

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

Civil Action No. 1:16-cv-01822

WILDERNESS WORKSHOP,
WESTERN COLORADO CONGRESS,
NATURAL RESOURCES DEFENSE COUNCIL, and
SIERRA CLUB,

Plaintiffs,

vs.

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

SALLY JEWELL, in her official capacity as Secretary of the U.S. Department of the Interior,

NEIL KORNZE, in his official capacity as Director of the U.S. Bureau of Land Management,

RUTH WELCH, in her official capacity as Colorado State Director of the U.S. Bureau of Land
Management, and

KARL MENDONCA, in his official capacity as Field Manager of the Colorado River Valley
Field Office of the U.S. Bureau of Land Management,

Federal Defendants.

PETITION FOR REVIEW OF AGENCY ACTION

INTRODUCTION

1. This petition challenges the federal defendants' approval of a resource management plan in western Colorado, thereby making available for oil and gas leasing and development hundreds of thousands of acres, without properly analyzing, studying alternatives to, and disclosing to the public potentially ensuing impacts to our climate, natural resources, and public health. It asks this Court to set aside that approval as violating the National Environmental Policy Act ("NEPA") and to ensure that federal oil and gas leasing and development in this area awaits the federal defendants' compliance with the law.

2. Plaintiffs Wilderness Workshop, Western Colorado Congress, Natural Resources Defense Council, and Sierra Club (collectively "Citizen Groups") challenge the decision of the U.S. Bureau of Land Management ("BLM"), and Sally Jewell, Neil Kornze, Ruth Welch, and Karl Mendonca in their official capacities (collectively, "Federal Defendants"), to approve through a Record of Decision ("ROD") on June 12, 2015 the Colorado River Valley Field Office ("CRVFO" or "Field Office") Resource Management Plan ("RMP") and Final Environmental Impact Statement ("Colorado River Valley EIS," or, simply, "EIS"). BLM's approval of the RMP violated NEPA, 42 U.S.C. §§ 4321 *et seq.*, and its implementing regulations and policies.

3. The RMP applies to 505,200 acres of BLM administered public land in northwestern Colorado and 701,200 acres of BLM managed federal mineral estate, much of it underlying the BLM surface estate. These areas are interspersed with other ownerships throughout the Colorado River Valley planning area, which in turn comprises all lands within the 2.9 million acre CRVFO administrative boundary except the Roan Plateau, which is subject to separate BLM resource management plan amendment. The planning area stretches from Vail in

the east most of the way to Grand Junction in the west and from near Steamboat Springs in the north to Aspen in the south.

4. The Colorado River Valley planning area is home to some of the nation's most important natural resources. It includes upper reaches of the Colorado River, known as the lifeblood of the southwest, which provides water to forty million people. The planning area spans some of the fastest growing counties and communities in the nation—communities that continue to attract new residents because of their proximity to public lands and the quality of life that those lands provide. More than 80% of surface and subsurface acres administered by the CRVFO are within one mile of private property. Many communities within the planning area are reliant on recreation and tourism, and some, like Vail and Aspen, are dependent on an abundant snowpack to support those uses. Other communities rely on traditional agriculture and grazing activities. The planning area is also rich in wildlife, including the nation's largest elk herd, bighorn sheep, sage grouse, and Canada lynx, as well as genetically pure populations of Colorado River cutthroat trout. The planning area includes river segments that are eligible for protection under the Wild and Scenic Rivers Act, as well as four Wilderness Study Areas and tens of thousands of acres of wilderness quality lands. The planning area also overlies the heart of the Piceance Basin—a significant natural gas reservoir.

5. Through its approval of the Colorado River Valley RMP, BLM made available 147,000 acres for oil and gas leasing where it projects 4,198 wells will be drilled and associated facilities and infrastructure will be developed. The RMP also made an additional 456,100 acres available to leasing where BLM projects little or no oil and gas development will occur.

6. The United States is the world's largest producer of oil and gas. Spurred by advances in extractive technologies, oil and gas will remain a prominent source of energy for some years to come. At the same time, as observed by President Obama, America is "transitioning away from energy that creates the carbon that's warming the planet and threatening our health and our environment." The reduction of emissions from the oil and gas sector has become a central component of national and global efforts to control climate change.

7. In 2013, the Administration released a federal Climate Action Plan, later setting the goal of cutting methane emissions from the oil and gas sector by 40-45 percent from 2012 levels by 2025. The first step in these efforts was made in 2015 when the Environmental Protection Agency ("EPA") proposed measures to cut methane and volatile organic compound ("VOC") emissions from the oil and natural gas industry to "help combat climate change, reduce air pollution that harms public health, and provide greater certainty about Clean Air Act permitting requirements for the oil and natural gas industry." In 2016, the U.S. Department of the Interior and BLM followed suit with a proposal to "update 30 year-old regulations in order to reduce the wasteful release of natural gas into the atmosphere from oil and gas operations on public and American Indian lands. The proposed rule on venting, flaring and leaking will help curb waste of our nation's natural gas supplies, reduce harmful methane emissions and provide a fair return on public resources for federal taxpayers, Tribes, and States." In May 2016, the EPA finalized standards to cut methane emissions from new and existing sources in the oil and gas sector, which the Administration described as a "further step...to take action on climate change and protect public health."

8. These national efforts to reduce oil and gas sector emissions come within the global context of the United Nations Framework Convention on Climate Change, Conference of Parties’ “Adoption of the Paris Agreement” on December 12, 2015, in which official representatives of 196 nations, including the United States, agreed to a take and increase concrete measures to abate climate change by reducing global greenhouse gas (“GHG”) emissions and, among other things, “pursue efforts to limit the [average global] temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”

9. In spite of America’s broad commitment to move aggressively on a path towards a clean energy future—and the recognition that oil and gas emissions are both warming the planet and threatening our health and our environment—BLM is, at a site-specific level, failing to acknowledge the full impact of its decisions to authorize and facilitate the leasing and development of our public lands for fossil fuels, including oil and gas in the Colorado River Valley planning area.

10. BLM, in the Colorado River Valley EIS: (1) failed to quantify or consider the full effects of oil and gas combustion emissions, and the costs that the full spectrum of oil and gas emissions impose on society; (2) failed to quantify the scale of methane pollution from oil and gas emission sources, and underestimated by an order of magnitude the global warming potential of such emissions; (3) failed to consider the full effect that oil and gas development has on human health and on the communities affected by the industrialization of our public lands; and (4) failed to consider any alternatives that meaningfully reduce the lands made available for oil and gas leasing, or measures to control the timing, pace, and scale of such development.

11. Because BLM failed to analyze these factors adequately in its NEPA documents and approved the Colorado River Valley RMP without sufficient analysis, the Citizen Groups bring this civil action.

JURISDICTION AND VENUE

12. This action arises under NEPA, 42 U.S.C. §§ 4321-4370h.

13. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1331, because the action raises a federal question. The Court has the authority to issue the requested declaratory and injunctive relief pursuant to 28 U.S.C. §§ 2201, 2202, and 5 U.S.C. §§ 705, 706.

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

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

16. The challenged agency action is final and subject to judicial review pursuant to 5 U.S.C. §§ 702, 704, and 706.

17. Citizen Groups have exhausted any and all available and required administrative remedies.

18. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(b)(2) because the property that is the subject of the action—the planning area containing 505,200 surface acres and 701,200 acres of subsurface mineral estate administered by the BLM’s Colorado River Valley Field Office—is located in Colorado. Venue is also proper under 28 U.S.C. § 1391(e)(1) because officers of the United States in Colorado are defendants, a substantial part of the events and omissions giving rise to this case occurred in BLM offices located in Colorado, Plaintiffs Wilderness Workshop and Western Colorado Congress reside in Colorado, and Plaintiff Sierra Club maintains an office in Colorado.

PARTIES

19. Plaintiff Wilderness Workshop is a non-profit organization dedicated to preservation and conservation of the wilderness and natural resources of the White River National Forest and adjacent public lands, including the Colorado River Valley. Wilderness Workshop engages in research, education, legal advocacy, and grassroots organizing to protect the ecological integrity of local landscapes and public lands in the area affected by the RMP. Wilderness Workshop focuses on the monitoring and conservation of air and water quality, wildlife species and habitat, natural communities, and lands of wilderness quality. Wilderness Workshop is the oldest environmental non-profit in the Roaring Fork Valley, dating back to 1967, with a membership base of more than 700 people. Many of its members live, work, recreate, and/or otherwise use and enjoy lands affected by the RMP. They have a great interest in the protection and enhancement of natural values in the planning area. Wilderness Workshop has been closely monitoring, informing its members, and engaging in advocacy concerning proposals, developments, and management actions by the Colorado River Valley Field Office for

many years. Wilderness Workshop brings this action on its own behalf and on behalf of its adversely affected members.

20. Plaintiff Western Colorado Congress is an alliance for community action dedicated to healthy communities and landscapes. Since 1980, Western Colorado Congress has worked to foster public participation in resource management decisions affecting land and public health in western Colorado. The membership-based nonprofit has nearly 2,000 members across western Colorado. Western Colorado Congress members include residents and land and mineral owners of Garfield County, and the Colorado River Valley Field Office covers much of the same land where its members live. Western Colorado Congress brings this action on its own behalf and on behalf of its adversely affected members.

21. Plaintiff Natural Resources Defense Council (“NRDC”) is a non-profit environmental membership organization that uses law, science, and the support of more than two million members and activists throughout the United States to protect wildlife and wild places and to ensure a safe and healthy environment for all living things. More than 8,500 of NRDC’s members reside in Colorado. NRDC members use and enjoy public lands in the Colorado River Valley, including the specific lands affected by the RMP at issue in this case, for a variety of purposes, including recreation, solitude, scientific study, and conservation of natural resources. NRDC has a long-established history of working to protect public lands and clean air in Colorado and addressing climate change by promoting clean energy and reducing America’s reliance on fossil fuels. NRDC informs its members and others of the public about, and encourages advocacy relating to, those goals. NRDC brings this action on its own behalf and on behalf of its adversely affected members.

22. Plaintiff Sierra Club is a national nonprofit organization with 64 chapters and over 635,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. Sierra Club's concerns encompass the exploration, enjoyment, and protection of the land and air of Colorado. The Colorado Chapter of the Sierra Club has approximately 17,000 members, and those members live, work, and recreate in areas that will be adversely impacted by approval of the Colorado River Valley RMP. Sierra Club brings this action on its own behalf and on behalf of its adversely affected members.

23. Citizen Groups and their members have concrete and particularized interests in the public lands and minerals managed by BLM through the Colorado River Valley RMP.

24. Citizen Groups' and many of their members' interests are deeply rooted in the communities of the American West where Citizen Groups and their members reside, work, and recreate. These interests are also bound to the land, wildlands, air, rivers, streams, habitat, wildlife, and other components of healthy, intact landscapes in the Colorado River Valley planning area—all of which are threatened by human-caused climate change, and other impacts associated with oil and gas development. As described above, Citizen Groups and their members use and enjoy these landscapes for hiking, hunting, camping, photography, aesthetic enjoyment, spiritual contemplation, ranching, and other vocational, scientific, and recreational activities. Some of Citizen Groups' members own surface lands overlying federal minerals that are subject to the Colorado River Valley RMP. Citizen Groups and their members intend to continue to use

and enjoy BLM and other Colorado River Valley planning area lands, wildlands, wildlife habitat, rivers, streams, and healthy environments frequently and on an ongoing basis in the future, including this year.

25. The aesthetic, recreational, scientific, educational, religious, and procedural interests of Citizen Groups and their members have been and will be adversely affected by the process in which BLM approved the Colorado River Valley RMP, and by BLM's resulting decision. The adverse impacts from BLM's process and decision threaten actual, imminent, concrete, and particularized harm to Citizen Groups and their members' interests that are not redressable by remedies at law.

26. The relief sought by Citizen Groups would help remedy the injuries suffered by the Citizen Groups and their members.

27. Federal Defendant U.S. Bureau of Land Management is a federal agency within the U.S. Department of the Interior that is responsible for the management of more than 245 million acres of public lands in the United States and nearly 700 million acres of federal subsurface mineral estate.

28. Federal Defendant Sally Jewell is sued in her official capacity as the Secretary of the U.S. Department of the Interior. As Secretary, Ms. Jewell is responsible for managing public lands, resources, and mineral estates of the United States, including lands and resources in Colorado subject to the decision at issue herein, and, in that official capacity, is responsible for implementing and complying with federal law, including the legal requirements that form the basis of this action.

29. Federal Defendant Neil Kornze is sued in his official capacity as Director of the Bureau of Land Management. As Director, Mr. Kornze oversees the agency's management of public lands and is responsible for managing public lands under BLM authority, including lands and resources in Colorado subject to the decision at issue herein, in accordance with NEPA and other federal law.

30. Federal Defendant Ruth Welch is sued in her official capacity as Colorado State Director of the Bureau of Land Management. Ms. Welch is responsible for managing public lands under BLM authority, including lands and resources in Colorado subject to the decision at issue herein, in accordance with NEPA and other federal law. Ms. Welch signed the Record of Decision at issue in this case.

31. Federal Defendant Karl Mendonca is sued in his capacity as Field Manager of the Colorado River Valley Field Office. Mr. Mendonca is responsible for managing public lands under BLM authority, including lands and resources in the Colorado River Valley Field Office administrative area subject to the decision at issue herein, in accordance with NEPA and other federal law. Mr. Mendonca signed the Record of Decision at issue in this case.

STATUTORY BACKGROUND

I. National Environmental Policy Act

32. NEPA is our “basic national charter for the protection of the environment.” 40 C.F.R. § 1500.1. It is NEPA’s purpose, in part, “to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. Recognizing that “each person should enjoy a healthful environment,” NEPA directs that the federal government use all practicable means to “assure for all Americans

safe, healthful, productive, and esthetically and culturally pleasing surroundings,” and to “attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.” 42 U.S.C. § 4331(b).

33. NEPA regulations explain that:

Ultimately, of course, it is not better documents but better decisions that count. NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

40 C.F.R. § 1500.1(c).

34. NEPA regulations direct that “Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts.” *Id.* § 1501.2.

35. To accomplish this purpose, NEPA requires that federal agencies prepare a “detailed statement” regarding all “major federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). This environmental impact statement must, among other things, describe the “environmental impact of the proposed action,” and evaluate “alternatives to the proposal.” *Id.* § 4332(2)(C)(ii), (iii).

36. NEPA also requires that every agency must “study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” *Id.* § 4332(2)(E). The alternatives evaluation “is the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. It should

“sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public.” *Id.* § 1502.14.

37. NEPA regulations also direct that BLM to the fullest extent possible “encourage and facilitate public involvement” in the NEPA process. *Id.* § 1500.2(d). The Centers for Disease Control and Prevention have noted that NEPA “gives local, state, tribal, and federal public health agencies the opportunity to engage with other agencies in an environmental impact assessment process that will adequately protect and promote public health.”

II. Federal Land Policy Management Act

38. The Federal Land Policy Management Act (“FLPMA”) instructs the Secretary of the Interior to “manage the public lands under principles of multiple use and sustained yield.” 43 U.S.C. § 1732(a).

39. “Multiple use” means “a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values.” *Id.* § 1702(c).

40. FLPMA also requires that:

[P]ublic lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

Id. § 1701(a)(8).

41. BLM must “develop, maintain, and, when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands.” *Id.* § 1712.

42. BLM is also required to “take any action necessary to prevent unnecessary or undue degradation of the lands” and “minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved.” *Id.* § 1732(b), (d)(2)(A).

III. Administrative Procedure Act

43. The Administrative Procedure Act (“APA”) provides a right to judicial review for any “person suffering legal wrong because of agency action.” 5 U.S.C. § 702. Actions that are reviewable under the APA include final agency actions “for which there is no other adequate remedy in a court.” *Id.*

44. Under the APA, a reviewing court shall, *inter alia*, “hold unlawful and set aside agency action...found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” *Id.* § 706(2)(A). Agency actions may also be set aside in other circumstances, such as where the action is “without observance of procedure required by law.” *Id.* § 706(2)(B)-(F).

STATEMENT OF FACTS

I. Background of Planning Decision

45. The Colorado River Valley planning area covers most of the 2.9 million acre CRVFO administrative area, and contains 505,200 surface acres of BLM land and 701,200 acres of federal mineral estate in Garfield, Eagle, Pitkin, Mesa, and Routt Counties on the Western Slope of Colorado (formerly the Glenwood Springs Field Office).

46. The Colorado River Valley planning area is distinguished by its strikingly beautiful and diverse landscapes, renowned rivers and streams, forests and wilderness areas, and

abundant wildlife. These natural treasures make the area a national and international destination for year-round outdoor recreation and tourism.

47. The Colorado River Valley also overlaps much of the Piceance Basin, an area that has already experienced intensive oil and gas development. BLM recognizes in the EIS that leasing and development of oil and gas is in conflict with ecological and recreational values of the planning area.

48. According to the reasonably foreseeable development scenario prepared for the RMP, there were approximately 3,500 existing oil and gas wells within the planning area as of 2006. Many additional wells have been drilled to date. U.S. Census block data indicates that 6,166 people live within one-mile of these wells. Many more live downstream and may rely on water sources in the areas that have been developed or may be developed for oil and gas production in the future. In addition, many people are exposed to the air emissions from this development, in particular regional pollutants like ozone. The RMP proposes that most future drilling will occur in areas already developed, increasing health impacts to the thousands of people that live near these areas and additional people that rely on drinking water or air that may be impacted by future development there.

49. It is a responsibility of BLM, through development of an RMP, to balance the use of these public lands and minerals through its multiple use mandate, to prevent unnecessary and undue degradation, and to minimize adverse impacts on natural, environmental, scientific, cultural, and other resources and values.

50. The Colorado River Valley RMP acts as a blueprint for how the BLM will manage areas of public land and minerals over a 20-year time horizon. The RMP establishes

goals and standards for future management actions, as well as making some implementation-level decisions, based in part on the analysis of the direct, indirect, and cumulative impacts of various alternatives in the RMP's corresponding EIS.

51. Here, the process of developing the RMP, as mandated by NEPA, began in 2007, and included public meetings, scoping periods, and comment periods on draft and final environmental impact statements. Citizens Groups participated extensively at all stages of development of the RMP and EIS.

52. The EIS for the Colorado River Valley RMP considered four alternatives: No Action (Alternative A); Mixed Use (Alternative B); Conservation (Alternative C); and Resource Use (Alternative D). BLM's Proposed Alternative in the Final EIS was Alternative B.

53. In the Proposed Alternative, all but 2,500 acres of the planning area with a high potential for oil and gas are left open to leasing. In all, 603,100 acres are left open to oil and gas leasing, and 98,100 acres are closed. BLM estimates that 99 percent of future oil and gas wells will be drilled in the high potential area.

54. BLM projects an additional 4,198 new wells (6,640 wells including those on the Roan Plateau and National Forest Service Lands) will be drilled during the 20-year planning period.

55. BLM estimates production of 188.9 billion cubic feet ("bcf") of natural gas and 787,600 barrels of natural gas condensate under the Proposed Alternative (12.5 bcf and 37,445 barrels of condensate per year) within the 20-year planning period.

56. Citizen Groups timely filed public comments on the BLM's draft EIS for the RMP. On May 5, 2014 Citizen Groups filed a Protest with BLM for the proposed RMP and final

EIS, and submitted supplemental comments on June 13, 2014. On June 12, 2015, BLM issued a ROD approving both the final EIS and Alternative B, with minor changes and clarifications, as the final Approved RMP for the Colorado River Valley planning area. On July 8, 2015, BLM denied the Citizen Groups' Protest.

II. Background on Climate Change

57. Climate change is well-established as a real and significant threat to the environment. The Intergovernmental Panel on Climate Change ("IPCC"), in its Fifth Assessment Report, stated that "human influence on the climate system is clear and growing, with impacts observed across all continents and oceans...the more human activities disrupt the climate, the greater the risks of severe, pervasive and irreversible impacts for people and ecosystems, and long-lasting changes in all components of the climate system." The IPCC continued: "we have the means to limit climate change and its risks, with many solutions that allow for continued economic and human development. However, stabilizing temperature increase to below [2 degrees Celsius] relative to pre-industrial levels will require an urgent and fundamental departure from business as usual. Moreover, the longer we wait to take action, the more it will cost and the greater the technological, economic, social and institutional challenges we will face."

58. President Obama has similarly recognized the urgency of needed action, affirming "no challenge poses a greater threat to future generations than climate change." In his 2016 State of the Union Address, he stated that "we've got to accelerate the transition away from old, dirtier energy sources. Rather than subsidize the past, we should invest in the future—especially in communities that rely on fossil fuels. We do them no favor when we don't show them where the

trends are going. That's why I'm going to push to change the way we manage our oil and coal resources, so that they better reflect the costs they impose on taxpayers and our planet.”

59. As of December 2015, the Earth had warmed by an average of about 1.7 degrees Fahrenheit since the late 19th century. Evidence shows that recent global warming is primarily a result of greenhouse gas (“GHG”) emissions generated from human activities.

60. Raising the average global temperature by even a degree or two can lead to serious consequences, including reductions in crop yields, increases in rainfall and flooding, increases in hurricanes and typhoons, decreases in snowpack and stream flows, increases in wildfires, and rising sea levels. In the long term, if emissions continue to rise, climate change threatens the flooding of coastal cities, the mass extinction of plants and animals, the destabilization of governments, and refugee crises.

61. The U.S. Government Accountability Office (“GAO”) has recognized that federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others: “(1) physical effects, such as droughts, floods, glacial melting, and sea level rise; (2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and (3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses.”

62. Western Colorado is particularly susceptible to the effects of climate change. The area is experiencing increasing temperatures and prolonged droughts. The impacts of these changes are widespread across our forests, wildlife, and human communities, threatening the area's resilience in the face of continued warming. These impacts also have significant

importance to local economies that are reliant on consistent snowfall, not only for recreational pursuits within the planning area, but also on the 40 million people downstream who rely on Colorado River water—a substantial amount of which is produced in the planning area.

63. It is not too late for the United States government to take action to significantly lower the risk of much greater warming and climate disruption.

64. The Secretary of the Interior stated, in Secretarial Order 3226, *Evaluating Climate Change Impacts in Management Planning* (January 19, 2001), that “[t]here is a consensus in the international community that global climate change is occurring and that it should be addressed in governmental decision making.” Order 3226 established the responsibility of agencies to “consider and analyze potential climate change impacts when undertaking long-range planning exercises, when setting priorities for scientific research and investigations, when developing multi-year management plans, and/or when making major decisions regarding potential utilization of resources under the Department’s purview.”

65. The GAO, in a 2007 report entitled *Climate Change: Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources*, concluded that the Department of the Interior had not provided specific guidance to implement Secretarial Order 3226, that officials were not even aware of Secretarial Order 3226, and that Secretarial Order 3226 had effectively been ignored.

66. Secretarial Order 3289, *Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources* (September 14, 2009), reinstated the provisions of Order 3226, and recognized that “the realities of climate change require us to change how we manage land, water, fish and wildlife, and cultural heritage and tribal lands and

resources we oversee,” and acknowledged that the Department of the Interior is “responsible for helping protect the nation from the impacts of climate change.”

67. There remains a fundamental disconnect with regard to how many of our public lands are managed for energy production, particularly in the West, including public lands in the Colorado River Valley planning area, and national policies to limit GHG emissions. Federal Defendants cannot take informed action to address climate change, as required by Order 3226 and Order 3289, without taking a hard look at the climate impacts of oil and gas development on our public lands. As stated in Order 3289, BLM must “appl[y] scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts,” and “management decisions made in response to climate change impacts must be informed by [this] science.”

68. The threat of climate change and, indeed, many of the impacts to resource values as a result of climate change were acknowledged by the BLM in the Colorado River Valley EIS: “Climate is both a driving force and a limiting factor for biological, ecological, and hydrological processes, and it has great potential to influence resource management. Climate change is a phenomenon that could alter natural resource and ecologic conditions on spatial and temporal scales that have not yet been experienced.” Additionally, “[a]lthough natural GHG levels have varied for millennia, recent industrialization and burning fossil carbon sources have caused carbon dioxide equivalent (CO₂e) concentrations to increase dramatically and are likely to contribute to overall global climatic changes.”

69. Specifically, the Colorado River Valley EIS recognizes that “[d]ecisions made under the RMP...can have indirect effects resulting from activities that release GHG air

pollutants, or from activities that terrestrially sequester carbon that would otherwise exist in the atmosphere as carbon dioxide.”

70. BLM is cognizant of the impacts of climate pollution, and cites the IPCC in acknowledging that “[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.” BLM also acknowledges that “[t]he general consensus is that as atmospheric concentrations of GHGs continue to rise, average global temperatures and sea levels will rise, precipitation patterns will change, and climatic trends will change and influence earth’s natural resources in a variety of ways.”

71. Yet, despite these acknowledgements, BLM fails to provide any analysis of climate change effects to resource values that RMP alternatives will contribute to, or mitigation measures to reduce these impacts. Instead, the EIS states that due to uncertainties, “[q]uantification of cumulative climate change impacts...is beyond the scope of this analysis.” BLM also states “it is not possible...to determine whether GHG emissions that would result from the project sources...would cause significant impacts” and that “it is not possible...to determine the impact that GHG emissions...would have on global climate change.”

72. The White House Council on Environmental Quality (“CEQ”), the federal agency responsible for NEPA oversight, has recognized that:

[M]any agency NEPA analyses to date have concluded that GHG emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis

for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations. This approach does not reveal anything beyond the nature of the climate change challenge itself: The fact that diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact.

73. BLM is responsible for the management of nearly 700 million acres of federal onshore subsurface minerals. The ultimate downstream GHG emissions from fossil fuel extraction from federal lands and waters by private leaseholders could account for approximately 23% of total United States GHG emissions and 27% of all energy-related GHG emissions. BLM must take a fact-based hard look at the GHG pollution implications of oil and gas development allowed by the Colorado River Valley RMP, as an incremental contribution to emissions from all BLM lands and from federal agency management decisions more broadly.

III. Environmental and Human Health Impacts of Oil and Gas Production

74. BLM anticipates that large quantities of oil and natural gas will be produced in the Colorado River Valley planning area in reliance on the decisions and authorization in the RMP and EIS.

75. Oil and gas drilling, hydraulic fracturing, production, transmission, and processing result in emissions of methane, nitrogen oxides (“NOx”), and VOCs that contribute to ozone formation, hazardous air pollutants, and airborne particulates.

76. Ozone is formed in the atmosphere and can move with the wind—causing health problems for entire regions—not just for people living close to oil and gas facilities.

77. Impacts from high levels of air pollutants can be magnified due to concentrated oil and gas activity, weather conditions, or topography.

78. Air pollution, including sulfur dioxide (“SO₂”), NO_x, and particulates, contributes to regional haze and visibility impairment in areas of scenic beauty and natural wonder designated “Class I” air quality areas and subject to stringent air quality standards, including Class I areas surrounding the Colorado River Valley planning area in: Mount Zirkel Wilderness; Rocky Mountain National Park; Flat Tops Wilderness; Eagles Nest Wilderness; Maroon Bells—Snowmass Wilderness; West Elk Wilderness; Black Canyon of the Gunnison National Park; La Garita Wilderness; Weminuche Wilderness; Great Sand Dunes National Park; and Mesa Verde National Monument.

79. Oil and gas production is one of the largest sources of methane emissions in the United States. Methane is the second most prevalent greenhouse gas, after carbon dioxide. Although an emissions leak rate is not disclosed in the Colorado River Valley EIS, the BLM often assumes an emissions leak rate as low as one percent of total production. With respect to natural gas, best available science has demonstrated that leakage rates are substantially higher, with estimated average emissions rates of around three percent of production, and observed in many basins as high as 12 percent.

80. BLM estimates that 19,586 tons of methane per year (which BLM contends to be equivalent to 411,308 tons per year of CO₂e) would be released from oil and gas wells within the Colorado River Valley planning area. However, despite Citizen Groups’ call for transparency, the BLM does not disclose the basis for its calculation of methane emissions or clearly identify which potential sources are incorporated into or excluded from the calculation. Because factors

specific to a particular basin or production area can result in substantially different leak rates (from 2-12%), disclosure of the factors informing the emissions estimate—at a basin level—is fundamental to understanding the assumptions made, analysis provided, and alternatives considered. Here, BLM did not disclose or substantiate assumptions over methane leakage.

81. The most recent report, and best available science, of the IPCC estimates that as a climate pollutant, methane from fossil fuel sources is 87 times more potent than carbon dioxide over a 20-year period. In the Colorado River Valley EIS, however, the BLM assumes that methane is 21 times as potent as carbon dioxide, using an outdated 1996 IPCC estimate for a 100-year time horizon, in calculating the total amount of carbon dioxide equivalent, or CO_{2e}, from project activities. Consequently, the EIS underestimates the global warming effect that each ton of methane will have over the life of the RMP by a factor of four. Despite Citizen Groups' request for clarification, BLM did not provide an explanation of why it utilized the outdated 100-year global warming potential in its calculation.

82. The 20-year time horizon for methane's potential global warming contributions is consistent with the RMP's 20-year planning period, as well as the timeframe where meaningful action on climate change must occur. Thus, BLM should have disclosed the current 20-year global warming potential of 87 times carbon dioxide for methane. BLM estimated that the annual methane release from oil and gas related activities in the Colorado River Valley planning area would result in approximately 411,308 tons of CO_{2e}. However, accepting BLM's estimated methane leakage rate, the annual methane release from activities using current science would actually total 1,703,982 tons of CO_{2e}. Consequently, BLM failed to disclose at least 1,292,674

tons of reasonably-estimated CO₂e annually from activities in the Colorado River Valley planning area, attributable to oil and gas leasing and development covered by the RMP.

83. Oil and gas development can also impact water quality and quantity. Contaminants that impact both surface and groundwater quality includes salts, heavy metals, naturally occurring radioactive materials, and hydrocarbons. Impacts on water quantity and quality affect wildlife, including threatened and endangered aquatic species, as well as sources of drinking water for people and livestock, and water used for irrigation.

84. BLM knows that oil and gas development has caused drinking water contamination and related health impacts in Colorado.

85. Oil and gas development generates significant quantities of waste, including wastewater, drill cuttings and drilling mud, residual waste, and other associated wastes. This waste can be extremely toxic. The waste may be injected underground, disposed of or stored in open air surface pits, buried on site, spread on land or roads, sprayed into the air, otherwise evaporated, or taken to landfills. There is a wide range of ways it can be released into the environment including leaks, spills, and blowouts. A study provided by Citizen Groups to BLM, Seth Shonkoff, et al., *Environmental Public Health Dimensions of Shale and Tight Gas Development*, ENVIRONMENTAL HEALTH PERSPECTIVES (2014), discusses potential health impacts from exposure to fracturing wastewater and fluids, including neurological damage, cancer, and endocrine disruption.

86. Transportation of wastewater generated during oil and gas production increases vehicular traffic, leading to safety risks, as well as accidents that may spill toxic substances.

87. New oil and gas wells, pipelines, compressor stations, roads, and related facilities negatively impact viewsheds and fragment wildlife habitat.

88. Burning natural gas at the wellhead, or “flaring,” alone and in combination with industrial lighting from oil and gas development, causes light pollution.

89. Oil and gas activities generate significant amounts of noise that can cause health impacts.

90. The release of natural gas from wells to the atmosphere, or “venting” and “flaring” during oil and gas production, reduces the ability of a lease to supply energy, thereby increasing the pressure for new drilling that impacts air, land, and water.

91. The environmental impacts described in paragraphs 74-90 cumulate over time.

92. The Colorado River Valley EIS failed to consider alternatives involving available, reasonable, and cost effective mitigation measures to reduce methane emissions from venting, flaring, or gas leakage at oil and gas operations, and failed to consider adequately the harmful impacts of fracking, venting, and flaring.

93. RMPs identify lands open or closed to leasing and other resource management, and impose development constraints, including stipulations to achieve these objectives that are attached to leases before they are executed. 43 U.S.C. § 1712. In so doing, RMPs provide a critical opportunity to ensure the “orderly and efficient” development of oil and gas resources by governing the scale, pace, and nature of exploration, development, and production activities. 43 C.F.R. § 3160.0-4.

94. BLM regulations require the agency to ensure “that all [oil and gas] operations be conducted in a manner which protects other natural resources and the environmental quality,

protects life and property and results in the maximum ultimate recovery of oil and gas with minimum waste and with minimum adverse effect on the ultimate recovery of other mineral resources.” 43 C.F.R. § 3161.2.

95. For example, RMPs can require that lessees or operators construct the necessary infrastructure, such as gathering lines, separation and treatment equipment, and compression capacity, to route captured gas to a sales line or gas liquids to processing and storage facilities. Similarly, where gas is produced in association with oil, RMPs can concentrate or phase development activity on the landscape, improving the economics of the infrastructure necessary to capture and market (rather than flare or vent) associated gas. This in turn can help reduce the number of wells, storage tanks, pneumatic valves, or other sources of methane pollution and waste that would otherwise result from unmanaged development (or require mitigation through “back end” technologies and practices). Finally, by crafting RMPs to prevent waste through orderly and efficient development, BLM can reduce impacts to and thereby benefit wildlife, water, vegetation, and other conservation values—thereby protecting “other natural resources and environmental quality.” 43 C.F.R. §§ 3161.2, 3162.1(a).

96. The Colorado River Valley EIS failed to consider alternatives or measures that would have controlled the timing, pace, impacts, and scale of oil and gas development, thereby mitigating or avoiding harm to human health and the environment.

97. According to the BLM, there were 269,035 people living within the Colorado River Valley planning area in 2005. Other people who live elsewhere work in the region, including in the oil and gas industry, and will be exposed to health impacts from oil and gas activities in the area on a regular basis.

98. In the Colorado River Valley EIS, BLM asserts that it evaluated the impacts of air pollutant emissions from a level of oil and gas development up to an assumed 4,198 producing BLM wells, 15,664 total wells within the planning area, and a cumulative total of more than 44,000 wells within the region over the next twenty years.

99. BLM plans to lease minerals pursuant to the RMP that are located directly beneath and adjacent to private property, including residences, schools, and agricultural land in the planning area.

100. The RMP proposes that most future drilling will take place in areas where oil and gas development has already occurred. This would increase well density in these already developed areas, amplifying and exacerbating the potential health impacts to the thousands of people that live and work within one-mile of these areas, and could adversely affect additional populations that rely on clean air and drinking water in the Colorado River Valley planning area.

101. Oil and gas operations generate toxic air emissions and large quantities of toxic waste, threaten drinking water sources, and present a range of significant threats to public health and safety. Hazardous air pollutants associated with oil and gas production include benzene, toluene, ethylbenzene, and xylene. These hazardous air pollutants are linked to cancer, neurological, cardiovascular, liver, kidney, and respiratory effects as well as effects on the immune and reproductive systems.

102. Air emissions from oil and gas operations may also include formaldehyde, acetaldehyde, naphthalene, ethane, propane and methane. Chemicals in these emissions can affect the brain, central nervous system, liver, and metabolic systems. Many of the toxins can also affect the endocrine system, with impacts on reproductive health, fetal development, and

other endocrine related endpoints, with effects that manifest themselves many years following exposure. And many of the toxins can affect the immune system, the cardiovascular system, the skin, eyes and other sensory organs, and respiratory system. Many of these toxins are carcinogens.

103. Hydrogen sulfide emissions from oil and gas operations present health risks. Citizen Groups' comments included information on hydrogen sulfide emissions and impacts in Colorado. However, BLM did not consider the impacts to human health from hydrogen sulfide emissions in the planning area.

104. High ozone levels are an increasing concern in oil and gas producing regions. Ozone has been linked to numerous adverse health conditions. A study submitted by Citizen Groups to BLM, John L. Adgate, et al., *Potential Public Health Hazards, Exposures and Health Effects from Unconventional Natural Gas Development*, ENVIRONMENTAL SCIENCE & TECHNOLOGY (2014), reported that ozone exposure is associated with "respiratory, cardiovascular, and total mortality as well as decreased lung function, asthma exacerbation, COPD [chronic obstructive pulmonary disease], cardiovascular effects and adverse birth outcomes." Although the BLM modeled ozone for the planning area, it underestimated these emissions, did not consider heightened U.S. Environmental Protection Agency ("EPA") ozone standards, did not conduct an unmonitored area analysis as requested by the State of Colorado, and did not perform winter modeling.

105. Ground-level ozone is linked to health effects including: premature mortality for adults and infants; cardiovascular morbidity, such as heart attacks; and respiratory morbidity,

such as asthma attacks and acute and chronic bronchitis. These impacts result in increased hospital and emergency room visits, lost work and school days, and restricted activity days.

106. Six cooperating agencies requested that the BLM conduct a health impact assessment (“HIA”) as part of the Colorado River Valley RMP revision process. Citizen Groups also requested this in comments to BLM, and also referred BLM to EPA’s *Frequently Asked Questions About Integrating Health Impact Assessment into Environmental Impact Statement*, which explains how and why agencies should include HIAs in their NEPA compliance. An HIA is a forward-looking document that attempts to identify the foreseeable direct, indirect, and cumulative links between a proposed activity and the health and wellbeing of affected communities, as well as to develop mitigation measures to minimize harms and maximize benefits.

107. BLM’s EIS does not include an HIA or its equivalent. In fact, BLM did not analyze the possible health impacts to the human population within or downstream from the planning area at all. Nor did BLM consider how many people might be exposed to health impacts from oil and gas development pursuant to the RMP, or analyze where development might take place relative to water sources or residences. BLM did not adequately justify its failure to conduct an HIA for the RMP.

108. BLM concluded in the Colorado River Valley EIS:

[S]ome chemicals emitted to the atmosphere during oil and gas development have the potential for health effects with certain types, levels, and durations of exposure. However, emitted concentrations diffuse rapidly with increasing distance from the pad, and exposures to members of the public are of much shorter duration than those associated with chronic health effects. Consequently, no actual, existing health effects of oil and gas activities have been documented for the planning area.

109. BLM dismissed studies on the health impacts of oil and gas development on the grounds that “while these additional studies cite potential risks under certain assumptions, none of the studies has demonstrated that significant adverse health effects have occurred or are predicted to occur as a result of actual operations conducted in conformance with BLM and State of Colorado regulations.”

110. Numerous studies cited in the EIS indicate that health risks are associated with exposure to oil and gas operations in Colorado. The EIS also acknowledges that accidents such as spills and leaks do occur during the course of oil and gas operations in the Colorado River Valley planning area.

111. Numerous studies cited in Citizen Groups’ comments and/or submitted to BLM with these comments indicate that health risks, including risks of serious health problems and mortality, are associated with exposure to oil and gas operations in Colorado.

112. In western Colorado, a 2008 investigation by the federal Agency for Toxic Substances and Disease Registry was conducted in response to complaints from planning area residents who were experiencing health effects that they believed may have environmental causes, ranging from mild complaints such as dizziness, nausea, respiratory problems, and eye and skin irritation to more severe concerns including cancer. This investigation found elevated cancer risk at one site.

113. The Colburn (2012) study referenced in the EIS was based on air sampling from oil and gas operations in Colorado and confirms that air toxics are generated during every stage of oil and gas development and can have potentially significant health impacts even at concentrations below regulatory thresholds. This study also found that polycyclic aromatic

hydrocarbons (“PAHs”) in Garfield County, which is within the Colorado River Valley planning area, were over three times higher than were found in a New York City cohort. PAHs are known carcinogens and endocrine disruptors. They are linked to preterm births, low birth weight, and adverse effects on mental development, intelligence, and behavior.

114. Another study of impacts in Colorado referenced in the EIS, McKenzie (2012), found that people who lived less than half a mile from a gas well had a higher risk of health issues. That research also found an increase in cancer risk and concluded that exposure to benzene was a major contributor to the risk. Similarly, a study submitted to BLM by Citizen Groups, Adgate, et al. (2014), found that residents living near natural gas operations experienced elevated benzene exposure, and that the health effects most often associated with benzene exposure included several kinds of acute and chronic leukemia, non-Hodgkins lymphoma, anemia, and other blood disorders as well as immunological effects.

115. Another study undertaken in rural Colorado and submitted to BLM by Citizen Groups, Lisa M. McKenzie, et al., *Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado*, ENVIRONMENTAL HEALTH PERSPECTIVES (2014), found that women who lived close to gas wells were more likely to have children born with a variety of defects, from oral clefts to heart issues and possibly neural tube defects. Similarly, Adgate, et al. (2014), which Citizen Groups also submitted to BLM, reported that “a retrospective study of 124,862 births in rural Colorado indicated an association between maternal proximity to natural gas well sites and birth prevalence of congenital heart defects and neural tube defects.”

116. Symptoms reported in the State of Colorado’s inspection/incident database by residents living within a half mile of well development included headaches, nausea, upper respiratory irritation, and nosebleeds. Health studies investigating oil and gas impacts to residents of the Piceance Basin also establish health risks.

117. Numerous health studies were identified in Citizen Groups’ comments. BLM’s Response to Comments did not address all of these health studies. BLM’s final conclusions on the health impacts of oil and gas are inconsistent with these studies’ findings. BLM did not adequately explain its decision to ignore these studies or its differing conclusions from theirs.

118. Numerous additional health studies were identified in Citizen Groups’ Protest of the Colorado River Valley RMP and EIS. BLM’s decision to deny the Protest did not address these health studies and its final conclusions are inconsistent with these studies findings. In addition, BLM’s ROD similarly failed to address these health studies and is inconsistent with their findings.

119. Instead, BLM assumes that that there will be no significant adverse health effects from oil and gas operations, provided that State of Colorado regulations are complied with. These regulations include, among others, Colorado Oil and Gas Conservation Commission (“COGCC”) surface operation setback requirements establishing the minimum distance between occupied structures and oil and gas drilling operations. The COGCC admits, however, that it lacks sufficient data for its setbacks.

120. A COGCC Staff Report, issued in March 25, 2013, states: “The Setback Rules are also not intended to address potential human health impacts associated with air emissions related to oil and gas development. The Commission, after consulting with [Colorado Department of

Public Health and Environment], believes that there are data gaps, related to oil and gas development's potential effect on human health, which warrant further study.”

121. BLM did not analyze how many people live within any given distance of current or potential oil and gas facilities allowed under the RMP, nor did BLM analyze how the human health exposure risks associated with types and amounts of the chemicals emitted by potential oil and gas facilities allowed under the RMP vary with distance from source.

122. BLM's conclusions about lack of human health risks are, without adequate explanation, inconsistent with the declarations of Citizen Groups' members, submitted to BLM with Citizen Groups' comments. Specifically:

- a.** Gerry Everson notes health impacts experienced by friends/family/himself in his declaration. He discusses fumes and noise that caused stress and resulted in deterioration of his quality of life. He mentions breathing problems, rashes, and loss of hearing. He also discusses a 90% drop in the value of his property.
- b.** Robert Arrington notes health impact concern associated with drilling, fracking, and associated transportation in his declaration. He notes spills he's witnessed personally. He also notes the particular vulnerability of some populations (e.g., the elderly).
- c.** Peggy and Ema Tibbets note health symptoms that corresponded with drilling activity near their Silt homes and the presence of substances in blood tests that are normally associated with oil and gas production. Specific symptoms cited by the declarants include upper respiratory infections, swollen glands, sore throat, congestion, coughing, sneezing, earaches, shortness of breath, and itchy, watery, burning eyes, as well as severe bloody noses and chronic anemia.
- d.** Thomas Thompson discusses a litany of health and safety issues experienced by him/family/neighbors after drilling began close to their home.
- e.** Dave Devanney discusses headaches, dizziness, and nosebleeds that he experienced when drilling began 1,000 feet from his home. He also describes citizen bucket brigade tests that uncovered hydrogen sulfide at well-sites in his community.
- f.** Bonnie Smeltzer describes burning eyes, sore throat, dizziness, and prolonged congestion as a result of fumes emitted from drilling sites.

123. The EIS does not describe the baseline situation for drilling-related public health impacts in and downstream from the planning area, nor describe potential increases in public health impacts over baseline.

124. The EIS does not base its conclusions about public health risks on the best scientific information available. For example, BLM cites one study, McKenzie (2012), which found higher health risks within half a mile of an oil and gas well pad, but the agency discounted the consequences of this finding based on a press release from the Colorado Oil and Gas Association criticizing this study.

125. Citizen Groups' comments also included information on health impacts associated with naturally occurring radioactive materials that may be released into the environment due to oil and gas extraction activities. However, BLM did not consider the impacts to human health from naturally occurring radioactive materials released in the planning area.

126. Finally, oil and gas development involves multiple sources of pollutants and disturbance caused by connected actions, including but not limited to the operations of wellpads, trucks, wells, compressors, pipelines, tanks, pits, separators, dehydrators, rigs, and more. BLM did not conduct an analysis of the cumulative impacts of all proposed, current, and/or reasonably foreseeable development on human health.

CAUSES OF ACTION

FIRST CAUSE OF ACTION

Failure to Take a Hard Look at the Severity and Impacts of GHG Pollution (NEPA Violation)

127. Citizen Groups incorporate by reference all preceding paragraphs.

128. NEPA requires a federal agency's EIS to consider "the environmental impact of the proposed action" including "any adverse environmental effects which cannot be avoided." 42 U.S.C. § 4332(2)(C)(i)-(ii). In so doing, agencies must investigate and explain "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." *Id.* § 4332(2)(C)(iv).

129. NEPA requires the EIS to present a hard look at the effects of proposed major federal actions and reasonable alternatives to them. These effects include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8.

130. NEPA regulations further mandate that the agency consider "whether the action is related to other actions with individually insignificant but cumulatively significant impacts." 40 C.F.R. § 1508.27(b)(7). NEPA defines the "cumulative impact" to mean "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7.

131. An EIS must do more than merely identify impacts. An EIS must also enable the agency and other interested parties to "evaluate the severity" of the effects. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989); *see also* 40 C.F.R. § 1508.27-(b) (a factor in assessing intensity or severity, and hence significance for NEPA purposes, is "the degree to which the proposed action affects public health or safety").

132. The Colorado River Valley EIS offers estimates of the amount of GHGs that will be emitted under the various alternatives, but the EIS fails to include any meaningful discussion of the impacts of these emissions. BLM asserted that discussion of the impact of these emissions would require modeling that was beyond the scope of BLM's analysis and is impossible. BLM also failed to address the foreseeable indirect impacts from downstream combustion of oil and gas resources leased and developed in the Colorado River Valley planning area.

133. Where information relevant to foreseeable adverse impacts is unavailable, agencies must nonetheless evaluate "such impacts based upon theoretical approaches or research methods generally accepted in the scientific community." 40 C.F.R. § 1502.22(b)(4).

134. One widely used approach to evaluating the impact of GHG emissions is to estimate the costs of those emissions to society. The federal Interagency Working Group on the Social Cost of Carbon has developed estimates of the present value of the future costs of carbon dioxide emissions as a proxy for the magnitude and severity of those impacts. The EPA has relied on a similar peer-reviewed estimate for the social cost of methane emissions, which adjusts the social cost of carbon dioxide to account for the different effects of methane on climate change and its greater global warming potential. These tools are easy to use by agencies, easy to understand by the public, and supported by years of peer-reviewed scientific and economic research. The EPA and other federal agencies have used these social cost protocols to estimate the effects of rulemakings on climate, and certain BLM field offices have used these tools in project level NEPA analysis. These protocols estimate the global financial cost of each additional ton of GHG pollution emitted to the atmosphere, taking into account factors such as

diminished agricultural productivity, droughts, wildfires, increased intensity and duration of storms, ocean acidification, and sea-level rise.

135. In the Colorado River Valley EIS, BLM failed to employ a social cost of carbon protocol, or any other economic or scientific tools, for assessing the potential impact of its decisions on climate caused by the production and combustion of the federal oil and gas resources made available for leasing and development pursuant to the RMP. BLM's failure to discuss the severity or impact of these emissions and the broader, cumulative impacts to which they incrementally contribute, despite the availability of tools to do so, is arbitrary, capricious, an abuse of discretion, and contrary to NEPA, 42 U.S.C. § 4332(2)(C)(ii) and its implementing regulations, in 40 C.F.R. §§ 1508.7, 1508.8, 1508.25, and 1508.27.

SECOND CAUSE OF ACTION
Failure to Take a Hard Look at Methane Emissions
(NEPA Violation)

136. Citizen Groups incorporate by reference all preceding paragraphs.

137. In the Colorado River Valley EIS, BLM failed to take a hard look at the environmental impacts of the methane pollution projected under the plan—particularly from the flaring, venting, and leaking of natural gas. BLM failed to properly quantify the magnitude of methane pollution resulting from oil and gas emissions sources in the Colorado River Valley planning area. BLM also utilized an outdated global warming potential for methane to calculate the RMP's CO₂ equivalent emissions. Consequently, BLM underestimated both the magnitude and the impacts of methane emissions resulting from its implementation of the Colorado River RMP.

138. BLM’s failure to take a hard look at methane emissions is arbitrary, capricious, an abuse of discretion, and contrary to NEPA, 42 U.S.C. § 4332(2)(C)(ii) and its implementing regulations in 40 C.F.R. §§ 1508.7, 1508.8, 1508.25, and 1508.27.

THIRD CAUSE OF ACTION
Failure to Take a Hard Look at the Impacts of Oil and Gas on Human Health
(NEPA Violation)

139. Citizen Groups incorporate by reference all preceding paragraphs.

140. NEPA implementing regulations direct agencies to consider “the degree to which the proposed action affects public health or safety.” 40 C.F.R. § 1508.27(b).

141. NEPA also states it as national policy that federal agencies “shall use all practicable means, consistent with other essential considerations of national policy,” to improve federal plans in order to, inter alia, “assure for all Americans safe, healthful...surroundings [and] attain the widest range of beneficial uses of the environment without...risk to health or safety.” 42 U.S.C. § 4331(b).

142. Here, BLM failed to satisfy NEPA and its implementing regulations by: (1) failing to adequately analyze the direct, indirect, and cumulative environmental impacts of oil and gas operations on human health; (2) failing to evaluate and apply recent and relevant scientific and health data; (3) failing to analyze the full range of foreseeable human health impacts; and (4) by delaying its analysis of potential human health impacts to subsequent implementation level, lease or project-specific environmental assessments rather than during consideration of overall management alternatives and mitigation measures at the RMP stage.

143. BLM, charged with evaluating reasonably foreseeable significant adverse effects on the human environment, claimed that it lacked documentation of the impacts from oil and gas

operations on human health in the planning area. However, substantial relevant information on health impacts was available, and BLM was required to develop all additional health impact information that was essential to a reasoned choice among alternatives or, if the cost to do so was exorbitant or the means to obtain the information were not known, then to include in the EIS the detailed statement required by 40 C.F.R. § 1502.22(b)(1)-(4).

144. BLM also violated 40 C.F.R. §1503.4 by not responding adequately to Citizen Groups' comments and the health studies and other information provided therewith on health impacts, and not explaining why it failed to undertake the requested Health Impact Assessment.

145. BLM's failure to consider human health impacts from RMP implementation adequately, and its failure to examine relevant human health data and articulate a satisfactory explanation for its actions, including a rational connection between the facts found and choices made, was arbitrary, capricious, an abuse of discretion, and contrary to NEPA, 42 U.S.C. § 4332(2)(C)(ii) and its implementing regulations, 40 C.F.R. §§ 1508.7, 1508.8, 1508.25, and 1508.27.

FOURTH CAUSE OF ACTION
Failure to Consider Alternatives to Oil and Gas Leasing and Development
(NEPA Violation)

146. Citizen Groups incorporate by reference all preceding paragraphs.

147. An EIS must consider "alternatives to the proposed action." 42 U.S.C. § 4332(2)(C)(iii). NEPA further requires federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." *Id.* § 4332(2)(E).

148. Federal Defendants must “[r]igorously explore and objectively evaluate all reasonable alternatives” to their proposed action. 40 C.F.R. § 1502.14(a). This alternatives analysis is the “heart” of the EIS. *Id.* § 1502.14.

149. In the Colorado River Valley RMP and EIS, BLM failed to consider any alternatives that could meaningfully reduce the lands made available for oil and gas leasing, or measures to control the timing, pace, impacts, and scale of such development. The existence of reasonable but unexamined alternatives renders a NEPA analysis inadequate.

150. BLM’s failure to consider in the EIS a reasonable range of alternatives with respect to oil and gas leasing and development was arbitrary, capricious, and an abuse of discretion, contrary to NEPA, 42 U.S.C. § 4332(2)(C)(iii), (E) and its implementing regulations, 40 C.F.R. § 1502.14(a).

REQUEST FOR RELIEF

WHEREFORE, Citizen Groups respectfully request that this Court:

- A.** Declare that Federal Defendants’ actions violate NEPA and the regulations and policies promulgated thereunder;
- B.** Vacate and set aside Federal Defendants’ actions taken in reliance on the Colorado River Valley EIS;
- C.** Enjoin Federal Defendants from approving the leasing or development of oil and gas resources in the planning area pursuant to the Colorado River Valley RMP until Federal Defendants have demonstrated compliance with NEPA;
- D.** Retain continuing jurisdiction of this matter until BLM fully remedies the violations of law complained of herein;

E. Award Citizen Groups their fees, costs, and other expenses as provided by applicable law; and

F. Issue such relief as Citizen Groups subsequently request and this Court may deem just, proper, and equitable.

Respectfully submitted this 18th day of July, 2016.

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