



October 9, 2012

**BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

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Secretary of the Interior
U.S. Department of the Interior
1849 C St., NW
Washington, D.C. 20240

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Jesse Juen
New Mexico State Director
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Santa Fe, NM 87508

Re: Notice of Intent to File Suit Under the Endangered Species Act

Dear Interior Secretary Salazar, Acting Assistant Secretary Burke, Acting Director Pool, and State Director Juen:

Pursuant to 16 U.S.C. § 1540(g) of the Endangered Species Act (“ESA”), WildEarth Guardians intends to file suit against the U.S. Department of Interior and Bureau of Land Management (“BLM”) (hereafter referred to as “the Agencies”) over their failure to comply with Sections 7 and 9 of the ESA, as well as regulations set forth at 50 C.F.R. § 402, *et seq.*, over three decisions related to coal mining at the San Juan Coal Mine in San Juan County in northwestern New Mexico, which is located in the Four Corners region of the southwestern United States. We specifically intend to file suit over the Agencies’ failure to consult, adequately consult, and/or reinstate consultation pursuant to Section 7 over the impacts of these decisions to the Colorado pikeminnow and razorback sucker, both species listed as endangered under the ESA, and their critical habitat, and prevent take of these species in accordance with Section 9 of the ESA. We intend to file suit after 60 days if we cannot achieve a resolution of these violations beforehand.

The violations of the ESA at issue here are over the Agencies’ failure to address direct, indirect, and cumulative mercury and selenium contamination impacts related to coal mining at the San Juan Coal Mine in San Juan County, New Mexico. The coal-related decisions specifically at issue include the following:

1. **San Juan Coal Mine Lease NMNM 28093 Modification:** This decision, made by the BLM New Mexico State Director on May 12, 2006, authorized a modification to federal coal lease number NMNM 28093. The lease modification was issued pursuant to the BLM's authorities under the Mineral Leasing Act, 30 U.S.C. § 203, and regulations implementing the Mineral Leasing Act at 43 C.F.R. § 3432. The decision added 160.60 acres to the coal lease. In total, lease number NMNM 28093 contains 3,855.60 acres and is located in San Juan County, New Mexico. This decision is attached hereto as Exhibit 1.
2. **San Juan Coal Mine Lease NMNM 28093 Readjustment:** This decision, which was made by the BLM on January 6, 2010 and became effective April 1, 2010, readjusted the terms and conditions of coal lease NMNM 28093. The lease readjustment was issued pursuant to BLM's authorities under its coal management regulations at 43 C.F.R. § 3451. Notice of this decision is provided on the BLM's LR2000 case recordation website. The LR2000 page for coal Lease NMNM 28093, which identifies the 2010 lease readjustment, is attached as Exhibit 2.
3. **San Juan Coal Mine Mining Plan Modification:** This decision, made by the Assistant Interior Secretary for Land and Minerals Management on January 17, 2008, authorized a modification to the mining plan for federal coal lease number NM-99144. The mining plan modification was issued pursuant to the Interior Department's authorities under the Mineral Leasing Act, 30 U.S.C. § 207(c), the Surface Mining Reclamation and Control Act, 30 U.S.C. § 1273, and regulations thereunder at 30 C.F.R. § 730. This decision is attached hereto as Exhibit 3.
4. **Farmington Field Office Resource Management Plan:** This decision, made by the BLM New Mexico State Director on September 29, 2003, approved the Resource Management Plan ("RMP") for the Farmington Field Office in northwestern New Mexico. The RMP was issued pursuant to the BLM's authorities under the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1712, and regulations thereunder at 43 C.F.R. § 1601. The Record of Decision approving the RMP is attached hereto as Exhibit 4.

These decisions have had the effect of authorizing coal mining at the San Juan Coal Mine. The San Juan Coal Mine provides fuel to the adjacent San Juan Generating Station, a 1,848 megawatt coal-fired power plant. As will be discussed further in this notice letter, the San Juan Coal Mine, both directly from the mine and indirectly from the San Juan Generating Station, leads to the release of selenium and mercury into the San Juan River drainage, which supports both populations of endangered Colorado pikeminnow and razorback sucker and their critical habitat.

The best available scientific information clearly documents that mercury and selenium contamination negatively affects both the pikeminnow and razorback sucker. Thus, by undertaking the aforementioned actions at issue in the notice letter, the Agencies are undertaking activities that may affect these endangered species and their critical habitat. Despite this, the

Agencies have yet to consult and/or reinstate consultation over these contamination impacts to ensure that these species' survival is not jeopardized, that their critical habitat is not adversely modified, and that the species are not inappropriately taken (i.e., harmed) under the ESA. This violates Section 7(a)(1), Section 7(a)(2), and Section 9 of the ESA.

These violations are especially of concern in light of the fact that the U.S. Fish and Wildlife Service ("USFWS") already has concluded that mercury and selenium contamination may be jeopardizing the continued existence of these species and adversely modifying their critical habitat. In an October 15, 2009 draft Biological Opinion prepared in response to the proposed construction of the 1,500 megawatt Desert Rock coal-fired power plant in San Juan County, New Mexico, the USFWS found that the continued existence of both the Colorado pikeminnow and razorback sucker would be jeopardized and that their critical habitat would be adversely modified. This Biological Opinion is attached hereto as Exhibit 5. Although the impacts of the Desert Rock power plant would have been relatively small and confined to the San Juan River Basin, they were significant in light of the cumulative contamination impacts—particularly from the Navajo Indian Irrigation Project, which is underway—already experienced by the species in the San Juan River.

These findings are buttressed by reports indicating that mercury and selenium contamination are adversely affecting the Colorado pikeminnow and razorback sucker and their critical habitat in other rivers in the Colorado Plateau region, including in the San Juan River, and that contamination may be preventing the recovery of these species. With regards to the Colorado pikeminnow, the USFWS recently reported:

Management strategies for controlling anthropogenic mercury emissions are necessary as atmospheric pollution can indirectly affect this endangered species, its critical habitat, and its recovery by ambient air exposure, deposition into aquatic habitat and bioaccumulation in diet and fish tissues.

USFWS. 2011. "Colorado pikeminnow (*Ptychocheilus lucius*) 5-Year Review: Summary and Evaluation" (hereafter referred to as the "Colorado pikeminnow 5-Year Review") at 21. This 5-year review is attached as Exhibit 6.

The best available scientific information therefore strongly indicates that: 1) Contamination is already adversely affecting the pikeminnow and sucker within the San Juan River and 2) Adverse contamination impacts in the San Juan River may already be jeopardizing the continued existence of both species rangewide, as well as adversely modifying their critical habitat. In light of these cumulative impacts and this best available scientific information, the need to consult and/or reinstate consultation, and comply with the ESA is especially urgent with regards to oversight of the operation of the San Juan Coal Mine.

Pursuant to the ESA, we intend to file suit after 60 days against the Agencies if these violations are not remedied. Any suit will seek declaratory and injunctive relief, as well as other relief available to WildEarth Guardians under the ESA and other applicable statutes and regulations. Below, we explain in detail the aforementioned violations.

I. ESA Background

It is important to first set forth the Agencies' obligations under the ESA in order to frame the violations at issue in this notice letter. To this end, it is critical to note that the overarching purpose of the ESA is "to provide a program for the conservation [of] endangered species and threatened species" and "to provide a means whereby the ecosystems upon which [such] species depend may be conserved." 16 U.S.C. § 1531(b). "Conservation," as well as the terms "conserve" and "conserving" mean "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." 16 U.S.C. § 1532(3). In other words, the ESA is meant to both protect species from extinction, as well as ensure their ultimate recovery.

To fulfill this purpose, the USFWS has a duty to list a species as threatened or endangered solely on the basis of biological criteria and the best available scientific and commercial data. 16 U.S.C. §§ 1533(b), 1533(c). A threatened species is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20). An endangered species is "any species which is in danger of extinction throughout all or a significant portion of its range[.]" 16 U.S.C. § 1532(6). Once a species is listed as threatened or endangered, its critical habitat must be designated. 16 U.S.C. § 1533(a)(3). Critical habitat includes areas that contain the features "essential to the conservation of the species[.]" 16 U.S.C. § 1532(5)(A)(i)(I).

Federal agencies are required to "utilize their authorized in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered species and threatened species[.]" 16 U.S.C. § 1536(a)(1). To fulfill this conservation mandate, federal agencies are required under section 7(a)(2) of the ESA to avoid actions that are "likely to jeopardize the continued existence" of any listed species or "result in the destruction or adverse modification of" critical habitat. 16 U.S.C. § 1536(a)(2). To ensure compliance with these prohibitions, the "action agency" is required to consult with the USFWS upon proposing to authorize, fund, or carry out an action that "may affect" a species or its critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.2.

The consultation requirements under the ESA are twofold. Section 7(a)(1) imposes a proactive affirmative duty upon federal agencies, regardless of specific agency action, to further the conservation of threatened and endangered species, while Section 7(a)(2) imposes a reactive affirmative duty that is triggered by discrete agency action. Both statutory provisions require consultation in fulfilling both the proactive and reactive duties and ensure both the protection and recovery of threatened and endangered species.

To facilitate the Section 7(a)(2) consultation process, the action agency prepares a "biological assessment." 16 U.S.C. § 1536(c). A biological assessment is required to include information "concerning listed and proposed species and designated and proposed critical habitat that may be present in the action area" and an "evaluation [of] potential effects of the action on such species and habitat." 50 C.F.R. § 402.02. In general, a biological assessment includes a

“description of the action to be considered,” “description of the specific area that may be affected by the action,” “description of any listed species or critical habitat that may be affected by the action,” “description of the manner in which the action may affect any listed species or critical habitat and an analysis of any cumulative effects,” “relevant reports,” and “any other relevant available information on the action, the affected listed species, or critical habitat.” *Id.* § 402.14(c). A biological assessment must be based on the “best scientific and commercial data available.” 40 C.F.R. § 402.14(d).

The effects of the action include the direct, indirect, and cumulative effects to a species from a proposed agency action, as well as “interrelated and interdependent actions.” 40 C.F.R. §§ 402.02 (defining “effects of action”), 402.14(c)(4) & (8). Direct impacts are caused by the action and occur at the same time and place. 50 C.F.R. § 402.02. Indirect impacts are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. *Id.* Cumulative effects include “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” *Id.* Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. *Id.* Interdependent actions are those that have no independent utility apart from the action under consideration. *Id.*

A biological assessment is provided to the USFWS in order to obtain the agency’s biological opinion as to whether “jeopardy” of the species’ survival or “adverse modification” of its critical habitat is likely to occur due to the action and, if so, sets forth the reasonable and prudent alternatives that could avoid such ESA violations. 16 U.S.C. § 1536(b)(3)(A). Jeopardy results when it is reasonable to expect that the action would “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.” 50 C.F.R. § 402.02. Adverse modification occurs when it is reasonable to expect that the action will result in “a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.” 50 C.F.R. § 402.02.

The duty of federal agencies to consult is ongoing. Regulations implementing the ESA specifically require that federal agencies reinitiate consultation under certain key circumstances, including when “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.” 50 C.F.R. § 402.16(b). Above all, reinitiation of consultation is required “where discretionary Federal involvement or control over the action has been retained or is authorized by law[.]” *Id.*

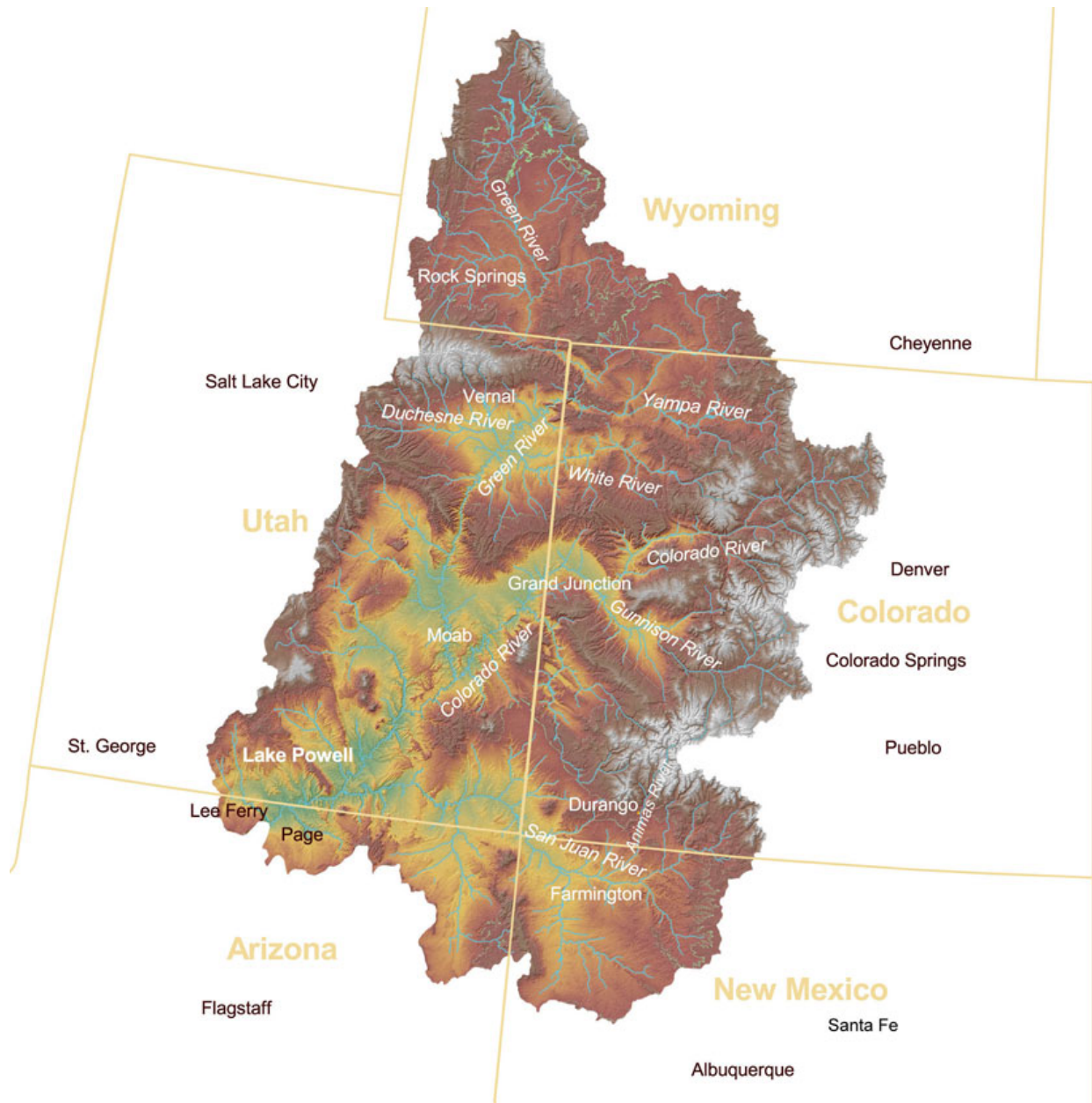
Above all, the ESA generally prohibits take of threatened and endangered species, even by federal agencies. “Take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” 16 U.S.C. § 1532(19). ESA regulations further define “harm” as “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3.

If an agency’s action will lead to take, but will not jeopardize the continued existence of a listed species or adversely modify its critical habitat, or where reasonable and prudent

alternatives have been identified, the ESA provides an exemption to the “take” prohibition. 16 U.S.C. § 1536(b)(4)(A). This exemption provides that the USFWS may provide a “take statement,” provided that it: 1) discloses the impacts on the species; 2) identifies the reasonable and prudent measures that the USFWS considers necessary to minimize such impacts; and 3) sets forth terms and conditions that must be complied with by the federal agency to implement these reasonable and prudent measures. 16 U.S.C. § 1536(b)(4). Such a take statement must quantify the amount of take of the species being authorized and, if take cannot be quantified, a legally-valid surrogate must be included. *Id.*

II. The Colorado Pikeminnow and Razorback Sucker

The Colorado pikeminnow and razorback sucker are both native fish that once ranged throughout the Colorado River basin of the southwestern United States, but now are primarily limited to inhabiting river systems of the Upper Colorado River Basin within the states of Arizona, Colorado, New Mexico, and Utah. The map below illustrates the geographic area covered by the Upper Colorado River Basin.



Upper Colorado River Basin. Map Available from the Upper Colorado River Endangered Fish Recovery Program at http://www.coloradoriverrecovery.org/images/UCEFR_map.jpg.

“The Colorado pikeminnow is the largest member of the minnow family native to North America.” Exhibit 5 at 26. A pike-like fish, it is the top native predator in the Colorado River system. They once grew as large as 1.8 meters (6 ft.) in length and weighed nearly 45 kg (100 lb.), but today rarely exceed one meter (~3 ft.) in length or weigh more than 8 kilograms (18 lbs.). *See id.* 26. The diet of large adults consists almost entirely of other fishes. *See id.* Spawning, hatching, and larval development are tied closely with specific habitat requirements including day length, temperature, flow level, and perhaps substrate characteristics. *See id.* at 27-28.



Colorado Pikeminnow. Image available from the Upper Colorado River Endangered Fish Recovery Program at <http://www.coloradoriverrecovery.org/general-information/the-fish/images/colorado-pikeminnow-large.jpg>.

The pikeminnow was listed as endangered under the ESA in 1967 due to precipitous declines stemming from the loss and degradation of its river habitat. The species once ranged throughout the Colorado River system of the southwestern United States, but wild, reproducing populations are now limited to the Green River, upper Colorado River (above Glen Canyon Dam), and San Juan River. *See* USFWS. 2002. Colorado pikeminnow (*Ptychocheilus lucius*) Recovery Goals: amendment and supplement to the Colorado Squawfish Recovery Plan. USFWS, Mountain-Prairie Region (6), Denver, CO, available online at http://ecos.fws.gov/docs/recovery_plan/020828b.pdf (hereafter referred to as the “Colorado pikeminnow Recovery Plan”) at viii. In 1994, critical habitat was designated for the Colorado pikeminnow under the ESA. *See* 59 Fed. Reg. 13374 (March 21, 1994). This designated habitat encompassed 1,148 river miles, including stretches of the Colorado River, Green River, Yampa River, White River, and San Juan River, all in the upper Colorado River basin. *See id.* at 13384. In 2002, a recovery plan was developed for the Colorado pikeminnow establishing goals for downlisting and ultimately delisting the species under the ESA. Among the key goals was the establishment of a population consisting of 1,000 five year-old or greater fish in the San Juan River and ultimately a self-sustaining population of more than 800 adults. Colorado pikeminnow Recovery Plan at ix.

Razorback suckers are bottom browsers, “sucking up or scraping off small invertebrates, algae, and organic matter with their fleshy, protrusible lips.” Exhibit 5 at 34. “Adults often exceed 3 kg (6 lbs) in weight and 600 mm (2 ft) in length.” *Id.* Habitat requirements for young suckers are not well-studied, but “it is assumed that low-velocity backwaters and side channels are important for [young of the year] and juveniles [and that] maintaining low-velocity habitat is important for the survival of larval razorback suckers.” *Id.* at 36-37. Individuals of both species may live over 40 years. *See id.* at 34.



Razorback sucker. Image available from the Upper Colorado River Endangered Fish Recovery Program at <http://www.coloradoriverrecovery.org/general-information/the-fish/images/razorback-large.jpg>.

The sucker was listed as endangered under the ESA in 1991 also due to precipitous declines stemming from the loss and degradation of habitat. The species once ranged throughout the Colorado River system of the southwestern United States, but is now currently found only in small numbers in the Green River, upper Colorado River, parts of the lower Colorado River, small tributaries of the Gila River, and the San Juan River. According to the USFWS, “Remaining wild populations are in serious jeopardy.” USFWS. 2002. Razorback sucker (*Xyrauchen texanus*) Recovery Goals: amendment and supplement to the Razorback Sucker Recovery Plan. USFWS, Mountain-Prairie Region (6), Denver, CO, available online at http://ecos.fws.gov/docs/recovery_plan/060727c.pdf (hereafter “razorback sucker Recovery Plan”) at viii. In 1994, critical habitat was designated for the razorback sucker under the ESA. See 59 Fed. Reg. 13374 (March 21, 1994). This designated habitat encompassed 1,724 river miles, including stretches of the upper Colorado River, Green River, Yampa River, Duchesne River, White River, Gunnison River, San Juan River, and portions of the lower Colorado, Gila, Salt, and Verde Rivers. See *id.* at 13383. In 2002, a recovery plan was developed for the razorback sucker establishing goals for downlisting and ultimately delisting the species under the ESA. Among the key goals was the maintenance of “genetically and demographically viable, self-sustaining populations” in the Colorado River and either the Green River or San Juan River. See Razorback sucker Recovery Plan at ix.

Both species are susceptible to the impacts of selenium and mercury contamination. In fact, both the Colorado pikeminnow and razorback sucker Recovery Plans specifically note that the “adverse effects of selenium contamination” must be reevaluated before either species can be downlisted or delisted entirely under the ESA. See Colorado pikeminnow Recovery Plan at 34; Razorback sucker Recovery Plan at 33.

In the San Juan River, the USFWS notes that sources of selenium include “[c]oal mining and other energy development, including oil and gas exploration and refining; and [e]mission and deposition, as well as wastes and effluent discharges from coal-fired power plants[,]” Exhibit 5 at 98.

Though small concentrations (<0.5 micrograms per gram [$\mu\text{g/g}$] on a dry weight [DW] basis) of selenium are required in the diets of fish, it is toxic at even slightly higher levels. “Selenium is generally one of the most toxic elements to fish, and researchers have reported selenium toxicity to occur at dietary concentrations only 7 – 30 times greater than those considered essential for proper nutrition (i.e., > 3 mg selenium/kg DW).” Exhibit 5 at 100. “The safe level of selenium concentrations for protection of fish and wildlife in water is considered to be <2 $\mu\text{g/L}$, and chronically toxic levels are considered to be >2.7 $\mu\text{g/L}$.” *Id.* at 77. According to the USFWS:

Excess dietary selenium causes elevated concentrations of selenium to be deposited into developing eggs, particularly the yolk. If concentrations in the egg are sufficiently high, developing proteins and enzymes become dysfunctional or result in oxidative stress, conditions that may lead to embryo mortality, deformed embryos or embryos that may be at higher risk for mortality.

Exhibit 5 at 76. Selenium concentrations in eggs exceeding 10 $\mu\text{g/g}$ DW correspond with increased teratogenic deformities; though these deformities do not affect hatchability and are not always lethal, they lower the probability that an affected individual will survive and breed. “At sufficiently high selenium concentrations in eggs, larvae are unable to survive.” *Id.* at 99-100.

Razorback suckers are already being impacted by selenium. As studies have reported, “In some backwaters along the Colorado River in the Grand Valley, [selenium concentrations in eggs] were as high as 30 – 40 $\mu\text{g/g}$ DW....” Exhibit 5 at 101. When these larvae were fed site food that ranged in concentration from 4.5 – 37 $\mu\text{g/g}$, survival was near zero. Broodstock fed food with a similar selenium concentration also showed a much reduced survival rate (approximately 20 – 80 percent survival in three trials). *Id.* at 101-102.

In the USFWS’s Biological Opinion for the Desert Rock coal-fired power plant, 4 $\mu\text{g/g}$ DW selenium concentrations in whole body fish was given as the threshold for the onset of adverse effects (i.e., growth, survival, reproductive impairment) for both razorback sucker and Colorado pikeminnow based on a variety of studies. *See* Exhibit 5 at 103. Based on this finding, the USFWS found that both species were suffering tremendously as a result of selenium contamination in the San Juan River and were likely to suffer even further in the future. As the USFWS stated, “During 1994 – 1995, 45 percent of whole body razorback sucker concentrations exceeded the 4.0 $\mu\text{g/g}$ DW level of concern” based on collections of muscle tissue. Exhibit 5 at 107. The Agency further found that concentrations of selenium in invertebrates sampled, if indicative of the diets of razorback suckers, indicated that 40 percent exceeded the dietary level of concern. *See id.* at 108. Looking to the future, the USFWS noted that the “[Navajo Indian Irrigation Project (NIIP)], when fully constructed, is expected to increase selenium concentrations in the San Juan River basin by 119 percent.” *Id.* at 121. “[I]f selenium concentrations in fish tissues increase 119 percent due to NIIP, the concentrations expected would range from 2.7 – 21.3 $\mu\text{g/g}$ DW, and 93 percent would exceed the 4.0 $\mu\text{g/g}$ DW level of concern.” *Id.* at 107.

Noting the same study, the USFWS found that when four Colorado pikeminnow were sampled in the San Juan River, “whole body selenium concentrations range[d] from 3.0 – 3.9

µg/g DW.” Exhibit 5 at 107. The Agency noted that if selenium concentrations in fish tissues increase only ~30-40 percent, all Colorado pikeminnow would be above the threshold for adverse reproductive effects. The USFWS also noted that prey of the Colorado pikeminnow exhibited elevated levels of selenium in the San Juan River, stating “If the concentrations in the fish samples were indicative of the diets of Colorado pikeminnow, then 14 percent of them exceed the 4.0 ug/g DW dietary level of concern.” Exhibit 5 at 109. The Agency further noted that, “If NIIP increased dietary invertebrate selenium concentrations by 119 percent, then 71 percent of them exceed the 4.0 ug/g DW dietary level of concern... In other words, 71 percent of the Colorado pikeminnow in the San Juan River basin would experience adverse effects in offspring such as growth limitations, reproductive impairment, and death.” Exhibit 5 at 109.

With regards to mercury, the USFWS has noted:

The global pool of mercury in the atmosphere is a mixture of mercury emitted from all sources (both natural and anthropogenic) and is dominated by primary and secondary anthropogenic emissions [e.g. coal-fired power plants] that can deposit even at the most remote locations from known sources... Atmospheric transport is likely the primary mechanism by which elemental mercury is distributed throughout the environment. The reactive form of mercury is often deposited to land or water surfaces much closer to their sources due to its chemical reactivity and high water solubility.

Exhibit 5 at 74. The Agency has also reported that coal-fired power plants can emit large amounts of mercury impacting the surrounding area in the San Juan watershed, stating “Sediment cores from several lake bottoms in southwestern Colorado demonstrate a clear increase in mercury deposition in the 1960s and 1970s. This increase is likely due, in part, to the Four Corners area power plants built between 1963 and 1977.” Exhibit 5 at 75.

Mercury emissions enter the San Juan River system through “ambient air exposure, deposition, and runoff into aquatic habitats, and subsequent bioaccumulation through the food chain.” Exhibit 5 at 86. The USFWS has stated:

Where mercury loading is dominated by atmospheric sources, it is thought that the degree of mercury accumulation in fish is roughly proportional to the long-term rate of atmospheric mercury deposition, other factors being equal. Atmospheric deposition is the predominant pathway delivering mercury to aquatic systems and into fish tissues. (75, internal citations omitted)

Id. at 86. “Fish are exposed to mercury through diet... Once ingested and absorbed into the blood, there is no known way for an organism to excrete it.” *Id.* at 120. “[M]icroorganisms convert mercury to methylmercury, a highly toxic form of mercury. Because methylmercury is stable and accumulates through the food chain, the highest mercury concentrations are found in top predators, such as the Colorado pikeminnow, potentially causing reproductive impairment, behavioral changes, and brain damage.” *Id.* at 86. As the USFWS has stated:

The brain and the central nervous system are very sensitive to mercury... Methylmercury in the brain causes lysis (death) of cells of the central nervous system. Because nervous

system cells are replenished only by cell division during an organism's development, cell lysis by methylmercury in adult fish results in permanent brain damage. Thus, nerve cell damage is irreversible and most likely cumulative. (93-94, internal citations omitted)

Laboratory experiments have shown diminished reproduction and endocrine impairment in fish exposed to dietary methylmercury at environmentally relevant concentrations, with documented effects on production of sex hormones, gonadal development, egg production, spawning behavior, and spawning success. Field studies have found declining levels of sex hormones with increased methylmercury exposure.

Id. at 95. The toxicity of mercury has been demonstrated in fish, birds, and mammals. *See id.* at 93. Multiple studies “indicate that adverse effects in sensitive species of fish may begin at [whole body] concentrations less than 0.2 mg/kg¹ [wet weight (WW)].” *Id.* In its Biological Opinion for the Desert Rock coal-fired power plant, the USFWS concluded that, “For the purposes of the Biological Opinion, adverse effects, including reproductive effects, were assumed to begin at this whole body concentration. In studied fish species, whole body concentrations of 0.68 µg/g WW were associated with brain lesions and behavioral impairment. Exhibit 5 at 97. To this end, the USFWS found:

Assuming fish collected during 1987 – 1996 represent steady state equilibrium with mercury emissions and deposition, then concentrations in fish collected from the San Juan River are currently above thresholds of effect for predatory fish. In fact, concentrations in other predatory fish species from lakes and reservoirs in the San Juan River basin exceed these thresholds currently. (96, internal citations omitted)

Exhibit 5 at 96.

The USFWS reports that, muscle concentrations of mercury in razorback suckers were estimated to range from 0.1 – 0.22 µg/g WW and brain concentrations from 0.01 – 0.20 µg/g WW and stated, “By 2020, mercury deposition in the San Juan River basin is expected to increase 35.5 percent.” Exhibit 5 at 97 and 120. Thus “the mercury concentrations in San Juan River razorback sucker are expected to increase by approximately 35.5 percent, to range from 0.003 – 0.43 µg/g WW with median concentration 0.11 µg/g WW.” *Id.* at 96. Further additions to the mercury load could push concentrations over the 0.2 µg/g WW threshold causing reproductive impairments.

The Colorado pikeminnow, a top predator susceptible to bioaccumulation, is currently affected by mercury poisoning. As the USFWS noted, “Estimated whole body Colorado pikeminnow mercury concentrations... likely range from 0.02 – 1.3 µg/g WW and average 0.46 µg/g.” Exhibit 5 at 91. Mercury concentrations increase with length, appearing to level out when the fish reaches 600-700 mm. *See id.* at 90. Extrapolating from the mercury concentrations in sampled pikeminnows and studies of mercury impacts on other species of fish, the USFWS concluded that:

¹ Note: 0.2 mg/kg is equivalent to 0.2 µg/g.

10 percent of Colorado pikeminnow may currently be experiencing brain lesions and impairment of essential behaviors, and the population affected will likely increase to 32 percent by 2020 [and that] the majority of Colorado pikeminnow would likely experience reproductive impairment through a combination of effects to the 95 portions of the brain that regulate the production and timing of sex steroids. Further, during larval development, elevated methylmercury exposure would also lead to impaired testicular development and atrophy. At the expected whole body mercury concentrations, 64 percent of Colorado pikeminnow may be experiencing reproductive impairment currently.

Id. at 94. The Agency further reported that, “By 2020, mercury deposition in the San Juan River basin is expected to increase 35.5 percent... With this additional mercury, 72 percent of Colorado pikeminnow in the San Juan River basin are expected to experience reproductive impairment.”
Id. at 120.

The USFWS further found that:

Both mercury and selenium are detrimental to the Colorado pikeminnow and razorback sucker through concentrations in their diet such that both species will experience significant reproductive impairment. Therefore, the food supply in the San Juan River system is not currently adequate, [as it is not] free of detrimental levels of contaminants.

Exhibit 5 at 110.

Ultimately, based on its consideration of the best available science regarding direct, indirect, and cumulative mercury and selenium contamination impacts, the USFWS concluded that construction and operation of the Desert Rock coal-fired power plant would jeopardize the continued survival and recovery of both the razorback sucker and the Colorado pikeminnow, as well as adversely modify critical habitat for these species. The USFWS explained:

The San Juan River basin is one of only three subbasins inhabited by the Colorado pikeminnow. In the Recovery Goals for the Colorado Pikeminnow, criteria for downlisting and delisting the species are identified. In order to downlist the species, the San Juan River population of Colorado pikeminnow must reach at least 1,000 age 5+ fish. Given the baseline levels of mercury and selenium in the system as well as the amounts added to the system due to DREP [Desert Rock Energy Project], 72 percent of Colorado pikeminnow would experience reproductive impairment due to mercury levels in their diets. Of those that did successfully reproduce, 71 percent of their offspring would experience deformities that would lead to growth limitations, reproductive impairment, and/or death due to selenium. Due to these factors, it is extremely unlikely the Recovery Goals would be met and the survival and recovery of the Colorado pikeminnow in the wild would be significantly diminished.

In the Recovery Goals for the Razorback Sucker, the San Juan River system is one of two that must show stable or increasing trends in order to achieve downlisting or delisting. According to our analysis, razorback suckers would not be affected by mercury in the system. However, given baseline levels of selenium in the system as well as the amounts

added by DREP, 85 percent of their offspring would experience deformities that would lead to growth limitations, reproductive impairment, and/or death. Recovery of the San Juan River population of razorback sucker would not be achievable, significantly diminishing survival and recovery in the wild.

Exhibit 5 at 120-121. In response to these findings, the USFWS concluded, “After reviewing the current status of the fish, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our Biological Opinion that implementation of the DREP as proposed, is likely jeopardize the continued existence of the Colorado pikeminnow and razorback sucker.” *Id.* at 120. The USFWS further found that the direct, indirect, and cumulative impacts of the Desert Rock coal-fired power plant would “adversely modify critical habitat for the Colorado pikeminnow and razorback sucker.” *Id.* at 122.

III. The San Juan Coal Mine and San Juan Generating Station

The San Juan Coal Mine is located in San Juan County in northwestern New Mexico. The mine produces around 6.7 million tons of coal annually from underground mining operations, all of which is used to fuel the adjacent San Juan Generating Station, but is permitted to mine up to 8.0 million tons annually.² In early 2008, the Office of Surface Mining, Reclamation and Enforcement (“OSMRE”) stated that the life of the approved mining operations would be approximately nine years, or until 2016. *See* Memorandum from Allen D. Klein, Western Regional Director, OSMRE, to Brent Wahlquist, Director, OSMRE, “Recommendation for Approval of the Mining Plan Modification for new Federal Lease NM-99144 at San Juan Coal Company’s San Juan Mine located in San Juan County, New Mexico,” January 7, 2008. This memo is attached as Exhibit 7. However, mining reclamation and other associated activities are likely to occur far beyond 2016.

² According to U.S. Energy Information Administration Form EIA-923 Fuel Receipts and Cost Report data available online at <http://www.eia.gov/electricity/data/eia923/>. According to this data, no coal produced from the San Juan Coal Mine is used to fuel any other power plant.



**Aerial View of San Juan Coal Mine and San Juan Generating Station.
Image Taken by EcoFlight.**

According to the U.S. Environmental Protection Agency's ("EPA's") Toxic Release Inventory database, the operation of the San Juan Coal Mine and San Juan Generating Station leads to the release of 3,882.77 pounds of mercury and 324,111 pounds of selenium annually. These releases occur in the form of air emissions, water discharge, waste disposal, and on-site surface impoundments. These releases occur within the San Juan River drainage. Indeed, the San Juan Coal Mine and San Juan Generating Station are located directly north of the San Juan River near Waterflow, New Mexico in San Juan County. According to National Pollutant Discharge Elimination System ("NPDES") Permits issued by the EPA, both facilities are permitted to discharge selenium, both permanently and temporarily, into the San Juan River and/or its tributaries. These NPDES permits are attached as Exhibits 8 and 9.

**Mercury and Selenium Releases from San Juan Coal Mine and
San Juan Generating Station (in pounds)**

Facility	Mercury Releases	Selenium Releases
San Juan Coal Mine ³	1,327.6	162,490
San Juan Generating Station ⁴	2,555.17	161,621
TOTALS	3,882.77	324,111

The map below, produced with Google Earth, shows the general location of the San Juan Coal Mine and the San Juan Generating Station in relation to the San Juan River and the town of Waterflow.



**Proximity of San Juan Generating Station and San Juan Coal Mine to San Juan River.
The Plant and Mine are Approximately 2-3 miles from the San Juan River.**

IV. The Violations of the ESA

The Interior Department and BLM, both federal agencies, are duty-bound to consult and/or reinstate consultation under the ESA because the decisions at issue here—namely, the San Juan Coal Mine Lease Modification, San Juan Coal Mine Lease Readjustment, San Juan

³ Data available online at http://oaspub.epa.gov/enviro/tris_control.tris_print?tris_id=87421SNJNMCOUNT.

⁴ Data available online at http://oaspub.epa.gov/enviro/tris_control.tris_print?tris_id=87421SNJNGCOUNT.

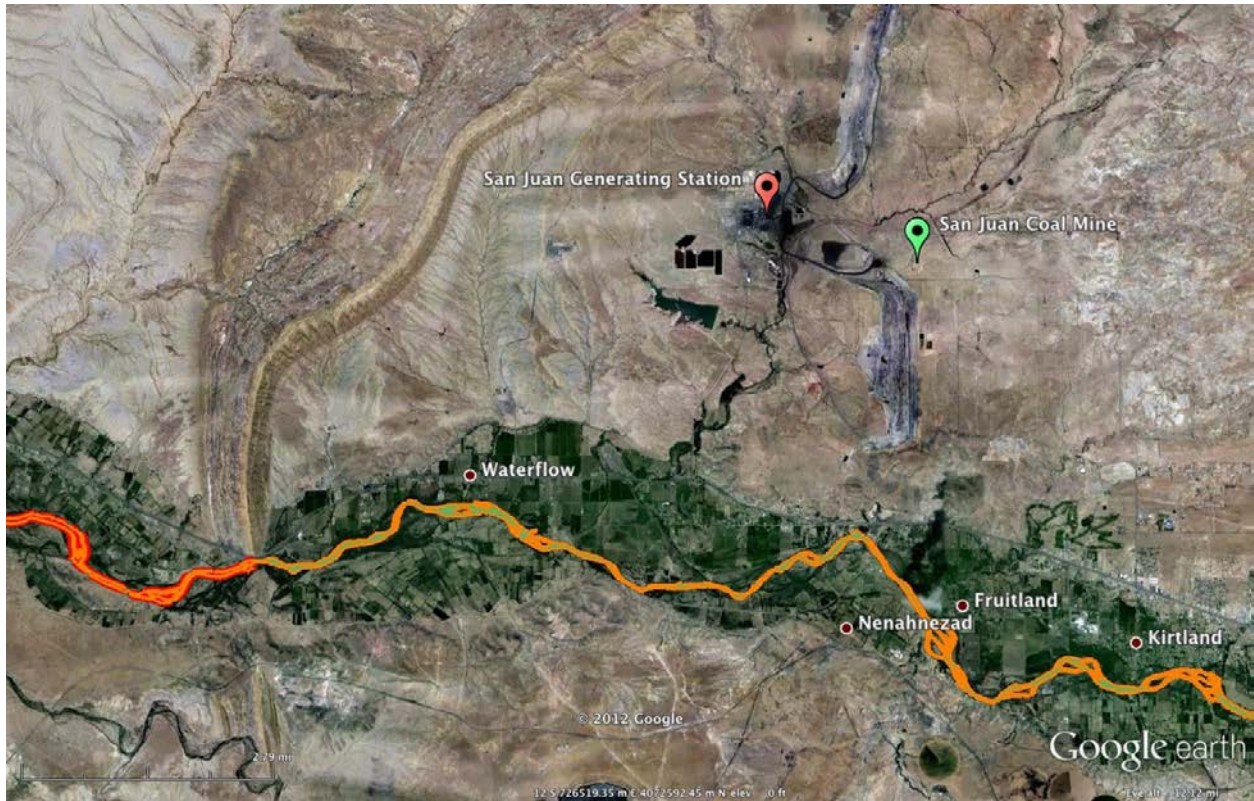
Coal Mine Mining Plan Modification, and the Farmington RMP—trigger Section 7 responsibilities. The failure to perform the required consultation indicates that the Agencies are authorizing take, contrary to Section 9 of the ESA.

A. Failure to Consult Pursuant to Section 7

This duty for the Agencies consult is triggered first and foremost because these decisions “may affect” both the Colorado pikeminnow and razorback sucker due to the direct and indirect impacts of mercury and selenium contamination associated with the ongoing operation of the San Juan Coal Mine. The San Juan Coal Mine Lease Modification, Lease Readjustment, and Mining Plan Modification explicitly authorize mining activities at the San Juan Coal Mine. Furthermore, the Farmington RMP authorized ongoing mining operations as well as made minerals and lands available for future leasing and mining to facilitate the expansion of the San Juan Coal Mine.⁵ Furthermore, both the San Juan Coal Mine Lease Modification, Lease Readjustment, and Mining Plan Modification were issued in reliance upon the programmatic direction found in the Farmington RMP. This means that all three decisions both directly authorize any mercury and selenium contamination resulting from the operation of the mine and indirectly authorize mercury and selenium contamination resulting from the operation of the San Juan Generating Station.

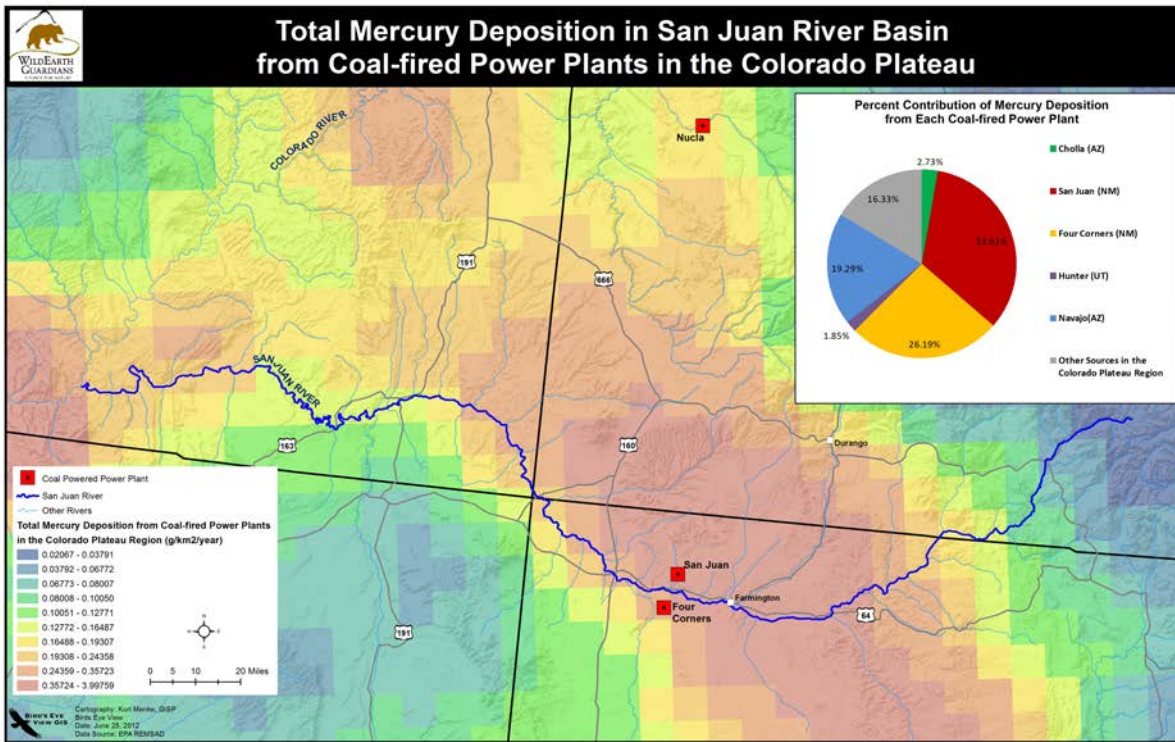
These impacts are not speculative. As explained, both the San Juan Coal Mine and San Juan Generating Station release significant amounts of mercury and selenium through air emissions, water discharge, and waste disposal. Further, the USFWS has already concluded that mercury and selenium contamination is having a detrimental impact on the razorback sucker and Colorado pikeminnow and their designated critical habitats in the San Juan River, finding that current selenium and mercury loads dangerously high because of, among other things, coal mining and coal-fired electricity generation. The map below, which was prepared using Google Earth files available from the USFWS, shows the proximity of the San Juan Generating Station and San Juan Coal Mine with critical habitat for the Colorado pikeminnow (orange) and razorback sucker (red), and underscores the fact that these facilities “may affect” both species and their critical habitats.

⁵ In particular, the RMP made available lands and minerals in the Twin Peaks tracts for leasing and mining. *See* RMP ROD, Exhibit 3 at 8.



Proximity of San Juan Generating Station and San Juan Coal Mine to San Juan River and Designated Critical Habitat for Colorado Pikeminnow (Orange) and Razorback Sucker (Red). Both Facilities are Within Three Miles of Designated Critical Habitat. The Entire San Juan River Downstream of Farmington, New Mexico is Designated Critical Habitat for One or Both Endangered Fish.

With regards to mercury, the San Juan Generating Station has already been identified by the USFWS as a primary contributor to high mercury in the San Juan River, with 1.8% of all mercury deposition in the river attributed to this power plant. *See Exhibit 5 at 74.* That the San Juan Generating Station contributes to mercury contamination in particular in the San Juan River is confirmed by modeling prepared by WildEarth Guardians in 2012 using data from the EPA’s Regional Modeling System for Aerosols and Deposition (“REMSAD”). According to these modeling results, the San Juan Generating Station contributes to more than 30% of all mercury deposition in the San Juan Basin, making it one of the top contributors to deposition. *See image below.* Although this modeling data is not meant to be determinative of the precise impacts of mercury deposition related to the operation of the power plant, it demonstrates that mercury deposition in the San Juan Basin caused by the San Juan Generating Station is not insignificant or otherwise irrelevant in terms of impacts to the Colorado pikeminnow and razorback sucker, and their designated critical habitat in the San Juan River.

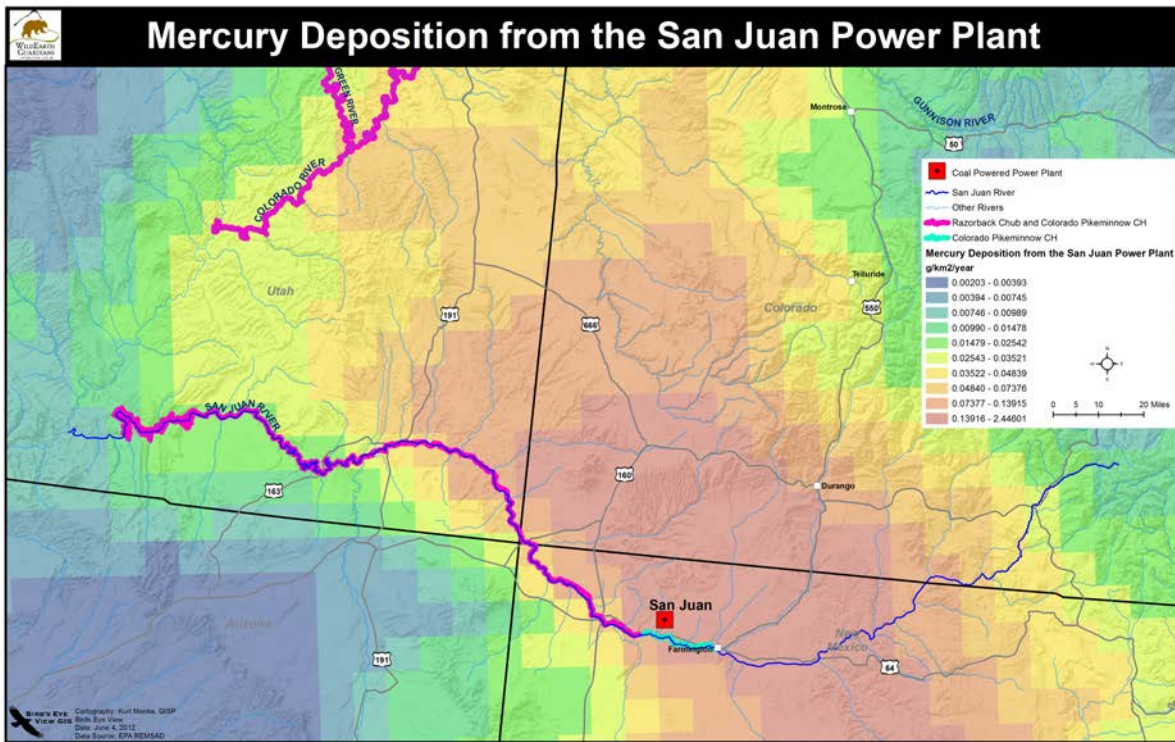


Breakdown of Top Contributors to Mercury Deposition in the San Juan River.⁶

Further modeling confirms that mercury emissions from the San Juan Generating Station are locally concentrated and heavily impact the San Juan River. The image below illustrates that the area of highest concentration of mercury deposition associated with the San Juan Generating Station is within the Four Corners region, including portions of the San Juan River containing designated critical habitat for the Colorado pikeminnow and razorback sucker. Again, while this data is not meant to precisely determine the mercury deposition impacts associated with the San Juan Generating Station, it demonstrates that mercury deposition from the San Juan Generating Station “may affect” the Colorado pikeminnow and razorback sucker, and their designated critical habitat in the San Juan River.⁷

⁶ This data presents both dry and wet mercury deposition. Information on EPA’s REMSAD model is available at http://www.epa.gov/owow/tmdl/pdf/final300report_10072008.pdf.

⁷ The USFWS has noted uncertainties with regards to analyzing the precise impacts of mercury deposition in the San Juan River Basin to the Colorado pikeminnow and razorback sucker. See Exhibit 5 at 87-88. In spite of these uncertainties, the Agency found that the best available science supported the presumption that there is a “proportional relationship between air deposition of mercury and total mercury concentrations in fish.” *Id.* at 87.



Mercury Deposition from the San Juan Generating Station in Relation to Designated Critical Habitat for the Colorado Pikeminnow and Razorback Sucker. Red, Orange, and Yellow Indicate Areas of Highest Deposition.

Despite the fact that the best available scientific information strongly indicates that selenium and mercury releases from the San Juan Coal Mine and San Juan Generating Station “may affect” the Colorado pikeminnow and razorback sucker, and their designated critical habitat, neither of the Agencies has ever addressed such impacts in accordance with Section 7 of the ESA. In assessments prepared for the Farmington RMP, the San Juan Coal Mine Lease Modification, Lease Readjustment, and Mining Plan Modification, there is no mention of the direct, indirect, or cumulative impacts of selenium or mercury contamination to the Colorado pikeminnow, the razorback sucker, or the endangered fishes’ critical habitat.⁸ In the Biological Assessment prepared for the San Juan Coal Lease Modification for example, the BLM asserted that, “No federally listed threatened, endangered, or candidate species or habitat loss or degradation would take place as a result of the project. No direct or indirect effects are anticipated that would affect any federally listed species.” BLM, Biological Assessment for the Proposed 160.6 Acre Coal Lease Extension, San Juan Underground Coal Mine, San Juan County, New Mexico (September 2005) at 6. This Biological Assessment is attached as Exhibit

⁸ There does not appear to have been any environmental analysis, let alone any biological assessment or equivalent analysis of impacts to threatened and endangered species, prepared in conjunction with the January 2010 San Juan Coal Mine Lease Readjustment decision at issue in this notice letter. In response to a May 25, 2011 Freedom of Information Act requesting any decision documents and underlying analysis related in any way to the mining and leasing of coal in the Farmington Field Office, the BLM provided no records related to the Lease Readjustment.

10. Clearly the conclusions in this Biological Assessment are not supported by the best available scientific information.

B. Failure to Reinitiate Consultation Pursuant to Section 7

Even if the Agencies are unwilling to admit and remedy the omissions and inadequacies in past biological assessments or similar analyses, there clearly is now a duty to reinitiate consultation in accordance with Section 7 of the ESA over the Farmington RMP, the San Juan Coal Mine Lease Modification, Lease Readjustment, and Mining Plan Modification given that new information has revealed that the effects of coal mining at the San Juan Coal Mine “may affect” the Colorado pikeminnow and razorback sucker, and their critical habitat, in a manner or to an extent not previously considered. This new information includes, but is not limited to, the October 2009 Desert Rock coal-fired power plant draft Biological Opinion issued by the USFWS, as well as the studies and conclusions referenced and relied upon in the Opinion, mercury modeling prepared by WildEarth Guardians in 2012, and the 2011 Colorado pikeminnow 5-Year Review. This new information demonstrates that mercury and selenium releases from the San Juan Coal Mine and San Juan Generating Station “may affect” the Colorado pikeminnow and razorback sucker, and their critical habitat in a manner and an extent not previously considered.

The duty to reinitiate consultation is buttressed by the fact that the Agencies have retained discretionary involvement and control over the actions at issue in this notice letter.

With regards to the Farmington RMP, the BLM is compelled by the Federal Land Policy and Management Act (“FLPMA”) to “revise” the plan “when appropriate.” 43 U.S.C. § 1712(a). To this end, BLM’s regulations state that an RMP must be “amended” or “revised” to respond to, among other things, “new data, new or revised policy, [or] a change in circumstances[.]” 43 C.F.R. §§ 1510.5-5 and 1610.5-6. Given that RMPs must “use and observe the principles of multiple use” (*see* 43 U.S.C. § 1712(c)(1)), which includes, among other things, the protection of “wildlife and fish” (*see* 43 U.S.C. § 1702(c)), it is clear that BLM retained discretion to amend or revise its RMP to ensure the conservation of threatened and endangered species under the ESA. To this end, the BLM has retained discretion to amend or revise its RMP to ensure that the direct, indirect, and cumulative impacts of coal mining are taken into account so as to ensure the continued survival of the Colorado pikeminnow and razorback sucker is not jeopardized and that their critical habitat is not adversely modified.

With regards to the San Juan Coal Mine Lease Modification, the BLM retained discretionary authority to ensure the lease complies with the ESA. Section 14 of the modified lease explicitly states that “This lease is subject to...all other applicable laws pertaining to exploration activities, mining operations and reclamation[.]” Exhibit 1 at 5. The ESA pertains to mining operations and therefore the BLM is authorized to ensure the lease complies with the substantive requirements of the ESA. This lease condition is echoed in the 2010 Lease Readjustment. Therefore, the BLM is similarly obligated to ensure the lease complies with the ESA on an ongoing basis.

With regards to the San Juan Coal Mine Mining Plan Modification, the Interior Department explicitly retained jurisdiction to “modify or cancel” the mining plan approval on the basis of “further consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act, as amended, 16 U.S.C. 1531 *et seq.*” Exhibit 2 at Condition 7. Thus, it is clear that the duty to reinitiate consultation is very much in effect and imposes an affirmative duty upon the Agencies to do so.

C. Failure to Prohibit Take

Despite the impacts of mercury and selenium contamination to the Colorado pikeminnow and razorback sucker and their critical habitat, the Agencies have not obtained a “take statement” from the USFWS or otherwise demonstrated that the species would not be taken contrary to the ESA. As explained, “take” means, among other things, to “harm” or “attempt to harm” species listed under the ESA. Here, the actions at issue—the Farmington RMP, the San Juan Coal Mine Lease Modification, Readjustment, and Mining Plan Modification—are harming the pikeminnow and sucker. These actions have approved the mining of coal at the San Juan Coal Mine and in turn, the burning of coal at the San Juan Generating Station. Operation of both the mine and the power plant is releasing selenium and mercury that the USFWS has identified as harming Colorado pikeminnow and razorback sucker populations in the San Juan River by significantly modifying or degrading habitat and/or actually injuring wildlife by significantly impairing essential behavior patterns. Despite this, neither the BLM nor the Interior Department has secured a “take statement” from the USFWS.

Thus, by continuing to undertake the actions at issue in this notice letter without initiating and/or reinitiating consultation over the impacts of mercury and selenium to the Colorado pikeminnow and razorback sucker, and their critical habitat, the Agencies are violating Section 9 of the ESA.

V. The Need to Comply with the ESA

Although compelled by the law, the need to consult under Section 7 and prevent take is especially critical to ensure that the Agencies are doing their part to aid in the conservation of threatened and endangered species and their critical habitats. Ultimately, the proactive obligations of Section 7(a)(1), buttressed by the reactive duties of Section 7(a)(2) and Section 9’s take prohibition, ensure that threatened and endangered species are ultimately recovered to the point that they no longer need protection under the ESA. The Agencies can play a critical role in the conservation of endangered species, including the razorback sucker and Colorado pikeminnow, and must do so by finally ensuring that the direct and indirect effects of coal mining at the San Juan Coal Mine are limited as necessary to protect and recover these species.

The need to fill this role is especially important given the significance of the San Juan River to the recovery of both the Colorado pikeminnow and razorback sucker. As noted earlier, the recovery plans for both species state that the establishment of self-sustaining populations in the River is critical to the ultimate recovery of both species. It is imperative that the Agencies comply with the ESA to ensure that the San Juan River can realistically sustain these populations

and ultimately to ensure that both species can eventually be taken of the list of endangered species.

VI. Conclusion

Pursuant to 16 U.S.C. § 1540(g) of the ESA, WildEarth Guardians intends to sue the Interior Department and the BLM over your agencies' failure to initiate and/or reinstate consultation with the USFWS in accordance with Sections 7(a)(1), 7(a)(2) of the ESA, and failure to prevent take in accordance with Section 9 of the ESA, with regards to decisions authorizing coal mining at the San Juan Coal Mine. The best available scientific information strongly indicates that operations at this mine are adversely affecting the razorback sucker, Colorado pikeminnow, and their critical habitats, both directly from mining activities and indirectly from the San Juan Generating Station, which is fueled by coal from the mine, imposing an affirmative duty upon the Agencies to conserve these species. The duties to consult, reinstate consultation, and prevent take are triggered as a result of the four actions at issue in this notice letter—the Farmington RMP, San Juan Coal Mine Lease Modification, Readjustment, and Mining Plan Modifications.

If the Agencies do not initiate or reinstate formal consultation with the USFWS within 60 days, or otherwise act to prevent take in accordance with Section 9 of the ESA, we will file suit thereafter to enjoin the failure to comply.

WildEarth Guardians' contact information is listed below. If you have questions regarding the allegations, believe that any of the above information is in error, or would like to discuss this matter prior to the initiation of litigation, please contact me at (303) 573-4898 x 1303.

Sincerely,

Jeremy Nichols
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Denver, CO 80202
(303) 573-4898 x 1303
jnichols@wildearthguardians.org

TABLE OF EXHIBITS

- Exhibit 1: BLM, Coal Lease Modification, Lease No. NMNM 28093 (May 12, 2006).
- Exhibit 2: BLM, LR2000 Case Recordation Report for Coal Lease NMNM 28093 (Sept. 10, 2012).
- Exhibit 3: U.S. Interior Department, San Juan Coal Mine Mining Plan Modification (Jan. 17, 2008).
- Exhibit 4: BLM, Record of Decision, Farmington Resource Management Plan (Sept. 29, 2003).
- Exhibit 5: USFWS, Draft Biological Opinion for the Desert Rock Energy Project (Oct. 15, 2009).
- Exhibit 6: USFWS, “Colorado pikeminnow (*Ptychocheilus lucius*) 5-Year Review: Summary and Evaluation” (2011).
- Exhibit 7: Memorandum from Allen D. Klein, Western Regional Director, OSMRE, to Brent Wahlquist, Director, OSMRE, “Recommendation for Approval of the Mining Plan Modification for new Federal Lease NM-99144 at San Juan Coal Company’s San Juan Mine located in San Juan County, New Mexico” (Jan. 7, 2008).
- Exhibit 8: EPA, NPDES Permit for San Juan Coal Mine (June 30, 2006).
- Exhibit 9: EPA, NPDES Permit for San Juan Generating Station (Feb. 24, 2011).
- Exhibit 10: Biological Assessment for the Proposed 160.6 Acre Coal Lease Extension, San Juan Underground Coal Mine, San Juan County, New Mexico (Sept. 2005).