UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF HEARINGS AND APPEALS
BOARD OF LAND APPEALS

WILDEARTH GUARDIANS, CENTER FOR BIOLOGICAL DIVERSITY, GRAND CANYON TRUST, and SIERRA CLUB, Appellants	)	IBLA No. 2016-
	)	Notice of Appeal and Petition for Stay, Greens Hollow Federal Coal Lease, UTU-084102, Record of Decision No. DOI-BLM-UT-070-2008-14, Sanpete and Sevier Counties, Utah

NOTICE OF APPEAL AND PETITION FOR STAY

Pursuant to 43 C.F.R. §§ 4.21 and 4.410, WildEarth Guardians, the Center for Biological Diversity, the Grand Canyon Trust, and the Sierra Club (hereafter "Appellants") file this Notice of Appeal and Petition for Stay of a decision made by Bureau of Land Management ("BLM") Acting Utah State Office Director, Jenna Whitlock, to offer the Greens Hollow coal lease in Sanpete and Sevier Counties, Utah for sale and issuance. This decision was documented in a Record of Decision ("ROD") signed on August 12, 2016 and numbered DOI-BLM-UT-070-2008-14.[1] Notice of this ROD, as well as notice of BLM's proposal to offer the Greens Hollow coal lease for sale on September 22, 2016, was published in the Federal Register on August 18, 2016. *See* 81 Fed. Reg. 55,226 (Aug. 18, 2016). The ROD authorizes the sale of the Greens Hollow lease, which comprises 55.7 million tons of publicly owned coal underneath 6,175.9 acres of publicly owned National Forest land. The lease would expand the SUFCO coal mine,

[1] Notice of the ROD was provided on August 12, 2016. Pursuant to 43 C.F.R. § 4.411, Appellants are required to file their Notice of Appeal within 30 days of being served with a decision and pursuant to 43 C.F.R. § 4.21, are required to serve any Petition for Stay at the same time. The 30-day deadline in this case would be September 11, 2016, a Sunday. If the last day of a deadline for filing a document pursuant to 43 C.F.R. § 4 falls on a Sunday, the deadline runs until the end of the following business day. *See* 43 C.F.R. § 4.22(e). Thus, this Notice of Appeal and Petition for Stay is timely filed.

extending its life and associated impacts for nearly 9 years. The ROD adopts Alternative 3, as based on information and analysis presented in a Final Supplemental Environmental Impact Statement ("FFSEIS") that was released in 2015.

A stay of Ms. Whitlock's ROD is eminently reasonable and justified in this case. In authorizing the sale and issuance of the Greens Hollow coal lease, the BLM violated the Federal Land Management and Policy Act ("FLPMA") and implementing regulations by failing to comply with applicable Resource Management Plan ("RMP") direction regarding sage grouse conservation, as well as related coal leasing regulations. Here, BLM was required to designate the Greens Hollow coal lease area as "unsuitable" for leasing, not approve the sale and issuance of a new lease. Further, the BLM failed to analyze, assess, and disclose a number of potentially significant impacts, in violation of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4331, *et seq*. Finally, the BLM failed to comply with the Endangered Species Act ("ESA"), 16 U.S.C. § 1531, *et seq*.

Approval of the Greens Hollow coal lease is not only contrary to applicable law and regulation, it threatens inevitable irreparable harm to Appellants and their interests in protecting and restoring public lands, wildlife, clean air and water, and a safe climate. On the balance, approval of the Greens Hollow coal lease poses irreparable harms to Appellants, yet a stay would pose no harm to the BLM. To this end, a stay would protect the public interest, maintaining the status quo and prevent inevitable harms, all while ensuring compliance with applicable law and regulation. For the following reasons, we therefore respectfully request that the Interior Board of Land Appeals ("IBLA") grant a stay of the implementation of the Greens Hollow coal lease ROD.

I. APPELLANTS ARE PARTIES THAT ARE ADVERSELY AFFECTED

To be granted a stay, Appellants must first demonstrate that they can maintain an appeal. *See* 43 C.F.R. § 4.21(a)(2). To maintain an appeal, Appellants must (1) be a party to the case; and (2) be adversely affected by the decision being appealed. 43 C.F.R. § 4.410(a); *National Wildlife Federation v. BLM*, 129 IBLA 124, 125 (1994).

WildEarth Guardians is a registered non-profit corporation whose purpose is the conservation of natural resources. With more than 100,000 members and supporters in the United States, including more than 1,000 in the State of Utah, WildEarth Guardians' mission is to protect and restore the wildlife, wild places, wild rivers, and health of the American West. WildEarth Guardians is headquartered in Santa Fe, New Mexico, and has offices in Denver, Colorado, Missoula, Montana, Portland, Oregon, and staff working in several other western states. Through its Climate and Energy Program, WildEarth Guardians works to safeguard the climate and communities of the American West by promoting a sensible transition to renewable energy.

The Center for Biological Diversity is a non-profit 501(c)(3) corporation with offices in Arizona, New Mexico, California, Nevada, Oregon, Washington, Alaska, Illinois, Minnesota, Vermont, Colorado and Washington, D.C. The Center works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. The Center has 50,400 members throughout the United States, Utah, Nevada and the world. The Center is actively involved in species and habitat protection issues worldwide, including throughout the western United States. The Center, its members, and staff members use the lands in and near the Manti-La Sal National Forest, and in particular the Green and White Rivers, for recreational, scientific, and aesthetic purposes. They also derive recreational, scientific, and aesthetic benefits

from these lands through wildlife observation, study, and photography. The Center and its members have an interest in preserving their ability to enjoy such activities in the future. As such, the Center and its members have an interest in helping to ensure their continued use and enjoyment of these activities on these lands. The Center is particularly concerned about species and critical habitats that are affected by coal mining at the SUFCO Mine and coal burning at the Hunter, Huntington, and other coal-fired power plants supplied by the mine. The Center and its members are adversely affected by mining operations at the SUFCO Mine as well as from impacts at the Hunter Power Plant and other coal-fired power plants.

The Grand Canyon Trust is a non-profit organization dedicated to protecting and restoring the spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude on the Colorado Plateau. The Trust is focused on the Grand Canyon region of Northern Arizona and in the forests and red rock country of central and southern Utah. The Trust represents 3,000 individual members throughout the U.S., including over 400 Utah members, some of whom recreate, photograph, study, and otherwise use the Dixie and Fishlake National Forests. Furthermore, Grand Canyon Trust members have a direct interest in managing and conserving sustainable human uses and the native plants, animals, and habitats of the Manti-La Sal and Fishlake National Forests.

The Sierra Club is America's largest grassroots environmental organization, with more than 2.4 million members and supporters nationwide and more than 3,900 members that live in Utah. In addition to creating opportunities for people of all ages, levels and locations to have meaningful outdoor experiences, the Sierra Club works to safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and litigation. Sierra Club is dedicated to exploring,

enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives.

As explained below, WildEarth Guardians, Center for Biological Diversity, Grand Canyon Trust, and the Sierra Club are parties to this case who are adversely affected.

A. Appellants are Parties

A party to the case includes a person or group who "participated in the process leading to the decision under appeal." *See* 43 C.F.R. § 4.410(b). Here, Appellants are parties because they have submitted extensive comments to BLM regarding the Greens Hollow coal lease during the public comment periods provided by the agency. Appellants submitted formal comments on the original Draft EIS and Final EIS for the Greens Hollow coal lease and in 2012, successfully appealed a prior ROD consenting to the Greens Hollow coal lease issued by the U.S. Forest Service ("USFS").[2] Appellants submitted comments on the Draft Supplemental Environmental Impact Statement ("Draft SEIS") on April 28, 2014. These comments are attached as Exhibit 1. Appellants also filed an Objection with the USFS on April 15, 2015 after approval of its second ROD consenting to the coal lease. The issues presented in this Notice of Appeal and Petition for Stay were raised with reasonable specificity in all Appellants' prior comments, appeals, and objections.

[2] In prior submissions related to the Greens Hollow coal lease, the nonprofit conservation group, Utah Environmental Congress, participated in comments and appeals. In 2013, Utah Environmental Congress merged with WildEarth Guardians with Guardians becoming the successor of Utah Environmental Congress. *See* http://www.wildearthguardians.org/site/News2?page=NewsArticle&id=9147#.V9F085MrIcg.

B. Appellants are Adversely Affected

To demonstrate that it will "be adversely affected by the decision being appealed," a party must demonstrate a legally cognizable "interest" and that the decision appealed has caused or is substantially likely to cause injury to that interest. *Glenn Grenke v. BLM*, 122 IBLA 123, 128 (1992); 43 C.F.R. § 4.410(d). This requisite "interest" can be established by cultural, recreational, or aesthetic uses as well as enjoyment of the public lands. *Southern Utah Wilderness Alliance*, 127 IBLA 325, 326 (1993); *Animal Protection Institute of America*, 117 IBLA 208, 210 (1990). The IBLA does not require a showing that an injury has actually occurred. Rather, a colorable allegation of injury suffices. *Powder River Basin Resource Council*, 124 IBLA 83, 89 (1992).

Moreover, it is not necessary for parties to show that they have actually set foot on the impacted parcel or parcels to establish use or enjoyment for purpose of demonstrating adverse effects. Rather, "one may also establish he or she is adversely affected by setting forth interests in resources or in other land or its resources affected by a decision and showing how the decision has caused or is substantially likely to cause injury to those interests." *The Coalition of Concerned National Park Retirees, et al.,* 165 IBLA 79, 84 (2005).

Appellants WildEarth Guardians, Grand Canyon Trust, and the Center for Biological Diversity will be adversely affected by the Greens Hollow coal lease.[3] Tim Peterson testifies that he is a member and employee of Grand Canyon Trust, as well as a member of WildEarth Guardians and Center for Biological Diversity. *See* Exhibit 2 ¶¶ 3-5. Mr. Peterson testifies that he personally regularly uses and enjoys public lands above the SUFCO mine, including lands

[3] The Sierra Club intends to submit a declaration at the time that the Statement of Reasons is due in this proceeding. In the meantime, as the U.S. Supreme Court held in Massachusetts v. EPA, "Only one of the petitioners needs to have standing to permit us to consider the petition for review." *Massachusetts v. E.P.A.*, 549 U.S. 497, 518 (2007).

near the Greens Hollow coal lease area, as well as areas and resources that will be affected by the lease, for recreational, aesthetic, and conservation purposes, and that he intends to return to these areas for enjoyment. *See* Exhibit 2 ¶¶ 6-14. Mr. Peterson's declaration establishes that the BLM's decision to sell and issue the Greens Hollow coal lease will adversely affect his recreational, aesthetic, and conservation interests, which are legally cognizable, in these areas through increased disturbance of otherwise undeveloped public lands, increased industrial activity in the area of the SUFCO mine, extended industrial impacts associated with coal production and consumption in the region. *See* Exhibit 2 ¶¶ 21. Mr. Peterson's declaration also establishes that a favorable ruling in this appeal would redress the harms he would otherwise experience. *See* Exhibit 2 ¶¶ 20-24. Mr. Peterson's declaration establishes that the Grand Canyon Trust, WildEarth Guardians, and Center for Biological Diversity will be adversely affected by BLM's decision to approve the Greens Hollow coal lease.

Also attached is the declaration of Taylor McKinnon, a member of the Center for Biological Diversity. *See* Exhibit 3. Mr. McKinnon testifies that he recreates frequently and extensively on and along streams within the Green River drainage of Utah, enjoying fishing, floating, hiking, learning about the natural world, and in support of his conservation interests, and that he intends to return to visit these streams for enjoyment. *See* Exhibit 3 ¶¶ 7-11. Mr. McKinnon's declaration establishes that the BLM's decision to sell and issue the Greens Hollow coal lease will adversely affect his recreational, aesthetic, educational, and conservation interests in relation to his visits to streams in the Green River drainage, particularly with regards to the impacts upon endangered fish that reside in the Green River and many of its tributaries. *See* Exhibit 3 ¶¶ 12-18. By authorizing the Greens Hollow coal lease, the BLM has authorized numerous adverse indirect effects to streams in the region, particularly the Green River,

especially in the form of toxic air pollution deposition. *See* Exhibit 5 ¶¶ 16-17. Mr. McKinnon's declaration also establishes that a favorable ruling in this appeal would redress the harms he would otherwise experience. *See* Exhibit 5 ¶ 20. Mr. Peterson's declaration further establishes that the Center for Biological Diversity will be adversely affected by BLM's decision to approve the Greens Hollow coal lease.

II. REQUEST FOR STAY

Appellants respectfully request the IBLA grant their request for a stay of the BLM's ROD for the Greens Hollow coal lease. In accordance with 43 C.F.R. § 4.21(b)(1), below we show that Appellants are likely to succeed on the merits, that Appellants will suffer immediate and irreparable harm if the stay is not granted, that the balance of harms favors a stay, and that the granting of a stay is in the public interest.

A. Appellants are Likely to Succeed on the Merits

For the following reasons, the BLM's approval of the Greens Hollow coal lease is contrary to law and regulations and should be overturned by the IBLA.

1. The BLM Was Prohibited From Approving the Greens Hollow Coal Lease Because it Was Legally Required to Declare All or a Portion of the Lease Area as Unsuitable for Leasing in Accordance With Sage Grouse Management Direction and The Agency's Coal Regulations

Under the applicable RMP and the BLM's coal management regulations, the agency was prohibited from authorizing Greens Hollow coal lease. According to the agency's rules and land use plan, the BLM was required to deem the lands within the lease area "unsuitable" for leasing and subsequent surface coal mining in order to protect priority sage grouse habitat. The BLM did not do so. Further, while the ROD attempts to impose a stipulation that would limit some surface impacts, this stipulation does not allow the BLM to forego its mandatory unsuitability

determination. This means the agency's approval of the lease violates both its applicable RMP and its coal management regulations.

Under the Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. § 1272, and BLM's coal regulations, 43 C.F.R. § 3461, before leasing federal lands for surface coal mining, the agency "shall" determine whether the subject federal lands must be considered "unsuitable" and therefore not available for leasing. 43 C.F.R. § 3461.3-1(a). "Federal lands" include lands owned by the United States, "including surface estate, mineral estate and coal estate[.]" 43 C.F.R. § 3400.0-5(o). "Surface coal mining" is defined as "activities conducted on the surface of lands in connection with a surface coal mine or surface operations and surface impact incident to an underground mine[.]" 43 C.F.R. § 3400.0-5(mm). This definition echoes the definition set forth under SMCRA. 30 U.S.C. § 1291(28).

To determine whether federal lands are unsuitable, the BLM is required to assess 20 criteria and designate lands unsuitable as appropriate. *See* 43 C.F.R. § 3461.5. Among the criteria, BLM is required to assess whether there are "Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife, and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species[.]" 43 C.F.R. § 3461.5(o). Example of such lands include, but are not limited to, "Active dancing and strutting grounds for sage grouse[.]" 43 C.F.R. § 3461.5(o)(1)(i). According to BLM's coal management rules, these lands "***shall be*** considered unsuitable" for leasing for surface coal mining. 43 C.F.R. § 3461.5(o)(1) (emphasis added).[4]

[4] The only exception to this unsuitability consideration is where a coal mine operator made certain legal and financial commitments prior to January 4, 1977, where coal mining operations were being conducted on August 3, 1977, and lands where a permit has already been issued. 43 C.F.R. § 3461.5(o)(2). These exceptions do not apply in this case.

On September 15, 2015, the BLM adopted an RMP Amendment for Utah establishing new direction for the protection of the greater sage grouse and its habitat. *See* Exhibit 5, BLM, "Utah Greater Sage-Grouse Approved Resource Management Plan Amendment," DOI-BLM-UT-9100-2013-0002-EIS (Sept. 2015), available online at http://www.blm.gov/style/medialib/blm/ut/natural_resources/SageGrouse/ARMPA_appendices.Par.31778.File.dat/Utah_ARMPA.pdf. A key component of the RMP Amendment was the designation and protection of sage grouse Priority Habitat Management Areas ("PHMAs") or areas "identified as having the highest value to maintaining sustainable [greater sage grouse] populations." RMP Amendment at 5-15. To this end, the RMP Amendment set forth additional limitations with regards to the BLM's assessment coal leasing and mining suitability in relation to PHMAs. Specifically, the RMP Amendment stated that, for purposes of assessing whether leasing of federal lands that would lead to surface mining area suitable under 43 C.F.R. § 3461.5(o)(1), "PHMA is essential habitat for maintaining [greater sage grouse] for purposes of the suitability criteria set forth at 43 CFR, Part 3461.5(o)(1)." RMP Amendment at 2-30; *see also* RMP Amendment at 1-11 (similarly stating that "PHMA is essential habitat for maintaining [greater sage grouse] for the suitability criteria set forth at 43 Code of Federal Regulations (CFR), Part 3461.5(o)(1).

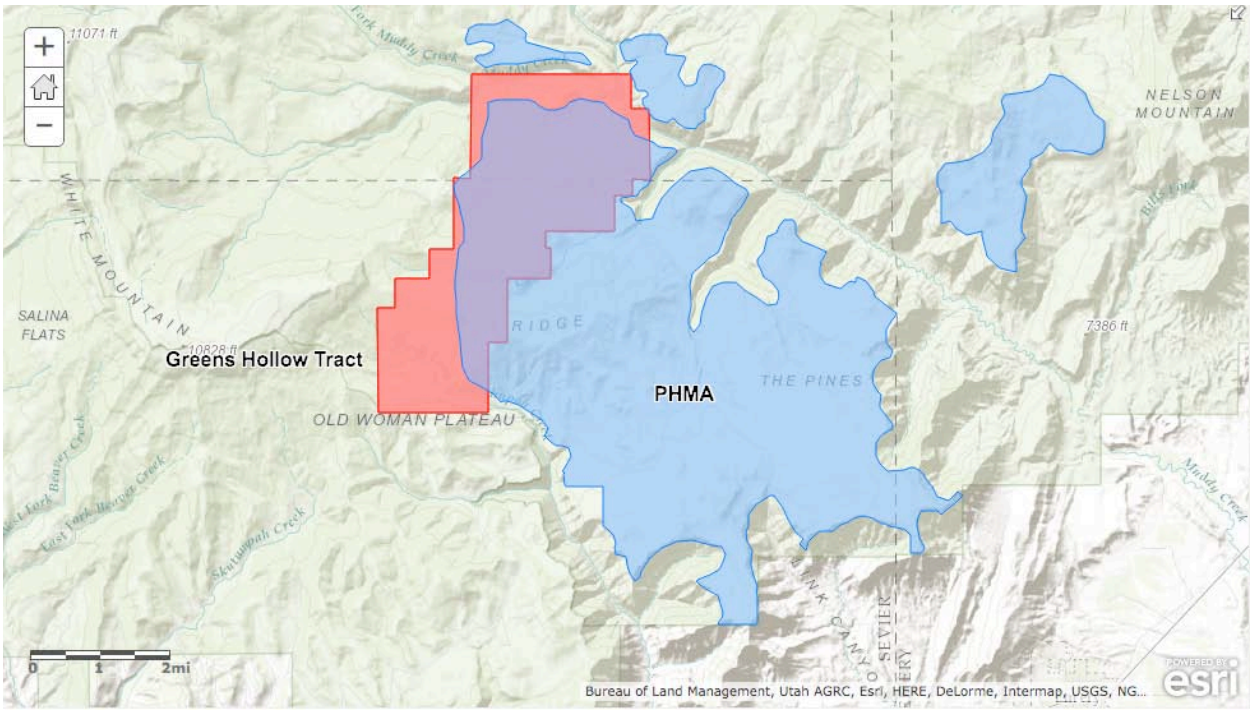
In other words, the BLM's coal management rules require that the agency designate as unsuitable any lands "essential" to priority wildlife, including "sage grouse" dancing and strutting grounds, and the agency's RMP Amendment makes clear that PHMAs constitute the very "essential" habitat meant to be made off limits to surface mining pursuant to 43 C.F.R. § 3461.5(o). To this end, where federal lands leasing that would lead to surface coal mining is

being considered in PHMAs, the BLM is required to designate such areas as unsuitable, both in accordance with 43 C.F.R. § 3461.5(o)(1) and its RMP Amendment.[5]

Although the Greens Hollow coal lease, as explained below, would lead to surface impacts incident to underground coal mining, the BLM failed to comply with these limitations. Importantly, while much of the federal lands that comprise the Greens Hollow coal lease tract contain part of a designated PHMA, the BLM did not designate the lands as unsuitable for surface coal mining. The map below, prepared using BLM, State of Utah, and other sources of data, shows quite clearly a major overlap with the coal lease and a PHMA.[6]

[5] BLM's duty to ensure that agency actions, including coal lease decisions, comply with the applicable RMP is set forth under both: (1) the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1732(a), and implementing regulations, 43 C.F.R. § 1610.5-3(a); and (2) BLM's coal management rules, which specifically state that "[t]he decision to hold a [coal] lease sale shall be consistent with the appropriate comprehensive land use plan or land use analysis." 43 C.F.R. § 3425.2. BLM is thus clearly required to ensure the Greens Hollow coal lease complies with the RMP Amendment.

[6] This map, prepared by WildEarth Guardians using ArcGIS.com, is effectively the same map as presented in the FFSEIS on p. 83. The map in the FFSEIS shows the location of "UDWR [Utah Division of Wildlife Resources] Sage-Grouse Habitat" in relation to the Greens Hollow lease. As the BLM's own map for its RMP Amendment confirms, BLM adopted the UDWR for its PHMA. *See* Exhibit 6, BLM's Map of PHMAs in Utah, http://www.blm.gov/style/medialib/blm/ut/natural_resources/SageGrouse/ARMPA_appendices.Par.29647.File.dat/Figure%202-1.pdf.



Overlap of Greens Hollow Tract (red) and PHMA (blue).
Overlap Area is Shown in Purple.

Instead of designating the federal lands within the Greens Hollow coal lease area that are part of the PHMA, the BLM simply moved to authorize leasing the entire area, apparently ignoring the implications for the PHMA.

BLM provides no explanation as to why it chose to ignore its own rules and the direction in its own RMP regarding the management of PHMAs. In the ROD, the agency asserts, "As required by applicable law and regulations, the Unsuitability Criteria for Coal Mining described at 43 CFR Subpart 3461 was applied site-specifically to lands in the Greens Hollow Tract. No Lands were identified as unsuitable and no additional stipulations were identified based on that analysis[.]" ROD at 9. A closer look at the unsuitability assessment cited in the ROD, however, indicates the agency did not actually consider the overlap between the Greens Hollow coal lease and the PHMA. What's more, the agency appears to have reached the erroneous conclusion that

the unsuitability criteria set forth under 43 C.F.R. § 3461.5(o) categorically do not apply in this case.

The unsuitability analysis is set forth in Appendix A of the FSEIS, which was released in February 2015, seven months before the sage grouse RMP Amendment was adopted and 18 months prior to the BLM's ROD for the Greens Hollow lease. As a practical matter, this unsuitability analysis could not have possibly assessed whether leasing was appropriate under the greater sage grouse RMP Amendment in force at the time of the ROD and cannot serve to demonstrate that BLM has met its duty to ensure compliance with its RMP and coal management rules.

Further, and more importantly, the unsuitability analysis inappropriately claims the criterion applicable to sage grouse conservation is "not applicable because sage-grouse habitat is not affected, as the mining is underground." FSEIS at A-6. While it is true that purely underground coal mining is exempt from the suitability analysis requirements pursuant to 43 C.F.R. § 3461.1, this exemption only applies insofar as there are "no surface coal mining operations, as defined in [43 C.F.R.] § 3400.0-5[.]" As explained, however, surface coal mining operations include "surface operations and surface impacts incident to an underground mine[.]" 43 C.F.R. § 3400.0-5(mm). Here, leasing Greens Hollow will lead to surface impacts incident to underground mining. The BLM explicitly discloses in the FSEIS that the reasonably foreseeable consequences of issuing the lease include the construction and operation of a ventilation and escape-way facility and the use of roads within the lease area. The FSEIS explains, "Facilities visible on the surface associated with a ventilation shaft could include shaft collars, ventilation equipment, and fencing/barriers. A ventilation shaft facility could be approximately 15-30 feet in shaft diameter and occupy up to 10 acres of land at the surface." FSEIS at 34. The FSEIS also

discloses that mining of the Greens Hollow coal lease will require surface facilities outside the lease area, including "a ventilation and escape-way facility, a ventilation fan system, reserve diesel generator(s) for power, power line for the ventilation fan system and the mine itself, and road access on existing roads." *Id*. Not only does it appear that all these new on-lease and off-lease surface facilities will impact the PHMA, but clearly there will be surface operations and impacts incident to the underground mining of the Greens Hollow lease. This means the mining operations permitted by the lease would include "surface coal mining operations" pursuant to 43 C.F.R. § 3400.0-5(mm). The Greens Hollow coal lease is therefore subject to the unsuitability criteria set forth under 43 C.F.R. § 3461.5, contrary to the BLM's claim.[7] This further means that BLM had a mandatory duty to consider the area within the PHMA "unsuitable" for leasing as part of the Greens Hollow Tract.

To be certain, the Greens Hollow lease ROD appears to impose a stipulation that would limit some surface impacts. In the list of special stipulations set forth at Appendix 3 to the ROD, it states, "No new surface facilities shall be authorized in sage grouse priority habitat management areas." ROD, Appendix 3 at 3. While this is a welcome stipulation, it does not obviate the duty for the BLM to make an unsuitability determination for PHMA within the Greens Hollow lease area for at least three reasons.

First, this stipulation only applies to the lands that are part of the Greens Hollow coal lease tract. It does not appear to limit the construction and operation of surface facilities that may

[7] BLM also attempts to assert in the FSEIS that the criterion under 43 C.F.R. § 3461.5(o) is "excepted because existing mining has not had any measurable effect upon the local habitat or population." FSEIS at A-6. However, no such exception to the unsuitability criteria set forth under 43 C.F.R. § 3461.5(o) is actually set forth, either implicitly or explicitly, in BLM's regulations. The agency cannot make up exceptions to its own duly promulgated rules without conducting additional rulemaking pursuant to 5 U.S.C. § 553(e) and other applicable statutory and regulatory authorities.

be outside the lease, but still incident to the underground mining of Greens Hollow. Given this, the stipulation does not prevent surface impacts incident to underground mining and therefore, the mining of Greens Hollow will constitute surface mining and the lands within the lease would still be subject to the unsuitability criteria set forth under 43 C.F.R. § 3461.5(o). To this end, the BLM would still have a mandatory duty to designate PHMA within the Greens Hollow lease area as unsuitable.

Second, as written, the stipulation does not prevent all surface impacts within the overlap of the Greens Hollow lease area and the PHMA, and therefore does not serve to allow the BLM to avoid its duty to designate PHMA as unsuitable in accordance with its coal management rules and the RMP Amendment. The stipulation refers only to "surface facilities," which are not defined anywhere in the ROD, the FSEIS, the RMP Amendment, or BLM's regulations. We presume the stipulation refers to permanent structures constructed on the surface. However, this would exclude temporary structures, use of existing roads, and even potentially the placement of equipment and/or structures that are not constructed. In any case, the stipulation is vague and does not demonstrate that surface impacts incident to underground mining will not occur above the Greens Hollow lease. Again, this means the BLM had a duty to designate PHMA within the lease area as unsuitable pursuant to its coal management rules and the RMP Amendment.

Third, it appears that the stipulation may be subject to "site-specific exceptions." The ROD suggests that only one special stipulation, "Special Stipulation #9," would not be subject to site-specific exceptions. ROD at 6. This implies that all other stipulations would be subject to exception. If so, the sage grouse stipulation does not actually prevent the authorization of surface facilities within PHMA. This again further confirms that the BLM had a duty to designate PHMA within the Greens Hollow lease area as unsuitable.

In accordance with its RMP and coal management regulations, BLM is duty-bound to designate all sage grouse PHMA as unsuitable where there are federal lands being considered for leasing that would lead to surface mining. Here, despite the fact that federal lands comprising the Greens Hollow coal lease contains PHMA and in spite of the fact that mining the lease will constitute surface mining according to BLM's own regulations, the agency did not consider the area to be unsuitable for leasing. The ROD is therefore contrary to the sage grouse RMP Amendment. Appellants are likely to prevail on the merits of this claim.

2. The FSEIS for the Greens Hollow Coal Lease Fails to Comply with NEPA

NEPA is our "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The law requires federal agencies to fully consider the environmental implications of their actions, taking into account "high quality" information, "accurate scientific analysis," "expert agency comments," and "public scrutiny," prior to making decisions. *Id*. at 1500.1(b). This consideration is meant to "foster excellent action," meaning decisions that are well informed and that "protect, restore, and enhance the environment." *Id*. at 1500.1(c).

To fulfill the goals of NEPA, federal agencies are required to analyze the "effects" of their actions to the human environment in an EIS. 40 C.F.R. § 1502.16(d). To this end, the agency must analyze the "direct," "indirect," and "cumulative" effects of its actions, and assess their significance. 40 C.F.R. §§ 1502.16(a), (b), and (d). Direct effects include all impacts that are "caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Indirect effects are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id*. at § 1508.8(b). Cumulative effects include the impacts of all past, present, and reasonably foreseeable actions, regardless of what entity or entities undertake the actions. 40 C.F.R. § 1508.7.

Here, the BLM violated NEPA by failing to adequately analyze and assess the reasonably foreseeable impacts of issuing the Greens Hollow coal lease. Such reasonably foreseeable impacts include coal combustion impacts, coal transport impacts, and coal export impacts. As a result, the BLM failed to appropriately analyze and assess impacts to the climate.

a. Failure to Adequately Analyze and Assess the Reasonably Foreseeable Impacts of Activities That Will Result From Leasing Greens Hollow

The FSEIS presents scant analysis and assessment of impacts related to coal combustion, coal transport, and coal exports, all activities that are reasonably foreseeable consequences—and therefore indirect impacts—of the BLM's approval of the Greens Hollow coal lease. The BLM variously refused to fully analyze and assess the impacts of these activities based on perceived uncertainty. In fact, there is no uncertainty that coal combustion, coal transport, and coal exports are reasonably foreseeable activities associated with issuing the Greens Hollow coal lease.

The problem is that the BLM appears to have inappropriately conflated a lack of desired analytical precision with a lack of reasonable foreseeability. However, simply because the agency may believe that an analysis of reasonably foreseeable impacts may not meet some arbitrary standard of precision does not render an impact unreasonably foreseeable or reasonably unforeseeable under NEPA.

Regardless, the agency's various claims of uncertainty are simply unsupported. As will be explained, available information and analysis readily indicates that the agency was capable of and obligated to conduct a full analysis of coal combustion, coal transport, and coal export impacts. The failure to do so renders the proposed ROD contrary to NEPA.

i. Coal Combustion Impacts

Agencies must analyze coal combustion impacts from mine expansion decisions when "(1) 'but for' the proposed expansion, the coal-combustion impacts would not occur and (2) the

coal-combustion impacts are reasonably foreseeable." *See Diné Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, 82 F.Supp. 3d 1201, 1213 (D. Colo. 2015), *vacated as moot*, 643 Fed. Appx. 799 (10th Cir. 2016) (*citing* 40 U.S.C. § 1508.8, *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1176 (10th Cir. 2002)).

With regards to the Greens Hollow coal lease, the FSEIS acknowledges that, "burning of the coal is an indirect impact that is a reasonable progression of the mining activity." FSEIS at 287. Nevertheless, the USFS expressly declined to address any impacts resulting from the combustion of coal that would be mined from the Greens Hollow lease under the proposed action. *See* FSEIS at 287-288 (declining to discuss impacts from coal combustion); FSEIS at D-63 ("The effects from consumption are not only speculative, but beyond the scope of agency authority or control.")

The FSEIS acknowledges that the SUFCO mine provides approximately four million tons of coal per year to the Hunter power plant and that this plant is likely to continue operations as the "largest customer of coal from the mine." FSEIS at 145 and 287. The FSEIS attempts to avoid consideration of the natural consequence of mining this coal and burning much of it at Hunter, including "the release of sulfur, nitrogen, mercury, arsenic, particulates, etc. from the burning of coal." FSEIS at 287. The agencies reject any quantification or description of these predictable releases and their consequences by arguing that "[a]t this time, there is insufficient information to determine the multiple end users of the coal and the combustion technology that might be used." FSEIS at 288. Uncertainty about the exact allocation of Greens Hollow coal, however, does not excuse the BLM from acknowledging the fact that the fundamental purpose of mining the coal is to burn it, and that the largest share of that coal will likely be burnt at the

Hunter power plant, where the conditions of operation are readily determinable. The agencies cannot avoid analyzing reasonably foreseeable impacts from major federal actions with significant environmental impacts by disavowing the foreseeable and intended result of those actions as speculative.

The failure to even attempt to disclose mercury, selenium, and other emissions associated with coal combustion is disconcerting because it is readily possible to predict where coal from the SUFCO mine will be burned. Indeed, as Appellants noted in comments on the Draft SEIS, fuel receipt data from the Energy Information Administration ("EIA") indicates the bulk of coal mined from SUFCO is combusted in power plants in Utah. This data, which is for the 2015 year-end, is attached as Exhibit 7, and available in downloadable spreadsheets from the U.S. Energy Information Administration at http://www.eia.gov/electricity/data/eia923/. The table below summarizes this data and still confirms that coal mined from SUFCO is burned primarily in the nearby Hunter and Huntington power plants, as well as the Intermountain and Kennecott power plants in Utah.

SUFCO Mine Customers, 2015, Total Coal Consumed, and Contract Details. Data from Energy Information Administration Form 923 Data.

Power Plant	Location (State)	Total Tons of SUFCO Coal Consumed 2014	Contract Expiration Date
Hunter	UT	1,238,753	December 2020
Huntington	UT	1,042,569	December 2020
Intermountain Power	UT	1,957,865	--
Kennecott Power Plant	UT	178,046	December 2015

Notably, the EIA data indicates that SUFCO coal furnished more nearly half the total coal consumed at Hunter in 2015, which according to the EIA was 2,540,128 tons of coal. Importantly, however, this data also indicates that coal from SUFCO will continue to be burned in the nearby Huntington and Hunter power plants throughout the foreseeable future. In addition

to coal consumption data, the EIA's report also presents contract information and indicates that the mine is contracted to provide coal to Hunter and Huntington until at least December of 2020. This data indicates that the FSEIS is significantly flawed because it asserts that it is not possible to determine where coal will be consumed.

Again, the BLM cannot feign ignorance of key factors that play a large role in fully evaluating the reasonably foreseeable impacts of the Greens Hollow lease. Those factors must be disclosed and analyzed under NEPA.

The FSEIS also touts the benefit of the leasing decision by arguing that, "combustion of the coal could provide electricity to every residence in Utah and 997,993 additional residences." FSEIS at 287. The law is quite clear that, although NEPA does not require quantification of costs and benefits of a proposed action in every instance, it is arbitrary and capricious for an agency to claim that the benefit of a proposed action is foreseeable and quantifiable but its adverse impacts too uncertain or speculative to quantify. *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174, 1196 (D. Colo. 2014).

Burning Greens Hollow coal, particularly at the Hunter power plant, will have readily foreseeable effects, both regionally and globally, that the FSEIS refuses to consider – impacts that Appellants brought to the agencies attention explicitly and repeatedly throughout the NEPA process. These combustion impacts include not only emissions of greenhouse gases contributing to global climate change, but also emission of hazardous air pollutants including mercury and selenium that are deposited proximate to the power plant and pose risks to both human health and the survival of endangered and other native fish in the Green River. In particular, the FSEIS's discussion of impacts to the listed Colorado pikeminnow, razorback sucker, humpback chub, and bonytail are limited solely to discussion of water diversions, and makes no mention of

the known and ongoing threat to those species posed by mercury and selenium deposited from coal combustion. *See* FSEIS at 198.

The FSEIS suggests that it need not disclose or analyze combustion effects due to the fact that the Hunter "plant is anticipated to continue operations as authorized by the state for the life of the facility. Therefore, regional impacts to ambient air quality from the combustion of coal within the region would be generally the same for each Alternative." FSEIS at 287. This "status quo" argument has been conclusively rejected by both the Ninth Circuit and the District of Colorado. Even if the proposed Greens Hollow expansion does not change the rate of combustion at Hunter, it will result in the combustion of an additional 56.6 million tons of coal, (*see* FSEIS at 2), of which approximately 4 million tons per year can be expected to be burnt at Hunter (*see* FSEIS at 145). Absent approval of the lease, the 56.6 million tons of coal would not be burnt, at Hunter or elsewhere. Because mercury accumulates in the environment and organisms, the relevant concern is not the rate of combustion but the total pollutant contribution. As Judge Kane recently explained in *Diné Care* regarding a coal mine permitting case involving the U.S. Office of Surface Mining Reclamation and Enforcement ("OSM"):

> A recent Ninth Circuit case illustrates the significance of this distinction. In *South Fork Band Council of Western Shoshone of Nevada v. U.S. Department of Interior*, the court rejected BLM's argument that the "status quo rule" obviated the need to consider the indirect effects of a proposed mining expansion project.[15] 588 F.3d 718 (9th Cir. 2009). In that case, BLM argued, as Respondents do here, that because the proposed expansion of mining operations would not result in any change in the rate of ancillary operations, it need not consider the effects of those ancillary operations in its NEPA analysis. *Id*. at 725. The Ninth Circuit flatly rejected this argument, noting that BLM's approval of the proposed mine expansion would result in an additional ten years of ancillary operations, along with the attendant environmental impacts. *Id*. at 726.
>
> This distinction is particularly relevant with regards to the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant. Even though, as Respondents argue, the effects related to ambient air quality concentrations of pollutants are most closely related to the rate of

> emissions, Transcript of Oral Argument (Feb. 18, 2015) at 38-39, the primary impacts of mercury are not associated with its ambient concentration in the air but with its deposition from the atmosphere. *Id*. at 42. Although Respondents attempt to downplay the significance of mercury emissions from the Four Corners Power Plant, *id*. (noting that the Four Corners Power Plant accounts for 1% of mercury deposition in the San Juan River basin), the record reveals that even microscopic changes in the amount of mercury deposition can have significant impacts on threatened and endangered species in the area impacted by the Four Corners Power Plant. *See* AR 1-2-14-1990 (concluding that a .1% increase in mercury deposition in the basin is likely to jeopardize the continued existence of the Colorado pikeminnow). Given the potentially significant impacts of mercury pollution, OSM's failure to discuss or analyze the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant is troubling. At a minimum, it renders OSM's analysis of the indirect effects of the proposed mine expansion insufficient.
>
> OSM's approval of the Permit Revision Application, even if it does not alter the rate of combustion at Four Corners Power Plant, will result in the combustion of an additional 12.7 million tons of coal. The "status quo rule" does not excuse OSM's failure to consider the cumulative impact of this additional coal combustion, which would not occur but for OSM's approval of the proposed expansion.

Diné Care, 1214-1215. Although *Diné Care* dealt with a permitting decision for a mine serving only a single plant, its reasoning is equally applicable to a mine, such as SUFCO, that serves multiple customers, but is under long-term contract to supply the vast majority of its output to a known power plant or plants.

The fatal shortcoming of the FSEIS is underscored by the fact that readily available information clearly demonstrates mercury and selenium releases and deposition will be a reasonably foreseeable consequence of coal combustion.

With regards to mercury, the element occurs naturally, but is also a local, regional, and global pollutant that is harmful to wildlife and human health. *See* Exhibit 8, Winfield Wright and Koren Nydick, *Sources of Atmospheric Mercury Concentrations and Wet Deposition at Mesa Verde National Park, Southwestern Colorado, 2002-08* (Mountain Studies Institute Report 2010-03) ("MSI Report"), available online at

http://www.cfc.umt.edu/CESU/Reports/NPS/CU/2008/08_09Nydick_MEVA_Hg%20sources%20Final%20report.pdf. Atmospheric mercury is produced from, among other things, combustion of coal at power plants, which releases mercury into the air where it is then deposited by precipitation water bodies, where micro-organisms convert it to methyl mercury – a particularly toxic form – at which point it becomes biomagnified through the food chain. *See* Exhibit 9, U.S. Fish and Wildlife Service, Biological Opinion for the Four Corners Power Plant and Navajo Mine Energy Project 72-73 (April 8, 2015) ("FCPP/NM BiOp"), available online at http://www.fws.gov/southwest/es/NewMexico/documents/BO/2014-0064_USFWS_FINAL_BO_Four_Corners_Power_Plant_Navajo_Mine_Energy_Project.pdf/. Further, according to the MSI Report, coal-fired power plants are the largest human source of mercury emissions in the United States, and atmospheric deposition appears to be the dominant source of mercury contamination in North America.

Some of the highest levels of mercury concentration in fish tissue within the entire region of the Upper Colorado River Basins occur in Colorado pikeminnow in the Middle Green River, located in close proximity to the Hunter power plant that burns the largest share of SUFCO coal. *See* Exhibit 7 at 76 & Table 3. The Colorado pikeminnow is a critically-endangered fish and top natural predator in the Colorado River that has been federally protected since 1967. The pikeminnow is imperiled due to widespread destruction and modification of the Colorado River basin, including its tributaries, where it once occurred. It currently survives as a result of stocking programs in some areas of the upper and lower Colorado River basins, and in a limited stretch of the San Juan River. The Green River is critical to the long-term survival and recovery of the Colorado pikeminnow, constituting the largest population for the potential downlisting and

delisting of the species. *See* U.S. Fish and Wildlife Service, Colorado pikeminnow (*Ptychochelius lucius*) Recovery Goals at 44 (2002), cited in FSEIS at 323.

In considering the effects of the Desert Rock Energy Project ("Desert Rock") – a coal-fired plant that was proposed to be cited on the Navajo Nation – the Fish and Wildlife Service considered the effects of atmospheric mercury deposition to endangered and threatened species including the Colorado pikeminnow. *See* Exhibit 10, U.S. Fish and Wildlife Service, Draft Biological Opinion for the Desert Rock Energy Project ("Desert Rock BiOp") at 106 (Oct. 15, 2009), available online at http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/coal/pdfs/EX_B.pdf. Using a threshold for adverse effects of 0.2 mg/kg WW (wet weight), 64 percent of San Juan Colorado pikeminnow experience reproductive impairment due to mercury presently. *Id*. By 2020, the Desert Rock BiOp found that mercury deposition in the San Juan River basin is expected to increase by 35.4 percent without or 35.5 percent with the construction of the proposed Desert Rock Energy Project. *Id*. at 3. For this reason, the Fish and Wildlife Service predicted that 72 percent of Colorado pikeminnow in the San Juan River basin will experience mercury-induced reproductive impairment by 2020 – which the agency found would be "likely to *jeopardize* the continued existence of the Colorado pikeminnow." *Id*. at 120 (emphasis added). The recently issued Four Corners/Navajo Mine Biological Opinion sets a substantially higher threshold for mercury concentrations that would lead to population-level impairment in the San Juan (0.7 mg/kg as opposed to 0.2 mg/kg) (Exhibit 8 at 116), but clearly reaffirms the substantial scientific certainty that mercury accumulation poses severe behavioral, reproductive, and survival risks to fish including Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. Exhibit 9 at 81-94. That same Biological Opinion, however,

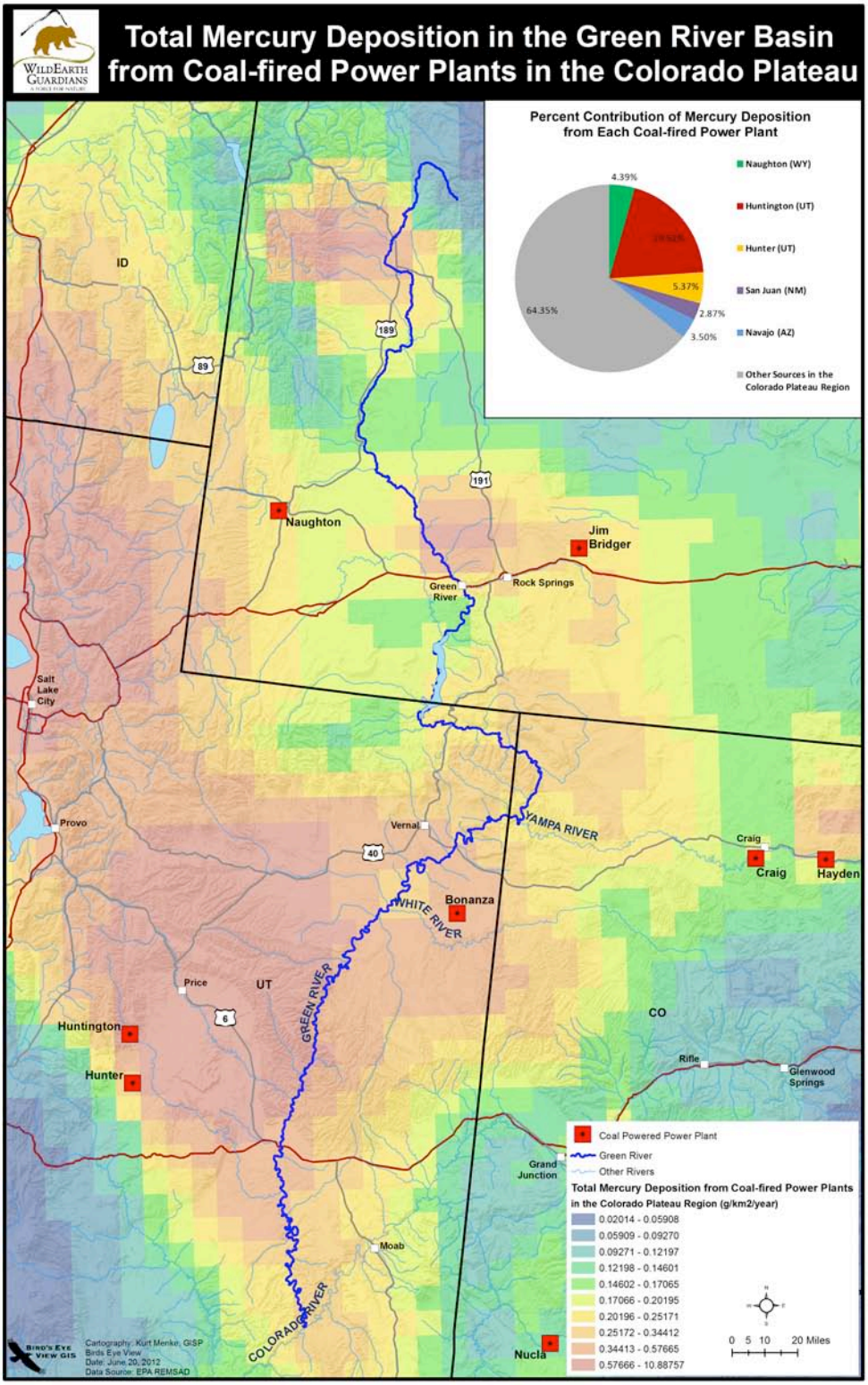
indicates baseline levels of 0.77 mg of mercury per kg of fish muscle tissue present in Colorado pikeminnow in the Middle Green and .95 mg of mercury per kg of fish muscle tissue in the White River – baseline levels sufficient to endanger population survival even under the elevated threshold of the Four Corners BiOp. *Id.* at 76 Table 3. Selenium levels in Middle Green fish are similarly dangerously high, averaging 1.0 mg/kg. *Id.*

Average and range of baseline mercury (Hg mg/kg WW) and selenium (Se mg/kg WW) in Colorado pikeminnow and razorback sucker muscle tissues in the Upper Colorado River Basin. *Id.*

River Basin and Species	Average Hg in Muscle Tissue (min - max)	Average Se in Muscle Tissue (min - max)
San Juan River Colorado pikeminnow > 400 mm TL	0.37 (0.31 - 0.43)	0.8 (0.6 – 0.9)
San Juan River Razorback sucker > 400 mm TL	0.12 (0.04 – 0.24)	0.8 (0.4 – 1.4)
Middle Green River Colorado pikeminnow	0.77 (0.68 - 0.87)	1.0 (0.9 – 1.1)
Upper Colorado River Colorado pikeminnow	0.60 (0.31 – 1.04)	1.9 (0.9 – 2.2)
White River Colorado pikeminnow	0.95 (0.43 – 1.83)	0.9 (0.6 – 1.2)
Yampa River Colorado pikeminnow	0.49 (0.44 – 0.53)	0.6 (0.4 – 0.7)

That mercury emissions from the Hunter and Huntington power plants may affect the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail is illustrated by a series of maps prepared by WildEarth Guardians using the Environmental Protection Agency's ("EPA's") Regional Modeling System for Aerosols and Deposition protocol, or REMSAD, and relying on the agency's methods. *See* Exhibit 11, EPA, "Model-based analysis and tracking of airborne mercury emissions to assist in watershed planning" (Aug. 2008), available online at http://www.epa.gov/owow/tmdl/pdf/final300report_10072008.pdf. Based on this model, Guardians modeled that the Hunter power plant contributes 5.37% of total mercury deposition in the Green River Basin, with Huntington contributing 19.52%. The image below illustrates the modeled impacts. More detailed modeling of the individual power plants also shows that both

power plants' mercury deposition footprints are more heavily concentrated in the Green River watershed, particularly in the Huntington Creek and Price River drainages. *See* Exhibit 12, Maps of Mercury Deposition from Hunter and Huntington Power Plants, prepared by WildEarth Guardians (June 6, 2012).



Top sources of mercury deposition in Green River watershed. Map prepared using EPA's REMSAD model.

Regardless of whether or not SUFCO's contribution to mercury releases from Hunter and other plants will cause jeopardy to the Colorado pikeminnow under the ESA, the agencies cannot ignore this significant impact due to minor uncertainty regarding the precise destination and combustion conditions for Greens Hollow coal. *See Northwest Envt'l Defense Ctr. v. NMFS*, 647 F. Supp. 2d 1221, 1247 (D. Or. 2009) ("Clearly, there can be a significant impact on a species [under NEPA] even if its existence is not jeopardized.") (quotation omitted).

ii. Coal Transport Impacts

Although the BLM acknowledges that coal from the SUFCO mine will be transported, the FSEIS is silent as to how these transport activities will affect the human environment.

In fact, the FSEIS's discussion of transport-related impacts appears boils down to one paragraph in which the BLM discloses that truck hauling of coal will occur, with the majority of coal trucked to the Hunter power plant. *See* FSEIS at 287. The FSEIS, however, does not disclose how much truck traffic will occur, what the reasonably foreseeable impacts of this truck traffic will be, whether coal is trucked to other power plants (*e.g.*, to the Intermountain Power Plant or the Kennecott power plant) and what other related impacts would be expected (*e.g.*, to water, to wildlife, etc.). Not only that, but the BLM appears to assert that, notwithstanding this trucking, that the transportation impacts of issuing the Greens Hollow coal lease would be the same as if the agency adopted a No Action Alternative. *See id*. This is completely unsupported. While the BLM claims that if coal from Greens Hollow is not trucked to the Hunter power plant, other coal will simply be trucked in, there is no basis for this assumption that would indicate the impacts under the No Action Alternative would be exactly the same as under the proposed action.

Regardless, the agency's fundamental presumption regarding transportation impacts simply hold no water. By approving the Greens Hollow coal lease, the BLM is acquiescing to more than eight more years of truck hauling of coal from the SUFCO mine. If the agency adopts a No Action alternative, this hauling would not otherwise occur. The fact that other coal may be trucked from some other mine to the Hunter power plant or other coal-fired power plant does not render the reasonably foreseeable transportation impacts irrelevant or, as the agency seems to imply, nonexistent. Similar to coal combustion impacts, the USFS here is obligated to analyze coal trucking impacts associated with extending the life of the SUFCO mine given that they would not otherwise occur but for the Greens Hollow coal lease and given that they are reasonably foreseeable.

Finally, the FSEIS is deficient under NEPA because it entirely fails to analyze and assess the impacts of rail transport of coal from the SUFCO mine. The BLM makes reference to rail transport FSEIS, for example noting that "coal is transported to a rail head in Levan, Utah, and from there to multiple end users," and that some coal is transported to a "central loading point for rail loading," but provides no analysis or assessment of the impacts of rail loading and transport. We are particularly concerned that as a result, the BLM has failed to adequately disclose air quality impacts related to locomotive traffic, including greenhouse gas emissions and fugitive coal dust from train cars.

Although the agency may claim that the ultimate destination of the coal is uncertain, this excuse does not seem to absolve the agency of its duty to disclose, analyze, and assess potentially significant reasonably foreseeable impacts. Here, the BLM has information to know with certainty that some coal is hauled to the Levan railhead and therefore has sufficient information to at least analyze and assess the impacts of coal loading. Indeed, even Union Pacific

has information available that could enable the agency to conduct such an analysis. According to the company's website, the SUFCO mine has 14,000 tons of live storage capacity at the railhead and ten 1,000-ton-per-hour vibrating feeders that place the coal on a belt to a 200 ton surge bin where it is fed into trains. *See* Exhibit 13, Union Pacific, "SUFCO Mine," website available at http://www.up.com/customers/coal/mines/m-utah/sufco/index.htm.

Furthermore, as to the uncertainty regarding the destination of coal from the SUFCO mine, this again appears to be unsupported. As explained, we know where SUFCO coal is currently shipped, giving us a reasonable understanding of where coal is likely to be shipped in the future. Even if destinations might change, it is unclear how this prevents the BLM from making any effort to analyze and assess the impacts of hauling coal by rail. At the least, the agency can and should estimate how much coal is likely to be shipped by rail from SUFCO at any time and to then roughly estimate what air emissions and other impacts are likely to occur. The failure to make any effort at all to analyze and assess such reasonably foreseeable impacts renders the FSEIS fatally flawed.

iii. Coal Export Impacts

Related to the BLM's failure to adequately analyze and assess coal transport impacts, the agency also ran afoul of NEPA by failing to analyze and assess impacts related to international coal export activities.

That Bowie Resources, the proponent of the Greens Hollow coal lease, exports coal internationally is not uncertain, speculative, or otherwise unforeseeable. According a report released in 2014 by the Sightline Institute, Bowie has signaled that exports are a key element of its business plan and revealed that the company has agreements to ship coal from two ports in the Bay Area of California, including the Port of Stockton in California the Levin-Richmond

Terminal, a private port in Richmond. *See* Exhibit 14, Williams-Derry, C., Sightline Institute, "Unfair Market Value: By Ignoring Exports, BLM Underprices Federal Coal" (July 2014), available online at http://www.sightline.org/download/2493/.

Indeed, according to Bowie Resources, coal from the SUFCO mine is already exported overseas through ports in the Bay Area of California. *See* Exhibit 15, Argus Media, "Coal firm Bowie proposes public offering," *Argus Media* (Feb. 9, 2015), available online at http://www.argusmedia.com/pages/NewsBody.aspx?id=989911&menu=yes. Not only that, but it was announced in 2015 that the company is partnering with local counties, including Sevier, Sanpete, Emery, and Carbon Counties, to secure additional port capacity in Oakland to lock in future exports. *See* Exhibit 16, "Project could transform local coal market to international," *Richfield Reaper* (April 14, 2015), available online at http://www.richfieldreaper.com/news/local/article_e13121f0-dd67-11e4-b956-3ff480cc1929.html. One local official, who noted that Bowie is interested in expanding its coal shipping capacity to international markets, commented that, "The purchase of SUFCO by Bowie [Resources] is what's driving all of this." *Id*. Recent news reports confirm that Bowie Resources is aggressively pursuing plans to ensure the ability to export coal from the SUFCO mine. *See* Exhibit 17, Tory, S., "How Utah coal interests helped push a secret plan to export coal from California," *High Country News* (July 21, 2016), available online at http://www.hcn.org/articles/how-a-utah-coal-company-fueled-a-secret-plan-to-export-coal-from-california-Keep-It-In-The-Ground-Oakland-terminal.

In spite of this information, the BLM asserted that the impacts of coal export activities, and more specifically the destination of the coal, are "outside the scope" of the FSEIS. FSEIS at D-51. NEPA, however, is clear that reasonably foreseeable impacts, or indirect impacts, must be

analyzed, meaning that it is impossible for such impacts to be "outside the scope" of an EIS. Here, international export of coal is certainly a reasonably foreseeable consequence of issuing the Greens Hollow lease. Although the BLM may believe that the ultimate destination of coal is uncertain, this does not make the activity of exporting coal any less certain or absolve the agency of addressing these impacts in accordance with NEPA.

With the information available now, the BLM clearly could have analyzed the potential impacts of hauling coal from Utah to California, the impacts of unloading coal from trains to barges at port facilities, and the impacts of shipping coal through the Bay Area. Such an analysis is not "outside the scope" of FSEIS, but rather an integral part of ensuring the BLM takes a hard look at potentially significant impacts.

The failure to even attempt to analyze the reasonably foreseeable impacts of coal exporting raises serious concerns that the BLM has not adequately analyzed the air quality impacts, including greenhouse gas emissions, of issuing the Greens Hollow lease, water impacts, and land impacts. Full and accurate consideration of these impacts is relevant to ensuring a well-informed decision under NEPA.

b. Failure to Adequately Analyze and Assess Climate Impacts Associated with Projected Direct and Indirect Greenhouse Gas Emissions

The BLM further overlooked what may be one of the most significant consequences of issuing the Greens Hollow coal lease, namely the climate impacts that would result from direct and indirect emissions of greenhouse gas emissions.

Here, the agency did not deny that greenhouse gas emissions would be released, both directly from mining operations and indirectly from coal combustion, and that these emissions would contribute to anthropogenic climate change. FSEIS at 285. Rather the BLM denied that these emissions would be significant in the context of their contribution to global climate change.

In offering this denial, however, the agency relied on specious logic and inaccurate information, rendering its analysis and assessment wholly unsupported under NEPA.

The BLM offers two lines of reasoning for its climate denial, both of which lack support. First, the agency asserts that direct and indirect greenhouse gas emissions would be so small that climate impacts would be insignificant. The agency discloses that total emissions related to the burning of the Greens Hollow coal lease would amount to "0.067% of global emissions" and that emissions from mining would amount to "0.014%" of global emissions, implying that total emissions would be a fraction of worldwide greenhouse gas emissions. FSEIS at 286. This is an absurd and arbitrary comparison.[8] Using this logic, for instance, the jobs and revenue that would be created by extending the life of the SUFCO mine would be a small fraction of global jobs and revenue, making them insignificant. For the agency to dismiss potentially significant climate impacts by proffering such a meaningless comparison is misleading, and undermines NEPA's goal of ensuring well-informed, objective decisions.

The agency next attempts to dismiss climate impacts as insignificant by claiming that, "The tools necessary to quantify incremental climatic impacts of specific activities [] are presently unavailable." FSEIS at 285. The BLM actually also asserts, "The climate change research community has not yet developed tools specifically intended for evaluating or quantifying end-point impacts attributable to the emissions of GHGs [greenhouse gases] from a

[8] Notably, the U.S. White House Council on Environmental Quality ("CEQ") recently explained that such an assessment of climate impacts is "not appropriate" under NEPA. As the agency stated, "a statement that emissions form a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA." Exhibit 18, CEQ, Memorandum for Heads of Federal Departments and Agencies, "Final Guidance for Federal Departments an Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews" (Aug. 1, 2016), available online at https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf

single source and there is a lack of any scientific literature to draw from regarding the climate effects of individual, facility-level GHG emissions." *Id*. This position is flatly unsupported because there *are* tools available to quantify incremental climate impacts associated with specific activities that are not only supported by science, but that are also supported by numerous federal agencies, including the Department of the Interior.

One of these tools (although by no means is it the only tool) is the social cost of carbon protocol. The social cost of carbon protocol for assessing climate impacts is a method for "estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO2) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO2 reduction)." Exhibit 19, U.S. Environmental Protection Agency ("EPA"), "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, available online at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf. The protocol was developed by a working group consisting of several federal agencies.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. *See* Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (Feb. 2010), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf. These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies. *See* Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory

Impact Analysis Under Executive Order 12866" (May 2013), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf. This report and the social cost of carbon estimates were again revised in 2015. *See* Exhibit 20, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (July 2015), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf.

Most recently, as an addendum to previous Technical Support Documents regarding the social cost of carbon, the Department of the Interior joined numerous other agencies in preparing estimates of the social cost of methane and other greenhouse gases. *See* Exhibit 21, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, "Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide" (Aug. 2016), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/august_2016_sc_ch4_sc_n2o_addendum_final_8_26_16.pdf.

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from $11 to $220 per metric ton of carbon dioxide. *See* Chart Below. In its most recent update to the Social Cost of Carbon Technical Support Document, the White House's central estimate was reported to be $36 per metric ton. *See* Exhibit 22, White House, "Estimating the Benefits from Carbon Dioxide Emissions Reductions," website available at https://www.whitehouse.gov/blog/2015/07/02/estimating-

benefits-carbon-dioxide-emissions-reductions. In July 2014, the U.S. Government Accountability Office ("GAO") confirmed that the Interagency Working Group's estimates were based on sound procedures and methodology. *See* Exhibit 23, GAO, "Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates," GAO-14-663 (July 2014), available online at http://www.gao.gov/assets/670/665016.pdf.

	Discount Rate and Statistic			
Year	5% Average	3% Average	2.5% Average	3% 95th percentile
2015	$11	$36	$56	$105
2020	$12	$42	$62	$123
2025	$14	$46	$68	$138
2030	$16	$50	$73	$152
2035	$18	$55	$78	$168
2040	$21	$60	$84	$183
2045	$23	$64	$89	$197
2050	$26	$69	$95	$212

Most recent social cost of carbon estimates presented by Interagency Working Group on Social Cost of Carbon. The 95th percentile value is meant to represent "higher-than-expected" impacts from climate change. *See* Exhibit 19.

Although often utilized in the context of agency rulemakings, the protocol has been recommended for use and has been used in project-level decisions. For instance, the EPA recommended that an EIS prepared by the U.S. Department of State for the proposed Keystone XL oil pipeline include "an estimate of the 'social cost of carbon' associated with potential increases of GHG emissions." Exhibit 24, EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011).

More importantly, the BLM has also utilized the social cost of carbon protocol in the context of oil and gas approvals. In recent Environmental Assessments for oil and gas leasing in Montana, the agency estimated "the annual SCC [social cost of carbon] associated with potential development on lease sale parcels." Exhibit 25, BLM, "Environmental Assessment for October 21, 2014 Oil and Gas lease Sale," DOI-BLM-MT-0010-2014-0011-EA (May 19, 2014) at 76, available online at

http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct__21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale_Post%20with%20Sale%20(1).pdf. In conducting its analysis, the BLM used a "3 percent average discount rate and year 2020 values," presuming social costs of carbon to be $46 per metric ton. *Id*. Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be "$38,499 (in 2011 dollars)." *Id*. In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be $51 per ton of annual CO_2e increase. *See* Exhibit 26, BLM, "Little Willow Creek Protective Oil and Gas Leasing," EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81, available online at https://www.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf. Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be $3,689,442 annually. *Id*. at 83.

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol "does not currently include all important [climate change] damages." Exhibit 19. As explained:

> The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

Id. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be

increased six times for a mid-range value of $220 per ton. *See* Exhibit 27, Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," *Nature Climate Change* (January 12, 2015) at 2. In spite of uncertainty and likely underestimation of carbon costs, nevertheless, "the SCC is a useful measure to assess the benefits of CO2 reductions," and thus a useful measure to assess the costs of CO2 increases. Exhibit 19.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decisionmaking, is emphasized by a recent White House report, which warned that delaying carbon reductions would yield significant economic costs. *See* Exhibit 28, Executive Office of the President of the United States, "The Cost of Delaying Action to Stem Climate Change" (July 2014), available online at https://www.whitehouse.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf. As the report states:

> [D]elaying action to limit the effects of climate change is costly. Because CO_2 accumulates in the atmosphere, delaying action increases CO_2 concentrations. Thus, if a policy delay leads to higher ultimate CO_2 concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO_2 concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO_2 concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.

Id. at 1.

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA, specifically supported in federal case law. Courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in

an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id*. at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id*. at 1200. The court found this argument to be arbitrary and capricious. *Id*. The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id*. at 1202.

More recently, a federal court has done likewise for a federally approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D. Colo. 2014), citing 40 C.F.R. § 1502.23. However, when an agency prepares a cost-benefit analysis, "it cannot be misleading." *Id*. at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project. However, the quantification of the social cost of carbon, although included in earlier analyses, was omitted in the final NEPA analysis. *Id*. at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id*. Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id*.

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. *See* Exhibit 29, Greenstone, M., "There's a Formula for Deciding When to Extract Fossil Fuels," *New York Times* (Dec. 1, 2015), available online at http://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html?_r=0.

Thus, although the social cost of carbon protocol is an appropriate and widely accepted method for analyzing and assessing the climate impacts of incremental greenhouse gas emissions from specific activities, such as coal leasing, it is also a necessary component of any cost-benefit analysis, should an agency choose to prepare one. In the case of Greens Hollow, this further underscores that the BLM did not take a hard look at climate impacts in accordance with NEPA. Indeed, as part of the FSEIS, the agency did prepare an economic analysis that disclosed economic benefits, disclosing for example that leasing would generate up to "$1.87 billion." FSEIS at 56. Given this, the agency was obligated to disclose the costs of leasing, including carbon costs. Unfortunately, the BLM did not do so, effectively presuming that there would be no costs whatsoever associated with issuing the Greens Hollow coal lease, including no carbon costs. This blatantly lopsided approach to analyzing and assessing costs and benefits contravenes NEPA.

The severity of this shortcoming is highlighted by the fact that carbon costs associated with the Greens Hollow coal lease appear to be substantial. Based on the BLM's disclosure that mining will produce "21.8 million metric tons" of carbon dioxide annually (FSEIS at 286) and that the Greens Hollow lease would extend the life of the SUFCO mine for approximately eight

years (FSEIS at S-2), we can estimate the present cost of carbon emissions using the 2015 social cost of carbon numbers presented by the Interagency Working Group. Presuming that the Greens Hollow lease will be mined starting in 2017, the table below shows the present cumulative carbon costs could be as low as $2.14 billion and as high as $21.65 billion.

Cumulative Carbon Costs Associated with Greens Hollow Coal Lease

Year	Low Carbon Price, 5% Avg. Discount Rate ($/metric ton)	Low Carbon Cost ($)	High Carbon Price, 3% 95th Percentile Avg. ($/metric ton)	High Carbon Cost ($)
2017	11	239,800,000	112	2,441,600,000
2018	12	261,600,000	116	2,528,800,000
2019	12	261,600,000	120	2,616,000,000
2020	12	261,600,000	123	2,681,400,000
2021	12	261,600,000	126	2,746,800,000
2022	13	283,400,000	129	2,812,200,000
2023	13	283,400,000	132	2,877,600,000
2024	13	283,400,000	135	2,943,000,000
	PRESENT COST (LOW)	**$2,136,400,000**	**PRESENT COST (HIGH)**	**$21,647,400,000**

Granted, there may be uncertainty around these numbers. However, NEPA does not allow an agency to forego analyzing impacts completely simply because there may be some uncertainty, especially where the information may still be of "high quality" according to 40 C.F.R. § 1500.1. The BLM itself seems to understand this as the FSEIS analyzes and discloses a number of reasonably foreseeable impacts that are uncertain, including economic impacts. For instance the agency notes that issuing the Greens Hollow coal lease "could" extend the life of the mine by 8.8 years and that the coal "could be recovered" and provide revenue. FSEIS at 243.

In light of all this, it appears more than reasonable to have expected the BLM to do more than make unsupported claims that analyzing and assessing climate impacts was not possible under NEPA. Here, the agency made no effort to actually verify what tools truly exist to analyze and assess climate impacts and instead, mischaracterized the state of science and understanding.

By failing to appropriately analyze and assess climate impacts, the FSEIS clearly contradicts NEPA's requirement that information and analysis be of "high quality" in accordance with 40 C.F.R. § 1500.1.

3. The ROD for the Greens Hollow Coal Lease Fails to Comply with the ESA

BLM's ROD violates Section 7 of the Endangered Species Act ("ESA"), 16 U.S.C. § 1536. Contrary to BLM's allegation in the ROD, BLM has failed to ensure no jeopardy to threatened and endangered species or destruction or adverse modification of designation critical habitat through consultation with the U.S. Fish and Wildlife Service ("FWS") pursuant to Section 7(a)(2) of the ESA and its implementing regulations, 16 U.S.C. § 1536(a)(2), 50 C.F.R. Part 400. Species and critical habitats that will be affected directly, indirectly, and cumulatively by the BLM's leasing decision include the endangered Colorado pikeminnow (*Ptycholcheilus lucius*) and its designated critical habitat; the endangered razorback sucker (*Xyrauchen texanus*) and its designated critical habitat; the endangered bonytail (*Gila elegans*) and its critical habitat; the endangered humpback chub (*Gila cypha*) and its critical habitat; and the threatened western yellow-billed cuckoo (*Coccyzus americanus*) and its proposed critical habitat.

Specifically, BLM (1) has completely failed to consult with FWS regarding the indirect effects of federally-authorized coal mining activities at the Greens Hollow Tract and SUFCO Mine, and (2) has failed to insure that the proposed Greens Hollow Coal Lease will not jeopardize the continued existence or adversely modify critical habitat for the Colorado pikeminnow, razorback sucker, bonytail, humpback chub, and/or yellow-billed cuckoo. The reasonably foreseeable indirect effects of coal leasing include the intended and predictable combustion of that coal and related waste disposal, *see* 50 C.F.R. § 402.02, which will result in mercury and selenium contamination adversely affecting the four endangered Colorado River

fish and their critical habitat, and the threatened yellow-billed cuckoo and its proposed critical habitat.

a. Background

The Greens Hollow Coal Lease Tract is proposed for lease under an application originally submitted by the Ark Land Company, the then-owner of the currently-operating SUFCO mine.[9] Coal from the Greens Hollow Tract would supply the existing SUFCO mine, now owned by a subsidiary Bowie Resources.[10] The purpose of the lease application is to extend production from the SUFCO mine, which supplies coal principally to three Utah coal-fired power plants, the Hunter, Intermountain Power, and Huntington plants.[11] As the FSEIS discloses:

> The existing SUFCO mine supplies about four million tons of coal per year to the Hunter Power Plant, making the Hunter Plant the largest consumer of coal from the mine. . . .The remainder of the coal is transported to a rail head in Levan, Utah, and from there to multiple end users. Therefore, the public demand for coal from the SUFCO Mine is already established. The action alternatives extend the supply of coal for additional years.[12]

The Greens Hollow Coal Lease will extend the life of the existing SUFCO Mine on the site by approximately ten years and over fifty million tons of coal. The tract's expected and intended buyer, Bowie Resource "expect[s] to obtain a lease from the BLM through the lease by application process for the Greens Hollow tract, which contains approximately 50.5 million tons of non-reserve coal deposits, including those in the Lower Hiawatha seam, accessible through

[9] FSEIS at S-1.

[10] FSEIS at S-3.

[11] FSEIS at 2.

[12] FSEIS at 145.

our SUFCO mine."[13] Bowie expects the existing Upper Hiawatha seam fueling the SUFCO mine to be exhausted in the third quarter to 2021.[14] Acquisition of the Greens Hollow tract and its 50.5 million tons of coal would give Bowie:

> the ability to add a new longwall system to the SUFCO mine to enable it to produce up to 7.0 million tons per year from the Lower Hiawatha seam. This production from the SUFCO mine's Lower Hiawatha seam would replace the production from the SUFCO mine's Upper Hiawatha seam and would be in addition to the 4.0 million tons of coal produced per year from the Fossil Rock reserves.[15]

Thus, the Greens Hollow lease would foreseeably increase coal production (and consumption) by 50.5 tons, at a rate of up to 7.0 million tons per year, on a projected life-of-mine sequence from December 2020 through August 2033.[16]

The FSEIS, EIA reports, Bowie securities filings, and Appellants' 2015 Objection to the Forest Service's FSEIS, make clear that the Hunter coal-fired power plant in Castle Dale, Utah is one of the largest current customers of the SUFCO mine, and one of the largest intended customer of the Greens Hollow tract reserve expansion.[17] As explained above, in 2015, the majority of coal mined from SUFCO was burned in the nearby Hunter power plant, with large amounts also combusted at the nearby Huntington power plant, the Intermountain Power Station, and Kennecott power plant.

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[13] United States Securities and Exchange Commission, Bowie Resource Partners LP Form S-1 at 4 (June 19, 2015), Exhibit 20.

[14] Bowie Form S-1 at 80.

[15] Bowie Form S-1 at 132.

[16] Bowie Form S-1 at 135.

[17] *See* FSEIS at 287-88; Exhibit 2; Exhibit 6; Bowie Form S-1 at 151.

Bowie's filings reveal that its coal supply contracts obligate it to supply PacificCorp's Hunter plant with 2.5 to 4.5 tons of coal per year through 2020.[18] In addition, Bowie is also under long-term contracts to supply PacificCorp's Huntington plant with 2 to 3 tons of coal per year through 2029, and Intermountain Power with 2.5 to 3 tons of coal per year through 2024. Although Bowie's existing contract with Hunter expires in 2020, it has invested in a paved road to shorten its transportation routes from the SUFCO mine to the Hunter plant,[19] and in real estate and coal storage blending facilities near the Hunter plant,[20] in a clear effort to enhance its abilities to supply the Hunter plant and extend its PacificCorp contract.

Based on this information, it is reasonably foreseeable that the intended use of the Greens Hollow Coal Tract is combustion at a rate of approximately 7 tons/year through 2033 at the Hunter (between 2.5 and 4.5 tons/year), Huntington (between 2 and 3 tons/year). Although Bowie has an additional contract with Intermountain Power (between 2.5 and 3 tons year through 2024, because of decisions by the Los Angeles Department of Water and Power to reduce carbon emissions, coal combustion at the Intermountain Power Project is expected to cease around 2024, to be replaced by gas-fired generation and potentially renewable energy storage.[21]

The Hunter and Huntington coal-fired power plants, the foreseeable recipients of Greens Hollow Tract coal, are major sources of mercury emissions and local mercury deposition, as well as sources of mercury contamination through coal waste disposal. Based on 2015 data from the

[18] Bowie Form S-1 at 151.

[19] Bowie Form S-1 at 119.

[20] Bowie Form S-1 at 127, 136

[21] *See* Tim Miser, The Intermountain Energy Storage Project, *Power Engineering* (April 19, 2016), http://www.power-eng.com/articles/print/volume-120/issue-4/features/the-intermountain-energy-project.html.

EPA's Toxic Release Inventory, last year Hunter emitted 12.3 pounds of mercury compounds to the atmosphere, and disposed of 303.4 pounds to "other landfill" destinations.[22] Huntington emitted 10.5 pounds of mercury compounds to the atmosphere, and 263.3 pounds to "other landfill" destinations.[23]

As explained above, in 2012, WildEarth Guardians conducted analysis of mercury emissions and deposition from coal-fired power plants, including Hunter and Huntington, on the Colorado Plateau, using the EPA's Regional Modeling System for Aerosols and Deposition protocol, or REMSAD, and relying on the agency's methods. *See* Exhibit 12.

Based on this model, Guardians modeled that the Hunter power plant contributes 5.37% of total mercury deposition in the Green River Basin, with Huntington contributing 19.52%. The image below illustrates the modeled impacts. More detailed modeling of the individual power plants also shows that both power plants' mercury deposition footprints are more heavily concentrated in the Green River watershed, particularly in the Huntington Creek and Price River drainages.

Selenium emissions from the Hunter and Huntington plant are likely, but less well understood. Selenium is known to be a natural component of coal and soils in the region, and to be released during coal combustion, as well as present in coal combustion waste.[24] It is not

[22] EPA, Toxics Release Inventory Data 2015 for Hunter, Exhibit 21.

[23] EPA, Toxics Release Inventory Data 2015 for Huntington, Exhibit 22.

[24] U.S. Fish and Wildlife Service, Biological Opinion on the Approval of a Mining Plan Modification for the South Taylor/Lower Wilson Area at the Colowyo Coal Mine 7 (Aug. 27, 2015) ("Colowyo BiOp"), *See* Exhibit 23.

monitored at coal combustion stations to the same degree as mercury, so specific selenium emissions levels are not known for Hunter and Huntington.[25]

b. The ESA Requires BLM to Ensure that its Issuance of the Lease Will Not Jeopardize the Continued Existence of Threatened and Endangered Species or Adversely Modify Their Critical Habitat

Congress enacted the ESA in 1973 to provide for the conservation of endangered and threatened fish, wildlife, plants and their natural habitats.[26] The ESA imposes substantive and procedural obligations on all federal agencies with regard to listed and proposed species and their critical habitats.[27]

Under Section 7 of the ESA, federal agencies must "insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical."[28] The duties in ESA Section 7 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 lawfully complies with these requirements may an action that "may affect" a protected species go forward.[29]

Moreover, in authorizing and allowing activities that harm federally-protected species, such as coal leasing and resulting coal combustion, the BLM may not, under Section 9(a)(1)(B)

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[25] Colowyo BiOp at 7. The TRI reporting threshold for selenium is 25,000 tons/year, which likely accounts for the fact that selenium emissions and disposal are not reported for Hunter and Huntington in the TRI. *See* http://www.epa.gov/tri/guide_docs/pdf/2000/00egf.pdf.

[26] *Id*. §§ 1531, 1532.

[27] *See id*. §§ 1536(a)(1), (a)(2) and (a)(4) and § 1538(a); 50 C.F.R. § 402.

[28] 16 U.S.C. § 1536(a)(2).

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

of the ESA, engage in any activities that "take" an endangered species.[30] The term "take" is defined in the "broadest possible manner to include every conceivable way" in which a person could harm or kill wildlife.[31] Persons subject to the prohibition on take include individuals and corporations, as well as "any officer, employee, agent, department or instrumentality of the Federal Government."[32] Further, "a regulatory scheme authorizing third parties to engage in actions that result in takings itself violates the ESA."[33]

Through the consultation process, the federal agency can comply with both the prohibitions set forth in Sections 7 and 9. The consultation duty is triggered whenever there is an "agency action" that "may affect" a listed species or critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a); *Rio Grande Silvery Minnow v. Bureau of Reclamation*, 601 F.3d 1096, 1105 (10th Cir. 2010). 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 programmatic actions.[34]

The "may affect" threshold for triggering the formal consultation requirement is "very low;" indeed, "any possible effect ... triggers formal consultation requirements."[35] Various factors must analyzed during consultation. The Service and the action agency must evaluate the

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[30] 16 U.S.C. § 1538(a)(1)(B).

[31] S. Rep. No. 93-307, 93d Cong., 1st Sess., reprinted in 1973 USCAAN 2989, 2995; *see also* 16 U.S.C. § 1532(18).

[32] 16 U.S.C. § 1532(13).

[33] *Strahan v. Coxe*, 127 F.3d 155, 163, 168 (1st Cir. 1997).

[34] 50 C.F.R. § 402.02.

[35] *See* Interagency Cooperation Under the Endangered Species Act, 51 Fed. Reg. 19,926 (June 3 1996).

"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."[36] The environmental baseline includes the past and present impacts of all Federal, state, and private actions and other human activities in the action area…."[37] 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."[38]

The "action area" includes "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action."[39] "Effects of the action" are in turn defined as:

> the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.[40]

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[36] *Id*. §§ 402.14 and 402.02.

[37] *Id*.

[38] *Id*.

[39] *Id*.

[40] 50 C.F.R. § 402.02.

The type of consultation will vary depending on the degree of anticipated effects. The action agency must initially prepare a biological assessment ("BA") to "evaluate the potential effects of the proposed action" on listed species.[41] 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.[42] If the Service concurs in this determination, then formal consultation is not required.[43]

If the action agency concludes that an action "may affect" and is "likely to adversely affect" listed species or critical habitat, it must enter into "formal consultation" with the Service.[44]

Formal consultation concludes with the Service's issuance of a "biological opinion."[45] 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."[46]

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[41] 50 C.F.R. § 402.12.

[42] *Id*. §§ 402.13(a) and 402.14(b).

[43] *Id*. § 402.13(a).

[44] 50 C.F.R. §§ 402.12(k), 402.14(a).

[45] 50 C.F.R. § 402.02.

[46] *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.

If the Service concludes in a biological opinion that jeopardy is likely to occur, it must prescribe "reasonable and prudent alternatives" to avoid jeopardy.[47] 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" ("RPMs") 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.[48]

The ESA requires federal agencies to use the best scientific and commercial data available when consulting about whether federal actions may jeopardize listed species or adversely modify critical habitat.[49] Accordingly, an action agency must "provide the Service with the best scientific and commercial data available or which can be obtained during the consultation for an adequate review of the effects that an action may have upon listed species of critical habitat."[50] Likewise, "[i]n formulating its biological opinion…the Service will use the best scientific and commercial data available."[51] However, if the action agency failed "to discuss information that would undercut the opinion's conclusions," the biological opinion is legally flawed, and the ITS will not insulate the agency from ESA Section 9 liability.[52]

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[47] *Id*. § 402.14(h)(3).

[48] 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i).

[49] *See* 16 U.S.C. § 1536(a)(2).

[50] 50 C.F.R. § 402.14(d).

[51] *Id*. § 402.14(g)(8).

[52] *See Ctr. for Biological Diversity v. BLM*, 698 F.3d 1101, 1127-28 (9th Cir. 2012).

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."[53] 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.

c. BLM Has Failed to Satisfy Its Consultation Duties Under Section 7(a)(2) of the ESA

i. BLM Failed to Consult With the U.S. Fish and Wildlife Service Regarding Coal Combustion Effects

BLM claims in its ROD that the Fish and Wildlife Service "provided written concurrence with the findings of the Biological Assessments prepared by the BLM pursuant to Section 7(a)(2) and (c) of the Endangered Species Act of 1973, as amended."[54] BLM further alleges that "[a]s part of its review, the BLM prepared a Supplemental Biological Assessment. That assessment determined that there would be no effect on federally-listed threatened and endangered species under the alternatives analyzed."[55]

BLM's characterization of its consultation history is narrowly accurate, but omits key facts relevant to this case. BLM did consult with in 2009 regarding certain effects to endangered

[53] 16 U.S.C. § 1536(d).

[54] ROD at 13.

[55] ROD at 13-14.

fish, but that was limited to assessing the impact of water depletions to the Colorado River system at the mine site itself.[56] They also appear to have prepared supplemental Biological Assessments in 2010 and 2014,[57] but determined there would be no effect on federally-listed species, and therefore did not transmit those Biological Assessments to the Fish and Wildlife Service or otherwise consult with FWS:

> A supplemental biological assessment was prepared for the proposed Greens Hollow tract (Cirrus 2014f). That assessment determined that there would be no effect on federally-listed threatened and endangered species under the alternatives analyzed. Therefore, consultation with the U.S. Fish and Wildlife Service was not required.[58]

Notably, in BLM and the USFS's 2009 consultation with FWS and in their two subsequent supplemental Biological Assessments, nowhere did the agencies ever disclose or consider the effects of coal combustion (and resulting mercury and selenium contamination) on endangered or threatened fish or birds.

ii. BLM Failed To Reinitiate Consultation

Alternatively, 50 C.F.R. § 402.16(b) provides that "[r]einitiation of formal consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and," *inter alia*, "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." Should this Board conclude that the Forest Service's 2009 and 2010 Biological Assessments constituted consultation, substantial

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[56] U.S. Fish and Wildlife Service, Formal Consultation for the Greens Hollow Coal Lease Tract, Manti-La Sal and Fishlake National Forests (June 4, 2009), Exhibit 24.

[57] *See* BLM, Biological Assessment for the Proposed Greens Hollow Federal Coal Lease Tract (Dec. 2014).

[58] USFS October 2015 ROD at 2014.

new post-2010 scientific information regarding the effects of mercury and selenium on listed fish and birds, as detailed below, constitutes new information requiring reinitiation of consultation under 50 C.F.R. § 402.16(b).

iii. Formal Consultation or Reconsultation Is Required Because Combustion of Coal from the Greens Hollow Tract Not Only May Affect, But Will Adversely Affect Listed Species and Their Critical Habitat

i. Colorado River Endangered Fish and Their Habitat

These endangered fish once inhabited thousands of miles of the Colorado River and its tributaries, including rivers in western Colorado. While they were once abundant and widespread throughout the Upper Basin, dam construction, introduction of nonnative species, and stream regulation have decimated their populations and now only a few sub-populations remain. The Service has listed each of the species as "endangered"[59] and designated a total of 1,980 miles of critical habitat for the endangered fish throughout the entire Colorado River Basin.[60]

a. The Colorado River Endangered Fish

The Colorado pikeminnow is an elongated pike-like fish and the largest minnow in North America that once grew as large as 6 feet and weighed nearly 100 pounds. It now rarely exceeds 3 feet or more than 18 pounds. It is a top predator in the Colorado River system and adapted to warm rivers.

The razorback sucker is a bottom browser that primarily feeds on algae, plant debris, and aquatic insect larvae. It often reaches over two feet in length and over 6 pounds. Both the

[59] 32 Fed. Reg. 4001 (Mar. 11, 1967) (Colorado pikeminnow and humpback chub); 45 Fed. Reg. 27623 (Apr. 23, 1980) (bonytail); 56 Fed. Reg. 54957 (Oct. 23, 1991) (razorback sucker).

[60] 59 Fed Reg. 13374 (Mar. 21, 1994).

Colorado pikeminnow and razorback sucker are migratory fish known to travel several hundreds of miles to spawning areas. Each can live up to 40 years.

Each of the endangered fish depends on sufficient natural flows, including peak spring flows, to create and provide habitat for various life phases. Peak spring flows are also important for the Colorado pikeminnow, which need riffles or shallow runs with cobble devoid of sediment for spawning. Natural flows are important to flooding bottomlands which make suitable habitat for nursery areas for the razorback sucker.[61] Natural flows are also needed to inundate areas to provide migration corridors for access to spawning, nursery, feeding, and rearing habitats.

The humpback chub and bonytail are both medium-sized, omnivorous fish in the minnow family and endemic to the Colorado River Basin, growing up to approximately 20 inches in length and living up to 30 and 50 years respectively. The humpback chub's distribution is restricted to remote whitewater canyons; its distinct hump acts as a stabilizer that helps it maintain position in its whitewater habitat. The bonytail is so rare that its preferred habitat is unknown, but its large fins and streamlined body are adapted to swimming through swift river flows.

Each of the fish has been extirpated from large portions of its historic range. In the Upper Colorado River Basin, 435 miles of Colorado pikeminnow habitat has been lost by reservoir inundation from Flaming Gorge Reservoir on the Green River, Lake Powell on the Colorado River, and Navajo Reservoir on the San Juan River.

On October 7, 2015, the Service finalized its annual Sufficient Progress Assessment evaluating the Recovery Program's progress in recovering the endangered fish. The assessment published 2014 population estimates for the Colorado pikeminnow, which indicated: (1) a

[61] Fish & Wildlife Service, Razorback Sucker, Recovery Goals, Amendment and Supplement to the Razorback Sucker Recovery Plan, 110 (2002).

decline in Colorado pikeminnow in the Colorado River sub-basin and a failure to meet the abundance criteria for this sub-population by 2015;[62] and (2) a decrease in Colorado pikeminnow "throughout the entire Green River Subbasin" indicating a continued failure to achieve the minimum viable population for this sub-population.[63]

b. Threats to the Endangered Fish: Water Depletions, Climate Change, and Mercury and Selenium Pollution

Historically, the devastating harm to endangered fish populations in the Colorado River basin was due primarily to the construction of dams, which caused a loss of suitable habitat. Dam construction drastically modified the river's natural hydrology and channel characteristics throughout the Colorado River basin, fragmenting the river ecosystem, blocking migrations, reducing temperatures downstream of dams, creating lake habitat, and creating conditions favorable to nonnative fish predators and competitors. Threats to these species also include stream regulation, habitat modification, competition with and predation by nonnative fish, and pesticides and pollutants.

Water depletions from other uses, such as oil and gas development, contribute to and exacerbate these threats. Removal of water changes the natural hydrologic regime that creates and maintains spawning habitats, nursery areas, and migratory corridors, reducing the availability of these habitats.[64] Reduced water levels increase the concentration of pollutants and

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[62] Fish and Wildlife Service, 2014-2015 Assessment of Sufficient Progress Under the Upper Colorado River Endangered Fish Recovery Program in the Upper Colorado River Basin 4-6, 36 (Oct. 7, 2015), Exhibit 25.

[63] *Id*. at 6-7.

[64] *See* Osmundson, Douglas B. & Patrick Nelson, USFWS, Relationships Between Flow and Rare Fish Habitat in the '15 Mile Reach' of the Upper Colorado River Final Report (1995), available at http://www.coloradoriverrecovery.org/documents-publications/technical-reports/isf/OsmundsonNelson1995.pdf.

contaminants that are toxic to the endangered fish, which could increase bioaccumulation of contaminants in the food chain and harm the predatory pikeminnow in particular. Reduced flows also alter habitat in ways that could increase nonnative fish populations. The loss of adequate flows is so serious that the Service has determined that *any* depletion of Upper Basin stream flows adversely affects and jeopardizes the endangered fish.[65]

Compounding the threats to the endangered fish are persistent drought conditions that have diminished natural flows in the Colorado River Basin. The period from 2000 to 2015 was the lowest 16-year period for natural flow in the last century, and one of the lowest 16-year periods for natural flow in the past 1,200 years, according to paleorecords.[66] As a result, water storage in the Colorado River system reservoirs have declined "from nearly full to about half of capacity," and led to local shortages in the Upper Colorado's sub-basins.[67] Population growth will increase water demand for agriculture and municipal uses, making it increasingly difficult to ensure sufficient water availability for the endangered fish.[68] An ever widening gap between

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[65] U.S. Bureau of Land Management, White River FEIS at 3-71 (2015) ("The FWS has determined that any federally authorized depletion from the Upper Colorado River Basin has an adverse effect on listed Colorado River fishes."); Biological Opinion for BLM Resource Management Plan (RMP), Price Field Office (PFO), 138 (Oct. 27, 2008) ("The USFWS determined that any depletion will jeopardize their continued existence and will likely contribute to the destruction or adverse modification of their critical habitat (citing USDI, Fish and Wildlife Service, Region 6 Memorandum, dated July 8, 1997), available at http://www.blm.gov/style/medialib/blm/ut/price_fo/Planning/rod_approved_rmp.Par.2742.File.dat/Price%20Biological%20Opinion.pdf; Biological Opinion for BLM Resource Management Plan (RMP), Vernal Field Office (VFO), 113 (Oct. 23, 2008)(same), available at http://www.blm.gov/style/medialib/blm/ut/vernal_fo/planning/rod_approved_rmp.Par.4719.File.dat/VernalBiologicalOpinion.pdf.

[66] Bureau of Reclamation, Managing Water in the West: SECURE Water Act Section 9503(c) Report to Congress, Chapter 3, Colorado River Basin at 3-64 (2016).

[67] *Id*.

[68] *See id*. at 3-7 , 3-8.

water supply and water demand is weakening the Colorado River water supply system's reliability and ability to buffer the system in dry years.[69]

Climate change will continue to exacerbate natural flow and water supply shortages. The Colorado River basin has warmed significantly during the past century, with average increases in surface temperature of 1.6°F (0.9°C) over the Southwest during 1901-2010.[70] Surface temperatures in the Southwest are projected to increase steeply in this century by an average of 4.5 to 7.9° F depending on the emissions scenario, with an average of 2.5 to 3°F of warming projected for 2021-2050 alone.[71]

Warming temperatures are having significant effects on streamflow, drought severity, and the hydrologic cycle in the Southwest.[72] Hotter temperatures have resulted in dryer conditions in the spring and summer, more winter rain instead of snow, reduced spring snowpack, earlier and reduced spring runoff, and increasing frequency and severity of drought.[73] Importantly, numerous studies show that warming temperatures alone will cause runoff and streamflow declines in the Colorado River basin.[74] According to the U.S. Geological Survey (USGS),

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[69] *Id*. at 3-10, 3-12.

[70] Hoerling et al., Present Weather and Climate: Evolving Conditions, Assessment of Climate Change: a Report Prepared for the National Climate Assessment (2013).

[71] Cayan et al., Future Climate: Projected Average, Assessment of Climate Change: a Report Prepared for the National Climate Assessment (2013).

[72] Barnett et al., Human-Induced Changes in the Hydrology of the Western United States, 319 Science 1080 (2008), Woodhouse et al., Increasing Influence of the Air Temperature on Upper Colorado Streamflow, 43 Geophyical. Research Letters. (2016); *see also* Wolf, Shaye, Center for Biological Diversity, Climate Change Impacts on Colorado River Basin Stream Flows (2016) ("CBD Literature Review"), Exhibit 26.

[73] *See id*.

[74] *See* CBD Literature Review at 2 and studies cited therein.

"increased water demand and declining water availability make the restoration of endangered fish habitat extremely challenging."[75]

Mercury and selenium pollution are also a serious and inadequately mitigated threat to the Colorado pikeminnow. Significant new research since 2008 has demonstrated that elevated levels of mercury in Colorado pikeminnow muscle tissue, including within the Upper Colorado River Basin, are at concentrations likely to cause reproductive and behavioral impairment to the fish.[76]

Mercury is a potent neurotoxin shown to cause numerous reproductive and endocrine impairments in fish in laboratory experiments, including effects on production of sex hormones, gonadal development, egg production, spawning behavior, and spawning success.[77]

Concentrations of mercury in Colorado pikeminnow in the Upper Colorado basin are documented to be well in excess of the thresholds for reproductive impairment and population-level impacts.[78] Average mercury concentrations in Colorado pikeminnow muscle tissue 2008-09 averaged 0.60 mg/kg wet weight overall, and 0.77 mg/kg in the Middle Green – well above the

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[75] USGS, Effects of Climate Change and Land Use on Water Resources in the Upper Colorado River Basin, 5 (2010), available at https://pubs.usgs.gov/fs/2010/3123/pdf/FS10-3123.pdf.

[76] U.S. Fish and Wildlife Service, Upper Colorado River Endangered Fish Recovery Program, Colorado pikeminnow (*Ptychocheilus lucius*), 5-Year Review: Summary and Evaluation 21 (2011) ("[T]he recovery goal revision needs to consider the impacts of mercury. . . the majority (64 %) of Colorado pikeminnow may be experiencing some reproductive impairment through mercury exposure."), Exhibit 27; U.S Fish and Wildlife Service, Biological Opinion for the Four Corners Power Plant and Navajo Mine Energy Project at 76 & Table 3 (April 8, 2015) ("Four Corners Biological Opinion"), Exhibit 9.

[77] Sufficient Progress Assessment at 10 (Oct. 7, 2015) ("Sufficient Progress Assessment").

[78] *See* Barb Osmundson and Joel Lusk, Field assessment of mercury exposure to Colorado pikeminnow within designated critical habitat (May 5, 2011), Exhibit 28.

0.2 mg/kg threshold of concern.[79] FWS's 2015 Sufficient Progress Assessment for the Recovery Program acknowledges that population viability studies show that mercury- and selenium-related reproductive impairment is likely to influence population levels in the San Juan Basin,[80] but no comparable analysis has yet been done for the higher levels of contamination present in Upper Colorado River Basin and/or Green River fish.[81]

ii. Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo is a threatened species reliant on riparian habitats in the western United States. The species' population has declined dramatically:

> Since 1980, statewide surveys from New Mexico, Arizona, and California indicate an overall estimated 52 percent decline with numbers too low to establish trends from Idaho, Montana, Utah, Nevada, and Colorado. Trend information is also lacking from west Texas and Mexico. Yellow-billed cuckoo has been extirpated as a breeding bird in Washington, Oregon, and British Columbia (USFWS 2011b). Comparisons of historic and current information suggest that the western yellow-billed cuckoo's range and population numbers have declined substantially across much of the western U.S. over the past 50 years.[82]

[79] *See* Four Corners Biological Opinion at 76 & Table 3; *see generally* Beckvar, N., T.M. Dillon, and L.B. Reads. 2005. Approaches for linking whole-body fish tissue residues of mercury or DDT to biological effects threshold. Environmental Toxicology and Chemistry 24:2094-2105, Exhibit 29.

[80] Sufficient Progress Assessment at 10-11.

[81] Colowyo BiOp at D-12.

[82] U.S. Office of Surface Mining Reclamation and Enforcement, Reinitation of Consultation for the Colowyo Coal Company, L.P. "Colowyo" Mine, Permit C-81-019 – South Taylor/Lower Wilson Mining Area, Permit Revision PR-02 (Aug. 24, 2015) ("Colowyo Biological Assessment"), Exhibit 50.

Critical habitat was proposed for the cuckoo in 2014, including multiple segments of the Green and Colorado Rivers in Utah affected by pollution from the Hunter and Huntington Plants, but has not yet been designated.[83]

iii. Mercury and Selenium Deposition from Coal Combustion Adversely Affects Listed Fish and Critical Habitat

Mercury is an element that occurs naturally, but it is also a local, regional, and global pollutant that is harmful to wildlife and human health.[84] Atmospheric mercury is produced from, among other things, combustion of coal at power plants, which releases mercury into the air where it is then deposited by precipitation water bodies, where micro-organisms convert it to methyl mercury – a particularly toxic form – at which point it becomes biomagnified through the food chain.[85] A recent study by the Mountain Studies Institute reports that coal-fired power plants are the largest human source of mercury emissions in the United States, and atmospheric deposition appears to be the dominant source of mercury contamination in North America.[86] Some of the highest levels of mercury concentration in fish tissue within the entire region of the Upper Colorado River Basins occur in Colorado pikeminnow in the Middle Green River, located in close proximity to the Hunter power plant that burns the largest share of SUFCO coal.[87]

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[83] U.S. Fish and Wildlife Service, Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow-Billed Cuckoo, Proposed Rule, 79 Fed. Reg. 58,548, 58,568 (Aug. 15, 2014).

[84] Winfield Wright and Koren Nydick, *Sources of Atmospheric Mercury Concentrations and Wet Deposition at Mesa Verde National Park, Southwestern Colorado, 2002-08* (Mountain Studies Institute Report 2010-03) ("MSI Report"), Exhibit 8.

[85] Four Corners Biological Opinion at 72-73.

[86] *See* MSI Report.

[87] FCPP NM BiOp at 76 & Table 3; Osmundson & Lusk 2011.

Once mercury is deposited on land or water, it is converted into a biologically available form, methylmercury (MeHg) by bacteria. Methylmercury "bioaccumulates in food chains, and particularly in aquatic food chains, meaning that organisms exposed to MeHg in their food can build up concentrations that are many times higher than ambient concentrations in the environment."[88] Once it accumulates, mercury is a potent neurotoxin, affecting fish in many ways, including brain lesions, reduced gonadal secretions, reproductive timing failures, reduced ability to feed, suppressed reproductive hormones, reduced egg production, reduced reproductive success, and transfer of mercury into developing eggs.[89] The published scientific literature concludes that survival, growth, reproduction, and behavior are impaired at a mercury concentration of 0.2 mg/kg wet weight in whole fish.[90]

Selenium is a dietary necessity at very low concentration for fish and other organisms, but toxic in higher levels. Threshold levels "encompass a range of dietary selenium of 2 to 10 mg/kg DW, with adverse effects a certainty as the upper limit is exceeded."[91] Selenium is a teratogen, causing defects not in adult fish but larvae: "Feeding excessive Se to larvae, fry, or adults does not directly cause malformations in the recipient, but survival of larvae fed elevated Se can be severely compromised. Dietary Se toxicity to larval survival can occur at the same time that adult fish appear healthy."[92] Although the precise effects vary with relative

[88] Four Corners Biological Opinion 73

[89] *See* Lusk 2010 at 17.

[90] *See* Beckvar *et al.*

[91] Four Corners Biological Opinion at 100-101.

[92] *Id.* at 101 (citations omitted).

concentrations, mercury and selenium may have synergistic toxic effects at certain ratios.[93] As FWS has noted:

> Selenium, a trace element, is a natural component of coal and soils in many areas of the western United States and can be released to the environment by the irrigation of selenium-rich soils and the burning of coal in power plants with subsequent emissions to air and deposition to land and surface water. . . . Excess selenium in fish have been shown to have a wide range of adverse effects including mortality, reproductive impairment, effects on growth, and developmental and teratogenic effects including edema and finfold, craniofacial, and skeletal deformities (Hamilton et al. 2004; Holm et al 2005). Excess dietary selenium causes elevated selenium concentrations to be deposited into developing eggs, particularly the yolk (Buhl and Hamilton 2000). If concentrations in the egg are sufficiently high, developing proteins and enzymes become dysfunctional, leading to embryo deformation and higher risk of morality. Embryos that do survive, hatch, and grow may experience an elevated risk of predation as small fish. Of all the endangered fish in the Colorado River system, concern regarding elevated selenium levels is greatest for the razorback sucker (Hamilton et al. 2002; Osmundson et al. 2010).[94]

Analysis of tissue samples from Colorado pikeminnow in the Upper Colorado and White Rivers shows average muscle concentrations of mercury in excess of the thresholds for reproductive impairment. 2008-2009 muscle tissue averages were 0.60 mg/Kg Hg for Colorado pikeminnow in the Upper Colorado basin and 0.95 mg/Kg Hg for Colorado pikeminnow in the White River.[95] The 2008-09 fish muscle tissue data also shows some of the highest levels of selenium (1.0 mg/Kg) in Middle Green pikeminnow.[96]

The Service has acknowledged that its recovery planning for the Colorado pikeminnow needs updating to reflect recent information regarding mercury:

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[93] *Id.* at 103.

[94] Colowyo BiOp at 26.

[95] Four Corners Biological Opinion at 76 & Table 3.

[96] *Id.*

> In addition, the recovery goal revision needs to consider the impacts of mercury. Beckvar et al. (2005) associated studies involving survival, growth, reproduction, and behavior and recommended that 0.2 mg/kg in whole fish be viewed as protective, while adverse biological effects are more likely at higher concentrations. Based on this threshold, the majority (64 %) of Colorado pikeminnow may be experiencing some reproductive impairment through mercury exposure. 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 in fish tissues.[97]

In addition, three recent ESA Section 7 consultations (Desert Rock, Navajo Mine/Four Corners, and Colowyo Mine) have acknowledged the significant contribution from coal mining and regional coal-fired power plants to mercury and selenium impairment of endangered fish. The methods and findings of the Colowyo Mine BiOp, in particular, clearly demonstrate that, even in the face of some uncertainty, sufficient data and reliable methods exist to permit a reasoned analysis of the mercury contamination impacts in particular of burning coal from the Greens Hollow tract at the Hunter and Huntington power plants.

In considering the effects of the Desert Rock Energy Project ("Desert Rock") – a coal-fired plant that was proposed to be cited on the Navajo Nation – FWS considered the effects of atmospheric mercury deposition to endangered and threatened species including the Colorado pikeminnow.[98] Using a threshold for adverse effects of 0.2 mg/kg WW, 64 percent of San Juan Colorado pikeminnow experience reproductive impairment due to mercury presently.[99] By 2020, the Desert Rock BiOp finds that mercury deposition in the San Juan River basin is expected to increase by 35.4 percent without or 35.5 percent with the construction of the proposed Desert

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[97] Colorado Pikeminnow 5-year review at 21; *see also* Significant Progress Assessment at 10-11.

[98] *See* U.S. Fish and Wildlife Service, Draft Biological Opinion for the Desert Rock Energy Project 106 (Oct. 15, 2009) ("Desert Rock Biological Opinion"), Exhibit 10.

[99] *Id.*

Rock Energy Project.[100] For this reason, FWS's draft Desert Rock biological opinion predicted that 72 percent of Colorado pikeminnow in the San Juan River basin will experience mercury-induced reproductive impairment by 2020 – which "is likely to *jeopardize* the continued existence of the Colorado pikeminnow."[101]

> The yellow-billed cuckoo may also be harmed by environmental mercury:
>
> > The yellow-billed cuckoo may potentially be impacted by mercury in the environment. For the yellow-billed cuckoo, as with other riparian birds, mercury is accumulated through the ingestion of aerial insects emerging from benthic life stages in aquatic environments containing mercury or from associated predatory spiders (Cristol et al. 2008; Edmonds et al. 2012; Evers et al. 2012; Buckland-Nicks et al. 2014; Gann et al. 2014). Dietary total Hg concentrations associated with adverse effects to birds are generally greater than 0.1 mg/kg WW (DOI 1998). Once ingested, MeHg rapidly moves into the bird's central nervous system, resulting in behavioral and neuromotor disorders (Tan et al. 2009; Scheuhammer et al. 2007, 2012). The developing central nervous system in avian embryos is especially sensitive to this effect, and permanent brain lesions and spinal cord degeneration are common (DOI 1998, Young 1998; Bryan et al. 2003; Scheuhammer et al. 2007; Heinz et al. 2009). Therefore, adverse effects are described for the eggs, embryos, nestlings and/or fledglings associated with elevated Hg burdens in the female parent and due to foraging.
> > Uptake of mercury by birds has been shown to generally impact fish eating birds more severely than insectivorous birds (Zolfaghari et al. 2009, Boening 2000). Additionally, Howie (2010) found that the lateral extent of elevated mercury levels in birds and invertebrate prey species varied from approximately 250 to 650 meters from an affected water body. After this distance, mercury levels in the blood and feathers could not be distinguished from background levels, indicating that only those individuals that forage adjacent to affected water bodies show signs of bioaccumulation of mercury.[102]

As discussed above, regional coal combustion, including the Hunter and Huntington power plants that will foreseeably burn the majority of Greens Hollow Tract coal, are known to be

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[100] *Id*. at 3.

[101] *Id*. at 120 (emphasis added).

[102] Colowyo Biological Assessment at 51.

significant contributors to the mercury contamination problem for fish in the Middle Green River.

The recently-issued Four Corners/Navajo Mine Biological Opinion sets a substantially higher threshold for mercury concentrations that would lead to population-level impairment in the San Juan (0.7 mg/kg as opposed to 0.2 mg/kg),[103] but clearly reaffirms the substantial scientific certainty that mercury accumulation poses severe behavioral, reproductive, and survival risks to fish including Colorado pikeminnow, razorback sucker, and humpback chub.[104]

Sampling of fish muscle tissue indicates baseline levels of 0.77 mg of mercury per kg of fish muscle tissue present in Colorado pikeminnow in the Middle Green and .95 mg of mercury per kg of fish muscle tissue in the White River – baseline levels sufficient to endanger population survival even under the elevated threshold of the Four Corners BiOp.[105] Selenium levels in Middle Green fish are similarly dangerously high, averaging 1.0 mg/kg. [106]

[103] Four Corners Biological Opinion at 116.

[104] Four Corners Biological Opinion at 81-94.

[105] Four Corners Biological Opinion at 76 Table 3.

[106] *Id.*

Average and range of baseline mercury (Hg mg/kg WW) and selenium (Se mg/kg WW) in Colorado pikeminnow and razorback sucker muscle tissues in the Upper Colorado River Basin.[107]

River Basin and Species	Average Hg in Muscle Tissue (min - max)	Average Se in Muscle Tissue (min - max)
San Juan River Colorado pikeminnow > 400 mm TL	0.37 (0.31 - 0.43)	0.8 (0.6 – 0.9)
San Juan River Razorback sucker > 400 mm TL	0.12 (0.04 – 0.24)	0.8 (0.4 – 1.4)
Middle Green River Colorado pikeminnow	0.77 (0.68 - 0.87)	1.0 (0.9 – 1.1)
Upper Colorado River Colorado pikeminnow	0.60 (0.31 – 1.04)	1.9 (0.9 – 2.2)
White River Colorado pikeminnow	0.95 (0.43 – 1.83)	0.9 (0.6 – 1.2)
Yampa River Colorado pikeminnow	0.49 (0.44 – 0.53)	0.6 (0.4 – 0.7)

d. Mercury and Selenium Emissions from Coal Combustion are Foreseeable Indirect Effects that Must Be Considered

Multiple judicial decisions and FWS Biological Opinions have confirmed that foreseeable coal combustion resulting from federal coal mine leasing and/or permitting actions are indirect effects, as that phrase is defined by the ESA and applied by federal agencies, of the leasing or permitting decision, and that the appropriate "action area" for analysis of coal mine projects includes both the local deposition area for receiving mines, and the waters impacted by deposition from the mines and related coal-fired power plants.[108]

i. The Greens Hollow Coal Lease Will Result in Additional Coal Combustion and Pollution to the Green River Watershed

[107] *Id.*

[108] *See South Fork Band Council of W. Shoshone of Nevada v. U.S. Dep't of Interior*, 588 F3.d 718, 725 (9th. Cir. 2009); *Mid States Coal. For Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003); *WildEarth Guardians v. U.S. Office of Surface Mining, Reclamation & Enforcement*, 104 F. Supp. 3d 1208, 1228-31 (D. Colo. 2015), *vacated as moot*, __ (10th Cir. 2016); *Dine Citizens Against Ruining Our Env't v. United States Office of Surface Mining Reclamation & Enforcement*, 82 F. Supp.3d 1201, 1212-14 (D. Colo. 2015), *vacated as moot*, 643 Fed. Appx. 799 (10th Cir. 2016); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp.3d 1174, 1197-98 (D. Colo. 2014); *see also* ColoWyo Biological Opinion at 4-7.

ESA consultation is required if an agency action "may affect" a species or its critical habitat. 50 C.F.R. § 402.14(a). To determine whether there is a "may affect," the "best scientific and commercial information available" must be used. 16 U.S.C. § 1536(a)(2).

This ESA consultation threshold is very low. FWS explained the meaning of "may affect" -- "[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character, triggers formal consultation." 51 Fed. Reg. 19,926, 19,949 (June 3, 1986). Judge Martinez ruled in a similar case that "[t]his 'may affect' standard triggering the consultation requirement is low." *Colo. Envt'l Coal. v. Dept. of Defense*, 819 F.Supp.2d 1193, 1221-22 (D. Colo. 2011); *Wilderness Society v. Widely*, 524 F.Supp.2d 1285, 1298 (D. Colo. 2007) (determining consultation necessary when "adverse effects are possible"). The ESA Section 7 Consultation Handbook confirms that the 'may affect' standard is satisfied "when a proposed action may pose *any* effects on listed species or designated critical habitat." ESA Consultation Handbook at xvi (emphasis added).[109] The Ninth Circuit also found that "[a]ctions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are 'not likely' to do so—require at least some consultation under the ESA." *Karuk Tribe v. U.S. Forest Service*, 681 F.3d 1006, 1027 (9th Cir. 2012) (reasoning "may affect" threshold "must be set sufficiently low to allow Federal agencies to satisfy their duty to insure that their actions do not jeopardize listed species or adversely modify critical habitat.").

Applying this low threshold, courts have ruled the "may affect" standard is satisfied even if impacts to species are "highly unlikely." *Colo. Envtl. Coalition*, 819 F.Supp.2d 1193, 1221 (D. Colo. 2011). In *Colo. Envtl. Coalition*, the court relied on the agency's environmental assessment

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[109] Available at: www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf.

that disclosed several possible effects, and concluding difference between highly unlikely effects and no effects is "not [an] unimportant distinction." Id. at 1221-22.

The FSEIS also suggests that it need not disclose or analyze combustion effects due to the fact that the Hunter "plant is anticipated to continue operations as authorized by the state for the life of the facility. Therefore, regional impacts to ambient air quality from the combustion of coal within the region would be generally the same for each Alternative." FSEIS at 287.

As discussed earlier, this "status quo" argument has been conclusively rejected by both the Ninth Circuit and the District of Colorado. Even if the proposed Greens Hollow expansion does not change the rate of combustion at Hunter, it will extend the life of the mine and result in the combustion of an additional 50 to 56.6 million tons of coal, *see* FSEIS at 2, of which approximately 4 million tons per year can be expected to be burned at Hunter, *see* FSEIS at 145. Absent approval of the lease, this 50 to 57 million tons of coal would not be burned, at Hunter or elsewhere. And because mercury accumulates in the environment and organisms, the relevant concern is not the rate of combustion but the total pollutant contribution.

In a related case, considering the probable (although not certain) combustion of coal from the Colowyo mine at the Craig power plant in northwest Colorado, the District of Colorado concluded:

> In this case, even if the timing of combustion is unknown, its location and method are not. Furthermore, the timing can be predicted, in part, by analyzing the historic rate of combustion.
>
> Finally, the defendants argue that OSM could not take into account the effects of coal combustion because it is purely speculative when the coal will be burned, at what rate it will be used, and what emissions-control technology might be applied at the combustion stage. The Court is not convinced. Agencies need not have perfect foresight when considering indirect effects, effects which by definition are later in time or farther removed in distance than direct ones. "[W]hen the *nature* of the effect is reasonably foreseeable but its extent is not . . . the agency may not

> simply ignore the effect." Mid States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 520, 549 (8th Cir. 2003) (emphasis in original).
>
> In a recent case, I found that insofar as a federal agency was able to estimate the amount of coal to be mined it could likewise predict the environmental effects of the combustion of that coal. See *High Country*, 52 F. Supp. 3d. at 1196. I stand by that holding. Both the Colowyo and Trapper EAs estimate the increase in coal production resulting from the proposed lease expansions on each mine. . . . If OSM can predict how much coal will be produced, it can likewise attempt to predict the environmental effects of its combustion. Just because it does not possess perfect foresight as to the timing or rate of combustion or as to the state of future emissions technology does not mean that it can ignore the effects completely.[110]

The requirement to assess indirect effects from burning the coal generated from the Greens Hollow coal lease is not disputed by BLM. To the contrary, BLM explicitly "acknowledges that the burning of the coal is an indirect impact that is a reasonable progression of the mining activity."[111]

ii. Adequate Data and Analytical Tools Exist to Allow BLM to Analyze Indirect Effects from Coal Combustion

BLM declines to quantify emissions from the coal-fired power plants received coal generated at the SUFCO Mine, including coal found within the Greens Hollow coal lease tract. The agency reasons in a document supporting its FSEIS:

> BLM does not have access to the various control technologies that may be utilized by the operators of the facilities ultimately burning the coal and could not develop reasonable emissions estimates for specific pollutants. Scrubber and bag-house technologies vary as do operating parameters such as boiler temperatures and pressures. There are many facility-dependent parameters that affect emissions of specific pollutants which are largely dictated by existing facility authorizations. Analytical techniques are not available to address specific design criteria of potential end users and their permit limitations associated with the above

[110] *WildEarth Guardians*, 104 F. Supp. 3d at 1230.

[111] FSEIS at 287.

> referenced pollutants and resulting potential emissions have therefore not been quantified.[112]

Although this reasoning does not attempt to justify BLM's failure to consult on impacts from coal combustion on endangered fish, it fails nonetheless. BLM's refusal to even consider mercury and selenium emissions from the foreseeable combustion of Greens Hollow coal is contrary to the courts' holdings in *Dine Care* and *WildEarth Guardians*. If BLM "can predict how much coal can be produced, it can likewise attempt to predict the environmental effects of its combustion."[113]

The feasibility of such analysis, and the availability of analytical tools, are made apparent by the BLM's Biological Assessment and FWS's Biological Opinion prepared for the Colowyo mine following remand to the agency from the District of Colorado. In OSM's 2015 "Reinitiation of Consultation for the Colowyo Coal Company,"[114] the agency analyzed the local effects of mercury and selenium from coal combustion on the local area and affected watersheds.[115] Despite a lack of detailed atmospheric data, OSM was able to predict coal combustion rates and resulting mercury emissions at the receiving plant based on prior supply and combustion rates and plant-specific mercury data (36 lbs./year for the Colowyo mine, similar to the 22.4 lbs/year for Hunter and Huntington) – just as is available here for Hunter and Huntington.[116] It also acknowledged the more detailed atmospheric modeling of emissions and deposition of mercury recently conducted for the Navajo Mine and Four Corners Power Plants,

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[112] FSEIS at 287.

[113] *WildEarth Guardians*, 104 F. Supp. 3d at 1231.

[114] OSMRE, Reinitation of Consultation for the Colowyo Coal Company.

[115] Colowyo BA at 39-46.

[116] Colowyo BA at 43.

but found that, even in the absence of such detailed deposition monitoring and modeling, it was feasible to predict the levels of mercury deposition in the watersheds affected by local deposition.[117] In its resulting Biological Opinion, FWS affirmed the viability of OSM's methods and concluded that, despite significant uncertainties, the best available scientific and commercial information allowed it to assess the effects of potential mercury and selenium contamination from coal combustion.[118] FWS concluded:

> Despite the uncertainties . . . we can come to basic conclusions regarding the effect to endangered fish from the mining of Colowyo coal and its eventual combustion. Given fish tissue mercury concentrations have been determined to be somewhat elevated in Colorado pikeminnow from both the Yampa and White Rivers, and coal mining and combustion adds mercury to the system, this additional mercury adds to the negative effects of mercury. Based on the best available science, we believe some Colorado pikeminnow individuals are experiencing low, chronic negative health effects from mercury already in the action area. The mercury added by this project will add to the effects of this chronic condition, although the relative contribution of project-related mercury is assumed to be 3 percent of total mercury that has been and will continue to be deposited in the action area. . . [119]

As part of this consultation, the Colowyo applicant committed to conservation measures to mitigate and better study fish impacts from coal combustion, including a contribution to the Colorado River Endangered Fish Recovery Program and the commissioning of a air quality deposition modeling analysis to determine the sources of mercury being deposited in the White and Yampa River basins.[120]

There is no valid reason why the methods and reasoning – evaluating the mine's past and foreseeable future contribution to mercury emissions from particular plants, and

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[117] Colowyo BA at 43-44.

[118] Colowyo BiOp at 48.

[119] Colowyo BiOp at 58.

[120] Colowyo BiOp at 7-8.

estimating deposition patterns in affected watersheds - utilized by OSM in the Colowyo Biological Assessment cannot be utilized by BLM for the Greens Hollow tract. In light of the available data and previously-applied methods, BLM's contention that combustion-related indirect effects cannot be analyzed due to a lack of "analytical techniques" is untenable.

B. Relative Harm to Appellants Favors a Stay

The relative harm in this case favors the granting of a stay of the sale and execution of the Greens Hollow coal lease in accordance with 43 C.F.R. § 4.21(b)(1)(i). Not only will Appellants suffer harm, but those harms will far outweigh any harm that the BLM may suffer.

1. Appellants Will Suffer Harm

As established by the declaration of Mr. Peterson and Mr. McKinnon, Appellants WildEarth Guardians, Grand Canyon Trust, and Center for Biological Diversity will suffer harm to their interests. These harms will occur as a result of disturbances to public lands above the SUFCO mine and the Greens Hollow coal lease, extended industrial activity in the area, more offensive sights and sounds, more degradation of recreational enjoyment of public lands in the area, more pollution from nearby coal-fired power plants fueled by the SUFCO mine, and more degradation of streams and fish in the Green River drainage due to toxic contamination.

2. The Balance of Harms Clearly Favors Granting a Stay

While Appellants will be harmed as a result of the Greens Hollow coal lease, the BLM will suffer no harm from the granting of a stay. In its ROD, the BLM cites no overriding need to move forward with the coal lease other than to respond to the application submitted by Bowie Resources. As to any "need" that Bowie Resources may have, coal leasing by application under 43 C.F.R. § 3425 is meant to be a competitive process, open to any and all potential bidders who

may have interest in a particular tract. The fact that Bowie Resources may be an applicant does not in any way entitle the company to the lease or bind the BLM to holding a competitive lease sale. Furthermore, nothing in the FSEIS or the ROD indicates there is any overriding emergency or urgency around offering the Greens Hollow coal lease for sale and issuance.[121]

On the other hand, if the leases are sold, the BLM will execute the leases and transfer the rights to develop the Greens Hollow coal lease, allowing the leases to be developed accordingly. Given that 43 C.F.R. § 3475.5 requires "diligent development" of any coal lease, this development could happen soon after the sale and execution of the leases.

What's more, if BLM moves to sell and issue the Greens Hollow lease, it will be doing so contrary to its greater sage grouse RMP Amendment, which stipulates that areas in PHMA be designated as unsuitable when leasing for surface mining is proposed. If BLM moves to sell and issue the lease, it will commit the agency to allowing surface operations and impacts above the Greens Hollow coal lease in extreme defiance of its own RMP Amendment and coal suitability regulations at 43 C.F.R. § 3461.5. It would be difficult, if not impossible, for the BLM to "undo" its inappropriate leasing action without considerable administrative expense (paid for by U.S. taxpayers) and staff time.

C. Appellants Will Suffer Immediate and Irreparable Harm if the Stay is not Granted

If Appellants' petition for a stay is not granted, BLM will offer the Greens Hollow lease for sale on September 22, 2016. Once the lease is sold, the BLM will immediately issue the lease in accordance with 43 C.F.R. § 3422.4 to the highest bidder and, upon receiving a completed

[121] Although the FSEIS asserts that, without the Greens Hollow lease, the SUFCO mine will close in 2015, this is incorrect. *See* FSEIS at 242. The SUFCO mine is still producing today. Thus far in 2016, the U.S. Mine Safety and Health Administration reports that SUFCO has produced more than 2.8 million tons. *See* Exhibit 51. The FSEIS is therefore wrong, underscoring that the balance of harms swing solidly in favor of the Appellants.

signed lease form and associated payments, the BLM is obligated to execute the lease. Any lease will be issued for a period of 20 years in accordance with 43 C.F.R. § 3475.2.

In executing the lease, Bowie Resources will be under an affirmative obligation to diligently develop the lease in accordance with 43 C.F.R. § 3475.5 and BLM will be obligated to not interfere with the company's compliance with this duty. Appellants interpret this affirmative duty to mean that Bowie Resources will be required to begin the operations analyzed and assessed in the FSEIS, including operations that will lead to surface disturbances to sage grouse habitat and public lands in the area, indirect impacts related to coal combustion, coal exports, and climate impacts, and pose other adverse environmental impacts that, as noted by the declarations of Mr. Peterson and Mr. McKinnon, would be irreparable. *See e.g.*, Declaration of Mr. Peterson, Exhibit 2 ¶ 15; Declaration of Mr. McKinnon, Exhibit 5 ¶ 15.

The declarations of Mr. Peterson and Mr. McKinnon indicate that once mining operations begin for Greens Hollow, harm will be irreparable, particularly with regards to public lands impacts directly above the SUFCO mine and in the Greens Hollow lease area and to the reasonably foreseeable indirect effects related to coal transport, coal combustion, and coal-fired power plant pollution. *See* Exhibit 2 ¶¶ 15-19; Exhibit 5 ¶¶ 12-17. Although it may be claimed that these impacts will not occur without future approvals from other agencies, such as from the State of Utah and OSM, if the IBLA does not grant a stay, nothing will prevent any future approvals and forestall the irreparable harms that would otherwise befall the Appellants.

D. The Public Interest Favors Granting the Stay

Here, the public interest favors granting a stay for a number of reasons. Vindicating congressionally established environmental policies and standards, particularly as enumerated under NEPA, FLPMA, and the ESA favors the requested stay. *See California ex rel. Van de*

Kamp v. Tahoe Regional Planning Agency, 766 F.2d 1319, 1324 (9th Cir. 1985) (finding that public interest may be defined "by reference to the policies expressed in legislation") (citation omitted). In this case, it is clear that BLM fell short of meeting substantive legal requirements under its RMP, its own coal management regulations, NEPA, and the ESA.

In the case of Greens Hollow, a stay would protect the public's interest in ensuring adequate greater sage grouse conservation and in preventing the need to list the species under the ESA. The whole reason that BLM prepared the RMP Amendment was to, "avoid the continued decline of populations across the [sage grouse] species' range" and, importantly, to avoid the species becoming listed under the ESA. Exhibit 5 at 1-8. It does not serve the public to allow the BLM to flout its own conservation initiatives, potentially driving an iconic wildlife species into further decline and potentially trigger the need for more significant conservation efforts.

Furthermore, Congress' purpose in passing laws such as NEPA and the ESA were clearly meant to ensure environmental protection considerations were not cast aside, potentially jeopardizing human health, future generations, and leading to ill-informed decisions with irreversible environmental consequences. As Congress stated in the preamble to NEPA, its purpose was "To declare a national policy which will encourage productive and enjoyable harmony between man and environment [and] to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man[.]" 42 U.S.C. § 4332(a).

To this end, no energy development project—no matter how rich the resource involved—should be permitted to proceed at the cost of the health and welfare of people and the environment. As the U.S. District Court for the District of Wyoming has stated:

> The Court is cognizant of the importance of mineral development to the economy of the State of Wyoming. Nevertheless, mineral resources should be developed responsibly,

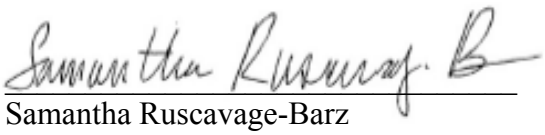
> keeping in mind those other values that are so important to the people of Wyoming, such as preservation of Wyoming's unique natural heritage and lifestyle.

Wyoming Outdoor Council v. U.S. Army Corps of Engineers, 351 F. Supp. 2d 1232, 1260 (D. Wyo. 2005).

Finally, BLM's own rules are clear that no federal coal lease application shall be approved unless "for environmental or other sufficient reasons [it is in] the public interest." 43 C.F.R. § 3425.1-8(a)(3). Given the environmental violations detailed above, it cannot possibly be claimed that moving forward with the Greens Hollow coal lease is in the public interest. Given that BLM is required to weigh heavily the environmental implications of coal leasing, the IBLA is more than justified in granting a stay in order to protect the public interest.

In light of the aforementioned, we respectfully request the IBLA grant a stay of the Greens Hollow coal lease ROD. Pursuant to 43 C.F.R. § 4.412, a Statement of Reasons will be filed within 30 days.

Respectfully submitted this 12th day of September 2016,



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CERTIFICATE OF SERVICE

I certify that on September 12, 2016, I served this Notice of Appeal and Petition for Stay by U.S. Postal Service Priority Mail, upon:

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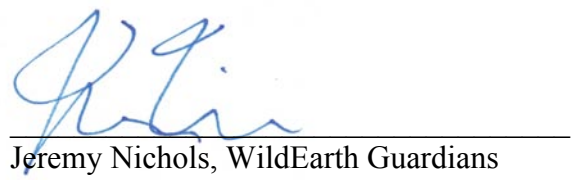

Jeremy Nichols, WildEarth Guardians