evaluated anticipated GHG emissions, but only on a piecemeal, lease sale-by-lease sale basis.22

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22 To the degree that BLM is contemplating additional oil and gas lease sales or oil and gas development projects in the San Juan Basin, these additional actions constitute “cumulative actions” necessitating preparation of a comprehensive EIS by Interior. 40 C.F.R. § 1508.25(a)(2).
As part of its cumulative effects analysis, the EA should also have considered potential GHG emissions from the planned Desert Rock facility, which, though dormant, is still reasonably foreseeable but receives no mention in the EA. See supra Part 2.c.

The EA’s failure to consider the cumulative past, present, and reasonably foreseeable GHG emissions from FCPP, operations across the entire mine, and broader fossil fuel production and use from the SJGS, San Juan Mine, oil and gas development in the San Juan Basin, and the Desert Rock project, is all the more glaring because it considers—albeit inadequately, as demonstrated below—other cumulative air pollution effects from FCPP, as well as air pollution from San Juan Generating Station (SJGC). See EA at 212-15. If the EA can consider cumulative air pollution from these sources, it can consider cumulative GHG emissions across the Basin.

Once the EA completes this quantified analysis of GHG emissions, it then has to actually consider how those GHG emissions will impact the climate. We find it problematic that OSM appears to think that its NEPA duty ends at quantifying GHG emissions rather than taking the next logical step to identify actual warming impacts. OSM should therefore explore opportunities to quantitatively discern the warming impact caused by direct, indirect, and cumulative emissions. At the least, OSM should do so qualitatively. See CEQ, Draft Guidance at 3 (providing that agencies should, at least, “qualitatively discuss the link between such GHG emissions and climate change”); Save Our Ecosystems v. Clark, 747 F.2d 1240, 1246 n.9 (9th Cir. 1984 (quoting Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm., 481 F.2d 1079, 1092 (D.C. Cir. 1973)) (“Reasonable forecasting and speculation is … implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’’’). Without a hard look at cumulative GHG emissions, OSM cannot justify its decision to proceed on the basis of an EA and to forego an EIS. 40 C.F.R. §§ 1508.7, 1508.27(b)(7).

Finally, the EA should have considered whether the tens of millions of tons of carbon emissions that will result from combustion of the additional coal from the extension to Area IV North would cause or contribute to irreversible climate change or, colloquially, a tipping point. See Intergovernmental Panel on Climate Change, Climate Change 2007: Synthesis Report, 53 (2007) (“Anthropogenic warming could lead to some impacts that are abrupt or irreversible, depending upon the rate and magnitude of the climate change.”) (attached as Exhibit 15); Int’l Energy Agency, World Energy Outlook, Executive Summary (2011)(“If stringent new action is not forthcoming by 2017, the energy-related infrastructure then in place will generate all the CO2 emissions allowed in the 450 Scenario up to 2035, leaving no room for additional power plants, factories, and other infrastructure unless they are zero-carbon, which would be extremely costly.”) (attached as Exhibit 16); Ctr. for Biological Diversity, 538 F.3d at 1220-21 (remanding EA to agency for failing, inter alia, to consider whether emissions reductions could avoid irreversible climate change).

f. The Cumulative Effects of the Navajo Mine and Climate Change

The “observed and projected effects of climate change” should be presented in the “affected environment” section of an EA or EIS. CEQ, Draft Guidance at 6. “Based on that

We therefore recommend that OSM confer with BLM, who is already a cooperating agency in this EA, to identify these cumulative actions.
description of climate change effects that warrant consideration, the agency may assess the extent that the effects of the proposal for agency action or its alternatives will add to, modify, or mitigate those effects.” CEQ, Draft Guidance at 6. Analyzing these effects is critical because “climate change can magnify the damaging strength of certain effects of a proposed action.” CEQ, Draft Guidance at 6-7. “For sources of the best scientific information available on the reasonably foreseeable climate change impacts, Federal agencies may summarize and incorporate [studies] by the U.S. Global Climate Research Program . . . .” CEQ, Draft Guidance 8.

Here, the EA, in considering the affected environment, only addresses climate change in extremely cursory fashion. It mentions observed effects of climate change such as the fact that the Southwest has been “among the most rapid[ly] [warming regions] in the United States,” and Colorado River flow has declined. EA at 86. However, the EA fails to address “projected effects of climate change.” CEQ, Draft Guidance at 6 (emphasis added). Though it cites the USGCRP, Impacts report, if fails to note the report’s conclusion that water—“the lifeblood of the Southwest”—is projected to become even scarcer than it already is due to increased drought and reduced rain and snowfall, leading to a “bleak[]” situation involving likely “conflict.” USGCRP, Impacts at 129-30. The 2009 USGCRP report was eerily prescient to foresee the devastating and extreme drought that afflicted the southwest in 2011. See J. Hansen et al., Climate Variability and Climate Change 1 (Nov. 10, 2011) (“[T]here is no need to equivocate about the summer heat waves in Texas in 2011 and Moscow in 2010, which exceed 3 [standard deviations]—it is nearly certain that they would not have occurred in tehabsence of global warming. If global warming is not slowed from its current pace, by mid-century 3 [standard deviations] events will be the new norm and 5 [standard deviations] will be common.”) (attached as Exhibit 17)). The EA fails to address projections that “[i]creasing temperature, drought, wildfire, and invasive species will accelerate transformation of the landscape.” USGCRP, Impacts at 131 (emphasis added). The EA further fails to note that climate change is projected to threaten direct harm to people and broad harm to whose sectors of the economy, including cities, tourism, and agriculture. USGCRP, Impacts at 132-33.

Critically, the EA also fails to address additive and synergistic cumulative effects from climate change and the Navajo Mine (along with the mine’s cumulative and indirect effects) in its actual analysis of impacts. The mine clearly has impacts to the environment, and so to does climate change. OSM must, therefore, consider the additive and synergistic impacts of both the mine and climate change. Increased temperatures from climate change will worsen ozone pollution from FCPP. USGCRP, Impacts at 134. The resilience and ability of plant and animal species to adapt to climate change will be hampered by air and water pollution from the Navajo Mine and FCPP. USGCRP, Impacts at 132. The additive and synergistic harm from climate change and the Navajo Mine’s direct impacts (from direct impacts to the hydrologic balance) and indirect impacts (water used at FCPP) will exacerbate harms to surface waters and fisheries, especially the San Juan River, which is already an impaired waterway downstream from portions of the mine and plant.23

23 See EPA, Watershed Assessment, Tracking & Environmental Results, http://iaspub.epa.gov/waters10/attains_state.control?p_state=NM (search “San Juan River”) (listing river as an impaired under CWA 303(d)).
Given the projected cross-media impacts of climate change—which unquestionably will be aggravated by the direct and indirect GHG emissions from the Navajo Mine—it was arbitrary and capricious for OSM to only briefly (and inadequately) mention the effects of climate change with regard to air pollution. Instead, as mentioned above, OSM should have considered how climate change is projected to impact water, soil, vegetation, wildlife, endangered and threatened species, the economy, and vulnerable populations, alone and in conjunction with the direct, indirect, and cumulative impacts of the proposed extension of the Navajo Mine. Without such a hard look, the EA will have failed to take a hard look at impacts and OSM cannot justify its Finding of No Significant Impact. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8, 1508.25(c)(3), 1508.27(a), (b).

**g. Cumulative Effects from Other Air Pollutants**

The EA arbitrarily and capriciously limits the temporal scope of its cumulative impacts analysis to six years, ending with 2018. EA at 212. OSM justifies this limited review with the assertion that “there are no credible projections of emissions after that date [2018] from sources within and near the AQRA.” EA at 212. The EA, however, gives no explanation for why it is impossible to predict emissions after 2018. For example, while the EA mentions the possibility of reductions in emissions from FCPP and SJGS due to emissions controls or shut downs of certain units, the resultant emissions reductions are well known and, in fact, quantified in the EA. EA at 212-13. Moreover, there is apparently no intention to retire FCPP or SJGS. Indeed, if the coal plants are planning to invest in expensive emissions controls in 2015 to 2018, then presumably they will continue to operate long enough after those dates to amortize the capital costs incurred to install the emissions controls—likely twenty years.\(^{24}\) Indeed, as we understand it, PNM Resources hopes to operate SJGS until 2051. The EA also implies that Navajo Mine will continue to operate after 2018 (supplying coal for FCPP), noting that if three units at FCPP shut down Navajo Mine coal production “could decline.” EA at 212; see also EA at 204 (stating that mining in the remainder of Area IV North and Area IV South is reasonably foreseeable).

Nor does the EA provide any explanation for why it is unable to forecast future emissions from oil and gas operations beyond 2018. Because the EA presents no valid reason for truncating its cumulative impacts analysis at 2018, this limitation is arbitrary and capricious. *N. Plains Resource Council v. Surface Transp. Bd.*, ___ F.3d ___, 2011 WL 6826409, at **7-8 (9th Cir. 2011) (holding that STB “arbitrarily and capriciously relied on [a]five-year time frame, which resulted in a faulty analysis of the possible cumulative impacts from reasonably foreseeable projects). It is clear that the environmental effects of air and water pollution from the Navajo Mine and FCPP will not cease after 2018.

\(^{24}\) See *Source Specific Federal Implementation Plan for Implementing Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation*, 75 Fed. Reg. 64,221, 64,227 (Oct. 19, 2010) (noting that “in its analysis [of installing pollution controls], APS [Arizona Public Service, the operator of FCPP]) used an amortization period of 20 years, the standard amortization period recommended by EPA, and indicated that it anticipated that the remaining useful life of Units 1-5 is at least 20 years. As it appears that the FCPP facility will continue to operate for at least 20 years, EPA agrees with the use of an amortization period of 20 years to estimate costs.”) (attached as Exhibit 18).
If OSM is uncertain whether certain units at FCPP will close, or whether FCPP and SJGS will impose different emissions controls, then it must construct high- and low-emissions scenarios, and evaluate the cumulative impacts of each. OSM may not simply eschew any analysis after 2018 by asserting that “there are no credible projections of emissions” after that date. See EA at 212. This is precisely the predictive analysis that NEPA requires the agency to undertake. “Reasonable forecasting and speculation is … implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’” See Our Ecosystems v. Clark, 747 F.2d 1240, 1246 n.9 (9th Cir. 1984) (quoting Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm., 481 F.2d 1079, 1092 (D.C. Cir. 1973)). NEPA merely requires “a reasonably thorough discussion of the significant aspects of the probable environmental consequences” to “foster both informed decision-making and informed public participation.” Ctr. for Biological Diversity, 538 F.3d at 1194 (quotations and citations omitted).

In any case, if OSM did not have sufficient information to evaluate air impacts beyond 2018, then it was required to follow the procedures elaborated at 40 C.F.R. § 1502.22(b). That is, OSM was required to: (1) state the relevance of the unavailable information; (2) summarize the existing information about the cumulative impacts; and (3) present the agency’s “evaluation of such impacts based upon theoretical approaches or research methods,” e.g., create, as we suggest, different emissions scenarios. OSM’s failure to do this was arbitrary and capricious.

In addition to improperly truncating the cumulative impacts analysis of air pollution, the EA’s conclusion that “[t]he proposed action is not anticipated to cause discernible impact to ambient air quality or to contribute to any cumulative effects on air quality in the AQRA” is contrary to the evidence presented in the EA itself. EA at 213. The EA’s conclusion is based in part on projected installation of emissions controls at FCPP and SJGS, as well as potential shut down of the three small units at FCPP (Units I-III). But these reductions are not expected to occur until “2015-2018.” EA at 214. In the meantime, emissions are expected to increase in the AQRA due to expected increases in oil and gas operations. EA at 213. Furthermore, despite some small past reductions in SO2 emission from FCPP, it is clear that FCPP still emits an enormous quantity of pollutants, including NOx, PM, and Mercury. In fact, FCPP is the “largest source of NOx emissions in the United States,” emitting over 40,000 tons each year. EA at 212; 75 Fed. Reg. at 64,224. As the EA acknowledges, FCPP’s historic emissions of NOx, PM, and mercury remain undiminished. EA at 212.

The EA was obligated to discuss the actual environmental and human health impacts of these emissions for the time period before and until the installation of pollution controls (and after these pollution controls are installed, which reduce, but do not necessarily eliminate emissions that contribute to environmental and human health impacts). Grand Canyon Trust, 290 F.3d at 345-46 (agency cannot simply consider incremental change in rate). These effects are dramatic, and a key element of how coal combustion externalizes its impacts to the broader public, resulting in a net adverse economic cost to society. Ackerman, F. and Stanton, E. A., Climate Risks and Carbon Pricing: Revising the Social Cost of Coal, Economics for Equity and Environment (2011) (attached as Exhibit 19); National Research Council, Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use (2010) (attached as Exhibit 20); Nicholas Z. Muller et al., Environmental Accounting for Pollution in the United States Economy, supra at 1664-72; Epstein et al., Full Cost Accounting for the Life Cycle of Coal, supra at 93
(concluding that externalities from the life cycle of coal, mining to combustion to waste disposal, costs Americans between $175 billion and $523 billion annually).

Furthermore, while the EA discusses various expected emissions increases and reductions, it fails to engage in a qualitative analysis of how these emissions are effecting and will continue to effect human health and the environment. The EA’s failure to take this step from the quantities of emissions to their actual environmental effects is arbitrary and capricious. See Ctr. for Biological Diversity, 538 F.3d at 1216.

Additionally, the conclusion of the EA (and FONSI) that no significant impacts will result ignores the fact that San Juan County is expected to be within a hair’s breadth of non-attainment of National Ambient Air Quality Standards (NAAQS) throughout the coming years due principally to the emissions from SJGS and FCPP, which the Navajo Mine supplies, along with oil and gas operations. EA at 213. In fact, the ozone standard was recently exceeded in 2006. Salvatore & Dee, Community Health Improvement Council, San Juan Community Health Profile 28 (Jan. 2010) (attached as Exhibit 21). This is particularly troubling because “San Juan County is the worst county in New Mexico for release of toxic materials to the environment, and is ranked in the top 10% of worst counties in the United States for toxic releases to the environment.” Id. Also, “San Juan County is in the top 10% of the worst counties in the United States for PM-2.5 emissions, PM-10 emission, and sulfur dioxide emissions. Area power plants are the major contributor to these three pollutants.” Id. San Juan County suffers higher rates of chronic lower respiratory disease than the average rate in New Mexico or the United States more broadly. Id. Furthermore, the EA fails entirely to address the cumulative impacts of mercury pollution from the mine and FCPP (in addition to SJGS). This is troubling because “mercury is a pollutant that is of particular concern in the Four Corners region. Mercury is released into the environment from coal-fired power plants and from mining. . . . Mercury is a heavy metal that builds up and remains in the ecosystem and can be found in toxic levels in fish in many areas in San Juan County. Even in small amounts, mercury can cause a variety of physiological problems, illness, and even death, according to Dr. Grossman, a Durango physician researching the effects of mercury on pregnant women and their newborn infants.” Id.

Additionally, the EA does not address the environmental impacts of long-range air pollutants emitted when FCPP burns the coal mined from Area IV North. See Charles J. Cichetti, Expensive Neighbors: The Hidden Costs of Harmful Pollution to Downwind Employers and Businesses 38 (Dec. 2010) (“Power plants without pollution controls can no longer be permitted to use the air stream as a free waste transfer system that pollutes the air for downwind populations, not only causing many thousands of premature deaths and illnesses each year, but also causing higher labor and health insurance costs, lost jobs, lost state and local tax revenues and higher gasoline prices in downwind regions.”) (attached as Exhibit 22).

For these reasons, in light of the EA’s own statements and the abysmal air quality in San Juan County, the EA’s conclusion that the extension of Area IV North will not contribute to significant air quality impacts to San Juan County is arbitrary and capricious.

**h. Cumulative Impacts on Water Resources**

The EA does not discuss the Navajo Mine’s indirect impact of mercury emissions to water resources. As mentioned above, mercury is released into the environment from coal mines
and coal fired power plants and is found in toxic levels in fish in many areas of San Juan County. Salvatore et al., *San Juan Community Health Profile* at 28. Nevertheless, the EA fails to discuss the cumulative impacts of mercury pollution that is caused directly or indirectly by the Navajo Mine.

Water is a scarce resource in the Southwest. The primary water use in the Upper San Juan River is water cooling at the FCPP and SJGS. The water quantity and water quality of the San Juan River is being degraded by mercury, selenium and other toxics from these two power plants. Furthermore, approximately 10 miles downstream is the Shiprock Uranium Mill Tailings Remedial Action (UMTRA) Site on terraces above the San Juan River. These uranium tailings are believed to be leaking in the San Juan River in Shiprock. There is no mention in EA of the toxicity from coal facilities mixing downstream with uranium tailings. This omission was arbitrary and capricious.

Finally, the EA fails to adequately evaluate the cumulative impacts of expanded mining in Area IV North and CCW previously dumped in unlined surface disposal pits between Morgan Lake and Chaco River. The EA declines to consider the groundwater impacts from CCW disposal because “there is no . . . hydrologic connection between Areas III/IV and Area I/II.” EA at 206. However, the EA admits that in addition to backfill in Batsui Wash in Areas I and II, CCW was previously disposed in “six unlined disposal cells, which are no longer in service.” EA at 205. The Zimmerman Report indicates that these cells are located between Morgan Lake and the Chaco River. Zimmerman Report at 21-22. Thus, some CCW will impact Chaco River in addition to the impacts from the proposed expansion of mining in Area IV North. It was arbitrary and capricious for the EA to neglect entirely to consider these cumulative impacts.

Moreover, the cumulative impacts analysis for water quality impacts from CCW as well as mining itself, such as from sedimentation caused by surface disturbance, assume that compliance with SMCRA and the CWA will ameliorate all water quality impacts below significance thresholds. EA at 209. However, as noted, no CHIA has been completed. Moreover, the mere fact that the mine will obtain SMCRA or CWA permits does not obviate OSM’s duty to take a hard look at impacts through NEPA. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8, 1508.27. Unfortunately, the EA’s analysis does not constitute this hard look as it: (a) is conclusory in nature; (b) does not acknowledge let alone evaluate impacts relative to water quality standards promulgated under the CWA; (c) largely assumes that impacts will be insignificant because they are incremental; (d) fails to identify the cumulative magnitude of impacts to gauge whether these incremental impacts are actually significant; (e) assumes without support that mitigation will cure all ills; and, (f) as mentioned, assumes that impacts are insignificant and excuses the lack of meaningful analysis because other laws will be complied with.

5. **EA Does Not Adequately Compare the Cumulative Impacts of Alternatives**

In its cumulative effects analysis, an agency must evaluate the “cumulative effects . . . along with the direct and indirect effects . . . of each alternative.” CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* (Jan. 1997). The EA improperly fails to compare the cumulative effects of its (improperly narrow) range of alternatives. The cumulative effects analysis only considers the cumulative effects from the proposed action, and does not compare the effects of the proposed action to the cumulative effects of alternatives. For example, the air pollution effects of the proposed action are narrowly limited to the pollution from mining,
which is then compared to the no-action alternative; however, when the cumulative effects analysis also considers the emission from FCPP, it does not then compare the effects with those of the no-action alternative. See EA at 172-73, 212-215. The same failure to compare cumulative impacts alternatives occurs with regard to water resources. See EA at 202-09.

6. AN EIS IS REQUIRED BECAUSE THE IMPACTS OF THE NAVAJO MINE EXPANSION MAY BE SIGNIFICANT

Under NEPA, significance is determined by context and intensity. 40 C.F.R. § 1508.27(a). The evaluation of context should consider both “short- and long-term effects.” Id. Intensity “refers to the severity of the impact.” Id. § 1508.27(b). An action’s intensity is determined by consideration of adverse impacts, degree of impacts to “public health or safety,” “unique characteristics” of the impacted area, the degree to which the impacts will be “highly controversial,” the degree to which impacts are “highly uncertain or involve unique or unknown risks,” precedent effect of the action, the significance of cumulative impacts, the degree to which the action will affect “significant scientific, cultural, or historic resources,” the degree to which the action will affect “endangered or threatened species,” and whether the action threatens to violate federal, state, or local environmental laws. Id. §§ 1508.27(b)(1)-(10). “[T]he existence of one of these factors may be sufficient to require preparation of an EIS in appropriate circumstances.” Ocean Advocates v. U.S. Army Corps of Eng’rs, 402 F.3d 846, 865 (9th Cir. 2005). Here, almost all of the context and intensity factors are present. While OSM has proposed a Finding of No Significant Impact (FONSI), we find this proposal, to say the least, premature and indicative of OSM’s failure to give preparation of an EIS due consideration. Indeed, it appears that OSM has made a predetermination that it will proceed on the basis of an EA and has never seriously considered the need for an EIS. Even if that were not the case, the proposed FONSI does not provide a convincing statement of reasons justifying the decision to forego preparation of a comprehensive EIS as it fails to properly address, as described below, myriad context and intensity significance factors.

a. Context

As repeatedly emphasized in these comments, the EA largely considers the expansion of mining in Area IV North in an effective vacuum. While acknowledging that the coal mined at Area IV North will be burned at the FCPP, that the coal mined at Area IV North is part of a larger mine that has been in operation for decades, and may be in operation for decades more, and that there are additional fossil fuel extraction and combustion operations in the vicinity, and certainly in the broader San Juan Basin, the EA nonetheless does not take the next, requisite step of taking a hard look at the significance of impacts in the context of this broader geographic and temporal context. In so doing, the EA presents the illusion of insignificant impacts when the reality is a naturally and culturally rich landscape marred by a legacy of extensive, and intensive, fossil fuel extraction and combustion. This broader context, here, compels preparation of an EIS to address the substantial—if not dispositive—questions regarding impacts and to set a foundation for considering reasonable alternatives that account for this context.

Context is also implicated by the climate impacts of methane. The EA only accounts for the long-term warming impact of methane (i.e., in a 100-year time period) and does not account for the short-term warming impact of methane (i.e., in a 20-year time period). As noted, methane is 105 times as potent as CO2 over a 20-year time period, and 33 times as potent as CO2 over a
100-year time period, largely due to methane’s relative short residency time in the atmosphere. OSM needs to consider these warming impacts in the proper temporal context to truly gauge the significance of direct, indirect, and cumulative GHG emissions.

b. Adverse Impacts

The extension of the Navajo Mine to Area IV North will result in an additional 12.7 million tons of coal being burned at the FCPP. EA at 12. At the present rate, this will provide sufficient coal for the FCPP for approximately 1.5 years. EA at 8. The Clean Air Task Force reports that air pollution from FCPP conservatively causes or contributes to 44 premature deaths, 66 heart attacks, 800 asthma attacks, 31 hospital admissions, 28 cases of chronic bronchitis, and 42 emergency room visits for asthma attacks each year. Clean Air Task Force, *Death and Disease from Power Plants*. This number is particularly dramatic given the cumulative impact of the nearby San Juan Generating Station, which independently causes or contributes to 33 premature deaths, 50 heart attacks, 600 asthma attacks, 23 hospital admissions, 21 cases of chronic bronchitis, and 31 emergency room visits for asthma attacks each year. *Id.* (select San Juan Generating Station)

San Juan County is among the most polluted counties in the United States due to air and water pollution from coal mining and coal-fired power plants. Salvatore *et al.*, *San Juan Community Health Profile* at 28. FCPP, which is the largest single source of NOx pollution in the nation, and which exclusively burns coal from Navajo Mine, is the “dominant” source of air pollution in the region. When burned, the 12.7 million tons of coal will release approximately 25 million tons of CO2. This will be a significant contribution to atmospheric GHG emissions driving climate change. Climate change, if not rapidly abated, will cause significant hardship in the Southwest, including drought, conflict over reduced water supplies, increased wildfire, flooding, loss of biodiversity, and destruction of the tourism and agriculture sectors. USGCRP, *Impacts* at 129-34. Indeed, these emissions could cause climate change to reach a tipping point, leading to uncontrolled and irreversible impacts. IPCC, *Synthesis Report* at 53. The synergistic impacts of climate change, GHG emissions from combustion of the coal mined in Area IV North, and the other environmental impacts will aggravate all of these harms.

c. Human Health

As mentioned previously, the human health impacts from the Navajo Mine and its connected coal-fired power plant, FCPP, are tremendous. “Ozone levels, particulate matter pollution and mercury are all recognized concerns in San Juan and the Four Corners in General.” Salvatore *et al.*, *San Juan Community Health Profile* at 28.

The EA states “Overall, there would be no cumulative public health effects of the Proposed Action because there would be no measureable change to ambient air quality compared

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to baseline conditions.” EA at 223. This statement is almost offensively mistaken and misleading. It ignores the fact that San Juan County has been bordering on becoming a non-attainment area, EA at 213, and that there are considerable human health effects in the county already as a result of the existing coal/energy industrial complex, of which the Navajo Mine and FCPP form the heart. Salvatore et al., *San Juan Community Health Profile* at 28. As mentioned, these human health impacts include death and severe heart and respiratory issues. The extension of Navajo Mine to Area IV North, would allow FCPP to continue to poison the communities in San Juan County and the broader region affected by FCPP’s air pollution, a region that extends into Arizona, Colorado, and Utah.

The EA also ignores the fact that, but for the Proposed Action, 12.7 million tons of coal currently beneath the ground would not be mined and then burned at the FCPP. The mining and combustion of that additional 12.7 million tons of coal will contribute to air quality problems. Simply because that contribution will be the same contribution that is currently occurring, year-in-and-year out, from the mine and power plants operations does not mean that it does not exist. *See Grand Canyon Trust*, 290 F.3d at 345-46.

d. Controversy

From the beginning, mining and burning coal at Navajo Mine and FCPP has been controversial. *See* Iver Peterson, *Navajos in New Mexico Assail Coal Leases to Stop Relocation*, N.Y. Times A16 (June 14, 1984). And it has only become more controversial with time, as the deleterious effects of coal have become more apparent. Burning coal is a principal contributor to man-made climate change. This is not scientifically controversial. *See* USGCRP, at 12 (“Global warming is unequivocal and primarily human-induced”), at 13 (increased carbon dioxide concentrations “primarily due to the burning of fossil fuels (coal, oil, and natural gas).”). Nevertheless, whether to regulate GHG emissions has been hotly contested; for example approximately 370,000 people commented on EPA’s proposed endangerment finding regarding GHG emissions. *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496, 66,500 (Dec. 15, 2009) (attached as Exhibit 24). OSM’s failure to consider cumulative GHG emissions from the entire mine-power plant complex, and additional failure to consider alternatives that mitigate GHG emissions from coal mining and coal combustion, does, however, trigger “a substantial dispute [about] the size, nature, or effect of” of the Proposed Action necessitating an EIS. 40 C.F.R. § 1508.27(b)(4); *Blue Mtns. Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

In addition to the controversy generated by cumulative and uncontrolled GHG emissions from coal mining and combustion, the coal combustion waste that generated by coal combustion is also highly controversial. This is demonstrated by disputes surrounding EPA’s proposal to regulate coal ash as either a hazardous or non-hazardous waste. 75 Fed. Reg. at 35,142-43 (noting that citizens and environmental have been petitioning EPA to regulate CCW for over a decade and that industry has been actively opposing such regulation), 35,148 (describing competing potential regulations). From 1971 to 2008, all the coal ash produced from the combustion of Navajo Mine coal in the FCPP was backfilled, without any lining, in the Navajo Mine, or dumped in surface disposal pits adjacent to the mine. EA at 205-06; Zimmerman Report at 21-22. Toxic materials, such as arsenic, boron, selenium, and fluoride, are leaching from this buried waste into the alluvium of a portion of the San Juan River, which is currently listed as
impaired. EA at 206-207. There has been considerable controversy about the extent the toxic pollution from this CCW. Compare Zimmerman Report with EPA, Response to Comments 1-18 (attached as Exhibit 25). And while CCW is presently being placed in a lined impoundment, EA at 205, there is no indication that this is a permanent solution for this waste and its toxic components.

Overall, the extraction and combustion of coal from the Navajo Mine is also controversial because its costs are externalized onto the broader public and, therefore, often hidden. Ackerman, F. and Stanton, E. A., Climate Risks and Carbon Pricing: Revising the Social Cost of Coal, Economics for Equity and Environment, supra; National Research Council, Hidden Costs of Energy: Un-priced Consequences of Energy Production and Use, supra; Nicholas Z. Muller et al., Environmental Accounting for Pollution in the United States Economy, supra at 1664-72; Epstein et al., Full Cost Accounting for the Life Cycle of Coal, supra at 93 (concluding that externalities from the life cycle of coal, mining to combustion to waste disposal, costs Americans between $175 billion and $523 billion annually). Thus, the actual extent of impacts is often hidden and an EIS should be prepared to address and account for these externalized impacts. These controversial externalities – and the basic controversy over coal mining and combustion – is only exacerbated by OSM’s failure to consider reasonable alternatives.

e. Uncertain, Unique, and Unknown Risks

The risks of global climate change are unique in their global scope and cross-media impacts. There are some certainties about climate change, such as the historical fact that observed global temperatures have been increasing over the past century. IPCC, Synthesis Report at 50 (“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level.”); accord USGCRP, Impacts at 12. Additionally, there is a very high probability, if not virtual certainty, that this change is due to anthropogenic GHG emissions and the impacts of climate change will include global disruption of entire regions of the planet and “increased frequencies and intensities of some extreme weather events,” such as droughts, heat waves, cyclones, and floods IPCC, Synthesis Report at 50; Hansen, Climate Dice at 1. Nevertheless, as a result of the enormity of the problem, there are many uncertain but grave risks. Such risks include the possibility that feedback cycles may make stabilization of the climate impossible, the possibility of mass extinction of 20% to 30% of plant and animal species on earth, significant sea level rise, and the possibility of “large-scale singularities.” IPCC, Synthesis Report, 42-43, 52; James Hansen, Tipping Point: Perspective of a Climatologist 1-2 (2008-2009) (“Our home planet is dangerously near a tipping point at which human-made greenhouse gases reach a level where major climate changes can proceed mostly under their own momentum.”) (attached as Exhibit 26). There is also uncertainty about humanity’s ability to adapt to the impacts of climate change. IPCC, Synthesis Report at 43. The particular risks for the Southwest are uncertain but potentially devastating, including potential decades-long “megadroughts,” increased wildfires, loss of unique biodiversity hotspots, and damage to many principal economic drivers in the region. USGCRP, Impacts at 130-34; see also Stephen Saunders et al., Hotter and Drier: The West’s Changed Climate iv-viii (Mar. 2008) (detailing observed climatic changes in the American west) (attached as Exhibit 27).
The risks from climate change increase with each additional ton of GHGs emitted. Yet the EA failed entirely to address the cumulative emissions of the unique concentration of major GHG emission sources in San Juan County, including actions connected to the expansion of the Navajo Mine (the releasing of FCPP). See supra Part 5.a. These risks are exacerbated by OSM’s failure to consider alternatives that would prevent or abate GHG emissions.

f. Precedent

A highly negative precedent will be set if the Navajo Mine is allowed to continue to evade environmental scrutiny under NEPA by segmenting the mine extensions. The mine and FCPP have already managed to use segmentation to avoid meaningful environmental scrutiny for over half a century. See EA at 9-10 (no EIS has ever directly addressed the whole mine or FCPP), 207 (“Mining activities have occurred at the Navajo Mine since 1957.”); FCPP Title V Permit at 5 (showing that five units were built from 1963 to 1970). The mine expects to continue to mine through Areas IV North, IV South, and V. EA at 204 (“Reasonably foreseeable actions . . . are expected to include mining . . . the remainder of Area IV North and Area IV South.”), 205 (noting that Area V could be mined), 207 (Areas IV North and South comprise over 10,000 acres). And FCPP expects to continue to operate for “at least” 20 more years. 75 Fed. Reg. 64,221, 64,228. If the mine and connected power plant are not required to conduct an EIS now (particularly in light of FCPP’s request of BIA to renew its lease through 2041), it can be expected that no EIS will ever be completed for a 33,000 acre coal mine, EA at 2, that will have operated for nearly a century (1957 to 2041), and one of the most polluting power plants in the nation. 75 Fed. Reg. at 64,224 (noting “FCPP is the largest source of NOx emissions in the United States”).

g. Cumulatively Significant Effects

The cumulative impacts from the air and water pollution from the Navajo Mine and the connected FCPP are significant. The first such cumulative impact is climate change from GHG emissions. See supra Part 4.e. This includes (1) cumulative GHG emissions from fossil-fuel projects and development in the region, (2) the cumulative impact on climate change from those emissions, and (3) the synergistic negative impacts from climate change on the region and the environmental and health impacts from Navajo Mine and FCPP, as well as the potential Desert Rock Project. In addition, the cumulative impacts from other air pollutants and water pollution – whether to human health or aquatic species—are also significant. See supra Part 4; infra Part 6, Sec. i. As mentioned elsewhere, these cumulative impacts are too often externalized onto the backs of the broader public.

h. Scientific, Cultural, and Historic Resources

Archaeological, traditional cultural properties, and paleontological resources are currently being destroyed in the project area. The proposed extension of the Navajo Mine will negatively impacts scientific, cultural, and historic resources. The mine will disturb historic and archeological sites and will potentially disinter Navajo grave sites. EA at 190. Ethnographic and archeological analyses and studies of the proposed project area reveal complex, dynamic impacts that have not adequately complied with the Archaeological Resource Protection Act (ARPA), National Historic Preservation Act (NHPA), or Native American Graves Protection and Repatriation Act (NAGPRA). It appears that BHP has been working to utilize ethnographic
studies, including “Each Places Brings Stories,” (of which, our organizations have a redacted version) to identify and mitigate archeological sites in Area IV of Navajo Mine.

Additionally, the significant amounts of air pollution from the connected FCPP contribute to regional haze, which impacts visibility in numerous class I areas and the “Golden Circle of National Parks.” 75 Fed. Reg. 64,221, 64,224.

i. Endangered and Threatened Species

The Endangered Species Act (ESA) implements a Congressional policy that “all Federal Departments and agencies shall seek to conserve endangered species and threatened species.” 16 U.S.C. § 1531(c)(1). An “endangered species” is a species of plant or animal that is “in danger of extinction throughout all or a significant portion of its range,” while a “threatened species” is one which is likely to become endangered within the foreseeable future. 16 U.S.C. § 1532(6), (20). The operative core of the ESA is a list maintained by the Secretary of the Interior of threatened and endangered species, and the ESA permits citizens to petition the Secretary to add species to that list. 16 U.S.C. § 1533(b)(3)(A).

At the heart of Congress’s plan to preserve endangered and threatened species is Section 7 of the ESA, which places affirmative obligations upon federal agencies. Section 7(a)(1) provides that all federal agencies “shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species.” 16 U.S.C. § 1536(a)(1).

The mandate of section 7(a)(2) is even clearer:

Each Federal agency shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical, unless such agency has been granted an exemption for such action . . . pursuant to subsection (h) of this section.

Id. § 1536(a)(2). Thus, section 7(a)(2) imposes two obligations upon federal agencies. The first is procedural and requires that agencies consult with the FWS to determine the effects of their actions on endangered or threatened species and their critical habitat. See Id. § 1536(b). The second is substantive and requires that agencies insure that their actions not jeopardize endangered or threatened species or their critical habitat. See Id. § 1536(a)(2); see also, Florida Key Deer v. Paulison, 522 F.3d 1133, 1138 (11th Cir. 2008).

The requirements of the ESA are triggered by “any ‘agency action’ which may be likely to jeopardize the continued existence of the species or its habitat.” 16 U.S.C. § 1536(a). By this process, each federal agency must review its “actions” at “the earliest possible time” to determine whether any action “may affect” listed species or critical habitat in the “action area.” 50 CFR § 402.14; 50 CFR § 402.02. When there exists a chance that such species “may be present,” the agency must conduct a biological assessment (BA) to determine whether or not the
species “may be affected” by the action. See 16 U.S.C. § 1536(c). The term “may affect” is broadly construed by FWS to include “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,” and is thus easily triggered. 51 Fed. Reg. at 19926. If a “may affect” determination is made, “formal consultation” is required and a biological opinion (BiOp) must be prepared.

Numerous threatened and endangered species are known to occur within the federally defined “action area” of the Navajo Mine and the proposed expansion area, all of which “may” be affected directly, indirectly, and/or cumulatively by the proposed action and its resulting coal mining and transportation, as well as by subsequent combustion at Four Corners Power Plant. Listed species and critical habitats that may be affected include: the endangered Colorado pikeminnow (Ptychocheilus lucius) and its designated critical habitat; the endangered razorback sucker (Xyrauchen texanus) and its designated critical habitat; the endangered roundtail chub (Gila robusta); the endangered southwestern willow flycatcher (Empidonax traillii extimus) and its designated critical habitat; the endangered yellow-billed cuckoo (Coccyzus americanus); the threatened Mesa Verde cactus (Sclerocactus mesae-verdae); the endangered Mancos milkvetch (Astragalus humillimus); the endangered Rio Grande silvery minnow (Hybognathus amarus) and its designated critical habitat; and, the endangered California condor (Gymnogyps californianus) (collectively referred to herein as “Listed Species and Critical Habitats”). See U.S. Dep’t of the Interior, U.S. Fish and Wildlife Service, Draft Biological Opinion for the Desert Rock Energy Project, U.S. Bureau of Indian Affairs, Gallup, New Mexico (Oct. 2009) (Desert Rock BiOp) (attached as Exhibit 28); see also 50 CFR § 402.02 (defining “indirect effects” as “those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.”).

The Navajo Mine EA cites to Appendix E for its “biological evaluation” (BE), which OSM purports to use to satisfy its compliance with the ESA. While a BE is the functional equivalent of a biological assessment (BA), the latter is triggered through regulation and is required whenever there is a “major construction activity,” 50 C.F.R. § 402.12, whereas a BE is a voluntary analysis. A major construction activity is defined as “a construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act [NEPA, 42 U.S.C. § 4332(2)(C)].” 50 C.F.R. § 402.02. Under this definition, OSM should have conducted a BA rather than a BE. This reasoning is more than semantics, and is illustrative of OSM’s fundamental premise that it can avoid compliance with the procedural and substantive requirements of the ESA in its expansion of Navajo Mine through a cursory analysis and citing to past and outdated biological assessments. See Appendix E, at 1.

The BE itself is flawed for several reasons. First, the “action area” as defined for this project is essentially deficient in that it does not extend far enough beyond the area of direct impact. The BE provides: “The Action Area in this BE was determined based on maximum distance that a particular impact from mining could reasonably be expected to effect a listed or sensitive species,” which is later determined to be “the entire Navajo Mine lease area plus a one-mile buffer.” Appendix E at 5-6. This arbitrary and inferior “action area” fails to account for the full scope of impacts to the listed species in question. According to implementing regulations, the “Action area” is defined as “all areas to be affected directly and indirectly by the Federal
action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.27 The court in Wilderness Society v. Wisely, 524 F.Supp.2d 1285, 1305 (D. Colo. 2007), stated: “[I]t is clear from the definition of ‘action area’ that the agencies must consider the effects that occur beyond ‘the immediate area involved in the action,’ i.e., those known to have incidences of the [protected species].” In Wilderness Society, the informal consultation between BLM and FWS was specifically limited to parcels known to contain a protected species, and did not consider the entire “action area.” In that case, the Court provided that, “[a]lthough the [agency] believes that such consequences are localized or can be adequately mitigated, it is not clear [from the conferral] whether the FWS agrees” because the “action area” was ill-defined. Id. at 1305. Accordingly, the Court concluded that the agencies’ conferral under the ESA was insufficient to encompass all potential adverse effects resulting from development in the action area, and thus, their concurrence that no further consultation was necessary was arbitrary and capricious.” Id. By confining its “action area” to a “one mile buffer” around the mine, OSM arbitrarily limits its analysis of impacts to listed species—in contravention to its ESA mandate.

This arbitrarily limited analysis is evidenced by the fact that—despite the numerous listed species and critical habitat at stake—the Navajo Mine EA specifically addresses only one species, the Southwestern willow flycatcher, which OSM concludes the proposed project “may affect but is unlikely to adversely affect.” EA at 181. Although the BE does include analysis of additional listed species—the Southwestern willow flycatcher, the Yellow-billed cuckoo, the Colorado pikeminnow, the Razorback sucker, and the Roundtail chub—that analysis is cursory and dismissive.

For example, the BE fails to take a hard look at mercury pollution from the disposal of CCW at the Navajo Mine, as well as the combustion of coal from the Navajo Mine at Four Corners Power Plant—both of which will indirectly and cumulatively impact endangered Colorado pikeminnow, the razorback sucker and their critical habitat. Both fish would be exposed to mercury emissions through surface and groundwater contamination and ambient air exposure, deposition, and runoff into aquatic habitats, and subsequent bioaccumulation through the food chain. See Desert Rock BiOp at 120. Upon entering the San Juan River ecosystem, microorganisms convert mercury to methylmercury, a highly toxic form of mercury. Id. Because methylmercury is stable and accumulates through the food chain, the highest mercury concentrations are found in top predators, such as the Colorado pikeminnow, causing reproductive impairment, behavioral changes, and brain damage. Id. Using a threshold for adverse effects of 0.2 mg/kg WW, 64 percent of Colorado pikeminnow experience reproductive impairment due to mercury presently. Id. By 2020, the Desert Rock BiOp finds that mercury deposition in the San Juan River basin is expected to increase by 35.4 percent without or 35.5 percent with the construction of the proposed Desert Rock Energy Project. Id. at 3. For this

27 “Effects of the action” means “direct and indirect effects of an action on the species or critical habitat together with the effects of other activities that are interrelated or interdependent with that action.” 50 C.F.R. § 402.02. “Cumulative impacts” are those effects of future State or private activities . . . that are “reasonably certain to occur within the action area.” Id.; see also Sierra Club v. U.S., 255 F.Supp.2d 1177, 1187 (D. Colo. 2002). Further, “interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.” Id.
reason, FWS’s draft biological opinion predicts that 72 percent of Colorado pikeminnow in the San Juan River basin will experience mercury-induced reproductive impairment by 2020—which “is likely to jeopardize the continued existence of the Colorado pikeminnow.” Id. at 120 (emphasis added). The Desert Rock BiOp and jeopardy opinion is based on a conservative estimate of environmental release and exposure to mercury. Among other things, the Desert Rock BiOp does not evaluate or consider the significant contribution of mercury from forty-years of CCW disposal at the Navajo Mine. According to EPA’s TRI, which provides BHP reported data from 2000-2007, thousands of pounds of mercury have been disposed of in the Navajo Mine annually as “minefill.” None of the CCW is treated prior to disposal and BHP does not use a liner system or any other control mechanism to prevent saturation and migration of the mercury or other constituents into surface or ground waters that flow directly into the San Juan River.

Moreover, OSM has failed to consider the impacts that climate change will have on listed species. According to experts at the GAO, federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others, “(1) physical effects, such as droughts, floods, glacial melting, and sea level rise; (2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and (3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses.”

There is a growing consensus within the scientific community that climate change will “compound existing threats to declining species and lead to an acceleration of the rate at which biodiversity is lost. The species that are most vulnerable to extinction from whatever cause are those with restricted ranges, fragmented distribution within their range, low populations, reducing range, decreasing habitat within the range, and/or which are suffering population declines. Species with quite restrictive habitat requirements are most vulnerable to extinction. Where climate change is projected to reduce habitats of such species there are likely to be the greatest extinction risks.” Not surprisingly, “[a]quatic and wetland ecosystems display high vulnerability to climate change. Changes in water temperature and shifts in timing of runoff will change aquatic habitats, resulting in species loss or migration as well as novel and unpredictable interactions of new combinations of species.”

Impacts from climate change are anticipated to acutely affect New Mexico, and include the “dewatering of rivers and streams,” as well as “[i]ncreased drying of soils and significant reductions in soil moisture”—all of which are “likely with climate change as potential

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29 Agency Technical Work Group, State of New Mexico, *Potential Effects of Climate Change on New Mexico* (2005), at 24-25 (attached as Exhibit 32).

evapotranspiration rises with increasing temperatures.”31 These effects will “compound the adverse effects of changes in the hydrology of runoff and water availability throughout New Mexico.”32 Water availability has the potential to significantly impact endangered and threatened species. For example, “[s]ubstantial changes in the natural hydrograph and intensification of managed uses will severely disrupt stream ecology and health, which may have additional implications for managing endangered [fish species],”33 as well as those species—like the Southwestern willow flycatcher—which “rely on riparian vegetation for nesting and food resources.”34 None of these impacts to listed species from climate change were considered in OSM’s BE, a fatal error.

Furthermore, OSM failed to consult with FWS—in violation of the ESA and its implementing regulations.35 In correspondence with OSM, SJCA specifically requested a copy of initial consultations with FWS on compliance of the proposed project with the Endangered Species Act, to which OSM’s response was that “OSM has nothing to provide.”36 Indeed, the BE states that there was no consultation with FSW because OSM had “consulted in the past.” Appendix E at 1. Unfortunately for OSM, past outdated consultations do not satisfy the ESA’s implementing regulations. As noted above, the only listed species contemplated in the EA was the Southwestern willow flycatcher—which OSM concluded may be affected but is unlikely to adversely affected by the proposed project. EA at 181. However, once a “may affect” determination is made, the Federal agency must either request FSW concurrence with a “may affect, but not likely to adversely affect” finding, or request initiation of formal consultation. 50 C.F.R. § 402.14(a).37 In other words, a determination of “not likely to adversely affect” (a conclusion reached at the end of a BA) requires the consent of the FWS. Here, that consent was neither sought nor granted.

Aside from the evident concerns that OSM’s cowboy approach to ESA compliance raises for the many listed species at risk from the proposed action, there are also concerns with regard to the public’s opportunity to evaluate this action. In Wildlands v. U.S. Forest Service, 791 F.Supp.2d 979, 991 (D. Or. 2011), the court concluded that “the public evaluation process of the

31 Brian H. Hurd, et al., Climate Change and Its Implications for New Mexico’s Water Resources and Economic Opportunities (2007), at 18 (attached as Exhibit 34).
32 Id.
33 Hurd, et al. at 19.
34 See Agency Technical Work Group, State of New Mexico, at 25, 26.
35 According to the ESA Section 7 Handbook, at 4-12, “[t]he history of the consultation request includes any informal consultation, prior formal consultations on the action, documentation of the date consultation was initiated, a chronology of subsequent requests for additional data, extensions, and other applicable past or current actions. Conclusions reached in earlier informal and formal consultations on the proposed action also may be relevant. If so, such conclusions should be documented in the biological opinion.” (attached as Exhibit 35).
36 Email from Bob Postle, Manager, Program Support Division, Western Region, OSM to Mike Eisenfeld, New Mexico Energy Coordinator, SJCA April 12, 2011 (attached as Exhibit 36).
proposed agency action and its impact on the environment was skewed by the inaccurate and misleading ‘not likely to adversely impact’ [listed species] determination in the EA.” The court continued, “[T]he public is entitled to be accurately informed of the impact of the proposed action . . . and to have a meaningful opportunity to weigh in on the proposal during the period for public review and comment.” Id. OSM’s approach has foreclosed the public this opportunity through its cursory and insulated analysis.

Thus, the direct, indirect and cumulative impacts to threatened and endangered species and their critical habitats must be analyzed as a result of the proposed Navajo Mine Area IV North Mine Plan Revision, per compliance requirements with Section 7 of the ESA, 16 U.S.C. § 1536, and its implementing regulations at 50 C.F.R. § 402. Those impacts include but are not limited to the impacts of mercury and selenium pollution resulting from coal mining, combustion, waste disposal and climate change on all the listed species and critical habitat in question. In addition, the Navajo Nation Fish and Wildlife Department must be consulted on any potential action concerning the Navajo Nation and potential impacts to species listed under the Navajo Endangered Species List (NESL).

j. Violations of Environmental Laws

By failing to undertake formal consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act in connection with its approval of the Navajo Mine Area IV North Mine Plan Revision, OSM’s approval of the action will violate the Endangered Species Act and its requirements imposed for the protection of the environment.

Similarly, by failing to conduct a proper CHIA prior to approving the lease provision, any approval of the revision by OSM will violate SMCRA, 30 U.S.C. § 1260(b)(3). See supra Part 4.b.

The failure to properly address impacts to water quality, as required before a CWA 402 or 404 permit may be issued, violates the CWA.

Furthermore, OSM’s segmentation of the EA for the Navajo Mine and failure to prepare an EIS violates section 309 of the Clean Air Act, which provides for EPA review of OSM’s NEPA analysis.

k. Archaeological Resources

The entire Navajo Mine area is an important cultural and archaeological area. Due to the segmented analysis and attempts by BHP to mitigate archaeological sites at Navajo Mine, the FONSI for the EA makes the claim that, “At present, compliance efforts have already been completed with respect to any known sites or objects that are subject to NAGPRA of the Nation’s Jischchaa’ Policy.” This statement cannot be accurate as ground-disturbing activities have not been approved for the majority of the Navajo Mine expansion, the permanent Burnham

38 The Navajo Mine EA predicts impacts from habitat loss and modification, as well as disturbance from mine related noise and human presence to the following Navajo Nation listed species: kit fox, golden eagle, ferruginous hawk, western burrowing owl, and San Juan milkweed. See EA, at 181-82.
Road relocation or Cottonwood Wash. If OSM has disturbed gravesites in these areas they are in violation of NAGPRA.

For the foregoing reasons, there are reasonable concerns that the proposed expansion of the Navajo Mine will have a significant impact on quality of the human environment, necessitating a comprehensive EIS.

Thank you for your time and consideration of these comments.

Sincerely,

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