Memorandum

To: Interested Parties

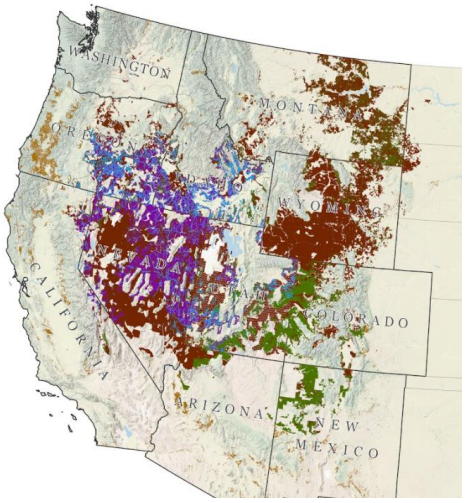
From: Defenders of Wildlife, Southern Utah Wilderness Alliance, Sierra Club, Oregon Natural Desert Association, Western Environmental Law Center, Grand Canyon Trust, Western Watersheds Project, Center for Biological Diversity, Natural Resources Defense Council

Date: January 28, 2021

Subject: Recently Finalized Policies and Programs Enabling Massive Vegetation Removal on Public Lands Need Fixing

Over the past 12 months, the Bureau of Land Management finalized five actions that expedite the removal of native forests, woodlands, and sagebrush shrublands across the intermountain West. The five actions – three regulatory changes and two multi-state initiatives – fast-track approvals and eliminate public input and review on future projects that involve chaining, mastication, herbicides, prescribed burning, targeted grazing, salvage logging, and mulching of native vegetation on public lands. The Bureau of Land Management's rewrite of its guiding policy advanced the Trump administration's efforts to broadly gut protections in the National Environmental Policy Act (NEPA), serve extractive industries, and downplay science in decision-making.

The cumulative reach of the Bureau of Land Management's actions is considerable. By our calculation, the new rules and initiatives give the Bureau of Land Management broad discretion to remove native vegetation from millions of acres without project-level environmental review or public notification, setting into motion decades of ground-disturbing projects with serious implications for native plant communities and the wildlife that depend on them. This includes the iconic sage grouse, whose habitat has dwindled to less than half of its native range due to extraction, development, and grazing,[1] and the piñon jay, a sharply declining species that occurs within the piñon-juniper woodlands that are oft targeted by the Bureau of Land Management for logging.[2] The rewrite also risks exacerbating the climate crisis by reducing carbon storage and sequestration in native forests and shrublands, and producing dust that accelerates mountain snowmelt. This phenomenon in



Public lands likely available for fast-tracked logging and vegetation removal under new policies and programs.

[1] Wisdom, M.J.; Rowland, M.M.; Tausch, R.J. 2005. Effective management strategies for sage-grouse and sagebrush: a question of triage? Transactions, North American Wildlife and Natural Resources Conference. 70: 206–227. https://www.fs.fed.us/rm/pubs_other/rmrs_2005_wisdom_m001.pdf.

[2] Boone, John & Ammon, Elisabeth & Johnson, Kristine. (2018). Long-term declines in the Piñon Jay and management implications for piñon–juniper woodlands. https://pdfs.semanticscholar.org/a43e/bb8a9b6ca62a8fc8ef9520faa8e9a0e48599.pdf

the Colorado Rockies alone threatens the water supply on which 40 million people and 15 percent of the nation's agriculture rely.[3]

Since the 1940s, the Bureau of Land Management has spent tens of millions of taxpayer dollars manipulating native piñon pine and juniper forests and sagebrush stands throughout the West.[4] Initially undertaken to enhance forage for wildlife and livestock, these projects have more recently been justified in the name of habitat restoration and fuels reduction. Vegetation treatments are often controversial because the scientific evidence to support their efficacy is mixed at best.[5] Consider that the Bureau of Land Management conducts vegetation management activities on over one million acres every year, yet ecological conditions as measured, for instance, by exotic grass invasions[6] and sage grouse and piñon jay populations[7], continue to worsen. Adding to controversy is concern that the Bureau of Land Management often fails to meaningfully include Tribes and consider Tribal issues in its vegetation management projects, leading to unnecessary cultural damage and continued cultural repression.

Bullhog Mastication Project, Utah

Increased public and scientific scrutiny[8] in recent years has forced the Bureau of Land Management to stop or rethink a number of large-scale mechanical vegetation removal proposals. Rather than responding to the increased scrutiny with greater attention to the implications of large-scale vegetation manipulation for native wildlife and ecological integrity, the Bureau of Land Management instead rewrote policy and launched new programs to deliberately curtail public oversight and scientific review of its vegetation removal activities across the West.

Millions of acres of lands administered by the Bureau of Land Management are ecologically degraded or have increased fire risk as a result of past and current land management practices, including decades of using heavy machinery to remove vegetation and over-grazing.[9] Some tracts may benefit from active

---

[3] United States Geological Survey. (2007). Impacts of Climate Change on Water and Ecosystems in the Upper Colorado River Basin [Face sheet].

[4] Pilliod, D.S., J.L. Welty, and G.R. Toevs. 2017. Seventy-five years of vegetation treatments on public rangelands in the Great Basin of North America. Rangelands 39:1–9.

[5] *e.g., see:* Jones, Allison, lead editor. 2019. Do Mechanical Vegetation Treatments of Pinyon-Juniper and Sagebrush Communities Work? A Review of the Literature, February 2019. *Also see:* Bombaci, S., Pejchar, L., 2016. Consequences of pinyon and juniper woodland reduction for wildlife in North America. Forest Ecology and Management 365, 34-50.

[6] *E.g., see:* Lelmini, M. R., T. E. Hopkins, K. E. Mayer, K. Goodwin, C. Boyd, B. Mealor, M. Pellant, and T. Christiansen. 2015. Invasive Plant Management and Greater Sage-grouse Conservation: A Review and Status Report with Strategic Recommendations for Improvement. Western Association of Fish and Wildlife Agencies. Cheyenne, Wyoming.

[7] *See:* Boone et al. (2018, *supra. Also see:* Somershoe et al. (2020) and https://www.cpr.org/2019/09/13/sage-grouse-numbers-in-west-continue-to-decline-after-federal-protection-rejection/

[8] *e.g., see:* https://suwa.org/chaining-and-vegetation-removal/. *Also see:* Letter dated December 18, 2020 by sagebrush scientists regarding the ecological hazards of fuel breaks.

[9] The Bureau of Land Management permits grazing on almost one hundred million acres of which 31.5 million acres are not meeting land health standards and 34.7 million acres have not been evaluated for their land health condition. This figure is based on an analysis by the Public Employees for Environmental Responsibility (PEER). *See*

restoration while others might only need passive restoration (i.e., removal of grazing or other activities) to be functional. Regardless of the approach, it is important that restoration is undertaken within a rigorous scientific framework with careful project selection, monitoring, evaluation, and consideration of future climate scenarios.[10] Bureau of Land Management's own Integrated Rangeland Fire Management Strategy highlights the importance of conducting actions within an experimental scientific framework.

The incoming Secretary of the Interior in coordination with Congress should take immediate steps to restore science and transparency in fuels management, restoration, and other vegetation management projects on lands administered by the Bureau of Land Management. We recommend the following immediate actions:

- Halt the use of the piñon-juniper removal categorical exclusion;
- Halt the use of the salvage logging categorical exclusion;
- Withdraw the Records of Decision for the Great Basin Fuels Reduction and Range Restoration Programmatic EIS[11] and the Fuel Breaks in the Great Basin Programmatic EIS;[12]
- Establish a scientific committee to review the best available science on the conservation and restoration of the sagebrush biome and make recommendations to the Secretary; and
- Ensure that the Bureau of Land Management's future restoration program is scientifically rigorous, coordinated nationally, transparent, and inclusive of the public and scientific experts.

The three rules and two multi-state initiatives finalized over the past 12 months are:

- A rulemaking that allows the Bureau of Land Management to thin or cut down piñon pine and juniper forests in multiple projects, each up to 10,000 acres in size, without environmental analysis, scientific oversight, or public review and input. Ten thousand acres is equivalent to a 4 mi x 4 mi square.
- A rulemaking that automatically greenlights logging on up to 3,000 acres of forest as long as the agency determines the trees are "dead and dying" due to a variety of possible "disturbances" such as wildfire or forest pathogens. Again, this would proceed without any public oversight or scientific review, as would typically be required under NEPA.
- A rulemaking that exempts vegetation removal projects (including chaining of sagebrush and other native vegetation) up to 4,500 acres in size from the public oversight and scientific review ordinarily required by NEPA prior to a project being planned and executed. This rulemaking was directed by the 2018 Farm Bill to protect, restore, or improve habitat for greater sage grouse and mule deer. The rule establishes some sideboards related to science and transparency. Wilderness and Wilderness Study Areas are excluded.

---

https://www.peer.org/blm-grazing-data/ for an explanation of PEER's methods and results. *Also see:* Vavra, M. C.G. Parks, and M.J. Wisdom. 2007. Biodiversity, exotic plant species, and herbivory: The good, the bad, and the ungulate. Forest Ecology and Management 246: 66-72.

[10] *e.g. see:* Steven T. Knick, David S. Dobkin, John T. Rotenberry, Michael A. Schroeder, W. Matthew Vander Haegen, Charles van Riper. 2003. "Teetering on the edge or too late? Conservation and research issues for avifauna of sagebrush habitats." The Condor, 105(4), 611-634, November 11, 2003. ("Implementation of sound management based on an understanding of the effects of land-use practices, and enforced accountability to those policies, may be the only way to ensure long-term survival of sagebrush habitats and their birds.")

[11] https://eplanning.blm.gov/eplanning-ui/project/122968/510

[12] https://eplanning.blm.gov/eplanning-ui/project/71149/510

- A program that authorizes the clearing of up to 11,000 miles (667,000 acres) of 500-foot wide "fuel breaks" in forest, sagebrush, and grassland habitats across Utah, Nevada, Idaho, California, Washington, and Oregon without scientific oversight, public review of projects, or accountability.
- A corresponding, even broader program that allows the Bureau of Land Management to plan and execute vegetation removal projects across a 223-million-acre area in the same six states without scientific oversight, public review of projects, or accountability. Treatments are allowed within healthy native vegetative systems. National Monuments, National Conservation Areas, Wilderness Areas and Wilderness Study Areas, Visual Resource Class I areas, Areas designated through the John D. Dingell Jr. Conservation, Management, and Recreation Act (2019) are excluded.

Additional information and resources can be found here:

- Google Drive folder containing photos (for use with attribution), maps, fact sheets, scientific studies, and resources relevant to all five of the Trump administration's 2020 actions removing public and scientific oversight from vegetation removal actions on the Bureau of Land Management's National System of Public Lands.
- Video of chaining, a heavy-handed technique used to clear piñon-juniper trees and brush.
- Recording of July 2020 Virtual Press Conference discussing all five of the Trump administration's vegetation/deforestation actions.
- Letter from scientists specializing in shrub steppe ecosystems warning of the ecological hazards that result from clearing vegetation for fuel breaks (December 18, 2020)
- Gambling with Our Public Lands: The Scientific Uncertainty and Fiscal Waste of the Bureau of Land Management's Vegetation Removal Program in the West
- Do mechanical vegetation treatments of piñon-juniper and sagebrush communities work? A review of the literature. 2019. Alison Jones.
- Consequences of piñon and juniper woodland reduction for wildlife in North America. 2016. Sara Bombaci and Liba Pejchar in Forest Ecology and Management

For more information, contact:

- Vera Smith, Defenders of Wildlife, 303-917-7222, vsmith@defenders.org
- Kya Marienfeld, Southern Utah Wilderness Alliance, 435-259-5440, kya@suwa.org
- Scott Lake, Center for Biological Diversity, 802-299-7495, slake@biologicaldiversity.org
- Susan Jane Brown, Western Environmental Law Center, 503-914-1323, brown@westernlaw.org
- Laura Welp, Western Watersheds Project, 435-899-0204, laura@westernwatersheds.org
- Connie Howard, Toiyabe Chapter of the Sierra Club, 775-224-3916, constancehoward58@gmail.com
- Mike Popejoy, Grand Canyon Trust, 928-707-1419, mpopejoy@grandcanyontrust.org
- Jeremy Austin, Oregon Natural Desert Association, (541) 330-2638, ext. 310, jeremy@onda.org

Questions and Answers
Bureau of Land Management Vegetation Removal

How many acres of land does the Bureau of Land Management administer and where are they located? The Bureau of Land Management manages about 245 million acres mainly located in the western United States that aggregately are the National System of Public Lands (NSPL). Excluding lands in Alaska and eastern Oregon, most of the lands are generally lower elevation, arid and semi-arid, shrub, steppe, dry forests, and grasslands. The sagebrush biome, which is the aggregate of lands where sagebrush grows, accounts for a large component of the NSPL.[13]

Why are these lands important? The NSPL is home to over 300 species listed or proposed for listing under the Endangered Species Act and another 2,436 sensitive and rare species. Some of these species depend on the broad expanses or unique habitat niches on the NSPL to survive. Healthy ecosystems yield resiliency within public lands and more broadly within agricultural lands and watersheds on which people depend. The sagebrush biome, about half of which is managed by the Bureau of Land Management, is home to over 350 wildlife species that use sagebrush for sustenance and protection. The piñon, juniper and sagebrush plants targeted for removal are important for sequestering carbon in the face of climate change.

What is the condition of the arid and semi-arid shrub steppe lands of the Interior West that are administered by the Bureau of Land Management and the focus of most of the large-scale proposals the Bureau of Land Management is pursuing?

- Less than 10% of the sagebrush biome is fully intact[14]
- Industrial development and wildfire continue to transform and fragment native habitat:
    - Between 4th Q 2015 and 1st Q 2020, the Bureau of Land Management leased over 2 million acres of sage grouse habitat for oil and gas[15]
    - Since Jan. 1, 2020, 6.8 million acres have burned[16]
    - The Bureau of Land Management has authorized 16.5 million acres to Rights-of-Way and Fuel Breaks[17]

---

[13] For the purposes of the calculations in this section, we defined the sagebrush biome as the sagebrush layer developed by the US Geological Survey. It represents lands with 5% or more sagebrush cover. https://www.sciencebase.gov/catalog/item/5d1cfecae4b0941bde64ce9f

[14] Wisdom, M.J.; Rowland, M.M.; Tausch, R.J. 2005. Effective management strategies for sage-grouse and sagebrush: a question of triage? Transactions, North American Wildlife and Natural Resources Conference. 70: 206–227. https://www.fs.fed.us/rm/pubs_other/rmrs_2005_wisdom_m001.pdf.

[15] Based on spatial descriptions of lease sales provided by the Bureau of Land Management in eplanning and state designations of sage grouse habitats.

[16] Based on National Interagency Fire Center layers at Historic GeoMAC Perimeters 2019 and US HIST FIRE PERIMTRS 2000 2018.

[17] This figure was calculated by summing 1) acres calculated by taking ROW tabular data queried in LR2000 and joining it with the Public Land Survey System (PLSS) polygonal data (https://gis.blm.gov/arcgis/rest/services/lands/BLM_Natl_RightsOfWay_Public_Display/MapServer), and 2) acres where fuel breaks are authorized in 2019 in the Great Basin Programmatic Fuel Breaks EIS and Tri-State Fuel Breaks EIS.

- The Bureau of Land Management permits grazing on almost one hundred million acres of which 31.5 million acres are not meeting land health standards and 34.7 million acres have not been evaluated for their land health condition[18]

Why generally are these lands in decline? The western Bureau of Land Management lands have been subject to decades of domestic livestock grazing, vegetation treatments (e.g., sagebrush removal in support of grazing and big game management), fossil fuel development, and road building, among other land activities.[19] Cheatgrass and other weeds are invading especially where soils are disturbed.[20] Energy development is expanding aggressively. Wildfires, exacerbated by flammable invasive grasses and climate change, are burning more frequently.[21]

Do the lands administered by the Bureau of Land Management in the interior west need restoration? The top priority for lands that are relatively intact is to protect them.[22] Other lands can be restored through passive restoration (that is, cease activities that continue to damage the ecology and let nature recover) or more active restoration informed by sound science and site-specific information. A fraction may not be feasible to restore (e.g., where lands have crossed ecological thresholds that are very difficult to reverse). When restoration is warranted, it is important that it is undertaken within a rigorous scientific framework with careful project selection, monitoring, evaluation, and feedback loops and consideration of future climate scenarios.[23] Restoration of the sagebrush steppe ecosystem is experimental and as experience has demonstrated can actually make conditions worse if poorly executed.

Do vegetation removal treatments work? Land management agencies have conducted vegetation treatments for nearly a century, but quantified published research into the long-term effectiveness of treatments is still fairly new. The overarching conclusion of most studies, however, is that the success of past treatments has been mixed. We are starting to understand that achieving goals is dependent on a

---

[18] The Bureau of Land Management's Land Health Standards (LHS) evaluations assess the conditions of Bureau of Land Management lands with respect to a number of "Fundamentals of Rangeland Health," defined in 43 CFR 4180.1. In its evaluations, the Bureau of Land Management determines whether allotments are meeting standards, are failing to meet standards, and if failing, whether impacts of livestock grazing are identified as a significant cause or are failing to meet standards due to factors other than livestock. Public Employees for Environmental Responsibility (PEER) through Freedom of Information Act requests acquired land health data from 2012 and compiled it into one data base. *See* https://www.peer.org/blm-grazing-data/ for an explanation of PEER's methods. Because the Bureau of Land Management does not maintain a formal data base containing land health evaluation records, we used PEER's data from 2012 in this analysis.

[19] *See* Table 1 in Wisdom et al. 2005, *supra*, for a list of 26 activities that have and continue to damage habitat.

[20] *See* Lelmini et al. 2015, *supra.*

[21] Brooks, M.L., Matchett, J.R., Shinneman, D.J., and Coates, P.S., 2015, Fire patterns in the range of greater sagegrouse, 1984–2013—Implications for conservation and management: U.S. Geological Survey Open-File Report 2015-1167, 66 p., http://dx.doi.org/10.3133/ofr20151167.

[22] *See,* e.g., Knick, Stephen T., David S. Dobkin, John T. Rotenberry, Michael A. Schroeder, W. Matthew Vander Haegen, Charles van Riper "Teetering on the Edge or Too late? Conservation and Research Issues for Avifauna of Sagebrush Habitats," The Condor, 105(4), 611-634, (1 November 2003)

[23] *See,* e.g., Gann GD, McDonald T, Walder B, Aronson J, Nelson CR, Jonson J, Hallett JG, Eisenberg C, Guariguata MR, Liu J, Hua F, Echeverria C, Gonzalez E, Shaw N, Decleer K, Dixon KW. 2019. International principles and standards for the practice of ecological restoration. Second edition. Restoration Ecology S1-S46. *Also see:* Congressional Research Service, 2011. Adaptive Management for Ecosystem Restoration: Analysis and Issues for Congress.

wide variety of interrelated factors (such as temperature, elevation, average precipitation, degree of tree dominance if any, understory plant composition if any, seeding with native or nonnative seeds, amount of invasive annuals present on site relative to native perennials, precipitation levels and patterns when treatment occurs, livestock management, post-treatment management, and fire history to name a few). We also know that vegetation projects, even those done to restore ecosystems, can make conditions worse.

Two recent literature reviews investigated the efficacy of vegetation treatment projects. Jones (2019) conducted an extensive review of the literature to evaluate the effectiveness of mechanical treatment projects in piñon-juniper and sagebrush systems and Bombaci and Pejchar (2016) conducted an extensive review of the literature to evaluate the effectiveness of mechanical treatment projects in piñon-juniper woodlands on wildlife. Findings included:

- Most studies found that cutting piñon-juniper woodlands did not improve mule deer and elk habitat and resulted in negative or non-significant effects to invertebrates, birds, and small mammals (Bombaci and Pejchar 2016).
- Only 36% of sagebrush treatments showed benefit to sage grouse. Many researchers concluded that sagebrush removal can be harmful to sage grouse (Jones 2019).
- About three-fourths of the reviewed treatment projects had non-significant or negative effects on native forbs and grasses. About 50% of the time, non-native species such as cheatgrass increased (Jones 2019).

How many vegetation projects has the Bureau of Land Management implemented on the NSPL? According to a recent Bureau of Land Management Press Release entitled *Trump Administration Reduces Wildfire Risk Across Record 5.4 Million Acres*, the Bureau of Land Management in FY 2020 conducted projects on over 4 million acres.[24]

Why is salvage logging, as proposed by the Bureau of Land Management, bad for the environment? It is widely acknowledged in the scientific community that the impacts of salvage logging and the associated timber yarding and road construction (temporary and permanent) are pervasive and cumulatively negative.[25] Numerous scientific studies[26] tell us that even in vegetation patches where forest fires burned intensely, the resulting post-fire habitat is one of the most ecologically important, biodiverse, and rare habitat types in western conifer forests. Post-fire conditions are vital for rare and imperiled wildlife that depend upon the unique ecological conditions resulting from intense fire. These include standing dead trees or "snags" that provide nesting and foraging habitat for numerous birds and mammals.

The habitat conditions produced by natural disturbances are not mimicked by salvage logging, which typically removes critical ecological features. The Bureau of Land Management's proposed salvage exemption to NEPA would allow clear-cut logging without detailed environmental review and public

[24] We note that the Bureau of Land Management reported projects on 1.7 million acres in FY 2019 in the Public Lands Statistics. See Tables 2-3 and 2-8.

[25] See letter sent by 192 scientists to the Bureau of Land Management July 2, 2020 opposing the proposed salvage exemption. Available at https://westernlaw.org/wp-content/uploads/2020/07/2020.07.02-BLM-Salvage-CE-Rulemaking-Comments.pdf, Exhibit C.

[26] Noss, R.F, and D.L Lindenmayer. 2006. The ecological effects of salvage logging. Special feature in Conservation Biology (several papers). Vol 20.

comment with potentially serious implications to ecology and wildlife (e.g., coho salmon, northern spotted owl).

What would be a better approach?

Given that vegetation treatments are experimental and controversial, the Bureau of Land Management should ensure that its ecological restoration program adheres to widely accepted ecological restoration principles.[27] Specific to the sagebrush biome, the Bureau of Land Management should pursue a sagebrush sea restoration initiative that is designed, implemented, and evaluated in concert (not in conflict) with the public and scientific experts. The Department of Interior should establish a science oversight mechanism (including, but not exclusively, scientists from outside of government) to guide annual work plans, project selection, design, expected outcomes, monitoring & evaluation, and course correction if desired outcomes are not being met. Second, the Department should centralize the initiative so that projects implemented by field offices support a coordinated strategy and information is readily available on a dedicated website. Third, the Department should invite the public to weigh in on projects and contribute to an annual evaluation of lessons learned and the growing body of scientific understanding. Fourth, the Bureau of Land Management should conduct environmental analyses for the projects (or groups of projects) that consider the site-specific conditions for each project area. Fifth, the Bureau of Land Management must assure that post-treatment management supports restoration objectives and desired conditions that have been described prior to project initiation.

[27] *See, supra,* Gann et a. 2019.