Forty-Four Conservation Recipes for 30x30

A Cookbook of 22 Administrative and 22 Legislative Opportunities for Government Action to Protect 30 Percent of US Lands by 2030

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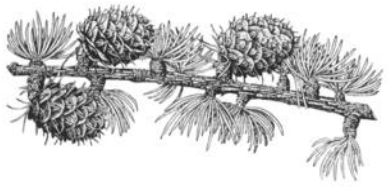

Abstract

President Biden has committed the United States to achieving conservation protection for 30 percent of the nation's lands and waters by 2030 (30x30). This paper addresses only the lands (not the waters) side of the goal. Currently 13 percent (13x21) of US lands have adequate conservation protection (US Geological Survey GAP 1 or GAP 2 status). To achieve 30 percent by 2030, another 17 percent, or ~490 million acres, must attain GAP 1 or GAP 2 status. While the federal government could take or facilitate a multitude of public policy actions that would benefit conservation, and while such actions would generally be useful to society, not all would confer levels of protection that would result in GAP 1 or GAP 2 status, and thus not all would contribute to the 30x30 goal. This paper offers a set of detailed recipes for conservation actions that can be taken by Congress and/or the Biden administration to reach 30x30. Many of these conservation actions could apply to the same acres, so the totals are gross, not net. Even if Congress does not act to meet this goal, administrative action (including presidential proclamations, presidential executive orders, action by the interior secretary, and action by the agriculture—Forest Service—secretary), if properly fashioned, can reach 30x30. This cookbook focuses primarily on existing federal public lands, and such lands are disproportionately in the West and Alaska; thus, many ecoregions across the nation would be underrepresented in achieving 30x30 if just these recipes were followed. But overshooting 30x30 by disproportionate protection of federal public lands would not be a problem, as the ultimate scientifically required goal is 50x50.

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Abbreviations

30x30	30% of lands and waters conserved by 2030 ("30 by 30")
ACE	Army Corps of Engineers
ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BoR	Bureau of Reclamation
CBD	Convention on Biological Diversity
CH	Critical Habitat
DoD	Department of Defense
FWS	Fish and Wildlife Service
GAP	Gap Analysis Project
IRA	Inventoried Roadless Area
IUCN	International Union for Conservation of Nature
LWC	Lands and Wilderness Characteristics
NCA	National Conservation Area
NFS	National Forest System
NLCS	National Landscape Conservation System
NPS	National Park Service *or* National Park System
NRA	National Recreation Area
NSA	National Scenic Area
NWA	National Wildlife Area
NWPS	National Wilderness Preservation System
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
NWSRS	National Wild and Scenic Rivers System
OECM	Other Effective Area-Based Conservation Measures
PA	Protected Area
PAD-US	Protected Area Database–United States
RNA	Research Natural Area
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
USGS	United States Geological Survey
WCPA	World Commission on Protected Areas (part of the IUCN)
WDPA	World Database on Protected Areas (part of the CBD)
WPA	Wetland Production Area
WSA	Wilderness Study Area
WSR	Wild and Scenic River

Introduction: To 30x30 from 13x21

In his executive order of January 27, 2021, entitled "Tackling the Climate Crisis at Home and Abroad,"[1] President Biden committed the United States to conserving 30 percent of the nation's lands and waters by 2030 (30x30). This cookbook addresses only the lands side of that commitment and not the waters side (see Box I-1).

This cookbook starts with the assumption that 30x30 is necessary. If you do not concur, then you'll not likely find any of these recipes tasty. Actually, this cookbook has enough recipes to achieve 50x50 if all are executed, which is what the science says is necessary to conserve our natural security—a vital part of our national security.

Box I-1: *Lands* and Waters *of the United States*

The 30x30 goal is for both lands and waters of the United States. "Waters" in this case generally means saltwater under the control of the United States but not within the borders of its states or territories. The US exclusive economic zone is 3.4 million square nautical miles (2,881,663,200,000 acres; yes, ~2.9 trillion acres). It is generally accepted that "only 26 percent of Federal ocean territory is permanently protected, the vast majority of which is in the remote western Pacific Ocean or northwestern Hawaii."[2] Given that only another 4 percent of US ocean acreage must be conserved to achieve 30x30, the goal for our oceans should be changed to 50x30. However, ocean conservation is not the subject of this cookbook.

The Meaning of "Conserving" in President Biden's Executive Order

In his executive order, President Biden set a goal of "conserving at least 30 percent of our lands and waters by 2030," and he asked the heads of relevant agencies to submit a report within three months recommending steps the US should take to achieve that goal. Just what does "conserving" mean? It is worth examining this question from three perspectives:

- what President Biden meant
- how departments in his administration are interpreting it
- what nature requires, based on international standards and the best available science

What Did the President Mean?

President Biden did not elaborate in his executive order on what he meant by "conserving." Perhaps he had in mind *Merriam-Webster's* definition of *conserve*: "to keep in a safe or sound state." Or perhaps he meant it in the sense of *Merriam-Webster's* definition of *conservation*: "a careful preservation and protection of something."

Perhaps the President was thinking of the definitions in the Endangered Species Act as appropriate to apply to endangered nature.

[1] Biden, Joseph R., Jr. January 27, 2021. Executive Order 14008: Tackling the Climate Crisis at Home and Abroad. *Federal Register* 86:19 (February 1, 2021), 7619–7633.
[2] Haaland, Deb. February 6, 2020. H.Res.835 (116th Congress). Expressing the sense of the House of Representatives that the Federal Government should establish a national goal of conserving at least 30 percent of the land and ocean of the United States by 2030.

> *The terms "conserve," "conserving," and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.*[3]

In this case, "conserving" would mean using all methods and procedures necessary to bring any endangered or threatened ecosystem to the point at which the goal in his executive order has been met.

How Are Departments Interpreting It?

In May 2021, the Departments of the Interior, Agriculture, and Commerce, as well as the White House Council on Environmental Quality, issued the requested report. The report misses the mark in most ways. Among other sins, it seeks to downgrade the meaning of "conserving" by embracing any action or activity that is less than 100 percent exploitative as adequate "conservation" to attain 30x30. My critique of the report can be found in Appendix A.

In the interdepartmental report, the agencies stretch—if not break—what is meant by "conserving":

> *Notably, the President's challenge specifically emphasizes the notion of "conservation" of the nation's natural resources (**rather than the related but different concept of "protection" or "preservation"**) recognizing that many uses of our lands and waters, including of **working lands, can be consistent with the long-term health and sustainability of natural systems**. The 30 percent goal also reflects the need to support conservation and restoration efforts across all lands and waters, not solely on public lands, including by incentivizing voluntary stewardship efforts on private lands and by supporting the efforts and visions of States and Tribal Nations.*[4] [emphasis added]

Biden baited; his administration switched. Why? To comport with the politically expedient notion that "many uses of our lands and waters, including of working lands, can be consistent with the long-term health and sustainability of natural systems." Such a notion is based on hope, with neither evidence nor history in support. (Most troubling is the apparent weakening in her position as to what qualifies as conservation between the days of Representative Haaland and the era of Secretary Haaland.)

What Does Nature Require?

A lot of scientific thought and policy development has gone into determining just what "conserve" means and just how little of our lands and waters societies must "conserve" to have functioning ecosystems, both across the landscape (and seascape) and over time.

The gold standard is the United Nations Convention on Biological Diversity (CBD), an international treaty that the United States was instrumental in developing but that President George H. W. Bush refused to sign in 1992.[5] In 1993, President Bill Clinton, who prevented a

[3] 16 USC 1532(c).
[4] US Department of the Interior et al. 2021. *Conserving and Restoring America the Beautiful* (pdf).
[5] Jones, Benji. May 20, 2021. "Why the US Won't Join the Single Most Important Treaty to Protect Nature." Vox.

second term for the first Bush, signed the treaty and sent it off to the Senate for ratification. In 1994, the Senate Foreign Relations Committee recommended by a vote of 16 to 3 that the full Senate ratify the CBD, which requires a two-thirds vote.[6] But given the chronic dysfunction of the Senate, ratification of the CBD has not yet happened and is highly unlikely to happen, so the United States has only "observer" status as far as the treaty goes. Fortunately, 196 other nations—just about every other nation on Earth—did ratify the treaty. The only other "nation" that has not ratified the CBD is the Holy See.[7]

Not waiting for the US Senate, the Secretariat of the CBD has long been busy. Among other things, it has defined how much of the world's lands and waters must be "conserved" by 2030 to fulfill the purposes of the CBD. The latest iteration and elaboration is found in Target 3 in the first draft of a new framework for global biodiversity:

> Target 3. **Ensure that at least 30%** globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, **are conserved through** effectively and equitably managed, ecologically representative and well-connected systems of **protected areas and other effective area-based conservation measures**, and integrated into the wider landscapes and seascapes.[8] [emphasis added]

As defined under the CBD, 30 percent "conserved" means either in protected areas (PAs) or through other effective area-based conservation measures (OECMs). (More on these in Chapter 1.) It does not include "working lands," as the Biden administration hopes.

Running the Numbers

One cannot protect what one does not measure.

The land area of the United States and its territories[9] is 2,439,773,792 acres.[10] Thirty percent of that is 731,932,138 acres. That is the area we are aiming to protect by 2030.

In mid-2021, 316,304,508 acres or 13 percent of the US (hereafter "13x21") is in adequately protected areas dedicated to the preservation of biological diversity. Adequate conservation is defined as permanently protected areas (PAs) that achieve GAP 1 or GAP 2 status as defined by the US Geological Survey.[11] To attain 30x30, another 17 percent of the nation's land area—or 487,954,758 acres—must achieve GAP 1 or GAP 2 status by 2030. (To understand the four GAP categories, 1 best and 4 worst, see Chapter 1.)

Let's be generous and conclude that "x30" means by the end of, not the beginning of, 2030. Let's also assume the clock started at noon Eastern Time on Wednesday, January 20, 2021, when President Biden was sworn in. (I suppose it would only be fair to count the end of 2030 as

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[6] Defenders of Wildlife and the Center for Biological Diversity. 2009. "The United States and the Convention on Biological Diversity" (pdf).
[7] Convention on Biological Diversity. List of Parties.
[8] Convention on Biological Diversity. 2021. "First Draft of the Post-2020 Global Biodiversity Framework" (pdf).
[9] District of Columbia, Guam, Commonwealth of the Northern Mariana Islands, Puerto Rico, US Virgin Islands, and Minor Outlying Islands.
[10] US Geological Survey (USGS). May 2021. Protected Areas Database of the United States (PAD-US) 2.1 Summary Statistics by GAP Status Code.
[11] Ibid.

actually at noon Eastern Time on Monday, January 20, 2031, but the calculations are much harder and we end up in the same place.) Now let's say that the Biden administration's share of the acreage that must be conserved is 40 percent (40 percent of the decade or a presidential term). That means 166,251,052 acres must be adequately conserved by the end of this presidential administration at noon Eastern Time, Monday, January 20, 2025.

Here is what the calculator says must be conserved, on average:

- 41,526,763 acres per Biden-year
- 3,463,564 acres per Biden-month
- 799,284 acres per Biden-week
- 114,183 acres per Biden-day
- 4,758 acres per Biden-hour
- 79 acres per Biden-minute
- 1.3 acres per Biden-second

Chose the unit of time that works best for you. An acre is a bit larger than a US football field (end zones not included).

Distribution Across the Landscape

It is very important that every effort be made to achieve 30x30 (and ultimately 50x50) not just at the national level but well distributed across the multitude of US ecoregions. It would almost be possible to attain a 30x30 national goal by focusing exclusively on federal public lands, but that would unduly limit biological diversity protection to the eleven western states and Alaska.

The forty-nine US states on the North American continent encompass 108 Level III ecoregions (see Figure I-1; Hawaii and US territories are not on the continent).[12]

> Ecoregions are areas where ecosystems (and the type, quality, and quantity of environmental resources) are generally similar. . . . [E]coregions denote areas of similarity in the mosaic of biotic, abiotic, terrestrial, and aquatic ecosystem components with humans being considered as part of the biota. . . . Ecoregions are identified by analyzing the patterns and composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity. These phenomena include geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology.[13]

Recipes 8 (Quadruple the Acreage of National Wildlife Refuges) and 9 (Quadruple the Acreage of Waterfowl Production Areas) will work best to ensure protected areas are well distributed across the American landscape.

Inclusion of Both Public and Private Lands

The vast majority of natural areas that are now adequately protected (13x21) are public lands—mostly federal public lands. So too will be the vast majority of the lands that will comprise 30x30. This is for two major reasons:

[12] Center for Biological Diversity. 2021. Unpublished analysis.
[13] US Environmental Protection Agency. February 10, 2021. Ecoregions.

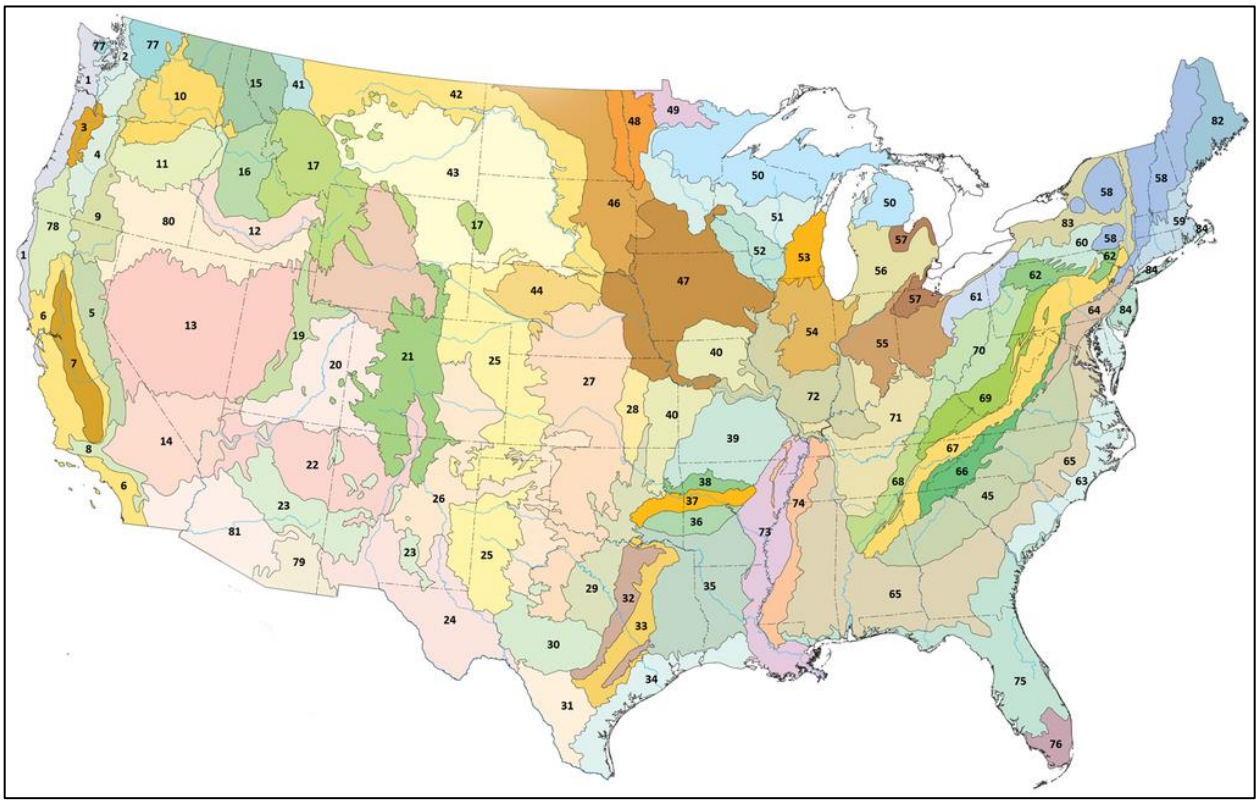

Figure I-1. *US EPA Level III ecoregions in the Lower 48. There are 108 Level III ecoregions in the Lower 48 and Alaska. Ideally, at least 30 percent of each ecoregion would be dedicated to the preservation of biological diversity.* Source: Environmental Protection Agency via Wikipedia.

• A lot of federal public lands already have natural vegetative cover (generally in the GAP 3 category) and could be elevated to GAP 2 status by specific actions of the federal government.

• The federal government has the financial resources to acquire significant amounts of nonfederal land for conservation purposes.

State, Tribal, and local government lands can also contribute as long as they qualify for GAP 1 or GAP 2 status by being dedicated to the preservation of biological diversity and have adequate and enduring protections against harm to biodiversity.

Private lands can qualify for GAP 1 or GAP 2 status as long as adequate deed restrictions or other mechanisms ensure the land is dedicated to the preservation of biodiversity and the protection is enduring.

The Climate-Nature Nexus: Salutary Effects

Achieving 30x30 will have an extremely salutary effect on both mitigation of and adaption to climate change.

Mitigation

Protecting land ecosystems—be they forest, desert, shrublands, grasslands, wetlands, or tundra—generally results in far more carbon being stored in those ecosystems, both above- and belowground in vegetation and soils. Logging, livestock grazing, and mining lands not only are

harmful to biodiversity conservation but also result in vast emissions of carbon dioxide into the atmosphere. Conversely, protecting ecosystems results in the removal of atmospheric carbon and safely securing it as ecosystem carbon.

Adaptation

As the climate changes despite our best efforts at mitigation (much climate change is baked in with previous loading of the atmosphere with carbon dioxide), adaptation is also critical. Natural ecosystems are stressed by climate change. The best way to help natural ecosystems cope with the stresses of climate change is to remove other anthropogenic stressors, including but not limited to roading, logging, grazing, mining, off-road vehicle abuse, and land conversion. The least stressed ecosystems are most likely to adapt to climate change.

Measuring the Will and the Way

The ecological necessity is clear, and a scientifically sound path exists to achieve 30x30.[14] The supply of land to attain 30x30 in the United States is available.[15] President Biden is on board with his executive order to that effect.[16]

So is Secretary of the Interior Deb Haaland, or at least she was when she was the lead champion for 30x30 in the House, where her "Thirty by Thirty Resolution to Save Nature" (H.Res.835) had forty-three cosponsors.[17] So is Vice President Kamala Harris, one of thirteen cosponsors of the identical "Thirty by Thirty Resolution to Save Nature" (S.Res.372) introduced in the Senate by then US Senator Tom Udall (D-NM) and still Senator Michael Bennet (D-CO).[18] So is Representative Joe Neguse (D-2nd-CO), who has introduced a resolution in the current 117th Congress calling for 30x30.[19]

The conservation community is all in, as indicated by a letter to US senators from 180 businesses and organizations in support of the "Thirty by Thirty Resolution to Save Nature" (S.Res.372) and a letter to US representatives in support of the "Thirty by Thirty Resolution to Save Nature" (H.Res.835). The public is broadly supportive of attaining 30x30. According to a 2019 survey, 86 percent of Americans strongly (54 percent) or somewhat (32 percent) support protecting 30 percent of America's lands and oceans by 2030.[20]

[14] Dinerstein, E., et al. 2019. "A Global Deal for Nature: Guiding Principles, Milestones, and Targets." *Science Advances* 5 (4).
[15] US Geological Society (USGS). Protected Areas Database of the United States (PAD-US) 2.1 Summary Statistics by GAP Status Code.
[16] Biden, Executive Order 14008.
[17] Haaland, Deb. February 6, 2020. H.Res.835 (116th Congress). Expressing the sense of the House of Representatives that the Federal Government should establish a national goal of conserving at least 30 percent of the land and ocean of the United States by 2030.
[18] Udall, Tom. October 22, 2019. S.Res.372 (116th Congress). A resolution expressing the sense of the Senate that the Federal Government should establish a national goal of conserving at least 30 percent of the land and ocean of the United States by 2030.
[19] Neguse, Joe. January 21, 2021. H.Res.69 (117th Congress). Expressing the need for the Federal Government to establish a national biodiversity strategy for protecting biodiversity for current and future generations.
[20] Lee-Ashly, Matt, et al. August 6, 2019. "How Much Nature Should America Keep?" Center for American Progress.

The Two Major Federal Paths Toward 30x30

Ecological realities are immutable. While political realities are mutable, the latter don't change on their own. Fortunately, there are two major paths to change the conservation status of federal public lands: through administrative action and through congressional action.

The US Constitution, particularly the property clause, gives Congress full power over the nation's federal public lands:

> *The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States.*[21]

Ideally, Congress will enact enough legislation during the remainder of the decade to attain 30x30. An Act of Congress that protects federal public land is as permanent as conservation of land in the United States can get. If properly drafted, an Act of Congress can provide federal land management agencies with a mandate for strong and enduring preservation of biological diversity.

If Congress does not choose to act in this manner, the administration can protect federal public land everywhere but in Alaska. Fortunately, Congress has delegated many powers over the nation's public lands to either the Secretary of the Interior or the Secretary of Agriculture (for the National Forest System), and—in the sole case of proclaiming national monuments—the President.

Chapters3 and 4 give detailed recipes for administrative and congressional action to achieve 30x30.

Ultimately Aiming for 50x50

It is worth noting that 30x30, while a vital target, is an interim goal. To adequately protect the irreplaceable and priceless goods and services nature provides for the benefit of this and future generations, the scientifically sound goal is 50x50.[22] Protecting half of Earth is "the only way to save upward of 90 percent of the rest of life," notes Harvard biologist Edward O. Wilson.[23] Overshooting 30x30 would be a good thing, as it is but a way station on the path to 50x50.

[21] United States Constitution, Article IV, Section 3, Clause 2.
[22] Wilson, Edward O. 2016. *Half-Earth: Our Planet's Fight for Life*. New York, NY: W.W. Norton & Company.
[23] Wilson, Edward O. March 12, 2016. "The Global Solution to Extinction." *New York Times.*

Chapter 1

Scorecards for Measuring Conservation Status

The Convention for Biological Diversity (CBD) establishes a target of conserving at least 30 percent of lands and waters globally, and President Biden's executive order sets the same target for the United States. It matters to the tally how the conservation status of lands and waters is measured. As it turns out, the CBD and the US use different scorecards to measure conservation status.

The CBD specifies that to count toward 30x30, land and sea areas should be conserved either in "protected areas" (PAs) or through "other effective area-based conservation measures" (OECMs). In the United States, lands that should count toward 30x30 are permanently protected areas (PAs) that achieve GAP 1 or GAP 2 status as defined by the US Geological Survey. Here we take a closer look at all these categories and what they mean.

PAs and OECMs Defined

The World Commission on Protected Areas (WCPA), a project of the International Union for Conservation of Nature (IUCN), is the official scorekeeper for the CBD. The WCPA explains the differential essence of a "protected area" (PA) and an "other effective area-based conservation measure" (OECM):

> *The distinguishing criterion is that a protected area has a* ***primary conservation objective****, whereas an "other effective area-based conservation measure"* ***delivers the effective in-situ conservation of biodiversity, regardless of its objectives****.*[24] [emphasis in original]

PAs and OECMs both have to deliver "effective in-situ conservation of biodiversity." The essential difference is whether or not an area has a "primary conservation objective." A PA must have a primary conservation objective, while an OECM usually has either a secondary or ancillary conservation objective. In cases where a nation, for whatever reason, doesn't want a PA recognized—even though the area fully qualifies—the area can receive OECM status. OECMs can also be designated because of secondary conservation or ancillary conservation objectives (see below).

Protected Areas

The CBD defines a "protected area" as follows:

> *A geographically defined area which is designated or regulated and managed to achieve specific conservation objectives* (CBD Article 2).

The IUCN has a more detailed definition:

[24] World Commission on Protected Areas Task Force. 2019. *Recognising and Reporting Other Effective Area-based Conservation Measures*. Protected Area Technical Report Series No. 3. International Union for Conservation of Nature.

> *A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.*

The CBD and the IUCN recognize the two as being equivalent in practice, as in both cases these areas are intended to achieve in-situ conservation.[25]

Other Effective Area-Based Conservation Measures

The parties to the CBD have defined an OECM as follows:

> *A geographically defined area other than a Protected Area, which is* ***governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity with associated ecosystem functions and services*** *and where applicable, cultural, spiritual, socio-economic, and other locally relevant values.*[26] [emphasis added]

The WCPA explains the reasoning for inclusion of OECMs to contribute to the goal of 30 percent "conserved":

> ***Protected areas provide the foundation of national biodiversity conservation strategies and delivery*** *of [Aichi Biodiversity] Target 11* [named for the prefecture in Japan where it was approved]. *IUCN has provided guidance on the definition, management categories and governance types of protected areas.* ***Parties to the CBD included*** *"other effective area-based conservation measures" (****OECMs****) in Target 11* ***because some areas outside*** *the recognised protected area networks* ***also result in the effective in-situ conservation of biodiversity****. These can include territories and conserved areas governed by any of four governance types, i.e., by governments, private actors, indigenous peoples and local communities, and shared governance arrangements. Regardless of achievements under Target 11 by 2020, it is expected that both protected areas and OECMs will be part of any post-2020 targets to conserve biodiversity in situ and OECMs will become a more commonly used tool in conservation strategies.* [emphasis added]

Biodiversity is *no less protected* in an OECM than in a PA. This is well worth repeating: Biodiversity is *no less protected* in an OECM than in a PA.

Designating OECMs without providing real and enduring conservation on the ground is not a way to run up the conservation scorecard on paper. Most OECMs are not intentionally managed and protected for biodiversity, but nonetheless they must result in "the effective in-situ conservation of biological diversity," just like a PA does, if they are to count toward the 30x30 goal.

[25] Convention on Biological Diversity. 2018. "Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity: 14/8" (pdf).
[26] WCPA Task Force, *Recognising and Reporting Other Effective Area-based Conservation Measures*.

The WCPA recognizes three approaches that deliver effective conservation in OECMs: primary, secondary, and ancillary.[27]

> *1. "**Primary conservation**"—refers to areas that may **meet all elements of the IUCN definition of a protected area, but which are not officially designated as such because the governance authority does not want the area to be recognised or reported as a protected area**. For example, in some instances indigenous peoples and local communities may not want areas of high biodiversity value that they govern to be designated as protected areas or recorded in government protected area databases. Assuming an area meets the OECM criteria, the governance authority has the right to withhold or give its consent to the area being recognised as an OECM.*
>
> *2. "**Secondary conservation**"—is achieved through the active management of an area **where biodiversity outcomes are a secondary management objective**. For example, enduring watershed protection policies and management may result in effective protection of biodiversity in watersheds, even though the areas may be managed primarily for objectives other than conservation. Sites managed to provide ecological connectivity between protected areas or other areas of high biodiversity, thereby contributing to their viability, may also qualify as OECMs.*
>
> *3. "**Ancillary conservation**"—refers to areas that **deliver in-situ conservation as a by-product of management activities, even though biodiversity conservation is not a management objective**. For example, Scapa Flow in the Orkney Islands protects shipwrecks and war graves. This protection has led to the ancillary conservation of important biodiversity*. [emphasis added]

Why OECMs?

Boiling down the WCPA's voluminous commentary, there are two basic reasons for OECMs: recognizing internal politics and coincidental protection.

Internal Politics

For a variety of reasons, some countries do not want to formally recognize as "protected areas" areas that are nonetheless protected both in law and in fact (the "primary conservation" approach). Remember, the CBD is applicable in nearly two hundred nations, so there can be lots of reasons and circumstances that OECMs, rather than PAs, are designated.

Coincidental Protection

There are two kinds of OECMs where in law the intention of the area is not biodiversity conservation, but nonetheless such is the result:

• Areas that, while not having the management intention of a "protected area," nonetheless have the same conservation outcomes as a protected area. Examples are certain municipal drinking watersheds on federal, state, or local government land where strict prohibitions on loading,

[27] Ibid.

roading, public use, livestock grazing, and such have the conservation effect of a PA (the "secondary conservation" approach).

• Areas that are managed for protection of nonbiological resources so that effective in-situ conservation of biological diversity also results (the "ancillary conservation" approach). An example may be the very large and natural buffer around a bombing range. Only the area near ground zero is affected by bombs, but prohibitions on recreation, livestock grazing, and other uses end up being highly friendly to and protective of nature.

The International Scorecard Versus the US Scorecard

Although the United States has only "observer" status regarding the CBD, the US Geological Survey (USGS) reports information on protected areas (and other effective area-based conservation measures) to the WCPA. Rather than comporting with the IUCN definitions of conservation categories for lands (which the rest of the world does), the USGS uses its own four-level "GAP" classification system (see Box 1-1) for protected areas. GAP status codes are "a measure of management intent for the long-term protection of biodiversity."[28]

Box 1-1: *USGS GAP Codes Crosswalk to IUCN Categories*

The US Geological Survey uses GAP codes for land-based conservation areas while the National Oceanic and Atmospheric Administration uses IUCN categories for marine protected areas. The rest of the world generally uses the nature conservation categories defined by the International Union for Conservation of Nature. Below is a simple crosswalk.[29]

IUCN Category	GAP Status
1a: Strict nature reserves	1
Ib: Wilderness areas	1
II: National park	2
III: Natural monument or feature	2
IV: Habitat / species management	2
None	4
Other Conservation Area	3
V: Protected landscape / seascape	2

The US Geological Survey defines a *protected area* (PA) as an area

> ***Dedicated to the preservation of biological diversity*** *and to other natural (including extraction), recreation and cultural uses, managed for these purposes through legal or other effective means."*[30] [emphasis added]

This definition is considered functionally equivalent to the CBD and IUCN definitions. It is worth parsing a bit. To qualify, a USGS PA—first and foremost—must be "dedicated to the preservation of biological diversity" (aka "nature") and can also be dedicated to other "natural, . . . recreation and cultural uses." The parenthetical "(including extraction)" after "natural" should

[28] US Geological Survey (USGS). 2019. GAP Status Code Assignment: Assumptions, Criteria, and Methods (updated).
[29] US Geological Survey (USGS). February 2, 2021. GAP Analysis Project: PAD-US Data Manual, Table 13.
[30] USGS, PAD-US Data Manual.

be read conservatively to mean extraction of resources up to a level that doesn't negate "the preservation of biological diversity."

Table 1-1. *Definitions and Examples of USGS GAP Categories*	
Definition[31]	*Selected Examples of USGS Designation Types with This Status*[32]
GAP 1 status: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.	[federal] Wilderness Area [the one and only GAP 1 example]
GAP 2 status: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance (for example, wildland fire or native insect outbreaks).	Conservation Easement, National Monument, National Park, National Wildlife Refuge, Private Conservation, Research Natural Area, Wilderness Study Area, Wild and Scenic River, State Wilderness
GAP 3 status: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (for example, logging, OHV recreation) or localized intense type (for example, mining). It also confers protection to federally listed endangered and threatened species throughout the area.	BLM Area of Critical Environmental Concern, Forest Stewardship Easement, Forest Service Inventoried Roadless Area, Mitigation or Land Bank, National Forest, National Grassland, National Lakeshore or Seashore, National Recreation Area, National Scenic Area, National Botanical Area, National Volcanic Area, National Scenic or Historical Trail, Private Forest Stewardship, National Public Lands, Ranch Easement, Special Designation Area, State Resource Management Area, Watershed Protection Area
GAP 4 status: There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown.	Historic or Cultural Area, Historic or Cultural Easement, Local Park, Local Recreation Area, Military Land, Other Easement, Private Agricultural, Private Historical or Cultural, State Historic or Cultural Area, State Park, Native American Land

This leads us to look at the definition of *biological diversity* (or *biodiversity*, as they are one and the same). The Ecological Society of America, a professional association of ecologists, says:

> *Short for biological diversity, biodiversity includes all organisms, species, and populations; the genetic variation among these; and all their complex assemblages of communities and ecosystems. It also refers to the interrelatedness of genes, species, and ecosystems and their interactions with the environment. Usually three levels of biodiversity are discussed—genetic, species, and ecosystem diversity.*

[31] Ibid.
[32] USGS, PAD-US Data Manual, Table 12.

Genetic diversity *is all the different genes contained in all individual plants, animals, fungi, and microorganisms. It occurs within a species as well as between species.*

Species diversity *is all the differences within and between populations of species, as well as between different species.*

Ecosystem diversity *is all the different habitats, biological communities, and ecological processes, as well as variation within individual ecosystems*.[33] [emphasis in original]

The USGS GAP Status Framework

The USGS Protected Areas Database of the United States (PAD-US) assigns "protected areas" to one of four GAP categories (Table 1-1) using a dichotomous key (Figure 1-1). When no other information is available, it assigns categories based upon designation type (for example, Wilderness, National Monument, or State Wildlife Area).[34]

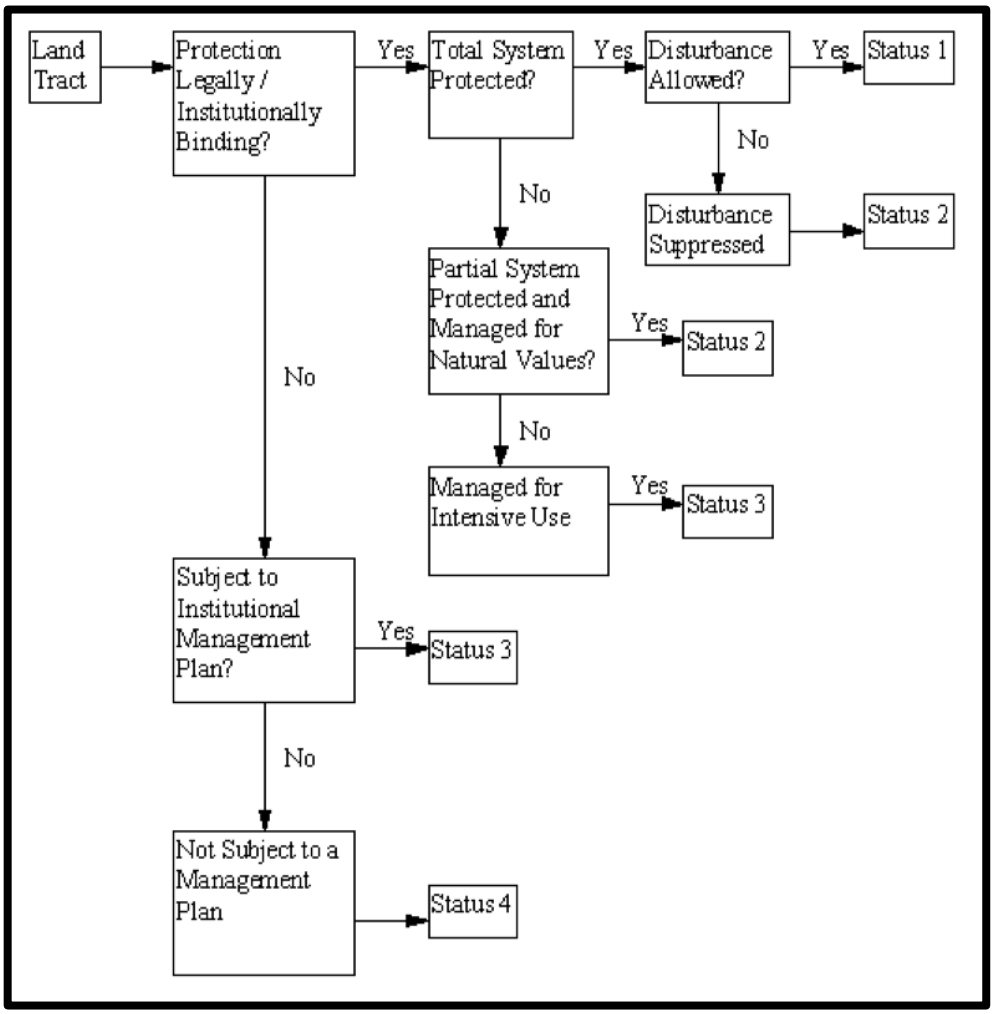

Figure 1-1. *USGS GAP status code assignment dichotomous key in flowchart format.* Source: USGS.[35]

[33] Ecological Society of America. Fall 1997. *Biodiversity* pamphlet (pdf).
[34] USGS. 2019. GAP Status Code Assignment (updated).
[35] USGS, GAP Status Code Assignment: Assumptions, Criteria, and Methods (updated).

Table 1-2 parses out the most relevant factors that determine the appropriate GAP categorization. Land assigned GAP 4 status is simply land (not even "an area") that currently has "natural habitat types." It has no "permanent protection." Lands assigned GAP 3 status are subject to extraction that is harmful to the preservation of biodiversity. The primary difference between lands with GAP 1 and GAP 2 status is the amount of human interference with natural events that is allowed.

Table 1-2. ***Relevant Factors in Assigning Protected Areas to USGS GAP Categories***

Factor	*GAP 1*	*GAP 2*	*GAP 3*	*GAP 4*
"An area"	✓	✓	✓	
"permanent protection from conversion of natural land cover"	✓	✓	✓	
"mandated management plan to maintain a"	✓	✓		
"natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management"	✓			
"primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance (for example, wildland fire or native insect outbreaks)"		✓		
"subject to extractive uses of either a broad, low-intensity type (for example, logging, OHV recreation) or localized intense type (for example, mining)"			✓	
"confers protection to federally listed endangered and threatened species throughout the area"	✓	✓	✓	
"no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown."				✓

The vast majority of protected areas with GAP 1 and GAP 2 status are predominantly on federal public lands. The two major exceptions are (1) private conservation (for example, land trust lands with a strong mandate for biological diversity conservation), and (2) state wilderness. A wild and scenic river often includes nonfederal (mainly private) lands. The amount of private land can range from small inholdings within mostly federal public lands to totally private lands, though the watercourse is managed as a wild and scenic river by the National Park Service.

GAP 3 areas are almost all public lands.

GAP 4 is everything else in the nation and is not broken down to distinguish lands that are

- natural habitat types (for example, certain farmlands and forestlands),
- anthropogenic habitat types that have potential to be restored to natural habitat types (for example, certain forestlands, farmlands, and rangelands), or
- anthropogenic habitat types with no potential to be restored to natural habitat types (for example, urban, suburban, exurban, and most rural areas, most agricultural cropland, most pasture/range, roads and railroads, utility corridors, cemeteries, golf courses).

In the context of the Convention on Biological Diversity, only US lands with GAP 1 and GAP 2 status qualify as PAs. Lands with GAP 3 and GAP 4 status do not qualify as PAs, nor do lands with GAP 3 and GAP 4 status meet the WCPA's criteria for OECMs. In essence, while an

OECM may be intended for the protection of biodiversity, it contributes to the 30x30 goal only if it actually does protect biodiversity. GAP 3 lands do not adequately protect biodiversity. If they did, they would be classified as GAP 2. In general, all criteria are important and must be met. No credit is allowed for half measures.

Chapter 2

What Should Count Toward 30 Percent?

President Biden has ordered the federal government to achieve a very ambitious policy goal based on the best available science on the climate and species extinction crises. It may be the minimum scientifically necessary, but it is an unprecedented goal politically. Given the magnitude of the 30x30 goal, special interests and federal land managers and policy makers will undoubtedly suggest actions to meet the goal that further their own bureaucratic interests and/or political imperatives but that do not in fact qualify as adequate conservation. That's why it's handy to have the clear scorecards for measuring conservation status discussed in the previous chapter.

As explained there, the CBD specifies that to count toward 30x30, land and sea areas should be conserved either in "protected areas" (PAs) or through "other effective area-based conservation measures" (OECMs). In the United States, lands that should count toward 30x30 are permanently protected areas (PAs) that achieve GAP 1 or GAP 2 status as defined by the US Geological Survey. While there are some areas in the US that qualify for OECM status and should be so recognized, we should emphasize PAs, deemphasize OECMs, and count only lands with GAP 1 and GAP 2 status toward the 30x30 goal.

GAP by the Numbers

The 30x30 resolutions in Congress calling for "conserving" lands and waters corroborate the idea that only lands with GAP 1 or GAP 2 status should count toward 30x30. The resolutions state that "only 12 percent of the land area of the United States [is] permanently protected,"[36] which precisely corresponds to the percentage of lands assigned the US Geological Survey's GAP 1 and GAP 2 status in the Protected Areas Database of the United States (PAD-US) version 1.4 (2017).[37]

In the new PAD-US version 2.1, dated 2021, the USGS reported these acreages in its four GAP categories:[38]

GAP 1	200,584,829
GAP 2	115,719,679
GAP 3	413,600,517
GAP 4	256,803,629 (real) / 1,709,868,767 (total)[39]
Total	**986,708,654 (real) / 2,439,773,792** (total)

It should be noted that in some cases there are significant inconsistencies and incongruities in the application of GAP status codes in PAD-US (see Appendix B). But taking those numbers at face

[36] Haaland, H.Res.835 (116th Congress), and Udall, S.Res.372 (116th Congress).
[37] US Geological Survey (USGS). October 2017. Protected Areas Database of the United States (PAD-US) Version 1.4: National (US States and Territories) Protection Status Summary Statistics. (Excel spreadsheet)
[38] US Geological Survey (USGS). May 2021. Protected Areas Database of the United States (PAD-US) 2.1 Summary Statistics by GAP Status Code.
[39] In presenting the data, PAD-US notes, "The 'GAP 4' category includes areas without biodiversity protection (e.g. developed parks) or where data gaps to assign GAP Status exist in PAD-US as well as the area of the US not included in the PAD-US (e.g. mostly private land)." The former type of area is included in "real" acreage with GAP 4 status and the latter is included in "total" acreage with GAP 4 status. The total of acreage with GAP 1, GAP 2, GAP 3, and GAP 4 status is equal to the entire land area of the United States and its territories.

value, if all GAP 3 lands were to receive elevated conservation protections so as to qualify for GAP 2 status, there would still be a 2,027,113-acre shortfall in attaining 30x30. Notably, not all lands with GAP 3 status can or should be upgraded to GAP 2 or GAP 1 status. There are lands with GAP 4 status that have higher biodiversity values and are better situated to provide geographic and other diversity than certain lands with GAP 3 status.

What "Conservation" Means for 30x30 Purposes

Just what "conservation" means is not explicitly defined in the congressional 30x30 resolutions, but we can stitch together other language found throughout the resolutions to come up with an implied definition. "Conservation" means "protection of the remaining natural areas in the United States for future generations" by establishing a "permanently protected" "network of" "natural areas" to "protect, conserve, and restore that natural environment."

What constitutes a "natural area" as called for in the congressional resolutions and in the CBD? We can look at this question through two interlocking lenses: current naturalness and management intent.

- *Current naturalness*. The first lens is how natural the potential "protected area" is, in fact, today. Many areas are relatively pristine (though one can find traces of human-made chemicals and plastics in the most pristine of natural areas), while other are mostly, generally, or somewhat natural, and all are amenable to ecological restoration.

- *Management intent*. The other lens in considering "natural areas" is the intent of their management. While most or all of the natural area may have been clear-cut previously, if the area is now dedicated to nature, nature is regaining control of the site as intended by the management.

Protected areas must be dedicated to the preservation of biological diversity in order to count toward 30x30. Full stop. It's not a protected area if the area is not dedicated to the preservation of biological diversity.

Only PAs that have GAP 1 or GAP 2 status qualify for attaining 30x30. While some areas with GAP 3 status may have some level of protection and areas with GAP 4 status may have important societal values, neither qualify as either permanently or adequately protected.

Only "protected areas" that are "dedicated to the preservation of biological diversity" [40] should count toward the 30 percent goal. While "other natural (including extraction), recreation and cultural uses" may occur in adequately protected areas, first and foremost a PA must be dedicated to the preservation of biological diversity in order to count toward 30x30 (or 50x50).

Why Areas Count or Do Not Count Toward 30x30

Defenders of Wildlife[41] and the Sierra Club,[42] in reports on how to get to 30x30, clearly articulate that to count toward the 30 percent, lands must have GAP 1 or GAP 2 status. Defenders particularly points to the opportunities to elevate the conservation status of certain

[40] USGS, PAD-US Data Manual.
[41] Defenders of Wildlife. 2020. *Getting to 30x30: Guidelines for Decision-makers* (pdf).
[42] Sierra Club. 2020. "30x30 Conservation Agenda" (pdf).

GAP 3 lands through administrative action to attain GAP 2 status. The Center for Biological Diversity[43] and the Natural Resources Defense Council[44] similarly call for full and complete protection for lands counted toward 30x30.

Table 2-1 lists examples of protected areas that have GAP 1 or GAP 2 status. All, including wilderness areas, have exceptions to a strict biodiversity conservation mandate, but they are (1) discrete areas dedicated to the preservation of biological diversity with (2) protections that are generally enduring (not easily undone).

Table 2-1. *Examples of Protected Areas with GAP 1 or GAP 2 Status*	
Protected Area Designation	*Why They Count Toward 30x30*
Wilderness	Public lands dedicated to the preservation of biological diversity, despite having what are sometimes harmful exceptions allowing exploitation of resources
Wild and Scenic River	
National Monument	
National Wildlife Refuge	
State Park dedicated to nature	
Research Natural Area	
State Wilderness	
Conservation Easement	Private lands with deed restrictions or other enduring mechanisms that mandate the preservation of biological diversity and where any other activities are not harmful to that mandate.
Private Conservation	

Table 2-2 lists examples of areas that have either GAP 3 or GAP 4 status. A major distinction between lands with GAP 3 and GAP 4 status is that the former are generally discrete designated areas while the latter are generally lands with no designation that calls them out in any significant way. For example, while BLM areas of critical environmental concern (ACECs) and Forest Service inventoried roadless areas (IRAs) have significantly more conservation protection than other national forest or BLM national public lands, neither ACECs nor IRAs qualify for GAP 2 status due to a combination of loopholes allowing exploitation at the expense of biodiversity and the lack of a mineral withdrawal.

Table 2-2. *Examples of Areas without GAP 1 or Gap 2 Status*	
Area Designation	*Why They Must Not Count Toward 30x30*
BLM Area of Critical Environmental Concern	Weak mandate pertaining to the preservation of biological diversity; not closed to mining, off-road vehicles, livestock grazing, or such
USFS Inventoried Roadless Area	
Ranch Easement	No mandate for the preservation of biological diversity. A mandate to prevent future development while allowing continuing logging and grazing does not qualify.
Private Forest Stewardship	
BLM National Public Lands	Mandate for "multiple [ab]use"
National Grasslands or National Forest	
Historical or Cultural Areas or Easements	Dedicated to history and culture, not nature
Native American Land	For the benefit of Native Americans, the vast majority of whom are not dedicated to the preservation of biological diversity
Military Land	Dedicated to national security, not natural security, even though biodiversity protection may be a coincidental consequence

[43] Center for Biological Diversity. 2020. *Saving Life on Earth: A Plan to Halt the Global Extinction Crisis* (pdf).
[44] Natural Resources Defense Council. 2020. "Why the World Must Commit to Protecting 30 Percent of the Planet by 2030 (30x30)" (pdf).

"Conservation" Designations That Are Unlikely to Qualify

30x30 is a bandwagon that many organizations want to climb on to further their missions. There is an expectation that inclusion of a project in 30x30 will result in federal money for the project. Thus, some organizations are proposing that urban parks, the trees in a city, and even fixed-up vacant lots be included in 30x30.[45] Examples:

- Conservationists have suggested counting the Bloomingdale Trail Park in Chicago, a redevelopment of an elevated rail line. The trail is 2.7 miles long, and the park is generally about 30 feet wide, with about 12 feet of that width taken up by a paved pedestrian and bike path. Trees and some other vegetation have been planted. Being elevated, the park is not conducive to wildlife connectivity—unless the native animals can learn to use the stairs. Even if they can, they won't be keen on walking the streets to get to the next real nature.
- The National Wildlife Federation is proposing counting urban tree canopies along streets, as well as green infrastructure such as swales to slow urban runoff, toward 30x30.
- Conservationists have also suggested counting vacant lots converted to green spaces.

These and other fine ideas are worthy of government support, as they are quite beneficial to society. However, such are not "protected areas" that are "dedicated to the preservation of biological diversity" and therefore do not qualify for 30x30.

In terms of funding such worthy endeavors, a start is the proposed "Parks, Jobs, and Equity Act."[46] It would authorize $500 million for land acquisition, recreational facilities, delivery of recreation services, and developing native event sites and cultural gathering places.

Now, if that vacant lot is in public ownership and has been redeveloped to be covered with native species beneficial to birds, bats, and butterflies; if recreation is limited to protect those birds, bats, and butterflies; and if the protection of this natural habitat is permanent, then such qualifies to be counted toward 30x30.

30x30 is all about biodiversity. It is not a catchall for the very necessary and desirable goals of more livable urban areas; more outdoor recreation opportunities; green infrastructure to mitigate urban water, air, and noise pollution; or even carbon storage and sequestration. 30x30 is only about biodiversity conservation. Attaining 30x30 will significantly help remove carbon from the atmosphere, ameliorate water and air pollution, and conserve recreational opportunities, but such are not purposes of 30x30.

Table 2-3 is a selection of "conservation area" designations that are touted by various special interests to count toward 30x30 but that are neither PAs nor OECMs as defined by the CDB. Descriptions are from the World Commission on Protected Areas guidelines for OECMs.[47]

[45] Yachnin, Jennifer. April 12, 2021. "Urban Parks, Vacant Lots Could Become '30x30' Targets." *Greenwire*. E&E News.
[46] H.R.1678, 117th Congress. "Parks, Jobs, and Equity Act" (proposed).
[47] WCPA Task Force, *Recognising and Reporting Other Effective Area-based Conservation Measures*, p. 11.

Table 2-3. *"Conservation Areas" That Are Unlikely to Qualify*		
Area Designation	*Summary*	*WCPA Description(s)*
Working Ranch Easement	Areas where development is prohibited, but livestock production remains primary and intended use	Agricultural lands which are managed in a manner that limits the *in-situ* conservation of biodiversity. This may include, for example, pastures that are grazed too intensively to support native grassland ecosystems or species, or grasslands replanted with monocultures or non-native species for the purposes of livestock production.
Most Urban Parks	Areas that are intensively managed with limited biodiversity conservation value. Exception: a few urban parks large enough and sufficiently natural.*	Small, semi-natural areas within an intensively-managed landscape with limited biodiversity conservation value, such as municipal parks, formal/domestic gardens, arboreta, field margins, roadside verges, hedgerows, narrow shoreline or watercourse setbacks, firebreaks, recreational beaches, marinas and golf courses. **May qualify:** Urban or municipal parks managed primarily for public recreation but which are large enough and sufficiently natural to also effectively achieve the in-situ conservation of biodiversity (e.g. wild grassland, wetlands) and which are managed to maintain these biodiversity values.
Conservation Reserve Program	Areas with 10-year "conservation" contracts	Temporary agricultural set asides, summer fallow and grant-maintained changes to agricultural practice that may benefit biodiversity.
Private Timberlands	Timberlands owned by private interests and managed for some level of profit	Forests that are managed commercially for timber supply and are intended for logging, even though they may have some conservation values and support some species of interest.
Federal Forestlands (not otherwise constrained)	Forestlands owned by the federal government but where no particular administrative or conservation protection has been imposed	
* Forest Park in Portland, Oregon, comes to mind. According to Wikipedia, at 5,172 acres, it contains a few patches of old growth but is mostly second growth, having been intensively logged previously. It hosts 112 bird and 62 mammal species plus a relic salmon run. Yet, it has 70 miles of recreational trails open to bikers and hikers (8.6 miles per square mile), is threatened by "overuse, urban traffic, encroaching development, invasive flora, and lack of maintenance money," and is the location of "occasional serious crimes and more frequent minor crimes."		

The 800-Pound Bovine in the Room

Livestock grazing occurs on 247.1 million acres of federal public lands, and nearly one-third of all land in the US is dedicated to livestock production (41 percent of all land in the Lower 48). Still, the contribution of federal public lands to the nation's feed and forage supply is but 1.3 percent. Livestock grazing on public lands could end with no impact on the nation's beef, lamb, wool and leather supplies. Any slack would be picked up on nonfederal lands.[48]

Livestock grazing is extremely harmful to biological diversity.[49] Any forage consumed by domestic livestock is not available to native wildlife (such as elk, deer, bighorn sheep,

[48] Kerr, Andy. 2021. No Need to Graze Livestock on Federal Public Lands (pdf). The Larch Company, Ashland, OR, and Washington, DC.
[49] Donahue, Debra. 2000. *The Western Range Revisited: Removing Livestock from Public Lands to Conserve Native Biodiversity*. University of Oklahoma Press.

pronghorn). Many other native species do better in the absence of livestock (including sage-grouse, butterflies, and birds).

In the National Park System, domestic livestock grazing is generally prohibited. In the National Wildlife Refuge System, such grazing is allowed only if compatible with the purposes of the refuge (it often is not). In the National Wilderness Preservation System, livestock grazing is grandfathered in if it was occurring at the time of designation of the wilderness.

In recent years in certain areas (for example, the California Desert, wilderness areas in southwest and central Idaho, and around two national monuments in Oregon), Congress has provided for the voluntary relinquishment of federal grazing permits and leases from willing sellers who hold such permits and leases. Third-party "conservation buyers" (foundations, conservation organizations, and the like) contract with willing permit and lease holders to, in exchange for mutually agreed upon compensation, waive their permits and leases back to the administering agency. The agency closes the allotment(s), and domestic livestock grazing permanently ends. This voluntary solution is ecologically imperative, economically rational, fiscally prudent, socially just, and politically pragmatic.

Lowering the Standards to Up the Numbers

The Center for American Progress overtly calls for watering down the generally accepted standards for lands to count toward 30x30.

> *Measuring progress toward a 30X30 goal should account for a wide range of enduring conservation solutions. What should count as protected when measuring progress toward a 30X30 goal? According to the currently accepted international and domestic standards, for an area of land or ocean to be counted as protected, it must be permanently protected in a natural condition, and extractive uses must be limited or prohibited. U.S. lands and waters that fit this definition include national parks, wildlife refuges, national marine sanctuaries, national monuments, state parks, permanent conservation easements, and national wildlife refuges.* ***For the purpose of measuring progress toward a 30X30 goal, however, this definition should be broadened to include other conservation tools and management structures that provide enduring—but not necessarily permanent—protections, as well as areas where some sustainable and traditional land uses are still allowed****.* ***Common sense, not dogma, should inform a determination of which lands and waters qualify as protected under a 30X30 goal****.*[50] [emphasis added]

As for not having to be "permanent," if nature conservation is important now, it will be important in the future. Failing to seek permanence now doesn't mean it will come any easier later.

As for those "sustainable and traditional uses," most traditional uses are not sustainable, and sustainable uses are not sustainable if nature is not adequately conserved. This is why we have a problem.

[50] Lee-Ashley, "How Much Nature Should America Keep?"

"Common sense" might be code for political timidity. There is no doubt 30x30 is a stretch. We have to save ("conserve") 1.3 times the land area we have saved since 1872. An exponential increase in true conservation is the only answer, not an exponential lowering of standards. Nature doesn't care that it is a tough political lift. Securing the strong and enduring protections of Yellowstone on conditions that now confer GAP 1 or GAP 2 status mostly did not come easily. "Polite conservationists leave no mark save the scars upon the Earth that could have been prevented had they stood their ground," said David Brower.[51]

As for "dogma" informing the debate, synonyms for the pejorative meaning CAP intended are "blind faith," "unquestioning belief," "certainty," "invincible conviction," "unchallengeable conviction," "arrogant conviction." Nature doesn't negotiate. Nature doesn't care that it's politically difficult. If the imperative is integration, one must not count desegregation as good enough, even in the short term. Nature bats last. Band-aids are not effective on gunshot wounds.

Lowering the standard on nature conservation to up the numbers is like counting a face mask hanging loose from one ear as someone being masked. It's not going to end well.

[51] Dreier, Peter. August 20, 2012. "Today's Environmental Activists Stand on David Brower's Shoulders." *Huffington Post*.

Chapter 3

Recipes for Administrative Action Toward 30x30

Twenty-two recipes are offered in this chapter for administrative action by the Secretary of the Interior, the Secretary of Agriculture, or the President (Table 3-1). The recipes are not mutually exclusive, especially within an administering agency, but can be overlapping or alternative conservation actions on the same lands. While overlapping conservation designations can be desirable, no double counting should be allowed in determining 30x30. A common ingredient in all is that such areas must be administratively withdrawn from all forms of mineral exploitation for the maximum twenty years allowed by law. (This withdrawal can and should be renewed; see Box 3-1.) Alas, no administrative conservation actions are recommended in Alaska, as such are generally prohibited by statute (see Box 3-2).

Table 3-1. ***Recipes for Administrative Action***

Agency	*Conservation Action**	*Acres (in millions)*	*Additional % of US Conserved*	*Pri-ority*	*Recipe No.*
BLM	Proclaim new BLM wilderness study areas	17.3	2.4%	High	1
BLM	Strengthen protections for existing BLM areas of critical environmental concern	21	2.9%	High	2
BLM	Quadruple the acreage of BLM areas of critical environmental concern	63	8.6%	High	3
BLM	Establish a Sagebrush Sea Conservation Reserve System	78	10.7%	High	4
BLM	Establish a Federal Land Carbon Reserve System on BLM lands	3	0.4%	High	5
BLM	Triple the acreage of BLM national monuments	46.8	6.4%	High	6
BLM	Do a comprehensive mineral withdrawal for all BLM wild and scenic rivers	0.3	na	Low	7
FWS	Quadruple the acreage of national wildlife refuges	293.1	40%	High	8
FWS	Quadruple the acreage of waterfowl production areas	12.5	1.7%	High	9
FWS	Create new national wildlife refuges from ESA critical habitat on BLM lands	5.7	0.8%	High	10
USFS	Protect inventoried roadless areas against mining and close loopholes	58.5	8.0%	High	11
USFS	Protect other Forest Service large roadless areas	39.6	5.4%	High	12
USFS	Protect Forest Service small roadless areas	43.9	6%	High	13
USFS	Elevate the conservation status of Forest Service special areas	9.7	1.3%	High	14
USFS	Quadruple the acreage in Forest Service special areas	29	4%	High	15
USFS	Protect ESA critical habitat as Forest Service special areas	22.8	3.1%	High	16
USFS	Protect existing Forest Service research natural areas from mining	0.9	0.1%	High	17
USFS	Round out research natural areas in the National Forest System	1	0.1%	High	18
USFS	Triple the acreage of Forest Service national monuments	13.1	1.8%	High	19
USFS	Strengthen and expand national wildlife areas within the National Forest System	4.9	0.7%	High	20
USFS	Establish a Federal Land Carbon Reserve System within the National Forest System	50	6.8%	High	21
USFS	Do a comprehensive mineral withdrawal for all Forest Service wild and scenic rivers	1.3	na	Low	22

* There can be significant overlap in protected areas between administrative conservation actions and congressional conservation actions.

Recall that President Biden's proportional share contribution to attain 30x30 is 165,251,052 acres. The recipes in Table 1 have a gross total of 815.4 million acres. While there is significant overlap in that most recipes call for acres that could be used in other recipes, there is plenty of selection among the recipes for the Biden Administration to meet its promise of 30x30.

Box 3-1: ***Mining on Federal Public Lands***

An important distinction between federal public lands with GAP 1 or GAP 2 status and those with lesser GAP status is based on whether mining is allowed. Federal law on mineral exploitation or protection from mining on federal public lands dates back to the latter part of the nineteenth century with the enactment of the general mining law. Today, the exploitation of federal minerals is either by location, leasing, or sale. The administering agency has the ability to say no to leasing and sale, but not to filing of mining claims by anyone in all locations open to such claiming.

When establishing a conservation area on federal lands, Congress routinely withdraws the lands from location, leasing, or sale. Unfortunately, when administrative action elevates the conservation status of federal public lands (such as Forest Service inventoried roadless areas or IRAs, Bureau of Land Management areas of critical environmental concern or ACECs, and Fish and Wildlife Service national wildlife refuges carved out of other federal land), it doesn't automatically protect the special area from mining.

Congress has provided that the only way an area can be withdrawn from the application of the federal mining laws is for the Secretary of the Interior (or subcabinet officials also confirmed by Congress for their posts) to withdraw the lands from mining—and only then for a maximum of twenty years (though the withdrawal can be renewed). A major reason that particular USFS IRAs and BLM ACECs do not qualify for GAP 1 or GAP 2 status is that they are open to mining.

Two Foci for Administrative Action

As noted in the Introduction, the Biden administration's share of the acreage that must be conserved to reach 30x30 is 166,251,052 acres by noon Eastern Time, Monday, January 20, 2025. While all the recipes in this cookbook are quite tasty and nutritious, the Biden administration should initially focus its efforts in two general areas, using existing authorities:

- expand and elevate lands with "GAP 2.5" status to GAP 2 status (estimated potential 289.3 million acres, as shown in Table 3-2)
- expand the National Wildlife Refuge System (estimated potential 311.3 million acres, as shown in Table 3-3)

The acreages above are gross and contain overlap in both areas.

Focus on Elevating Lands with "GAP 2.5" Status to GAP 2 Status

For federal public lands most especially, the lumping together of so many different kinds of "protected areas" into one GAP status is highly problematic. For example, the USGS default settings assign GAP 3 status to these two kinds of PAs alike:

- PAs with hardly any protection (for example, designated Forest Stewardship Easement or Private Forest Stewardship) where clear-cutting may be prevented but intensive timber production is allowed at the expense of the preservation of biological diversity.
- PAs with quite strong mandates to protect biological diversity (for example, certain national recreation areas, national botanical areas, and the like). Many such areas are congressionally mandated and come with provisions that withdraw the land from the application of the federal mining laws.

Box 3-2: ***More Conservation in Alaska by Administrative Action: Fuggedaboutit!***

The Alaska National Interest Lands Act of 1980 contains a provision prohibiting any "future executive branch action" withdrawing more than 5,000 acres "in the aggregate" unless Congress passes a "joint resolution of approval within one year."[52] Note that 5,000 acres is 0.0012 percent of the total area of Alaska. Congress should repeal this prohibition of new national monuments, new national wildlife refuges, or other effective administrative conservation in the nation's largest state. Until Congress so acts, no administrative action in Alaska can make any material contribution to 30x30. While restoring the application of the Forest Service Roadless Area Conservation Rule to inventoried roadless areas (IRAs) on the Tongass National Forest is good public policy, such action does not elevate those USFS IRAs to GAP 1 or GAP 2 status from GAP 3.

Lumped together with GAP 3 status are BLM areas of critical environmental concern, Forest Service inventoried roadless areas, USFS national forests, and BLM national public lands. The former two have significant biodiversity protection mandates—albeit they are not withdrawn from new mining and often have roading and logging loopholes—while the latter two are run-of-the-mill federal public lands open to roading, logging, grazing, off-road vehicles, utility corridors, telecommunication towers, and much more. National forest lands can have monoculture timber plantations, and BLM national public lands can have their natural land cover replaced with monocultures of alien crested wheatgrass. These "GAP 2.5" lands are low-hanging fruit that could be elevated to GAP 2 protection if:

(1) administrative action is taken to withdraw the areas from all mining threats, and
(2) the areas are included under strong protective language in an administrative rule.

An administrative rule is published in the *Code of Federal Regulations* and is relatively permanent, in contrast to a mere administrative land allocation in a Forest Service or Bureau of Land Management land and/or resource management plan (see box: "'*GAP 2.75' Lands".)*

In aiming toward 30x30, protected areas on federal public lands that have strong mandates for the preservation of biological diversity but also have loopholes or grandfather provisions that allow (for example) mining should be distinguished from federal public lands that are solely managed under the "multiple use" mandate, where commodity uses always prevail over biodiversity. Lands with an effective "GAP 2.5" status are those areas of federal public land that could readily be elevated to GAP 2 status (and then contribute to 30x30) from GAP 3 status by either administrative or congressional action to end mining and/or by firming up the protection requirements (Table 3-2).

[52] 16 USC 3213. Future executive branch actions (Alaska National Interest Lands Act).

Table 3-2. ***Existing and Potential Lands with Effective "GAP 2.5" Status Easily Elevated to GAP 2 Status***					
"GAP 2.5" Land Type	*Estimated Current Acres (in millions)*	*Potential Additional Acres (in millions)*	*Current Adequate Protection in Rule*	*Current Mineral Withdrawal***	*Recipe No.*
BLM wilderness study areas	*	17.3	No	No	1
BLM areas of critical environmental concern	21.3	63	No	No	2
USFS inventoried roadless areas	58.5	83.5	No	No	11
USFS special interest areas	9.7	29	No	No	14, 15
USFS research natural areas	0.9	1	No	No	17
USFS national wildlife areas	1.3	3.8	Yes	No	20
Total acres	*91.7*	*197.6*			
Grand total new GAP 2 acres	***289.3***				
* Existing BLM WSAs have GAP 2 status. ** Some areas may be withdrawn from mining, but such doesn't apply to the types of lands with "GAP 2.5" status.					

Focus on Expanding the National Wildlife Refuge System

National wildlife refuges (NWRs) and waterfowl production areas (WPAs) are both included in the National Wildlife Refuge System (NWRS). In terms of conservation, the differences between NWRs and WPAs are minor. (See Recipe 9 for an explanation of the differences.) Lands in the National Wildlife Refuge System have GAP 2 status and thus count toward 30x30.

Table 3-3. ***Potential Expansions of the National Wildlife Refuge System***		
Administrative Conservation Action	*Potential Additional Acres (in millions)*	*Recipe No.*
Quadruple the acreage of national wildlife refuges	293.1	8
Quadruple the acreage of waterfowl production areas	12.7	9
Create new national wildlife refuges from ESA critical habitat on BLM lands	5.7	10
Total additional GAP 2 acres	***311.5***	

As the nation's federal public lands are concentrated in the western US (including Alaska), to achieve adequate biodiversity conservation across the great variety of ecosystem types in the nation, numerous new conservation designations will be necessary on what are currently nonfederal lands in the eastern US. For reasons stated elsewhere, national ownership and administration provides the most enduring, effective, and fair conservation. This can be achieved by expanding the National Wildlife Refuge System as suggested in Table 3-3.

Box 3-3: *"GAP 2.75" Lands*

There are a significant number of "areas" that are designated in Forest Service or Bureau of Land Management land and/or resource management plans that are generally "dedicated to the preservation of biological diversity" (e.g. "roadless backcountry," "unroaded recreation," or the like). However, almost none of such areas are protected from mining. In addition, most generally forested such areas have loopholes to the effect that the areas shall not be logged unless there is a significant disturbance event, which then may be salvage logged.

In contrast to an administrative rule promulgated by the Secretary of Agriculture and/or the Interior, administrative land allocations in agency management plans are relatively easy to undo by lower-level line officers. It is worth recognizing these lands as "GAP 2.75"—not quite GAP 3, but not as protected as GAP 2.5.

Recipe 1: Proclaim New BLM Wilderness Study Areas

Establish, protect, and withdraw from mining new wilderness study areas (WSAs) on Bureau of Land Management (BLM) national public lands. Establish by directing BLM field officials to promptly complete inventory of lands with wilderness characteristics (LWCs). Protect by administrative rulemaking that establishes and protects new BLM WSAs. Withdraw the lands from mineral exploitation for the maximum twenty years allowed by the Federal Land Policy and Management Act (FLPMA). Upon establishment, new BLM WSAs automatically become part of the National Landscape Conservation System (16 USC 7202(b)(1)(C)).

Conservation Action Options: 1a (establishment), 1b (protection), 1c (mineral withdrawal)

Priority: High

Actors: Bureau of Land Management (establishment and protection), Secretary of the Interior (mineral withdrawal)

Acres Affected: 17.3 million (guestimated; see notes below)

Change in GAP Status of Lands: From GAP 3 to GAP 2

Percentage Increase in Protected Land Acreage: 2.4%

Discussion: With the enactment of the Federal Land Policy and Management Act (FLPMA) of 1976, in Section 603 Congress directed the BLM (and the President) to (1) inventory its lands and establish wilderness study areas; (2) report to Congress on their suitability or nonsuitability for wilderness designation by 1991; and (3) to administer the areas in "a manner so as not to impair the suitability of such areas for preservation as wilderness." These areas, known as Section 603 WSAs, remain Section 603 WSAs "until Congress determines otherwise." In 2009, Congress established the National Landscape Conservation System, which includes, among other areas, BLM wilderness study areas.

The BLM did a poor job of its wilderness review required by FLPMA Section 603. Section 201 of FLPMA requires the BLM to keep an ongoing inventory of resources, including the wilderness resource. Section 202 of FLPMA requires land use plans to allocate areas to different uses. Over the decades and sporadically, the BLM has established some additional WSAs under the authority of Sections 201 and 202. The quality of reinventories has been mixed. Recently, the BLM has been inventorying LWCs, again with mixed results. While LWCs must be inventoried, the BLM is currently under no obligation to protect such areas.

Affected National Conservation System: National Landscape Conservation System

Authority: Inventory, Section 201 of Federal Land Policy and Management Act (43 USC 1711); establishment, Section 202 of FLPMA (43 USC 1712); mineral withdrawal, Section 204 of FLPMA (43 USC 1714)

Affected States: AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: The BLM has not completed its inventory of LWCs. The inventories are done as part of revising resource management plans (RMPs), of which there are generally several for each state. In addition, some BLM jurisdictions, because of vigorous citizen advocacy, are doing more complete LWC inventories than other jurisdictions. There are a guestimated minimum of 17.3 million acres of BLM LWCs in the eleven western states (based on Oregon Natural Desert Association data for Oregon extrapolated to the other ten western states based on a ratio compared to BLM Section 603 WSAs in those states). The total is likely significantly higher.

More Information:

• Blumm, Michael C., and Andrew B. Erickson. 2014. "Federal Wild Lands Policy in the Twenty-First Century: What a Long, Strange Trip It's Been" (pdf). *Colorado Natural Resources, Energy, and Environmental Law Review* 25(1).

• Bureau of Land Management. 2021. Lands with Wilderness Characteristics.

• Bureau of Land Management Manual 6310: Conducting Wilderness Characteristics Inventory of BLM Lands (pdf).

• Bureau of Land Management Manual 6320: Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (pdf).

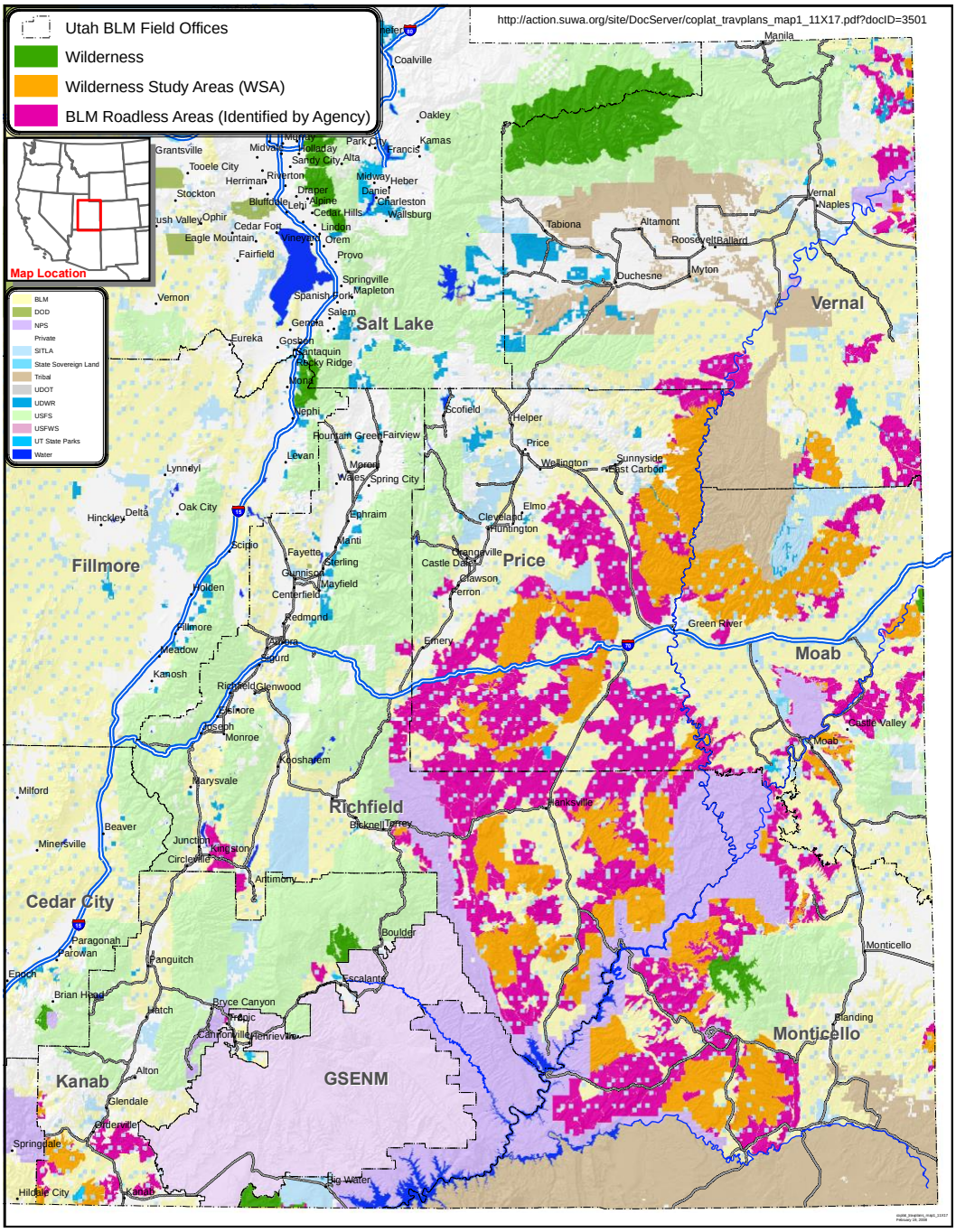

Figure 3-1. *Section 603 wilderness study areas (brownish-orange) in Utah. The agency-identified roadless areas in magenta should become Section 202 wilderness study areas*. Source: Southern Utah Wilderness Alliance.

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Recipe 2: Strengthen Protections for Existing BLM Areas of Critical Environmental Concern

Promulgate a regulation that provides permanent substantive protection for BLM ACECs, and also withdraw the areas from mining for the maximum twenty years allowed by law.

Conservation Action Options: 2a (mineral withdrawal), 2b (substantive protection)

Priority: High

Actors: Bureau of Land Management (rulemaking), Secretary of the Interior (mineral withdrawal)

Acres Affected: 21 million

Percentage Increase in Protected Land Acreage: 2.9%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: Congress established ACECs in the Federal Land Policy and Management Act (16 USC Chapter 35). FLPMA defines ACECs as

> *areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.* (43 USC 1702(a))

While FLPMA requires the BLM to "give priority to the designation and protection" of ACECs (43 USC 1712), the "protection" for ACECs has been inconsistently applied in the resource management plans (RMPs) in which ACECs have been established. While there is a BLM regulation pertaining to ACECs, it pertains only to their inventory, consideration, and establishment (43 CFR 1610.7-2). Not only does the regulation unduly narrow what qualifies as an ACEC as compared to the statutory definition, it also offers no substantive national standards for what "protection" means. In many ACECs, activities that are harmful to the resources and natural systems or processes that are supposed to be protected continue to be allowed (including livestock grazing, off-road vehicles, and mining). The regulation should be revised to more broadly define what an ACEC can be and also provide substantive protection requirements. The regulation should specify that while ACECs are established, expanded, or strengthened in RMPs, ACECs can only be disestablished, shrunk, or weakened by the Secretary of the Interior.

As for protection of an ACEC from mining, the decision to establish an ACEC is done in a BLM RMP at the field level, while a mineral withdrawal can only be done by the Secretary of the Interior. While all RMPs promise that the BLM will seek a withdrawal, it very rarely happens. For example, several ACECs established in western Oregon in 1995 have yet to have any follow-through seeking a twenty-year mineral withdrawal.

By BLM policy, ACECs include not only areas designated as ACECs but also designated research natural areas (RNAs), national natural landmarks (NNLs), and outstanding natural areas (ONAs). Additional kinds of ACECs could include Sagebrush Sea conservation reserves (all priority areas for conservation of the greater sage-grouse, 78 million acres; see Recipe 4) and critical habitats on BLM lands (all Endangered Species Act–designated critical habitat, 5.7 million acres; see Recipe 10).

Affected National Conservation System: none

Authority: Substantive protection, Section 202 of Federal Land Policy and Management Act (43 USC 1712); mineral withdrawal, Section 204 of FLPMA (43 USC 1714)

Affected States: AK (no mineral withdrawals), AZ, CA, CO, FL, ID, MT, NM, NV, OR, UT, WA, WY

Notes: BLM-provided acreages. Significant acreages of ACECs were de-established during the Trump administration and should be restored.

More Information:

• Bureau of Land Management. Areas of Critical Environmental Concern. You can download a current list of ACECs.

• Sheldon, Karin P., and Pamela Baldwin. 2017. "Areas of Critical Environmental Concern: FLPMA's Unfulfilled Conservation Mandate" (pdf). *Colorado Natural Resources, Energy, and Environmental Law Review* 28(1).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 3: Quadruple the Acreage of BLM Areas of Critical Environmental Concern

Quadruple the acreage of BLM lands that are established as areas of critical environmental concern (ACECs).

(Please see Conservation Action Options 2a and 2b in Recipe 2, as they are necessary precursors to this conservation action recommendation.)

Priority: High

Actor: Bureau of Land Management

Acres Affected: 63 million

Percentage Increase in Protected Land Acreage: 8.6% (if Recipe 2 is also done)

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: Many areas of BLM lands qualify for protection as ACECs. ACECs are established in resource management plans (RMPs), which are approved by field managers. As a cohort, bureaucrats are generally loath to have their discretion limited, especially if they are expected to limit their own discretion. Therefore, clear direction must be given to the field from the BLM director to promptly amend RMPs to quadruple the acreage of ACECs from current levels, with continuing oversight to ensure the goal is met.

By BLM policy, ACECs include not only areas designated as ACECs but also designated research natural areas (RNAs), national natural landmarks (NNLs), and outstanding natural areas (ONAs). Additional kinds of ACECs could include Sagebrush Sea conservation reserves (all priority areas for conservation of the greater sage-grouse, 78 million acres; see Recipe 4) and critical habitats on BLM lands (all Endangered Species Act–designated critical habitat, 5.7 million acres; see Recipe 10).

BLM's own inventories, as well as inventories of other federal agencies (such as the US Geological Survey and the Fish and Wildlife Service), state agencies, and private entities could be consulted in identifying areas for establishment.

Affected National Conservation System: none

Authority: Establishment, Section 202 of Federal Land Policy and Management Act (43 USC 1712); mineral withdrawal, Section 204 of FLPMA (43 USC 1714)

Affected States: AZ, CA, CO, FL, ID, MT, ND, NM, NV, OR, SD, UT, WA, WY. AK is not included due to congressional ban on administrative mineral withdrawals under FLPMA.

Notes: Significant acreages of ACECs were de-established during the Trump administration and should be restored. The proposed quadrupling number is based on ACECs in effect at the end of the Obama administration.

More Information:

• Bureau of Land Management. Areas of Critical Environmental Concern. You can download a current list of ACECs.
• Sheldon, Karin P., and Pamela Baldwin. 2017. "Areas of Critical Environmental Concern: FLPMA's Unfulfilled Conservation Mandate" (pdf). *Colorado Natural Resources, Energy, and Environmental Law Review* 28(1).

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Recipe 4: Establish a Sagebrush Sea Conservation Reserve System

Establish by administrative rule a system of Sagebrush Sea conservation reserves and also withdraw the lands from mineral exploitation.

Conservation Action Options: 4a (establishment and protection), 4b (mineral withdrawal)

Priority: High

Actor: Secretary of the Interior

Acres Affected: 78 million

Percentage Increase in Protected Land Acreage: 10.7%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion:

> *. . . in the sagebrush lands of the West . . . the natural landscape is eloquent of the interplay of the forces that have created it. It is spread before us like the pages of an open book in which we can read why the land is what it is and why we should preserve its integrity. But the pages lie unread.*
>
> —Rachel Carson, *Silent Spring* (1962)

The Sagebrush Sea is a landscape of dramatic contrasts and subtlety. While to some the dry, rocky hillsides and apparently endless bluffs of sage, juniper, piñon, mountain mahogany, and bitterbrush appear monotonous and barren, they teem with wildflowers, aromatic and flowering shrubs, birds, and a great variety of other animals. This is expansive country.

More than one hundred bird, seventy mammal, twenty-three reptile and amphibian, and forty-six fish species depend on the Sagebrush Sea ecosystem. Besides the iconic greater sage-grouse, Gunnison sage-grouse, and bistate sage-grouse, the land harbors pronghorn, pygmy rabbit, sagebrush vole, sagebrush sparrow, Brewer's sparrow, sage thrasher, swift fox, northern leopard frog, black-footed ferret, and ferruginous hawk.

Affected National Conservation System: none

Authority: Inventory, Section 201 of Federal Land Policy and Management Act (43 USC 1711); establishment, Section 202 of FLPMA (43 USC 1712); mineral withdrawal, Section 204 of FLPMA (43 USC 1714)

Affected States: AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: Acreage is approximate. The Fish and Wildlife Service identified 78 million acres as "priority areas for conservation" (PACs) out of ~160 million acres of current range for greater sage-grouse. Of the 78 million acres, 54 million are federal (BLM and USFS) land and/or mineral estate within the PAC boundaries. The nonfederal lands within the PACs should be acquired from willing sellers. In addition, there are significant areas of the Sagebrush Sea where greater sage-grouse do not exist but other denizens of the Sagebrush Sea, such as the Wyoming pocket gopher, find habitat. The original Sagebrush Sea was 270 million acres.

As an alternative to a completely new administrative rule, Sagebrush Sea conservation reserves could be defined (like research natural areas, national natural landmarks, and outstanding natural areas are now) as a kind of area of critical environmental concern (see Recipes 2 and 3).

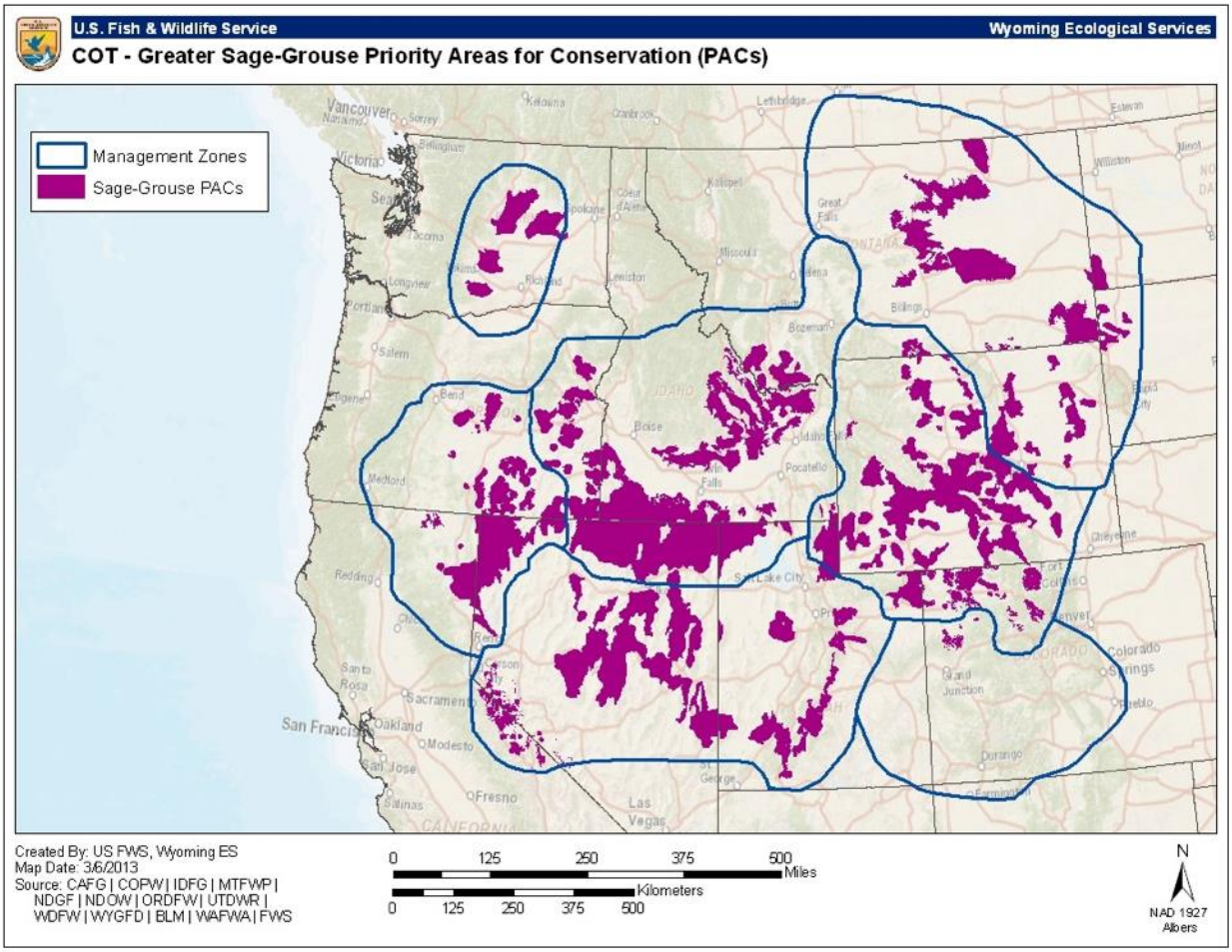

Figure 3-2. *Greater sage-grouse priority areas for conservation (PACs).* Source: US Fish and Wildlife Service.

More Information:

• Molvar, Erik. 2015. *The Shrinking Geography of Sage Grouse Conservation* (pdf). WildEarth Guardians.

• Grossman, Elizabeth, et al. 2002. *The Sagebrush Sea* (pdf). The Larch Company, Ashland, OR, and Washington, DC.

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Recipe 5: Establish a Federal Land Carbon Reserve System on BLM Lands

Promulgate a regulation that provides permanent substantive protection for BLM forestlands with high carbon storage and sequestration values, not only aiding climate mitigation but also coincidentally permanently protecting biological diversity. Also, withdraw such lands from mining for the maximum twenty years allowed by law.

Conservation Action Options: 5a (establishment), 5b (mineral withdrawal)

Priority: High

Actor: Bureau of Land Management (rulemaking), Secretary of the Interior (mineral withdrawal)

Acres Affected: 3 million

Percentage Increase in Protected Land Acreage: 0.4%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: The permanent conservation of old (mature and old-growth) forests can significantly mitigate climate change. Such conservation can coincidentally permanently protect biological diversity. Protecting such forests by a regulation would ensure that such protections are far less vulnerable to elimination by a future hostile administration.

Affected National Conservation System: none

Authority: Federal Land Policy and Management Act (43 USC Chapter 35), Oregon and California Lands Act (43 USC Chapter 44), Endangered Species Act (16 USC Chapter 35)

Affected States: Primarily western OR, some eastern OR, MT, CA

Notes: The acreage number is an informed guess. An identical recommendation is also being made for National Forest System lands administered by the Forest Service (Recipe 21).

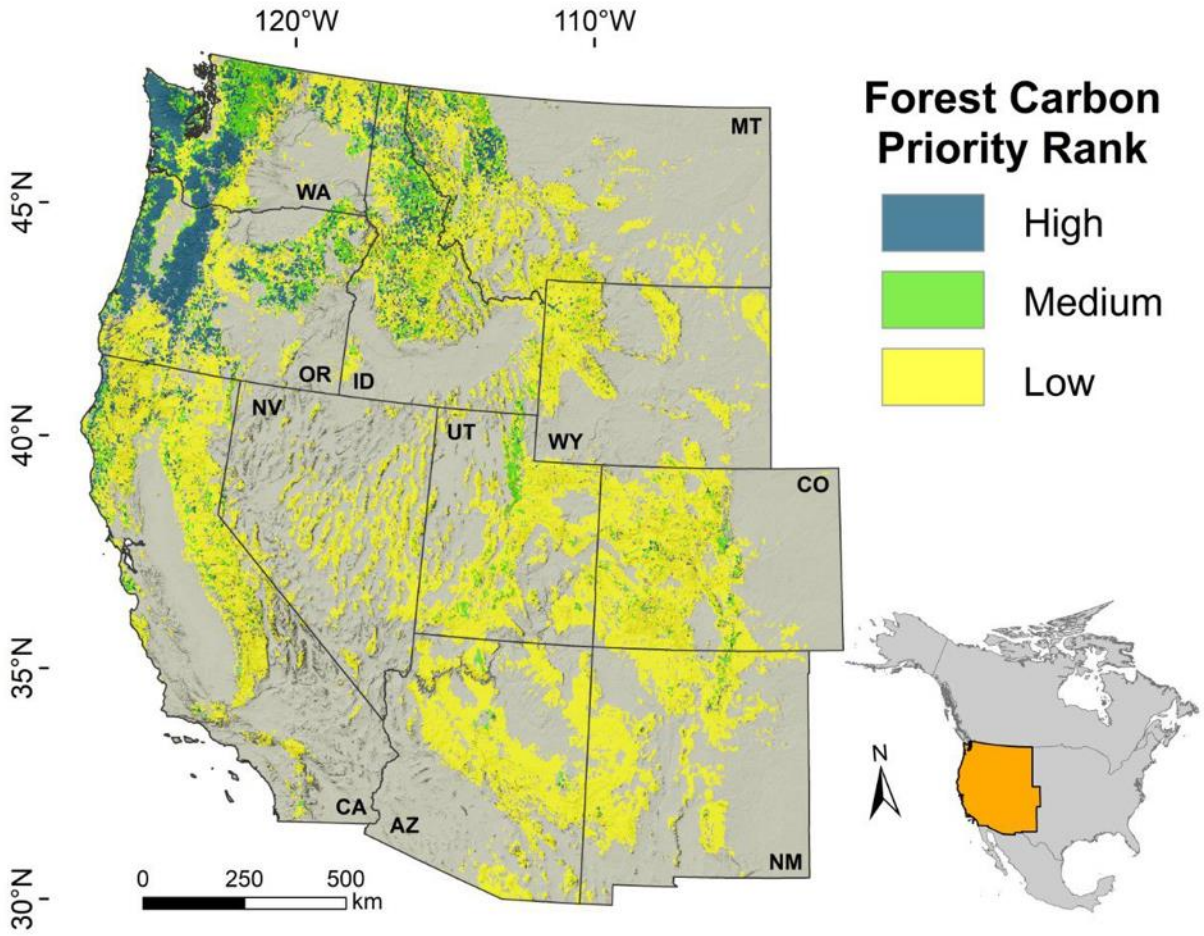

Figure 3-3. *Forest carbon priority rankings in the eleven western states. Most forested BLM lands are in western Oregon, with most aboveground carbon (also known as trees) given high and medium priority.* Source: Oregon State University, published on OregonLive.com.

More Information:

• Law, Beverly E., et al. "Land Use Strategies to Mitigate Climate Change in Carbon Dense Temperate Forests." *Proceedings of the National Academy of Sciences* 115(14): 3663–3668.

• DellaSala, Dominick (ed.). 2011. *Temperate and Boreal Rainforests of the World: Ecology and Conservation*. Washington, DC: Island Press.

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Recipe 6: Triple the Acreage of BLM National Monuments

Proclaim new and expand existing national monuments on BLM lands.

Priority: High

Actor: President

Acres Affected: 46.8 million

Percentage Increase in Protected Land Acreage: 6.4%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: National monument designation confers the strongest conservation protection an administration can achieve for public lands. It is appropriate to expand the twenty-eight proclaimed and legislated national monuments administered by the BLM. It is also appropriate to proclaim several other landscape-level BLM national monuments. A presidential proclamation establishing a national monument, a power granted by Congress in the Antiquities Act, is not subject to the requirements of the National Environmental Policy Act. This is a big advantage, as having to do an environmental impact statement first simply allows opposition to organize.

Affected National Conservation System: National Landscape Conservation System

Authority: Antiquities Act of 1906 (54 USC 320301)

Affected States: AZ, CA, CO, FL, ID, MT, ND, NM, NV, OR, SD, UT, WA

Notes: Given that the BLM administers 155.4 million surface acres outside of Alaska and Wyoming (where Congress has precluded presidential proclamations for national monuments), the goal of tripling the acreage is very doable. Proposals available upon request.

More Information:

• Bureau of Land Management. Monuments, Conservation Areas and Similar Designations.

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Recipe 7: Do a Comprehensive Mineral Withdrawal for All BLM Wild and Scenic Rivers

Withdraw from mining, for the maximum twenty years allowed by law, all BLM lands within existing units of the National Wild and Scenic Rivers System.

Priority: Low

Actor: Secretary of the Interior

Acres Affected: 0.3 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: No change from GAP 2

Discussion: All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. If a stream is worth designating as a wild and scenic river, it is worth withdrawing from mining. A few scenic or recreational segments are administratively withdrawn from mining, but most are not. All should be.

Legislation is pending in Congress that would withdraw from mining all scenic- and recreational-classified segments of wild and scenic rivers in Oregon.

Affected National Conservation System: National Wild and Scenic Rivers System

Authority: Federal Land Policy and Management Act Section 204 (43 USC 1714)

Affected States: AK, CA, ID, MT, NM, OR, UT

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with GAP 2 status already qualify to be counted toward 30x30. Acreage estimated from official numbers kept by rivers.gov.

More Information:
• Bureau of Land Management. Wild and Scenic Rivers.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 8: Triple the Acreage of National Wildlife Refuges

Establish new and expand existing wildlife refuges to, among other things, ensure that 30 percent of each of the nation's 108 Level III ecoregions is permanently protected.

Priority: High

Actor: Secretary of the Interior

Acres Affected: 293.1 million

Percentage Increase in Protected Land Acreage: 40%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: It should be a goal to permanently protect at least 30 percent of the acreage in each of the nation's 108 Level III ecoregions. While it will be impossible to meet in some ecoregions (not enough natural land cover remains), it can be met in most of them and has been met in some of them. In 55 ecoregions, even if all lands with GAP 3 status were given additional protection to elevate them to GAP 1 or GAP 2 status, there would be a shortfall of a total of 264.3 million acres. The most appropriate designation for permanent protection is national wildlife refuge. Further analysis is needed to determine priorities for lands' inclusion in new and expanded NWRs, but an obvious priority is to include nonfederal lands that are within designated critical habitat for Endangered Species Act–protected species (7.4 million acres). This would facilitate fee simple acquisition of long-term leases from willing sellers.

Priorities for acquisition from willing sellers could be the ESA-designated critical habitat on nonfederal lands. In addition, there are 5.7 million acres of ESA-designated critical habitat on BLM public lands.

Affected National Conservation System: National Wildlife Refuge System

Authority: National Wildlife Refuge System Administration Act (16 USC 668dd) and the Federal Land Policy and Management Act withdrawal provision (43 USC 1714)

Affected States: All but Alaska (which is precluded by statute)

Notes: The numbers are based on a GIS analysis of protected areas with GAP 1 and GAP 2 status by EPA Level III ecoregion (available upon request).

More Information:
• US Fish and Wildlife Service. National Wildlife Refuge System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 9: Quadruple the Acreage of Waterfowl Production Areas

Establish new and expand existing waterfowl production areas.

Priority: High

Actor: Fish and Wildlife Service

Acres Affected: 12.5 million

Percentage Increase in Protected Land Acreage: 1.7%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: Waterfowl production areas (WPAs) are not national wildlife refuges (NWRs) but nonetheless are part of the National Wildlife Refuge System. The Fish and Wildlife Service explains the differences between NWRs and WPAs:

> *As units of the Refuge System, waterfowl production areas are generally subject to the same rules and regulations as national wildlife refuges but are distinct in geography and management.*
>
> *One key difference between wildlife refuges and waterfowl production areas is that all fee-title-owned WPAs are open to recreation activities unless public safety or other concerns dictate otherwise. In contrast, wildlife refuges are closed to recreation activities unless specifically opened.*
>
> *Another difference is that a wildlife refuge is typically one contiguous place with one border and one set of neighbors. Waterfowl production areas often are lands dispersed across several counties and townships.*

Ninety-five percent of the current WPAs are scattered across the Prairie Pothole Region along the north end of the Central Flyway in thirty-eight wetland management districts. WPAs could be established in any state. WPAs have generally been acquired using "duck stamp" monies.

Affected National Conservation System: National Wildlife Refuge System

Authority: Migratory Bird Conservation Act (16 USC 715d)

Affected States: Historically, 95 percent of WPAs are in IA, MN, MT, ND, NE, SD, and WI. There are also a few WPAs in ID, ME, and MI. Ducks and other waterfowl are found in all fifty states.

Notes: Although WPAs have generally been limited to central northern states, this need not be the case. As the Fish and Wildlife Service notes:

> *Beyond providing recreation for people and habitat for ducks, wetland birds, grassland birds, raptors and shorebirds, waterfowl production areas are economically and ecologically important to the Upper Midwest. These wetlands and grasslands serve as natural sponges that reduce runoff and help with flood control.*

More Information:
• US Fish and Wildlife Service. Waterfowl Production Areas.
• US Fish and Wildlife Service. Duck Stamp.

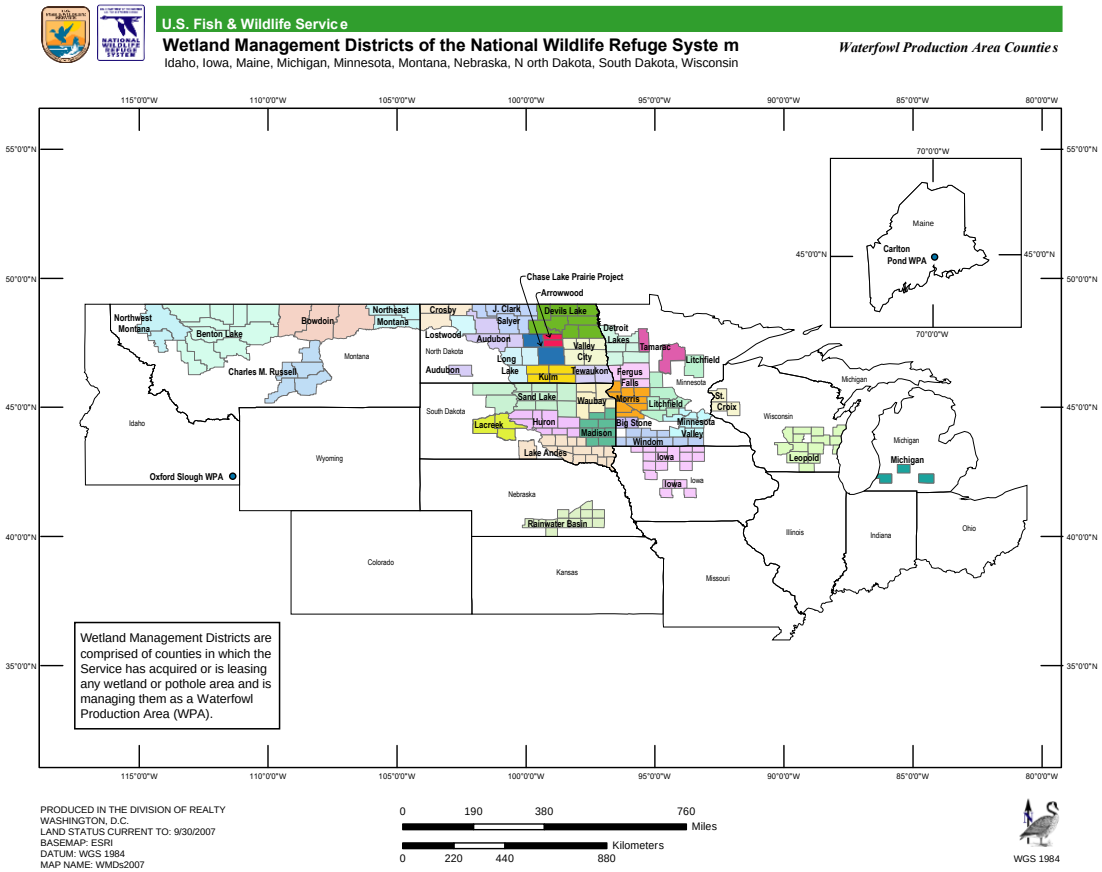

Figure 3-4. *Current distribution of waterfowl production areas. They are grouped in wetland management districts that include several counties.* Source: Fish and Wildlife Service.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 10: Create New National Wildlife Refuges from ESA Critical Habitat on BLM Lands

Proclaim, and withdraw from mining, new national wildlife refuges based on those lands currently administered by the BLM that are designated critical habitat for plant and animal species under the Endangered Species Act.

Conservation Action Options: 10a (establishment), 10b (mineral withdrawal)

Priority: High

Actor: Secretary of the Interior

Acres Affected: 5.7 million

Percentage Increase in Protected Land Acreage: 0.8%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: The Endangered Species Act defines "critical habitat" for a threatened or endangered species to mean "the specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection." While "essential to the conservation of the species," critical habitat (CH) on federal public land serves as an overlay that somewhat constrains management so as not to jeopardize the continued existence of the species. It is not a land allocation intended to do all things possible to achieve conservation of the species so that the protection of the ESA is no longer necessary. Several national wildlife refuges have been established under the authority of the Endangered Species Act.

Affected National Conservation System: National Wildlife Refuge System

Authority: National Wildlife Refuge System Administration Act (16 USC 668dd) and the Federal Land Policy and Management Act withdrawal provision (43 USC 1714)

Affected States: AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: An FLPMA mineral withdrawal must be concurrent with refuge establishment.

More Information:
• US Fish and Wildlife Service. Critical Habitat for Threatened and Endangered Species mapper.
• US Fish and Wildlife Service. Listing and Critical Habitat | Critical Habitat | Frequently Asked Questions.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 11: Protect Inventoried Roadless Areas Against Mining and Close Loopholes

Withdraw IRAs from mining and strengthen protections by closing logging and roading loopholes.

Conservation Action Options: 11a (mineral withdrawal), 11b (strengthening protections)

Priority: High

Actor: Forest Service

Acres Affected: 58.5 million

Percentage Increase in Protected Land Acreage: 8.0%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: The current Forest Service roadless rule generally prohibits roading and logging but does have loopholes so that the Forest Service can abuse (and has abused) its discretion to road and log such areas.

Affected National Conservation System: National Forest System

Authority: 16 USC 472, Laws affecting national forest lands; 16 USC §529, Authorization of development and administration consideration to relative values of resources; areas of wilderness; 16 USC 551, Protection of national forests; rules and regulations; Federal Land Policy and Management Act withdrawal provision (43 USC 1714)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: The official Forest Service Roadless Area Conservation Rule was published in the *Federal Register* on Friday, January 12, 2001 (Vol. 66, No. 99, pages 3244–3273). Due to a history of (then) litigation and (now) incompetence, the rule—though having the same force of law as other regulations—has never been codified into the *Code of Federal Regulations.* The version in the *Federal Register* is referenced as 36 CFR 294.10 through 294.14. The current CFR has provisions pertaining to state petitions for roadless area management, and special rules for Idaho and Colorado roadless areas, but not the core roadless rule. It's more confusing because 294.10 through 294.14 refer to the state petitions provisions. Suffice it to say the Forest Service inventoried roadless area protection rule is fully in effect and can be amended.

More Information:
• US Forest Service. Welcome to the Roadless Area Conservation.

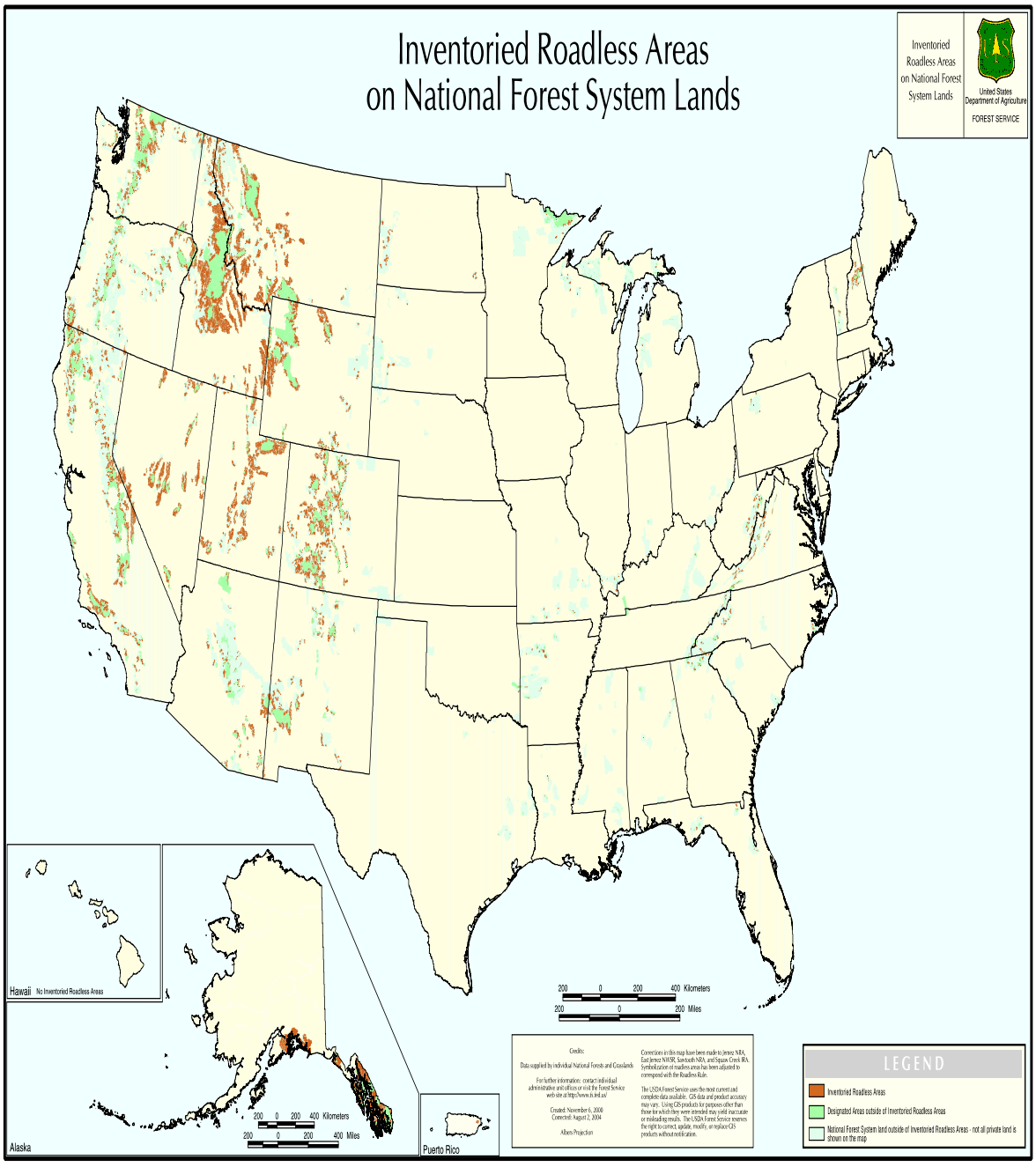

Figure 3-5. *Inventoried roadless areas on National Forest System lands.* Source: Forest Service.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 12: Protect Other Forest Service Large Roadless Areas

Extend the protections of the Forest Service roadless rule to large roadless areas (>5,000 acres in size) that were not included in the official list.

Conservation Action Options: 12a (inclusion in roadless conservation rule), 12b (mineral withdrawal)

Priority: High

Actor: Forest Service

Acres Affected: 39.6 million

Percentage Increase in Protected Land Acreage: 5.4% (if Recipe 11 is also done)

Change in GAP Status of Lands: From GAP 3 or GAP 4 to GAP 2

Discussion: The areas protected under the 2001 Forest Service roadless rule are those inventoried in the Forest Service Roadless Area Conservation Final Environmental Impact Statement (Vol. 2). These maps were generally based on the Forest Service's second Roadless Area Review and Evaluation (RARE II), completed in 1980. Despite persistent efforts by citizens to get the Forest Service to identify roadless areas larger than 5,000 acres that were not in the agency inventory, the agency refused to do so. The agency has a pattern and practice of not completing and maintaining an accurate roadless area inventory. One of the reasons for RARE II was that RARE I so badly failed to identify roadless areas. The Forest Service resisted correcting its inventory as it prepared land and resource management plans in the 1990s. These omissions were baked into the roadless rule.

In fact, millions of acres of roadless national forest lands still have not, to this day, been inventoried by the agency. Agency bureaucrats have resisted because inventorying the lands is recognition of importance that tends to lead to protection. Inherently, bureaucrats disfavor designations and classifications of land that limit their discretion.

Affected National Conservation System: National Forest System

Authority: Forest Service Roadless Area Conservation Rule

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: No official agency inventory of roadless areas exists. Oregon Wild has done an intensive inventory of roadless areas in federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of other large roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon. See note in Recipe 11.

More Information:
• Oregon Wild. Oregon's Roadless Wildlands.
• Oregon Wild. Oregon Roadless Forests (pdf).

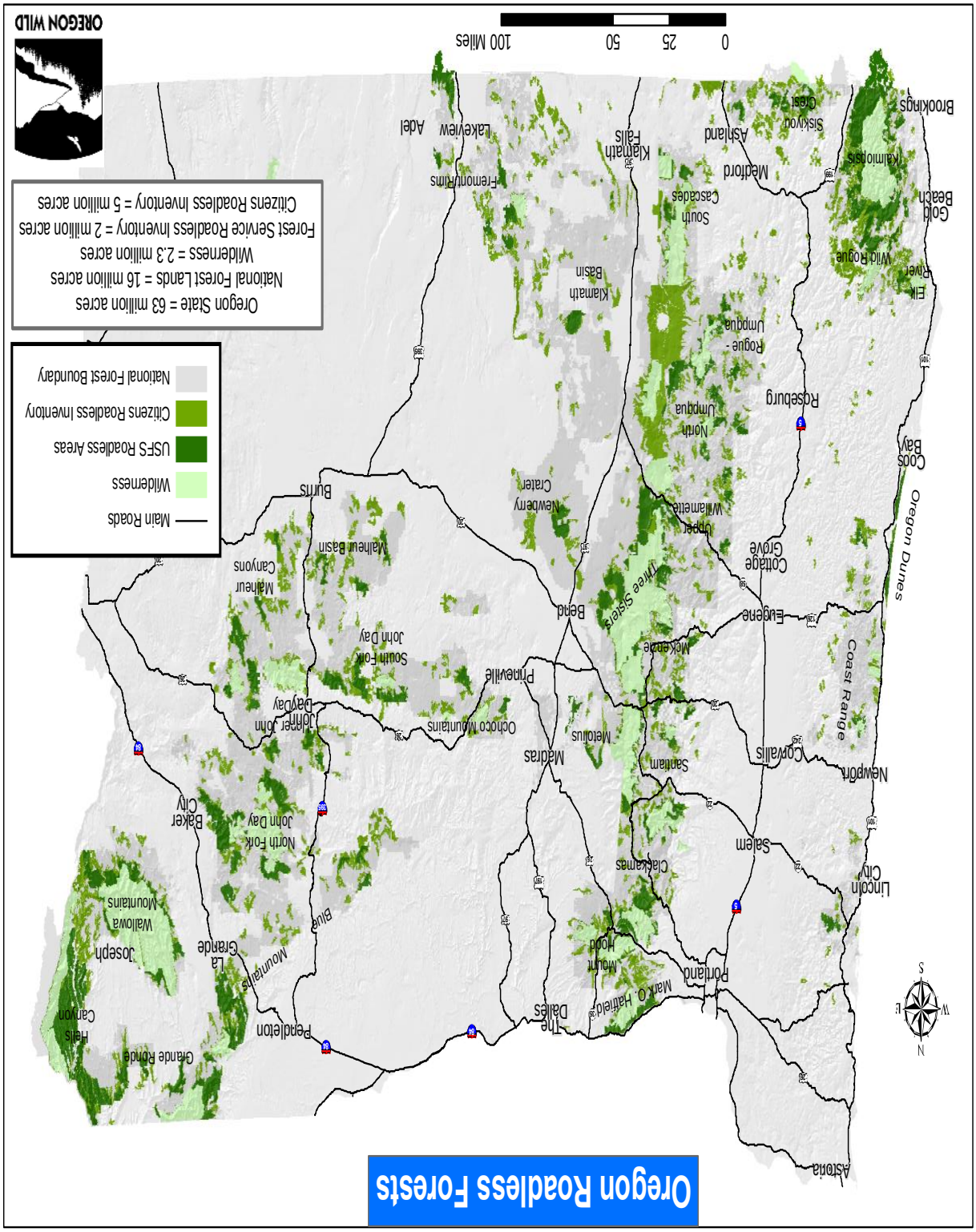

Figure 3-6. *Oregon roadless forests map prepared by Oregon Wild. The Citizens Roadless Inventory includes both large roadless areas missed in the USFS roadless area inventory and small roadless areas from 1,000 to 4,999 acres in size.*

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 13: Protect Forest Service Small Roadless Areas

Extend the protections of the Forest Service roadless rule to roadless areas between 1,000 and 4,999 acres in size.

Conservation Action Options: 13a (inclusion in roadless conservation rule), 13b (mineral withdrawal)

Priority: High

Actor: Forest Service

Acres Affected: 43.9 million

Percentage Increase in Protected Land Acreage: 6% (if Recipe 11 is also done)

Change in GAP Status of Lands: From GAP 3 or GAP 4 to GAP 2

Discussion: Small roadless areas are ecologically and hydrologically vital. In 1997, 136 scientists signed a letter to President Clinton that made this clear:

> *There is a **growing consensus among academic and agency scientists that existing roadless areas—irrespective of size—contribute substantially to maintaining biodiversity and ecological integrity on the national forests**. The Eastside Forests Scientific Societies Panel, including representatives from the American Fisheries Society, American Ornithologists' Union, Ecological Society of America, Society for Conservation Biology, and The Wildlife Society, recommended a prohibition on the construction of new roads and logging within existing (1) roadless regions larger than 1,000 acres, and (2) roadless regions smaller than 1,000 acres that are biologically significant. . . . Other scientists have also recommended protection of all roadless areas greater than 1,000 acres, at least until landscapes degraded by past management have recovered. . . . As you have acknowledged, a national policy prohibiting road building and other forms of development in roadless areas represents a major step towards balancing sustainable forest management with conserving environmental values on federal lands. **In our view, a scientifically based policy for roadless areas on public lands should, at a minimum, protect from development all roadless areas larger than 1,000 acres and those smaller areas that have special ecological significance because of their contributions to regional landscapes**.*[53] [emphasis added]

The geographic ecosystem diversification of such areas is relatively high, though weighted by area to the western states.

Affected National Conservation System: National Forest System

Authority: Forest Service Roadless Area Conservation Rule

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: No official agency inventory exists. Oregon Wild has done an intensive inventory for federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of

[53] Letter to President Clinton signed by 136 scientists (Nov. 14, 1997).

small roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon. See note in Recipe 11 and Figure 3-6.

More Information:

- Kerr, Andy. "Small" Wilderness: No Big Deal (pdf). Larch Occasional Paper #8.
- Oregon Wild. Oregon's Roadless Wildlands.
- Oregon Wild. Oregon Roadless Forests (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 14: Elevate the Conservation Status of Forest Service Special Areas

Withdraw all Forest Service special areas from mining and strengthen the protection mandate in the existing regulation.

Conservation Action Options: 14a (withdraw from mining), 14b (strengthen regulatory protection)

Priority: High

Actor: Forest Service

Acres Affected: 9.7 million

Percentage Increase in Protected Land Acreage: 1.3%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: The Forest Service administers certain portions of the National Forest System as special areas (SAs), conferring the highest form of administrative protection available. "Special area" is a permanent administrative designation that is far more enduring than a mere land allocation made (and sometimes later revoked) in a land and resource management plan.

SAs, more commonly known in agency parlance as "special *interest* areas," are areas of special interest that have been established under the authority of a Forest Service regulation entitled "Recreation areas." Such special areas are "managed principally for recreation use substantially in their natural condition." The Forest Service has used the authority to establish recreation areas to protect areas it has found to have special scenic, geological, botanical, zoological, paleontological, historical, and/or recreational resources.

SAs are distinct from research natural areas (RNAs), which are authorized under a different provision of the *Code of Federal Regulations*.

Some Forest Service SAs have been permanently withdrawn from mineral development; others are temporarily withdrawn, while others are open to hard rock mining claims and development. All should be protected from mining.

"Special area" designation could be used to elevate and make permanent the conservation status of Forest Service lands that are critical in the conservation of threatened and endangered species.

Affected National Conservation System: National Forest System

Authority: 36 CFR 294.1, Special Areas—Recreation areas

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MS, MO, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: No nationwide compilation of Forest Service special areas is known to exist. It is guestimated that 5 percent of federal lands within the National Forest System are special interest areas, which is probably high. See Recipe 15 for a proposal to triple the acreage in Forest Service special areas. See Recipe 16 for a proposal to protect ESA critical habitat as Forest Service special areas.

More Information:

• Kerr, Andy. 2021. The Authority for and Implementation of Forest Service Special Areas (pdf). Larch Occasional Paper #25.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 15: Quadruple the Acreage in Forest Service Special Areas

By both expanding existing and establishing new special areas, triple the acreage of lands protected.

Conservation Action Options: 15a (strengthen regulatory protection), 15b (withdraw from mining)

Priority: High

Actor: Forest Service

Acres Affected: 29 million

Percentage Increase in Protected Land Acreage: 4% (if Recipe 14 is also done)

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The opportunities to expand existing and establish new Forest Service special areas are immense. For example, countless somewhat protective land allocations in the land and resource management plans for each unit of the National Forest System specifically recognize biodiversity values or are a form of management consistent with the preservation of biodiversity. These areas have already been recognized as socially important; they are just not adequately protected. All are open to mining, and some allow for activities harmful to biodiversity (such as logging, grazing, off-road vehicles). In addition, numerous and sizeable other areas are indeed special in fact but not yet in law. A priority should be the 22.8 million acres of critical habitat on NFS lands designated pursuant to the Endangered Species Act.

Affected National Conservation System: National Forest System

Authority: 36 CFR 294.1, Special Areas—Recreation areas

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MS, MO, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: See Recipe 14 for a proposal to elevate the conservation status of Forest Service special areas. See Recipe 16 for a proposal to protect ESA critical habitat as Forest Service special areas.

More Information:

• Kerr, Andy. 2021. The Authority for and Implementation of Forest Service Special Areas (pdf). Larch Occasional Paper #25.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 16: Protect ESA Critical Habitat as Forest Service Special Areas

Elevate areas of ESA critical habitat on National Forest System lands to also be Forest Service special interest areas and withdraw from mining.

Priority: High

Actor: Forest Service

Acres Affected: 22.8 million

Percentage Increase in Protected Land Acreage: 3.1% (if Recipe14 is also done)

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The obligation of the Forest Service in areas designated as critical habitat for ESA-listed species is to avoid "jeopardy" to the continued existence of the species. With special interest area status, the obligation would be to affirmatively aid the "conservation" of the species. "Conservation" means "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the Endangered Species Act] are no longer necessary."

Affected National Conservation System: National Forest System

Authority: 36 CFR 294.1, Forest Service special areas; 16 USC Chapter 35, Endangered Species Act

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MS, MO, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: See Recipe 14 for a proposal to elevate the conservation status of Forest Service special areas. See Recipe 15 for a proposal to quadruple the area in Forest Service special areas.

More Information:

• Kerr, Andy. 2021. The Authority for and Implementation of Forest Service Special Areas (pdf). Larch Occasional Paper #25.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 17: Protect Existing Forest Service Research Natural Areas from Mining

Protect existing Forest Service research natural areas from mining.

Priority: High

Actor: Forest Service

Acres Affected: 0.9 million

Percentage Increase in Protected Land Acreage: 0.1%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The Forest Service presently has 586 RNAs, totaling 850,720 acres, which is 0.44 percent of all the acreage in the National Forest System. A very significant number of these RNAs are open to mineral exploitation. Some were withdrawn at the time of their establishment, while others have benefited from a withdrawal associated with another form of land protection (such as wilderness area designation). RNAs established before enactment of the Federal Land Policy and Management Act of 1976 have likely already been withdrawn. RNAs established after 1976 have more likely not been withdrawn because of bureaucratic impediments and because the office of the Secretary of the Interior, who must approve such withdrawals, has sometimes been occupied by persons generally hostile to mineral withdrawals.

Affected National Conservation System: National Forest System

Authority: 43 USC 114,Withdrawals of lands

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: Concurrently, this provision in the *Forest Service Manual* should be modified as follows (deletion in *italic*, addition in **bold**)

> *Unless catastrophic circumstances significantly alter the conditions for which a Research Natural Area was originally created such that it no longer may serve that function, t***T**he designation of a Research Natural Area shall be in perpetuity.

The language recommended for deletion is contrary to the Forest Service regulation on RNAs that says, "Research Natural Areas will be **retained in a virgin or unmodified condition** . . . " [emphasis added] (36 CFR 251.23). Besides, the prime purpose of RNAs is to study nature, including natural changes due to natural disturbances. An RNA established to study a multicentury old-growth forest could be disestablished if a stand-replacing event such as a fire, windstorm, or volcano reset the forest stand to a complex early seral forest. In such cases, natural history has taught us, if left alone the site will eventually again become an old-growth forest.

More Information:

• Forest Service Northern Region. Research Natural Areas.
• Forest Service. Rocky Mountain Research Station. Research Natural Areas.
• Forest Service. 1993. National Strategy: Opportunities for the Future.
• Forest Service. 2005. Forest Service Manual, Chapter 4060, Research Facilities and Areas (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 18: Round Out Research Natural Areas in the National Forest System

Expand the acreage of research natural areas (RNAs) in the National Forest System to adequately meet the purposes of RNAs, and withdraw these expanded areas from mining.

Conservation Action Options: 18a (establishment) and 18b (mineral withdrawal)

Priority: High

Actor: Forest Service

Acres Affected: 1 million

Percentage Increase in Protected Land Acreage: 0.1%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The first RNA was established in 1927 on the Coronado National Forest in Arizona. It would be nice to round out the network of RNAs by 2027. Numerous candidates have been proposed by several regional agency or interagency committees, but Forest Service line officers have been slow to process these recommendations.

Affected National Conservation System: National Forest System

Authority: 43 USC 1714, Withdrawals of lands; 36 CR 251.23, Forest Service experimental areas and research natural areas

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: The acreage recommended is a rough, but reasoned, guess. RNAs are on average relatively small, so small at times as to limit opportunities for research. Larger RNAs are more conducive to research and can also include several ecological elements. (A single element might be the likes of "Douglas-fir/western hemlock mature forest at mid-elevation in the Oregon Cascade Range.")

More Information:

• Forest Service Northern Region. Research Natural Areas.
• Forest Service. Rocky Mountain Research Station. Research Natural Areas.
• Forest Service. 1993. National Strategy: Opportunities for the Future.
• Forest Service. 2005. Forest Service Manual, Chapter 4060, Research Facilities and Areas (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 19: Triple the Acreage of Forest Service National Monuments

Create new and expand existing national monuments by presidential proclamation.

Priority: High

Actor: President

Acres Affected: 13.1 million

Percentage Increase in Protected Land Acreage: 1.8%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: While most national monuments are administered by the National Park Service, the Forest Service administers twelve national monuments, five of which are jointly administered with the Bureau of Land Management. To qualify as a national monument, the federal land must have at least one object of scientific or historic interest.

Affected National Conservation System: National Forest System

Authority: Antiquities Act of 1906 (54 USC 320301)

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: Specific recommendations for new and expanded national monuments in the National Forest System can be made available upon request. Here are a few suggestions (Forest Service acreages only):

- Birthplace of Rivers National Monument (proposed), West Virginia, ~0.1 million acres
- Douglas Fir National Monument (proposed), Oregon, ~0.5 million acres
- Modoc Plateau National Monument (proposed), California, ~1.6 million acres
- Greater Grand Canyon Heritage National Monument (proposed), Arizona, ~1 million acres
- Range of Light National Monument (proposed), California, ~1.4 million acres

More Information:

• USDA Forest Service. 2020. "Listing of USFS-Administered National Monuments (pdf). *Land Area Report.*

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 20: Strengthen and Expand National Wildlife Areas Within the National Forest System

Expand existing, establish new, and strengthen protections for national wildlife areas on any National Forest System lands that were acquired rather than reserved from the public domain. The existing proclaimed national wildlife areas/preserves would benefit from more direction pertaining to habitat conservation. Numerous opportunities exist to establish new NWAs.

Conservation Action Options: 20a (expand existing) and 20b (establish new)

Priority: High

Actor: President

Acres Affected: 4.9 million (1.2 million [existing areas] and 3.6 million [new areas]

Percentage Increase in Protected Land Acreage: 0.9%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: During the first third of the twentieth century, Congress authorized the President to proclaim, within certain national forests, areas dedicated to providing breeding places for game birds, game animals, and fish. While not used by recent presidents, the authority to do so remains on the books and could be used to further the conservation of wildlife.

There are presently 1,252,935 acres of National Game Refuge and Wildlife Preserves including 622,283 acres on Kaibab National Forest Grand Canyon Preserve.

The President has the authority to proclaim "national wildlife areas" on any National Forest System lands that were acquired rather than reserved from the public domain. This includes almost all national forests in the East, as well as significant portions of national forests in the West that have acquired non–public domain lands since their establishment. A list of eligible national forest lands can be found in Larch Occasional Paper #27.

Affected National Conservation System: National Forest System

Authority: Various Acts of Congress (see Larch Occasional Paper #27)

Affected States: AL, AR, AZ, FL, GA, IL, IN, KY, LA, ME, MI, MO, MS, NE, NH, NY, OH, PA, SC, TN, TX, VT, WI, WV

Notes: The guestimated acreage is one-third of total national forest acreage where the authority exists to proclaim national wildlife areas. Congress has granted the authority (16 USC 694) to the President to proclaim "breeding places for game birds, game animals, and fish" on all national forests (except those associated with the Alaska Natural Gas Transportation System), subject to recommendations from the Secretary of Agriculture and Secretary of Commerce and with the approval of the affected state legislature. This authority has never been successfully used.

More Information:

• USDA Forest Service 2020. "Forest Service National Game Refuges and Wildlife Preserves by State" (pdf). *Land Area Report.*
• Kerr Andy. 2021. Presidential Authority to Establish "National Wildlife Areas" Within the National Forest System. Larch Occasional Paper #27.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 21: Establish a Federal Land Carbon Reserve System within the National Forest System

Promulgate a regulation that provides permanent substantive protection for national forest lands with high carbon storage and sequestration values, not only aiding climate mitigation but also coincidentally permanently protecting biological diversity. Also, withdraw such lands from mining for the maximum twenty years allowed by law.

Conservation Action Options: 21a (establishment), 21b (mineral withdrawal)

Priority: High

Actor: Forest Service (rulemaking), Secretary of the Interior (mineral withdrawal)

Acres Affected: 50 million

Percentage Increase in Protected Land Acreage: 6.8%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The permanent conservation of old (mature and old-growth) forests can significantly mitigate climate change. Such conservation can coincidentally permanently protect biological diversity. Protecting such forests by a regulation would ensure that such protections are far less vulnerable to elimination by a future hostile administration.

Affected National Conservation System: National Forest System

Authority: 16 USC 472, Laws affecting national forest lands; 16 USC §529, Authorization of development and administration consideration to relative values of resources; areas of wilderness; and 16 USC 551, Protection of national forests; rules and regulations.

Affected States: AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: It is an informed guestimate of the amount of older (mature and old-growth) forests and trees on the National Forest System. An identical recommendation is also being made for forestlands administered by the Bureau of Land Management (Recipe 5).

More Information:

• Law, Beverly E., et al. "Land Use Strategies to Mitigate Climate Change in Carbon Dense Temperate Forests." *Proceedings of the National Academy of Sciences* 115(14): 3663–3668.
• DellaSala, Dominick (ed.). 2011. *Temperate and Boreal Rainforests of the World: Ecology and Conservation*. Washington, DC: Island Press.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 22: Do a Comprehensive Mineral Withdrawal for All USFS Wild and Scenic Rivers

Withdraw from mining, for the maximum twenty years allowed by law, all Forest Service lands within existing units of the National Wild and Scenic Rivers System.

Priority: Low

Actor: Secretary of the Interior (at the request of the Secretary of Agriculture or Chief of the Forest Service)

Acres Affected: 1.3 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: No change from GAP 2

Discussion: All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. If a stream is worth designating as a wild and scenic river, it is worth withdrawing from mining. A few scenic or recreational segments are administratively withdrawn from mining, but most are not. All should be.

Legislation is pending in Congress that would withdraw all scenic- and recreational-classified segments of all wild and scenic rivers in Oregon.

Affected National Conservation System: National Wild and Scenic Rivers System and National Forest System

Authority: Federal Land Policy and Management Act Section 204 (43 USC 1714)

Affected States: CA, CO, GA, ID, KY, LA, MI, MO, MS, MT, NC, NH, NM, OR, PA, PR, SC, WA, WI, WY

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with GAP 2 status already qualify to be counted toward 30x30. Acreage estimated from official numbers kept by rivers.gov.

More Information:

• USDA Forest Service. "Forest Service National Wild and Scenic Rivers by State" (pdf). *Land Area Report*.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Chapter 4

Recipes for Congressional Action Toward 30x30

Table 4-1. ***Recipes for Congressional Action***

Agency	*Conservation Action**	*Acres (in millions)*	*Additional % of US Conserved*	*Priority*	*Recipe No.*
	Wilderness				
BLM	Elevate BLM wilderness study areas to wilderness	11.4	na	Low	23
BLM	Designate BLM-identified lands with wilderness characteristics as wilderness	17.3	2.4%	High	24
FWS	Establish wilderness areas within national wildlife refuges in Alaska	52.6	na	Low	25
FWS	Establish wilderness areas within units of the National Wildlife Refuge System outside Alaska	2	na	Low	26
NPS	Establish wilderness areas within the National Park System	70	na	Low	27
USFS	Designate Forest Service inventoried roadless areas as wilderness	58.5	8.0%	High	28
USFS	Establish all other large Forest Service roadless areas as wilderness	39.6	5.4%	High	29
USFS	Establish all small Forest Service roadless areas as wilderness	43.9	6%	High	30
	Wild and Scenic Rivers				
BLM	Triple the mileage of BLM wild and scenic rivers, including full mineral withdrawal	1.7	0.2	High	31
FWS	Triple the mileage of FWS wild and scenic rivers, including full mineral withdrawal	0.7	0.1%	High	32
NPS	Triple the mileage of NPS wild and scenic rivers	1.1	0.2%	High	33
USFS	Triple the mileage of USFS wild and scenic rivers, including full mineral withdrawal	3.3	0.5%	High	34
BLM & USFS	Do mineral withdrawals for existing wild and scenic rivers open to mining	1.3	na	Low	35
	Congressional Special Conservation Areas				
BLM	Expand existing and establish new BLM national conservation areas, national monuments, and similar designations	24	3.3%	High	36
BLM	Include BLM areas of critical environmental concern in the National Landscape Conservation System	21	2.9%	High	37
FWS	Triple the acreage of national wildlife refuges	293.2	40.1%	High	38
NPS	Triple the acreage of the parks, preserves, and monuments in the National Park System	169.5	23.2 %	High	39
USFS	Triple the acreage of congressional special protection areas in the National Forest System	17.6	2.4%	High	40
USFS	Codify the Roadless Area Conservation Rule into statute	58.5	8.0%	Med.	41
USFS	Include other large roadless areas in a codified Roadless Area Conservation Rule	39.6	5.4%	Med.	42
USFS	Include small roadless areas in a codified Roadless Area Conservation Rule	43.9	6%	Med.	43
**	Establish a National Wildlife Corridor System	66	9.1%	High	44

* There can be significant overlap in protected areas between administrative conservation actions and congressional conservation actions.

** BLM, FWS, NPS, USDA, DoD, DOE, ACE, BoR, or a state lands, natural resource, wildlife, and/or parks agency, as appropriate.

Twenty-two recipes are offered for congressional action (Table 4-1). The recipes are not mutually exclusive, especially within an administering agency, but can be overlapping or alternative conservation actions on the same lands. However, they should not be double-counted for the purpose of attaining 30x30. A commonality among these congressional actions is that each explicitly or implicitly calls for the preservation of biological diversity and also promulgates a comprehensive mineral withdrawal.

Recipe 23: Elevate BLM Wilderness Study Areas to Wilderness

Elevate all BLM wilderness study areas to full wilderness status.

Priority: Low

Actor: Congress

Acres Affected: 11.4 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: From GAP 2 to GAP 1

Discussion: There are 491 BLM WSAs in twelve states. The BLM has found all to qualify for inclusion in the National Wilderness Preservation System. These areas have been identified and protected under Section 603 of the Federal Land Policy and Management Act (43 USC 1782).

Affected National Conservation System: National Landscape Conservation System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with either GAP 1 or GAP 2 status qualify to be counted toward 30x30.

More Information:
- Bureau of Land Management. Wilderness and Wilderness Study Areas.
- Bureau of Land Management. National Landscape Conservation System: Wilderness Study Areas (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 24: Designate BLM-Identified Lands with Wilderness Characteristics as Wilderness

Establish as wilderness, all lands that the BLM has identified as lands with wilderness characteristics (LWCs).

Priority: High

Actor: Congress

Acres Affected: 17.3 million

Percentage Increase in Protected Land Acreage: 2.4%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 1

Discussion: With the enactment of the Federal Land Policy and Management Act (FLPMA) of 1976, in Section 603 Congress directed the BLM (and the President) to (1) inventory its lands and establish wilderness study areas; (2) report to Congress on their suitability or nonsuitability for wilderness designation by 1991; and (3) to administer the areas in "a manner so as not to impair the suitability of such areas for preservation as wilderness." These areas, known as Section 603 WSAs, remain Section 603 WSAs "until Congress determines otherwise." In 2009, Congress established the National Landscape Conservation System, which includes, among other areas, BLM wilderness study areas.

The BLM did a poor job of its wilderness review required by FLPMA Section 603. Section 201 of FLPMA requires the BLM to keep an ongoing inventory of resources, including the wilderness resource. Section 202 of FLPMA requires land use plans to allocate areas to different uses. Over the decades and sporadically, the BLM has established some additional WSAs under the authority of Sections 201 and 202. The quality of re-inventories has been mixed. Recently, the BLM has been inventorying lands with wilderness characteristics (LWCs), again with mixed results. While LWCs must be inventoried, the BLM is currently under no obligation to protect such areas.

Affected National Conservation System: National Landscape Conservation System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: The BLM has not completed its inventory of LWCs. The inventories are done as part of revising resource management plans (RMPs), of which there are generally several for each state. In addition, some BLM jurisdictions, because of vigorous citizen advocacy, are doing more complete LWC inventories than other jurisdictions. There are a guestimated minimum of 17.3 million acres of BLM LWCs in the eleven western states (based on Oregon Natural Desert Association data for Oregon extrapolated to the other ten western states based on a ratio compared to BLM Section 603 WSAs in those states). The total is likely significantly higher.

More Information:

• Blumm, Michael C., and Andrew B. Erickson. 2014. "Federal Wild Lands Policy in the Twenty-First Century: What a Long, Strange Trip It's Been" (pdf). *Colorado Natural Resources, Energy, and Environmental Law Review* 25(1).
• Bureau of Land Management. 2021. Lands with Wilderness Characteristics.
• Bureau of Land Management Manual 6310: Conducting Wilderness Characteristics Inventory of BLM Lands (pdf).

• Bureau of Land Management Manual 6320: Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 25: Establish Wilderness Areas Within National Wildlife Refuges in Alaska

Establish wilderness areas within national wildlife refuges in Alaska.

Priority: Low

Actor: Congress

Acres Affected: 52.6 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: From GAP 2 to GAP 1

Discussion: The GAO report Alaska Wildlife Refuges: Restrictive Criteria Used to Recommend Additional Wilderness says:

> *Although the planning teams found that 52.6 million acres were qualified for wilderness designation, FWS ultimately recommended that only 3.4 million acres be preserved as additional wilderness. The primary reason for this large difference in acreage levels was the strict application of management criteria developed and promulgated by the FWS Director in 1985. These criteria established how FWS determined which of the lands found qualified for wilderness would be recommended for preservation as wilderness.*

Affected National Conservation System: National Wildlife Refuge System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected State: AK

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with either GAP 1 or GAP 2 status qualify to be counted toward 30x30.

More Information:

• GAO. 1989. Alaska Wildlife Refuges: Restrictive Criteria Used to Recommend Additional Wilderness (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 26: Establish Wilderness Areas Within Units of the National Wildlife Refuge System Outside Alaska

Establish wilderness areas within twenty-one units of the National Wildlife Refuge System outside Alaska.

Priority: Low

Actor: Congress

Acres Affected: 2 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: From GAP 2 to GAP 1

Discussion: The agency-recommended wilderness areas are in these national wildlife refuges: Anaho Island, Back Bay, Bombay Hood, Charles M. Russell, Chincoteague, Crescent Lake, Desert, Hart Mountain, Hawaiian Islands, Malheur, Mattamuskeet, Mille Lacs, Missisquoi, Parker River, Pea Island, Rice Lake, Sam D. Hamilton Noxubee, Santee, Sheldon, Valentine, and White River.

Affected National Conservation System: National Wildlife Refuge System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AR, DE, HI, MD, MA, MN, MS, MT, NC, NE, NV, OR, SC, VA, VT

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with either GAP 1 or GAP 2 status qualify to be counted toward 30x30.

More Information:

• Fish and Wildlife Service. July 21, 2020. FWS Proposed Wilderness Descriptions (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 27: Establish Wilderness Areas Within the National Park System

Establish wilderness areas on all qualifying lands within the National Park System.

Priority: Low

Actor: Congress

Acres Affected: 70 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: From GAP 2 to GAP 1

Discussion: Congress has previously protected 443 million acres of NPS lands in sixty-one wilderness areas.

Affected National Conservation System: National Park System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: unknown

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with either GAP 1 or GAP 2 status qualify to be counted toward 30x30. The acreage estimate is from the magazine article "How Secure Is Wilderness in the National Park System?" so is rough.

More Information:

• Repanshek, Kurt. July 5, 2019. "How Secure Is Wilderness in the National Park System?" *National Parks Traveler*.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 28: Designate Forest Service Inventoried Roadless Areas as Wilderness

Establish as wilderness all areas currently protected under the Forest Service Roadless Area Conservation Rule.

Priority: High

Actor: Congress

Acres Affected: 58.5 million

Percentage Increase in Protected Land Acreage: 8.0%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 1

Discussion: All Forest Service inventoried roadless areas (IRAs) qualify for inclusion in the National Wilderness Preservation System. See Recipe 11 for more on the roadless rule.

Affected National Conservation System: National Forest System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: The official Forest Service Roadless Area Conservation Rule was published in the *Federal Register* on Friday, January 12, 2001 (Vol. 66, No. 99, pages 3244–3273). Due to a history of (then) litigation and (now) incompetence, the rule—though having the same force of law as other regulations—has never been codified into the *Code of Federal Regulations.* The version in the *Federal Register* is referenced as 36 CFR 294.10 through 294.14. The current CFR has provisions pertaining to state petitions for roadless area management, and special rules for Idaho and Colorado roadless areas, but not the core roadless rule. It's more confusing because 294.10 through 294.14 refer to the state petitions provisions. Suffice it to say the Forest Service inventoried roadless area protection rule is fully in effect and can be amended.

More Information:

• US Forest Service. Welcome to the Roadless Area Conservation.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 29: Establish All Other Large Forest Service Roadless Areas as Wilderness

Establish as wilderness all large (>5,000 acres in size) roadless areas in the National Forest System that are not protected under the Forest Service Roadless Area Conservation Rule.

Priority: High

Actor: Congress

Acres Affected: 39.6 million

Percentage Increase in Protected Land Acreage: 5.4%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 1

Discussion: The areas protected under the 2001 Forest Service roadless rule are those inventoried in the Forest Service Roadless Area Conservation Final Environmental Impact Statement (Vol. 2). These maps were generally based on the Forest Service's second Roadless Area Review and Evaluation (RARE II), completed in 1980. Despite persistent efforts by citizens to get the Forest Service to identify roadless areas larger than 5,000 acres that were not in the agency inventory, the agency refused to do so. The agency has a pattern and practice of not completing and maintaining an accurate roadless area inventory. One of the reasons for RARE II was that RARE I so badly failed to identify roadless areas. The Forest Service resisted correcting its inventory as it prepared land and resource management plans in the 1990s. These omissions were baked into the roadless rule.

In fact, millions of acres of roadless national forest lands still have not, to this day, been inventoried by the agency. Agency bureaucrats have resisted because inventorying the lands is recognition of importance that tends to lead to protection. Inherently, bureaucrats disfavor designations and classifications of land that limit their discretion.

Affected National Conservation System: National Forest System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: No official agency inventory of roadless areas exists. Oregon Wild has done an intensive inventory of roadless areas in federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of other large roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon.

More Information:
• Oregon Wild. Oregon's Roadless Wildlands.
• Oregon Wild. Oregon Roadless Forests (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 30: Establish All Small Forest Service Roadless Ares as Wilderness

Establish as wilderness all small (1,000 to 4,999 acres in size) roadless areas in the National Forest System that are not protected under the Forest Service Roadless Area Conservation Rule.

Priority: High

Actor: Congress

Acres Affected: 43.9 million

Percentage Increase in Protected Land Acreage: 6%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 1

Discussion: Small roadless areas are ecologically and hydrologically vital. In 1997, 136 scientists signed a letter to President Clinton that made this clear:

> *There is a **growing consensus among academic and agency scientists that existing roadless areas—irrespective of size—contribute substantially to maintaining biodiversity and ecological integrity on the national forests**. The Eastside Forests Scientific Societies Panel, including representatives from the American Fisheries Society, American Ornithologists' Union, Ecological Society of America, Society for Conservation Biology, and The Wildlife Society, recommended a prohibition on the construction of new roads and logging within existing (1) roadless regions larger than 1,000 acres, and (2) roadless regions smaller than 1,000 acres that are biologically significant. . . . Other scientists have also recommended protection of all roadless areas greater than 1,000 acres, at least until landscapes degraded by past management have recovered. . . . As you have acknowledged, a national policy prohibiting road building and other forms of development in roadless areas represents a major step towards balancing sustainable forest management with conserving environmental values on federal lands. **In our view, a scientifically based policy for roadless areas on public lands should, at a minimum, protect from development all roadless areas larger than 1,000 acres and those smaller areas that have special ecological significance because of their contributions to regional landscapes***.[54] [emphasis added]

Affected National Conservation System: National Forest System, National Wilderness Preservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: It is worth noting that as of 2011 one out of every fifteen wilderness areas designated by Congress was a freestanding wilderness of fewer than 5,000 acres (Kerr 2011). No official agency inventory exists. Oregon Wild has done an intensive inventory for federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of small roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon.

[54] Letter to President Clinton signed by 136 scientists (Nov. 14, 1997).

More Information:

• Kerr, Andy. "Small" Wilderness: No Big Deal (pdf). Larch Occasional Paper #8.
• Oregon Wild. Oregon's Roadless Wildlands.
• Oregon Wild. Oregon Roadless Forests (pdf).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 31: Triple the Mileage of BLM Wild and Scenic Rivers, Including Full Mineral Withdrawal

Triple the mileage of existing and establish new wild and scenic rivers administered by the BLM, and ensure full mineral withdrawal for these rivers.

Priority: High

Actor: Congress

Acres Affected: 1.7 million

Percentage Increase in Protected Land Acreage: 0.2%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that when new components are established or existing components are expanded, only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. Those segments classified as "scenic" or "recreational" are open to hardrock and possibly other kinds mining (fossil fuels, geothermal, and such). Some recent enactments and pending legislation (for example, the proposed River Democracy Act of 2021, S.192.IS, 117th) override this default setting and withdraw all federal lands from the threat of mining. For lands to fully merit GAP 2 status, mineral withdrawals are necessary.

Affected National Conservation System: National Landscape Conservation System, National Wild and Scenic Rivers System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: The "Acres Affected" number assumes the default protected area of ~0.25-mile buffers on each side of a stream (320 acres/mile). Many WSRs in Alaska and some in Oregon have 0.5-mile buffers on each side (640 acres/mile). The proposed River Democracy Act of 2021 (S.192.IS, 117th) would amend the Wild and Scenic Rivers Act so that all future WSRs in Oregon have the wider protective corridor.

More Information:
• Bureau of Land Management. Wild and Scenic Rivers.
• Interagency Coordinating Council. National Wild and Scenic Rivers System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 32: Triple the Mileage of FWS Wild and Scenic Rivers, Including Full Mineral Withdrawal

Triple the mileage of existing and establish new wild and scenic rivers administered by the Fish and Wildlife Service, and ensure full mineral withdrawal for these rivers.

Priority: High (but only for lands outside of the current National Wildlife Refuge System)

Actor: Congress

Acres Affected: 0.7 million

Percentage Increase in Protected Land Acreage: 0.1%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2 *if* outside of the current National Wildlife Refuge System

Discussion: All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that when new components are established or existing components are expanded, only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. Those segments classified as "scenic" or "recreational" are open to hardrock and possibly other kinds mining (fossil fuels, geothermal, and such). Some recent enactments and pending legislation (for example, the proposed River Democracy Act of 2021, S.192.IS, 117th) override this default setting and withdraw all federal lands from the threat of mining. For lands to fully merit GAP 2 status, mineral withdrawals are necessary.

As national wildlife refuges already have GAP 2 status, the establishment of wild and scenic rivers within them would not elevate the conservation status of the affected lands.

Affected National Conservation System: National Wildlife Refuge System, National Wild and Scenic Rivers System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: All fifty, potentially

Notes: The "Acres Affected" number assumes the default protected area of ~0.25-mile buffers on each side of a stream (320 acres/mile). Many WSRs in Alaska and some in Oregon have 0.5-mile buffers on each side (640 acres/mile). The proposed River Democracy Act of 2021 (S.192.IS, 117th) would amend the Wild and Scenic Rivers Act so that all future WSRs in Oregon have the wider protective corridor.

More Information:

• Interagency Coordinating Council. National Wild and Scenic Rivers System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 33: Triple the Mileage of NPS Wild and Scenic Rivers

Triple the mileage of existing and establish new wild and scenic rivers administered by the National Park Service.

Priority: High (but *only* if new wild and scenic rivers are outside of the current National Park System)

Actor: Congress

Acres Affected: 1.1 million

Percentage Increase in Protected Land Acreage: 0.2%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2 *if* outside of the current National Park System

Discussion: As all wild and scenic rivers administered by the National Park Service are within or are units of the National Park System, they are withdrawn from mining.

Affected National Conservation System: National Park System, National Wild and Scenic Rivers System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: All fifty, potentially

Notes: The "Acres Affected" number assumes the default protected area of ~0.25-mile buffers on each side of a stream (320 acres/mile). Many WSRs in Alaska and some in Oregon have 0.5-mile buffers on each side (640 acres/mile). The proposed River Democracy Act of 2021 (S.192.IS, 117th) would amend the Wild and Scenic Rivers Act so that all future WSRs in Oregon have the wider protective corridor.

More Information:

• Interagency Coordinating Council. National Wild and Scenic Rivers System.
• National Park Service. Overview of Wild and Scenic Rivers.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 34: Triple the Mileage of USFS Wild and Scenic Rivers, Including Full Mineral Withdrawal

Triple the mileage of existing and establish new wild and scenic rivers administered by the Forest Service, and ensure full mineral withdrawal for these rivers.

Priority: High

Actor: Congress

Acres Affected: 3.3 million

Percentage Increase in Protected Land Acreage: 0.5%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that when new components are established or existing components are expanded, only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. Those segments classified as "scenic" or "recreational" are open to hardrock and possibly other kinds mining (fossil fuels, geothermal, and such). Some recent enactments and pending legislation (for example, the proposed River Democracy Act of 2021, S.192.IS, 117th) override this default setting and withdraw all federal lands from the threat of mining. For lands to fully merit GAP 2 status, mineral withdrawals are necessary.

Affected National Conservation System: National Forest System, National Wild and Scenic Rivers System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: The "Acres Affected" number assumes the default protected area of ~0.25-mile buffers on each side of a stream (320 acres/mile). Many WSRs in Alaska and some in Oregon have 0.5-mile buffers on each side (640 acres/mile). The proposed River Democracy Act of 2021 (S.192.IS, 117th) would amend the Wild and Scenic Rivers Act so that all future WSRs in Oregon have the wider protective corridor.

More Information:
• Interagency Coordinating Council. National Wild and Scenic Rivers System.
• Forest Service. Wild and Scenic Rivers.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 35: Do Mineral Withdrawals for Existing Wild and Scenic Rivers Open to Mining

Withdraw from mining all Forest Service- and BLM-administered segments of wild and scenic rivers classified as "scenic" or "recreational."

Priority: Low

Actor: Congress

Acres Affected: 1.3 million

Percentage Increase in Protected Land Acreage: 0%

Change in GAP Status of Lands: No change from GAP 2

Discussion: 3,194 miles of USFS and 932 miles of BLM wild and scenic rivers are open to mining on federal lands because they are classified as either "scenic" or "recreational."

All federal wild and scenic rivers currently have GAP 2 status, whether or not the federal lands within that component of the National Wild and Scenic Rivers System are withdrawn from mining. Rivers in the National Wild and Scenic Rivers System are classified as either "wild," "scenic," or "recreational." The default setting in the Wild and Scenic Rivers Act of 1968 (16 USC Chapter 28) is that when new components are established or existing components are expanded, only federal lands in "wild"-classified segments are withdrawn from mineral exploitation. Those segments classified as "scenic" or "recreational" are open to hardrock and possibly other kinds mining (fossil fuels, geothermal, and such). Some recent enactments and pending legislation (for example, the proposed River Democracy Act of 2021, S.192.IS, 117th) override this default setting and withdraw all federal lands from the threat of mining. For lands to fully merit GAP 2 status, mineral withdrawals are necessary.

Affected National Conservation System: National Landscape Conservation System, National Wild and Scenic Rivers System, National Forest System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, CO, CT, DE, FL, GA, KY, LA, MA, ME, MI, MN, MO, MS, MT, NC, NE, NH, NJ, NM, NY, OH, PA, PR, RI, SC, SD, TN, TX, UT, VT, WA, WI, WV, WY

Notes: The priority is low because while achieving a higher level of conservation, the recipe would not contribute to the attainment of 30x30 since lands with GAP 2 status already qualify to be counted toward 30x30.

More Information:

• Interagency Coordinating Council. National Wild and Scenic Rivers System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 36: Expand Existing and Establish New BLM National Conservation Areas, National Monuments, and Similar Designations

Triple the area of BLM national conservation areas, national monuments and other congressionally protected areas.

Priority: High

Actor: Congress

Acres Affected: 24 million

Percentage Increase in Protected Land Acreage: 3.3%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: Congress has established sixteen national conservation areas (NCAs), four national monuments (twenty-four others have been presidentially proclaimed), three outstanding natural areas, one national scenic area, one forest reserve, and one cooperative management and protection area.

Affected National Conservation System: National Landscape Conservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: The proposed Oregon Wildlands Act (S.86; 116th) would establish the first two BLM "recreation areas." Earlier versions of the bill called for "national recreation area" status, but the then-Republican-controlled committee markup removed "national" from the title. It is expected that the legislation will be reintroduced, and it is hoped that the word "national" can be restored. The mandate for conservation of nature in the legislation is strong enough to qualify these "recreation areas" for GAP 2 status.

More Information:

• Bureau of Land Management. National Landscape Conservation System: National Monuments (pdf).
• Bureau of Land Management. National Landscape Conservation System: National Conservation Areas and Similar Designations (pdf).
• Kerr, Andy. 2015. National *What-Have-You* Areas: Congressional Conservation of Our Public Lands (pdf). Larch Occasional Paper #21.
• Kerr, Andy. 2015. 21st-Century National Recreation Areas for Oregon's National Forests and BLM Public Lands (pdf). Larch Occasional Paper #20.4.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 37: Include BLM Areas of Critical Environmental Concern in the National Landscape Conservation System

Include BLM areas of critical environmental concern (ACECs) in the National Landscape Conservation System.

Priority: High

Actor: Congress

Acres Affected: 21 million

Percentage Increase in Protected Land Acreage: 2.9%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: Congress established ACECs in the Federal Land Policy and Management Act (16 USC Chapter 35). FLPMA defines ACECs as

> *areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.* (43 USC 1702(a))

As a practical matter BLM has not established ACECs to "protect life and safety from natural hazards" nor with a focus on "development." Rather, almost all ACECs have been established to give "special management attention . . . to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes."

More than 1,200 ACECs have been administratively designated in agency resource management plans (RMPs) prepared pursuant to FLPMA's planning provision (43 USC 1712). Almost none of them has also been withdrawn from mineral development, though the RMPs call for such. The problem is that mineral withdrawals can only be done by the Secretary of the Interior. RMPs are the products of BLM field offices, while a mineral withdrawal comes only from the highest office in the Interior Department. In addition, the maximum period for an administrative withdrawal is twenty years. If these "historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes" are important today, they likely will be even more important in two decades.

Congress should:

1. Withdraw all ACECs from the application of the federal mining laws.
2. Place all ACECs in the National Landscape Conservation System.
3. Continue to allow ACECs to be established in BLM RMPs.

Affected National Conservation System: National Landscape Conservation System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Notes: BLM ACECs include not only areas designated as ACECs but also designated research natural areas (RNAs), national natural landmarks (NNLs), and outstanding natural areas (ONAs).

More Information:

• Bureau of Land Management. Areas of Critical Environmental Concern. You can download a current list of ACECs.

• Sheldon, Karin P., and Pamela Baldwin. 2017. "Areas of Critical Environmental Concern: FLPMA's Unfulfilled Conservation Mandate" (pdf). *Colorado Natural Resources, Energy, and Environmental Law Review* 28(1).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 38: Triple the Acreage of National Wildlife Refuges

Establish new and expand existing wildlife refuges to, among other things, ensure that 30 percent of each of the nation's 108 Level III ecoregions is permanently protected.

Priority: High

Actor: Congress

Acres Affected: 293.1 million

Percentage Increase in Protected Land Acreage: 40%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: It should be a goal to permanently protect at least 30 percent of the acreage in each of the nation's 108 Level III ecoregions. While it will be impossible to meet in some ecoregions (not enough natural land cover remains), it can be met in most of them and has been met in some of them. In 55 ecoregions, even if all lands with GAP 3 status were given additional protection to elevate them to GAP 1 or GAP 2 status, there would be a shortfall of a total of 264.3 million acres. The most appropriate designation for permanent protection is national wildlife refuge. Further analysis is needed to determine priorities for lands' inclusion in new and expanded NWRs, but an obvious priority is to include nonfederal lands that are within designated critical habitat for Endangered Species Act–protected species (7.4 million acres). This would facilitate fee simple acquisition or long-term leases from willing sellers. In addition, most of the ~71.3 million acres of BLM lands in Alaska qualify for inclusion in the National Wildlife Refuge System. Under the Alaska National Interest Lands Act of 1980, only Congress can establish additional national wildlife refuges in Alaska.

Affected National Conservation System: National Wildlife Refuge System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: All fifty, plus US territories

Notes: The numbers are based on a GIS analysis of protected areas with GAP 1 and GAP 2 status by EPA Level III ecoregion (available upon request).

More Information:

• US Fish and Wildlife Service. National Wildlife Refuge System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 39: Triple the Acreage of the Parks, Preserves, and Monuments in the National Park System

Triple the acreage in the National Park System through the expansion of existing and the establishment of new national parks, national monuments, and national preserves.

Priority: High

Actor: Congress

Acres Affected: 169.5 million

Percentage Increase in Protected Land Acreage: 23.2%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: Congress has assigned at last least thirty distinct designations to National Park System units that variously emphasize nature, culture, history, and recreation. Only those with a strong emphasis on nature conservation qualify for GAP 1 or GAP 2 status. These are overwhelmingly—in terms of both numbers and acreage—national parks, national monuments, and national preserves. As long as they have a strong biodiversity conservation mandate, also qualifying are forest parks, mountain parks, national recreation areas, national rivers (and similar variants), national scientific reserves, national reserves, and national seashores, among other designations.

Affected National Conservation System: National Park System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: Potentially all fifty, plus US territories

Notes: The designation of wild and scenic rivers administered by the National Park Service can contribute to 30x30, but only if the segment so designated is a new addition to the National Park System. Establishing wild and scenic rivers (which have GAP 2 status) in existing national parks, monuments, or preserves (which also have GAP 2 status) doesn't increase the acreage of permanently protected lands.

More Information:

• National Park Service. National Park System.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 40: Triple the Acreage of Congressional Special Protection Areas in the National Forest System

Expand existing and establish new national recreation areas, national scenic areas, and other national what-have-you areas within the National Forest System.

Priority: High

Actor: Congress

Acres Affected: 17.6 million

Percentage Increase in Protected Land Acreage: 2.4%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2 or GAP 1

Discussion: When established by Congress, wilderness areas become part of the National Wilderness Preservation System, and wild and scenic rivers become part of the National Wild and Scenic Rivers System. The protection and management frameworks are set forth in the Wilderness Act (16 USC Chapter 23) and the Wild and Scenic Rivers Act (16 USC Chapter 28) respectively. Congress has often designated other special protection areas in the National Forest System (see note below). Some are modeled on previous designations with the same name, while others are one-offs (so far). Whatever the name, the area must have a strong mandate to protect biological diversity, as well as a comprehensive mineral withdrawal, to qualify for GAP 2 status.

Affected National Conservation System: National Forest System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: According to the Forest Service, as of 2020 Congress had designated within the National Forest System a national historic area, a national scenic research area, a scenic recreation area, a scenic wildlife area, two national botanical areas, two national volcanic monuments, two recreation management areas, six national protection areas, eight national scenic areas, two national monuments, fourteen special management areas, and twenty-four national recreation areas.

More Information:

• Forest Service. 2020. Land Areas Report (pdf).
• Kerr, Andy. 2015. National *What-Have-You* Areas: Congressional Conservation of Our Public Lands (pdf) Larch Occasional Paper #21.
• Kerr, Andy. 2015. 21st-Century National Recreation Areas for Oregon's National Forests and BLM Public Lands (pdf) Larch Occasional Paper #20.4.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 41: Codify the Roadless Area Conservation Rule into Statute

Permanently protect the national forest roadless areas somewhat protected by the 2001 Roadless Area Conservation Rule.

Conservation Action Options: 41a (codification), 41b (mineral withdrawal), 41c (closing roading and logging loophole)

Priority: Medium

Actor: Congress

Acres Affected: 58.5 million

Percentage Increase in Protected Land Acreage: 8.0%

Change in GAP Status of Lands: From GAP 3 to GAP 2

Discussion: The Roadless Area Conservation Rule of 2001 somewhat protects many, but not all, national forest roadless areas from roading and logging. They are not protected from mining, off-road vehicle abuse, or other threats. The rule includes limited exceptions to a general ban on roading and logging, which the Forest Service has abused in several cases. In addition, the original rule has been weakened for roadless areas in Idaho and Colorado.

A proposed Roadless Area Conservation Act, first introduced in 2002, is pending in Congress. The House bill (H.R.279) is sponsored by Representative Ruben Gallego (D-AZ-7th). Senator Maria Cantwell (D-WA) has recently announced her intention to reintroduce an identical counterpart in the Senate, but it has yet to be filed in 2021. A total of nine fixes to the legislation are recommended, including prohibiting mining, closing the roading and logging loophole, restoring the lost areas in Idaho and Colorado, facilitating the voluntary relinquishment of grazing permits in roadless areas, and prohibiting off-road vehicle use in roadless areas. (See "The Proposed Roadless Area Conservation Act: Work Still Needed.")

Affected National Conservation System: National Forest System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: See Recipe 11. The official Forest Service Roadless Area Conservation Rule was published in the *Federal Register* on Friday, January 12, 2001 (Vol. 66, No. 99, pages 3244–3273). Due to a history of (then) litigation and (now) incompetence, the rule—though having the same force of law as other regulations—has never been codified into the *Code of Federal Regulations*. The version in the *Federal Register* is referenced as 36 CFR 294.10 through 294.14. The current CFR has provisions pertaining to state petitions for roadless area management, and special rules for Idaho and Colorado roadless areas, but not the core roadless rule. It's more confusing because 294.10 through 294.14 refer to the state petitions provisions. Suffice it to say the Forest Service inventoried roadless area protection rule is fully in effect and can be amended.

More Information:

• Kerr, Andy. March 5, 2021. "The Proposed Roadless Area Conservation Act: Work Still Needed." *Public Lands Blog*.
• US Forest Service. Welcome to the Roadless Area Conservation.
• US Forest Service. 2001 Roadless Rule.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 42: Include Other Large Roadless Areas in a Codified Roadless Area Conservation Rule

Extend congressional codification of the Roadless Area Conservation Rule to also include large (>5,000 acres) roadless areas excluded from the administrative rule.

Priority: High

Actor: Congress

Acres Affected: 39.6 million

Percentage Increase in Protected Land Acreage: 5.4%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: The areas protected under the 2001 Forest Service roadless rule are those inventoried in the Forest Service Roadless Area Conservation Final Environmental Impact Statement (Vol. 2). These maps were generally based on the Forest Service's second Roadless Area Review and Evaluation (RARE II), completed in 1980. Despite persistent efforts by citizens to get the Forest Service to identify roadless areas larger than 5,000 acres that were not in the agency inventory, the agency refused to do so. The agency has a pattern and practice of not completing and maintaining an accurate roadless area inventory. One of the reasons for RARE II was that RARE I so badly failed to identify roadless areas. The Forest Service resisted correcting its inventory as it prepared land and resource management plans in the 1990s. These omissions were baked into the roadless rule.

In fact, millions of acres of roadless national forest lands still have not, to this day, been inventoried by the agency. Agency bureaucrats have resisted because inventorying the lands is recognition of importance that tends to lead to protection. Inherently, bureaucrats disfavor designations and classifications of land that limit their discretion.

Affected National Conservation System: National Forest System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: No official agency inventory of roadless areas exists. Oregon Wild has done an intensive inventory of roadless areas in federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of other large roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon. See Recipe 12.

More Information:

• Kerr, Andy. March 5, 2021. "The Proposed Roadless Area Conservation Act: Work Still Needed." *Public Lands Blog*.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 43: Include Small Roadless Areas in a Codified Roadless Area Conservation Rule

Extend congressional codification of the Roadless Area Conservation Rule to also include small (1,000 to 4,999 acres) roadless areas excluded from the administrative rule.

Priority: Medium

Actor: Congress

Acres Affected: 43.9 million

Percentage Increase in Protected Land Acreage: 6%

Change in GAP Status of Lands: From GAP 4 or GAP 3 to GAP 2

Discussion: Small roadless areas are ecologically and hydrologically vital. In 1997, 136 scientists signed a letter to President Clinton that made this clear:

> *There is a **growing consensus among academic and agency scientists that existing roadless areas—irrespective of size—contribute substantially to maintaining biodiversity and ecological integrity on the national forests**. The Eastside Forests Scientific Societies Panel, including representatives from the American Fisheries Society, American Ornithologists' Union, Ecological Society of America, Society for Conservation Biology, and The Wildlife Society, recommended a prohibition on the construction of new roads and logging within existing (1) roadless regions larger than 1,000 acres, and (2) roadless regions smaller than 1,000 acres that are biologically significant. . . . Other scientists have also recommended protection of all roadless areas greater than 1,000 acres, at least until landscapes degraded by past management have recovered. . . . As you have acknowledged, a national policy prohibiting road building and other forms of development in roadless areas represents a major step towards balancing sustainable forest management with conserving environmental values on federal lands. **In our view, a scientifically based policy for roadless areas on public lands should, at a minimum, protect from development all roadless areas larger than 1,000 acres and those smaller areas that have special ecological significance because of their contributions to regional landscapes**.*[55] [emphasis added]

Affected National Conservation System: National Forest System

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: AK, AL, AR, AZ, CA, FL, GA, ID, IL, IN, KY, LA, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, OK, OR, PA, PR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

Notes: It is worth noting that as of 2011 one out of every fifteen wilderness areas designated by Congress was a freestanding wilderness of fewer than 5,000 acres (Kerr 2011). No official agency inventory exists. Oregon Wild has done an intensive inventory for federal forestlands in Oregon. An extrapolation was done for other states based on the ratio of small roadless areas to the official Forest Service Inventoried Roadless Area database in Oregon.

[55] Letter to President Clinton signed by 136 scientists (Nov. 14, 1997).

More Information:

• Kerr, Andy. "Small" Wilderness: No Big Deal" (pdf). Larch Occasional Paper #8.

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

Recipe 44: Establish a National Wildlife Corridor System

Establish a National Wildlife Corridor System for wildlife just as there is a National Highway System for humans.

Priority: High

Actor: Congress

Acres Affected: 66 million

Percentage Increase in Protected Land Acreage: 9.1%

Change in GAP Status of Lands: From non-GAP lands, GAP 4, and GAP 3 to GAP 2

Discussion: Just like people need an enduring system of road corridors to get around, so do wildlife need an enduring system of corridors to migrate between key habitats.

The Dwight D. Eisenhower National System of Interstate and Defense Highways includes 48,876 miles of freeways. The US Numbered Highway System contains 157,724 miles of roads. The National Highway System includes 160,955 miles of roads and is "a network of strategic highways within the United States, including the Interstate Highway System and other roads serving major airports, ports, rail or truck terminals, railway stations, pipeline terminals and other strategic transport facilities." There is significant overlap in the three national systems of roads.

A full system of wildlife corridors that adequately facilitates the movement of wildlife would be comparable to our full system of highways that facilitates the movement of people. In areas of the nation with more human roads, more wildlife corridors are needed. The length of a corridor is defined by the two (or more) areas of core wildlife habitat the corridor connects. The width of a corridor is related not only to length but also to the needs of particular species of plants and animals.

Beier (2018) suggests, as a rule of thumb, that a corridor "should be at least 2 km [1.2 mi.] wide, except at unavoidable bottlenecks such as highway crossing structures," and goes on to say:

> *The question should not be posed as how narrow a corridor the focal species might use. This is* ***analogous to asking an engineer, what are the fewest number of rivets that might keep this wing on the airplane?*** *Planners should reframe the question as, what is the narrowest corridor width that is not likely to be regretted after the adjacent area is converted to human uses? [emphasis added]*

Others (Ford et al. 2020) recommend 3,500 to 7,000 meter [2.1 to 4.2 miles] corridors to facilitate unimpeded movement of large carnivores (bears, grizzly bears, gray wolves, and cougars). Interestingly, the largest North American carnivore, the grizzly bear, doesn't need the largest corridor; perhaps because of its size, it is used to other species (including humans) avoiding it.

For purposes here, a biopolitically optimum width for a national wildlife corridor is comparable to the corridor for a national wild and scenic river—no more than 320 acres/mile, or an *average* corridor width of 0.5 mile. In some places to accommodate some species, corridors could be more or less than 0.5 miles wide.

A new National Wildlife Corridor System should include mineral withdrawals for all federal lands included in the system. It is anticipated that NWCs would be administered, as appropriate, by the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service, the Forest Service, other federal agencies (for example, the Army Corps of Engineers, the

Department of Energy, the Department of Defense), state agencies, and tribal governments, with the US Fish and Wildlife Service having an overall administerial role.

Affected National Conservation System: National Wildlife Corridor System (new)

Authority: US Constitution Property Clause (Article IV, Section 3, Clause 2)

Affected States: All fifty, plus US territories

Notes: Legislation has previously been introduced in Congress that addresses wildlife corridors: the Wildlife Corridors Conservation Act (S.1499 and H.R.2795, 116th Congress) and the Tribal Wildlife Corridors Act (S.2891 and H.R.5179, 116th Congress). H.R.2795, as reported out of the House Natural Resources Committee, was included in the Moving Forward Act (H.R.2, 116th Congress) that passed the House of Representatives in July 2020.

More Information:

• Beier, Paul. December 2018. "A Rule of Thumb for Widths of Conservation Corridors." *Conservation* Biology 33.

• Ford, Adam T., et al. July 2020. "Effective Corridor Width: Linking the Spatial Ecology of Wildlife with Land Use Policy." European *Journal of Wildlife Research* 66(4).

• Kerr, Andy. December 8, 2017. "A Solution to Corridor Collisions: A National Wildlife Corridors System." *Public Lands Blog.*

• McGuire, Jenny L., et al. June 2016. "Achieving Climate Connectivity in a Fragmented Landscape." *Proceedings of the National Academy of Sciences* 113(26).

Prepared by: Andy Kerr (andykerr@andykerr.net; 503.701.6298 v/t), The Larch Company (www.andykerr.net), Ashland, OR, and Washington, DC

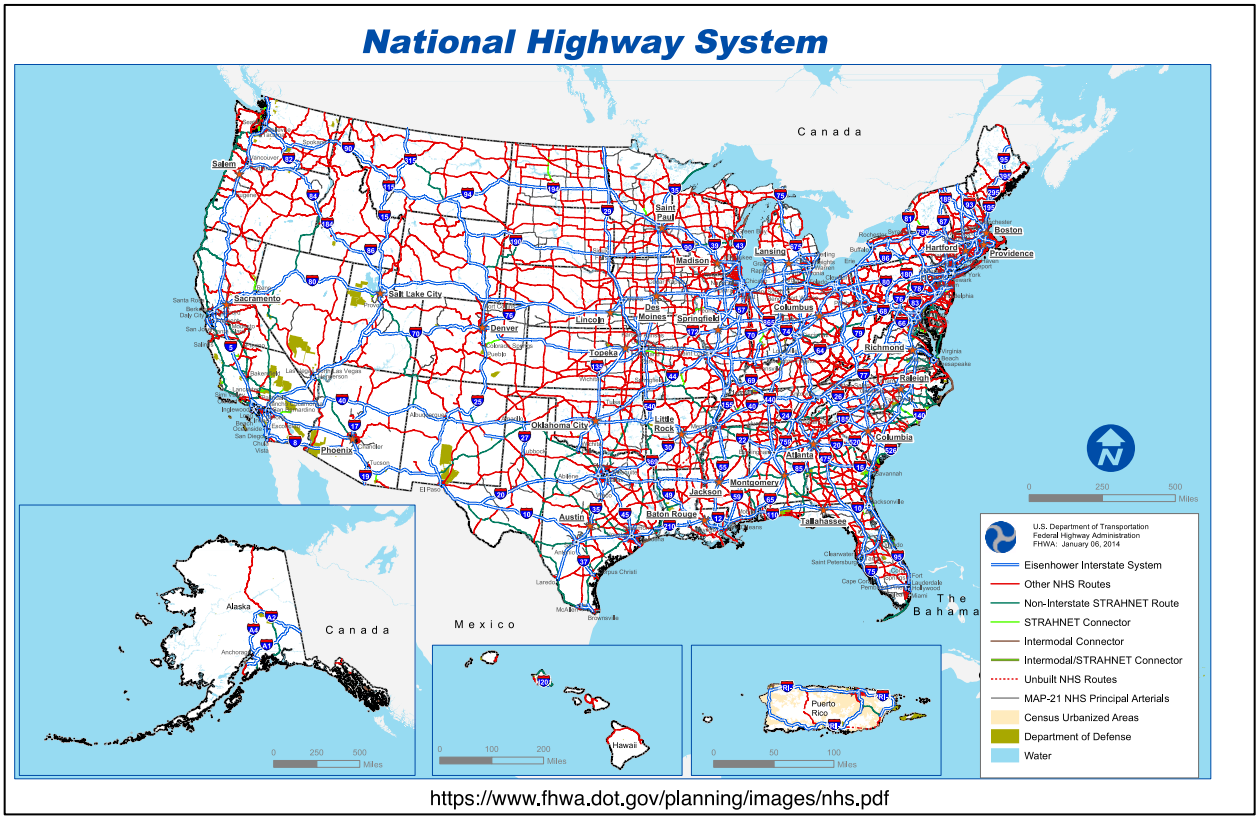

Figure 4-1. *The National Highway System. Included are all interstate highways, most US numbered highways, and other strategic roads. The need for wildlife corridors is greatest in the East where the road density is highest.* Source: Federal Highway Administration.

Chapter 5

Paying for It All

There are relatively minimal costs for elevating the conservation status of federal public lands from GAP 3 or GAP 4 to GAP 1 or GAP 2. While there is the initial cost of complying with the National Environmental Policy Act (environmental impact statements and the like) and the Administrative Procedure Act (public notice and comment, and such), the management costs of administering land for conservation or exploitation are similar.

Some money is available for the administration to spend without a further specific appropriation by Congress (for example, from the Migratory Bird Conservation Fund, the Land and Water Conservation Fund, and the North American Wetlands Conservation Fund), but it's not a lot of money in the context of 30x30. The most efficient and equitable way to attain 30x30 is for the federal government to acquire nonfederal lands from willing sellers and place those lands within designated areas that qualify for either GAP 1 or GAP 2 status.

Tax and Spend

To raise monies, Congress could modernize the Land and Water Conservation Fund (LWCF) in three ways, each of which would significantly increase the amount of monies available to acquire high-conservation-value lands from willing sellers:

1. Congress could appropriate the backlog of unspent funds (~$22 billion in 2019) that has accumulated in the LWCF but not yet been appropriated.[56]

2. Going forward, Congress could index to inflation the $900 million authorized to accrue annually to the LWCF.

3. Retroactively, Congress could index the $900 million cap, which is in 1965 dollars, to current (and then future) dollars ($900 million per year in 1965 dollars is the equivalent of $7.587 billion per year in 2021 dollars[57]).

In addition, Congress could enact an excise tax on outdoor recreation equipment (tents, binoculars, sporks, coolers, and such)—comparable to that now levied on hunting[58] and fishing[59] equipment, with the funds dedicated to further the activity associated with the items taxed. Notably, the tax on hunting equipment was enacted in the depths of the Great Depression.

As well, Congress could tax the emission of carbon dioxide into the atmosphere, with a portion of the receipts going to purchase nonfederal lands from willing sellers for the purpose of 30x30, which coincidentally will result in very high ecosystem-based carbon storage and sequestration.

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[56] Vincent, Carol Hardy. "Land and Water Conservation Fund: Overview, Funding History, and Issues." Congressional Research Service, RL33531. (pdf)
[57] US Bureau of Labor Statistics. CPI Inflation Calculator.
[58] 16 USC Chapter 5B. Federal Aid in Wildlife Restoration Act of 1937 (aka Pittman-Robertson Act).
[59] 26 USC 9504. Federal Aid in Sport Fish Restoration Act of 1950 (aka Dingell-Johnson Act).

Financing the Conservation of Nature

The cost to the federal government of borrowing money is at record lows. Rather than using the dedicated tax monies suggested above to directly acquire new conservation lands for federal stewardship, Congress could specify the tax revenues be dedicated to debt service on a very large quantity of new US "nature bonds," so as to be able to raise very large and immediate amounts of capital to finance 30x30. Think war bonds (World War II) and savings bonds.

Box 5-1: ***Contributing to 30x30 Via the Farm Bill***

None of the recipes recommended in this conservation cookbook rely on any programs in the current or future federal farm bill. Most "conservation" spending in the current farm bill does not result levels of protection necessary to elevate lands to either GAP 1 or GAP 2 status and thus meaningfully contribute to 30x30. There are a few parts of some farm bill conservation programs that do. The next farm bill could include more that would contribute to 30x30. Appendix C gives an overview of farm bill conservation programs and recommends that the next farm bill be designed to contribute meaningfully to 30x30.

Acquisitions by the Use of Eminent Domain

For short-term political reasons, the acquisition of private lands from willing sellers for the public purpose of attaining 30x30 is preferred. But for long-term policy reasons, the acquisition of private lands from unwilling sellers using the power of eminent domain should not be easily dismissed. The Fifth Amendment to the US Constitution requires "just compensation"[60] for all government takings of nonfederal lands for federal purposes.

Many, or portions of, units of the National Park System were acquired by eminent domain (condemnation). The Commonwealth of Virginia used its power of eminent domain to acquire lands that became Shenandoah National Park. The states of Tennessee and North Carolina similarly acted on lands that became Great Smoky Mountains National Park, as did the Commonwealth of Kentucky for Mammoth Cave National Park. The United States directly acquired all or portions of lands in Everglades National Park, Channel Islands National Park, Appalachian National Scenic Trail, Big Cypress National Preserve, Cape Cod National Seashore, Gettysburg National Military Park, Indiana Dunes National Lakeshore, Protection Island National Wildlife Refuge, and Redwood National Park.[61] Many more examples exist.

While short-term controversy may have surrounded many such cases, the passage of time has proved the use of eminent domain to have been in the public interest. Just as it is in the national interest to have a system of roads and utility corridors, most of which have been acquired through the use, or threat of use, of eminent domain, it is also in the national interest to have a system of natural areas. Natural security is an irreplaceable subset of national security.

As Senator Gaylord Nelson noted, "The economy is a wholly owned subsidiary of the environment."[62]

[60] National Constitution Center. The Fifth Amendment Takings Clause. Interactive Constitution.
[61] US Department of Justice. History of the Federal Use of Eminent Domain. Land Acquisition Section of the Environment and Natural Resources Division.
[62] Quirmbach, Chuck. July 4, 2005. "Earth Day Founder Gaylord Nelson Dies." NPR.

Conclusion: A Moonshot for Earth

More than 1.3 times as much US land must be adequately protected in the 2020s as has been protected by this nation in the past fifteen decades, since the establishment of Yellowstone National Park,[63] the world's first national park, in 1872.

> *We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too.*[64]
>
> *President John F. Kennedy, 1962*

President Biden made his 30x30 commitment on day 12 of his administration, February 1, 2021. President Kennedy made his moonshot commitment on day 105 of his administration, May 25, 1961. Kennedy specified "before this decade is out."[65] President Biden gave himself until the end of 2030, a similar timeframe.

The clock is ticking. To permanently protect 30 percent of its lands by 2030, the US must conserve 114,183 acres of land per day—with no time off for weekends and holidays. We are behind already, but we can catch up.

On a parallel and interrelated track, President Biden has committed to decarbonizing our economy in short order:[66]

• a 50-to-52-percent reduction from 2005 levels in economywide net greenhouse gas pollution by 2030
• reaching net zero emissions economywide by no later than 2050

The nation's first oil well was drilled in 1859,[67] just thirteen years before the establishment of Yellowstone National Park. Fortunately, saving nature complements decarbonizing our energy systems by reducing net greenhouse gas emissions.

To increase the pace to achieve the goal, the federal government must add at least three zeros to the size of traditional conservation actions. Rather than individual new wilderness bills averaging 100,000 acres, new wilderness bills should sum hundreds of millions of acres—and promptly be enacted into law. Rather than a relatively few new national monuments mostly proclaimed in election years, many new national monuments must be proclaimed every year.

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[63] National Park Service. February 1, 2021. Birth of a National Park.
[64] Kennedy, John F. September 12, 1962. Rice Stadium Moon Speech. Johnson Space Center, National Aeronautics and Space Administration.
[65] Kennedy, John F. May 25, 1961. Address to Joint Session of Congress. John F. Kennedy Presidential Library and Museum.
[66] The White House. April 22, 2021. FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies.
[67] American Oil & Gas Historical Society. First American Oil Well.

In Arlington National Cemetery, across the Potomac River from our nation's capital, is the National Seabee Memorial. The Navy's Construction Battalion (CB, phonetically and *pun*etically "seabee") was instrumental in America's success in World War II. Prominently inscribed on the memorial is: "With willing hearts and skillful hands, the difficult we do at once. The impossible takes a bit longer!"[68]

In that time, nothing was more important than winning World War II. In this time, nothing is more important than saving nature and the climate.

[68] CEC/Seabee Historical Foundation.2 018. National Seabee Memorial, Arlington National Cemetery, Arlington, Virginia. Gulfport, MS: CEC/Seabee Historical Foundation.

Appendix A

Critique of the Biden Administration's "Conserving and Restoring America the Beautiful" Report

The following is reprinted from Andy Kerr's *Public Lands Blog* (#183, May 14, 2021).

Biden's Bait and Switch

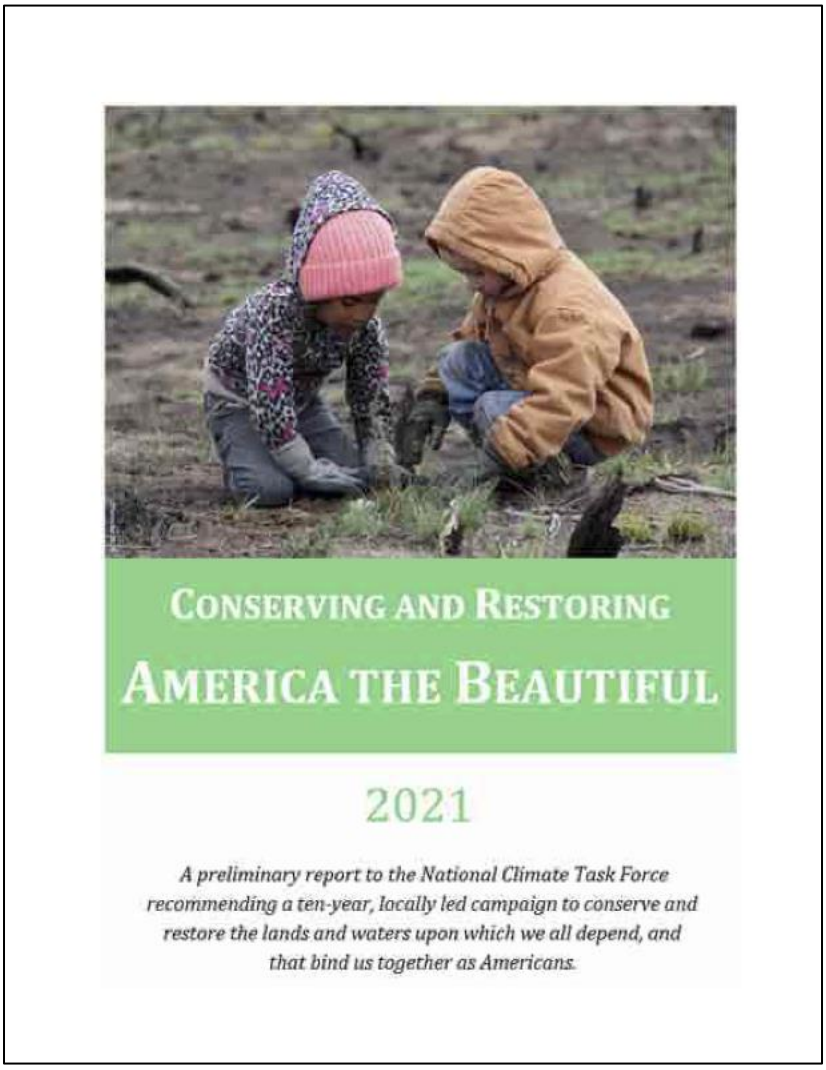

Figure A-1. *Twenty-four pages of mostly greenwashing*. Source: Biden administration.

While running for the job, now-President Biden pledged support for "30x30." He followed up on his campaign pledge with an executive order on January 27, 2021, that committed his administration "to achieve the goal of conserving at least 30 percent of our lands and waters by 2030." In 2020, his now-Secretary of the Interior had introduced a resolution into the US House of Representatives expressing the sense of the House that the federal government "should establish a national goal of conserving at least 30 percent of the land and ocean of the United States by 2030."

It sounded great, especially since—at the time and in the intent of the resolution—30 percent by 2030 (30x30) meant that 18 percent more of the nation's lands and waters above the 12 percent already "conserved" would need to be protected. In the context of 30x30, 30 percent

"conserved" unequivocally means that by 2030, 30 percent of the nation's lands and waters will have qualified for either GAP 1 or GAP 2 status in the US Geological Survey's Protected Area Database (meaning that they have permanent protection and mandated management plans that do not allow extractive uses). That commitment is a big lift. 30x30 means that 1.3 times as much acreage must achieve GAP 1 or GAP 2 status in this decade as has merited that designation since 1872, when Yellowstone National Park was established.

Another comparable big lift is the Biden administration's effort to effectively end the use of fossil fuels by 2050. The first US oil well was drilled in 1859, just thirteen years before the establishment of the nation's first national park. The climate crisis and the extinction crisis equally need our attention, and solving both can be as complementary as they are critical. In his executive order, Biden specified that his secretaries of agriculture, commerce, and interior, as well as his chair of the White House Council on Environmental Quality, were to report back to him on the question of what qualified to be counted in the 30 percent by 2030. The result is a report entitled "Conserving and Restoring America the Beautiful" and subtitled "A preliminary report to the National Climate Task Force recommending a ten-year, locally led campaign to conserve and restore the lands and waters upon which we all depend, and that bind us together as Americans" (whew…).

Unfortunately, "America the Beautiful" represents a gross dereliction of the duty of the Biden administration to future generations.

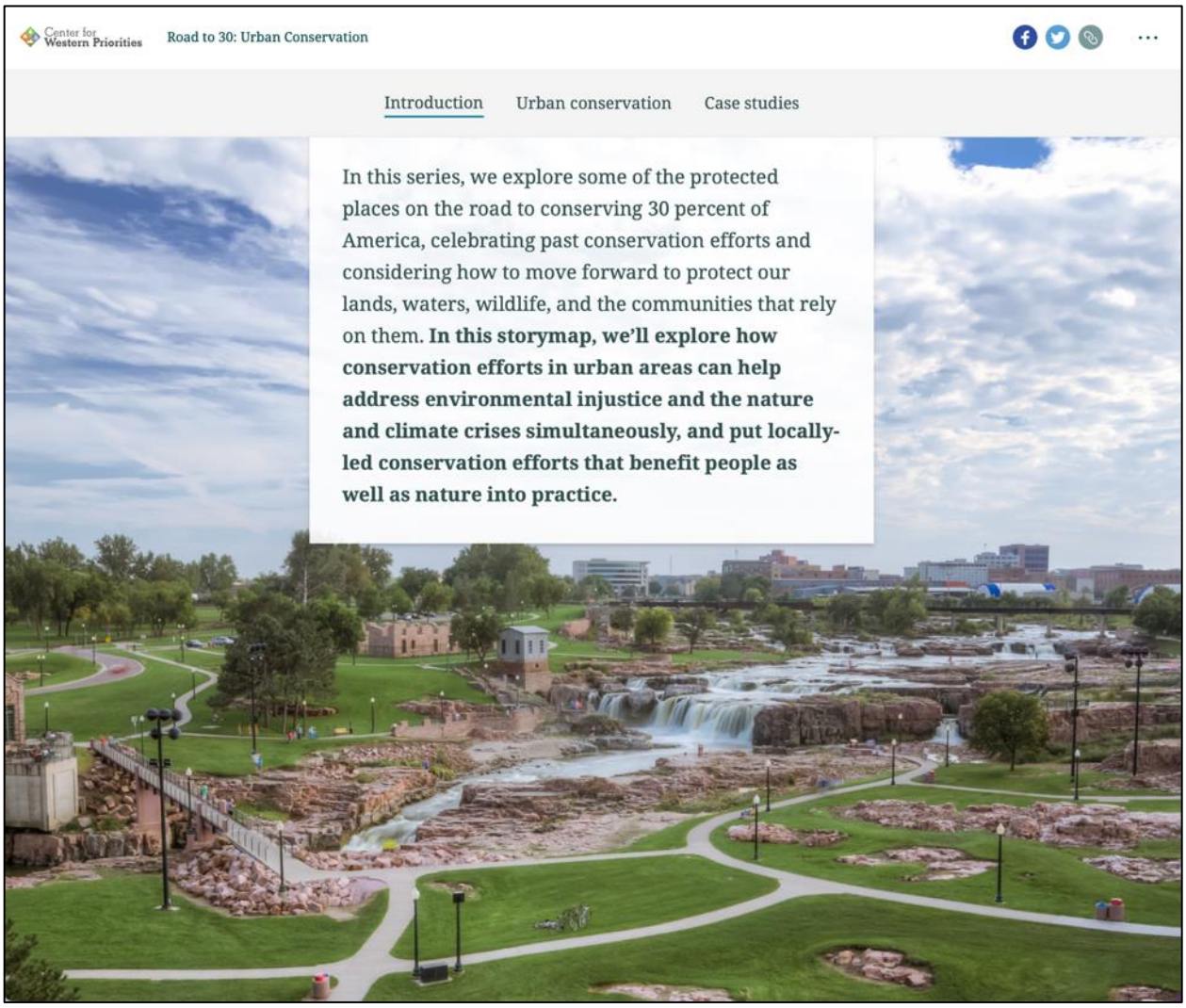

Figure A-2. *Falls Park in Sioux Falls, South Dakota: an example of urban conservation that the Biden administration would like to count toward 30x30. The nonnative lawn is closely mowed and likely treated with herbicides to maintain its monoculture. The trees may, or may not, be native. All those lights on at night keep wildlife as well as muggers away.* Source: Center for Western Priorities.

Conservation-Lite

In the twenty-four-page report, the cabinet-level officials have taken advantage of the propensity of English words to have several different meanings. Here is my Mac dictionary's entry for conservation:

> *con•ser•va•tion | ˌkänsərˈvāSH(ə)n |*
>
> *1 prevention of wasteful use of a resource: the government must take action to promote energy conservation.*
> *• preservation, protection, or restoration of the natural environment and of wildlife: [with modifier]: nature conservation.*
> *• preservation and repair of archaeological, historical, and cultural sites and artifacts: the artworks in the collection need indexing and conservation.*

(Definition 2 has to do with Newtonian physics and therefore is not included here.)

Biden's campaign pledge (and Interior Secretary Deb Haaland's congressional resolution) unambiguously committed our nation to "preservation, protection, or restoration of the natural environment and of wildlife." The "America the Beautiful" report has switched the meaning of conservation to something closer to "prevention of wasteful use of a resource." The report says:

> Notably, the President's challenge specifically emphasizes the notion of "conservation" of the nation's natural resources (**rather than the related but different concept of "protection" or "preservation"**),recognizing that many uses of our lands and waters, including of **working lands**, can be consistent with the long-term health and sustainability of natural systems. [emphasis added]

The report accurately summarizes the two basic choices about what should count (and then chooses the wrong one):

> *The question of what should "count" came up regularly in the early listening sessions, followed by various perspectives on how to define conservation on the land and in the ocean. Many stakeholders recommended that a continuum of effective conservation measures be acknowledged, departing from stricter definitions of "protection" that do not recognize the co-benefits that* ***working lands*** *or areas managed for multiple use may offer. Other feedback encouraged the administration to focus on the quality and durability of conservation outcomes, noting that not every parcel of land or water is equal when it comes to enhancing nature's contributions to people, ecosystem health, biodiversity, or the sequestration of carbon.* [emphasis added]

The report goes on to embrace as "conservation" almost anything that has even a scintilla of something that is not profit-maximizing exploitation.

By supporting and accounting for existing and future conservation of public lands and waters, as well as collaborative and voluntary conservation efforts on ***working lands****, Tribal lands, and State, local, and private lands, the U.S. is well positioned to achieve a 30 percent goal over the next decade.* [emphasis added]

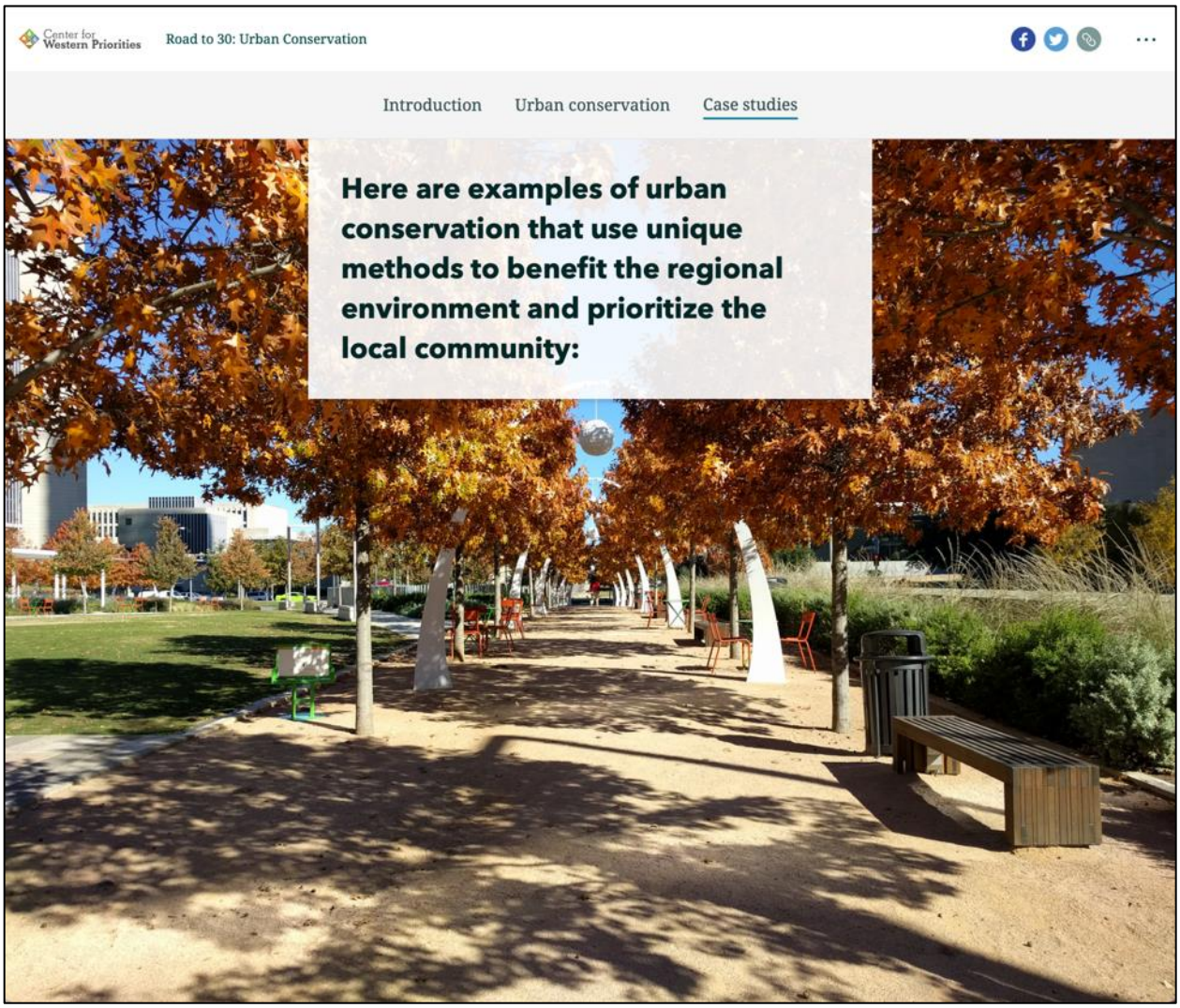

Figure A-3. *Klyde Warren Park in Dallas, Texas: another example of urban "conservation" that the Biden administration would like to count toward 30x30. Perhaps a few birds might nest in the trees.* Source: Center for Western Priorities.

Mind the GAP

Twelve times, the report mentions "working lands" as being, or having the potential to be, model "conservation" lands. By "working lands," the report means lands "that give our nation food and fiber"—in other words, lands that are logged, grazed, and farmed. This is a canard. All forestlands, tundra lands, desert lands, alpine lands, grasslands, shrublands, scablands, and wetlands are working lands. The extraction of forage, food, or fiber is not a prerequisite for "working" lands. As the authors of the nation's premier forestry textbook note: "All forests are working ecosystems in that they carry out ecological functions or processes of value to humankind."

The factor that determines whether a parcel of land should be counted as "conserved" in the context of 30x30 is not whether it is in public or private ownership but rather the quality of protections the land is afforded as indicated by the USGS GAP coding system. To qualify for either GAP 1 or GAP 2 status, the parcel must be "dedicated to the preservation of biological

diversity" with "permanent protection from conversion of natural land cover and a mandated management plan in operation" to maintain either

• "a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management" (GAP 1), or

• "a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance" (for example, wildland fire or native insect outbreaks) (GAP 2).

Of course, for obvious reasons, almost all GAP 1 and GAP 2 lands are public lands.

So what qualifies or does not qualify for GAP 1 or GAP 2 status? Here are some examples:

• Many holdings of the private nonprofit Nature Conservancy qualify for GAP 2 status. However, many others—for example, their Dugout Ranch near Canyonlands National Park in Utah—have been assigned "default" GAP 2 status by the USGS. A closer examination of the management of the area would show that it does not qualify for GAP 2 status.

• If a wetland easement on private land (usually obtained with farm bill money) is permanent, the easement qualifies for GAP 2 status. If it is a term-limited easement, it does not (and would probably be designated GAP 4).

• Depending on how it is written, a conservation easement can qualify as nature preservation or not. If it requires the land to be managed in a natural state without extraction and in perpetuity, then yes. If the "conservation" easement merely prevents private land from being subdivided while continuing to allow the land to be cow-bombed and/or clear-cut, then no.

• An easement on private timberland that limits the size of the clear-cut or extends the period of time before it can be clear-cut is of very marginal conservation value and certainly should not count toward 30x30.

• An easement on a ranch that requires wildlife-friendly fences while all possible forage is consumed by domestic livestock—and not native wildlife—is of very marginal conservation value and certainly should not count toward 30x30. An easement on a ranch that gives over the land to native wildlife and takes away the domestic livestock could qualify it to count toward 30x30.

Confusing Recreation with Conservation

To "unlock access to the millions of acres of public lands that are currently inaccessible to the public," as suggested in the "America the Beautiful" report, may well be a good thing (or may not, if you are looking at it from the point of view of wildlife), but it should certainly not qualify those millions of acres as counting toward 30x30. Increasing recreation access to a parcel usually diminishes its conservation value.

A priority of the "America the Beautiful" report is providing more recreation, especially in urban areas so that urbanites have more access to "nature." This may be good public policy,

but urban parks generally do not significantly contribute to the conservation of nature. (One exception might be Forest Park in Portland, Oregon, but the intensity of recreation there has an inverse effect on its conservation value.) Counting as "nature" an urban park that is mostly planted in a monoculture mowed lawn with some exotic ornamental trees is like counting a person with a mask hanging from one ear as "masked."

All of the photos in this Public Lands Blog post are from the "Road to 30: Urban Conservation" storyboard published in November 2020 by the Center for Western Priorities (CWP), "a nonpartisan conservation and advocacy organization that serves as a source of accurate information, promotes responsible policies and practices, and ensures accountability at all levels to protect land, water, and communities in the American West." Unfortunately, the CWP is not the only conservation organization that is suggesting that urban parks should count toward 30x30. Such lands should not.

Figure A-4. *The Platte River Greenway in Denver, Colorado: Another example of urban conservation that the Biden administration would count toward 30x30. The concrete riparian area, though offering excellent loafing habitat for people, has no habitat value for wildlife*. Source: Center for Western Priorities.

Bowing to Political Correctness

The "America the Beautiful" report reeks of political correctness. I shall pounce upon only one sentence of it here:

> *While the U.S. has a remarkable record of success in safeguarding iconic lands, species-rich waters, and at-risk wildlife, the Federal Government has also caused pain along the way: . . . [by] evicting private landowners to create national parks.*

Perhaps the authors were thinking of Shenandoah, a national park established by Congress in 1935. The National Park Service was willing to have a national park in Virginia, but since the state wasn't a "public land state" in the West, a new national park could not be reserved from existing federal public lands. If the Commonwealth of Virginia wanted a national park, it would have to acquire the land and give it to the United States.

The National Park Service and Virginia drew a proposed boundary, and the Commonwealth—using, when necessary, its power of eminent domain (condemnation)—then acquired what was mostly cutover, burned-off, mined-out, grazed-down, plowed-up mountains (those "working lands" I keep hearing about). Yes, there were "evictions," but the evicted received just compensation as required by the Fifth Amendment. The power of eminent domain is routinely used (and always with just compensation) to acquire lands or rights-of-way for public purposes, such as highways and utility corridors found to be in the public interest. Are not natural areas at least equally in the public interest?

Upon the establishment of Shenandoah National Park, the National Park Service announced it was "inviting nature back." Today, much of the national park is also part of the National Wilderness Preservation System. It was a radical idea, but the creation of Shenandoah National Park is considered to be a very reasonable thing to have done. Until now, I guess.

Kowtowing to Locals and Cowtowing to Cowboys

A recurring theme in the "America the Beautiful" report is that local is best. The Biden administration is conflating urban locals with rural locals. The urban locals that it most cares about are persons who have been affected by systemic racism, economic inequality, and environmental injustice. These people are part of the Democratic base.

The rural locals the Biden administration most cares about are the opposite. Ranchers, for example, are land barons who own or control much of the American West. Ranchers—together with timber barons, mining magnates, and absentee owners of the local means of production—control local rural governments. These people are not part of the Democratic base.

If conservation means anything, it should mean choosing the long-term national interest over short-term local self-interest. Until now, I guess.

The report calls for the federal government to defer to locals (unless a check is being written in which the money comes from the federal taxpayer through the farm bill or from the Land and Water Conservation Fund or other federal source) in "leading and designing conservation efforts." Local, enduring conservation efforts are more the exception than the rule. It is unwise to have a national conservation strategy that limits national leadership. Such is not leadership but kowtowing.

Or cowtowing. The "American the Beautiful" report is replete with assertions, unsupported by evidence, that ranching is good for conservation. The most egregious is this one:

This commitment includes a clear recognition that maintaining ranching in the West—on both public lands and private lands—is essential to maintaining the health of wildlife, the prosperity of local economies, and an important and proud way of life.

Apparently ranching in the East is neither important nor a proud way of life. In so many ways, this statement is untrue. Any forage that is eaten by domestic livestock is not available to native wildlife, be it elk, deer, pronghorn, bighorn sheep, sage grouse, or butterflies. Bovine bulldozers are twice the extinction-drivers that clear-cutting and strip-mining are. As a peer-reviewed article in *BioScience* notes, "Among extractive land uses, logging, mining, and grazing have contributed to the demise of 12%, 11%, and 22%, respectively, of the endangered species we analyzed." Not only is public lands ranching subsidized by the taxpayer (so that it costs more to feed a house cat at home than a cow on public lands), but also ranchers pay lower property taxes than other residents of a county and are thereby a suck on local economies. I could go on.

Recommendations to the Biden Administration

Please don't misread me. I love open spaces. Some of my best friends are open spaces. However, open spaces—even if they have relic or reintroduced elements of nature—do not equate to nature.

Yes, Biden administration, you should do most of things you outline in the "America the Beautiful" report. They are generally in the public interest. However, you should not count as "nature conservation" things that are not adequate nature conservation on the ground. Just as the climate doesn't appreciate carbon reduction programs and credits that don't actually reduce the amount of carbon dioxide going into or already in the atmosphere, nature doesn't appreciate conservation on paper that is not also conservation on the ground.

Yes, do build an American Conservation and Stewardship Atlas to provide "a clear baseline of information on lands and waters that have already been conserved or restored," as you recommend in the report. Count everything that has even a scintilla of conservation value. But don't count areas dedicated to the furtherance of recreation rather than protection of biological diversity as "conservation." Maybe you can count it as "stewardship," but why not just count it as the "recreation" it is? Such an atlas should depict the multitude of distinctive kinds of conservation, stewardship, and recreation, but it should indicate the GAP status of each kind of land depicted: 1 (managed for biodiversity—disturbance events proceed or are mimicked), 2 (managed for biodiversity—disturbance events suppressed), 3 (managed for multiple [ab]uses), or 4 (no known mandate for biodiversity protection).

Do not renounce the use of conservation measures that have a proven history of effectiveness—that is, designating more national parks, national wildlife refuges, national monuments, wilderness areas, wild and scenic rivers, national conservation areas, national recreation areas, and such.

Turning over the authority and responsibility to address the extinction crisis to state, local, and tribal governments is a recipe for disaster. Biden administration, you are not deferring to and relying on local and voluntary efforts to address climate change, health care, border security, civil rights, and COVID, but you are throwing biodiversity under the bus. Perhaps the campaign bus.

Many mid-level Biden administration officials (and one cabinet officer who oversees the Forest Service) are retreads from the Obama administration. Other than Obamacare, what is the great legacy of the Obama administration? Other than some national monuments, what is the great conservation legacy of the Obama administration?

Officials, consider how history will treat you. In the present, you can simply point to the extraordinarily low bar of the Trump administration and feel good. However, history will judge you not against Trump but against all the rest. Did you step up and do what needed to be done, or did you polish your resume so as to land again in a later Democratic administration or a university teaching job? What will you be remembered for? As for the conservation and restoration of nature, will the Biden administration be compared favorably to the F. D. Roosevelt, L. Johnson, and R. Nixon administrations, or will it be unfavorably compared to the W. G. Harding administration?

Nature Bats Last

If society wants functioning ecosystems both across the landscape and over time (it does), 30 percent of our lands must be—in fact and on the ground—dedicated to the preservation of biological diversity by 2030. 30x30. Full stop.

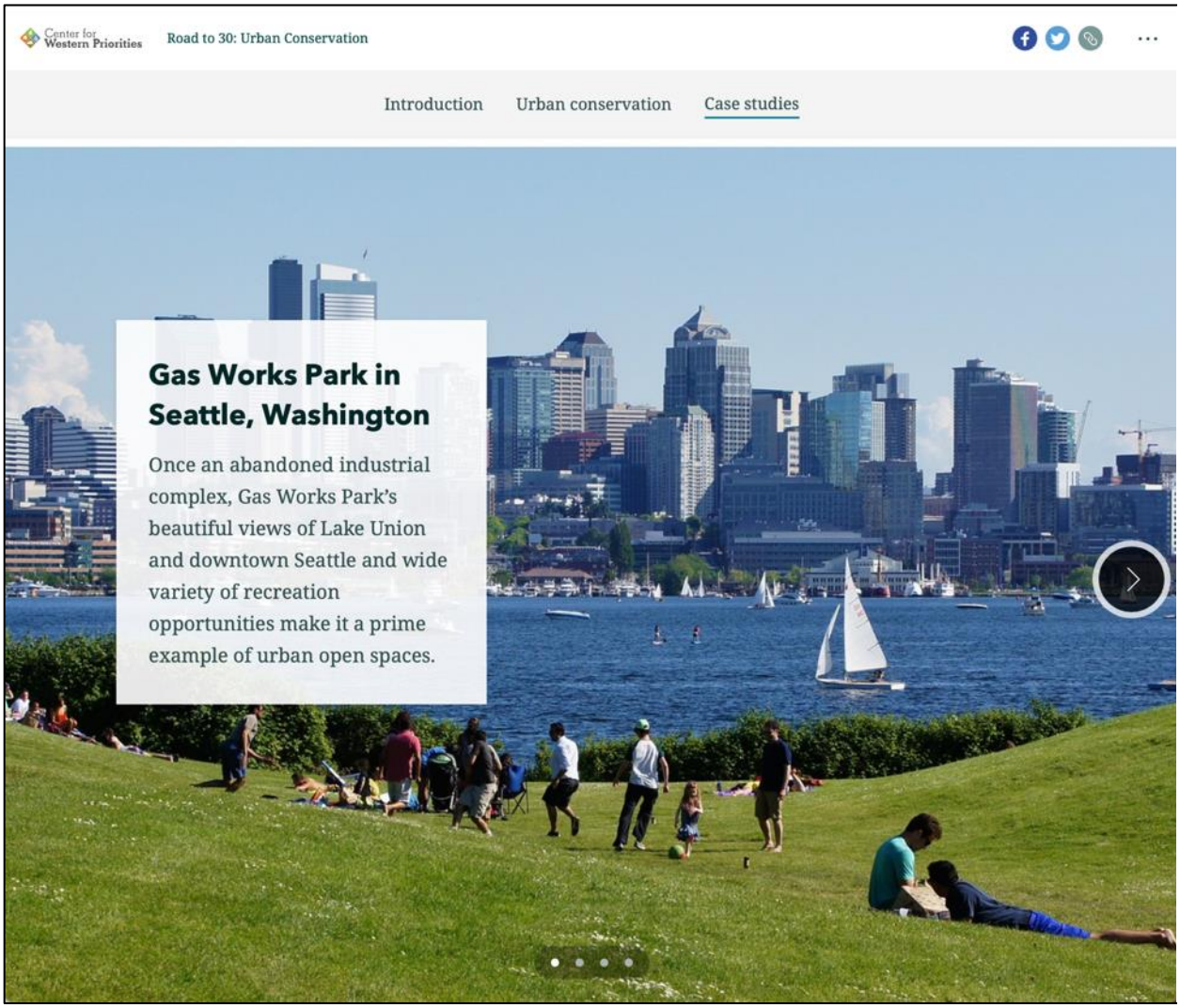

Figure A-5. *Gas Works Park in Seattle, Washington: another example of urban conservation that the Biden administration would count toward 30x30*. Frisbee habitat is not wildlife habitat. Source: Center for Western Priorities.

Appendix B
Misapplications of GAP Status

While there is nothing inherently wrong with the four GAP status categories (and in fact much that is inherently right), in some cases the USGS has assigned the wrong GAP status code to nominated protected areas as a default. To initially assign a GAP status code to an area, the USGS uses a computer algorithm that assumes the least biodiversity conservation value for the designation type. Thus, asserts the USGS, "it is likely categorical assignments of GAP Status Code underestimate biodiversity protection."[69] Yet in many cases, a higher biodiversity conservation value than is warranted is indicated by the GAP status code assigned by default.

Here are some examples:

• *Wildernesses* default to GAP 1 status, yet many wilderness areas in the American West are grazed by domestic livestock. Such grazed wilderness areas should be given GAP 2 status.

[69] US Geological Survey (USGS). February 2, 2021. PAD-US 2.0 Default Categorical Assignment Process.

• *Research Natural Areas* (RNAs) default to GAP 2 status, yet many Forest Service and most Bureau of Land Management RNAs are open to hardrock and other mining. Some BLM RNAs are grazed by livestock. If open to mining or grazing, the RNA should be given GAP 3 status.

• *Wild and Scenic Rivers* default to GAP 2 status, yet only federal public lands within segments classified as "wild" (which often encompass significant amounts of nonfederal land) are protected from future mining. Wild and scenic river segments classified as "scenic" and "recreational" are open to mining on federal lands and should be assigned GAP 3 status.

• *Conservation Easements* default to GAP 2 status, yet not all conservation easements are alike. Some preclude further development but do not restrict current logging and/or livestock grazing. Such easements should be given GAP 3 (assuming there is "natural land cover") or even GAP 4 status. (Intensively grazed and irrigated pastures may be important open space but are not areas dedicated to "the preservation of biological diversity.")

• *Private conservation areas* default to GAP 2 status, yet some areas, such as the Nature Conservancy's Dugout Ranch in Utah, suffer from intensive grazing by domestic livestock. Such areas are more appropriately assigned GAP 3 or 4 status.

To properly determine the appropriate GAP status for a particular protected area, an examination of the specific intent of the protected area is necessary, as well as an understanding of biodiversity-harming nonconforming uses (like livestock grazing, logging, mining, and off-road vehicle use) that may be allowed in the protected area.

PAD-US says, "The 'GAP 4' category includes areas without biodiversity protection (e.g. developed parks) or where data gaps to assign GAP Status exist in PAD-US as well as the area of the US not included in the PAD-US (e.g. mostly private land)."[70] Either GAP 4 should be split out into a GAP 5 to include those lands "not included in the PAD-US" or GAP 4 should include only nominated areas that are "areas without biodiversity protection."

[70] US Geological Survey (USGS). May 2021. Protected Areas Database of the United States (PAD-US) 2.1 Summary Statistics by GAP Status Code.

Appendix C

Farm Bill "Conservation" Programs

While this book of recipes centers on the two major paths toward 30x30, federal administrative conservation and federal legislative conservation, another minor—but still significant—opportunity exists: federal subsidies to conservation. Most such subsidies were (and are) enacted by Congress in the every-five-or-so-year farm bill.

> *The farm bill is an omnibus, multiyear law that governs an array of agricultural and food programs. Titles in the most recent farm bill encompassed farm commodity revenue supports, **agricultural conservation**, trade and foreign food assistance, farm credit, research, rural development, forestry, bioenergy, horticulture, and domestic nutrition assistance. Typically renewed about every five or six years, the farm bill provides a predictable opportunity for policymakers to comprehensively and periodically address agricultural and food issues.*[71] [emphasis added]

Farm bill programs sometimes contribute to the conservation of nature, but almost all are not adequate to provide for the conservation of nature. Still, more can be done.

About Agricultural Production More Than Nature Preservation

Currently, 7 percent, or $30 billion, of farm bill spending is for "conservation." The term is used broadly, referring alike to the conservation of soil and water while still intensively farming and to the conservation of wetlands through permanent easements. Most farm bill conservation is more about agricultural production than nature preservation. Most conservation programs result in dialing back the intensity of farming to merely lighten the environmental impact. In addition, almost all program projects have an expiration date. Only a relatively few projects are both permanent and protective of biodiversity (for example, a permanent wetland reserve easement).

While the examples below may be beneficial to society, they do not raise the status of farmlands to GAP 1 or GAP 2:

- a conservation easement on farmland that precludes development but allows continued agricultural production
- a conservation reserve program contract
- a less-than permanent wetland reserve easement
- a less-than permanent healthy forest reserve easement that allows continued production of wood

The Next Farm Bill

Congress has an opportunity in the next farm bill to create and expand programs that contribute toward the 30x30 goal (meaning programs that expand the acreage with GAP 1 or GAP 2 status). Specifically, such programs must provide—in the words of the US Geological Survey that define GAP 1 or GAP 2 status (see Table 1-1)—areas that have "permanent protection from conversion of natural land cover and a mandated management plan" to maintain either:

[71] Congressional Research Service. 2019. "What is the Farm Bill?" Congressional Research Service, RS22131. (pdf)

• GAP 1—“a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management,” or
• GAP 2—“a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance (for example, wildland fire or native insect outbreaks).”

For More Information

• Douglas, Leah. July 15, 2021. “USDA Wants to Make Farms Climate-Friendly. Will It Work?” Food and Environment Reporting Network.

About the Author

Andy Kerr (andykerr@andykerr.net) is the Czar of The Larch Company (www.andykerr.net) and consults on environmental and conservation issues. The Larch Company is a for-profit non-membership conservation organization that represents the interests of humans not yet born and species that cannot talk.

He is best known for his two decades with Oregon Wild (then the Oregon Natural Resources Council), the organization best known for having brought you the northern spotted owl. Kerr began his conservation career during the Ford administration.

Kerr has been closely involved in the establishment or expansion of forty-seven wilderness areas, fifty-seven wild and scenic rivers, thirteen congressionally legislated special management areas, fifteen Oregon scenic waterways, and one proclaimed (and later expanded) national monument.[72] He has testified before congressional committees on several occasions.

Over the decades, Kerr has been or was or is a prodding force in efforts to obtain Endangered Species Act protection for the northern spotted owl, marbled murrelet, numerous stocks of Pacific salmon, western snowy plover, Qapdo (aka shortnose) sucker, C'waam (aka Lost River) sucker, Gunnison sage-grouse, and greater sage-grouse.

He has lectured at all of Oregon's leading universities and colleges, as well as at Harvard and Yale. Kerr has appeared numerous times on national television news and feature programs and has published numerous articles on environmental matters. He is a dropout of Oregon State University.

Kerr authored *Oregon Desert Guide: 70 Hikes* (The Mountaineers Books, 2000) and *Oregon Wild: Endangered Forest Wilderness* (Timber Press, 2004).

Kerr participated, by personal invitation of President Clinton, in the Northwest Forest Conference held in Portland in 1993, for which *Willamette Week* gave Kerr a "No Surrender" award.

Time reporter David Seideman, in his book *Showdown at Opal Creek*, described Kerr as "the Ralph Nader of the old-growth-preservation movement." In a feature on Kerr, *Time* magazine titled him a "White Collar Terrorist," referring to his effectiveness in working within the system and striking fear in the hearts of those who exploit Oregon's natural environment.

In his book *Lasso the Wind*, *New York Times* correspondent Tim Egan wrote about Kerr, "He has a talent for speaking in such loaded sound bites that it was said by reporters that if Andy Kerr did not exist, someone would have to invent him. . . . [Kerr] forced some of the most powerful timber companies to retreat from a binge of clear-cutting that had left large sections of the Oregon Cascades naked of forest cover."

The *Christian Science Monitor* characterized Kerr as "one of the toughest environmental professionals in the Pacific Northwest."

The *Oregonian* named Kerr one of the 150 most interesting Oregonians in the newspaper's 150-year history. The Oregonian's *Northwest Magazine* once characterized him as the timber industry's "most hated man in Oregon." In 2010, the *Oregonian* said Kerr was "once the most despised environmentalist in timber country." Jonathan Nicholas of the *Oregonian* characterized Kerr as one of the "Top 10 people to take to (the) Portland bank" for "his gift of truth."

The *Lake County Examiner* called Kerr "Oregon's version of the Anti-Christ."

Willamette Week said Kerr "is entirely unwilling to give an inch when it comes to this state's remaining old-growth timber."

Rocky Barker of the *Idaho Statesman* wrote, "There were a lot of environmentalists working to stop logging on old-growth national forests in the 1980s and 1990s. But few were more outspoken and effective than Andy Kerr."

The *Salt Lake Tribune* described Kerr as "part provocateur and part policy wonk" and said, "Kerr . . . has long been a burr in the side of the cattle industry."

High Country News ranks Kerr "among the fiercest and most successful environmentalists."

[72] Kerr, Andy. 2021. Legislative Accomplishments of Andy Kerr. The Larch Company, Ashland, OR, and Washington, DC.