BEFORE THE OBJECTION REVIEWING OFFICER USDA FOREST SERVICE, INTERMOUNTAIN REGION

)

)

)

WILDEARTH GUARDIANS, GRAND CANYON TRUST, SIERRA CLUB, and CENTER FOR BIOLOGICAL DIVERSITY	
Objector,	
V.	
BRIAN M. PENTECOST, Supervisor, Manti-La Sal National Forest, and ALLEN ROWLEY, Supervisor, Fishlake National Forest, Responsible Officials.	

Objection to the Draft Record of Decision and Final Environmental Impact Statement for the Leasing and Underground Mining of the Greens Hollow Federal Coal Lease Tract, UTU-84102, Sanpete and Sevier Counties, Utah (March 2015)

NOTICE OF OBJECTION, STATEMENT OF REASONS, AND REQUEST FOR RELIEF

TABLE OF CONTENTS

INTRODU	CTION_		_3
OBJECTO	RS		_5
STATEME	ENT OF R	EASONS	_6
I.	The S	EIS Fails to Comply with NEPA	_6
	A.	Failure to Adequately Analyze and Assess the Reasonably Foreseeable Impacts of Activities That Will Result from Leasing Greens Hollow	_7
		i. Coal Combustion Impacts	_6
		ii. Coal Transport Impactsiii. Coal Export Impacts	_14 _15
	B.	Failure to Adequately Analyze and Assess the Climate Impacts Associated with Projected Direct and Indirect Greenhouse Gas Emissions	_16
	C.	The SEIS Fails to Analyze and Assess Impacts to Sage Grouse	_21
		i. Impacts from Road Traffic Have not Been Adequately Analyzed and Assessed	_23
		ii. The SEIS Does not Adequately Analyze and Assess Noise from the Ventilation Fan	24
		 iii. The SEIS Does not Adequately Analyze and Assess Impacts from Transmission Line Development and new Rights of Way iv. SEIS Does not Adequately Analyze and Assess Cumulative 	28
		Impacts	_29
II.	The I Resor Speci	Draft ROD Fails to Protect Sage Grouse in Accordance with Land and arce Management Plan Requirements and the Agency's Sensitive es Handbook	_30
III.	The I Act_	Draft ROD Fails to Ensure Compliance with the Endangered Species	_31
IV.	Treat Comp	ment of IRA and Inventoried Potential Wilderness Areas Fails to bly With NEPA, 1982 and 2012 NFMA Policies, and APA	_31
	A.	Background Facts, Requirements, Failures to Meet Legal Duties	_33
	B.	Potential Wilderness Areas	_34

	i. Physical Impacts to Inventories 2015 PWA not Disclosed/ Studied	39
	ii. Legal Availability Conflicts for URUD/PWA Distinct from IRA not Studied	_39
C.	Violation of 36 CFR 294/RACR	_40
REQUEST FOR RE	LIEF	_41
TABLE OF EXHIBI	TS	_43

INTRODUCTION

Pursuant to 36 C.F.R. § 218, WildEarth Guardians, Grand Canyon Trust, the Sierra Club, and the Center for Biological Diversity (hereafter "Objectors") hereby object to the Final Supplemental Environmental Impact Statement ("SEIS") for the Leasing and Underground Mining of the Greens Hollow Federal Coal Lease Tract and the Draft Record of Decision ("ROD") proposed by Brian M. Pentecost, Supervisor of the Manti-La Sal National Forest, and Allen Rowley, Supervisor of the Fishlake National Forest.¹ In the Draft ROD, the U.S. Forest Service ("USFS") proposes to consent to allowing the Bureau of Land Management ("BLM") to issue the Greens Hollow coal lease, a 60 million ton tract of publicly owned coal that would enable Bowie Resources to expand mining and extend the life of the company's SUFCO mine in Sanpete and Sevier Counties, Utah.

We are disappointed to see the USFS offer its consent to the Greens Hollow coal lease at a time when all indications are that our nation and our federal government should be doing everything possible to prevent additional carbon emissions in order to combat climate change. This includes exercising restraint in the approval of additional fossil fuel development on public lands, such as new coal mining. As recently reported in the peer-reviewed journal, *Nature*, in order for our world to ensure that global temperatures do not rise higher than 2° C, more than 80% of global coal reserves must remain in the ground. *See* Exhibit 1, McGlade, C. and P. Ekins, "The geographical distribution of fossil fuels unused when limiting global warming to 2° C," *Nature*, Vol. 15 (Jan. 2015) at 187. In the United States, the study reports that more than 200 billion metric tons of our coal reserves must remain unused. *Id.* at 189.

Our primary objection with the proposed decision lies with the fact that the USFS has not appropriately analyzed and assessed the reasonably foreseeable impacts of consenting to the coal lease and thereby authorizing the attendant coal mining, transport, and combustion that would occur, in contravention of the National Environmental Policy Act ("NEPA"). See 42 U.S.C. § 4321, et seq. The SUFCO mine provides coal for several coal-fired power plants in Utah and Nevada. Further, according to Bowie Resources, coal from the SUFCO mine is exported overseas through ports in the Bay Area of California. See Exhibit 2, 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 (last accessed April 17, 2015). Not only that, but it was recently announced 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 3, "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 (last accessed April 17, 2015). In spite of the fact that Bowie clearly intends to secure the lease to extend the life of the SUFCO mine and continue to fuel domestic power plants and export coal overseas, the USFS dismissed such reasonably foreseeable consequences as "speculative." SEIS at D-34.

¹ Legal notice of the availability of the SEIS and Draft ROD was published in the newspaper of record on March 3, 2015, making this objection timely filed within 45 days of notification in accordance with 36 C.F.R. § 218.26(a).

Aside from ignoring these far reaching consequences, the USFS also turned its back on the reasonably foreseeable impacts that would occur on site as a result of expanded mining. Of particular concern is the agency's refusal to follow scientific guidelines for the protection of the greater sage grouse advanced by a National Technical Team of scientists and resource specialists from the Bureau of Land Management, state fish and wildlife agencies, the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, and the U.S. Geological Survey.² The greater sage grouse is a candidate for listing under the Endangered Species Act ("ESA"). See 16 U.S.C. § 1531, et seq. According to the National Technical Team, no new coal leases shall be granted for underground mines unless "all surface disturbances" are placed outside of the priority sage-grouse habitat area. National Technical Team Recommendations at 24. In spite of this recommendation, the USFS asserts that its actions would adequately protect the sage grouse, even though it would allow the placement of surface disturbances, including "ventilation shafts (one with a fan), intake shafts, utility boreholes, a power transmission line, and associated road access" (SEIS at Abstract), within priority sage grouse habitat. Although the USFS asserts that future coal leasing will adhere to future, yet-to-be adopted guidance that will supposedly adequately protect the sage grouse, reliance on speculative direction fails to support the agency's conclusion that the sage grouse will be adequately protected and the leasing will not contribute to the need for listing under the ESA.

Finally, with regards to the sage grouse, as with other fish and wildlife, the USFS turned a blind eye toward its obligation to comply with its Land and Resource Management Plans ("LRMPs") in accordance with the National Forest Management Act ("NFMA"). *See* 16 U.S.C. 1604(i). Both the Manti-La Sal and Fishlake National Forest LRMPs require the USFS to protect the viability of sensitive species and more importantly, to prevent the need for species to be listed as threatened or endangered under the ESA. In spite of this, the agency's own disclosures indicate the viability of several species of fish and wildlife would be threatened and that its proposed action would not prevent the listing of species under the ESA.

The USFS is not a rubberstamp for BLM coal leasing proposals. The Mineral Leasing Act ("MLA") provides that where a federal coal lease underlies National Forest lands, the lease may only be issued "upon the consent [and] upon such conditions as [the USFS] may prescribe with respect to the use and protection of the nonmineral interest in those lands." 30 U.S.C. § 201(a)(3)(A)(iii); *see also* 43 C.F.R. §§ 3400.3-1 and 3420.4-2. This authority does not convey a mandatory duty upon the USFS to approve coal leasing. Rather, it conveys full discretion upon the agency to reject coal leasing. This is consistent with the Congressional intent in authorizing the leasing of federal coal under the MLA, and in particular the Federal Coal Leasing Act Amendments of 1976, which intended leasing to be tempered by public interest considerations, including environmental considerations. As the courts have noted, Congress intended the MLA:

"to provide for a more orderly procedure for the leasing and development" of coal the United States owns, while ensuring its development "in a manner compatible with the public interest."...Congress's underlying substantive policy concern was to develop the coal resources in an environmentally sound manner. This purpose lays as much stress on the developing [of] the coal resources as it does on the environmental effects of development.

² These recommendations are cited in the USFS's SEIS at 319.

Northern Cheyenne Tribe v. Hodel, 851 F.2d 1152, 1156 (9th Cir. 1988) (citation omitted). Taken together, the USFS cannot simply rubberstamp a coal lease. Rather, the agency must ensure that any consent to coal leasing is consistent with NEPA, its LRMPs, and other applicable environmental protection requirements.

Here, if the agency consents to the issuance of the Greens Hollow coal lease, the agency will fall exceptionally short of meeting these basic legal obligations. As a result, we call on the Intermountain Regional Office of the USFS to prevent the Manti-La Sal and Fishlake National Forests from offering their consent to the Greens Hollow coal lease.

OBJECTORS

WildEarth Guardians is a Santa Fe, New Mexico-based nonprofit organization with offices throughout the western U.S., including in Utah. WildEarth Guardians is dedicated to protecting and restoring wild places, wildlife, wild rivers, and the health of the American West and has over 44,000 members. As part of its Climate and Energy Program, Guardians works to combat climate change by advancing clean energy and aiding a transition away from fossil fuels, the key source of the greenhouse gases fueling global warming, particularly on our pubic lands. In doing so, Guardians defends the public interest by safeguarding clean air, pure water, vibrant wildlife populations, and protected open spaces. For purposes of this objection, WildEarth Guardians is the lead objector.

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.

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 Objectors submitted timely comments on the Draft SEIS, and therefore may file this Objection in accordance with 36 C.F.R. § 218.5. Further, the objections raised herein were specifically raised in these prior submitted comments. Therefore, the issues raised in this Objection are subject to review under 36 C.F.R. § 218.8.

STATEMENT OF REASONS

I. The SEIS 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 USFS fell short of complying with NEPA. In preparing its SEIS, the agency failed to adequately analyze and assess the reasonably foreseeable impacts of allowing the

Greens Hollow coal lease to be issued. Such reasonably foreseeable impacts include surface disturbances on the ground associated with the expansion of the SUFCO mine, coal combustion impacts, coal transport impacts, and coal export impacts. As a result, the USFS failed to appropriately analyze and assess impacts to sage grouse, to the climate, and to National Forest roadless areas that will be affected by these future activities.

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

The SEIS 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 allowing the BLM to issue the Greens Hollow coal lease. The USFS 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 USFS 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* Exhibit 4, *Diné Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, No. 12-cv-01275, slip op. at 13 (D. Colo. March 2, 2015) (*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 SEIS acknowledges that "burning of the coal is an indirect impact that is a reasonable progression of the mining activity." SEIS 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* SEIS at 287-288 (declining to discuss impacts from coal combustion); SEIS at D-63 ("The effects from consumption are not only speculative, but beyond the scope of agency authority or control.")

The SEIS 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." SEIS at 145 and 287. The SEIS 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." SEIS 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." SEIS at 288. Uncertainty about the exact allocation of Greens Hollow coal, however, does not excuse the USFS 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 Objectors noted in our Draft SEIS comments, fuel receipt data from the Energy Information Administration indicates the bulk of coal mined from SUFCO is combusted in power plants in Utah and Nevada. This data is attached as Exhibit 5, and available in downloadable spreadsheets from the U.S. Energy Information Administration at http://www.eia.gov/electricity/data/eia923/ (last accessed April 17, 2015). The table below summarizes this data and still confirms that coal mined from SUFCO is burned primarily in the Hunter, Huntington, and Intermountain power plants, but also in other power plants in Utah and Nevada.

Dowon Dlant	Location	Total Tons of SUFCO	Contract Expiration
rowerriant	(State)	Coal Consumed 2014	Date
Hunter	UT	1,949,997	December 2020
Huntington	UT	417,260	December 2020
Intermountain Power	UT	2,197,885	December 2014-2016
Kennecott Power	UT	273,403	December 2014
Plant			
North Valmy	NV	35,393	
Reid Gardner	NV	330,758	

SUFCO Mine Customers, 2014, Total Coal Consumed, and Contract Details.	Data from
Energy Information Administration Form 923 Data.	

Notably, the EIA data indicates that SUFCO coal furnished more than half the total coal consumed at Hunter in 2013 and 2014. Importantly, however, this data also indicates that coal from SUFCO will continue to be burned in the Huntington and Hunter power plants throughout the foreseeable future. In addition to coal consumption data, the Energy Information Administration'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 SEIS is significantly flawed because it asserts that it is not possible to determine where coal will be consumed.

Again, the USFS 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 SEIS 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." SEIS 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 Serv.*, ---F. Supp.2d---, 2014 WL 2922751 (D. Colo. 2014) *1.

Burning Greens Hollow coal, particularly at the Hunter power plant, will have readily foreseeable effects, both regionally and globally, that the SEIS refuses to consider – impacts that Objectors 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 SEIS'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* SEIS at 198.

The SEIS 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." SEIS 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* SEIS at 2, of which approximately 4 million tons per year can be expected to be burnt at Hunter, *see* SEIS at 145. Absent approval of the lease, this 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*:

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.

Exhibit 4 at 17-18. 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 a substantial portion of its output to a known power plant or plants.

The fatal shortcoming of the SEIS 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 6, 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%2

<u>OFinal%20report.pdf</u> (last accessed April 7, 2015). 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 7, 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 (last accessed April 17, 2015). 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 SEIS at 323.

In considering the effects of the Desert Rock Energy Project ("Desert Rock") – a coalfired 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 8, 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/co al/pdfs/EX_B.pdf (last accessed April 17, 2015). 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 just-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 7 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 7 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.*

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)

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.*

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 9, 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 (last accessed April 17, 2015). 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 10, 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 – a question that has not even been addressed - 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 if not jeopardized.") (quotation omitted).

ii. Coal Transport Impacts

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

In fact, the SEIS's discussion of transport-related impacts appears boils down to one paragraph in which the USFS discloses that truck hauling of coal will occur, with the majority of coal trucked to the Hunter power plant. *See* SEIS at 287. The SEIS, 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 USFS 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 USFS 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 USFS 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 SEIS is deficient under NEPA because it entirely fails to analyze and assess the impacts of rail transport of coal from the SUFCO mine. The USFS makes reference to rail transport SEIS, 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 USFS 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 USFS has information to know with certainty that coal is hauled to the Levan rail head 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 11, Union Pacific, "Sufco Mine," website available at http://www.up.com/customers/coal/mines/m-utah/sufco/index.htm (last accessed Aril 17, 2015).

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 USFS from making any effort to analyze and assess the impacts of hauling coal by rail. At the least, it seems reasonable to expect the agency to estimate how much coal is likely to be shipped by rail from SUFCO at any time and to then roughly estimate what air emissions an other impacts are likely to occur. The failure to make any effort at all to analyze and assess such reasonably foreseeable impacts renders the SEIS fatally flawed.

iii. Coal Export Impacts

Related to the USFS'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 a fantasy. According a report released in 2014 by the Sightline Institute, Bowie has signaled that exports are a key element of the 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 12, Williams-Derry, C., Sightline Institute, "Unfair Market Value: By Ignoring Exports, BLM Underprices Federal Coal" (July 2014), available online at <u>http://www.sightline.org/download/2493/</u> (last accessed April 17, 2015). Recent news coverage around Bowie Resources' potential initial public offering has continued to confirm that the company is currently exporting coal through the Stockton and Levin-Richmond port facilities. *See* Exhibit 2. Further, as explained earlier, the most recent news indicates that Bowie, together with local counties, intend to invest heavily in the development of a new privately owned port in Oakland, California. *See* Exhibit 3. 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*.

In spite of this information, the USFS asserted that the impacts of coal export activities,

and more specifically the destination of the coal, are "outside the scope" of the SEIS. SEIS 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 USFS 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 USFS clearly could have analyzed the 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 SEIS, but rather an integral part of ensuring the USFS 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 USFS 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 USFS 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. SEIS at 285. Rather what the USFS did deny is how significant these emissions would be 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 USFS offers two lines of reasoning for its climate denial, both of which are completely unsupported. 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. SEIS at 286. This is an absurd and arbitrary comparison. 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 attempt to dismiss potentially significant climate impacts by proffering such a meaningless comparison is borderline deceitful.

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." SEIS at 285. The USFS actually goes so far as to assert, "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 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 as there are tools available to quantify increment 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 Agriculture.

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 13, 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 (last accessed April 17, 2015). The protocol was developed by a working group consisting of several federal agencies with the primary aim of implementing Executive Order 12866, which requires that the costs of proposed regulations be taken into account.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. *See* Exhibit 14, 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 <u>https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbonfor-RIA.pdf</u> (last accessed April 17, 2015). These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies, including the Department of Agriculture. *See* Exhibit 15, 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 (last accessed April 17, 2015).

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 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 16, 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 (last accessed April 17, 2015).

Discount Rate Year	5.0% Avg	3.0% Avg	2.5% Avg	3.0% 95th
2010	11	32	51	89
2015	11	37	57	109
2020	12	43	64	128
2025	14	47	69	143
2030	16	52	75	159
2035	19	56	80	175
2040	21	61	86	191
2045	24	66	92	206
2050	26	71	97	220

Revised Social Cost of CO₂, 2010 – 2050 (in 2007 dollars per metric ton of CO₂)

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-thanexpected" impacts from climate change. *See* Exhibit 15 at 3.

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 17, EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011).

More importantly, the BLM, the agency tasked with leasing federal coal, has also utilized the social cost of carbon protocol. 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 18, 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_sale s/2014/oct_21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%2 OSale_Post%20with%20Sale%20(1).pdf (last accessed April 17, 2015). 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 CO₂e increase. *See* Exhibit 19, 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-frontoffice/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf (last accessed April 17, 2015). Based on this estimate, the agency estimated 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 13. 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 20, Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," *Nature Climate Change* (Jan. 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 13.

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 21, 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_clima te_change.pdf (last accessed April 17, 2015). 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.

Exhibit 21 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, and by Executive Order 13514. As explained, NEPA requires agencies to analyze the consequences of proposed agency actions and consider include direct, indirect, and cumulative consequences.

To this end, 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* at *1, citing 40 C.F.R. § 1502.23. However, when an agency prepares a cost-benefit analysis, "it cannot be misleading." *Id.* at *1 (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 *10-11. 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.* at *11.

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 USFS did not take a hard look at climate impacts in accordance with NEPA. Indeed, as part of the SEIS, the agency did prepare an economic analysis that disclosed economic benefits, disclosing for example that leasing would generate up to "\$1.87 billion." SEIS at 56. Given this, the agency was obligated to disclose the costs of leasing, including carbon costs. Unfortunately, the USFS 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 USFS's disclosure that mining will produce "21.8 million metric tons" of carbon dioxide annually (SEIS at 286) and that the Greens Hollow lease would extend the life of the SUFCO mine for approximately eight years (SEIS at S-2), we can estimate the present cost of carbon emissions using the most recent social cost of carbon numbers presented by the Interagency Working Group. Presuming that the Greens Hollow lease will be mined starting in 2016, the table below shows the present cumulative carbon costs could be as low as \$2.1 billion and as high as \$21.8 billion.

Year	Low Carbon Price, 5% Avg. Discount Rate (\$/metric ton)	Low Carbon Cost (\$)	High Carbon Price, 3% 95 th Percentile Avg. (\$/metric ton)	High Carbon Cost (\$)
2016	12	261,600,000	112	2,441,600,000
2017	12	261,600,000	116	2,528,800,000
2018	12	261,600,000	120	2,616,000,000
2019	12	261,600,000	124	2,703,200,000
2020	12	261,600,000	128	2,790,400,000
2021	12	261,600,000	131	2,855,800,000
2022	13	283,400,000	134	2,921,200,000
2023	13	283,400,000	137	2,986,600,000
	PRESENT COST (LOW)	\$2,136,400,000	PRESENT COST (HIGH)	\$21,843,600,000

Cumulative Carbon Costs Associated with Greens Hollow Coal Lease

Granted, there is 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 USFS itself seems to understand this as the SEIS 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. SEIS at 243.

In light of all this, it appears more than reasonable to have expected the USFS 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 SEIS clearly contradicts NEPA's requirement that information and analysis be of "high quality" in accordance with 40 C.F.R. § 1500.1.

C. The SEIS Fails to Analyze and Assess Impacts to Sage Grouse

The SEIS falls short of adequately analyzing and assessing impacts to sage grouse, a candidate for listing under the ESA and a USFS sensitive species. Although the USFS asserts that any lease will incorporate the terms of yet-to-be adopted guidance and thereby protect the species, this is not supported by the SEIS and other available scientific data. Deferring to future, undefined guidance to assert that the sage grouse and its habitat will be adequately protected does not satisfy NEPA's hard look requirements. This particularly true here, where the reasonably foreseeable impacts of issuing the Greens Hollow coal lease include the development of surface facilities within priority sage grouse habitat, further posing impacts that will jeopardize the viability of the species and lead to a need for listing under the ESA.



Overlap of SUFCO mine, Greens Hollow coal lease, and priority sage grouse habitat.

Indeed, as Objectors noted in their comments, much of the Greens Hollow tract underlies mapped priority sage grouse habitat, habitat that the National Technical Team recommended should receive utmost protection. In fact, the National Technical Team recommended that, where leasing for underground coal mining occurs, all surface development be prohibited. In spite of this, USFS has disclosed that the reasonably foreseeable impacts of developing the Greens Hollow lease will include a transmission line, ventilation shafts, roads, and other facilities, all of which appear poised to occur directly in priority habitat.

The fact that new sage grouse protection guidance may be adopted as part of the Utah Greater Sage-grouse Land Use Plan Amendment does not remedy the USFS's failure to analyze and assess these impacts, or to acknowledge that the reasonably foreseeable impacts of issuing the Greens Hollow coal lease will directly contravene broadly accepted National Technical Team recommendations. In fact, the decision to approve the Greens Hollow coal lease appears poised to conflict with a number of conservation measures under consideration for Preliminary Priority Management Areas for the Plan Amendment, including:

- The fact that under Alternatives B and C considered in the Land Use Plan Amendment DEIS would prohibit new underground mining leases in priority habitat. *See* Plan Amendment DEIS at 2-118. Here, it could be that under the new plan, the USFS would be barred completely from consenting to the Greens Hollow coal lease.
- Under the Preferred Alternative, leasing for underground coal mining would have to meet noise and tall structure restrictions. *See* Plan Amendment DEIS at 2-118. If these restrictions cannot be met, a lease cannot be granted. *Id.* at 2-119. Again, it could be that under the new plan, the USFS would be barred completely from consenting to the Greens Hollow coal lease.

- Under the Preferred Alternative, "the long-term development meets noise restrictions, including from supporting traffic along roads. Plan Amendment DEIS at 2-118.
- Under Alternative E1, "New permanent tall structures should not be located within 1 mile of the lek, if visible by the birds within the lek." Plan Amendment DEIS at 2-118.
- Under Alternative E1, noise that rises more than 10 dBA above ambient (background) levels at the lek during the breeding season will not be allowed. Plan Amendment DEIS at 2-118.

Consenting to the Greens Hollow lease in advance of the Plan Amendment Record of Decision could very well preclude the USFS from implementing Alternatives B, C, its Preferred Alternative, and Alternative E1. Regardless of whether future development will meet future guidance, if future guidance would have otherwise barred the agency's consent and the BLM's leasing, then approval of the Greens Hollow lease now would certainly not protect the sage grouse. This impact was not addressed at all by the agency in the SEIS.

Below, we detail further shortcomings in the SEIS.

i. Impacts from Road Traffic Have not Been Adequately Analyzed and Assessed

Objectors raised the potential for impacts from project-related construction activity and vehicle traffic. The development of the mine in question will involve access road development, use, and/or maintenance. SEIS at 25. Roads pose and important threat to sage grouse by fragmenting their habitat and displacing them from adjacent areas. For instance, Wisdom et al. found that extirpated range of sage grouse was closer to highways (mean = 3.1 miles) than occupied range for sage grouse. See Exhibit 22, Wisdom, M.J., C.W. Meinke, S.T. Knick, and M.A. Schroeder. 2011. Factors associated with extirpation of sage-grouse. Pp. 451-472 in S.T. Knick and J.W. Connelly (eds.). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitat. Studies in Avian Biology (vol. 38), University of California Press, Berkeley, CA. Holloran found that main haul roads (defined as gravel roads accessing 5 or more natural gas wells) had a significant negative effect up to 1.9 miles from the road on sage grouse lek attendance compared to unaffected leks (regardless of whether the road was visible from the lek or not), and that increased traffic led to increased impact. See Exhibit 23, Holloran, M. J. 2005. Greater sage-grouse (Centrocercus urophasianus) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Wyoming. Laramie, Wyoming. This latter finding is particularly important given that the mine in question involves a significant increase in heavy truck traffic. Braun and Remington and Braun, both studies cited in the SEIS, also found a significant negative effect of coal mining haul roads on sage grouse leks within 1.9 miles of the road.

At minimum, all roads need to be sited at least 0.8 miles from lekking and nesting habitat, and main haul roads should be sited at least 2 miles away. Braun and Holloran demonstrated that main haul roads sited within 2 miles of sage grouse leks resulted in significant declines of breeding populations at the leks. In addition, Knick et al. found that the vast majority

of active sage grouse leks were within habitats characterized by less than 3% cumulative surface disturbance (including, in significant measure, roads). *See* Exhibit 24, Knick, S.T., S.E. Hanser, and K.L. Preston. 2013. Modeling ecological minimum requirements for distribution of greater sage-grouse leks – Implications for population connectivity across their western range, USA. Ecology and Evolution 3: 1539-1551.

The SEIS did not analyze reasonably foreseeable impacts in the context of these scientific findings and therefore, the USFS did not meet NEPA's hard look requirement.

ii. The SEIS Does not Adequately Analyze and Assess Noise from Ventilation Fan

As Objectors noted in the comments on the Draft SEIS, noise can have a major negative impact on sage grouse, causing disturbance and displacement of birds from preferred habitat and drowning out the mating calls of males during the lekking season, as we pointed out in our comments. According to the agency, a mine ventilation shaft would be necessary, and ventilation fan operation could create constant noise that could negatively affect lekking sage grouse. SEIS at 27 and 279. This mine ventilation shaft and fan would be sited within 2 miles of the active Wildcat Knolls lek complex, substantially closer than a current existing SUFCO vent fan. Original FEIS at 73. During earlier objection resolution discussions involving WildEarth Guardians, project proponents represented that this was the only possible location for the mine ventilation shaft and fan. Needless to say, this noise could stress, disturb and/or displace sage grouse engaged in other activities and normal habitat use as well.

The USFS relied on a 2008 TetraTech analysis of noise in the project area vicinity and a Cirrus Ecological Solutions Biological Assessment for its impacts analysis on this critical factor for sage grouse. However, a review by Skip Ambrose, one of the nation's leading experts on noise and its impacts to sage grouse, found that these analyses had a number of fatal flaws, including (1) using insufficiently sensitive equipment to accurately detect background noise levels; (2) measuring background noise levels at the wrong times of day and wrong seasons to attain accurate readings for the purposes of measuring impacts to lekking sage grouse; and (3) using inappropriate sound levels inconsistent with American National Standards Institute (ANSI) requirements. *See* Exhibit 25, Ambrose, S., "Review of Greens Hollow Sound Study by Tetra Tech (2008)" (April 16, 2015). As a result, the agency's impacts analysis reaches flawed conclusions, that serious impacts to the Wildcat Knolls lek complex are unlikely.

Further, Ambrose's review provides an accurate assessment of baseline noise levels and the likely noise impacts of adding an additional mine exhaust fan. This assessment represents the best available science, and in order to take the legally mandated 'hard look' at noise impacts to sage grouse, the USFS must revise their impacts analysis to account for this new information. This field study estimates that the addition of a second exhaust fan, half as far from active sage grouse leks than the existing exhaust fan, will result in a cumulative noise level at the lek site of 26 dBA, which is likely to result in significant impacts to breeding sage grouse as outlined below.

Blickley and Patricelli found that low-frequency noise from oil and gas development can

interfere with the audibility of male sage grouse vocalizations:

We found that noise produced by natural gas infrastructure was dominated by low frequencies, with substantial overlap in frequency with Greater Sage-Grouse acoustic displays. Such overlap predicted substantial masking, reducing the active space of detection and discrimination of all vocalization components, and particularly affecting low-frequency and low-amplitude notes.

Exhibit 26, Blickley, J.L., and G.L. Patricelli. 2012. Potential acoustic masking of greater sagegrouse (*Centrocercus urophasianus*) display components by chronic industrial noise. Ornith. Monogr. 74: 23-35. Such masking could increase the difficulty of mate assessment for lekking greater sage grouse. These researchers went on to state, "Ultimately, increased difficulty in finding leks or assessing males on the leks may lead to lower female attendance on noisy leks compared with quieter locations. Males may also avoid leks with high levels of noise if they perceive that their vocalizations are masked." Noise also causes stress to sage grouse. According to Blickley et al.:

We found strong support for an impact of noise playback on stress levels, with 16.7% higher mean FCM [fecal corticoids, an index of stress] levels in samples from noise leks compared with samples from paired control leks. Taken together with results from a previous study finding declines in male lek attendance in response to noise playbacks, these results suggest that chronic noise pollution can cause greater sage-grouse to avoid otherwise suitable habitat, and can cause elevated stress levels in the birds who remain in noisy areas.

Exhibit 27, Blickley J.L., Word K.R., Krakauer A.H., Phillips J.L., Sells S.N., et al. 2012b. Experimental Chronic Noise Is Related to Elevated Fecal Corticosteroid Metabolites in Lekking Male Greater Sage-Grouse (*Centrocercus urophasianus*). PLoS ONE 7(11): e50462. doi:10.1371/journal.pone.0050462. The Ambrose field study indicates that the sound frequency of coal mine exhaust fans measured near the Greens Hollow project also occupied the same range of hertz as sage grouse mating vocalizations, and thus would result in similar masking of mating calls. According to Blickley and Patricelli, "The cumulative impacts of noise on individuals can manifest at the population level in various ways that can potentially range from population declines up to regional extinction. If species already threatened or endangered due to habitat loss avoid noisy areas and abandon otherwise suitable habitat because of a particular sensitivity to noise, population viability could be lost, and their status becomes even more critical."

Blickley et al., which is cited in the SEIS, played back recorded continuous and intermittent anthropogenic sounds associated with natural gas drilling and roads at leks. For 3 breeding seasons, they monitored sage grouse abundance at leks with and without noise. Peak male attendance (i.e., abundance) at leks experimentally treated with noise from natural gas drilling and roads decreased 29% and 73%, respectively, relative to paired controls. Decreases in abundance at leks treated with noise occurred in the first year of the study and continued throughout the experiment. Intermittent noise had a greater effect than continuous noise. Female attendance averaged a decrease of 48%; male attendance averaged a decrease of 51%. Road

noise leks decreased by 73% versus control leks; drilling noise leks decreased 29% versus control leks. There were residual effects of noise after the treatment ceased. These researchers concluded that sage grouse do not habituate to noise impacts over time. Piquette et al. found that intermittent noise suppressed breeding activity on Gunnison sage grouse leks in Colorado. *See* Exhibit 28, Piquette, D., A. Keck, N. Seward, B.P. Magee, P.A. Magee, and G. Patricelli. 2014. Acoustic soundscapes in the Gunnison Basin and effects of anthropogenic noise on Gunnison sage-grouse (*Centrocercus minimus*) in the Gunnison Basin, Colorado. Final Report submitted to Colorado Parks and Wildlife, 27 pp.

For this particular project, the USFS's own experts (Grubb and Delaney 2008, cited in the SEIS) contend that the cumulative noise from the new fan, coupled with the existing fan, could result in serious problems for sage grouse:

Both the existing and proposed ventilation fan sites are well within the recommended, data-supported, 3-mile buffer for no surface disturbance, documented in current scientific literature. The growing use of the satellite lek to the northeast and in the opposite direction of the existing fan may very well be a direct result of that fan's presence. Similar subtle movements away from anthropogenic sources of activity by breeding sage grouse are well documented in scientific literature.

Skip Ambrose provides unpublished data from noise detection at Wyoming leks (2000-2014), indicating population decline for a majority of leks subjected to noise above 25dBA, which is lower than the sound level (27dBA detected by Tetra Tech's equipment on Wildcat Knolls). *See* Exhibit 25. With this in mind, the ventilation fan portion of the project will likely have important direct and cumulative impacts on the Wildcat Knolls sage grouse population, threatening its viability.

The SEIS also fails to analyze and assess noise that may have an adverse effect on sage grouse during nesting, brood-rearing, and wintering periods. Holloran and Anderson found that sage grouse nest within 5.3 miles of the lek site (although some studies have documented nesting beyond this point). *See* Exhibit 29, Holloran, M. J. and S. H. Anderson. 2005. Spatial distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats. Condor 107(4): 742-752. In Utah, Peck et al. recommended 10 km as the appropriate lek buffer to encompass nesting activity. *See* Exhibit 30, Peck, R.D., R.J. Baxter, R.T. Larsen, and J.T. Flinders. 2012. Nest-area fidelity of greater sage-grouse in Strawberry Valley, Utah. W. N. Am. Nat. 72: 425-431. All nesting habitats are important from the standpoint of noise reduction, and noise abatement standards should apply equally to all habitats important to the life cycle of sage grouse, not just to leks. Many occupied nesting and brood-rearing habitats are even closer to the proposed ventilation fan than the lek sites themselves, which means grouse occupying these habitats will be exposed to noise levels *significantly greater* than the 26 dBA noise level estimated for the lek by Ambrose.

It is reasonable to suppose that if noise that mimics oil and gas truck traffic causes elevated levels of stress-related metabolites in grouse on the lek, as reported by Blickley et al. 2012, that this physiological response would be substantially similar during other parts of this bird's life cycle. Indeed, these researchers stated, "Noise at energy development sites is less seasonal and more widespread and may thus affect birds at all life stages, with a potentially greater impact on stress levels." Patricelli et al. recognized this explicitly:

Second, and much more importantly, if noise levels drop down to stipulated levels at the edge of the lek, then much of the area surrounding the lek will be exposed to higher noise levels (see Figures 3 & 4). This management strategy therefore protects only a fraction of sage-grouse activities during the breeding season— mate assessment and copulation on the lek—leaving unprotected other critical activities in areas around the lek, such as foraging, roosting, nesting and brood rearing.

Exhibit 31, Patricelli, G.L., J.L. Blickley, and S.L. Hooper. 2012. The impacts of noise on greater sage-grouse: A discussion of current management strategies in Wyoming with recommendations for further research and interim protections. Unpubl. Report prepared for: The Bureau of Land Management, Lander Field Office and Wyoming State Office, Cheyenne and Wyoming Game and Fish Department, 25 pp. The Greens Hollow SEIS does not appear to provide any assurance that noise levels in excess of 10 dBA above ambient will be precluded during subsequent mine operations.

Furthermore, construction activities for the fan, ventilation shaft, and powerline themselves propose additional direct and cumulative noise impacts to the Wildcat Knolls lek complex. According to Grubb and Delaney (2008):

...due consideration must be given to the fact that construction of the proposed ventilation fan will require approximately a year, during which time there will be blasting, drilling, heavy construction, and fairly constant traffic servicing the site. Sound levels from these activities are likely to be much higher than those from the fan once construction is complete. Current recommendations also call for a temporal restriction of activities from 06:00 PM through 9:00 AM during sage grouse breeding and nesting periods.

Because temporal restrictions limit noise only for three hours during the peak of breeding and displaying activity, noise impacts from construction-related activities are likely to cause displacement, stress, and/or lek abandonment as a result of activities affecting birds using habitats adjacent to the lek during non-lekking hours. Numerous studies show that sage grouse loaf within 0.6 miles of leks during off-hours (Rothenmaier 1979, Autenreith 1981, Emmons and Braun 1984) and that sensitive nesting habitat for the Bi-State population (Carson City, Douglas, Lyon, Mineral and Esmeralda Counties in Nevada, and in Alpine, Mono, and Inyo Counties in California) occurs within 4.66 mile of the lek. Manier et al (2014) underscores these findings, and found that the appropriate distance ("interpreted range") for these types of activities and impacts is 3.1 to 5 miles. *See* Exhibit 32, Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H. 2014. Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., http://dx.doi.org/10.3133/ofr20141239. In Utah, Peck et al. recommended a more conservative distance of 10 km (6.2 miles) to encompass all nesting

habitat. By siting roads, powerlines, and a ventilation fan closer than 3.1 miles from the Wildcat Knolls leks, the USFS threatens the viability of this population. *See* Exhibit 30.

The scientific research conducted in Wyoming evaluates the impacts of developmentrelated noise on sage grouse. *See* Exhibit 31. Patricelli also recommends that noise be limited to 10 A-weighted decibels above the ambient noise level, but points out that 39 decibels is not the appropriate ambient noise level for their Lander Field Office study site (and generally), but instead that 20 to 22 decibels is the actual background noise level measured at sage grouse leks. To achieve these levels, these researchers recommend: "Therefore to avoid disruptive activity in areas crucial to mating, nesting and brood-rearing activities, we recommend that roads should be sited (or traffic should be seasonally limited) within 0.7-0.8 miles from the edge of these areas." *Id.* Ambrose notes that once noise levels reach 25-30 dBA, detrimental population decline in associated leks has been shown to occur. *See* Exhibit 25.

iii. The SEIS Does not Adequately Analyze and Assess Impacts from Transmission Line Development and new Rights of Way

A proposed overhead powerline would be constructed to serve the proposed mine vent fan, which would run within 0.2 mile of active lekking habitat for the Wildcat Knolls lek complex. Original FEIS at 73, Figure 3.5. Bafflingly, the USFS does not appear to have considered the reasonable alternative of requiring this powerline to be buried underground (as recommended by National Technical Team 2011), which would reduce concerns that it will cause abandonment of the Wildcat Knolls lek complex due to increased raptor predation and behavioral displacement of sage grouse away from this tall structure.

As noted in our comments, inappropriate protections from transmission lines and projects with rights-of-way are a significant threat to sage grouse. Wisdom et al. found that lands within 3.1 miles of transmission lines and highways had an elevated rate of lek abandonment. See Exhibit 22. Nonne et al. (2011) found that raven abundance increased along the Falcon-Gondor powerline corridor in Nevada both during the construction period, and long-term after powerline construction activities had ceased. These increases were documented to be long-term increases by a subsequent report on the same powerline. See Exhibit 33, Gibson, D., E. Blomberg, and J. Sedinger. 2013. Dynamics of greater sage-grouse (Centrocercus urophasianus) populations in response to transmission lines in central Nevada. Final Progress Report, Dept. of Natural Resources and Environmental Sciences, Univ. Nevada-Reno, 68 pp. Dinkins documented sage grouse avoidance of powerlines not just during the nesting period but also during early and late brood-rearing. See Exhibit 34, Dinkins, J. B., 2013. Common raven density and greater sagegrouse nesting success in southern Wyoming: Potential conservation and management implications. PhD Dissertation, Utah State Univ. http://digitalcommons.usu.edu/etd/1700. Braun et al. reported that 40 leks with a power line within 0.25 mile of the lek site had significantly slower population growth rates than unaffected leks, which was attributed to increased raptor predation. See Exhibit 35, Braun, C.E., O.O. Oedekoven, and C.L. Aldridge. 2002. Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse. In Transactions North American Wildlife and Natural Resources Conference 67:337-349. Gibson et al. reported significantly lower nest success and female survival near the Falcon-Gondor powerline, an impact that was greatest closest to the

powerline but was still measurable out to 20 km away from the powerline. *See* Exhibit 33. These researchers concluded:

Published results suggest that population growth in sage-grouse is highly sensitive to variation in female survival and nest survival (Taylor et al. 2011); therefore we urge caution when placing transmission lines within sage-grouse habitat. Additionally, placement of the Falcon-Gondor transmission line was selected specifically to minimize the disturbance to sage-grouse (M. Podborny, NDOW, personal communication), therefore our results may underestimate the influence of transmission lines in general on sage-grouse demographic rates, depending on line placement.

The National Technical Team also recommended that Priority Habitats be managed as exclusion areas for new overhead transmission lines.

The USFS contends that power line poles would be designed to exclude perching raptors. SEIS at 212. Raptors perching have an increased impact on nesting birds at least 0.25 mile from the structure (Braun et al. 2002, Hanser et al. 2011, Dinkins 2013). Anti-perching devices have limited effectiveness (Prather 2010, Lammers and Collopy 2007) and therefore are no substitute for an outright prohibition on tall structures in key grouse habitats. Coates et al. (2013) recommended a 4.66-mile buffer for active leks as the appropriate area of protection for sage grouse key habitats (at least breeding, nesting, and early brood-rearing habitats); Peck et al. (2012) recommended a 10-km buffer for nesting habitat in Utah. *See* Exhibit 30.

The SEIS concedes, however, that the line would still provide perches for raptors and result in increased predation in the lekking area. SEIS at 273. This is particularly troubling in light of the findings of Perkins (2010), who determined that female survival was significantly lower in the Wildcat Knolls population than the Horn Mountain population due to a higher concentration of golden eagles at Wildcat Knolls, and documented that golden eagle mortalities were higher here. This finding is underscored with differential nest success at Wildcat Knolls based on proximity to woodlands, successful nests averaged 536.4 m from non-habitat edge (i.e., woodlands), while unsuccessful nests averaged 163.4 m from non-habitat edge. Proposals to require perch inhibitors offer limited benefit for sage grouse. *See* Exhibit 36, Prather, P.R. 2010. Factors affecting Gunnison sage-grouse (*Centrocercus minimus*) conservation in San Juan County, Utah. PhD Dissertation, Utah State Univ., 134 pp. For small lines such as the one that will be constructed to serve the Greens Hollow ventilation fan, a scientific study in Gunnison sage grouse habitat determined that perch deterrents did not significantly reduce raptor use of power lines. *Id*.

iv. The SEIS Does not Adequately Analyze and Assess Cumulative Impacts

Under NEPA, federal agencies are required to analyze the direct and cumulative impacts of federally permitted activities together with connected actions, currently existing impacts, and reasonably foreseeable impacts. For sage grouse, this has not been done. Existing impacts include vegetation treatment projects, roads, off-road vehicle traffic, and existing coal mine exhaust fans. Reasonably foreseeable impacts include all of this project's appurtenant facilities as well as projects discussed in Table 2.1. Cumulative effects for sage grouse consider only partially the direct consequences of coal leasing on this tract, but not how these interact with other cumulative impacts. SEIS at 205 and 209.

According to the agency, SUFCO double disked 530 acres and harrowed 270 acres within crested wheatgrass and smooth brome monocultures in 2008, re-seeding them with sagebrush, native grass, and native forbs, with the intention of restoring sage grouse habitat for nesting and brood-rearing. SEIS at 40. Perkins (2010) noted near-term impacts to sage grouse from these activities: "Major habitat areas within 2 km of the main Wildcat lek were disked and harrowed at this time, and may have removed and disturbed critical habitat for breeding sage-grouse." It is now seven years later. While the agency is tracking, in partnership with Grand Canyon Trust, the effectiveness of this mitigation project in terms of persistence of native grasses and forbs, that analysis does not include assessment of the habitat conditions for sage grouse, e.g., in terms of height of grasses or forbs.

Livestock grazing is permitted by the USFS in the cumulative effects analysis area. Livestock grazing can have a significant negative impact on sage grouse through spreading cheatgrass (Reisner et al. 2013) and through depriving sage grouse of sufficient grass for hiding cover; 7 inches of residual grass height is required in key habitats (Gregg et al. 1994, Connelly et al. 2000, Hagen et al. 2007). The USFS has failed to determine whether livestock grazing is annually leaving behind this sufficient threshold of grass cover to provide for strong nest success, and likewise has failed to consider the cumulative effects of livestock grazing together with the direct and reasonably foreseeable impacts of the Greens Hollow coal leasing project, including noise. This is a particularly egregious violation of NEPA's cumulative effects analysis requirements as the USFS has itself admitted that the construction of a powerline in close proximity to lekking and nesting habitat will elevate predation risk from raptors and corvids.

II. The Draft ROD Fails to Protect Sage Grouse in Accordance with Land and Resource Management Plan Requirements and the Agency's Sensitive Species Handbook

In proposing to consent to the Greens Hollow coal lease, the SEIS demonstrates that the USFS will not comply with its LRMPs and its Sensitive Species Manual with regards to the sage grouse

Here, the USFS's Sensitive Species Manual, FSM 2670 requires that the Agency "[d]evelop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions," to "[m]aintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands," and to "[a]void or minimize impacts to species whose viability has been identified as a concern." FSM 2670.22 and 2670.32.

The Manti-La Sal National Forest LRMP requires that the USFS "[m]anage habitat of sensitive species to keep them from becoming threatened or endangered" and comply with the Agency's Sensitive Species Manual at FSM 2670. Manti-La Sal LRMP at III-21. The Fishlake

National Forest LRMP similarly requires that habitat be managed to ensure viable populations of all native vertebrate wildlife species and also requires the USFS to maintain habitat for each species on the forest by "protecting at least 40 percent of the ecosystems for existing species." Fishlake National Forest LRMP, Wildlife and Fish Resource Management (C01) #1 at IV-18.

The duty for the USFS to ensure its actions are consistent with its LRMP is paramount. Indeed, the agency is statutorily duty bound under NFMA to ensures its actions are consistent with its LRMP. *See* 16 U.S.C. § 1604(i). The agency's duty to comply with its Sensitive Species Manual is also critical for ensuring the viability of sensitive species. Unfortunately, for the sage grouse, the USFS fell short of meeting these basic obligations.

As discussed above, the basis for the USFS's finding that the viability of the sage grouse will be maintained is thoroughly unsupported. Not only is the agency relying on yet-to-be adopted guidance that the Greens Hollow coal lease could be in inherent conflict with, but the SEIS fails to analyze and assess a number of potentially significant impacts that would indicate any future guidance will sufficiently protect the species.

It is critical to point out that, as currently proposed, the decision to consent to the Greens Hollow coal lease is in direct conflict with the National Technical Team recommendations that coal leases for underground mining not be issued unless all surface impacts are prohibited. *See* National Technical Team Recommendations at 24. The USFS's draft ROD leaves open the prospect that surface impacts will not be prohibited. Worse, the decision to consent to the issuance of the Greens Hollow coal lease could be contrary to the Utah Greater Sage-grouse Land Use Plan Amendment, which will be finalized in May or June of this year.

There is simply no concrete limitations on surface disturbance that the USFS can point to that would actually indicate the sage grouse, which is already a candidate for listing under the ESA, will not become listed as threatened or endangered or otherwise become unviable on the Manti-La Sal and Fishlake National Forests. It is telling that, even though the Fishlake LRMP requires that "at least 40 percent of the ecosystems for existing species" be protected, that the SEIS presents no information or analysis to suggest that at least 40 percent of ecosystems for the sage grouse are currently being protected or will be protected as a result of issuing the Greens Hollow coal lease.

III. The Draft ROD Fails to Ensure Compliance with the Endangered Species Act

The Draft ROD and SEIS fail to demonstrate that the USFS will ensure compliance with the ESA if the agency consents to the Greens Hollow Coal Lease. The FEIS indicates that the USFS is remiss in meeting its section 7 obligations under the ESA, 16 U.S.C. § 1536(a). Section 7 requires federal agencies to "consult" with the U.S. Fish and Wildlife Service to ensure "any action authorized, funded, or carried out by such [agencies]" does not jeopardize the existence of or destroy or adversely modify the critical habitat of species listed under the ESA. 16 U.S.C. § 1536(a)(2). To this end, "formal consultation" is required for "any action [that] may affect listed species or critical habitat." 50 C.F.R. § 402.14(a).

Of particular concern is that the agency has not consulted and has signaled that it does not intend to consult at any point in the future over the reasonably foreseeable impacts of mercury and selenium deposition related to coal combustion at the Hunter and Huntington power plants. Such deposition certainly "may affect" Colorado River drainage endangered fish, including the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail.

As explained above, a reasonably foreseeable consequence of authorizing the Greens Hollow coal lease is the combustion of coal at the Hunter and Huntington power plants, which have contracts to be supplied by the SUFCO mine until December of 2020. This coal combustion will certainly release mercury and selenium, which are known to contaminate the habitats of Colorado River endangered fish. As discussed, modeling prepared by WildEarth Guardians indicates that the Hunter and Huntington power plants have substantial mercury deposition impacts in the Green River watershed, and that their mercury deposition footprints are concentrated in the Huntington Creek and Price River drainages, which are both tributaries to the Green River. *See* Exhibit 10.

In spite of this, the USFS nowhere mentions in the SEIS the need to consult with the U.S. Fish and Wildlife Service regarding contamination impacts to endangered fish and their critical habitat. Instead, the SEIS focuses completely on the impacts of water depletions. *See* SEIS at 51. Based on this, the agency concluded that the Greens Hollow lease would have "no effect" on Colorado River endangered fish. Although depletions are serious, they are not the only reasonably foreseeable action that "may affect" these endangered fish and their critical habitats.

Although the USFS may believe that it is not obligated to consult under section 7 regarding contamination impacts, this belief is misplaced. Federal agencies must consult whenever their actions "may affect" a listed species. "Action" is broadly defined to include "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies" and includes "the granting of [] leases" or "actions directly *or indirectly* causing modifications to the land, water, or air." 50 C.F.R. § 402.02 (emphasis added). Here, the decision to consent to coal leasing clearly constitutes an action under the ESA. It is, in effect, a decision to condone leasing. While leasing itself may not lead to direct effects, the USFS readily acknowledges in its FEIS that the reasonably foreseeable consequence, or indirect effect, of leasing will be coal combustion, which is likely to adversely affect endangered species in the Colorado River drainage through the release of mercury and selenium.

Although the USFS may claim that consultation over contamination impacts will occur at some later point, nothing in the Endangered Species Act suggests that an agency can forego formal consultation where its decision "may affect" listed species and their habitats. Indeed, agencies are required to review their actions "at the earliest possible time to determine whether any action may affect listed species or critical habitat." *Id.* § 402.14(a). Given this, there is no basis for the agency to defer consultation at this time. Indeed, it is this very "earliest possible time" obligation that prompted the U.S. District Court for the District of Colorado to hold that an agency's decision to make lands available for oil and gas leasing constitutes federal action triggering section 7 obligations. *See Wilderness Society v. Wisely*, 524 F. Supp.2d 1285, 1302 (D. Colo. 2007) (finding "earliest possible time" requirement triggered section 7 duties over BLM decision to make lands available for oil and gas leasing). Such a decision to make lands

available for leasing is virtually identical to consenting to leasing.

Unless and until the USFS formally consults with the U.S. Fish and Wildlife Service over the reasonably foreseeable contamination impacts associated with coal combustion, the agency cannot issue a Final ROD consenting to the Greens Hollow coal lease, or otherwise consent to any future leasing.

IV. Treatment of IRA and Inventoried Potential Wilderness Areas Fails to Comply with NEPA, 1982 and 2012 NFMA Policies, and APA

A. Background Facts, Requirements, Failures to Meet Legal Duties

Just as was the case with the 2011 EIS we challenged, the SEIS errs almost without exception point for point when it comes to its arbitrary, and even explicitly false, characterization, analysis, and treatment of IRA, the RACR, and the degree to which action alternatives 2 and 3 will equally result in detrimental – and we continue to argue illegal- impacts to IRA.

In 2012 we argued (in our incorporated 2012 appeal):

"Through explicit application and use of the 1982 NFMA regulations, the FEIS incorrectly holds that presently, and for its study, "The term IRA refers to an area usually of at least 5,000 acres without developed and maintained roads, in a substantially natural condition, and inventoried as part of either the National Roadless Area Review and Evaluation (RARE II) process in 1978 or the Land and Resource Management Planning (LRMP) process (36 CFR 219.17(a)(1)). EIS, p. 119. The EIS works to confuse the definition of IRA by applying the 1982 rule, 36 CFR 219.17(a)(1); that regulation does not even include a definition of "IRA" or "Inventoried Roadless Area."

It's almost exactly the same degree of substantively inaccurate and meaningfully misleading characterization in the SEIS. For example, not almost the exact same paragraph and citation to the 1982 NFMA regulatory standards on page 121 of the 2015 Supplemental Environmental Document. Obviously, we must recognize that the regulatory definition of IRA (those maps included in appendix C of the 2001 RACR FEIS, or any subsequent update thereof), is cited on page 120 of the 2015 Supplemental EIS, but that does not change the fact that the same canned and aggressively (if not knowingly) false and misleading description of IRA is almost verbatim unchanged from the 2011 FEIS.

The primary substantive difference is that the very architecture of the 2015 Supplement is such that it arbitrarily and capriciously (indeed we believe knowingly and duplicitously ... assuming the language chosen for the SEIS was deliberate) fails to disclose the very real and detrimental harm done to IRA due to the massive vent fan facilities and their requisite new power lines ... that will necessitate new road construction in violation of 36 CFR 294. The SEIS treatment of IRA is, in short, legally, materially, and factually incorrect. This is of course an extreme example of the USFS failing to take NEPA's hard look. More importantly, as we already argued the same thing in 2012 (leading to the SEIS), this represents a process that

knowingly violates the RACR and its implementing CFR while working to obfuscate (and not simply disclose) such significant and illegal impacts.

In 2012 we argued that to avoid public confusion regarding the term "IRA," which is locked to the 2000 RACR FEIS, from the often newer or ongoing inventories of unroaded potential wilderness that do not fall under the RACR's protections, the Forest Service NFMA Handbook was amended. In the early 2000's, the Handbook was amended to distinguish IRA from newer LRMP inventories by using the phrase inventory of unroaded undeveloped areas. Soon after that, in 2006-2007, the Handbook was amended again using the phrase inventory of potential wilderness areas (PWA). FSH 1909.12 Ch 71 explained that potential wilderness areas are the areas that satisfy the definition of Wilderness found in section 2 (c) of the Wilderness Act. They are mapped and inventoried for wilderness study and recommendation as a part of the LRMP revisions, "Areas of potential wilderness identified through this process are called potential wilderness areas." Id. In January 2015 that handbook was revised from the bottom up in very important and substantive manners. This echoes of our 2012 appeal arguments and concerns specific to IRA (again, incorporated into this objection), but in our view this constitutes a much more clear and knowing violation of the standards imposed by the APA as this now appears to reflect a pattern and practice that consistently results in materially misleading the Responsible Officials (assuming they rely upon the SEIS) as well as the public.

B. Potential Wilderness Areas

The 2015 FEIS fails in very much the same patterns as the 2011 EIS to disclose or adequately study impacts to potential wilderness areas. This is particularly true for potential wilderness areas that do not overlap with IRA polygons. There is a failure to take any look at this issue, let alone NEPA's requisite hard look. In 2012 this was primarily because the FEIS included a consideration of impacts located inside formal IRA boundaries (albeit inadequate). Impacts to lands inside the newer inventory of unroaded undeveloped/potential wilderness area in the lease area that are *outside* of IRA boundaries were systematically overlooked. In the 2015 Supplemental EIS the failure is more a result of the new architecture of the EIS where surface facilities that are admittedly reasonably foreseeable are never disclosed site-specifically. Similarly, their very real and (admittedly) reasonably foreseeable future cumulative impacts are also never afforded NEPA's duty to receive a hard look.

This is an acutely site-specific issue. It therefore is particularly frustrating that the SEIS never actually maps or discloses the reasonably foreseeable future cumulative impacts (detrimental, illegal, or otherwise) that are explicitly at the heart of the matter before the agency. This renders the maps and graphics relating to PWA and IRA in the Supplemental EIS to be substantively less meaningful than those found in the EIS it was to supplement. Therefore, below we must default to the FEIS maps and graphics relating to this issue. The IRA polygons are mapped and displayed clearly in the FEIS, such as Figure 3.8 on EIS page 122:



Impacts and what happens to the roadless and/or unroaded area acres were only considered in the scope of the original EIS study if they were located inside these IRA polygons. "The scope for the roadless analysis focuses specifically on the portions of the "inventoried roadless areas" (IRA) that occur within the project area, but also considers the entire IRAs in terms of impact to the designated area." EIS, p. 119. Impacts to "other unroaded areas" are a part of this key issue the EIS is supposed to analyze in detail. EIS, p. 15. The original EIS was inadequate because it never discloses the other unroaded areas that are outside of and do not match the older, smaller, IRA polygons. The Supplemental EIS is inadequate due to these concerns but more importantly also due to a new problem: none of the surface facilities like the power line that will need to be built with temporary road construction (or more) through PWA and IRA are arbitrarily and inaccurately dismissed as too speculative and never mapped, let alone studied. This constitutes continuing failure to meet legal duties established by the NEPA, 2015 NFMA policies, and the CFR implementing the RACR.

Consistent with this exclusive focus on IRA the EIS discloses that about 48% of the

Greens Hollow lease area overlaps with IRA. EIS, p. 55. IRA is mapped in relation to the lease. See EIS figure 3.8 above. "Other unroaded areas" are not. Impacts to other unroaded areas outside of IRA are overlooked.



A sample of examples that we have raised repeatedly for many years are below.

The pink shaded area denotes IRA. The black lines and cross hatching denote the area of subsidence authorized in alternative 3 and the larger Greens Hollow Lease Tract boundary. *The blue shaded area denote additional lands inside the Manti-La Sal and Fishlake's unroaded undeveloped area inventory (aka potential wilderness area inventory as defined in the FSH cited earlier).* Note how much is outside of the pink IRA polygons.

In our 2012 appeal (incorporated by reference) we attached screen capture images of PDF wall maps circulated during the LRMP revision for the newer inventory of undeveloped and unroaded areas. We've enclosed those again to this objection for your convenience, and we ask that you please reference those larger USFS unroaded undeveloped area inventory wall maps to better orient these screen captures geographically.

MAP 2:



In the GIS screen capture above, just the PWA is shown in blue shading. IRA boundaries have been left out for clarity, and because one can go to very similar maps in the EIS for maps of IRA boundaries (e.g. Figure 3.8, EIS p. 122).

MAP 3:



Map 3 (above) is a close up of a part of map 2. Blue shaded area is USFS inventoried unroaded undeveloped area (aka potential wilderness area). The black line in the upper left is the lease tract boundary. The solid red line is essentially the project area boundary. The red circle denotes the southern of the 2 proposed vent fan sites (no longer even site specifically disclosed or studied, even as a reasonably foreseeable cumulative impact in the Supplemental EIS), and the solid yellow/black line going to it denotes the new power line that will be required to mine the Greens Hollow tract. There are several take home concerns these GIS screen capture maps continue to illustrate for this 2015 objection:

- (1) Power lines and related fan facility construction that will occur inside PWA that is
 outside of and that does not overlap with the IRA was not considered in the 2011 EIS, nor
 was that rectified by the significantly less site-specific SEIS in 2015 that doesn't even
 map or site specifically disclose these (while at the same time admitting them as
 reasonably foreseeable and related actions with cumulative impacts);
- (2) Legal availability conflicts with PWA are created outside of IRA, and that have no relation to PWA characteristics that the 2011 EIS did consider ... are disclosed to an even less meaningful and less site-specific extent in its 2015 Supplement;

i. Physical impacts to inventoried 2015 PWA not Disclosed/Studied

Map 3 shows the overlap of the new southern vent shaft facility and the power line required to mine the Greens Hollow Tract in relation to the region of the USFS' inventoried White Mountain unroaded/potential wilderness area. The southern vent shaft may or may not directly enter this part of the White Mountain unroaded potential wilderness area. The new power line that would have to be constructed, however, clearly enters and crosses a portion of the White Mountain unroaded area/potential wilderness area. This boundary location is the Forest Service's from its LRMP revision effort. We know this (inadequate amount) of information from the 2011 FEIS; the 2015 Supplemental EIS is significantly less meaningful, significantly less site-specific in disclosure and, compared to the 2011 EIS - consistently fails to meet associated duties imposed by the NEPA and the APA to a meaningfully greater extent.

ii. Legal Availability Conflicts for URUD/PWA Distinct From IRA not Studied

The 2015 SEIS fails to rectify or resolve legal deficiencies raised three years ago for the EIS to which the 2015 document is to Supplement under NEPA regulations. In 2012, EIS sections 3.12 and 4.12 constitute the primary sections of the EIS that disclose impacts of leasing and associated coal mining activity to Inventoried Roadless Area characteristics, as well as consideration of impacts to "capability" for Wilderness recommendation/management. The 2011 EIS stated that it opted to not evaluate Wilderness suitability required by the (1982) 36 CFR 219.17(a)(2) for the IRAs in the project area. EIS, p. 119. It's the same in the 2015 Supplement. In both instances, we do not challenge the decision to not apply the Suitability criteria found in the 1982 NFMA regulations (nor the same in the 2012 NFMA regulations for the 2015 Supplemental EIS).

This is a decision that at its core is focused on a USFS decision whether or not to consent to BLM leasing the subsurface for coal mining; the 2015 SEIS hammers this point to which we've always been in agreement. Consideration of an area of a mineral estate for leasing triggers a <u>legal Wilderness Availability issue</u>. Once an area is leased to an active mine (and the SUFCO mine is active) it becomes legally unavailable for Wilderness consideration. A prior existing right will come into being, thereby preventing Wilderness recommendation, consideration, designation or management. This is an "invisible" legal conflict, and it can exist only with the USFS decision to consent to such mineral leasing.

This invisible legal availability conflict with the potential wilderness area values in the greens hollow area is not addressed by study of effects to Inventoried Roadless Area characteristics or capability issues, which have more to do with on the ground management than legal conflicts. This constitutes a substantial legal conflict among alternative uses of available resources. The 2011 FEIS was not adequate because it never disclosed or took a hard look at the legal availability issue for Wilderness potential, and the 2015 SEIS fails to alleviate this inadequacy. Take the White Mountain PWA; Map 2 (above) shows that the area subject to leasing works to legally bisect or cut in half this inventoried potential wilderness area. The FEIS was inadequate because it never disclosed this fact, and the SEIS fails to rectify the legally significant inadequacy. The 2015 SEIS does not take the requisite hard look at this legal

availability issue that was necessary to rectify the legal shortcoming in the original FEIS sufficient to satisfy NEPA's mandated hard look.

C. Violation of 36 CFR 294/RACR

In 2012 we argued on appeal that the 2011 FEIS failed to adequately disclose and study impacts to and failures to comply with 36 CFR 294. This inadequacy is not rectified in the 2015 SEIS. At page 119 the December 2011 FEIS stated:

"At present (January 2011), the Forest Service is under conflicting Ninth Circuit Court decisions upholding the roadless rule and a Wyoming Federal District Court's ruling that the 2001 roadless rule is invalid. These decisions create a situation where the Forest Service could be held in contempt of court for complying or not complying with the roadless rule.

The above was not, actually, correct. More important, perhaps, now in 2015 is that the construction of the power line through the Wildcat Knolls IRA will necessitate, at a minimum, authorization for temporary road construction in order for that power line to be constructed. While not necessary for this argument to prevail, we point out that the long term maintenance over at least three decades for the power line, as well as subsequent deconstruction and removal of the line and all power line towers will necessitate real or *de facto* road construction that is not temporary in nature. Assuming, *arguendo*, we were to accept the SEIS premise that this is nothing more than a reasonably foreseeable future cumulative impacts, the new power line corridor complete with new power line towers through the middle of an IRA will become a reasonably foreseeable and inextricably connected future cumulative impact (due to establishment of a private right via the new coal lease). It is a connected action, and it is a cumulative action. It involves cumulative impacts that are significant and most likely illegal due to the resultant future obligation of the government to grant or allow real and or *de facto* (temporary) road construction inside IRA. This connected action violates the RACER and 36 CFR 294.

The 2015 SEIS is functionally meaningless when it comes to disclosing or studying this issue. This is evidenced by the fact that it's never mapped or site-specifically described. If anything, the SEIS implies there's no concern whatsoever. It echoes of "Shultz" in the classic TV show "Hogan's Heroes." Security guard Schultz would always repeat "I see nothing" each time the Americans were trying to escape the German POW camp. It was funny only because it was so obvious. We bring up this bit of Americana not to diminish or belittle the issue. Rather, we point to it as an analogy; it alludes to how absurd the SEIS comes across at points when it appears to foolishly refuse to site-specifically disclose and study the very serious impacts and legal problems presented by the reasonably foreseeable and connected ("conceptual") surface facilities that we all know will be required if consent to lease is issued as described in either action alternative. The 2011 FEIS and the 2015 SEIS are both arbitrary, capricious, and inadequately supported to the extent that they dismisses any need in the first place to demonstrate compliance with the RACR and 36 CFR 294 on the grounds that not even one temporary road will need be constructed inside the Wildcat Knolls IRA. After all, the record and FEIS both show that the construction and/or maintenance for 30 years of a high power line

complete with towers that bisect IRA presents serious problems demanding NEPA's hard look. Arbitrarily, the SEIS skirts the issue to a significantly greater extent than the 2011 FEIS. The controlling definition of (temporary) road construction is at 36 CFR 294.11 (the RACR definitions). (Temporary) road construction is not defined as an action that requires supervision, money spent, or 'shovels in the dirt' in order to constitute new (or temporary) road construction. All that is requisite is an authorization to drive along a specified linear section of land for a specified period (or longer). The Wildcat Knolls area is closed to all wheeled cross country motorized traffic. As such, allowing construction of the power line complete with new power line towers necessarily requires at a minimum approval of real and/or de facto temporary road construction to access all power line towers that will need to be constructed and erected inside the Wildcat Knolls IRA. Helicoptering in all heavy equipment and new prefabricated high power line towers is not described in either action alternative. Therefore, authorizing construction of high power line towers and stringing of a new power line that bisects an IRA necessitates designation of new (temporary) road construction that conflicts with the prohibitions on doing such found at 36 CFR 294 and the RACR. It would strain credulity to conclude anything less. At the very least it is a directly connected future action with serious, and we believe illegal, ramifications. By failing to take a site-specific hard look the SEIS fails to meet duties imposed by NEPA, as well as expectations created by the RACR.

REQUEST FOR RELIEF

The USFS's Draft ROD and SEIS are fatally flawed in key regards. The proposed decision, as set forth in the ROD, cannot be adopted as it stands. For the aforementioned reasons, Objectors request that the agency withhold its consent to the Greens Hollow coal lease. It does not appear, particularly based on sage grouse impacts, that the USFS has any justification for approving the Greens Hollow coal lease. The agency could undertake additional analysis and assessment of impacts, but ultimately it appears that substantively, more procedure will not cure the flaws that plague this proposed coal lease.

Respectfully submitted April 17, 2015

Jeremy Nichols Climate and Energy Program Director WildEarth Guardians Lead Objector 1536 Wynkoop, Suite 310 Denver, CO 80202 (303) 437-7663 jnichols@wildearthguardians.org

on behalf of:

Mary O'Brien PhD. Utah Forests Project Director Grand Canyon Trust HC 64, Box 2604 Castle Valley, UT 84532 (435) 259-6205 maryobrien10@gmail.com Nathaniel Shoaff Staff Attorney Sierra Club Environmental Law Program 85 Second St., Second Floor San Francisco, CA 94105 (415) 977-5610 nathaniel.schoaff@sierraclub.org

Taylor McKinnon Public Lands Campaigner Center for Biological Diversity 1536 Wynkoop, Suite 421 Denver, CO 80202 (801) 300-2414 tmckinnon@biologicaldiversity.org

TABLE OF EXHIBITS

- 1. McGlade, C. and P. Ekins, "The geographical distribution of fossil fuels unused when limiting global warming to 2° C," *Nature*, Vol. 15 (Jan. 2015).
- Argus Media, "Coal firm Bowie proposes public offering," *Argus Media* (Feb. 9, 2015), available online at <u>http://www.argusmedia.com/pages/NewsBody.aspx?id=989911&menu=yes</u> (last accessed April 17, 2015).
- 3. "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 (last accessed April 17, 2015).
- 4. Diné Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement, No. 12-cv-01275, slip op. at 13 (D. Colo. March 2, 2015).
- 5. EIS Form 923 Fuel Receipt Data for the SUFCO Mine, 2014.
- 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 <u>http://www.cfc.umt.edu/CESU/Reports/NPS/CU/2008/08_09Nydick_MEVA_Hg</u> %20sources%20Final%20report.pdf (last accessed April 7, 2015).
- U.S. Fish and Wildlife Service, Biological Opinion for the Four Corners Power Plant and Navajo Mine Energy Project 72-73 (April 8, 2015), available online at <u>http://www.fws.gov/southwest/es/NewMexico/documents/BO/2014-</u>0064_USFWS_FINAL_BO_Four_Corners_Power_Plant_Navajo_Mine_Energy_ Project.pdf (last accessed April 17, 2015).
- 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 <u>http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_d</u> <u>evelopment/coal/pdfs/EX_B.pdf</u> (last accessed April 17, 2015).
- EPA, "Model-based analysis and tracking of airborne mercury emissions to assist in watershed planning" (Aug. 2008), available online at <u>http://www.epa.gov/owow/tmdl/pdf/final300report_10072008.pdf</u> (last accessed April 17, 2015).

- 10. Maps of Mercury Deposition from Hunter and Huntington Power Plants, prepared by WildEarth Guardians (June 6, 2012).
- Union Pacific, "Sufco Mine," website available at <u>http://www.up.com/customers/coal/mines/m-utah/sufco/index.htm</u> (last accessed Aril 17, 2015).
- 12. 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/ (last accessed April 17, 2015).
- U.S. Environmental Protection Agency ("EPA"), "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, available online at <u>http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf</u> (last accessed April 17, 2015).
- 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 <u>https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf</u> (last accessed April 17, 2015).
- 15. 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 <u>https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbo</u> <u>n_for_ria_2013_update.pdf</u> (last accessed April 17, 2015).
- 16. GAO, "Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates," GAO-14-663 (July 2014), available online at <u>http://www.gao.gov/assets/670/665016.pdf</u> (last accessed April 17, 2015).
- 17. EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011).
- 18. 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%20 EA%20October%202014%20Sale_Post%20with%20Sale%20(1).pdf (last accessed April 17, 2015).
- 19. 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 (last accessed April 17, 2015).

- 20. Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," *Nature Climate Change* (Jan. 12, 2015).
- 21. 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 (last accessed April 17, 2015).
- 22. Wisdom, M.J., C.W. Meinke, S.T. Knick, and M.A. Schroeder. 2011. Factors associated with extirpation of sage-grouse. Pp. 451-472 in S.T. Knick and J.W. Connelly (eds.). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitat. Studies in Avian Biology (vol. 38), University of California Press, Berkeley, CA.
- Holloran, M. J. 2005. Greater sage-grouse (*Centrocercus urophasianus*) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Wyoming. Laramie, Wyoming.
- Knick, S.T., S.E. Hanser, and K.L. Preston. 2013. Modeling ecological minimum requirements for distribution of greater sage-grouse leks – Implications for population connectivity across their western range, USA. Ecology and Evolution 3: 1539-1551.
- 25. Ambrose, S., "Review of Greens Hollow Sound Study by Tetra Tech (2008)" (April 16, 2015).
- 26. Blickley, J.L., and G.L. Patricelli. 2012. Potential acoustic masking of greater sage-grouse (*Centrocercus urophasianus*) display components by chronic industrial noise. Ornith. Monogr. 74: 23-35.
- 27. Blickley J.L., Word K.R., Krakauer A.H., Phillips J.L., Sells S.N., et al. 2012b. Experimental Chronic Noise Is Related to Elevated Fecal Corticosteroid Metabolites in Lekking Male Greater Sage-Grouse (*Centrocercus urophasianus*). PLoS ONE 7(11): e50462. doi:10.1371/journal.pone.0050462.
- Piquette, D., A. Keck, N. Seward, B.P. Magee, P.A. Magee, and G. Patricelli. 2014. Acoustic soundscapes in the Gunnison Basin and effects of anthropogenic noise on Gunnison sage-grouse (*Centrocercus minimus*) in the Gunnison Basin, Colorado. Final Report submitted to Colorado Parks and Wildlife, 27 pp.
- 29. Holloran, M. J. and S. H. Anderson. 2005. Spatial distribution of Greater Sagegrouse nests in relatively contiguous sagebrush habitats. Condor 107(4): 742-752.

- 30. Peck, R.D., R.J. Baxter, R.T. Larsen, and J.T. Flinders. 2012. Nest-area fidelity of greater sage-grouse in Strawberry Valley, Utah. W. N. Am. Nat. 72: 425-431.
- 31. Patricelli, G.L., J.L. Blickley, and S.L. Hooper. 2012. The impacts of noise on greater sage-grouse: A discussion of current management strategies in Wyoming with recommendations for further research and interim protections. Unpubl. Report prepared for: The Bureau of Land Management, Lander Field Office and Wyoming State Office, Cheyenne and Wyoming Game and Fish Department, 25 pp.
- Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H. 2014. Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., <u>http://dx.doi.org/10.3133/ofr20141239</u>.
- 33. Gibson, D., E. Blomberg, and J. Sedinger. 2013. Dynamics of greater sage-grouse (*Centrocercus urophasianus*) populations in response to transmission lines in central Nevada. Final Progress Report, Dept. of Natural Resources and Environmental Sciences, Univ. Nevada-Reno, 68 pp.
- Dinkins, J. B., 2013. Common raven density and greater sage-grouse nesting success in southern Wyoming: Potential conservation and management implications. PhD Dissertation, Utah State Univ. <u>http://digitalcommons.usu.edu/etd/1700</u>.
- 35. Braun, C.E., O.O. Oedekoven, and C.L. Aldridge. 2002. Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse. In Transactions North American Wildlife and Natural Resources Conference 67:337-349.
- Prather, P.R. 2010. Factors affecting Gunnison sage-grouse (*Centrocercus minimus*) conservation in San Juan County, Utah. PhD Dissertation, Utah State Univ., 134 pp.