

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLORADO**

Civil Action No. \_\_\_\_\_

WILDERNESS WORKSHOP,  
CENTER FOR BIOLOGICAL DIVERSITY,  
LIVING RIVERS: COLORADO RIVERKEEPER, and  
SIERRA CLUB,

Plaintiffs,

vs.

UNITED STATES BUREAU OF LAND MANAGEMENT, an agency of the U.S. Department  
of the Interior,

BRIAN STEED, in his official capacity as the Deputy Director of the U.S. Bureau of and  
Management,

U.S. DEPARTMENT OF THE INTERIOR,

and

RYAN ZINKE, in his official capacity as Secretary of the U.S. Department of the Interior,

Federal Defendants.

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**COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF AND  
PETITION FOR REVIEW OF AGENCY ACTION**

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**INTRODUCTION**

1. This petition challenges the Federal Defendants' approval of 53 oil and gas lease parcels covering over 45,000 acres of public lands in the Upper Colorado River Basin in western Colorado in two oil and gas lease auctions, held on December 8, 2016 and December 7, 2017 (together "lease auctions"), without properly analyzing and disclosing to the public the ensuing site-specific impacts to natural resources, our climate, and public health. It asks this Court to

1 invalidate and set aside these lease authorizations as violating the National Environmental Policy  
2 Act (NEPA) and its implementing regulations, and to ensure Federal Defendants' compliance  
3 with the law.

4         2. Plaintiffs Wilderness Workshop, Center for Biological Diversity, Living Rivers:  
5 Colorado Riverkeeper, and Sierra Club (collectively "Conservation Groups") challenge the  
6 failure of the Bureau of Land Management (BLM) to comply with the NEPA, 42 U.S.C. § 4332,  
7 and its requirements for public disclosure and informed decision-making. In particular,  
8 Conservation Groups challenge BLM's decision to approve each of the lease auctions through a  
9 Determination of NEPA Adequacy, which relied entirely upon prior NEPA documents, and  
10 which failed to provide any environmental analysis of site-specific impacts prior to making an  
11 irreversible and irretrievable commitment of resources.

12         3. For both the December 2016 and December 2017 lease auctions, the subject lease  
13 parcels span two BLM planning areas administered by the Colorado River Valley and the Grand  
14 Junction Field Offices. Accordingly, the Determinations of NEPA Adequacy purporting to  
15 authorize the lease auctions relied on broad, planning-stage Environmental Impact Statements  
16 ("RMP-EIS") prepared for the Colorado River Valley and Grand Junction Resource  
17 Management Plans. The Colorado River Valley RMP-EIS was approved through a record of  
18 decision on June 12, 2015, is currently the subject of federal litigation before this Court in  
19 *Wilderness Workshop, et al., v. Bureau of Land Management, et al.*, No. 1:16-cv-01822-MSK,  
20 and includes certain common and related claims to those alleged herein. In particular, BLM's  
21 authorization of the lease auctions through a Determination of NEPA Adequacy, here,  
22 perpetuates the agency's failure at the planning stage to take a hard look at greenhouse gas  
23 pollution and climate change, failure to take a hard look at the impacts of oil and gas  
24 developement on human health and the environment, and failure to consider a reasonable range  
25 of alternatives. The Grand Junction RMP-EIS was approved through a record of decision on  
26 August 24, 2015. While the Grand Junction RMP-EIS is not subject to pending litigation, much  
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1 of the analysis and alternatives included therein suffer from the same deficiencies that undermine  
2 the legality of the adjacent Colorado River Vally RMP-EIS.

3 4. Together, the Colorado River Valley and Grand Junction plans govern  
4 management of roughly 1.7 million acres of public lands and minerals in the Upper Colorado  
5 River, White, and Yampa River basins in northwest Colorado. This area is home to some of the  
6 nation's most important natural resources. It includes the upper reaches of the Colorado River,  
7 known as the lifeblood of the southwest, which provides water to forty-million people. The area  
8 spans some of the fastest growing counties and communities in the nation—communities that  
9 continue to attract new residents because of their proximity to public lands and the quality of life  
10 that those lands provide. The public lands of the Upper Colorado basin are rich in wildlife, and  
11 provide essential habitat for both terrestrial and aquatic wildlife. The Upper Colorado also  
12 overlies the heart of the Piceance Basin—an area containing both a significant natural gas  
13 reservoir and one of the nation's largest mule deer herds. In particular, thousands of acres  
14 included in the lease auctions are near or immediately upstream from the Colorado River's 15-  
15 Mile Reach—one of the most important "critical habitats" designated under the Endangered  
16 Species Act for recovering endangered native fishes, including the Colorado pikeminnow and  
17 razorback sucker.

18 5. On December 8, 2016, BLM auctioned 18,333.78 acres of federal oil and gas  
19 minerals in the Grand Junction and Colorado River Valley field offices in Mesa and Garfield  
20 counties.

21 6. On December 7, 2017, BLM offered for lease 27,281.30 acres of federal oil and  
22 gas in many of these same areas in the Colorado River watershed.

23 7. The foreseeable and intended result of oil and gas leasing in the established  
24 hydrocarbon-bearing formations of the Piceance Basin—including but not limited to the Mancos  
25 Shale formation—will be additional oil and gas exploration, drilling, and production. It is  
26 reasonably certain that the leased areas will be subject to horizontal drilling and hydraulic  
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1 fracturing (or “fracking”)—dangerous techniques that involve high-pressure injection of millions  
2 of gallons of toxic fluids underground, to fracture shale rock and release natural gas.

3       8.       The readily foreseeable development of leased acreage will foreseeably heighten  
4 the risk of toxic spills and leaks from fracking chemicals and wastewater, fracturing the ecologic  
5 balance and risking harm to terrestrial and aquatic species. More oil and gas extraction and  
6 combustion of these fossil fuels, enabled by the lease auctions, will both directly increase the  
7 risks of toxic pollution and foreseeably increase net greenhouse gas emissions, through both  
8 direct production emissions and the downstream combustion. The resulting impacts of climate  
9 change from the incremental contribution of these emissions, together with other reasonably  
10 foreseeable emissions that result from BLM’s management of our public lands and minerals,  
11 significantly impact the region’s natural resources, compound the harms of oil and gas  
12 development, and threaten the resilience of our landscapes and communities in the face of our  
13 changing climate.

14       9.       The foreseeable increase in industrialization of leased areas, through a spider web  
15 of oil and gas wells, well pads, roads, pipelines, compressors, and other associated infrastructure,  
16 will also endanger public health. Large-scale fracking operations required for horizontal drilling  
17 have been linked to an array of illnesses and adverse health effects, including poor infant health,  
18 endocrine disruption, and increased cardiac-patient hospitalizations. Increasingly, fracking in  
19 Colorado and neighboring states has encroached upon communities, in the form of massive  
20 drilling rigs, pipelines, heavy truck traffic, accidental explosions, noise, and air and water  
21 pollution.

22       10.      BLM failed to prepare any site-specific analysis under NEPA addressing the  
23 reasonably foreseeable direct, indirect, and cumulative effects of each lease auction, in violation  
24 of NEPA’s requirements for federal agencies to disclose significant environmental effects of  
25 their proposed actions and to consider reasonable alternatives to those actions. Rather, for each  
26 lease auction, BLM erroneously relied on Determinations of NEPA Adequacy asserting that the  
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1 earlier Colorado River Valley and Grand Junction RMP-EISs adequately analyzed all of the  
2 lease sales' significant environmental effects.

3 11. The RMP-EISs, however, fail to take *any* look, much less, the “hard look”  
4 required by NEPA, at the site-specific impacts of leasing oil and gas in the specific areas  
5 auctioned, and fail to recognize even general concerns about fracking and horizontal drilling. For  
6 example, the RMP-EISs fail to acknowledge the enormous amounts of toxic chemicals and  
7 wastewater involved in using these techniques, and their greater water contamination risks and  
8 significant effects. The RMP-EISs also disregard public health impacts of fracking,  
9 notwithstanding the lease parcels' proximity to neighboring homes and communities like the  
10 towns of De Beque, Mesa, and Molina, Colorado. And despite the significant contribution of  
11 public lands oil and gas production to greenhouse gas emissions and the extreme urgency to slow  
12 climate change and its most catastrophic harms, the RMP-EISs fail to take a hard look, using  
13 established and readily available methods, at the foreseeable greenhouse gas emissions and  
14 significant effects on climate change from increased fracking in the Grand Junction and  
15 Colorado River Valley planning areas.

16 12. BLM's approval process for the lease auctions failed to consider *any* reasonable  
17 alternative other than the sale of all lease parcels. This failure perpetuates underlying deficiencies  
18 in the RMP-EISs, whereby BLM similarly failed to consider a sufficient range of alternatives—  
19 placing an administrative thumb on the scale that prioritizes oil and gas leasing and development  
20 above other multiple use values within the planning areas.

21 13. BLM has committed tens of thousands of acres of public land and carbon  
22 emissions to oil and gas development by auctioning and issuing oil and gas leases.

23 14. BLM has approved and offered the lease parcels without first considering the site-  
24 specific, or even landscape-level and regional direct, indirect, and cumulative effects of leasing  
25 and foreseeably resulting development, in violation of NEPA, its regulations, and the BLM  
26 NEPA Handbook.

1           15.     BLM’s decision to avoid analysis of site-specific impacts at both the land-use  
2 planning stage and leasing stage constitute a “shell game,” the end result of which is complete  
3 avoidance of disclosure of significant environmental impacts at the earliest possible stage, as  
4 required by NEPA.

5           16.     Deferring all analysis to the final stage of drilling permit authorization forecloses  
6 BLM’s ability to prevent impacts altogether, regardless of what the analysis may reveal, and  
7 instead constrains its authority to mitigating or attempting to reduce such harms. At the  
8 Application for Permit to Drill (“APD”) stage, BLM consistently asserts that it lacks authority to  
9 deny an operator the right to use or develop leased lands for oil and gas operations, or impose  
10 new lease stipulations or permit conditions beyond “reasonable measures,” foreclosing  
11 meaningful consideration of alternatives to any proposed well operations. The point at which  
12 BLM should have considered environmental effects of oil and gas development and weighed  
13 alternatives and mitigation measures was before it committed lands to leasing—when it approved  
14 the Colorado River Valley and Grand Junction RMP-EISs, and approved each lease auction.  
15 BLM has failed to do so at each opportunity.

16           17.     Accordingly, because BLM’s approvals of the lease auctions violate federal law,  
17 the leases must be invalidated and set aside. Any oil and gas activities on these parcels cannot  
18 proceed until BLM has prepared a legally adequate EIS fully disclosing the effects of each lease  
19 auction.

#### 20                                   **JURISDICTION AND VENUE**

21           18.     This action arises under 42 U.S.C. § 4331 *et seq.*, and 5 U.S.C. §§ 702, 706.  
22 Jurisdiction of this Court is conferred by 28 U.S.C. § 1331 (federal question) and the  
23 Administrative Procedure Act, 5 U.S.C. § 551 *et seq.* The Court has the authority to issue the  
24 requested declaratory and injunctive relief pursuant to 28 U.S.C. §§ 2201-02, 5 U.S.C. §§ 705,  
25 706, and Rule 57 of the Federal Rules of Civil Procedure.

1           19.     This action reflects an actual, present, and justiciable controversy between  
2 Conservation Groups and Federal Defendants. Conservation Groups' interests are adversely  
3 affected and irreparably injured by Federal Defendants' violations of NEPA as alleged herein,  
4 and will be further if BLM affirmatively implements the decision that Conservation Groups  
5 challenge herein. These injuries are concrete and particularized and fairly traceable to Federal  
6 Defendants' challenged decisions, providing the requisite personal stake in the outcome of this  
7 controversy necessary for this Court's jurisdiction.

8           20.     The requested relief would redress the actual and imminent, concrete injuries to  
9 Conservation Groups caused by BLM's failure to comply with duties mandated by NEPA and its  
10 implementing regulations.

11           21.     The challenged agency actions are final and subject to judicial review pursuant to  
12 5 U.S.C. §§ 702, 704, and 706.

13           22.     Conservation Groups have exhausted any and all available and required  
14 administrative remedies.

15           23.     Venue is proper in this Court pursuant to 28 U.S.C. § 1391(b)(2) because the  
16 property that is the subject of the action—the 53 oil and gas lease parcels and over 45,000 acres  
17 of public lands across BLM's Colorado River Valley and Grand Junction field offices—is  
18 located in Colorado. Venue is also proper under 28 U.S.C. § 1391(e)(1)(B), because (1) a  
19 substantial part of the events or omissions giving rise to each of Conservation Groups' claims  
20 occurred in this judicial district, (2) a substantial part of property that is the subject of this action  
21 is situated in this judicial district, (3) the majority of the environmental impacts resulting from  
22 this agency action will impact this district, and (4) BLM has an office in this district, and  
23 plaintiffs Wilderness Workshop, Center for Biological Diversity, Living Rivers: Colorado  
24 Riverkeeper and Sierra Club have offices or members in this district.

25           24.     Pursuant to 28 U.S.C. § 2201 *et seq.*, Conservation Groups seek a declaration of  
26 rights under the laws of the United States. There exists now between the parties an actual,  
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1 justiciable controversy in which Conservation Groups are entitled to have a declaration of their  
2 rights and of defendants' obligations, and further relief, because of the facts and circumstances  
3 set out herein.

#### 4 **PARTIES**

5 25. Plaintiff WILDERNESS WORKSHOP is a non-profit organization dedicated to  
6 preservation and conservation of the wilderness and natural resources of the White River  
7 National Forest and adjacent public lands, including public lands in the Colorado River Valley.  
8 Wilderness Workshop engages in research, education, legal advocacy, and grassroots organizing  
9 to protect the ecological integrity of local landscapes and public lands in the area affected by the  
10 lease auctions. Wilderness Workshop focuses on the monitoring and conservation of air and  
11 water quality, wildlife species and habitat, natural communities, and lands of wilderness quality.  
12 Wilderness Workshop was founded in 1967 and has a membership base of more than 700 people.  
13 Wilderness Workshop members live, work, recreate, and/or otherwise use and enjoy lands  
14 affected by the lease auctions. They have a great interest in the protection and enhancement of  
15 natural values in the leased areas. Wilderness Workshop has been closely monitoring, informing  
16 its members, and engaging in advocacy concerning proposals, developments, and management  
17 actions by the Colorado River Valley and Grand Junction Field Offices for many years.  
18 Wilderness Workshop brings this action on its own behalf and on behalf of its adversely affected  
19 members.

20 26. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY (the Center) is a non-profit  
21 membership corporation with offices in Arizona, Colorado, Alaska, California, Florida, Hawaii,  
22 Minnesota, Oregon, Washington, Washington D.C., and Mexico. The Center works through  
23 science, law, and policy to secure a future for all species, great or small, hovering on the brink of  
24 extinction. The Center is actively involved in species and habitat protection issues worldwide,  
25 including throughout the western United States, and continues to actively advocate for increased  
26 protections for species and their habitats in Colorado. The lands that will be affected by the  
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1 approvals at issue in this action include habitat for listed, rare, and imperiled species that the  
2 Center has worked to protect, including the Colorado pikeminnow, razorback sucker, humpback  
3 chub, bonytail, Parachute beardtongue, Debeque phacelia, and Colorado hookless cactus. The  
4 Center also works to reduce greenhouse gas emissions to protect biological diversity, the  
5 environment, and public health. The Center has over 61,000 members, including those living in  
6 and near Colorado who have visited these public lands in the Grand Junction and Colorado River  
7 Valley field offices for recreational, scientific, educational, and other pursuits and intend to  
8 continue to do so in the future, and are particularly interested in protecting the many native,  
9 imperiled, and sensitive species and their habitats that may be affected by the approved oil and  
10 gas leasing. The Center brings this action on its own behalf and on behalf of its adversely  
11 affected members.

12         27. Plaintiff LIVING RIVERS: COLORADO RIVERKEEPER is a nonprofit  
13 organization based in Moab, Utah, next to the Colorado River. Since its inception, Living Rivers:  
14 Colorado Riverkeeper has been engaged in advocating for responsible management of the  
15 Colorado River System. Living Rivers was designated as the Colorado Riverkeeper in 2002 by  
16 the Waterkeeper Alliance, comprised of 200 affiliate “Waterkeepers” on six continents. Living  
17 Rivers: Colorado Riverkeeper’s trustees, partners, and members live, work, and recreate in the  
18 Upper Colorado River Basin. By articulating conservation and alternative management strategies  
19 to the public, Living Rivers: Colorado Riverkeeper seeks to revive the natural habitat and spirit  
20 of rivers by undoing the extensive damage done by dams, and water-intensive energy  
21 development on the Colorado River. Living Rivers: Colorado Riverkeeper has approximately  
22 1,200 members in Utah, Colorado and other states. Living Rivers: Colorado Riverkeeper’s  
23 members and staff use public lands in the Upper Colorado River Basin, including lands that  
24 would be threatened by increased oil and gas development that could result from BLM’s decision  
25 to authorize the December 2016 and December 2017 lease auctions, for quiet recreation (hiking  
26 and camping), scientific research, and aesthetic pursuits.

1           28. Plaintiff SIERRA CLUB is a national nonprofit organization of approximately  
2 800,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to  
3 practicing and promoting the responsible use of the earth's ecosystems and resources; to  
4 educating and enlisting humanity to protect and restore the quality of the natural and human  
5 environment; and to using all lawful means to carry out these objectives. The Colorado  
6 Chapter of the Sierra Club has 23,500 members in the state of Colorado. For many decades, the  
7 Sierra Club has worked to protect the Grand Junction and Colorado River Valley field offices  
8 other public lands from harmful activities such as clear-cutting, mineral extraction, commercial  
9 development, pipelines, and oil and gas drilling. Sierra Club members use the public lands in  
10 Colorado, including the lands and waters that would be affected by actions under the challenged  
11 actions, for quiet recreation, scientific research, aesthetic pursuits, and spiritual renewal. These  
12 areas would be threatened by increased oil and gas development that could result from BLM's  
13 decision to authorize the December 2016 and December 2017 lease auctions. Sierra Club brings  
14 this action on its own behalf and on behalf of its adversely affected members.

15           29. Conservation Groups and their members have concrete and particularized  
16 interests in the public lands and minerals managed by BLM and sold through the lease auctions.

17           30. Conservation Groups have individual members who live near the lease parcels;  
18 regularly visit these areas and areas near or downstream of these areas along the Colorado River;  
19 and intend to continue to use and enjoy these areas in the near future and beyond. They use and  
20 enjoy these areas for a variety of purposes, including scientific study, hiking, cycling,  
21 photography, sightseeing, wildlife observation, swimming, canoeing, rafting, and fishing, and  
22 intend to continue to do so on an ongoing basis in the future. Conservation Groups' members  
23 derive recreational, spiritual, professional, aesthetic, educational, health, and other benefits and  
24 enjoyment from these activities.

25           31. Conservation Groups' members also obtain drinking water from streams that are  
26 downstream from the lease parcels, and groundwater, below or near the lease parcels. These  
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1 areas are at risk of water contamination from fracking, pipeline spills, and chemical, wastewater,  
2 and oil and gas storage that could result from oil and gas development on the auctioned lease  
3 parcels.

4 32. Conservation Groups' and their members have shown an interest in participating  
5 in the management of the Grand Junction and Colorado River Valley Field Offices through  
6 participation in the development of land-use and resource management plans and oil and gas  
7 leasing decisions, and in the preparation of comprehensive environmental analyses required  
8 under NEPA. Conservation Groups participated in BLM's decision whether to auction the lease  
9 parcels by commenting on the Determinations of NEPA Adequacy for each lease auction, and  
10 submitting a timely administrative protest, pursuant to 43 C.F.R. §§ 4.450-2 and 3120, of each  
11 lease sale.

12 33. Conservation Groups and their members have been and are suffering, and will  
13 continue to suffer, irreparable injury as a result of BLM's authorizations of the lease auctions and  
14 their failure to comply with NEPA. For example, the oil and gas leases issued by BLM will  
15 allow increased fracking and oil and gas development, resulting in noise, visual blight, increased  
16 traffic, seismic risks, loss of natural soil function, habitat fragmentation and degradation,  
17 greenhouse gas emissions, and greater air and water pollution and stream depletions. All of these  
18 harms will diminish Conservation Groups' members' ability to enjoy recreational, spiritual,  
19 professional, aesthetic, educational, and other activities in and around the Grand Junction Field  
20 Office, Colorado River Valley Field Office, and Colorado River Basin, while increased water  
21 pollution may foreseeably contaminate drinking water sources used by Conservation Groups'  
22 members and/or adversely affect fish species of scientific and/or recreational interests. BLM has  
23 failed to study and adopt adequate mitigation measures to avoid or significantly reduce these and  
24 other significant adverse impacts of the challenged oil and gas leasing decisions.

25 34. BLM's failure to comply with NEPA has deprived Conservation Groups and their  
26 members of information to which they are entitled under NEPA, including information  
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1 pertaining to the effects of new leasing on environmental resources in the Grand Junction and  
2 Colorado River Valley Field Offices, reasonable alternatives to the proposed action, and  
3 available measures to mitigate adverse environmental impacts. This lack of required public  
4 information has injured Conservation Groups and their members by depriving them of a  
5 meaningful opportunity to comment on the missing information; and denying them the  
6 procedural safeguards required by NEPA to ensure that BLM carefully consider the direct,  
7 indirect, and cumulative effects of the agency's proposed actions, environmentally superior  
8 alternatives to those actions, and appropriate mitigation measures prior to allowing new leasing.

9         35. Conservation Groups' injuries will be redressed by the relief sought herein. This  
10 court has jurisdiction to vacate and enjoin BLM's authorization of the lease auctions, and any  
11 leases and project approvals relying on BLM's Determinations of NEPA Adequacy. Requiring  
12 the preparation of an EIS would redress Conservation Groups' injuries by increasing the  
13 likelihood of mitigation of the impacts of BLM's leasing decision, and increasing the likelihood  
14 of survival of rare and imperiled species impacted by the decision. All such relief would improve  
15 Conservation Groups' opportunities for using and enjoying the lease parcels and their  
16 surrounding areas, and the Colorado River in the future.

17         36. Conservation Groups have no adequate remedy at law to address the foregoing  
18 injuries to their interests.

19         37. Defendant BUREAU OF LAND MANAGEMENT is an agency of the United  
20 States within the U.S. Department of the Interior. BLM is responsible for managing its lands,  
21 including the lands within the Grand Junction and Colorado River Valley Field Offices, in  
22 accordance with federal law, including NEPA, the Federal Land Policy and Management Act,  
23 and the Mineral Leasing Act.

24         38. Defendant BRIAN STEED is sued in his official capacity as Deputy Director of  
25 Bureau of Land Management exercising authority of the Director. As Deputy Director, Mr. Steed  
26 oversees the agency's management of public lands and is responsible for managing public lands  
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1 under BLM authority, including lands and resources in Colorado subject to the decision at issue  
2 herein, in accordance with NEPA and other federal law.

3 39. Defendant RYAN ZINKE is sued in his official capacity as Secretary of the U.S.  
4 Department of Interior. Secretary Zinke is responsible for managing public lands, resources, and  
5 mineral estates of the United States, including lands and resources in Colorado sold in the lease  
6 auctions, and in his official capacity, is responsible for implementing and complying with federal  
7 law, including the legal requirements that form the basis of this action.

8 40. Defendant, THE U.S. DEPARTMENT OF THE INTERIOR, is a Cabinet-level  
9 federal agency that manages America's natural and cultural resources, including resource and  
10 land use planning, leasing and development.

#### 11 **STATUTORY BACKGROUND**

12 41. The National Environmental Policy Act is “our basic national charter for  
13 protection of the environment.” 40 C.F.R. § 1500.1(a). Its twin aims are to facilitate informed  
14 agency decision-making and public access to information. By focusing both agency and public  
15 attention on the environmental effects of proposed actions, NEPA facilitates informed decision-  
16 making by agencies and fosters public participation.

17 42. To accomplish these objectives, NEPA requires “responsible [federal] officials”  
18 to prepare an environmental impact statement (“EIS”) to consider the effects of each “major  
19 Federal action[ ] significantly affecting the quality of the human environment.” 42 U.S.C. §  
20 4332(2)(C)(i).

21 43. The EIS must “provide full and fair discussion of significant environmental  
22 impacts and shall inform decisionmakers and the public of the reasonable alternatives which  
23 would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40  
24 C.F.R. § 1502.1. An EIS must take a “hard look” at not only the direct impacts of a proposed  
25 action, but also the indirect and cumulative impacts. Such analysis must include all reasonably  
26 foreseeable impacts of the proposed action. An EIS must also include a discussion of possible  
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1 mitigation measures to avoid adverse environmental impacts. *See* 42 U.S.C. § 4332(C)(ii); 40  
 2 C.F.R. §§ 1502.14(f), 1502.16(h), 1508.14, 1508.25(b)(3). To “properly evaluate the severity of  
 3 the adverse effects” of a proposed project, the discussion of mitigation measures must be  
 4 “reasonably complete.” *Colo. Env’tl Coalition v. Dombeck*, 185 F.3d 1162, 1173 (10th Cir.  
 5 1999), *see also* *Robertson v. Methow Valley*, 490 U.S. 332, 352 (1989).

6 44. NEPA’s implementing regulations require that the agency “shall identify any  
 7 methodologies used and shall make explicit reference by footnote to the scientific and other  
 8 sources  
 9 relied upon for conclusions,” and shall ensure the scientific accuracy and integrity of  
 10 environmental  
 11 analysis. *Id.* § 1502.24. The agency must disclose if information is incomplete or unavailable and  
 12 explain “the relevance of the incomplete or unavailable information to evaluating reasonably  
 13 foreseeable significant adverse impacts.” *Id.* § 1502.22(b)(1). The agency must also directly and  
 14 explicitly respond to dissenting scientific opinion. *Id.* § 1502.9(b). The EIS must also be  
 15 circulated for public comment.

16 45. To determine whether the impacts of a proposed action are significant enough to  
 17 warrant preparation of an EIS, the agency may prepare an Environmental Assessment (EA).  
 18 Under NEPA’s implementing regulations, an agency’s EA must include “brief discussions of the  
 19 need for the proposal, of the alternatives . . . , [and] of the environmental impacts of the proposed  
 20 action and the alternatives.” 40 C.F.R. § 1508.9. Like an EIS, the EA must take a hard look at all  
 21 reasonably foreseeable, direct, indirect, and cumulative impacts of the proposed action. *See id.* §  
 22 1508.7, 1508.8. If the agency decides the impacts are not significant, it must supply a convincing  
 23 statement of reasons why.

24 46. Federal agencies must comply with NEPA before there are “any irreversible and  
 25 irretrievable commitments of resources which would be involved in the proposed action should it  
 26 be implemented.” 42 U.S.C. § 4332(2)(C)(v); *see also* 40 C.F.R. §§ 1501.2, 1502.5(a).

1           47. NEPA requires Federal Defendants to consider “any adverse environmental  
2 effects which cannot be avoided.” 42 U.S.C. § 4332(2)(C)(ii). In so doing, Federal Defendants  
3 must “identify and develop methods and procedures . . . which will insure that presently  
4 unquantified environmental amenities and values may be given appropriate consideration in  
5 decision-making along with economic and technical considerations.” *Id.* § 4332(2)(B).

6           48. BLM policy on Land Use Planning and Lease Parcel Reviews, as set forth in the  
7 Bureau of Land Management Manual, Section 3120, and other policy guidance documents,  
8 guides BLM’s implementation of NEPA requirements. BLM guidance confirms that a  
9 Determination of NEPA Adequacy “is not itself a NEPA document,” and may be utilized only  
10 when, among other conditions, “the direct, indirect, and cumulative effects that would result  
11 from implementation of the new proposed action [are] similar (both quantitatively and  
12 qualitatively) to those analyzed in the existing NEPA document.” BLM NEPA Handbook, H-  
13 1790-1, Section 5.1.2-3.

14           49. The Federal Land Policy and Management Act (FLPMA) authorizes BLM to  
15 create and amend Resource Management Plans governing the use of public lands and federal  
16 minerals under BLM’s management. *See* 43 U.S.C. § 1712. Among other things, BLM uses the  
17 Resource Management Plan process to determine what public lands are open to federal oil and  
18 gas leasing and development and how those leased lands will be managed, and to formulate  
19 mitigation measures to reduce the impacts of oil and gas development, including lease  
20 stipulations for the protection of various resources.

21           50. The Mineral Leasing Act (MLA) authorizes the Secretary of Interior to lease  
22 federal lands and minerals for oil and gas development in a competitive bidding process. *See* 30  
23 U.S.C. § 226. BLM may, but is not obligated to, offer public lands that operators have  
24 “nominated” or requested for leasing in quarterly lease auctions, after confirming lands are open  
25 for leasing under the relevant Resource Management Plan or other governing land-use plan.

## FACTUAL BACKGROUND

### A. The Mancos Shale Formation and the Dangers of Hydraulic Fracturing

51. The Piceance Basin spans seven counties in northwest Colorado, and encompasses large areas of the Colorado River Valley and Grand Junction planning areas, including the areas where BLM auctioned the challenged leases. This basin contains vast “tight” and “continuous” natural gas reserves, which are difficult to extract using conventional drilling technology and require extraction via hydraulic fracturing or other unconventional methods. In recent years, the most productive area of the Basin has been the Mesa Verde Group, which consists of multiple underground formations targeting natural gas and coalbed methane reserves. However, exploration of the underlying Mancos Shale Formation has revealed development potential of these deeper shale gas reserves. In June 2016, the U.S. Geological Survey asserted the Mancos shale play could contain 66 trillion cubic feet of undiscovered, technically recoverable shale natural gas reserves—over 40 times greater than the amount previously assessed in 2003—plus 74 million barrels of shale oil and 45 million barrels of natural gas liquid.

52. Recent technological advances in horizontal drilling and multi-stage hydraulic fracturing have enabled exploitation of the Mancos shale play. Hydraulic fracturing, a dangerous practice in which operators inject toxic fluid underground under extreme pressure to produce fractures that release oil and gas, has greatly increased industry interest in developing shale oil and gas deposits that would otherwise be impossible or uneconomic to extract. Advances in horizontal drilling techniques consist of a single vertical or directional wellbore, and then multiple horizontal wellbores that radiate laterally. Horizontally drilled wells can be over two miles in length, which are then fractured sometimes several dozens of times each, resulting in far greater magnitudes of water consumption and air pollution.

53. The main ingredient in modern fracturing fluid (or “frack fluid”) is generally water, although petroleum has also been used as a base fluid. The second ingredient is a “proppant,” typically sand, that becomes wedged in the fractures and holds them open so that

1 passages remain after pressure is relieved. In addition to the base fluid and proppant, a mixture of  
2 chemicals is used for purposes such as increasing the viscosity of the fluid, keeping proppants  
3 suspended, and impeding bacterial growth or mineral deposition.

4         54. Fracking entails the transport of massive quantities of fluid and other products to  
5 a single well site: thousands of tons of sand, thousands of gallons of chemicals, and over 24  
6 million gallons of water may be used to drill and frack a single well. In the Piceance Basin,  
7 dozens of wells may be drilled from a single well pad. Many millions of gallons of wastewater  
8 may be produced from a single well, which must then be stored, transported, and disposed of.  
9 This includes highly toxic frack fluid that returns to the surface after it is injected (known as  
10 “flowback”) and brine water that discharges from the fractured formation (known as “produced  
11 water”). These wastewaters may be laced with naturally occurring radionuclides, heavy metals,  
12 and hydrocarbons that are carried to the surface from the underground formation.

13         55. Horizontal drilling—or drilling down and then sideways along the shale  
14 formation—enables economic extraction of deep layers of shale that are not profitable to extract  
15 via vertical drilling and hydraulic fracturing alone. Horizontal drilling exposes more of the oil- or  
16 gas-bearing formation to the production well. Fracking typically occurs in multiple stages every  
17 several hundred feet along a horizontal borehole that can be miles long.

18         56. Horizontal drilling typically requires much greater volumes of water than vertical  
19 drilling. Freshwater is also required for drilling the borehole. Given the typically longer  
20 boreholes in a horizontal well than in a vertical well, greater amounts of freshwater are needed  
21 for horizontal drilling, resulting in greater production of wastewater. According to the Colorado  
22 Oil and Gas Conservation Commission, since 2013, over 150 horizontal wells have been  
23 “spudded” (i.e., completed the initial drilling stage) in northwest Colorado counties spanning the  
24 Piceance Basin, including Moffat, Mesa, Gunnison, Garfield, Delta, Rio Blanco and Routt  
25 counties.

1           57. With the rise in fracking and horizontal drilling operations, significant new  
2 information has emerged about fracking in recent years showing significant impacts to air  
3 quality, public health, water resources, wildlife, and climate change.

4           58. The high volumes of chemicals and water involved, and the high volumes of oil  
5 and gas produced, requires larger-scale infrastructure and equipment—e.g., larger pads,  
6 pipelines, tanks, pits, and rigs—and thus greater land disturbance than conventional oil and gas  
7 development, to support fracking operations. The clearance of land and construction of new  
8 infrastructure destroys and fragments wildlife habitat, and industrializes rural areas. Further, the  
9 transport of larger volumes of water, sand, fracking chemicals, wastewater, and solid waste (e.g.,  
10 drill cuttings from longer boreholes) to and from the well pad requires thousands of truck trips,  
11 causing greater air pollution, noise, and public safety hazards.

12           59. Fracking can result in the discharge of hazardous wastes, including petroleum  
13 products, into drinking water. The hydraulic fracturing process involves hundreds of toxic  
14 chemicals that can escape into water supplies either through deep well injection or through more  
15 conventional routes, like migration through faulty casing or via surface spills. In 2016, the U.S.  
16 Environmental Protection Agency (EPA) finalized a study that concluded that fracking can and  
17 has resulted in adverse effects on drinking water resources.<sup>1</sup> The study noted numerous cases of  
18 water contamination resulting from spills, leaks, and faulty wells. Numerous studies indicate that  
19 leaks from fracked wells are a chronic problem, even for newer wells.

20           60. Increased storage, transport, and disposal of chemicals and wastewaters  
21 associated with fracking can result in a higher incidence and severity of spills and leaks, and  
22 devastating consequences for fish and wildlife.

23           61. Recently published scientific papers describe the harmfulness of the chemicals  
24 often used in fracking fluid. One analysis found that 37 percent of the chemicals found at fracked  
25

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26 <sup>1</sup> U.S. EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on  
27 Drinking Water Resources in the United States (2017), available at <https://www.epa.gov/hfstudy>.

1 gas wells were volatile, and that of those volatile chemicals, 81 percent can harm the brain and  
 2 nervous system, 71 percent can harm the cardiovascular system and blood, and 66 percent can  
 3 harm the kidneys.<sup>2</sup>

4 62. Volatile organic compounds (VOCs) from car and truck engines, as well as the  
 5 drilling and fracking stages of oil and gas production, make up about 3.5 percent of the gases  
 6 emitted by oil or gas operations. The VOCs emitted include the BTEX compounds – benzene,  
 7 toluene, ethyl benzene, and xylene – which are listed as hazardous air pollutants by EPA. These  
 8 toxic air contaminants coupled with smog-forming chemicals (such as nitrogen oxides or NOx,  
 9 methane, and ethane) threaten local communities and regional air quality.

10 63. A number of studies link proximity to unconventional oil and gas development  
 11 (i.e., fracking and horizontal drilling) to increased rates of cancer, birth defects, poor infant  
 12 health, endocrine disruption, cardiology-patient hospitalization, and acute health effects (e.g.,  
 13 skin rashes, nausea or vomiting, headache, dizziness, eye and throat irritation). For example:

14 (a) One study in Colorado found that pregnant women living within ten miles  
 15 of a fracked well were more likely to bear children with congenital heart defects and possibly  
 16 neural tube defects.<sup>3</sup>

17 (b) A study of 9,384 pregnant women in Pennsylvania found that women who  
 18 live near active drilling and fracking sites had a 40 percent increased risk for having premature  
 19 birth and a 30 percent increased risk for having high-risk pregnancies.<sup>4</sup>

20 (c) A study that analyzed air samples taken during drilling operations near  
 21 natural gas wells and residential areas in Garfield County, Colorado detected 57 chemicals  
 22 within a 0.7 mile radius of the wells, including 44 with reported health effects.<sup>5</sup> Ambient  
 23

24 <sup>2</sup> Colborn, Theo et al., Natural Gas Operations from a Public Health Perspective, 17 Human and  
 Ecological Risk Assessment 1039, 1046 (2011).

25 <sup>3</sup> McKenzie, Lisa M., Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in  
 Rural Colorado, 122 Environmental Health Perspectives 412 (2014).

26 <sup>4</sup> Casey, Joan A., Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania, USA,  
 27 Epidemiology 163 (2016).

28 <sup>5</sup> Colborn et al., An Exploratory Study of Air Quality Near Natural Gas Operations, Human and

1 concentrations of polycyclic aromatic hydrocarbons (PAHs) found in the study may be of  
 2 “clinical significance”; low-level prenatal exposure to PAHs has been linked to lower mental  
 3 development and IQ scores in children.

4 (d) In Colorado, a study of water samples near active natural gas wells that  
 5 had been fracked and known spill sites in Garfield County, Colorado indicated the presence of  
 6 endocrine disrupting chemicals, and the presence of moderate levels of these chemicals in the  
 7 Colorado River, the drainage basin for this region.<sup>6</sup> The study suggests that areas with known-  
 8 natural gas related spills surrounding the river might be contributing to this contamination.

9 (e) In one study, residents living within one-half mile of a fracked well were  
 10 significantly more likely to develop cancer than those who live more than one-half mile away,  
 11 with exposure to benzene being the most significant risk.<sup>7</sup>

12 (f) A study using data from rural Colorado shows a link between proximity to  
 13 oil and gas development and childhood leukemia. Researchers found children diagnosed with  
 14 acute lymphocytic leukemia were more likely to live in areas of high-density oil and gas  
 15 development compared to children with other types of cancer.<sup>8</sup>

16 (g) A recent Yale University study identified numerous fracking chemicals  
 17 that are known, probable, or possible human carcinogens (20 air pollutants) and/or are linked to  
 18 increased risk for leukemia and lymphoma (11 air pollutants), including benzene, 1,3-butadiene,  
 19 cadmium, diesel exhaust, and PAHs.<sup>9</sup>

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20 Ecological Risk Assessment: An International Journal, Vol. 20, Iss. 1, Table 4 available at  
 21 <http://www.tandfonline.com/doi/full/10.1080/10807039.2012.749447>.

22 <sup>6</sup> Kassotis, Christopher D. et al., Estrogen and Androgen Receptor Activities of Hydraulic Fracturing  
 Chemicals and Surface and Ground Water in a Drilling-Dense Region. Endocrinology, March 2014,  
 155(3):897–907, pp. 905-906, available at <http://press.endocrine.org/doi/full/10.1210/en.2013-1697>.

23 <sup>7</sup> McKenzie, L. et al., Human Health Risk Assessment of Air Emissions from Development of  
 Unconventional Natural Gas Resources, 424 Science of the Total Environment 79 (2012) (“McKenzie  
 24 2012”).

25 <sup>8</sup> McKenzie, Lisa M., et al., Childhood hematologic cancer and residential proximity to oil  
 and gas development, PLoS ONE 12(2): e0170423 (2017),  
<http://dx.doi.org/10.1371/journal.pone.0170423>.

26 <sup>9</sup> Elliot, Elise G. et al., A Systematic Evaluation of Chemicals in Hydraulic-Fracturing Fluids and  
 Wastewater for Reproductive and Developmental Toxicity, 27 Journal of Exposure Science and  
 27 Environmental Epidemiology 90 (2016).

1 (h) A rigorous study by Johns Hopkins University, which examined 35,000  
 2 medical records of people with asthma in Pennsylvania, found that people who live near a higher  
 3 number of, or larger, active gas wells were 1.5 to 4 times more likely to suffer from asthma  
 4 attacks than those living farther away, with the closest groups having the highest risk.<sup>10</sup> Increased  
 5 asthma risks occurred during all phases of well development.

6 (i) A report from a researcher at Colorado State University shows that ozone  
 7 smog that results from oil and gas industry pollution poses a real threat to children who suffer  
 8 from asthma.<sup>11</sup> Nationally, there are more than 750,000 summertime asthma attacks in children  
 9 under the age of 18 due to ozone smog resulting from oil and gas pollution. Each summer, there  
 10 are more than 2,000 asthma-related emergency room visits and over 600 respiratory related  
 11 hospital admissions nationally due to ozone smog resulting from oil and gas pollution.

12 64. The above studies and many others were presented to BLM for its consideration  
 13 in approving the lease auctions. BLM's Determinations of NEPA Adequacy, however, do not  
 14 address these studies, or analyze human health impacts of oil and gas development on the  
 15 particular communities surrounding the lease parcels. This failure is not cured by the RMP-EISs  
 16 on which they rely, where many of the same and similar studies were also provided to BLM, and  
 17 where the agency also failed to consider or analyze the weight of scientific information.

18 65. Many of the lease parcels are also within or near towns or popular recreational  
 19 areas. Development of these parcels for oil and gas could impact the health of local residents and  
 20 visitors. For example:

21 (a) The town of De Beque, Colorado in Mesa County, overlaps or borders  
 22 lease parcels, and is within one or two miles of other lease parcels.

23  
 24  
 25 <sup>10</sup> Rasmussen, Sara G. et al., Association Between Unconventional Natural Gas Development in the  
 Marcellus Shale and Asthma Exacerbations, 176 JAMA Internal Medicine 1334 (2016).

26 <sup>11</sup> Fleischman, Lesley, Gasping for Breath: An Analysis of the health effects from the oil and gas industry,  
 Clean Air Task Force (Aug. 2016), available at  
 27 [http://www.catf.us/resources/publications/files/Gasping\\_for\\_Breath.pdf](http://www.catf.us/resources/publications/files/Gasping_for_Breath.pdf).

1 (b) De Beque's Pre-K-12 School is within one-half mile of a lease parcel  
2 (parcel COC77995).

3 (c) The unincorporated community of Mesa, Colorado in Mesa County is  
4 within two miles of a lease parcel.

5 (d) The unincorporated community of Molina, Colorado in Mesa County is  
6 within less than a half-mile of a lease parcel.

7 (e) Lease parcels are within two miles of the Island Acres Section of James  
8 M. Robb-Colorado River State Park, a popular campground on the Colorado River and rest stop  
9 along I-70.

10 (f) A lease parcel lies within half a mile of Highline Lake State Park, an  
11 important migratory bird habitat in the Grand Valley, which contains two lakes and is popular  
12 with birders. Highline Lake State Park is also a popular area for camping and open water  
13 swimming, and numerous recreational events are held there every year—including the 18 Hours  
14 of Fruita Mountain Bike Race and local triathlon races.

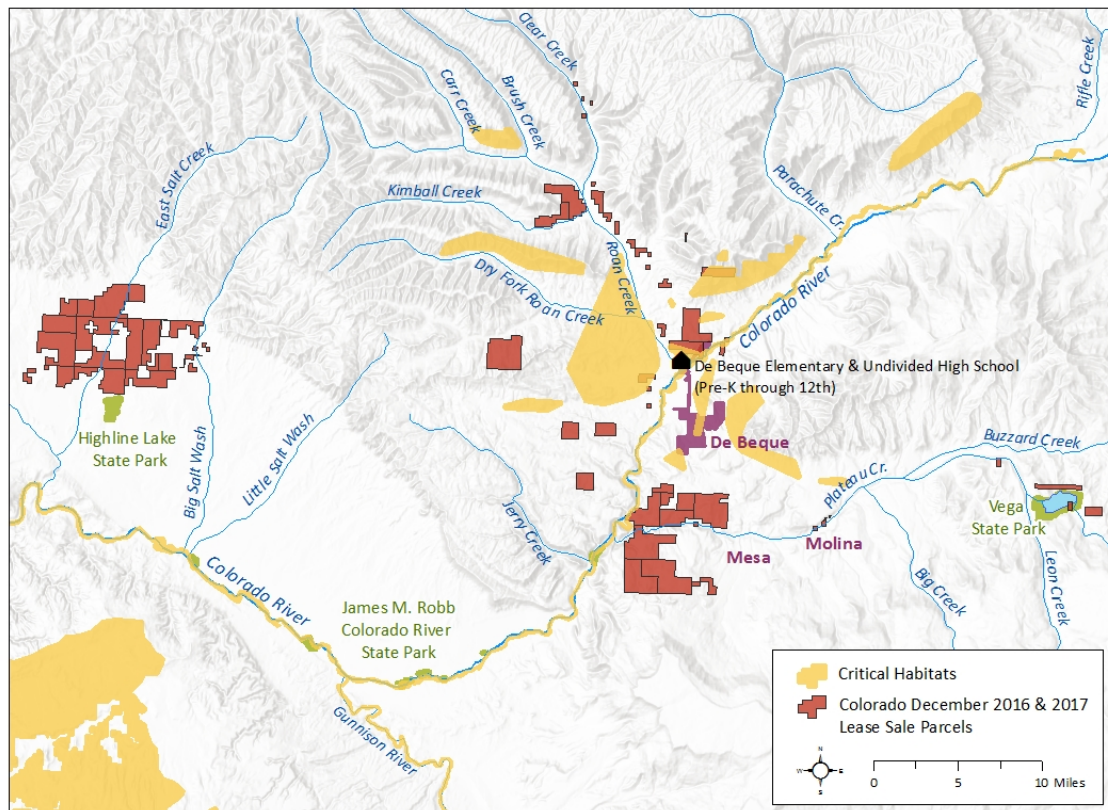
15 66. One lease parcel underlies Vega Reservoir. Vega Reservoir is a high-mountain  
16 lake within a montane meadow in Vega State Park, and supplies irrigation water to downstream  
17 communities. Numerous residences surround Vega Reservoir, and the area is popular for fishing,  
18 camping, hunting, and other forms of recreation. Lease parcels also lie just outside Vega State  
19 Park, including one parcel adjacent to Grand Mesa National Forest.

20 **B. Natural Resources of the Lease Auction Parcels and Surrounding Areas**

21 67. The Grand Junction and Colorado River Valley Field Offices support a rich  
22 diversity of rare, at-risk and endemic wildlife, fish, and plants, and abundant outdoor recreational  
23 opportunities. The parcels offered in the December 8, 2016 and December 7, 2017 lease auctions  
24 lie within areas vital to sustaining these unique and sensitive natural resources, and places where  
25 people live and recreate. The lease auctions included numerous parcels overlying or neighboring  
26 critical habitat for the endangered Colorado pikeminnow and razorback sucker in the Colorado  
27  
28

River, and habitat for other native, sensitive fish species, such as bluehead sucker, flannelmouth sucker, and roundtail chub. Many of these parcels are also within or near important habitat for rare and sensitive plant species, such as the imperiled De Beque phacelia, Parachute beardtongue, and Colorado hookless cactus.

68. Above the Grand Valley, between Palisade and Parachute, Colorado, a number of parcels directly overlap the Colorado River, its tributaries, and their floodplains and riparian areas—the region’s lifeblood in arid western Colorado. U.S. Fish and Wildlife Service has designated this stretch of the river as critical habitat for the Colorado pikeminnow and razorback sucker, which are both listed as “endangered” under the Endangered Species Act. Numerous lease parcels lie atop or drain into this critical habitat (see December 2016 and December 2017 Lease Auction parcel map below).



Data Sources:  
Bureau of Land Management  
US Fish & Wildlife Service

Map by: K. Clauser, Center for Biological Diversity 4/23/2018

1           69.     The Colorado pikeminnow is an elongated pike-like fish and the largest minnow  
2 in North America, once growing as large as six feet and weighing nearly 100 pounds. It now  
3 rarely exceeds three feet or more than 18 pounds. The razorback sucker is one of the largest  
4 suckers in North America, a bottom browser that primarily feeds on algae, plant debris, and  
5 aquatic insect larvae. It often reaches over two feet in length and over six pounds. Both the  
6 Colorado pikeminnow and razorback sucker are migratory fish known to travel several hundreds  
7 of miles to spawning areas. Each can live up to 40 years. Both species were once abundant  
8 throughout the Colorado River mainstem and its tributaries. Today, only two wild populations of  
9 Colorado pikeminnow exist in the Colorado River and Green River systems. A variety of factors,  
10 including lack of adequate summer and seasonal flows in the Upper Colorado River Basin,  
11 predation by nonnative fish, and effects from pollutants including mercury and selenium, has  
12 prevented larval and juvenile fish of these species from surviving into adulthood and establishing  
13 self-sustaining wild populations.

14           70.     Historically, threats to endangered fish populations in the Colorado River Basin  
15 were due primarily to the construction and operation of dams, which caused a loss of suitable  
16 habitat. Dam construction drastically modified the river's natural hydrology and channel  
17 characteristics throughout the Colorado River Basin, fragmenting the river ecosystem, blocking  
18 migrations, reducing temperatures downstream of dams, creating lake habitat, and creating  
19 conditions favorable to nonnative fish predators and competitors. Threats to these species now  
20 also include stream regulation, habitat modification, competition with and predation by  
21 nonnative fish, and pesticides, air pollutants and climate change.

22           71.     The 15-mile Reach of the Colorado River provides some of the most important  
23 critical habitat, critical to the recovery of the Colorado pikeminnow and razorback sucker. Under  
24 the Endangered Species Act, only areas that are "essential for the conservation of the species"  
25 may be designated critical habitat. 16 U.S.C. § 1532(5). Spanning 15 miles upstream from the  
26 Gunnison River confluence in Grand Junction, Colorado, and northeast to the Grand Valley  
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1 Diversion Dam, the 15-Mile Reach contains valuable spawning habitat for both species; an  
2 optimum balance between temperature and food availability and year-round habitat for adult  
3 Colorado pikeminnow; and an important refuge for these fish should a catastrophic event cause a  
4 loss of populations in the Gunnison River or in the Colorado River below the Gunnison River  
5 confluence.

6 72. All of the December 8, 2016 lease sale parcels lie within the Colorado River sub-  
7 basin and are directly upstream from or drain into the 15-mile Reach. The Colorado River sub-  
8 basin encompasses the upstream reaches of the main stem Colorado River and its headwaters to  
9 its confluence with the Gunnison River.

10 73. All of the December 7, 2017 lease sale parcels also lie within the Colorado River  
11 sub-basin, including many that are upstream from or drain into the 15-mile Reach. All parcels  
12 below the 15-mile Reach also drain into critical habitat for the endangered fish.

13 74. Parcels also overlie or neighbor Plateau Creek, Clear Creek, and Roan Creek,  
14 important drainage areas of the Colorado River Basin. Plateau Creek provides important habitat  
15 to sensitive native fish species, including bluehead sucker, flannelmouth sucker, and roundtail  
16 chub.

17 75. Oil and gas development threatens the endangered fish and other sensitive fish  
18 species and their habitat by dewatering streams, causing sedimentation and runoff pollution, and  
19 increasing the risk of toxic spills and leaks. The Determinations of NEPA Adequacy for the lease  
20 auctions do not analyze these effects on the endangered fish, sensitive fish species, and their  
21 habitat in the particular areas to be leased. Likewise, the RMP-EISs on which the Determinations  
22 of NEPA Adequacy rely lack this analysis.

23 76. The leased areas near De Beque, Colorado also provide important habitat for  
24 sensitive plant species, such as Parachute beardtongue, De Beque phacelia, and Colorado  
25 hookless cactus—all listed as “threatened” under the Endangered Species Act. These plants  
26 endemic to western Colorado specialize in unusual soils or geological formations scattered in  
27  
28

1 small pockets of the region. Critical habitat for Parachute beardtongue and/or De Beque phacelia  
 2 are found on or near numerous parcels sold in the lease auctions. Colorado hookless cactus also  
 3 occupies several leased areas. Many other rare and endemic plants also likely found within or  
 4 near the leased areas, including, sun-loving meadowrue, De Beque milkvetch, Adobe hills  
 5 thistle, Wetherill milkvetch, long-flower cat's eye, Naturita milkvetch, Roan Cliffs blazing star,  
 6 Utah mountain lilac, Utah fescue, Piceance bladderpod, and Cisco sego lily.

7 77. BLM's Determinations of NEPA Adequacy for the lease auctions lack any  
 8 analysis of potential significant impacts of oil and gas development on the particular plant  
 9 species and communities inhabiting these lease parcels.

#### 10 **C. Fracking and its Contribution to Climate Change**

11 78. With the rise of fracking technology and its ability to unlock vast shale and other  
 12 geological reserves, the U.S. has become the world's leading producer of both petroleum and  
 13 natural gas. The rapid expansion in fracking operations and fossil fuel production, however,  
 14 threatens to unleash enormous amounts of greenhouse gas emissions and undermine U.S.  
 15 commitments to reduce greenhouse gas emissions and limit global warming to scientifically-  
 16 advised limits. Production of fossil fuels from U.S. public lands and waters accounts for  
 17 approximately 24% of energy-related U.S. greenhouse gas emissions, and approximately 21% of  
 18 total U.S. emissions.

19 79. Climate change is a problem of global proportions resulting from the cumulative  
 20 greenhouse gas emissions (e.g., carbon dioxide and methane) of countless individual sources—  
 21 primarily sources that burn fossil fuels. Fracking and oil and gas development emit greenhouse  
 22 gases at every stage of the extraction, production, transportation, and combustion processes.  
 23 These include emissions from equipment used during the land clearing, well construction,  
 24 drilling, fracking, and extraction process and from transporting materials and equipment to the  
 25 well site; venting from wells and gas flaring, when gas cannot be captured or contained; wells,  
 26 tanks, and pipelines, which are prone to leakage; railcars and trucks distributing the raw and  
 27  
 28

1 finished product; and the refining, processing, and end-use combustion of the oil and gas. In  
2 addition, the construction and operation of pipelines, export terminals, refineries, and other  
3 infrastructure to support oil and gas development all entail significant greenhouse gas emissions;  
4 and, ultimately, from end use and combustion.

5 80. Given already dangerously high levels of greenhouse gas emissions in the  
6 atmosphere and the disastrous effects of warming temperatures for decades to come, an extensive  
7 body of research points to the need for human society to halt all new commitments to fossil fuel  
8 development and infrastructure and even phase out existing areas of fossil fuel production.

9 81. Earlier this year, the United States released the Climate Science Special Report  
10 prepared for the Fourth National Climate Assessment (“NCA”), which concluded that  
11 anthropogenic activity—principally from the burning of fossil fuel resources—is the primary  
12 driver of global warming. The observed increases of greenhouse gases in the atmosphere over  
13 the industrial era has already increased global average temperatures by over 1.0°C—now the  
14 warmest in the history of modern civilization. Sixteen of the warmest years on record for the  
15 globe occurred in the last 17 years, including record high temperatures in each of the last three  
16 years. This warming has resulted in documented impacts to our lands and oceans: melting  
17 glaciers; diminishing snow cover and snowpack; shrinking sea ice; rising sea levels; and  
18 increasing and intensifying natural disasters such as droughts, heatwaves, and wildfires. Without  
19 major reductions in greenhouse gas emissions, the increase in average global temperature  
20 relative to pre-industrial times could reach more than 5.0°C by the end of the century. Limiting  
21 warming between 1.5°C and 2.0°C—the generally accepted threshold for avoiding the worst  
22 dangers of climate change—requires dramatic emission reductions.

23 82. Immediate action is required. Concentrations of heat-trapping gases already exist  
24 at the highest levels on this planet in the last 3 million years, and are increasing at an  
25 unprecedented rate. Unabated emissions could cause carbon levels to exceed those not  
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28

1 experienced in tens to hundreds of millions of years, threatening the very fabric of life as we  
2 have known it.

3 83. The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment  
4 Report, and other expert assessments, have established global carbon budgets, or the total  
5 amount of carbon that can be burned while maintaining some probability of staying below  
6 temperature thresholds of 1.5°C and 2.0°C. Exceeding these temperature targets could lead to  
7 irreversible and catastrophic climate change effects. According to the IPCC, total cumulative  
8 anthropogenic emissions of carbon dioxide (CO<sub>2</sub>) must remain below about 1,000 gigatons of  
9 CO<sub>2</sub> (GtCO<sub>2</sub>) from 2011 onward for a 66 percent probability of limiting warming to 2°C above  
10 pre-industrial levels.<sup>12</sup> A more cautious and prudent budget would hold emissions to below 400  
11 GtCO<sub>2</sub> from 2011 onward for a 66 percent probability of limiting warming to 1.5°C.<sup>13</sup> However,  
12 in just four short years, 15% of the global carbon budget for limiting warming to 2°C has already  
13 been consumed, resulting in a budget of 850 GtCO<sub>2</sub> from 2015 onward.<sup>14</sup> Further, 40% of the  
14 budget for limiting warming to 1.5°C has already been consumed, and is now reduced to 240  
15 GtCO<sub>2</sub> from 2015 onward. According to the Fourth NCA projected emissions could lead to using  
16 up the 1.5°C global carbon budget in less than *two years*—by 2019, under either a high or low  
17 emissions scenario—and to using up the 2°C budget in 16 to 20 years— by 2033 under a high  
18 emissions scenario, and 2037 under a low emissions scenario.<sup>15</sup> The Climate Science Special  
19

20 <sup>12</sup> Intergovernmental Panel on Climate Change, 2013: Summary for Policymakers. In: Climate Change  
21 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of  
22 the Intergovernmental Panel on Climate Change [Stocker, T.F. et al. (eds.), Cambridge University Press  
23 (2013) at 25; Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report.  
24 Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental  
25 Panel on Climate Change, [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], IPCC, Geneva,  
26 Switzerland, 151 pp. (2014) at 63-64 & Table 2.2.

27 <sup>13</sup> *Id.*

28 <sup>14</sup> Rogelj, Joeri et al., Differences between carbon budget estimates unraveled, 6 Nature Climate Change  
245 (2016) at Table 2.

<sup>15</sup> U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate  
Assessment, Vol. I, p. 397 (2017) (“Fourth NCA 2017”), available at  
[https://science2017.globalchange.gov/downloads/CSSR\\_Ch14\\_Mitigation.pdf](https://science2017.globalchange.gov/downloads/CSSR_Ch14_Mitigation.pdf); *see also* Carbon Brief,

Report prepared for Fourth National Climate Assessment (“NCA”) observed, “no more than approximately 230 GtC [gigatons of carbon]<sup>16</sup> may be emitted in the future in order to remain under this temperature threshold.”<sup>17</sup> The incremental contribution of greenhouse gas emissions from a myriad of sources—including, here, from the subject parcels leased for oil and gas development—are a debit against this remaining carbon budget. The Climate Science Special Report, including defendant Department of Interior, also confirmed “the further and the faster the Earth system is pushed towards warming, the greater the risk of unanticipated changes and impacts, some of which are potentially large and irreversible”; and “major reductions” in greenhouse gas emissions are necessary to slow or avoid these effects.<sup>18</sup>

84. A large body of scientific research has established that the vast majority of global and U.S. fossil fuels must stay in the ground in order to hold temperature rise to well below 2°C.<sup>19</sup> Studies estimate that 68 to 80 percent of global fossil fuel reserves must not be extracted and burned to limit temperature rise to 2°C.<sup>20</sup> For a 50 percent chance of limiting temperature rise to 1.5°C, 85 percent of known fossil fuel reserves must stay in the ground.<sup>21</sup>

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Analysis: Only five years left before 1.5C carbon budget is blown (May 19, 2016), *available at* <https://www.carbonbrief.org/analysis-only-five-years-left-before-one-point-five-c-budget-is-blown>.

<sup>16</sup> 230 GtC is equal to ~844 GtCO<sub>2</sub>, using the standard conversion factor of 1GtC = 3.67 GtCO<sub>2</sub>.

<sup>17</sup> Fourth NCA 2017 at 393, 404.

<sup>18</sup> *Id.* at 11, 15, 32.

<sup>19</sup> The IPCC estimates that global fossil fuel reserves exceed the remaining 275 GtC carbon budget (from 2011 onward) for staying below 2°C by 4 to 7 times, while fossil fuel resources exceed the carbon budget for 2°C by 31 to 50 times. *See* Bruckner, Thomas et al., 2014: Energy Systems. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2014) at Table 7.2.

<sup>20</sup> To limit temperature rise to 2°C, studies indicate variously that 80 percent (Carbon Tracker Initiative 2013), 76 percent (Raupach et al. 2014), and 68 percent (Oil Change International 2016) of global fossil fuel reserves must stay in the ground. *See* Carbon Tracker Initiative, Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble? (2013); Raupach, Michael et al., Sharing a quota on cumulative carbon emissions, 4 Nature Climate Change 873, Figure 2 (2014) (“Raupach 2014”); Oil Change International, The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production, 6, 12 (September 2016).

<sup>21</sup> Oil Change International 2016 at 6.

85. Effectively, fossil fuel emissions must be phased out globally within the next few decades.<sup>22</sup> A 2016 global analysis found that potential carbon emissions from developed reserves in currently operating oil and gas fields and mines would lead to global temperature rise beyond 2.0°C.<sup>23</sup> Excluding coal, currently operating oil and gas fields alone would take the world beyond 1.5°C.<sup>24</sup> To stay well below 2.0°C, the clear implication is that no new fossil fuel extraction or transportation infrastructure should be built, and governments should grant no new permits for new fossil fuel extraction and infrastructure.<sup>25</sup>

86. Under the Paris Agreement, the United States has committed to the climate change target of holding the increase in long-term global average temperature “to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”<sup>26</sup> The United States signed the Paris Agreement on April 22, 2016,<sup>27</sup> and the agreement entered into force on November 4, 2016. The Paris Agreement codifies the international consensus that climate change is an “urgent threat” of global concern.<sup>28</sup> The Agreement requires a “well below 2°C” climate target recognizing that the 2°C warming

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<sup>22</sup> Rogelj et al. (2015) estimated that a reasonable likelihood of limiting warming to 1.5° or 2°C requires global CO<sub>2</sub> emissions to be phased out by mid-century and likely as early as 2045. Rogelj, Joeri et al., Energy system transformations for limiting end-of-century warming to below 1.5°C, 5 Nature Climate Change 519 (2015). The United States must phase out fossil fuel CO<sub>2</sub> emissions even earlier: between 2025 and 2030 on average for a reasonable chance of staying below 1.5°C and between 2040 and 2045 on average for a reasonable chance of staying below 2°C. *See* Climate Action Tracker, USA (last updated Nov. 6, 2017) at 2016 Rating figure showing U.S. emissions versus year (last visited April 10, 2018), available at <http://climateactiontracker.org/countries/usa/2017.html>.

<sup>23</sup> Oil Change International, *The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production*, 5 (September 2016).

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> United Nations Framework Convention on Climate Change, Conference of the Parties, Nov. 30-Dec. 11, 2015, Adoption of the Paris Agreement Art. 2, U.N. Doc. FCCC/CP/2015/L.9 (December 12, 2015) (“Paris Agreement”).

<sup>27</sup> United Nations Treaty Collection, Chapter XXVII, 7.d Paris Agreement, List of Signatories; U.S. Department of State, Background Briefing on the Paris Climate Agreement (December 12, 2015).

<sup>28</sup> *See* Paris Agreement, at Recitals.

1 threshold is no longer considered a safe guardrail for avoiding catastrophic climate impacts and  
 2 runaway climate change.<sup>29</sup>

3 87. The United States had signed the Paris Agreement prior to the agency actions at  
 4 issue here. As of the filing of this complaint, the United States remains a party to that  
 5 agreement—notwithstanding President Trump’s recent pronouncement of intent to withdraw the  
 6 U.S. from the Agreement. Published scientific studies have estimated the United States’ portion  
 7 of the global carbon budget by allocating the remaining global budget across countries based on  
 8 factors including equity and economics. Estimates of the U.S. carbon budget vary depending on  
 9 the temperature target used by the study (1.5°C versus 2°C), the likelihood of meeting the  
 10 temperature target (50% or 66% probability), the equity principles used to apportion the global  
 11 budget among countries, and whether the least-cost mitigation pathway was assumed. The U.S.  
 12 carbon budget for limiting temperature rise to well below 2°C has been estimated at 57 GtCO<sub>2</sub>eq  
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21 <sup>29</sup> See the comprehensive scientific review under the United Nations Framework Convention on Climate  
 22 Change (UNFCCC) of the global impacts of 1.5°C versus 2°C warming: U.N. Subsidiary Body for  
 23 Scientific and Technological Advice, Report on the Structured Expert Dialogue on the 2013-2015 review,  
 24 FCCC/SB/2015/INF.1 (May 4, 2015); Hansen, James et al., Assessing “dangerous climate change”:  
 25 Required reduction of carbon emissions to protect young people, future, generations and nature, 8 PLoS  
 26 ONE e81648 (2013); IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014:  
 27 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the  
 28 Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri & L.A. Meyer (eds.)],  
 IPCC, Geneva, Switzerland (2014), available at [http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full\\_wcover.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf) at 72-73; Schleussner, Carl-Friedrich et al.,  
 Differential climate impacts for policy-relevant limits to global warming: the case of 1.5C and 2C, 7 Earth  
 Systems Dynamics 327 (2016).

(which corresponds to carbon dioxide-specific emissions of  $\sim 38 \text{ GtCO}_2$ ),<sup>30</sup> while the estimated budget for limiting temperature rise to  $2^\circ\text{C}$  ranges from  $34 \text{ GtCO}_2$  to  $158 \text{ GtCO}_2$ .<sup>31</sup>

88. Numerous states, including Colorado, have committed to reducing greenhouse gas emissions consistent with the Paris Agreement's greenhouse gas reduction targets. On July 11, 2017, Colorado Governor John Hickenlooper issued an executive order committing to a 26 percent reduction in the state's total greenhouse gas emissions by 2025, as compared to 2005 levels; a 25 percent reduction in carbon dioxide emissions from the state's electricity sector by 2025, as compared to 2012 levels; and a 35 percent reduction in carbon dioxide emissions from the electricity sector by 2030, as compared to 2012 levels.<sup>32</sup>

89. Oil and gas leasing of public lands opens up new reserves for fossil fuel extraction and fracking, and runs contrary to internationally-agreed upon and state-led efforts to keep

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<sup>30</sup> Robiou du Pont, Yann et al., Equitable mitigation to achieve the Paris Agreement goals, 7 Nature Climate Change 38 (2017), Table 2 (estimating a US carbon budget of  $57 \text{ GtCO}_2\text{eq}$  (equal to  $\sim 38 \text{ GtCO}_2$ ) for a 50% chance of returning global average temperature rise to  $1.5^\circ\text{C}$  by 2100, based on IPCC equity principles for apportionment). Quantities measured in  $\text{GtCO}_2\text{eq}$  include the emissions from  $\text{CO}_2$  as well as the other well-mixed greenhouse gases ( $\text{CO}_2$ , methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and  $\text{SF}_6$ ) converted into  $\text{CO}_2$ -equivalent values, while quantities measured in  $\text{GtCO}_2$  refer to emissions of just  $\text{CO}_2$  itself. To convert between  $\text{GtCO}_2\text{eq}$  and  $\text{GtCO}_2$ , we used a conversion factor of  $1 \text{ GtCO}_2 = 1.5 \text{ GtCO}_2\text{eq}$  based on Table 1 in Meinshausen et al. 2009. See Meinshausen, Malte et al., Greenhouse gas emission targets for limiting global warming to 2 degrees Celsius, 458 Nature 1158 (2009).

<sup>31</sup> See, e.g., Robiou du Pont, Yann et al., Equitable mitigation to achieve the Paris Agreement goals, 7 Nature Climate Change 38 (2017), Table 2 (estimating a US carbon budget of  $104 \text{ GtCO}_2\text{eq}$ , which corresponds to carbon dioxide-specific emissions of  $\sim 69 \text{ GtCO}_2$ , for a 66 percent probability of keeping warming below  $2^\circ\text{C}$ ); Peters, Glen P. et al., Measuring a fair and ambitious climate agreement using cumulative emissions, 10 Environmental Research Letters 105004, Table 1 (2015) (estimating a US carbon budget of  $34 \text{ GtCO}_2$  based on an "equity" approach for allocating the global carbon budget, and  $123 \text{ GtCO}_2$  under an "inertia" approach for a 66% probability of keeping warming below  $2^\circ\text{C}$ —the "inertia" approach bases carbon budget apportionment (or "sharing") on countries' current emissions, while the "equity" approach bases sharing on population size and provides for equal per-capita emissions across countries); Gignac, Renaud and H. Damon Matthews, Allocating a 2C cumulative carbon budget to countries, 10 Environmental Research Letters 075004 (2015), Figure 2 (estimating a US carbon budget of  $78$  to  $97 \text{ GtCO}_2$  for a 66 percent probability of keeping warming below  $2^\circ\text{C}$ ); Raupach 2014at Supplementary Figure 7 (estimating budget of  $158 \text{ GtCO}_2$  for a 50% probability of limiting global warming to  $2^\circ\text{C}$  using a blended "inertia" and "equity" approach).

<sup>32</sup> Executive Order D 2017-015, Supporting Colorado's Clean Energy Transition, § II(A) (July 11, 2017), available at [https://www.colorado.gov/governor/sites/default/files/executive\\_orders/climate\\_co.pdf](https://www.colorado.gov/governor/sites/default/files/executive_orders/climate_co.pdf).

1 warming below the Paris Agreement targets and scientifically-advised limits. The significant  
2 expansion of rights to fossil fuel extraction from public lands necessarily influences the price and  
3 consumption of oil and gas versus renewable energy sources, and therefore directly influences  
4 net greenhouse gas emissions.

5 90. The two lease auctions together would result in estimated emissions of over 5.5  
6 million tons of carbon dioxide equivalent, while oil and gas development throughout the Grand  
7 Junction and Colorado River Valley planning areas, and development of the Mancos Shale,  
8 would result in many more tens of millions of greenhouse gas emissions. In addition to the  
9 downstream emissions from combustion, leakage, venting, and flaring from foreseeable oil and  
10 gas development will increase emissions of methane, a vastly more potent greenhouse gas.

11 91. BLM ignored these concerns altogether and failed to take a hard look at the direct,  
12 indirect, and cumulative greenhouse emissions that will result from the lease auctions. BLM's  
13 Determinations of NEPA Adequacy for the lease auctions fail to consider or quantify *any* site-  
14 specific direct, indirect, and cumulative greenhouse gas emissions from leasing and their  
15 resulting climate change effects. Likewise, the RMP-EISs, on which the Determinations of  
16 NEPA Adequacy are based, fail to sufficiently analyze these impacts.

17 **D. The Colorado River Valley and Grand Junction RMPs**

18 92. In 2015, BLM approved revised Resource Management Plans for the Colorado  
19 River Valley and Grand Junction Field Offices, pursuant to the Federal Land Policy and  
20 Management Act. 43 U.S.C. § 1701 *et seq.* Each plan identifies specific areas in the planning  
21 area that are open to oil and gas leasing, and each allows the development of thousands of oil and  
22 gas wells throughout the respective planning area, including horizontal well development.

23 93. The Grand Junction Field Office contains more than 1 million surface acres and  
24 1.2 million acres of federal subsurface minerals administered by BLM, primarily in Mesa and  
25 Garfield counties.

1           94.     The Colorado River Valley Field Office contains 567,000 surface acres and over  
2 700,000 sub-surface acres administered by BLM, primarily in Garfield, Eagle, Mesa, Pitkin and  
3 Routt counties.

4           95.     BLM prepared a Reasonably Foreseeable Development Scenario as part of the  
5 plan revision process for each planning area. For the Grand Junction planning area, BLM  
6 projected that over 2,100 BLM-authorized horizontal wells would be drilled to develop the  
7 Mancos shale play—over half of all new federal wells projected to be developed in the planning  
8 area through 2029. It further projected that over 1,400 horizontal wells would be drilled to  
9 develop private minerals within the planning area—almost half of all private wells expected to  
10 be developed over the planning period.

11           96.     For the adjacent Colorado River Valley planning area (just east of the Grand  
12 Junction Field Office), BLM projected over 6,640 BLM-authorized wells could be drilled over  
13 the 20-year life of the revised plan, while over 9,000 additional wells could be drilled to develop  
14 private minerals. During the planning process for the Colorado River Valley RMP-EIS revision,  
15 BLM acknowledged consistently high production of natural gas from the Mancos shale play and  
16 the potential for future production from this play, but did not estimate the number of horizontal  
17 wells that could be developed in the Colorado River Valley planning area, on the grounds that  
18 the development intensity, timing and location of such development was “too speculative” for  
19 quantitative analysis in the planning process.

20           97.     For each RMP, BLM prepared a draft and final EIS regarding that RMP’s  
21 significant environmental effects, pursuant to NEPA.

22           98.     Neither RMP-EIS performs any site-specific analysis of the environmental  
23 consequences developing any particular area of the Grand Junction or Colorado River Valley  
24 planning area for oil and gas development.

25           99.     The Grand Junction RMP-EIS fails to analyze the foreseeable water demands of  
26 horizontal wells required for development of the Mancos shale play, while the Colorado River  
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1 Valley RMP-EIS vastly underestimates such water use. Neither RMP-EIS quantifies or even  
2 acknowledges the greater amounts of chemicals and wastewater involved, and the resulting  
3 greater risk of harm to the endangered fish from spills and leaks.

4 100. The RMP-EISs do not address the increased public health risks that could result  
5 from increased horizontal well development. They fail to consider the potential for increased  
6 hazardous pollutant emissions from larger rigs, more fracking chemicals transported to and  
7 stored at the well pad for fracking deeper and longer boreholes, more wells concentrated on a  
8 single well pad, and greater hazardous waste generation, such as drilling cuttings (i.e., earth  
9 removed from drilling) and produced water.

10 101. Each RMP-EIS fails to quantify the indirect and downstream greenhouse gas  
11 emissions that could result from oil and gas development authorized by the RMP, or the  
12 reasonably foreseeable cumulative emissions that result from BLM's management. Among other  
13 things, the greenhouse gas analysis for each planning area omits emissions from transportation of  
14 extracted product to market or to refineries, refining and other processing, and combustion of the  
15 extracted end-use product, failing to disclose the full scope of greenhouse gas emissions that  
16 could result from oil and gas development authorized in the planning area.

17 102. Notably, each RMP-EIS also failed to ensure the scientific integrity of analysis  
18 relating the greenhouse gas emissions, relying on outdated science to account for methane's  
19 global warming potential (GWP)—therefore significantly underestimating the short- and long-  
20 term magnitude of methane pollution. A particular greenhouse gas' ability to contribute to global  
21 warming is based on its longevity in the atmosphere and its heat trapping capacity. Each  
22 greenhouse gas is therefore assigned a GWP to convert that gas into a carbon dioxide equivalent  
23 (CO<sub>2</sub>e). Each RMP-EIS altogether ignored the 20-year GWP for methane—thus failing to  
24 account for methane's greater near-term climate impacts—and instead relied solely on outdated  
25 100-year GWP for methane. This failure prevented BLM from providing a full and fair  
26 discussion of impacts as required by NEPA.

1           103. Moreover, because the lease auctions were approved through Determinations of  
2 NEPA Adequacy—which provide no site-specific analysis—BLM failed to quantify or analyze  
3 *any* of the direct, indirect, or cumulative emissions that result from BLM’s leasing  
4 authorizations.

5           104. The BLM has repeatedly acknowledged that climate change is a scientifically  
6 verified reality. Climate science is not a scientific frontier, and greenhouse gas and climate  
7 quantification and impact tools exist and are routinely utilized by both BLM, and other federal  
8 agencies both within and without the Department of the Interior.

9           105. Each RMP-EIS also fails to disclose or analyze the climate change impacts of  
10 increased greenhouse gas emissions resulting from new oil and gas development in the planning  
11 area, or the significance of these emissions.

12           106. The RMP-EISs fail to analyze whether opening these new sources of emissions is  
13 consistent with global, U.S., regional and State carbon budgets. The RMP-EISs fail to analyze or  
14 acknowledge existing global, U.S., regional, and State carbon budgets, and the extent to which  
15 increased oil and gas development throughout the planning areas would undermine or make  
16 impossible staying within those budgets.

17           **E. Approvals of the December 2016 and December 2017 Lease Auctions**

18           107. On February 8, 2016, BLM posted online a list of parcels “nominated” by persons  
19 interested in leasing federal minerals for oil and gas development, including parcels in the Grand  
20 Junction and Colorado River Valley Field Offices. The posting of this list commenced a 31-day  
21 public “scoping” process to determine the scope of issues to be addressed in a NEPA document  
22 analyzing the significant environmental effects of the December 8, 2016 lease auction.

23           108. Many of the lease parcels are located near areas where oil and gas operators are  
24 already conducting horizontal drilling operations or have proposed horizontal drilling. For  
25 example, lease parcels are located near the existing planning areas for the De Beque Exploratory  
26 Master Development Plan, the proposed De Beque Southwest Master Development Plan, and the  
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1 proposed Homer Deep Master Development Plan—all of which involve the drilling of multiple  
2 horizontal wells. In the Reasonably Foreseeable Development Scenario for the Grand Junction  
3 Field Office, BLM identified many of the lease areas as having “very high,” “high,” and  
4 “moderate” potential for conventional oil and gas development and/or Mancos shale gas  
5 development.

6 109. On March 10, 2016, Conservation Groups submitted scoping comments to BLM.  
7 Those comments raised the need for BLM to address unique issues related to fracking and  
8 horizontal drilling, including water depletion and water quality effects on local water resources  
9 and the endangered fish, and public health impacts—including site-specific and cumulative  
10 impacts—before leasing the proposed parcels. It also urged BLM to quantify the full lifecycle  
11 greenhouse gas emissions and impacts on climate change that would result from development of  
12 the lease parcels.

13 110. On May 12, 2016 BLM circulated for public comment a proposed Determination  
14 of NEPA Adequacy, finding that the 2015 revised Grand Junction RMP-EIS and 2015 Colorado  
15 River Valley RMP-EIS adequately addressed the effects of the proposed December 2016 lease  
16 sale, and that no further analysis of the proposed lease sale’s environmental effects was  
17 necessary.

18 111. On June 13, 2016, Conservation Groups timely submitted comments on the  
19 proposed Determination of NEPA Adequacy, pointing out the RMP-EISs’ failures to address the  
20 issues and new information identified in the Conservation Groups’ scoping comments, and their  
21 failures to address the effects of horizontal drilling and fracking and climate change effects of oil  
22 and gas development allowed in the Grand Junction and Colorado River Valley planning areas.  
23 Conservation Groups urged BLM to prepare an EIS to analyze these effects.

24 112. On October 13, 2016 BLM issued a sale notice for the December 8, 2016 Grand  
25 Junction lease auction, triggering a 30-day protest period. Conservation Groups timely filed a  
26 formal protest of the lease auction, raising the same issues raised in previous comments.

1           113. On December 7, 2016, BLM denied all protests of the lease sale, finding that both  
2 the Grand Junction and Colorado River Valley RMP-EISs were adequate to support its leasing  
3 decision.

4           114. BLM's response to the protest constituted BLM's final decision and its Decision  
5 Record authorizing the lease auction.

6           115. All twenty-eight parcels in the Grand Junction and Colorado River Valley Field  
7 Offices totaling 18,333.78 acres were sold in the December 8, 2016 lease auction for over \$1.58  
8 million dollars.

9           116. On May 10, 2017 BLM announced its proposed decision to lease parcels for oil  
10 and gas leasing and released a Determination of NEPA Adequacy for a 30-day comment period.  
11 Many of the parcels are in close proximity to areas that BLM leased in the December 2016  
12 auction, such that oil and gas development on these parcels could affect the same resources and  
13 the same watersheds and sub-basins.

14           117. On June 9, 2017, Conservation Groups submitted comments on the Determination  
15 of NEPA Adequacy, raising the same concerns they had with the prior year's December auction,  
16 including BLM's failure to analyze site-specific and local watershed effects on endangered fish  
17 in the 15-Mile Reach; public health effects on the unincorporated town of Molina; and  
18 greenhouse gas emissions and climate change effects.

19           118. On September 8, 2017, BLM released a sale notice for the December 7, 2017  
20 lease auction. Conservation Groups timely protested on October 10, 2017. BLM denied the  
21 protest on December 6, 2017, and held the lease auction on December 7, 2017. Twenty-three  
22 parcels totaling 22,073.110 acres were sold for over \$333,840.50. BLM's denial of the protest  
23 constituted its final decision and its Decision Record approving the December 7, 2017 lease  
24 auction.

119. Five of the offered parcels were not sold in the December 2017 lease auction. However, these parcels could still be sold and leased non-competitively (i.e., without an auction among competing bidders) up to two years from the lease sale date for \$1.50 per acre.

#### FIRST CLAIM FOR RELIEF

##### BLM'S VIOLATION OF NEPA AND THE APA— FAILURE TO TAKE A "HARD LOOK" AT ENVIRONMENTAL IMPACTS

120. Plaintiffs hereby reallege and incorporate by reference the allegations set forth in the preceding paragraphs.

121. Pursuant to NEPA, BLM must take a "hard look" at the consequences, environmental impacts, and adverse effects of its proposed actions. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.9. 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. Such analysis must include all reasonably foreseeable impacts of the proposed action.

122. Despite that horizontal drilling and fracking are reasonably foreseeable consequences of its leasing decisions, BLM failed to take a hard look at numerous effects of these activities, including the site-specific and aggregate effects of leasing the parcels auctioned in the lease auctions.

123. A Determination of NEPA Adequacy is not a NEPA document. *Pennaco Energy, Inc. v. United States DOI*, 377 F.3d 1147, 1162 (10th Cir. 2004). As such, BLM's Determinations of NEPA Adequacy, together with the RMP-EISs upon which they rely, fail to adequately disclose or consider the foreseeable environmental effects of leasing and resultant oil and gas development on particular resources affected by the individual lease parcels, including on natural resource values and communities proximate to foreseeable oil and gas development sites. BLM has also failed to adequately account for the fact that this development will take place in the context of and against the background of recent, ongoing, and foreseeable development, both federal and private, of oil and gas resources in the Piceance Basin and Mancos Shale. BLM

1 failed to analyze the significant cumulative impacts of the lease auctions on public health,  
2 climate change, and other resources, in connection with this ongoing and reasonably foreseeable  
3 development.

4 124. For example, BLM failed to quantify and analyze the lease auctions' greenhouse  
5 gas emissions and climate change effects, in connection with emissions from federal and state oil  
6 and gas development throughout the Grand Junction and Colorado River Valley planning areas,  
7 including the Mancos Shale. Further, BLM failed to analyze the cumulative significance of these  
8 emissions in light of existing oil and gas production activities, ongoing expansion of oil and gas  
9 development on existing leases in these planning areas and on surrounding state and private  
10 lands, and with other reasonably foreseeable BLM-managed emissions; rapidly diminishing  
11 global carbon budgets; and ample evidence that opening up new areas for oil and gas  
12 development runs contrary to preserving a reasonable chance of averting catastrophic climate  
13 change effects, and staying within global, U.S., regional, and State carbon budgets.

14 125. Each Determination of NEPA Adequacy lacks any rational explanation as to why  
15 BLM need not analyze these effects, including site-specific effects, in compliance with NEPA.

16 126. Further, each Determination of NEPA Adequacy improperly "tiers" to insufficient  
17 NEPA documents by relying on the Grand Junction and Colorado River Valley RMP-EISs to  
18 authorize the new leases. The RMP-EISs fail to analyze impacts associated with fracking and  
19 horizontal shale oil and gas development, including site-specific and cumulative effects  
20 described above.

21 127. In sum, BLM's failure to take the requisite "hard look" at the full impacts of its  
22 leasing decisions on wildlife, water, public health, and climate change is arbitrary and capricious,  
23 an abuse of discretion, and otherwise not in accordance with law, as required by NEPA, its  
24 implementing regulations, and the APA. 5 U.S.C. §§ 701-706, 706(2).

1 **SECOND CLAIM FOR RELIEF**

2 **BLM'S VIOLATION OF NEPA AND THE APA—**  
 3 **FAILURE TO PREPARE AN EIS OR AN EA**

4 128. Plaintiffs hereby reallege and incorporate by reference the allegations set forth in  
 5 the preceding paragraphs.

6 129. NEPA requires the preparation of an EIS for all “major federal actions  
 7 significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C); 40 C.F.R.  
 8 § 1501.4.

9 130. BLM’s decisions to offer parcels for oil and gas leasing in the December 8, 2016  
 10 and December 7, 2017 lease auctions are both major federal actions significantly affecting the  
 11 quality of the human environment.

12 131. When BLM is not clear on whether or not an action may result in significant  
 13 impacts, the agency may prepare an Environmental Assessment (“EA”) to determine whether an  
 14 EIS is required. 40 C.F.R. §§ 1501.3, 1508.9. An EA must include a discussion of alternatives  
 15 and the environmental impacts of the action. 40 C.F.R. § 1508.9.

16 132. The factors used to determine the significance of the action, and thus whether an  
 17 EIS is required, include consideration of both context and intensity. 40 C.F.R. § 1508.27(a), (b).  
 18 Context refers to the scope of the proposed action and the interests affected. *Id.* at § 1508.27(a).  
 19 Intensity “refers to the severity of the impact” and is determined by evaluating several factors,  
 20 including whether the action will affect “public health or safety”, whether the action affects  
 21 “ecologically critical areas,” whether effects are “highly controversial,” whether effects are  
 22 “highly uncertain or involve unique or unknown risks”, and whether the action may cause  
 23 “cumulatively significant impacts.” *Id.* at § 1508.27(b)(2), (3), (4), (5), (7). The presence of any  
 24 or all of these factors in the actions challenged here renders BLM’s decision to not prepare an  
 25 EIS arbitrary, capricious, and inconsistent with the law.  
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1           133. Here, BLM approved the subject lease auctions through a Determination of NEPA  
 2 Adequacy, refused to prepare either an EIS or an EA, and, thus, altogether failed to evaluate the  
 3 context and intensity of the environmental impacts resulting from its decision to issue the lease  
 4 parcels challenged herein, pursuant to NEPA. BLM also failed to provide convincing statements  
 5 of reasons justifying its decision to forgo an EIS analyzing the impacts of the lease parcels  
 6 challenged herein, as required by NEPA. BLM's conclusion that preparation of an EIS was not  
 7 required prior to approving this action was arbitrary, capricious, and inconsistent with the law.

8           134. Because BLM failed to provide a convincing statement of reasons on the record  
 9 justifying its decision to forego preparation of an EIS, BLM's actions are arbitrary, capricious,  
 10 and abuse of discretion, in excess of statutory authority and limitations, short of statutory right,  
 11 and not in accordance with the law and procedures required by law. 5 U.S.C. §§ 706(2)(A), (C),  
 12 (D).

### 13                                   **THIRD CLAIM FOR RELIEF**

#### 14                   **BLM'S VIOLATION OF NEPA AND THE APA—FAILURE TO CONSIDER A** 15                   **REASONABLE RANGE OF ALTERNATIVES**

16           135. Plaintiffs hereby reallege and incorporate by reference the allegations set forth in  
 17 the preceding paragraphs.

18           136. NEPA requires federal agencies to consider the likely environmental impacts of  
 19 the preferred course of action as well as reasonable alternatives. 42 U.S.C. § 4331(b)  
 20 (congressional declaration of national environmental policy). NEPA further requires federal  
 21 agencies to “study, develop, and describe appropriate alternatives to recommended courses of  
 22 action in any proposal which involves unresolved conflicts concerning alternative uses of  
 23 available resources.” *Id.* § 4332(2)(E).

24           137. BLM must “rigorously explore and objectively evaluate all reasonable  
 25 alternatives” to the proposed action in comparative form, so as to provide a “clear basis for  
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1 choice among the options” open to the agency. 40 C.F.R. § 1502.14. This alternatives analysis is  
 2 the “heart” of the agency’s NEPA analysis. *Id.*

3 138. BLM’s issuance and preparation of the Determinations of NEPA Adequacy for  
 4 the December 2016 and December 2017 lease auctions failed to consider any alternatives other  
 5 than the sale of all parcels. The Determinations of NEPA Adequacy relied solely on alternatives  
 6 analyzed and adopted in the Grand Junction and Colorado River Valley RMP-EISs, which failed  
 7 to consider the specific context of the lease parcels in questions, and which also unlawfully  
 8 considered an inadequate range of alternatives that prioritized oil and gas leasing and  
 9 development above other multiple use values.

10 139. BLM’s failure to consider a reasonable range of alternatives in the Determinations  
 11 of NEPA Adequacy for the December 2016 and December 2017 lease auctions was arbitrary,  
 12 capricious, and an abuse of discretion, contrary to NEPA, 42 U.S.C. § 4332(2)(C)(iii), (E) and its  
 13 implementing regulations, 40 C.F.R. § 1502.14(a).

#### 14 **REQUEST FOR RELIEF**

15 WHEREFORE, Conservation Groups respectfully request relief against BLM as follows:

16 A. For declarations that:

17 (1) BLM’s adoption of the Determinations of NEPA Adequacy and Decision  
 18 Records for the December 8, 2016 and December 7, 2017 lease auctions violated NEPA, its  
 19 implementing regulations, and the APA;

20 (2) BLM’s failure to prepare an EIS for its actions approving the December 8,  
 21 2016 and December 7, 2017 lease auctions violated NEPA, its implementing regulations, and the  
 22 APA;

23 B. For an order, including a preliminary and permanent injunction invalidating and  
 24 setting aside BLM’s Determinations of NEPA Adequacy and Decision Records for the  
 25 December 8, 2016 and December 7, 2017 lease auctions, and voiding any leases or approvals  
 26 issued in reliance on the foregoing documents or decisions;

1 C. For an injunction restraining BLM and each of its agents, employees, officers, and  
 2 representatives from implementing BLM's December 8, 2016 and December 6, 2017 Decision  
 3 Records, or from authorizing oil and gas development of lease parcels pursuant to these  
 4 decisions, pending BLM's completion of an EIS analyzing the effects of oil and gas leasing  
 5 allowed under each decision, in full compliance with NEPA and all other applicable legal  
 6 requirements;

7 D. For an injunction restraining any person or entity from constructing new wells or  
 8 other projects authorized under BLM approvals that rely on or tier to the Determinations of  
 9 NEPA Adequacy for the lease auctions, pending BLM's completion of an EIS analyzing the  
 10 effects of oil and gas leasing allowed under the December 7, 2016 and December 6, 2017  
 11 Decision Records, in full compliance with NEPA and all other applicable legal requirements.

12 E. For Plaintiffs' costs of suit and attorneys' fees pursuant to all applicable legal  
 13 authority including, but not limited to the Equal Access to Justice Act, 28 U.S.C. § 2412, and any  
 14 and all other provisions of law or equity; and

15 F. For such other and further relief as this Court may deem just and proper.

16 DATED: April 26, 2018

Respectfully submitted,

18 /s/ Diana Dascalu-Joffe

19 DIANA DASCALU-JOFFE (CO State Bar No. 50444)  
 20 Center for Biological Diversity  
 21 1536 Wynkoop Street, Suite 421  
 22 Denver, CO 80202  
 Tel: (720) 925-2521  
 Fax: (303) 572-0032  
 ddascalujoffe@biologicaldiversity.org

23 /s/ Wendy Park

24 WENDY S. PARK (CA State Bar No. 237331)  
 25 Center for Biological Diversity  
 26 1212 Broadway, # 800  
 27 Oakland, CA 94612  
 Tel: (510) 844-7138  
 Fax: (510) 844-7150  
 wpark@biologicaldiversity.org

1 /s/ Kyle Tisdel

2 KYLE J. TISDEL (CO State Bar No. 42098)  
3 Western Environmental Law Center  
4 208 Paseo del Pueblo Sur, Suite 602  
5 Taos, New Mexico 87571  
6 (p) 575.613.8050  
7 tisdel@westernlaw.org

8 *Counsel for Plaintiffs*

9 **Wilderness Workshop**  
10 520 S. 3rd Street, Suite 27  
11 PO Box 1442  
12 Carbondale, CO 81623

13 **Center for Biological Diversity**  
14 1536 Wynkoop Street, Suite 421  
15 Denver, CO 80238

16 **Living Rivers: Colorado Riverkeeper**  
17 PO Box 466  
18 Moab, UT 84532

19 **Sierra Club**  
20 2100 Webster Street, Suite 1300  
21 Oakland, CA 94612