



October 2, 2017

Via FEDERAL EXPRESS OVERNIGHT MAIL

Kent Hoffman
Deputy State Director, Lands & Minerals
Utah State Office
U.S. Department of the Interior
Bureau of Land Management
440 West 200 South, Suite 500
Salt Lake City, UT 84101

Re: Protest of BLM December 12th, 2017 Utah Vernal and Price Field Offices’ Competitive Oil and Gas Lease Sale, Environmental Assessments DOI-BLM-UT-G010-2017-0028-EA and DOI-BLM-UT-G020-2017-0030-EA.

Dear Mr. Hoffman:

The Center for Biological Diversity (the “Center”), Elders Rising, the Green River Action Network (GRAN), Living Rivers, the Sierra Club, and Utah Physicians for a Healthy Environment (UPHE), hereby formally protest the Bureau of Land Management’s (“BLM”) planned Green River District December 12th, 2017 oil and gas lease sale, and the Environmental Assessments (“EAs”)(DOI-BLM-UT-G010-2017-0028-EA and DOI-BLM-UT-G020-2017-0030-EA) evaluating the sale of 75 parcels encompassing 94,000 acres of federal lands in the Vernal and Price Field Offices in Duchesne, Uintah, and Emery counties, pursuant to 40 CFR §3120.1-3.

We formally protest the inclusion of each of the 75 parcels of federal minerals for oil and gas leasing, covering 94,000 acres in the State of Utah. Parcels included in this protest are listed as follows¹:

Vernal Field Office

UTU9 2656	UTU9 2657	UTU9 2658	UTU9 2659	UTU9 2660	UTU9 2661	UTU9 2662	UTU9 2663	UTU9 2664	UTU9 2665
(UT12 17 –									

¹ For clarity and consistency with the nomenclature used by BLM in the Environmental Assessments, proposed lease parcels are referred to in the body of this Protest by the UTU1217 parcel identifiers used in the EAs. The tables correlate those UTU1217 parcel identifiers and the UTU9 parcel identifiers used in the Lease Sale Notice.

022)	023)	024)	025)	027)	028)	029)	030)	031A)	031B)
UTU9 2666 (UT12 17 – 032)	UTU9 2667 (UT12 17 – 033)	UTU9 2668 (UT12 17 – 034)	UTU9 2669 (UT12 17 – 035)	UTU9 2670 (UT12 17 – 036)	UTU9 2671 (UT12 17 – 037)	UTU9 2672 (UT12 17 – 038)	UTU9 2673 (UT12 17 – 039)	UTU9 2674 (UT12 17 – 040)	UTU9 2675 (UT12 17 – 041)
UTU9 2676 (UT12 17 – 042)	UTU9 2677 (UT12 17 – 044)	UTU9 2678 (UT12 17 – 045)	UTU9 2679 (UT12 17 – 046)	UTU9 2680 (UT12 17 – 047)	UTU9 2681 (UT12 17 – 048)	UTU9 2682 (UT12 17 – 052)	UTU9 2683 (UT12 17 – 053)	UTU9 2684 (UT12 17 – 054)	UTU9 2685 (UT12 17 – 055)
UTU9 2686 (UT12 17 – 056)	UTU9 2687 (UT12 17 – 057)	UTU9 2688 (UT12 17 – 058)	UTU9 2689 (UT12 17 – 059)	UTU9 2690 (UT12 17 – 060)	UTU9 2691 (UT12 17 – 061)	UTU9 2692 (UT12 17 – 062)	UTU9 2693 (UT12 17 – 063)	UTU9 2694 (UT12 17 – 064)	UTU9 2695 (UT12 17 – 065)
UTU9 2696 (UT12 17 – 066)	UTU9 2697 (UT12 17 – 067)	UTU9 2698 (UT12 17 – 068)	UTU9 2699 (UT12 17 – 071)	UTU9 2700 (UT12 17 – 072)	UTU9 2701 (UT12 17 – 074)	UTU9 2702 (UT12 17 – 075)	UTU9 2703 (UT12 17 – 076)	UTU9 2704 (UT12 17 – 077)	UTU9 2705 (UT12 17 – 078)
UTU9 2706 (UT12 17 – 079)	UTU9 2707 (UT12 17 – 080)	UTU9 2708 (UT12 17 – 081)	UTU9 2709 (UT12 17 – 082)	UTU9 2710 (UT12 17 – 083)	UTU9 2711 (UT12 17 – 084)	UTU9 2712 (UT12 17 – 085)	UTU9 2713 (UT12 17 – 086)	UTU9 2714 (UT12 17 – 087)	UTU9 2730 (UT12 17 – 103)

Price Field Office

UTU92715 (UT1217 – 088)	UTU92716 (UT1217 – 089)	UTU92717 (UT1217 – 090)	UTU92718 (UT1217 – 091)	UTU92719 (UT1217 – 092)
UTU92720 (UT1217 – 093)	UTU92721 (UT1217 – 094)	UTU92722 (UT1217 – 095)	UTU92723 (UT1217 – 096)	UTU92724 (UT1217 – 097)
UTU92725 (UT1217 – 098)	UTU92726 (UT1217 – 099)	UTU92727 (UT1217 – 100)	UTU92728 (UT1217 – 101)	UTU92729 (UT1217 – 102)

PROTEST

I. Protesting Parties: Contact Information and Interests:

This Protest is filed on behalf of the Center for Biological Diversity, Elders Rising, the Green River Action Network, Living Rivers, the Sierra Club, and Utah Physicians for a Healthy Environment by:

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The Center for Biological Diversity (“Center”) is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and

environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over one million members and activists, including those living in Utah who have visited these public lands in the Vernal and Price Field Offices for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future, and are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

Elders Rising is a group of elders working together on climate to assure a livable world for the future generations of all species, and calling on an older generation to defend a livable future for children, grandchildren, and future generations across the board. Public land is the foundation of a healthy commons. We believe it is our right and duty to end the fossil fuel extraction on public lands.

Green River Action Network (or GRAN) is a project of Living Rivers, a nonprofit organization based in Moab, Utah that promotes river restoration through mobilization. GRAN seeks to empower grassroots organizers across the Colorado Plateau to build resistance networks of mutual aid and support to fight the extractive economy threatening our homes and watersheds. While focused on the integrity of the Green River and its riparian corridor, GRAN recognizes the threats to the Upper and Lower Basin of the Colorado river drainage as connected in a larger systemic fight for ecosystem integrity, climate mitigation and a just economic transition for the greater Colorado Plateau region. We believe we are stronger when we fight, dream and build together.

Living Rivers is a nonprofit organization based in Moab, Utah that promotes river restoration through mobilization. By articulating conservation and alternative management strategies to the public, Living Rivers seeks to revive the natural habitat and spirit of rivers by undoing the extensive damage done by dams, and water-intensive energy development on the Colorado Plateau. Living Rivers has approximately 1,200 members in Utah, Colorado and other states. Living Rivers' members and staff use the public lands in Utah and Colorado, including the lands and waters that would be affected by actions under the lease sale, for quiet recreation (including hiking and camping), scientific research, aesthetic pursuits, and spiritual renewal.

The Sierra Club is a national nonprofit organization of approximately 842,270 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; 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 Utah Chapter of the Sierra Club has approximately 5,600 members, including members who live and recreate in the Green River District. Sierra Club members use the public lands in Utah, including the lands and waters that would be affected by actions under the lease sale, for quiet recreation, aesthetic pursuits, and spiritual renewal. These areas would be threatened by increased oil and gas development that could result from the proposed lease sale.

Utah Physicians for a Healthy Environment (UPHE) is dedicated to protecting the health and well-being of the citizens of Utah by promoting science-based health education and

interventions that result in progressive and measurable improvements to the environment. UPHE's membership consists of approximately 3,500 members, including 400 doctors from across the state of Utah. For 10 years, UPHE has educated the public on the health risks of air pollution and provided valuable information on how to address and protect the public from exposure. UPHE has deep concerns associated with the unusually high infant mortality rates in the oil and gas leasing areas of the Uintah Basin that could worsen by increasing oil and gas development in the region. Increased ozone and Volatile Organic Chemicals (VOCs) will particularly affect vulnerable populations such as children and pregnant women. UPHE has a strong interest in the potential negative health impacts from this oil and gas lease sale on their membership and constituency.

II. Statement of Reasons as to Why the Proposed Lease Sale Is Unlawful:

BLM's proposed decision to lease the parcels listed above is procedurally and substantively flawed for the reasons discussed below and in the Center for Biological Diversity, et al. comments on the Environmental Assessments (EAs) for the proposed lease sale, incorporated here by reference.²

In addition to the specific unlawful elements identified in our comment letter, various site-specific impacts of the proposed leasing were not adequately addressed in BLM's response to comments, or in the body of the final lease EAs. Failure to address these significant impacts in the final EAs provides the basis for this administrative protest. The statement of reasons for this protest are as follows: 1) BLM failed to adequately analyze air quality impacts as required by the National Environmental Policy Act (NEPA) and failed to demonstrate conformity with the Clean Air Act (CAA), 2) BLM failed to adequately analyze and assign significance to the leasing decision's impact on climate change and 3) BLM failed to adequately address impacts to endangered and sensitive species. BLM must prepare an EIS, or, at minimum, address these effects in revised EAs.

A. BLM failed to adequately analyze air quality impacts from this leasing decision, in violation of NEPA and the Clean Air Act – All lease parcels.

As discussed at length in our comments on the draft EAs, the Uintah Basin in northeastern Utah has experienced hazardous ozone levels exceeding federal standards (National Ambient Air Quality Standards or "NAAQS") during multiple recent winters.³ Winter maximum 8-hour daily average ozone concentrations have exceeded federal standards at all stations in the basin with exceedances lasting up to 39 days at individual stations, and topping summertime

² The Center for Biological Diversity et al., Comments on the Vernal and Price Field Office's Lease Sale: December 12, 2017 Lease Parcels (submitted July 24, 2017).

³ Helmig, Detlev et al., Highly Elevated Atmospheric Levels of Volatile Organic Compounds in the Uintah Basin, Utah, 48 Environmental Science & Technology 4707 (2014) ("Helmig 2014"); Oltsmans, Samuel et al., Anatomy of Wintertime Ozone Associated with Oil and Natural Gas Extraction Activity in Wyoming and Utah, 2 Science of the Anthropocene doi: 10.12952/journal.elementa.000024 (2014) ("Oltsmans 2014"); Schnell, Russell C. et al., Quantifying Wintertime Boundary Layer Ozone Production from Frequent Profile Measurements in the Uintah Basin, UT, Oil and Gas Region, 121 J. Geophysical Research: Atmospheres 11038 (2016) ("Schnell 2016").

ozone levels reported for the Los Angeles region.⁴ Numerous studies show that the majority of ozone precursor emissions come from oil and gas operations in the region⁵ with prodigious emissions of VOCs and methane coming from equipment both on and off the well pad including condensate tanks, compressors, dehydrators, pneumatic devices, pumps, and tank flashings.⁶ One recent study of ozone pollution in the Uintah Basin found that oil and gas operations were responsible for 98 to 99 percent of VOCs and 57 to 61 percent of NO_x emitted from sources within the Basin considered in the study's inventory.⁷ Another study concluded that the "exceedingly high VOC concentrations" from fracking and drilling operations in the Uintah Basin lead to extreme wintertime ozone events in excess of federal air quality standards: "It is the exceedingly high VOC concentrations, and the radicals produced during their oxidation, in the oil and gas region that leads to highly efficient O₃ production."⁸ The study noted that the consequences for public health are "as yet unrecognized."

In BLM's response to comments in the final Vernal EA, the agency continues to ignore the state of Utah's actual measurements of ozone levels in Duchesne and Uintah Counties and the state's recommendation to designate both as nonattainment for ozone under the Clean Air Act.⁹ The EPA is scheduled to take action on the State's recommendation this coming October, officially designating the Uintah Basin as nonattainment. On August 2, 2017, the EPA announced its withdrawal of a one-year extension of the states' obligations to promulgate initial area designations in compliance with the 2015 National Ambient Air Quality Standards for ozone.¹⁰ Due to this announcement, the EPA will now take action on the state of Utah's recommendation to designate Uintah and Duchesne Counties as in nonattainment with the 2015 ozone standard. EPA will very likely approve this recommendation. This determination will then trigger the BLM's obligation to undertake a "conformity" analysis before approving any new oil and gas leasing in Uintah and Duchesne Counties as required by the Clean Air Act. *See* 42 U.S.C. § 7506(c)(1). BLM must fully comply with these obligations before approving the December 2017 lease sale because the EPA's ultimate approval of nonattainment is a reasonably foreseeable action under the National Environmental Policy Act.

The Clean Air Act states that, "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity" that does not conform to an approved state air quality

⁴ Helmig 2014; Oltsmans 2014.

⁵ Oltsmans 2014; Lyman, Seth & Trang Tran, Inversion Structure and Winter Ozone Distribution in the Uintah Basin, Utah, U.S.A., 123 Atmospheric Environment 156 (2015); Schnell 2016.

⁶ Warneke, Carsten et al., Volatile Organic Compound Emissions from the Oil and Natural Gas Industry in the Uintah Basin, Utah: Oil and Gas Well Pad Emissions Compared to Ambient Air Composition, 14 Atmospheric Chemistry and Physics 10977 (2014).

⁷ Lyman 2013; Gilman 2013.

⁸ Edwards, Peter M. et al., High Winter Ozone Pollution from Carbonyl Photolysis in an Oil and Gas Basin, 514 Nature 351 (2014).

⁹ Vernal EA at 15.

¹⁰ See USEPA, Withdrawal of Extension Deadline for Promulgating Designations for the 2015 Ozone National Ambient Air Quality Standards, EPA-HQ-OAR-2017-0223 (82 Fed. Reg. 37319), available at <https://www.gpo.gov/fdsys/pkg/FR-2017-08-10/pdf/2017-16901.pdf>; see also, USEPA News Releases: EPA Continues to Work With States on 2015 Ozone Designations (Aug. 2, 2017), available at <https://www.epa.gov/newsreleases/epa-continues-work-states-2015-ozone-designations>.

implementation plan. 42 U.S.C. § 7506(c)(1). “The assurance of conformity . . . shall be an affirmative responsibility of the head of such . . . agency.” To ensure conformity, agency actions must not “cause or contribute to any new violation of any [air quality] standard” or “increase the frequency or severity of any existing violation of any standard in any area.” *Id.* § 7506(c)(1)(B). This statute is very broadly applicable.

BLM must make a general conformity determination for any activity authorized in an ozone nonattainment area that has direct and indirect emissions of VOCs or NOx that exceed 100 tons/year. *See* 40 CFR § 93.153(b)(1). Direct emissions are defined as those emissions that are caused or initiated by the Federal action and occur at the same time and place as the action. Indirect emissions are defined as those emissions that are caused by the Federal action, but may occur later in time or distance, and are reasonably foreseeable, and which the Federal agency can practically control and will maintain control over. *See* 40 C.F.R. § 93.152. To demonstrate conformity, the agency must follow the procedures at 40 CFR §§ 93.158 and 93.159. *See* 40 CFR §§ 93.150(b). BLM implemented internal regulations in 2012 establishing a 10-step process for conducting a general conformity determination in compliance with the Clean Air Act section 176(c).¹¹

BLM recognizes that the future development of leases offered as a result of the proposed action, and the forthcoming ozone non-attainment designation for Uintah and Duchesne counties “will impact the regulatory requirements the BLM must address as well as state requirements to bring the area back into attainment. These will be important considerations for future NEPA analysis and cannot be addressed at this time since neither the designation nor classification of the Basin has been made.”¹² The agency then asserts that it will not analyze whether the proposed action is in conformity with the state SIP, instead promising to do so in subsequent analyses.¹³

The basis for kicking the can down the road appears to be that the BLM strongly believes leasing “would not result in any direct emissions of air pollutants.”¹⁴ As BLM must know, however, direct emissions alone are not the basis for a requirement to perform a conformity determination. A general conformity determination is required if indirect emissions would exceed 100 tons per year of target pollutants. 40 CFR § 93.153(b)(1). Indirect emissions are defined as those:

- (1) That are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action;
- (2) That are reasonably foreseeable;
- (3) That the agency can practically control; and

¹¹ United States Department of the Interior, Bureau of Land Management, Instruction Memorandum No. 2013-025, Guidance for Conducting Air Quality General Conformity Determinations (December 4, 2012) *found at* <https://www.blm.gov/policy/im-2013-025-0>.

¹² Vernal EA at 320 (“The act of leasing will not result in any emissions, therefore a conformity analysis/determination is not applicable at the leasing stage and only required when development is proposed and emissions can be accurately quantified”).

¹³ *Id.*

¹⁴ *Id.* See also Vernal EA at 322-324. See also Vernal FONSI at 3.

(4) For which the agency has continuing program responsibility.

40 C.F.R. § 93.152. Leasing is clearly a cause of future project emissions—if there are no leases, there are no new emissions. Those emissions are caused and initiated by the proposed action. They originate in the same proposed nonattainment area, but simply at a later time. They are reasonably foreseeable as BLM acknowledges in the EA. BLM can practically control those emissions in a number of ways including, but not limited to, by choosing not to lease certain areas or by including stipulations that require limits on emissions or emitting practices. The agency has continuing program responsibility for those emissions, both through subsequent permit actions and ongoing inspection and enforcement oversight.

All evidence presented in the EA supports the fact that the proposed leasing is a federal action that will produce—whether directly or indirectly—NO_x and/or VOC emissions that are likely to exceed de minimis thresholds (see NO_x and VOC emissions estimate calculations below at fn 16 and 17). To this end, the agency must provide an accurate emissions inventory to the public and the decision-maker at the very least, and anticipate a conformity determination requirement. The proposed leasing cannot proceed until this occurs.

The requirement to perform a conformity determination at the time of leasing is not only supported by the plain language of the Clean Air Act, but is in perfect synch with the spirit of that law. Congress intended a very broad application of the conformity provision to prevent the federal government from undermining states when it came to attainment of air quality standards. The law very clearly states that no agency, including the BLM, “shall engage in [or] support in any way . . . any activity” that does not conform to a SIP. 42 U.S.C. § 7506(c)(1). Further, meeting this requirement requires an “assurance of conformity” which is “the affirmative responsibility” of the BLM. *Id.* Leasing public minerals for development is surely engaging in an activity or supporting an activity that will lead to an increase in emissions of ozone precursors.

Further, it seems clear that it was not Congress’ intent that BLM could forego analysis of ozone emissions in a nonattainment area until the last possible moment, and then carve up those emissions inventories by reducing analyses to a well-by-well basis. The end result of such a process could be that no one well ever exceeded de minimis levels, but the tens of thousands in the nonattainment area, with thousands more being approved every year, could make attainment of the ozone standard by the State of Utah simply impossible.

The very basis of this lease sale is that potential buyers have gone to the trouble of assessing these very parcels for sale and have nominated them with that intent. There is no incentive to do so unless they intend to develop these parcels. Further, BLM has produced a document whose very name underlies any claim of unforeseeability.¹⁵ Not just well numbers, but specific production numbers are also found to be reasonably foreseeable. BLM attempts to quantify emissions per well based on the Reasonably Foreseeable Development Scenario

¹⁵ Department of the Interior, Bureau of Land Management, Vernal Field Office Final Resource Management Plan and Final Environmental Impact Statement, Reasonable Foreseeable Development Scenario (RFDS), Appendix A (2008) found at https://eplanning.blm.gov/epl-front-office/projects/lup/68145/86644/103816/Appendix_A_Oil_& Gas_Dev2.pdf.

(RFDS) in the Vernal EA.¹⁶ Even the BLM has been able to utilize this data to project reasonably foreseeable future VOC and NO_x emissions through the RFDS report.

However, by placing unsupported air emissions values in a table without comparing these values to the current air quality landscape and federally-enforceable air quality standards, BLM cuts the NEPA analysis off prematurely. BLM assigns no significance to these values and provides no real mitigation measures as discussed above. For example, the Vernal EA estimates that 16.4 tons/year of NO_x and 9.0 tons/year of VOCs could be emitted per well based on the RFDS for this lease sale.¹⁷ The RFDS also estimates that 135 wells could be developed on the lease parcels.¹⁸ Therefore, an additional 2,214 tons/yr of NO_x and 1,215 tons/yr of VOCs (NO_x plus VOCs= ozone precursors) will be emitted into the regional airshed because of this lease sale.¹⁹ This value is well above the de minimis threshold (100 tons/year) that triggers a conformity analysis in an ozone non-attainment area. *See* 40 CFR § 93.153(b)(1). Any additional amount of ozone emitted in a region struggling to meet basic air quality standards meant to protect public health, must be classified as significant. In fact, the values are significant enough to trigger a general conformity analysis which is meant to provide a clear and detailed justification that the federal action will not cause or contribute to violations of the national standards. Yet BLM conducts no such analysis and fails to provide required assurances that the additional ozone emissions will not cause or contribute to violations of the NAAQS. Because the EA lacks a detailed statement of the environmental impacts of these air emissions, and the foreseeable trend leading to violations of the NAAQS that are documented in the EA, BLM has not “fully consider[ed] and balanc[ed] the environmental factors” relevant to its leasing decision. *Defenders of Wildlife v. Salazar*, 698 F. Supp. 2d 141, 149 (D.D.C. 2010).

The purpose of an environmental assessment is for BLM to look at the impacts in total, and to take a hard look at all “reasonably foreseeable” impacts now, before leasing the land. NEPA regulations and case law clearly establish that uncertainty about the precise extent and nature of environmental impacts does not relieve an agency of the obligation to disclose and analyze those impacts utilizing the best information available. *See* 40 C.F.R. § 1502.22(a),(b). Additionally, BLM’s veiled promises about conducting the requisite site-specific air quality analysis and general conformity determination at the Application to Drill stage, the agency is avoiding a key pillar of NEPA review, which is to assess impacts and assign significance at the earliest stage possible. BLM is required to perform and disclose an analysis of environmental impacts *before* the issuance of an oil and gas lease. *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 716 (10th Cir. 2009). In the Tenth Circuit, “assessment of all ‘reasonably foreseeable’ impacts must occur at the earliest practicable point, and must take place before an irretrievable commitment of resources’ is made.” *Id.* at 718.

The issuance of a lease is an “irretrievable commitment of resources.” *See id.*; *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983); *Pennaco Energy, Inc. v. U.S. Dep’t of Interior*, 377 F.3d 1147, 1160 (10th Cir. 2004). Under BLM’s interpretation of its regulations, absent a no surface occupancy stipulation, a lessee cannot be prohibited entirely “from surface

¹⁶ Vernal EA at 47, citing to the Vernal Field Office Final Resource Management Plan RFDS.

¹⁷ *Id.* at 47.

¹⁸ *Id.*

¹⁹ *Id.*

use of the leased parcel once its lease is final.” *See Richardson*, 565 F.3d at 718 (citing 43 C.F.R. § 3101.1-2 [“A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease . . . [and other] reasonable measures”]); *see also* BLM Handbook H-1624-1 (“By law, these impacts [from oil and gas development] must be analyzed before the agency makes an irreversible commitment. In the fluid minerals program, this commitment occurs at the point of lease issuance.”).

Instead of disclosing reasonably foreseeable impacts, however, BLM improperly tiers to the EISs for the respective governing RMPs, in violation of NEPA. The RMP-EISs lack any analysis of the impacts of oil and gas development in the specific local areas at issue, and BLM unlawfully postpones disclosure of site-specific impacts when such analysis is possible now. The RMPs also contain incomplete or inadequate analysis of air quality impacts and public health risks of new leasing. Finally, new information arising since the RMPs’ adoption concerning significant air quality, public health and cumulative effects of oil and gas drilling and operations renders the RMPs outdated and unreliable.

For example, two recent nationwide health studies, not cited in our comments, reported significant adverse health impacts from exposure to ozone and fine particulate matter, including increased risk of stillbirth for pregnant women and increased risk of death in older Americans. BLM must consider this new information in assessing air quality impacts from this leasing decision, in conjunction with past, present and reasonably foreseeable federal actions. *See* 40 C.F.R. § 1508.27.

A nationwide study of stillbirth risk among 223,375 births during 2002-2008 linked chronic and acute exposure to ground level ozone during pregnancy to an increased risk of stillbirth.²⁰ Ozone exposure in the week prior to delivery was associated with a 13–22% increased stillbirth risk, while chronic exposure over the course of pregnancy increased risk by nearly 40%. These findings suggest that 200 stillbirths per 100,000 births each year might be attributable to chronic ozone exposure in the U.S., which translates to approximately 8,000 stillbirths per year in the U.S. and potentially 100 stillbirths per year in Utah associated with ozone exposure.²¹ The risk in some parts of Utah could be even greater in areas with high ozone levels.

A study of long-term exposure to ozone and fine particulate matter in a cohort of more than 60 million U.S. Medicare beneficiaries between 2000 and 2012 reported “significant evidence of adverse effects related to exposure to PM2.5 and ozone at concentrations below

²⁰ Mendola, P. et al. Chronic and Acute Ozone Exposure in the Week Prior to Delivery is Associated with the Risk of Stillbirth, 14 *Int. J. Environmental Research and Public Health* 731 (2017).

²¹ In 2015, there were 50,776 live births to Utah residents, according to Utah’s Public Health Indicator Based Information System, which when multiplied by the study stillborn rate of 0.002 stillbirths/total births, equals 101 potential stillborn births in Utah per year. (Utah Department of Health, Public Health Indicator Based Information System (IBIS), Complete Health Indicator Report of Birth Rates, https://ibis.health.utah.gov/indicator/complete_profile/BrthRat.html (accessed 9/28/2017))

current national standards.”²² Specifically, there was an important effect of ozone and PM_{2.5} on mortality, even for pollution exposures below National Ambient Air Quality Standards, which was strongest among self-identified racial minorities and people with low income. The effect was at least as great in individuals living in a rural environment as in those in cities. This study suggests that simply meeting current EPA standards will still result in a significant number of older individuals losing their lives due to ozone and particulate matter pollution in Utah.

Finally, BLM’s omission of EPA’s forthcoming approval of the 2015 ozone non-attainment designation is in violation of NEPA’s requirement to analyze the cumulative impacts from other agencies’ past actions and reasonably foreseeable future actions. The effects analysis must analyze not only the direct impacts of a proposed action, but also the indirect and cumulative impacts. 40 C.F.R. §§ 1508.7, 1508.8, 1508.9. The failure to appropriately analyze and assess the impacts of reasonably foreseeable development of the proposed leases to air quality, and specifically ground level ozone concentrations, also means that approval of the proposed leasing would fail to protect public health and welfare from any actual or potential adverse effects notwithstanding attainment and maintenance of all NAAQS. The omission of a cumulative impacts analysis also implicates future oil and gas development triggered by leasing the parcels in the Price Field Office. Although Emery County is not located in the Uintah Basin ozone non-attainment designation area, impacts from oil and gas development on those lease parcels must be analyzed in conjunction with past, present and reasonably foreseeable federal actions that could impact whether neighboring counties in the Uintah Basin meet the NAAQS. The final EAs for this lease sale failed to fully analyze these impacts, violating clear NEPA requirements.

B. BLM failed to adequately analyze and assign significance to climate change impacts from this leasing decision, in violation of NEPA – All lease parcels.

The EAs’ analyses of the direct and indirect greenhouse gas emissions (GHGs) that would result from this lease sale are still inadequate as it fails to adequately acknowledge and report direct, indirect, and cumulative greenhouse gas emissions resulting from this project, and fails to adequately disclose the impacts from these emissions.

In the section titled “Direct and Indirect Greenhouse Gas Emissions,” the EA provides an estimate of carbon dioxide, methane, and nitrous oxide emissions from well development and production activities, at 2,284 tons per year (tpy) CO₂e for a single oil well, and 2,415 tons per year CO₂e for a single gas well. The EA states that these estimates come from Table 4.2.1.4.1-1 in the Greater Monument Butte FEIS. However, it unclear how these estimates are derived from Table 4.2.1.4.1-1. Furthermore, the EA continues to provide only *annual* greenhouse gas estimates for development and production (i.e. 308,340 tons per year CO₂e for oil wells and 326,025 tons per year CO₂e for gas wells) rather than the cumulative total greenhouse gas emissions from development and production activities that would be produced over the lifetime of the wells, which is needed to assess the full impacts of these emissions.

²² Di, Q. et al. Air Pollution and Mortality in the Medicare Population. *New England Journal of Medicine* 376:2513–2522 (2017).

As stated by the EA, fugitive methane emissions that escape from wells, oil storage, and processing equipment are a “major source of global CH₄ emissions.”²³ However, the EA still fails to quantify the fugitive CH₄ emissions that would come from the wells.

The EA still fails to report the downstream emissions from the end-use combustion of oil and gas produced by the wells. The EA provides average cumulative production estimates over the lifetime of wells in the region (24,120 barrels of oil, and 421,302 MCF gas over the life of a well) and provides emissions factors, but fails to report the total downstream emissions that would result from the 135 wells projected by the RFD scenario. Based on the EA’s values, downstream emissions from 135 projected wells would equal ~ 4.5 million metric tons of CO₂ (e.g. 24,120 bbl oil per well * 0.43 metric tons CO₂/bbl *135 wells + 421,302 MCF gas * 0.054717 metric tons CO₂/MCF*135 wells). Furthermore, the EA must provide estimates of the methane and N₂O emissions that would be produced from the combustion of oil and gas.

Finally, the EA continues to state that it is not possible to assign a “significance” value or impact to the GHG emissions estimates and asserts that “the United States does not have a carbon budget.”²⁴ However, as detailed in our comment letter on the Draft EA, as a signatory to the Paris Agreement, the United States has committed to keeping global average temperature rise to “well below 2°C” to avoid the worst dangers of climate change. Scientific studies have estimated the U.S. portion of the global carbon budget for staying “well below 2°C,” which is rapidly been exhausted. The more than 4.5 million metric tons of CO₂ that would result from the lease sale comprise a measurable ~0.012 percent of the remaining U.S. carbon budget for staying well below 2°C, which is clearly significant in the scope of national, state, and local level commitments to implementing rapid GHG emissions reductions. At a time when the U.S. must rapidly ratchet down GHG emissions to avoid the worst dangers of climate change, the BLM should not be committing to new fossil fuel development and infrastructure on our public lands that locks in carbon intensive oil production for years into the future.

As NEPA requires, an agency must analyze the impacts of “similar” and “cumulative” actions in the same NEPA document in order to adequately disclose impacts in an EIS or provide sufficient justification for a FONSI in an EA. *See* 40 C.F.R. §§ 1508.25(a)(2) and (3). Here, the BLM failed to take into account the greenhouse gas emissions resulting from other proposed oil and gas leasing in Utah and other neighboring states, as well as related oil and gas development, and to analyze the impacts of these actions in terms of their direct, indirect, and cumulative greenhouse gas emissions.

The EA also fails to conduct a cumulative impacts analysis for greenhouse gas emissions and associated climate change impacts. The EA states that “[s]ince climate change and global warming are global phenomena, for purposes of this NEPA analysis, the analysis presented above about the direct and indirect effects of GHG emissions from the Proposed Action is also an analysis of the cumulative effects of the Proposed Action. The BLM has determined that this analysis “adequately addresses the cumulative impacts for climate change from the Proposed

²³ Vernal EA at 52.

²⁴ Vernal EA at 327.

Action, and therefore a separate cumulative effects analysis for GHG emissions is not needed.”²⁵ However, BLM’s failure to appropriately analyze and assess reasonably foreseeable greenhouse gas emissions from cumulative and similar leasing actions, and failure to demonstrate that the climate impacts will not be significant is a clear violation of NEPA.

C. BLM failed to address impacts to endangered and sensitive species in the Final EAs, in violation of NEPA and the Endangered Species Act.

1. ESA-Listed Species (Colorado River Endangered Fish, Black-footed Ferret, Western Yellow- Billed Cuckoo, Mexican Spotted Owl)

Congress enacted the ESA to provide “a program for the conservation of . . . endangered species and threatened species.” 16 U.S.C. § 1531(b). Section 2(c) of the ESA establishes that it is “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.” 16 U.S.C. § 1531(c)(1). The ESA defines “conservation” to mean “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary.” 16 U.S.C. § 1532(3). Section 7(a)(1) of the ESA explicitly directs that all federal agencies “utilize their authorities in furtherance of the [aforesaid] purposes” of the ESA. 16 U.S.C. § 1536(a)(1).

Section 7 of the ESA requires BLM, in consultation with FWS, to insure that any action authorized, funded, or carried out by the agency is not likely to (1) jeopardize the continued existence of any threatened or endangered species, or (2) result in the destruction or adverse modification of the critical habitat of such species. 16 U.S.C. § 1536(a)(2). For each proposed federal action, BLM request from FWS whether any listed or proposed species may be present in the area of the agency action. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12. If listed or proposed species may be present in such area, BLM must prepare a “biological assessment” to determine whether the listed species may be affected by the proposed action. Id.

If BLM determines that its proposed action may affect any listed species or critical habitat, the agency must engage in formal consultation with FWS. 50 C.F.R. § 402.14. To complete formal consultation, FWS must provide BLM with a “biological opinion” explaining how the proposed action will affect the listed species or habitat. 16 U.S.C. § 1536(b); 50 C.F.R. § 402.14. If FWS concludes that the proposed action will jeopardize the continued existence of a listed species, or result in the destruction or adverse modification of critical habitat, the biological opinion must outline “reasonable and prudent alternatives.” 16 U.S.C. § 1536(b)(3)(A).

BLM’s oil and gas leasing proposal for these parcels in the Vernal and Price Field Offices is an agency action under the ESA. Action is broadly defined under the ESA to include all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies, including the granting of leases, and actions that will directly or indirectly

²⁵ Vernal EA at 75.

cause modifications to the land, water, or air. 50 C.F.R. § 402.02. BLM, however, failed request from FWS whether any listed or proposed species may be present in the action area. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12.

Because there are listed species in the action area, the ESA requires preparation of a biological assessment. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12. BLM's Final EA acknowledges the necessity of conference and consultation respectively for the black-footed ferret and yellow-billed cuckoo: "the BLM is conferencing on penstemon and consulting on yellow-billed cuckoo with the USFWS for this lease sale." Final Vernal EA at 88. For listed species other than the black-footed ferret and yellow-billed cuckoo, the BLM appears to contend that impacts are covered by the 2004 State-wide programmatic Biological Opinion for oil and gas leasing, and the Biological Opinion accompanying the 2008 Vernal and Price RMP revisions. BLM states that "The BLM provided the USFWS with a notice that requested agreement from the USFWS that the Proposed Action (leasing): 1) does not exceed the impacts analyzed in the PRMP and BA/BO; and 2) would not exceed the effects determination in the BO (LAA) and our effects determination for this project (NLAA)." Final Vernal EA at 83. No indication is given whether USFWS has concurred with these assertions. As discussed in detail below, the 2004 Programmatic Biological Opinion and 2008 Vernal RMP Biological Opinion do not contemplate or allow BLM to forego consultation at the lease sale stage.

The EA reveals the presence of numerous threatened, endangered, and sensitive species present and their critical habitat within the areas proposed for leasing, but fails to provide any meaningful information regarding potential effects. BLM must not only evaluate the indirect and cumulative effects on special status species under NEPA, it must also (a) consult (and/or confer in the case of black-footed ferrets) with the Fish and Wildlife Service under Section 7 regarding the effects of oil and gas development and water use on listed species and critical habitat, and (b) evaluate the effects on sensitive species under its own sensitive species policy.

The Fish and Wildlife Service's 2008 Biological Opinion for the BLM Vernal Field Office's Resource Management plan considers at a field office-wide level the general impacts of oil and gas leasing on listed species within the planning area.²⁶ It explicitly conditions its findings of no jeopardy, however, on the requirement that "[a]ll site-specific projects designed under the proposed BLM Resource Management Plan would be subject to consultation requirements under Section 7 of the Endangered Species Act."²⁷

Although Protestors raised the necessity of ESA consultation in comments on the draft EA, BLM's response to comments is to defer analysis of impacts to the APD stage: "Leasing would not, by itself, authorize any water usage, which could contribute to a depletion from the Green River Basin. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred." Final Vernal EA at 327, Response to CBD Comments #16.

²⁶ U.S. Fish and Wildlife Service, Biological Opinion for the Vernal BLM Resource Management Plan 12-13 (2008) ("Vernal RMP BiOp").

²⁷ Vernal RMP BiOp 41 (black-footed ferret); *see also* Vernal RMP BiOp at 58 (Ute ladies'-tresses), 68 (Uinta basin hookless cactus), 75 (clay reed-mustard), 84 (shrubby reed-mustard), 115 (bonytail, Colorado pikeminnow, humpback chub, and razorback sucker).

This piecemeal approach to analysis and consultation is foreclosed by the Ninth Circuit’s decision in *Conner v. Burford*, 848 F.2d 1441, 1454-57 (9th Cir. 2012), where the court found that it was improper to exclude the potential effects of future lessee activity when reviewing the leasing phase for oil and gas permits on public lands. Moreover, BLM cannot rely on “Incremental Step Consultation” under BLM Manual 6840 to circumvent this requirement. That policy allows BLM to conduct consultation in “incremental steps,” but only if BLM undertakes an initial formal consultation on the entire action, and the resulting biological opinion must include the FWS and/or NMFS views “on the entire action (50 CFR Part 402.14(k)).” This requires an analysis of not only the impacts of leasing these parcels, but the interrelated actions associated with exploiting the oil and gas on these parcels. Furthermore, BLM may only proceed with the incremental step analysis “provided that the FWS and/or NMFS finding for the incremental step is not a jeopardy opinion; the BLM continues consultation with respect to the entire action and obtains biological opinions, as required, for each incremental step; the BLM fulfills its obligation to obtain sufficient data upon which to base the final biological opinion on the entire action; the incremental step does not result in the irreversible or irretrievable commitment of resources; and there is reasonable likelihood that the entire action will not result in jeopardizing the continued existence of a listed species or destruction or adverse modification of designated critical habitat.” See Manual 6840 at .1F5i(1). BLM has not adhered to these requirements, since they have not initiated formal consultation regarding this lease sale, and have failed to provide sufficient data, nor properly determined with a reasonable likelihood that the “entire action” would not jeopardize listed species or adversely modify critical habitat.

2. BLM Sensitive Species (Greater sage-grouse, clay reed-mustard, shrubby reed-mustard, Uinta Basin hookless cactus, Pariette cactus, Ute ladies’-tresses, Graham’s beardtongue, White River beardtongue)

Pursuant to Manual 6840, “[a]ll Federal candidate species, proposed species, and delisted species in the 5 years following delisting will be conserved as Bureau sensitive species.”²⁸ The Objective of Manual 6840 is “[t]o initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing of these species under the ESA.”²⁹ Manual 6840 further states that it is the BLM’s Policy to promote the “conservation and to minimize the likelihood and need for listing” Bureau sensitive species.³⁰

Pursuant to Manual 6840 it is the responsibility of State Directors to not only inventory BLM lands to determine the occurrence of BLM special status species, but also to determine “the condition of the populations and their habitats, and how discretionary BLM actions affect those species and their habitats.”³¹ The leasing of federal lands for oil and gas extraction is a discretionary BLM action that has the potential to adversely affect sensitive species including but

²⁸ U.S. Bureau of Land Management, Manual 6840 – Special Status Species Management (June 1969) at § .01 (“BLM Manual 6840”).

²⁹ *Id.* at § .02 (emphasis added).

³⁰ *Id.* at § .06.

³¹ *Id.* at § .04.

not limited to the Graham's beardtongue (*penstemon grahamii*), White River beardtongue (*penstemon scariosus* var. *albifluvis*), golden eagle, and bald eagle.³² Deferring an analysis of the potential effects of selling oil and gas leases to the APD stage is entirely inconsistent with the requirements of Manual 6840. If a lease is sold, the lessee acquires certain contractual rights constraining BLM authority. For example, according to 43 C.F.R. § 3101.1-2, once a lease is issued to its owner, that owner has the "right to use as much of the lease lands as is necessary to explore for, drill for, mine, extract, remove and dispose of the leased resource in the leasehold" subject to specific nondiscretionary statutes and lease stipulations. Therefore, once the lease is sold, it will be too late for BLM to ensure that sufficient protections will be in place to protect this species from the cumulative impacts of extraction-related activities.

Furthermore, pursuant to Manual 6840 Bureau sensitive species are considered BLM special status species, and Section 2 of the Manual provides specific measures that BLM is required to undertake in order to "conserve these species and their habitats."³³ To implement this section, BLM "shall... minimize or eliminate threats" affecting Bureau sensitive species, by determining their current threats and habitat needs, and ensuring that BLM activities "are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale."³⁴ Due to the potential harms from habitat loss and fragmentation, the appropriate spatial scale for determining threats to sensitive plants and animals from oil and gas development is the entire area subject to lease sales, rather than the piecemeal, limited APD-specific review that BLM is attempting to employ.

The need for a broader analysis to assess the threats to this species from the lease sale itself is further supported by Manual 6840's requirement that BLM work with partners and stakeholders to "develop species-specific or ecosystem-based conservation strategies," and in the absence of such strategies, to incorporate standard operating procedures and other conservation measures "to mitigate species specific threats to Bureau sensitive species during the planning of activities and projects."³⁵ Postponing any analysis of impacts to sensitive plants and raptors until the later APD stage forecloses the implementation of standard procedures and conservation measures necessary to mitigate threats to the species during exploration or other actions that might take place prior to an APD being filed, since as noted above once a lease is issued, the owner has the "right to use as much of the lease lands as is necessary to explore for, drill for, mine, extract, remove and dispose of the leased resource in the leasehold."³⁶

Moreover, the development of species-specific and ecosystem-based conservation strategies implicitly necessitates a more holistic review of the cumulative impacts of the proposed lease sale, which cannot be accomplished through site-specific APD-stage analysis alone. And, piecemeal analyses of individual lease sales do not provide the appropriate perspective for examining the cumulative effects of hydraulic fracturing and climate change impacts at the regional and landscape scale and for making land management decisions.

³² EA at 24 Table 3.4, 29-30 Table 3.10

³³ *Id.* at § .2 ("All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau sensitive species.").

³⁴ *Id.* at § .2(C) (emphasis added).

³⁵ *Id.* (emphasis added).

³⁶ 43 C.F.R. § 3101.1-2.

Where activities have the potential to adversely impact species of concern, the general practice is to consider those impacts and address them “at the earliest possible time,” in order to avoid delay, ensure that impacts are avoided and opportunities for mitigation are not overlooked.³⁷ This is likewise true in the context of even more general environmental review, such as under NEPA.³⁸ Furthermore, it is general practice to evaluate the impacts of several related projects with cumulative impacts proposed or reasonably foreseeable in the same geographic region in a single, comprehensive, analysis.³⁹ Likewise, under the ESA an analysis of the effects of an action must consider actions that are interrelated or interdependent.⁴⁰ This suggests that BLM should consider the effects of oil and gas extraction activities at the lease sale stage, since those actions are inherent in leasing land for such purposes. It is therefore evident that in order to effectuate the policy of protecting Bureau sensitive species set forth in Manual 6840,⁴¹ and consistent with the established practice of early, comprehensive review of potential impacts to sensitive species, BLM must consider impacts to the Graham’s and White River penstemon and other sensitive species at the lease sale, rather than waiting until the APD stage for project specific review.

In sum, BLM has issued regulations in Manual 6840 that require the agency to undertake actions to protect candidate species, much like they protect proposed and listed species. Delaying an analysis of impacts to the greater sage-grouse and sensitive plant species until the APD stage risks harm to an at-risk species that could otherwise be avoided. A failure to address the impacts to sensitive species at the lease sale stage violates BLM’s own regulations set forth in Manual 6840, is entirely inconsistent with established practice and policies regarding species protection, and is therefore arbitrary and capricious agency action under the Administrative Procedures Act.

3. Black-Footed Ferret – Parcels 55, 65, 67, 68, 72, 74, 75, 76, 77, and 85

According to the EA interdisciplinary team checklist, virtually all parcels support habitat for white-tailed prairie dogs, and Vernal parcels 55, 65, 67, 68, 72, 74, 75, 76, 77, and 85 are either within a reintroduction zone for reintroduced black-footed ferrets or have significant importance to black-footed ferrets outside the primary management zone.⁴² The black-footed ferret, one of the most critically endangered mammals in North America, was reintroduced to the Coyote Basin in northeast Utah following near-extirpation in the wild.⁴³ The species was

³⁷ See *i.e.* 50 C.F.R. §§ 402.14(a), (g)(8).

³⁸ See 40 C.F.R. § 1501.2 (“Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts.”).

³⁹ See *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) (“when several proposals for . . . actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together.”).

⁴⁰ 50 C.F.R. §§ 402.14 and 402.02.

⁴¹ See BLM Manual 6840 at .06 (“Bureau sensitive species will be managed consistent with species and habitat management objectives in land use and implementation plans to promote their conservation and to minimize the likelihood and need for listing under the ESA.”).

⁴² Final Vernal EA at 212.

⁴³ U.S. Fish and Wildlife Service, Revised Black-Footed Ferret Recovery Plan 20 (2013).

reintroduced to Utah as a nonessential, experimental population pursuant to a rule promulgated under Section 10(j) of the ESA.⁴⁴ Although nonessential experimental populations are not subject to the consultation requirement of ESA 7(a)(2), two provisions of ESA Section 7 still apply: (1) section 7(a)(1)—which requires all Federal agencies to use their authority to conserve listed species; and (2) section 7(a)(4)—which requires Federal agencies to confer with the Service on actions that are likely to jeopardize the continued existence of a proposed species throughout its range.”⁴⁵ Under the requirements of Section 7(a)(1) and 7(a)(4), BLM must still ensure that it is using its authority to conserve the black-footed ferret, and must confer with the Fish and Wildlife Service to determine whether its actions will jeopardize the continued existence of the species.⁴⁶

Importantly, the Section 10(j) rule for the Coyote Basin black-footed ferret production prohibits the “take” of black-footed ferrets under Section 9 of the ESA.⁴⁷ Allowing activities that harm federally-protected species, such as oil and gas drilling and associated ferret habitat destruction and mortality, opens up state and private actors to liability under section 9 of the ESA. Under section 9(a)(1)(B) of the ESA, it is illegal to engage in any activity that “takes” an endangered species.⁴⁸ The term “take” is defined in the “broadest possible manner to include every conceivable way” in which a person could harm or kill wildlife.⁴⁹ The term “take” is defined in the statute to include “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁵⁰

The ESA’s implementing regulations define “harm” to mean “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”⁵¹ The term “harass” is defined to mean “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.”⁵²

Persons subject to the prohibition on take include individuals and corporations, as well as “any officer, employee, agent, department, or instrumentality of the Federal Government.”⁵³ Further, “[t]he ESA prohibitions apply to actions by [governmental] agencies where their regulatory programs approve actions by third parties that contribute to causing the take.”⁵⁴ To the

⁴⁴ U.S. Fish and Wildlife Service, Establishment of a Nonessential Experimental Population of Black-footed Ferrets in Northwestern Colorado and Northeastern Utah, 63 Fed. Reg. 52,824 (Oct. 1, 1998).

⁴⁵ 63 Fed. Reg. at 52,824.

⁴⁶ 63 Fed. Reg. at 58,835.

⁴⁷ 50 C.F.R. § 17.84(g).

⁴⁸ 16 U.S.C. § 1538(a)(1)(B).

⁴⁹ S. Rep. No. 93-307, 93d Cong., 1st Sess. 1, reprinted in 1973 USCAAN 2989, 2995.

⁵⁰ 16 U.S.C. § 1532(18).

⁵¹ 50 C.F.R. § 17.3.

⁵² *Id.*

⁵³ 16 U.S.C. § 1532(13).

⁵⁴ *Strahan v. Coxe*, 127 F.3d 155 (1st Cir. 1997); *Animal Welfare Inst. v. Martin*, 623 F.3d 19 (1st Cir. 2010); *Defenders of Wildlife v. EPA*, 882 F.2d 1294 (8th Cir. 1988); *Loggerhead Turtle v. County Council of Volusia County*, 148 F.3d 1231 (11th Cir. 1998); *Seattle Audubon Soc’y v. Sutherland*, 2007 U.S. Dist. LEXIS 31880, 2007 WL 1300964 (W.D. Wash. May 2, 2007).

extent that exploration and development resulting from oil and gas leasing will foreseeably cause ESA “take” of ferrets, BLM may not authorize such leasing without a valid permit issued by the U.S. Fish and Wildlife Service.⁵⁵

The black-footed ferret is dependent for both habitat and forage on, in Coyote Basin, white-tailed prairie dog colonies. Both BLM, the Fish and Wildlife Service, and scientific research have all documented that oil and gas development can have serious adverse effects, including mortality, on both black-footed ferrets directly and the prairie dog colonies critical to their survival. The Vernal RMP EIS found that:

The minerals development proposed in the Proposed RMP would have multiple short-term and long-term direct and indirect adverse impacts on white-tailed prairie dog and black-footed ferret populations in the VPA. For this analysis it was assumed that black-footed ferrets are completely dependent upon white-tailed prairie dog towns for survival in those areas where they have been reintroduced into the VPA. Therefore, the impacts of minerals development on white-tailed prairie dog populations would be similar to the impacts on black-footed ferret populations. Minerals development would likely lead to an increase in road densities, a reduction in habitat from the installation of mineral development infrastructure, and an increase in habitat fragmentation.⁵⁶

Similarly, the Vernal RMP BiOp found, at a general plan-wide level, that:

Although stipulations or conditions may be included in the terms of these mineral contracts, there are potential impacts associated with these various activities. . . . General direct and indirect impacts resulting from this program would include increased human presence and vehicle traffic in ferret habitat and surface disturbance. Specific negative impacts include decreased availability and use of suitable habitat; direct loss of habitat; and a decrease in prairie dog prey. As a result, black-footed ferret adults and offspring may experience a reduction in fitness. There is some potential for mortality if energy exploration or development activities result in the crushing of burrows. Increased vehicle traffic could also result in mortality from vehicle collisions.⁵⁷

The best available scientific information regarding white-tailed prairie dogs (upon which black-footed ferrets in Coyote Basin rely exclusively for both burrows and prey base) demonstrates significant adverse impacts from oil and gas development:

Petroleum development and agriculture are the most frequently cited as being of immediate conservation concern, and there is ample evidence to support this assertion (Seglund et al. 2004). Oil and gas development is currently occurring at

⁵⁵ 50 C.F.R. § 17.84(g)(2).

⁵⁶ Vernal RMP EIS at 4-459.

⁵⁷ Vernal RMP BiOp at 38.

unprecedented levels, with substantial expansion expected in the future, making it an ever increasing threat. In Wyoming, 77% of the white-tailed prairie-dog predicted range is being developed at some level for oil and gas, Colorado has 4,953 wells and Utah has 8,835 wells in the predicted distribution of white-tailed prairie dogs (Seglund et al. 2004). Even when petroleum activity does not directly eliminate active burrows, it has been shown to be detrimental to prairie dog populations.⁵⁸

The 2004 Conservation Assessment for white-tailed prairie dogs similarly identified oil and gas development within prairie dog habitat as a limiting factor for the Coyote Basin population in Utah.⁵⁹ Neither the Vernal RMP EIS or its accompanying BiOp provide sufficient site-specific development, colony and occurrence data to permit a reasoned evaluation of the extent and viability of remaining prairie dog and black-footed ferret habitat in coyote basin, or to evaluate the impact of proposed leases 55, 65, 67, 68, 72, 74, 75, 76, 77, and 85 on the remaining ferrets and white-tailed prairie dogs in the area and their prospects for recovery and/or reestablishment.

The Coyote Basin reintroduction was the first black-footed ferret reintroduction program in 1999, and was designed in part to determine whether black-footed ferrets could be reestablished within white-tailed prairie dog colonies that have been affected by plague. Between 1999 and 2012, 424 ferrets were released, but the 2008-2012 population was estimated at only 7 adults.⁶⁰ Yet the EA provides no analysis or disclosure whatsoever of the effects of leasing eleven parcels within the primary ferret management zone or otherwise identified as important to ferret recovery on (a) the scientific integrity of the reintroduction experiment, (b) the survival of the remaining Coyote Basin population, or (c) the overall reintroduction and recovery effort for the species. BLM must carry out such an analysis under NEPA, and must also consult and/or confer with the Fish and Wildlife Service under ESA Section 7(a)(4) and the terms of the Vernal RMP Biological Opinion.

Absent additional information regarding the location and condition of white-tailed prairie dog colonies, black-footed ferret occurrence and habitat use, and site-specific potential impacts of well pads, roads, and traffic on habitat, prey, and mortality, the inclusion of parcels 55, 65, 67, 68, 72, 74, 75, 76, 77, and 85 in the proposed Vernal lease sale is arbitrary and unjustified.

4. Listed and Sensitive plants – Parcels 031A, 031B, 038, 039, 046, 047, 048, 049, 052, 053, 054, 055, 056, 063, 064, 065, 066, 067, 068, 069, 071, 072, 075, 080, 081, 082, 083, 084, 085, 086, 087

Vernal EA Table 3-8 lists the five endangered or threatened plants inhabiting the proposed lease parcels. Yet the EA, and proposed stipulations, fail to adequately disclose or mitigate impacts to these five listed species from oil and gas leasing and development. BLM must take a hard look at listed plant impacts in an EIS, and must consult with the Fish and

⁵⁸ Kenaith, Douglas E., Species Assessment for White-Tailed Prairie Dog (*Cynomys leucurus*) in Wyoming (2004) at 26 (citing A.E. Seglund *et al.*, White-Tailed Prairie Dog Conservation Assessment (2004) (“Seglund et al”).

⁵⁹ Seglund *et al.* at 46-47.

⁶⁰ Recovery Plan at 22 Table 2.

Wildlife Service under ESA Section 7(a)(2) to ensure its action will not cause jeopardy to these species or adverse modification of their critical habitat.

For the listed Pariette cactus and Uinta Basin hookless cactus, found on parcels UT1217-031A, -031B, -038, -039, -042, -044, -055, and -068, the Fish and Wildlife Service's recent GasCo BiOp found the 300 foot buffer proposed for the lease sale⁶¹ ineffective at minimizing impacts to the species:

On a broader landscape scale, the section 7 consultation process has been less effective at minimizing impacts to *Sclerocactus wetlandicus* because: individual consultations are minimally effective at mitigating landscape-scale cumulative impacts, recent research indicates that a 300-foot buffer may not be sufficient to protect gene flow between individuals of the *Sclerocactus* species, and the scientific literature indicates that the impacts of roads and other surface disturbances can extend far beyond 300 feet. Through section 7 consultations, individual projects on a case-by-case basis-even large energy field development EISs-have not been likely to jeopardize the continued existence of *S. wetlandicus* because of commitments to mitigation measures. As a result, hundreds of energy development projects have been approved across the landscape of the Uinta Basin. As a result, habitat fragmentation, fugitive dust, invasive species, and hydrologic changes have increased across the landscape. In the foreseeable future these disturbances are likely to reach a level at which recovery of *S. wetlandicus* will be appreciably reduced.

Recent research indicates that a 300'-foot buffer between energy development and *Sclerocactus* plants may not be sufficient to protect pollinators and thus preserve gene flow between sub-populations. Connectivity between sub-populations is important because *Sclerocactus* species are out-crossing and require pollen from another plant's flower to produce viable seed (Tepedino et al., 2010). Thus, maintaining pollinator habitat and pollinator populations is important for survival and recovery of *Sclerocactus* species. The commonest *Sclerocactus* flower visitors are Halictinae bees (a subfamily of bees that pollinate *Sclerocactus*) that can travel from 400 meters to 1,000 meters (Tepedino et al., 2010). These bees also use other native plants besides *Sclerocactus* species as food sources, and protecting overall native plant diversity is important to protect *Sclerocactus* pollinators (Tepedino et al., 2010). Finally, protecting bee nests is critical (Tepedino et al., 2010), but we do not currently have a reliable way to identify bee nests in the field. Although it does not appear the *S. wetlandicus* is pollinator limited (Tepedino et al., 2010), we should strive to institute protections for *S. wetlandicus* pollinators before this becomes the case.

The scientific literature continues to support the idea that effects from roads and other disturbances can extend far beyond 300 feet (see, for example, (Walker and

⁶¹ USFWS, Final Biological Opinion for the Gasco Energy Inc. Field Development Project Environmental Impact Statement / Biological Assessment (2011) ("GasCo BiOp"); Stipulation TE-12 in Final Vernal EA at page 146.

Everett, 1987; Myers-Smith and others 2006; Farmer, 1993). This research has been available for many years, even when we established the 300-foot buffer with federal land management agencies. These studies are not specific to the Uinta Basin, so we were conservative in our estimate of the minimum buffer needed to avoid jeopardizing survival and recovery of *Sclerocactus* species. At the time we thought that data from long-term population monitoring of *Sclerocactus* conducted by the BLM and three-year monitoring required for projects within 300-feet of plants would give us information specific to our species and ecosystem that we could use to refine buffers, if necessary. Unfortunately, inadequate study design (from the three-year monitoring) and incomplete results (from the long-term population monitoring) have not allowed us to draw any conclusions regarding what minimum buffer is sufficient to protect *Sclerocactus* species across their known ranges. Our previous knowledge of surface disturbance literature combined with new information regarding pollinators (from Tepedino et al., 2010) has made it imperative to implement more restrictive protective measures for *S. wetlandicus*.

Two other recent draft recovery plans for two small Pediocacti (*P. winkleri* and *P. despainii*) in Utah that have somewhat similar pollinators, and possibly some smaller-sized bees, indicate that a 300 foot buffer is grossly inadequate to conserve pollinators.⁶² In those recovery plans, FWS recommends no surface occupancy or deferral of new leases, or, if NSO is not possible, “BLM should implement at minimum 400 m (1,312 ft) avoidance buffers, surface disturbance limits, and compensatory mitigation in areas where NSO is not possible.”⁶³

Similarly, in 2014, pollinator expert Dr. Vincent Tepedino reviewed the Conservation Agreement for the Graham’s and White River beardtongues, and found a 300 foot buffer inadequate to conserve pollinators:

a 300 ft buffer around plants is insufficient to avoid effecting larger, strong-flying pollinators such as species of Anthophora (Apidae) and Pseudomasaris (Masaridae). A minimum of a quarter mile (1300 ft) would still be insufficient but would be a much more reasonable compromise.

The Sclerocacti have some even larger potential pollinators and so would need an even larger buffer. And all Sclerocacti species in Utah, common and uncommon, are in decline throughout the state for a variety reasons (drought and likely related increased beetle death, livestock grazing, invasive species, etc.).⁶⁴

⁶² U.S. Fish and Wildlife Service, Draft Recovery Plan, Winkler cactus (*Pediocactus winkleri*) and San Rafael cactus (*Pediocactus despainii*) 85 (Dec. 2015), available at http://ecos.fws.gov/docs/recovery_plan/Pediocactus%20Recovery%20Plan%20Final%20DRAFT%20signed%2004052016_1.pdf.

⁶³ *Id.* at 85.

⁶⁴ Dr. Vincent Tepedino, Public Submission, Comment on FWS-R6-ES-2013-0081-0030, Doc. No. FWS-R6-ES-2013-0081-0041 (June 20, 2014).

BLM must take a hard look at the effects of well pads, roads, and other ground disturbance on the Uinta Basin hookless cactus and other listed plant species, including effects on their pollinators and effects extending beyond the 300 foot buffer proposed in Stipulation TE-12. In addition, BLM must consult with the Fish and Wildlife Service, using best available scientific information, to determine whether the proposed action will jeopardize the continued existence of these species.

5. Colorado River Endangered Fish (all parcels)

All proposed sale parcels have the potential to impact the four Colorado River endangered fish species (bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker) through water depletions resulting from oil and gas development. In particular, parcels UT-1217- 43, 44, 54, 55, 65, and 70 contain or immediately abut designated critical habitat for the Colorado pikeminnow and razorback sucker.⁶⁵

Oil and gas drilling and hydraulic fracturing, the reasonably certain indirect consequence of leasing the proposed parcels for oil and gas development, will result in additional withdrawals of water from the Green River Basin, with adverse effects on the listed fish and their critical habitat. BLM's proposed lease stipulation requires consultation on and reporting of, but does not prohibit, such water depletions:

Water depletions from *any* portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species, and must be evaluated with regard to the criteria described in the Upper Colorado River Endangered Fish Recovery Program. Formal consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM.⁶⁶

In its 2008 Biological Opinion for the Vernal Resource Management Plan, the Fish and Wildlife Service re-confirmed its long-standing opinion that all depletions from the Upper Colorado will jeopardize the continued existence of the four listed fish:

Water depletions from the Upper Colorado River Basin are a major factor in the decline of the threatened and endangered Colorado River fish. The USFWS determined that any depletion will jeopardize their continued existence and will likely contribute to the destruction or adverse modification of their critical habitat (USDI, Fish and Wildlife Service, Region 6 Memorandum, dated July 8, 1997). However, the Recovery Program was established specifically to offset the negative effects of water depletions to the endangered fish populations, and to act as the Reasonable and Prudent Alternative for these depletions. Actual water

⁶⁵ Final Vernal EA at 210; Center for Biological Diversity, Map of Price/Vernal 2017 Lease Sale and Endangered Fish Critical Habitat (Attachment A).

⁶⁶ Stipulation TE-03 in Final Vernal EA at page 90-91.

depletions will be determined, and Section 7 consultation reinitiated on a project-specific basis.⁶⁷

As specified in the Vernal RMP BiOp, BLM must initiate consultation on the proposed lease sale on a project-specific basis. Significant new information regarding progress under the Recovery Program and climate change effects on Green and Colorado River flows requires independent reevaluation of the effects of water depletions on the four endangered fish. The Recovery Program's 2015 Assessment of Sufficient Progress under the Upper Colorado River Endangered Fish Recovery Program indicates that Colorado pikeminnow are in decline and failing to meet recovery goals in the Green River Subbasin that will be affected by the proposed action.⁶⁸

Data from the third round (2011–2013) of population estimates for the Green River Subbasin are still being analyzed (thus no confidence intervals are shown for the 2011–2013 estimates in Figure 4). Preliminary results from this analysis indicate adults and sub-adults are in decline throughout the entire Green River Subbasin.⁶⁹

Another demographic requirement in the 2002 Recovery Goals is that recruitment of age-6, naturally-produced fish must equal or exceed mean annual adult mortality. Estimates of recruitment age fish have averaged 1,455 since 2001, but have varied widely (Figure 5). Recruitment exceeded annual adult mortality only during the 2006 – 2008 period.⁷⁰

Pikeminnow within the Green River subbasin are also being adversely affected by mercury concentrations, which are exacerbated by water withdrawals:

Although a good portion of the recovery factor criteria (USFWS 2002a) are being addressed, nonnative fish species continue to be problematic and researchers now speculate that mercury may pose a more significant threat to Colorado pikeminnow populations of the upper Colorado River basin than previously recognized. Osmundson and Lusk (2012) recently reported elevated mercury concentrations in Colorado pikeminnow muscle tissue; the highest concentrations were from the largest adults collected from the Green and Colorado river subbasins. Mercury exposure has been reported to impair reproduction in fish (Batchelar et al. 2013; J. Lusk, U.S. Fish and Wildlife Service, personal communication). Laboratory experiments have shown diminished reproduction

⁶⁷ U.S. Fish and Wildlife, Biological Opinion for BLM Resource Management Plan (RMP), Vernal Field Office (VFO), 113 (Oct. 23, 2008), available at http://www.blm.gov/style/medialib/blm/ut/vernal_fo/planning/rod_approved_rmp.Par.4719.File.dat/VernalBiologicalOpinion.pdfhttp://www.blm.gov/style/medialib/blm/ut/vernal_fo/planning/rod_approved_rmp.Par.4719.File.dat/VernalBiologicalOpinion.pdf

⁶⁸ U.S. Fish and Wildlife Service, Final 2014--2015 Assessment of "Sufficient Progress" Under the Upper Colorado River Endangered Fish Recovery Program in the Upper Colorado River Basin 7-8 (Oct. 7, 2015) ("Sufficient Progress Assessment"), available at http://www.coloradoriverrecovery.org/documents-publications/section-7-consultation/sufficientprogress/2015_Suff_Progress_Memo.pdf.

⁶⁹ 2015 Sufficient Progress Memo at 7.

⁷⁰ Sufficient Progress Memo at 8.

and endocrine impairment in fish exposed to dietary methyl mercury at environmentally relevant concentrations, with documented effects on production of sex hormones, gonadal development, egg production, spawning behavior, and spawning success.⁷¹

Adverse effects from oil and gas development are not limited to the Green River water depletions addressed by the Upper Colorado Endangered Fish Recovery Program. BLM must also consider, and consult on, foreseeable water quality impacts from oil and gas development and the resulting wells, pipelines, pits, and soil disturbance. The Fish and Wildlife Service's recent Biological Opinion for the GasCo Energy Inc. Field Development Project EIS found that, in addition to water depletions, oil and gas development in the Uinta Basin has a significant potential for impacts to Colorado River endangered fish resulting from the highly foreseeable probability of spills and contamination:

There is a greater potential for impacts from pollutants, if a pipeline, well pit, or other source were to inadvertently release contaminated fluids into waterways at points near the Green and White Rivers. Through direct or indirect discharge, these pollutants could reach the Green River and negatively impact water quality to the point of affecting native fish populations. Direct impacts will result from a discharge from a pipeline or well pit reaching the Green River in its original form or within a single-release event. Indirect effects occur when discharges are released to the ground and are later released to the river after being carried by an erosion event or carried by rain or snowmelt runoff. As more well and pipeline development occurs in the project area the chance of pollutants reaching the Green River increases, thus increasing the potential of harm to native fish populations.

Approximately 744 pipeline crossings (61.9 miles) of intermittent/ephemeral drainages that are tributary to the Green River will be required, though no wells, roads, or pipelines are proposed within the 100-year floodplain for the Green River. In addition, no wells or pipelines are proposed within 100-year floodplains of Green River tributaries within 5 miles of the river.

While applicant-committed measures will reduce the chance for spills or leaks of contaminants, accidental releases can and do still occur. According to the National Response Center, there have been at least 219 spills and releases within Carbon, Duchesne, and Uintah Counties from January 1991 through August, 2011 due to oil and gas development and related activities affecting water, land and air.

Spill incidences reviewed in Utah include corrosion and leakage of surface and buried pipelines, broken well rods, valve and gasket failures, wellhead pressure buildups, shutoff alarm malfunctions, leakage of trace systems, loss of formation water to the surface during drilling, and vehicular related traffic accidents. Releases have included crude oil, natural gas, hydrochloric acid, condensate, salt water, ethylene glycol, and produced water in various quantities.

⁷¹ Sufficient Progress Memo at 10.

Releases of harmful agents into floodplain habitats could result in significant adverse impacts to the endangered fish and their designated critical habitat. One of the constituent elements of the designated critical habitat for the four Colorado River fish is contaminant-free water. Any release of contaminants into the floodplain will result in degradation of critical habitat and could result in take of individual fish, including downstream impacts to larvae and juveniles.⁷²

In addition, neither the 2008 VFO RMP nor the Final EAs have considered the impacts of climate change on these water resources, such as the decline in stream flows. This is a significant omission, as numerous climate change models show anthropogenic climate change is profoundly impacting the Colorado River in ways that are altering temperature, streamflow, and the hydrologic cycle, which we discussed in our previous comment letter. Changes observed to date include rising temperatures, earlier snowmelt and streamflow, decreasing snowpack, and declining runoff and streamflow. Modeling studies project that these changes will only worsen, including continued declines in streamflow and intensification of drought. Climate change is likely to have significant effects on the endangered fish and the Colorado River ecosystem, and the effect of climate change on future flow regimes and water temperatures must be taken into account in the consultation process and considering the sufficiency of the existing Recovery Program.

III. Conclusion

Oil and gas leasing is an irrevocable commitment to convey rights to use of federal land – a commitment with readily predictable environmental consequences that BLM is required to address. Unconventional oil and gas development not only fuels the climate crisis but entail significant public health risks and harms to the environment. Should BLM proceed with the proposed oil and gas leasing, at a minimum, it must thoroughly analyze the environmental and public health impacts in a full EIS.

Thank you for your consideration of this protest. The proposed leasing's significant environmental impacts should compel BLM to withdraw the leasing proposal.

Sincerely,



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ATTACHMENT A

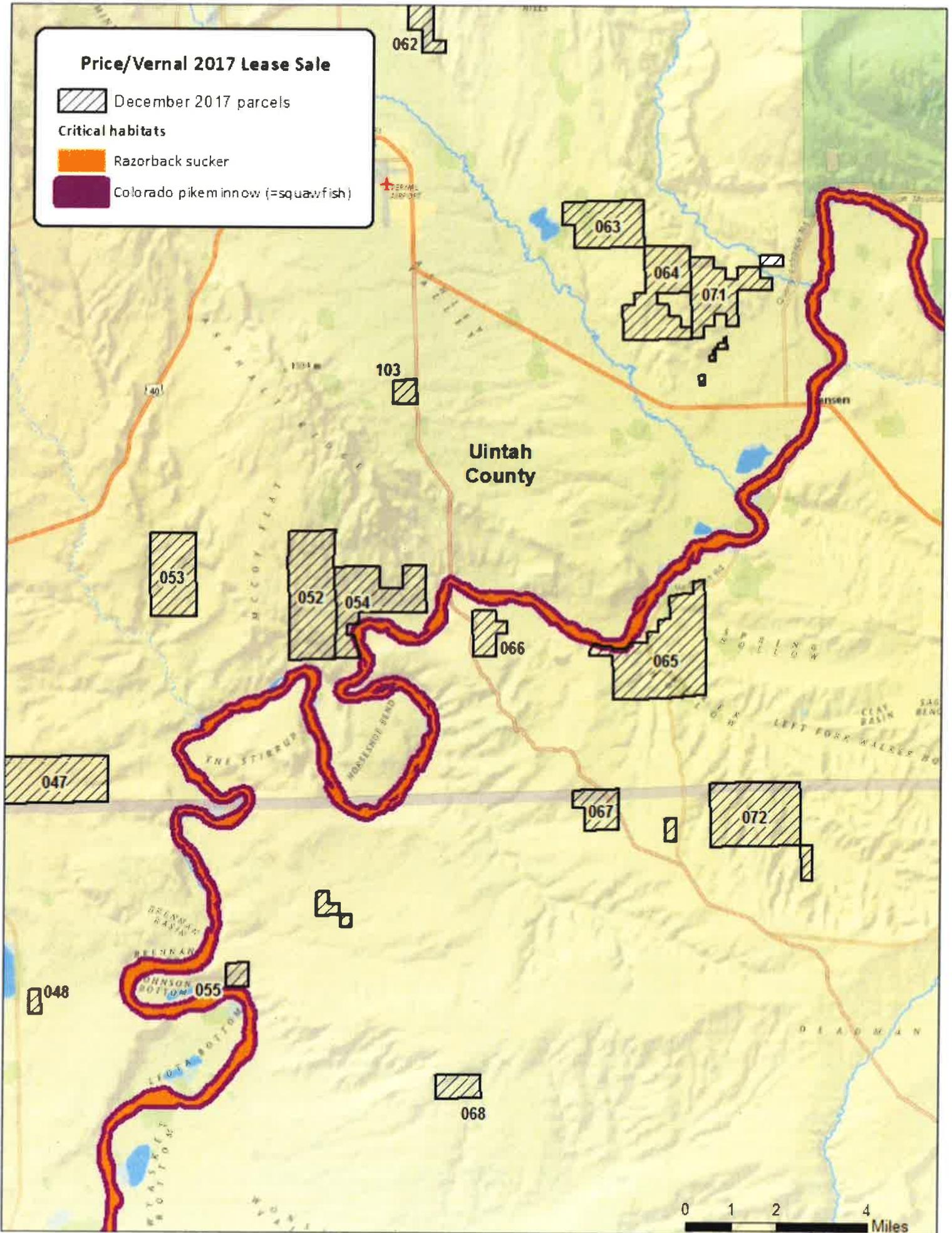
Price/Vernal 2017 Lease Sale

 December 2017 parcels

Critical habitats

 Razorback sucker

 Colorado pikeminnow (=squawfish)



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