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VIA ELECTRONIC and CERTIFIED MAIL: RETURN RECEIPT REQUESTED

December 20, 2015

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RE: SIXTY-DAY NOTICE OF INTENT TO SUE FOR VIOLATIONS OF SECTION 7 OF THE ENDANGERED SPECIES ACT IN CONNECTION WITH THE BIOLOGICAL OPINION AND RECORD OF DECISION AUTHORIZING THE FOUR CORNERS POWER PLANT AND NAVAJO MINE ENERGY PROJECT

Dear Messieurs/Mesdames:

We represent the Diné Citizens Against Ruining Our Environment, San Juan Citizens Alliance, the Center for Biological Diversity, Amigos Bravos, and the Sierra Club (collectively, “Conservation Groups”). This letter provides you, the Action Agencies and Consulting Agencies listed above, with notice that the Conservation Groups intend to sue for numerous violations of the Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, and the Administrative Procedure Act (“APA”), 5 U.S.C. §§ 701-706, arising from the formal consultation for the Four Corners Power Plant (“FCPP”) and Navajo Mine Energy Project (“NMEP”) and issuance of the 2015 *Biological Opinion for the Four Corners Power Plant and Navajo Mine Energy Project* (“BiOp”).

As described below, the Conservation Groups intend to sue the agencies for their unlawful preparation and reliance on the BiOp. The Conservation Groups intend to challenge the U.S. Fish and Wildlife Service’s (Service) issuance and the action agencies’ reliance on the BiOp and subsequent incidental take statement (“ITS”) to the FCPP and NMEP pursuant to Section 7(a)(2) standards of the Endangered Species Act, 16 U.S.C. § 1536(a)(2), 50 C.F.R. Part 400. Reliance on the illegal BiOp and ITS allows for immediate increase in species mortality and the destruction of critical habitat in exchange for speculative, unplanned conservation benefits that are uncertain to occur even decades into the future.

The Conservation Groups intend this letter to serve both as a notification that we are prepared to file suit, and an invitation to engage in productive discussions. We welcome the opportunity to work with the Service and the action agencies to improve the BiOp and the Four Corners Power Plant (FCPP) and Navajo Mine Energy Project (NMEP) (collectively, “Project”) to ensure the preservation of critical habitat and the continued existence, survival, and recovery of the Colorado pikeminnow and Razorback sucker. If the Service and the action agencies and their

officials do not take action within 60 days to remedy their violations of the ESA and APA, the Conservation Groups will be forced to pursue litigation over these claims.

This letter is provided pursuant to the sixty-day notice requirement of the citizen suit provision of the ESA. 16 U.S.C. § 1540(g).

I. Introduction and Factual Background

The Service's Biological Opinion is fundamentally flawed because it condones continued operations of an outdated, technologically obsolete, highly polluting coal strip mine and power plant for 25 more years. It does so, even though, by the Service's own admission, continued operations will contribute to extirpation of, and complete destruction of all critical habitat for, the endangered Colorado pikeminnow population in the San Juan River. It is also clear from the Biological Opinion, that 25 more years of operations of the Navajo Mine-FCPP energy complex will prevent the endangered Razorback sucker population in the San Juan River from ever being a self-supporting, recovered population, but will continue to balance on the brink of oblivion. This is contrary to the specific directive of Congress for the Service and all federal agencies to assure that their actions will not jeopardize endangered species or cause the destruction of their critical habitat.

The mine and power plant's toxic releases are polluting vital air and dwindling water and fisheries resources and causing serious and ongoing harm to the people and communities who live in the vicinity of the power plant. San Juan County, where the complex is located, carries one of the heaviest burdens of toxic legacy pollution in New Mexico and the United States. The air quality does not meet national ambient standards and the main water resource, the San Juan River, is impaired for numerous pollutants. Fish are unsafe for consumption. Furthermore, the area is ground zero for the worsening impacts of climate change in the United States, with rising temperatures among the highest in the country and devastating impacts from drought. Projections paint a bleak picture for the region. The Navajo Mine-FCPP complex is one of the largest regional sources of the harmful pollution causing these widespread impacts.

The facts presented in the Service's biological opinion make clear that continued operation is incompatible with endangered fish recovery and that it is time to transition away from obsolete and polluting activities at the Navajo Mine and FCPP and to clean, renewable energy sources. This is necessary to assure the survival and recovery of the Colorado pikeminnow and Razorback sucker. It is also necessary to protect the health and well-being of the people and communities of the Four Corners region.

A. The Action Area's Severely Compromised Baseline Condition

The project action area for the Four Corners Power Plant and Navajo Mine are located on the Navajo Nation, approximately 15 mile southwest of Farmington, New Mexico, in the San Juan River Basin. Proponents applied for multiple permits and approvals that would ensure the continued operation of the FCPP and Navajo Mine from July 6th, 2016, for 25 years to 2041. The mine and power plant have been operating since July 1957. New development of coal reserves in the project action area (Navajo Mine Permit (NM003F)) and the new 5,568-acre

surface mine in the Pinabete Permit Area, would supply 5.8 million tons of coal per year to the FCPP for 25 years. Coal is extracted with blasting, draglines, trucks, and loaders from the mine and transported to coal stockpiles for rail transport to the coal-preparation plant.

In 1966 the Navajo Nation issued a lease to Arizona Public Service (APS) for the FCPP. With the federal Bureau of Indian Affairs' approval, the FCPP will operate under a new lease starting on July 6th, 2016, through 2041. FCPP emits a number of hazardous air pollutants in coal processing and combustion operations. Under the proposed action, the FCPP will be permitted to also emit water pollution through conveyance facilities (pipes, ditches, etc.) via a new, existing, or modified Clean Water Act National Pollution Discharge Elimination System (NPDES) Permit No. NN0000019. Polluted stormwater discharge could also be authorized under a Multi-Sector General Permit NPDES Permit No AZR05001, or by a general construction permit. These and other pollution effluent discharges are channeled to three outfalls to Morgan Lake. The discharge and deposition of heavy metal and chemical polluted waters are extremely hazardous to the continued existence, survival and recovery of the Colorado pikeminnow and Razorback sucker and adversely modify the species' critical habitat.

Water usage at the mine is used in a coal suppressant spray. Surface-runoff is collected in sediment basins for percolation to the soil and evaporation. The proposed action includes present and future issuance of NPDES permits by the federal Environmental Protection Agency (EPA), and dredge-and-fill permit(s) under the Clean Water Act, to be issued by the U.S. Army Corps of Engineers (COE). Water usage at FCPP is provided by the APS, majority owner of the FCPP, which operates a weir for the FCPP in the San Juan River Basin action area. The APS Weir is used to divert water from the San Juan River to Morgan Lake, for use in FCPP's operations. Diversion at the APS weir adversely impacts the hydrologic flow of the San Juan River at the diversion site, making it impossible at times for the Colorado pikeminnow to cross the weir and access critical habitat upstream. Additionally, the weir's impact to river flow and channel morphology causes Colorado pikeminnow and Razorback sucker to be impinged on intake pipe screens, resulting in serious bodily injury or death. Similarly, the Weir's impact on river flow and channel morphology can cause many juvenile and sub-adult Colorado pikeminnow and Razorback suckers to become entrained in appurtenances to the FCPP, including being confined in Morgan Lake. Entrainment in Morgan Lake leaves the endangered species exposed to confined recreational fishing activities, invasive species, inhabitable water quality, and no spawning habitat. Water withdrawals for FCPP are highest in the summer, when flows in the San Juan River are the lowest, and constitute an increasingly large portion of total river flow.

The Navajo Mine and Four Corners Power Plant are among the leading sources of mercury and selenium pollution in the San Juan Basin. Mercury and selenium pollution is released via air pollution from FCPP that is then deposited throughout the San Juan Basin. These pollutants are also released from FCPP coal combustion waste impoundments and lagoons via groundwater to the San Juan River and its tributaries. These pollutants are also released via water pollution discharges from mining and power plant operations to surface and groundwater.

B. Colorado pikeminnow (*Ptychocheilus Lucius*) and the Razorback Sucker (*Xyrauchen texanus*)

Historically, the Colorado pikeminnow was a top predator throughout the warm water reaches of the Colorado River down to the Gulf of California.¹ By the 1970s the species was extirpated from entire regions of historical habitat as a result to major alterations to the riverine environment, such as dam building.² The Colorado pikeminnow was federally listed as endangered in 1967, having lost approximately 75-80% of its historic habitat range.³

Similarly, the Razorback sucker's decline is largely due to habitat destruction from riverine alterations. Historically, the Razorback suckers occurred in the main channel of the Colorado River and major tributaries in Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming, and in Mexico.⁴ The Razorback sucker was federally listed as endangered in 1991, after decades of population decline due to water depletion, invasive fish species, and dam construction and operation.

Critical habitat for Colorado pikeminnow and Razorback sucker, designated in 1994, includes the 100-year floodplain of the species' historic range in San Juan County, New Mexico, and San Juan County, Utah. The primary constituent elements (PCEs) of Colorado pikeminnow and Razorback sucker critical habitat are:

Water: a quantity of water of sufficient quality (i.e., temperature, dissolved oxygen, lack of contaminants, turbidity, etc.) that is delivered to a specific location in accordance with a hydrologic regime that is required for the particular life stage for the species;

Physical habitat: areas of the Colorado River system that are inhabited or potentially inhabitable for spawning, feeding, rearing, as a nursery, or corridors between these areas, including oxbows, backwaters, and other areas in the 100-year floodplain which when inundated provide access to spawning, nursery, feeding, and rearing habitats; and,

Biological environment: adequate food supply and ecologically appropriate levels of predation and competition.⁵

C. The Four Corners Power Plant Navajo Mine Energy Project, Record of Decision and Biological Opinion

¹ BiOp at 32, 46-47.

² *Id.*

³ *Id.*

⁴ BiOp at 45.

⁵ BiOp at 33.

In April 2015, the Service completed the BiOp for the FCPP and NMEP as required by the formal consultation process under the Endangered Species Act, 16 U.S.C. § 1536(a)(2), 50 C.F.R. Part 400. The BiOp concluded that the effects, both cumulative and direct, of the proposed action would not jeopardize the species' continued existence, survival, or recovery, nor adversely modify critical habitat. The BiOp considered a variety of issues, many of which the Conservation Groups intend to challenge for failing to meet the standards of the formal consultation process under Section 7 of the Endangered Species Act.

II. Legal Claims

The Conservation Groups intend to bring legal claims against the Service and action agencies under the ESA and APA. The Service failed to meet ESA standards in assessing FCPP and NMEP's adverse effects to the Colorado pikeminnow and Razorback sucker and their critical habitat. The Service's conclusion that the FCPP and NMEP's will not jeopardize the continued existence of or adversely modify the critical habitat for the Colorado pikeminnow and Razorback sucker was arbitrary, capricious, or otherwise not in accordance with the law under the Administrative Procedure Act, 5 U.S.C. § 706(2)(A). The action agencies' reliance on an unlawful BiOp itself violates their independent duty under section 7(a)(2) to ensure that these species are not jeopardized and their critical habitat is not adversely modified or destroyed.

A. Statutory framework of the ESA Section 7, 16 U.S.C. § 1536

ESA Section 7 imposes a substantive obligation on each Federal agency to “insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary...to be critical.”⁶

The definition of agency “action” is broad and includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies” including the granting of permits, and “actions directly or indirectly causing modifications to the land, water, or air,” such as the regulatory program, power plant operation and lease extension, and surface mining projects at issue here.⁷ These duties are only fulfilled by an agency's satisfaction of the consultation requirements that are set forth in the implementing regulations for Section 7 of the ESA, and only after the agency complies with these duties may an action that “may affect” a protected species go forward.⁸

Pursuant to these requirements, each federal agency must review its action at “the earliest possible time” to determine whether it “may affect” any listed species or its designated critical habitat in the “action area,” and must “use the best scientific and commercial data available” to

⁶ 16 U.S.C. § 1536(a)(2).

⁷ 50 C.F.R. § 402.02.

⁸ *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055-57 (9th Cir. 1994).

determine whether these species are likely to be adversely affected by the action.⁹ The “action area” encompasses all areas that would be “affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.”¹⁰ The term “may affect” is broadly construed to include “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,” and thus is easily triggered.¹¹

If the action agency concludes that the proposed action is “not likely to adversely affect” a listed species that occurs in the action area, the Service must concur in writing with this determination.¹² If the Service concurs in this determination, then formal consultation is not required.¹³ If the Service’s concurrence in a “not likely to adversely affect” finding is inconsistent with the best available science, however, any such concurrence must be set aside.¹⁴

If an agency concludes that an action is “likely to adversely affect” listed species or critical habitat, it must enter into formal consultation with the Service.¹⁵ Formal consultation commences with the action agency’s written request for consultation and concludes with the Service’s issuance of a biological opinion.¹⁶ The biological opinion states the Service’s opinion as to whether the effects of the action are “likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.”¹⁷

When conducting formal consultation, the Service and the action agency must evaluate the “effects of the action,” including all direct and indirect effects of the proposed action, plus the effects of actions that are interrelated or interdependent, added to all existing environmental conditions – that is, the “environmental baseline.”¹⁸ The environmental baseline includes the

⁹ 50 C.F.R. §§ 402.14(a), (g)(8); 16 U.S.C. §§ 1536(a)(2), (a)(4).

¹⁰ 50 C.F.R. § 402.02.

¹¹ *Interagency Cooperation – Endangered Species Act of 1973, as Amended*, 51 Fed. Reg. 19,926 (June 3, 1986).

¹² 50 C.F.R. §§ 402.13(a) and 402.14(b).

¹³ *Id.* § 402.13(a).

¹⁴ *See* 5 U.S.C. § 706(2).

¹⁵ 50 C.F.R. §§ 402.12(k), 402.14(a).

¹⁶ 50 C.F.R. § 402.02.

¹⁷ *Id.* § 402.14(g)(4). To “jeopardize the continued existence of” means “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” *Id.* § 402.02.

¹⁸ 50 C.F.R. §§ 402.14 and 402.02.

past and present impacts of all federal, state, and private actions and other human activities in the action area....”¹⁹ The effects of the action must be considered together with “cumulative effects,” which are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.”²⁰

If the Service concludes that a project is not likely to jeopardize listed species, it must nevertheless provide an “incidental take statement” (“ITS”) with the biological opinion, specifying the amount or extent of take that is incidental to the action (but which would otherwise be prohibited under Section 9 of the ESA), “reasonable and prudent measures” necessary or appropriate to minimize such take, and the “terms and conditions” that must be complied with by the action agency to implement any reasonable and prudent measures.²¹

After the issuance of a biological opinion and “where discretionary Federal involvement or control over the action has been retained or is authorized by law,” the agency must reinstate formal consultation if, *inter alia*:

- The amount or extent of taking specified in the incidental take statement is exceeded;
- New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- The identified action is subsequently modified in a manner that causes an effect to the listed species ... that was not considered in the biological opinion; or
- A new species is listed or critical habitat designated that may be affected by the identified action.²²

Furthermore, Section 7(d) of the ESA provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, “shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section.”²³ The purpose of Section 7(d) is to maintain the environmental status quo pending the completion of consultation. Section 7(d) prohibitions remain in effect throughout the consultation period and until the federal agency has satisfied its obligations under Section 7(a)(2) that the action will not result in jeopardy to listed species or adverse modification of critical habitat.

¹⁹ *Id.* § 402.02.

²⁰ *Id.*

²¹ 16 U.S.C. § 1536(b)(4), 50 C.F.R. § 402.14(i).

²² 16 U.S.C. 1536(a)(2); 50 C.F.R. § 402.16.

²³ 16 U.S.C. § 1536(d).

B. Violations Of Section 7 Of The Endangered Species Act

i. The Biological Opinion Omits Endangered Species Recovery Needs from Adverse Modification and Jeopardy Analyses

The BiOp is arbitrary and capricious because it excludes a “detailed discussion” regarding the species’ recovery needs as required by the ESA. Under the ESA, the Service must evaluate the effects and cumulative effects of the proposed project on listed species and critical habitat in the formal consultation process.²⁴ In issuing conclusions on jeopardy and adverse modification, the Service must provide a detailed discussion of its findings of the direct and cumulative effects of the proposed action considered in the BiOp in providing an analysis of such actions on the recovery of an endangered species.

In the Service’s 2015 BiOp for the FCPP and NMEP, the Service failed to include a detailed discussion of the project’s adverse effect to the recovery of the Colorado pikeminnow and Razorback sucker in reaching the no-jeopardy conclusion and no adverse modification conclusions. Although the BiOp mentions the issue of recovery in isolated instances in the BiOp, it fails to provide any sort of scientific, detailed discussion of the adverse impacts of the effects of the proposed action to the recovery of the species. The BiOp fails entirely to mention the delisting criteria for Colorado pikeminnow, which includes a self-sustaining population in the San Juan River. Similarly, the BiOp makes only one mention of the criteria for downlisting and then fails entirely to discuss whether meeting that criteria is feasible given the myriad and decades-long project impacts. Further, the BiOp’s analysis and conclusion of impacts to critical habitat fails entirely to address any recovery criteria. This omission is particularly troubling, given that the threshold mercury levels set by the BiOp for adverse modification of critical habitat correlate with extirpation of the Colorado pikeminnow from the San Juan River.²⁵ Similarly the BiOp’s no jeopardy and no adverse modification analyses for the Razorback sucker do not address the recovery criteria, particularly the requirement of a self-sustaining population. These omissions render the no-jeopardy and no adverse modification conclusions of the BiOp arbitrary and capricious.

ii. The Biological Opinion Excludes Major Sources of Selenium Pollution from Baseline Conditions and Cumulative Impacts

The BiOp unlawfully excludes from its analysis significant expected increases in selenium concentrations in the San Juan River due to the approved expansion of the Navajo Indian Irrigation Project (NIIP).²⁶ The full expansion of NIIP was approved by the Bureau of Indian Affairs, following informal consultation with the Service in 1999.²⁷ In the draft Biological

²⁴ 50 C.F.R. §402.14(g)(3).

²⁵ BiOp at 155.

²⁶ BiOp at 14.

²⁷ BiOp at 14.

Opinion for the Desert Rock Energy Project (DREP), the Service predicted that completion of NIIP would lead to a 119% increase in selenium concentrations in the San Juan River, resulting in significant impairment of Colorado pikeminnow and Razorback sucker.²⁸ The BiOp attempts to justify the exclusion of selenium increases from NIIP by stating that “BIA has agreed to reconsider its effects findings associated with the Navajo Indian Irrigation Project (NIIP) and other irrigation projects. BIA has begun developing additional scientific information that may be necessary to supplement their BA (BIA 1999). Therefore, potential future Se [selenium] discharges potentially from BIA irrigation projects and associated effects to listed species were not considered part of cumulative effects during the ESA consultation.”²⁹ BIA’s informal agreement to “reconsider” its prior findings, however, is no basis for excluding the expected impacts from the fully approved future expansion of NIIP. The BiOp’s failure to consider this significant projected increase in selenium concentrations in the San Juan River was arbitrary and capricious.

Significant omissions aside, the BiOp’s discussion of selenium impacts to Colorado pikeminnow and Razorback sucker is also arbitrary and capricious. The BiOp states that selenium deposition from the NMEP will cause significant harm to eggs and ovaries of Colorado pikeminnow and Razorback sucker. But the BiOp provides no information about how it arrived at such figures, no citation to any authorities, no discussion of population-level impacts, and no discussion of projected selenium increases in the San Juan River.³⁰ This latter point is significant because the Service’s own documents predict an increase in selenium concentrations in the San Juan River, with increasing negative impacts to Colorado pikeminnow and Razorback sucker. Furthermore, the BiOp’s no-jeopardy and no adverse modification conclusions rely on “conservation measures” but the conservation measures do not actually address selenium concentrations in the San Juan River. Further, the BiOp’s reliance on the effects of stocking to mitigate impacts to critical habitat is illogical. Putting more fish in the river may, temporarily, provide the illusion of a stable fish population, but it does nothing to alter the underlying habitat conditions that threaten the fishes’ survival and recovery. Notably, the BiOp recognizes that current habitat conditions are “insufficient to support successful Colorado pikeminnow and Razorback sucker recruitment at levels that will provide for the species conservation.”³¹ Further, Miller 2014 recognizes that if stocking were to cease, the pikeminnow population would plummet and population would quickly be extirpated. Thus, currently the primary constituent elements in the San Juan River are insufficient to support Colorado pikeminnow or Razorback sucker and the myriad negative impacts of the Project will only worsen these conditions, as the BiOp recognizes. It is illogical for the BiOp to conclude, in these circumstances, that the Project will not adversely modify critical habitat.

²⁸ Desert Rock Energy Project draft BiOp at 106.

²⁹ BiOp at 15.

³⁰ BiOp at 119.

³¹ BiOp at 136.

iii. The Biological Opinion Fails to Analyze the Cumulative Impacts of Climate Change

The BiOp recognizes that the impacts of climate change are projected to be significant throughout the American Southwest, including the San Juan Basin. The best-available science predicts streamflow in the San Juan River will decrease by eight to forty-five percent by mid-century.³² The BiOp acknowledges that this dramatic reduction in water will “make it increasingly challenging” to meet flow requirements, especially the high flow requirements that provide both for channel maintenance and create the backwater habitat required by Colorado pikeminnow. The BiOp also recognizes that this “may also exacerbate contaminant issues.”³³ Despite this acknowledgement, the BiOp fails to factor these projected significant changes into its analysis of the overall impacts of the project on Colorado pikeminnow. The BiOp does not consider potential increased mercury and selenium concentrations due to reduced flows in its analysis of the impacts of those pollutants. Nor does the BiOp consider reduced flows in its analysis of entrainment, water withdrawals (the BiOp notes that any increased depletions beyond 3,000 AFY will harm Colorado pikeminnow and Razorback sucker), or the blockage of fish passage due to the APS weir. This failure was arbitrary and capricious and in violation of the ESA. Notably, the BiOp considered the cumulative effects of climate change in its analysis of impacts to the southwestern willow flycatcher and the yellow-billed cuckoo.³⁴ By contrast, the BiOp failed at any point to consider how the project impacts of climate change would affect or exacerbate FCPP/NMEP’s impacts on the Colorado pikeminnow or the Razorback sucker.

Further, while the BiOp acknowledges that climate change will lead to significant changes in streamflow in the San Juan River, it fails to address other climate change related impacts that may adversely affect Colorado pikeminnow. For example, the BiOp does not consider that water shortages and reduced precipitation due to climate change could cause irrigators to call on previously unused water rights, which in turn would further reduce instream flows. This would be particularly problematic given that the San Juan River is over appropriated: if all water rights are used (which is currently not the case), there would be no water for fish.

Climate change will also affect the timing of flows in the San Juan River. This could in turn interfere with spawning. It is possible that Colorado pikeminnow and the Razorback sucker would not be able to adjust their spawning in response to changes in runoff and river flows.³⁵ In its draft BiOp for DREP, the Service noted that “fish may not be able to adjust to an earlier spawning date, especially if it were one or two months earlier.”³⁶ Increased air and water temperatures could lead to increased mercury uptake by Colorado Pikeminnow and Razorback

³² BiOp at 68.

³³ BiOp at 104.

³⁴ BiOp at 132.

³⁵ Desert Rock Energy Project draft BiOp at 70-71.

³⁶ *Id.*

suckers. Altered river conditions could also create an environment in which non-native species could out-compete native Colorado pikeminnow and Razorback suckers. The BiOp fails entirely to address the harmful impacts of climate change, rendering its analysis arbitrary and capricious and in violation of the Endangered Species Act.

Moreover, the BiOp bases its conclusions regarding jeopardy and adverse modification of critical habitat on the current state of the San Juan River and the expectation that that state will remain at the completion of the Project in 2042. However, the best available science clearly demonstrates that the climate in the Southwest is changing rapidly and that the San Juan River will be very different in 2042 than it is currently. The failure of the BiOp to assess the impacts of the Project in light of the environment that will exist in 2042 when it is completed was arbitrary and capricious and inconsistent with the Endangered Species Act and its implementing regulations.

iv. The Biological Opinion Fails to Consider Impacts of Fish Stocking or Reduced Genetic Diversity of Colorado Pikeminnow and Razorback Sucker

The BiOp bases its conclusions regarding jeopardy and adverse modification of critical habitat in large part on the San Juan River Recovery Implementation Program's (SJRRIP) ongoing fish stocking program.³⁷ There is, however, no analysis of the various potentially negative impacts of this massive fish stocking effort, particularly on the effect of stocking on any remaining wild Colorado pikeminnow or Razorback sucker in the San Juan River. Artificial stocking of fish has inherent risks of genetic introgression, hybridization, inbreeding depression, and outbreeding depression. Hatchery fish can also threaten wild stocks by competition, predation, and potential transmission of disease. Stocking can lead to decreased genetic diversity, reduction in effective population, and long-term genetic drift, all of which affect the long-term health of the species. Stocking should only be considered a temporary management tool to be used as a last resort. Notably, stocking cannot be considered a long-term solution because, aside from the negative effects of stocking, stocking does not address underlying habitat problems.

The Service's BiOp relies primarily on the ongoing, massive stocking efforts of SJRRIP to justify its no jeopardy and no adverse modification conclusions. However, at no point does the BiOp address the many potential negative effects of artificial stocking. Further, the BiOp relies heavily on the population viability analysis from Miller 2014 to justify its no jeopardy and no adverse modification conclusions, but Miller 2014 also does not address potential inbreeding depression or the impacts of stocking on the remaining wild Colorado pikeminnow in the San Juan River. The BiOp's complete failure to address the potential impacts of stocking and lack of genetic diversity was arbitrary and capricious.

v. The Biological Opinion Fails to Employ Best Available Science or Adequately Assess the Impacts of Mercury Deposition on Endangered Species

The BiOp's analysis of mercury impacts is wholly inadequate. The BiOp relies significantly on the analysis and modeling from EPRI 2014 and the population viability analysis from Miller

³⁷ BiOp at 132-36.

2014. Based on these models, the agency concludes that mercury levels will only reach levels that cause “significant decline” in Colorado pikeminnow populations in 2046, five years after the cessation of the FCPP/NMEP.³⁸ The BiOp fails however to assure that these models accurately reflect real world conditions. For example, the EPRI 2014 study premises its analysis on annual mercury emissions from the Four Corners Power Plant of 102 lbs./yr.³⁹ The BiOp itself notes however that the projected annual emissions from the power plant are in fact 50% higher, 149 lbs./yr.⁴⁰ Further, the BiOp, in accepting the analysis from EPRI 2014, repeatedly adopts the lowest possible estimates of mercury emissions and concentrations in water and fish, without providing any explanation for rejecting higher mercury levels. The ERPI 2014 study and BiOp rejected actual water quality measurements in favor of lower estimates based on modeling. The BiOp consequently adopts EPRI 2014’s estimated mercury concentrations that are significantly lower than actual measurements, alternative models, and the Service’s own calculations. No justification for these decisions is provided. The Service provides no explanation for accepting EPRI’s modeled mercury concentrations over the other measurements, models, and calculations. The BiOp then adopts the lowest possible estimate of mercury transfer to Colorado pikeminnow eggs, without providing any explanation, even though the transfer rate adopted by the Service was up to two orders of magnitude lower than other studies had estimated.⁴¹ Next the BiOp adopted lower injury estimates from ERM 2014a, b (a study paid for by the Navajo Mine’s strip mine operator—BHP Billiton), which were notably lower than estimates from the peer reviewed Dillon 2010 study. The BiOp also relied on the population viability analysis of Miller 2014 to establish the supposed threshold for adverse habitat modification from mercury, even though Miller 2014 expressly did not address behavioral or genetic injury to Colorado pikeminnow. Miller 2014 acknowledges that its analysis is an underestimate of mercury impacts because of these exclusions. The BiOp recognizes that continuing mercury pollution in the San Juan River is causing behavioral injury in 43 to 60 percent of Colorado pikeminnow and also estimates that these behavioral injuries will lead to mortality of 1.1% of the adult pikeminnow population.⁴² Despite this, the BiOp’s no jeopardy and no adverse modification conclusions relied entirely on the population viability analysis of Miller 2014, without addressing or explaining the projected harmful behavioral or genetic injury to pikeminnow. On account of these multiple, unexplained unrealistically low estimates, the BiOp failed to use the best available science and failed to adequately assess mercury impacts on Colorado pikeminnow and their critical habitat. This conclusion is all the more arbitrary because it does not take into account at all lead pollution in the basin, which is a recognized threat to Colorado pikeminnow and Razorback sucker.

vi. The Biological Opinion Fails to Assess Impacts of Impingement on Endangered Fish

³⁸ BiOp at 133, 135.

³⁹ BiOp at 134.

⁴⁰ BiOp at 26.

⁴¹ BiOp at 82.

⁴² BiOp at 118.

The Arizona Public Service Company, part owner of the FCPP, operates a weir for the FCPP in the San Juan River Basin action area. The APS weir is used to divert water from the San Juan River to Morgan Lake, for use in coal plant operations.⁴³ River diversion to Morgan Lake occurs just upstream from the APS weir by two 8 by 8.5 foot intake pipes.⁴⁴ There is one diversion pump at each intake pipe.⁴⁵ The pipes pump water to a single pipe for transport to Morgan Lake.⁴⁶ Both intake pipes are fully screened with 1 by 3 inch mesh screens.⁴⁷ The pumps divert an average of 76.4 cfs (cubic-feet per second) daily, depending on the seasonal flow of the river, with the greatest withdrawal occurring in the summer, when river flows are the lowest.⁴⁸ Annually, an average of 27,682 acre-feet per year (AFY) of water is pumped from the San Juan River to Morgan Lake, though APS has the right to withdraw nearly twice this amount.⁴⁹ The intake pipes were installed pursuant to the original FCPP lease.⁵⁰ No modifications to the intake pipes are planned or proposed by project proponents.⁵¹ The weir does not have any fish passage, collection or return facilities.⁵² The APS weir's intake pipes are located in critical habitat for the Colorado pikeminnow.⁵³

Although the Service observed that the risk of impingement was an adverse effect, the Service's failed to include any detailed discussion of the project's adverse effect of impingement for the jeopardy or adverse modification of critical habitat of the Colorado pikeminnow and Razorback sucker. This omission was arbitrary and capricious.

vii. The Biological Opinion Did Not Consider Foreseeable Impacts from the Project that Will Occur After 2041

⁴³ *Four Corners Power Plant Biological Assessment* ("BA"), Fish and Wildlife Service, 65 (Aug. 8, 2014).

⁴⁴ BiOp at 109.

⁴⁵ BA at 65.

⁴⁶ *Id.*

⁴⁷ BiOp at 109

⁴⁸ BiOp at 110

⁴⁹ BiOp at 27; BA at 65

⁵⁰ BA at 65

⁵¹ BiOp at 144

⁵² BA at 65

⁵³ BiOp at 114.

The Service concludes that the proposed action, along with cumulative effects, will not adversely modify or destroy critical Colorado pikeminnow habitat because mercury concentrations are not expected to reach critical levels until 2046.⁵⁴ The Service claims it is precluded by law from assessing any cumulative impacts that occur after completion of the project.⁵⁵ Because the proposed action (mine expansion and extension of the lease for the power plant) will be complete in 2041, the agency insists that it must ignore the critical impacts projected to occur in 2046.⁵⁶ The BiOp is mistaken as a matter of law. The ESA requires the Service to consider the impacts of the proposed action along with cumulative impacts for the duration of the effects of the proposed action, even if those effects extend beyond the completion of the proposed action. Accordingly, the BiOp's analysis of impacts to critical habitat is mistaken as a matter of law. The EPRI (2014) report on which the Service principally relies models mercury concentrations well beyond 2041. It is also arbitrary for the Service to rely on this report throughout the BiOp, but then arbitrarily conclude that the report is not reliable for mercury estimates beyond 2041.

viii. The Biological Opinion Improperly Bases Its Conclusions on No-Jeopardy and No-Adverse Modification of Habitat on Uncertain and Vague Mitigation Measures

The BiOp identifies eleven voluntary conservation measures drafted by the action agencies and project proponents.⁵⁷ The conservation measures were developed after the release of the initial Biological Assessment.⁵⁸ The Service relied on these proposed conservation measures to mitigate the adverse effects that “would otherwise occur as a result of the proposed action...”⁵⁹ The Service incorrectly relied on the implementation and success of the drafted conservation measures to reach the no jeopardy or adverse modification conclusion.

First, although an agency may rely on a clear, definite commitment of resources for future improvements that minimize the adverse impacts of a proposed project, it may not depend on such future improvements in reaching a no jeopardy or adverse modification determination if they are not binding or they are uncertain or vague.⁶⁰ This is because the ESA requires the agencies' to *assure* that the species and their critical habitat will not be jeopardized or adversely modified. In the BiOp, the conservation measures were listed in the “Description of the Proposed Action” section. At the time of the BiOp's release, implementation of the conservation measures

⁵⁴ BiOp at 135.

⁵⁵ BiOp at 135.

⁵⁶ BiOp at 135.

⁵⁷ BiOp at 28-31

⁵⁸ BiOp at 28

⁵⁹ BiOp at 132

⁶⁰ *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F. 3d 917, 936 (9th Cir. 2008).

had not begun in the action area. Additionally, the measures were not included in the initial project proposal. Finally, the Service failed to include any discussion of the conservation measures in the effects analysis of the proposed action. Therefore, the measures were incorrectly relied on by the Service in reaching a no jeopardy or adverse modification determination.

Next, the conservation measures were improperly incorporated in the reasonable and prudent measures and terms and conditions of the incidental take statement. Reasonable and prudent measures are only issued after a no-jeopardy or adverse modification determination is made. By contrast, the conservation measures were relied on by the Service in reaching the no jeopardy or adverse modification conclusion. Thus, the Service impermissibly relied on the conservation measures to retroactively mitigate the adverse effects of the project. This retroactive application of the conservation measures directly contradicts the preventative intent of the ESA. Further, even if the retroactive sleight of hand were permissible, which it is not, the conservation measures are not sufficiently specific or binding. The measures do not address all of the adverse impacts from the Project, such as water withdrawals and selenium loading. In many cases, as with mercury, the pumping, and non-native fish releases, the conservation measures are merely vague promises to formulate plans to mitigate impacts in the future. Similarly, because there is no discussion about *how* the conservation measures would supposedly offset the impacts of the Project, there is no indication that the conservation measures would entirely offset the harmful effects and, if not, whether the remaining adverse impacts would cause jeopardy or adverse modification to Colorado pikeminnow, Razorback sucker, or their critical habitat.

Further, reliance on the Colorado pikeminnow and Razorback sucker stocking programs to supposedly mitigate impacts was arbitrary and capricious. There is no indication and no obligation that these programs will continue through the entirety of the Project life (2041). Further, artificial propagation of stocked fish does not offset impacts to wild fish and, because it does not address impacts to the primary constituent elements for Colorado pikeminnow and Razorback sucker critical habitat, it cannot “mitigate” those effects. All it does is temporarily mask the admittedly insufficient and degraded critical habitat in the San Juan River.

ix. The Biological Opinion’s Conclusions on No-Jeopardy and No-Adverse Modification of Critical Habitat Are Inconsistent

The Service’s BiOp is also arbitrary and capricious because its ultimate determinations are inconsistent. Key to the BiOp’s no jeopardy determination is the conclusion that “any increases in Hg [mercury] deposition are due, not to the proposed action, but attributable to global sources.”⁶¹ By contrast, in reaching its no adverse modification determination, the BiOp states that the lack of co-occurrence of the primary constituent elements for Colorado pikeminnow and Razorback sucker are “attributable to the degraded environmental baseline, the proposed action and future predicted increased global contributions of Hg [mercury] to the basin.”⁶² Further, the BiOp also recognizes that mercury deposition from FCPP “ha[s] a clear but lesser effect” on

⁶¹ BiOp at 134.

⁶² BiOp at 136.

overall mercury deposition in the San Juan Basin.⁶³ Inconsistent findings and conclusions are the mark of arbitrary decision-making. The Service cannot maintain on one hand that continued mercury deposition from FCPP does not contribute to the worsening problem of mercury pollution in the San Juan River and, on the other hand, admit that mercury deposition from the proposed action has a clear contribution to the problem and that impacts on endangered fish are “attributable” to the proposed action. Furthermore, there is no rational connection between the agency’s findings that Colorado pikeminnow and Razorback sucker are unable to recruit at sufficient rates to sustain their populations under current conditions (which are expected to worsen), and its conclusion that the species will not face jeopardy because of continuation of current conditions (along with non-specific and non-binding mitigation measures).

x. The Biological Opinion’s Incidental Take Statement Is Unlawful

Incidental take statements (ITS) must include specific numeric limits of permissible take or, if numeric limits are not possible, must contain a valid proxy measurement. Here the BiOp’s ITS contains neither numeric take limits nor proxy measurements for numerous aspects of the Project that will adversely harm and therefore cause take of Colorado pikeminnow, Razorback sucker, southwestern willow flycatcher, and yellow billed cuckoo. The BiOp recognizes that water withdrawal will adversely affect pikeminnow and Razorback sucker. The ITS in turn authorizes “indeterminate” take of both fish from water withdrawals from 2016 to 2041. With no numeric take limit and no valid proxy, this is simply license to unlimited take of fish from water withdrawals. Similarly, there is no numeric limit for take due to effluent discharges, APS weir operations, and nonnative species releases. The ITS effectively exempts these harmful activities from the requirements of the Endangered Species Act.

The Service’s attempt to justify its failure to include any limit on incidental take for these various activities is without merit. For example, the agency writes that the “nature” of various effects do not allow creation of numeric limits or valid proxies. But the agency quickly contradicts itself. The Service states that take due to the APS weir’s blockage of fish passage should not “exceed up to 500 individual Colorado pikeminnow or Razorback sucker in any one year.”⁶⁴ Thus, the Service itself suggests a potential, workable numeric take limit for the weir. Thus, there is no justification for not including this limit in the ITS. Similarly, with respect to release of non-native fish release from Morgan Lake, the agency suggests that introduction of “a single, novel, nonnative fish species . . . would exceed the incidental take for this activity.”⁶⁵ Thus, there is an apparently workable proxy limit. The failure of the Service to include such an actual limit in the ITS was arbitrary and unlawful and amounts just to a free pass on numerous harmful activities. Finally, the agency offers no explanation for why it could not include either a numeric limit or valid proxy for take due to water withdrawal. In sum, the BiOp’s failure to include valid and enforceable take limits for multiple harmful activities was arbitrary and capricious and unlawful.

⁶³ BiOp at 134.

⁶⁴ BiOp at 140-41.

⁶⁵ BiOp at 141.

xi. The BiOp's No Adverse Modification Conclusion Was Arbitrary and Capricious

The BiOp finds that “[p]ast and present activities within the San Juan River basin have degraded these habitat elements [the primary constituent elements of Colorado pikeminnow critical habitat] to the extent that their co-occurrence at the appropriate places and times is insufficient to support successful Colorado pikeminnow and Razorback sucker recruitment at levels that will provide for the species’ conservation.”⁶⁶ Further, the BiOp recognizes that the effects that are preventing the co-occurrence of these habitat conditions “are attributable to the degraded environmental baseline, the proposed action and future predicted increased global contributions of Hg to the basin.”⁶⁷ However, the BiOp then concludes that the actions of SJRRIP and proposed conservation measures are “clearly offsetting” these impacts, so no adverse modification is likely to occur.⁶⁸

The principal activity of SJRRIP affecting persistence of Colorado pikeminnow in the San Juan River is its massive fish stocking program, without which pikeminnow in the San Juan River would be extirpated.⁶⁹ However, while stocking adds fish to the river for a temporary period, it does not address and therefore cannot “offset” the underlying impairment of critical habitat. Plus, at present SJRRIP’s stocking program is only planned to continue through 2020. There is no indication that it is going to continue through 2041. Further, as noted, none of the conservation measures assure any reduction or limitation of the projected increases in mercury and selenium in the San Juan River. And, also as noted, the BiOp’s critical habitat discussion fails entirely to consider the requirements for recovery of threatened and endangered fish. For example, despite decades of stocking, the current population of Colorado pikeminnow in the San Juan River is unable to reproduce at a sufficient rate to actually recruit fish to the adult, reproducing population. Given that habitat conditions are only predicted to become more polluted and instream flows are only projected to decrease, there is no evidence that Colorado pikeminnow or Razorback sucker will ever be able to establish a self-sustaining population if the FCPP/NMEP is allowed to continue its deleterious operations for 25 more years. In sum, the BiOp does not draw a rational connection between the facts found and its no adverse modification conclusion.

xii. Consulting Agencies’ Arbitrary Reliance on an Invalid BiOp

All federal agencies have an independent duty under section 7(a)(2) of the ESA to ensure that their actions do not lead to jeopardy of threatened or endangered species and do not lead to adverse modification or destruction of critical habitat. Arbitrary reliance on an invalid biological opinion violates this duty. Here, the Service’s BiOp for the FCPP and NMEP is legally flawed in numerous respects outlined above. Accordingly, reliance on the BiOp by the action agencies here

⁶⁶ BiOp at 136.

⁶⁷ BiOp at 136.

⁶⁸ BiOp at 136.

⁶⁹ BiOp at 132.

violated their substantive duties under section 7(a)(2) to avoid jeopardy and adverse modification of critical habitat of Colorado pikeminnow and Razorback sucker.

III. CONCLUSION

For the foregoing reasons, the Service and action agencies have violated and continue to violate Sections 7 of the ESA by failing to ensure that already-approved, ongoing actions in connection with the FCPP and NMEP will not jeopardize the continued existence of endangered species or adversely modify critical habitat.

We would welcome the opportunity to meet with the Service and the action agencies to work to resolve these issues within the notice period. In the meantime, no coal mining, transportation, combustion or waste disposal activities should be allowed to move forward at the Navajo Mine or Four Corners Power Plant absent full compliance with Section 7 of the ESA. Instead, the action agencies and the Service must reinitiate formal ESA Section 7 consultation on impacts of the FCPP and NMEP. If we do not hear from you or you do not act within 60 days to correct these violations of the ESA, the Conservation groups will pursue litigation in federal court against the agencies and officials named in this letter.

We will seek injunctive and declaratory relief, and legal fees and costs regarding these violations. Thank you for your time and consideration. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,



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