



Your Lands, Your Wildlife

RESTORING BALANCE TO THE MANAGEMENT OF OUR PUBLIC LANDS



This report is a project of the Your Lands, Your Wildlife campaign, a partnership
of organizations working to protect public lands and wildlife.
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Special thanks to the William and Flora Hewlett Foundation for funding this project.

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Cover photos: fly-fishing, Colorado © John Russell/Still Media; pronghorn, Wyoming © www.joelsartore.com

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Bighorn sheep, Rocky Mountains, Montana | © www.joelsartore.com



FOREWORD

Capturing remarkable wildlife with my camera has been my life's work and passion. In nearly 20 years as a *National Geographic Magazine* photographer, I have traveled and photographed some of the most remote and wild places on Earth, many right here in the United States. Through my photography, I've been able to capture nature's raw intensity—wildlife living as it has for thousands of years. These images have the power to bring to life our last wild places for people who may not have the opportunity to experience such wondrous landscapes.

But a single photograph rarely tells the whole story of a land and its wildlife, or of the people who depend on them. The wildlife that I've photographed has evolved over the centuries to survive and thrive in its natural habitat. But now, as humans are making dramatic changes to the lands, waters and skies, the threats facing our natural world are greater and more varied than ever. And many of those threats are happening on Forest Service and Bureau of Land Management lands, federal public lands owned by the American people. The purity of our waters, the clarity of our skies and the health of our wildlife should not have to take a back seat to aggressive energy production, logging, mining and other extractive uses on federal public lands. In the same way, the people who visit and love these lands—like anglers, hunters, outfitters, birders and, yes, even photographers—should not have to come second to development, with its short-term, unsustainable objectives.

Healthy and stable populations of wildlife are the key to a successful fishing trip, a memorable day in the wilderness, and the success of the local outfitters that support such ventures. But more important, healthy wildlife tells you a lot about the overall health of the land. If we neglect our wildlife, we'll not only push more species closer to the limits of their ability to survive, we'll also strain the resources that drive a large part of our economy. Fortunately, it is not too late to put the health of our federal public lands first. We need to put balanced solutions in place that allow for both development and conservation, taking care of our wildlife and federal public lands before they reach the tipping point. Otherwise, pictures of America's wondrous wildlife may be all we have left.

Joel Sartore
Lincoln, Nebraska

Joel Sartore | © Katie Joseph



Joel Sartore is a National Geographic Magazine contributing photographer and a member of the International League of Conservation Photographers. Several of his photographs appear in this report. Visit www.joelsartore.com to see more.

“I grew up in the heart of Superior National Forest near beautiful Lake Vermilion, where you can visit one island for every day of the year. I will never forget my first deer or any of the other special moments in the beautiful country where I am blessed to be from, and I hope that we all can remember how special this country truly is.”

—Aaron Bialke, Virginia, Minnesota

Excerpt from “Your Lands, Your Wildlife, Your Story” contest entry. To read more, visit www.yourlandseyourwildlife.org.

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INTRODUCTION

In the dense snows of Montana's Rocky Mountains, a wolverine digs the winter den where her kits will soon be born. In the chill of that same mountain air, a cross-country skier sets off to explore the backcountry. In Wyoming's sagebrush country, a father and daughter head into the windswept winter range on their annual mule-deer-hunting trip. And in the high country of Colorado, a cutthroat trout weaves in and out of the shallows of a cool mountain stream, locked in a cat-and-mouse game with a persistent angler. It's just another day in the wild on America's public lands.

Even if we never set foot on these lands owned by all Americans and managed by our federal agencies, many of us place great value on simply knowing that they exist. We seem to know instinctively that the quality of our lives is tied directly to the health of the plants and animals and cycles of nature public lands support. We also intuitively understand that we can gauge the health of the land itself by the condition of the wildlife, plants and natural amenities found there.

As the squeeze of development proceeds and the ecological realities of global warming unfold, we are increasingly realizing the linkages between healthy lands, healthy wildlife populations and the quality of our own lives. We are recognizing that the diminishment of our public lands threatens our wildlife heritage, which in turn threatens hunting, fishing, hiking and other outdoor pursuits and affects the overall quality of life we enjoy as Americans.

Nowhere are these threats more pressing than on the public lands managed for multiple uses by the U.S. Forest Service and Bureau of Land Management (BLM). Unlike national parks and national wildlife refuges, where conservation is the primary mission, national forests, national grasslands and BLM lands must not only protect

wildlife and provide recreational opportunities, but also meet the nation's demands for timber production, energy and mineral development and livestock grazing. Unfortunately, the Bush administration upset the balance among the natural, social and economic uses of these multipurpose lands, heavily tipping the scales toward damaging extractive activities. This report is about restoring balance.

Part one reviews the considerable natural value of the lands managed by the Forest Service and BLM. It establishes how healthy fish and wildlife populations translate directly into tangible and sustainable benefits for the American people.

Part two examines the Forest Service and BLM approaches to fish and wildlife management. It reviews the concept, history and implementation of multiple-use policy and the landmark 1976 National Forest Management Act (NFMA). It looks at the land-management implications of regulatory rollbacks to historic provisions of NFMA and the lack of clear fish and wildlife standards and conservation planning tools on BLM lands. Most important, it provides a set of policy recommendations. These recommendations are based on a standard of monitoring and maintaining viable wildlife populations to help the Forest Service and BLM make scientifically sound land-management decisions.

Part three presents eight case studies featuring challenges facing species found on public lands managed for multiple uses. Each case shows how the wildlife viability standard and our recommendations can be put into action to help re-establish the balance between sustaining healthy wildlife and habitat and providing multiple social, economic and ecological benefits for current and future generations of Americans.

1

VALUING OUR PUBLIC LANDS Healthy Lands, Healthy Wildlife and Public Benefits



Backpacking, Tongass National Forest, Alaska | © John Hyde/Alaska Stock/National Geographic Stock

Items of the animal and plant life on our federal public lands, the American people are the owners and stewards of an incredibly valuable natural asset. Our varied climate, topography and geology make the United States “the most ecologically diverse nation on earth.”¹ Nearly one-quarter

of U.S. mammals are “national endemics”—species that occur only here.² Much of the living diversity that the United States supports is found on the lands managed in the public interest by the federal government. These federal public lands include the national wildlife refuges managed by the

U.S. Fish and Wildlife Service, the national parks managed by the National Park Service and the BLM lands, all administered by the Department of the Interior, and the national forests and grasslands managed by the U.S. Forest Service under the Department of Agriculture. These four federal systems cover more than 672 million acres of land—29 percent of the nation’s land base.³ Together they form an integral part of America’s natural environment.

The Forest Service and BLM lands,

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the two multiple-use-managed federal systems that are the focus of this report, incorporate 449 million of these acres, or 20 percent of the U.S. land area, and play an essential role in protecting the nation’s wild plants and animals.

NATIONAL FORESTS AND GRASSLANDS

The Forest Service oversees 175 national forests and grasslands spread across 190 million acres—roughly 8 percent of the U.S. landscape. Most of these holdings are in the 11 western states and Alaska, but national forests and grasslands are also found in 31 other states and Puerto Rico. Seventy-three percent of America’s major terrestrial and wetland habitats are represented on the national forests and grasslands.⁴ The Forest Service manages everything from alpine tundra to tropical rainforest, deciduous and evergreen forests, native grasslands, bogs, fens, marshes and other wetlands. Streams, lakes and rivers on Forest Service lands include significant headwaters and stream





reaches critically important to aquatic life, such as the cutthroat trout and other fish, and to providing clean water to some 60 million Americans.⁵

The diversity of habitats found on the national forests and grasslands supports much of the nation's wildlife, including thousands of invertebrate species and wide-ranging populations of grizzly bears, wolverines, elk and bighorn sheep that require large blocks of habitat. One in every five species on the U.S. federal threatened and endangered lists is found on the national forests.⁶ National forests also have more intact populations of rare species than any other federal land system and are home to approximately 3,400 sensitive species—animals and plants for which there is concern and evidence of decline.⁷

BLM LANDS

Approaching 258 million acres, the BLM estate is even larger than that of the Forest Service, covering roughly 13 percent of America's total land surface and more than 40 percent of the land managed by the

federal government. In addition to these surface holdings, the BLM is responsible for managing 700 million acres of subsurface mineral rights, placing the agency front and center in the current policy debate about energy development on federal public lands.

Like Forest Service lands, BLM tracts are located mostly in the western states and Alaska. The size and distribution of these lands mean they represent a wide variety of landscapes, habitats and life forms. BLM lands are home to a full range of terrain types, including grasslands, sagebrush steppes, high deserts, great basins, forests, arctic tundra and mountains.

These varied landscapes harbor more than 300 endangered and threatened plant and animal species and 1,500 sensitive species, and encompass 90 million acres of key habitat for big game such as antelope, bison, bighorn sheep and elk. The BLM also administers lands directly affecting 16 million acres of wetlands⁸ and 117,000 miles of fish-bearing streams,⁹ ranging from isolated desert-springs to large tributaries to the Columbia River.¹⁰

At one time, high, arid BLM holdings were considered “the lands that nobody wanted,” but don't count on any biologist, western governor or sportsman to tell you that now.¹¹ In fact, BLM manages key tracts of low-elevation habitat, the precious and critical “winter range” that supports many wildlife species during the fierce winters of the intermountain west.

Forest Service and BLM lands also carry tremendous value for sportsmen. The Forest Service, for example, boasts more than half of the trout and salmon streams and more than 80 percent of the elk, mountain goat and bighorn sheep habitat in the lower 48 states.¹²

Together, the Forest Service and BLM lands form a foundation for the conservation of American fish, wildlife and plant life, supporting an incredible wealth of biological diversity that translates directly

into overall land health. Forest Service and BLM lands contain the right biological pieces, in the proper arrangement, to create a network of lands that will be productive and resilient for generations to come, if we—the American people and the agencies charged with the management of these lands—take our collective stewardship responsibility seriously. With the proper tools in place to maintain, manage and measure fish and wildlife populations, the two land systems could sustain the health of the land and provide myriad direct and indirect benefits to the American people for generations to come.

SOCIAL AND ECONOMIC BENEFITS

Much as a doctor assesses our health by taking our temperature, heart rate and blood pressure, a biologist gauges the health of our lands by measuring the condition of the native plant and animal populations that rely on those lands. Healthy lands have habitat of sufficient quantity and quality to support the stable and sustainable wildlife and plant populations that scientists describe as “viable populations.”

Healthy lands that support viable populations of wildlife and plants are far more capable of providing present and future generations of Americans with tangible benefits than unhealthy lands with diminished habitat devoid of animals and plants. Healthy lands rich in habitat and wildlife serve as a buffer against a changing climate, provide us with clean water and air, wood fiber and energy products, and outdoor recreation such as hunting, fishing and wildlife viewing. The continued provision of these valuable products and services is contingent on maintaining the health of the land over time.

Outdoor recreation is a case in point. Outdoor pursuits contribute a whopping \$730 billion annually to the U.S. economy and support 6.5 million jobs across the United States.¹³ More than ever, Americans are seeking out federal public lands for



Fly-fishing, Utah | © Cameron Lawson/National Geographic Stock



TABLE 1. Participation in Recreation on Forest Service Lands by Activity (2004)

ACTIVITY	TOTAL PARTICIPANTS
Backpacking	25.8 million
Primitive camping	33.1 million
Developed camping	66.5 million
Visited wilderness area	71.9 million
Day hiking	81.3 million
Canoeing	26.9 million
Horseback riding	19.1 million
Rafting	33.1 million
Mountain biking	42.5 million

Source: U.S. Forest Service. Recreation Statistics Update Report: Participation Rates for Outdoor Activities in 2004

adventure, respite and relaxation. Forest Service and BLM lands offer the most, and best, opportunities for outdoor recreation. For example, national forests offer more than 133,000 miles of trails and 95 Wild and Scenic Rivers, and increasing numbers of people are diligently seeking out these opportunities (Table 1).

When you consider what makes an outdoor recreation experience so valued and valuable, solitude, adventure, exercise, beauty, spiritual renewal and other factors come to mind. Something even more fundamental becomes apparent when you think what the outdoor experience would be like without wildlife. Robust and diverse animal and plant populations are an indicator of land health and essential to the experience

people are seeking when they choose to recreate on our federal public lands.

Degradation of wildlife habitat affects the quality of the outdoor recreation opportunities. It can have direct impacts such as sedimentation from a logging project fouling a trout stream or an oil drilling operation displacing a big-game herd from a sportsman’s favorite valley. It can also have indirect impacts such as depriving us of an opportunity to be in the presence of wildlife or diminishing our enjoyment of the wilderness experience. Recreating on public lands in the absence of key fish and wildlife values is like visiting an art museum missing its masterpieces.

The logical links between the condition of fish and wildlife populations, the



health of the federal public lands and direct positive benefits to the American people is certainly evident in the case of fishing and hunting, much of which takes place on our public lands, including the federal lands that make up the majority of those lands. In New Mexico, 94 percent of hunters hunt on public lands, as do 88 percent of Idaho hunters, 86 percent of Montana hunters, 81 percent of Utah hunters and 74 percent of Wyoming hunters.¹⁴ These hunters count on the presence of robust fish and wildlife populations on these lands and in return bring substantial benefits to communities and to our national economy.

In 2006, sportsmen spent a total of \$76.7 billion in pursuit of their passion.¹⁵ That same year, some 30 million U.S. residents reported

enjoying fishing opportunities and spent \$42.2 billion in the process.¹⁶ In Montana, Colorado, Wyoming and New Mexico alone, anglers

spent nearly \$1.7 billion in 2006 on fishing-related expenditures.¹⁷ In addition, some 12.5 million people went hunting in 2006, and 10.7 million of them pursued big-game species such as deer, elk and bighorn sheep.¹⁸

The figures on wildlife viewing and

birding on federal public lands are also impressive. Like hunting and fishing, these activities rely directly on healthy fish, wildlife and plant populations. In 2006, some 70 million Americans spent more than \$45.7 billion on wildlife watching.¹⁹ Over 30 million participated in wildlife photography, and close to 61 million people birded.²⁰ In 2006, 80 percent of all people who took trips to watch wildlife visited public lands, including federal lands, which make up the majority of those lands.²¹ You don't have to be an economist to understand the direct impact on these values should the condition of fish and wildlife on federal public lands diminish. Indeed, the viability of outdoor-based industries relies on the careful stewardship of our federal public land system.

The trends and values associated with outdoor recreation are shifting the economies of the American West. Yesterday's resource-extraction-based economies are now being buoyed or supplanted by new economies driven by values directly and indirectly derived from healthy federal public lands. For example, more people are choosing to live near national forests and BLM lands to enjoy the higher quality of life that comes with having towering mountains, lush forests, clean water sources, blue-ribbon fisheries and huntable wildlife populations in their backyards.

The viability of outdoor-based industries relies on the careful stewardship of our federal public land system.

Yet these and all of the benefits and values we derive from public lands are directly threatened if we continue to compromise the health of these precious places with regressive resource management like that practiced under the Bush administration.

2

MANAGING FOR MULTIPLE USES

Approaches, Mandates, Rollbacks and Recommendations



With their mission of providing multiple social, economic and ecological benefits to the American people over time, the Forest Service and BLM stand apart from the other federal land-managing agencies. Even though Congress

has passed several notable laws to help balance and guide the multiple-use mission, its implementation has proven not only challenging, but, in some cases, controversial. Forest Service and BLM managers often find it difficult to balance competing demands on their lands and have been hindered by a lack of clear direction on how to effectively and efficiently implement multiple-use policy. Now scientists and policymakers are recognizing that aspects of Forest Service and BLM management policies must be clarified

II, the Forest Service tended to manage its lands based on a rigid and narrow economic philosophy. Clear-cut logging and associated road-building activities were widespread on our national forests, with negative results for fish, wildlife, plants, watersheds and ecosystems.²³ However, the agency was generally following what was considered to be its driving mission. It had neither the policy mandate nor the tools to maintain, manage and measure what we now call sustainable ecosystems or land health.

Scientists and policymakers are recognizing that aspects of Forest Service and BLM management policies must be clarified to effectively implement multiple-use policies.

to effectively implement multiple-use policies. This part of our report reviews how we got to this point and what we need to do to reinstate the multiple-use ideal of managing our public lands for all Americans, not just a few select industries.

THE FOREST SERVICE APPROACH

The Forest Service, created in 1905, manages 193 million acres of federal public land “to sustain the health, diversity and productivity of the nation’s forests and grasslands to meet the needs of present and future generations.”²² For much of its history, the Forest Service enjoyed a reputation as a proud and well-managed federal agency. Increasingly, the agency is facing the challenges of implementing a complex mission that may not be keeping pace with shifting societal values. Yet even as the Forest Service has found itself at the center of many contemporary resource controversies, the agency has proven to be adept at effectively pursuing its mission when given the proper policy direction and management tools.

In the decades following World War

Then, in the 1970s, America had a widespread and science-driven ecological awakening. The resulting shift in values pushed the Forest Service to acknowledge that favoring short-term extractive uses was not sustainable in the long term and that the pursuit of short-term economic interests could, in fact, diminish the long-term health of the land. Americans recognized that practices such as clear-cut logging were diminishing the health of their federal lands, and Congress appropriately intervened to provide the Forest Service with modern conservation planning tools reflective of changing values.

In 1976, Congress responded to the increasingly high values Americans placed on their federal lands and passed the National Forest Management Act (NFMA). The enactment of NFMA was a watershed event in public-lands management because it provided the Forest Service with the mandate to conserve the diversity of life found on national forests and grasslands.

In 1982, the Reagan administration finalized regulatory provisions initiated and developed by the Carter administra-



tion that clarified and bolstered the statute. Together, the NFMA statute and the 1982 regulations provided the Forest Service with the congressional mandate and necessary policy tools to balance ecological values with other multiple-use objectives.

NFMA and the 1982 regulations directed the Forest Service to create a comprehensive management plan for each national forest and grassland through a process that allows for public input and transparency in Forest Service decision-making. Each plan provides managers with a strategic road map for implementing a range of activities that must

comply with the overall goals of the plan. Most important, each plan articulates how the Forest Service will maintain, manage and measure viable wildlife populations in implementing agency programs and projects.

NFMA provides the agency with the mandate to conserve ecological values on Forest Service lands. According to the statute, the Forest Service must “provide for diversity of plant and animal communities” as the agency establishes plans and undertakes multiple-use activities on its lands.²⁴ The 1982 regulations elaborated on the implementation of this “diversity provision” and required the

Forest Service to set measurable standards for wildlife management. According to the regulations, the Forest Service must “maintain viable populations of existing native species” in their planning and management actions.²⁵ This “population viability standard” provides the agency with a yardstick to measure how well they are performing their duty to maintain the ecological health and diversity of our national forests and grasslands.

However, a standard is only useful to the extent that its effectiveness can be evaluated. To evaluate performance in achieving diversity goals and viability standards and to measure the impact of agency actions on a suite of biological resources and the overall ecosystem, the 1982 regulations required the Forest Service to assess the impact of forest plans and associated projects on the condition of populations of a subset of key “management indicator species.” The concept of using indicator species to detect changes in natural systems remains in practice today, albeit with several innovations in its application.

This comprehensive statutory and regulatory package provided the Forest Service with the tools to fulfill its obligation to sustain the health of the people’s lands and deliver a range of benefits to all Americans. NFMA’s overarching notion that the condition of wildlife populations could be a bellwether for environmental change and overall land health served us well for two decades. Then came the policy changes that brought us back to the point where wildlife policy standardization is once again urgently needed.

ROLLBACKS AND REGRESSION

In 1999, the Clinton administration proposed sweeping changes to NFMA-related policies that redefined how the Forest Service interpreted its multiple-use mandate. As part of this rule-making process, and in accordance with NFMA, the Forest Service convened a committee of scientists to provide guidance on the new policies. In its report to the



1990s clear-cutting, Olympic National Forest, Washington | © www.joelsartore.com

Forest Service, the committee emphasized ecological sustainability as the fundamental, overarching objective of national forest stewardship.

Sustainability, according to the committee, should be the foundation of multiple-use management, and species viability is essential to ensuring sustainability.²⁶ The Clinton proposal attempted to incorporate these notions into its proposed rule. However, before such regulations could take effect, George W. Bush took office, and the political winds shifted.

With the arrival of the Bush administration, the fortunes of wildlife and the future of our public lands faltered. At the behest of the timber, mining and oil and gas industries, the administration proposed vague and highly discretionary forest-management planning guidelines. These guidelines eliminated the common-sense rules requiring the Forest Service to account for fish and wildlife populations in planning and project decision-making.

Under the regressive forest policies of the Bush administration, long-standing concepts of balanced multiple-use management and science-based decision-making became secondary to the narrow pursuit of resource extraction projects without careful consideration of fish, wildlife and other social and environmental values. These rollbacks allowed national forest managers to craft forest plans without considering



the impacts to fish and wildlife populations and thus move ahead with harmful logging, mining and drilling projects.

Removing the Forest Service's wildlife population viability standard and associated monitoring functions was like taking away a doctor's stethoscope and other diagnostic tools. Without it, there is no accurate way to know if a system is functioning properly. This can lead to the kind of short-term thinking that results in poor water quality, poor air quality, a measurable decrease in public health, and ecosystems on the brink of collapse. The ability to detect changes and possible declines in the condition of our vital federal lands, which the viability standard

confers, is the most common-sense approach to ensuring the overall health of these lands.

THE BLM APPROACH

Formed in 1946 by a merger of the U.S. Grazing Service and the General Land Office, BLM manages more wildlife habitat than any other federal or state agency and still lacks the appropriate regulatory tools to conserve fish and wildlife resources. More than 1,500 sensitive species are found on BLM lands, which are increasingly recognized for their high overall habitat values and have long been sought out for outstanding fishing and hunting opportunities.

Operating under the Federal Land Policy

THE WILDLIFE POPULATION VIABILITY STANDARD

VIALE FISH, WILDLIFE AND PLANT populations are integral to maintaining ecological diversity and are an indication of overall land health. Biologists define a viable population as one that can sustain itself over a period of at least 100 years. A viable population must have a sufficient number of individuals well-distributed across the landscape, and reproductive and survival rates that allow it to persist over the long term. Essentially, population viability is all about the factors that control birth and death rates—quantifiable data scientists can use to forecast a population's persistence over time.

This wildlife viability standard gives agencies a basis for making sustainable land-management decisions. For example, if surveys indicate that a wildlife population is holding steady, managers can proceed with planned projects confident that they are not significantly altering the health of the land. If the population is observed to be declining, managers can assess the contributing factors and determine if adaptive actions can be taken to reverse the downward trends.

Wildlife population viability is useful and meaningful to land managers because it acts as an indicator of overall land health and an early warning system. Agencies can readily measure the viability of a population to evaluate how well they are protecting key land values.

and Management Act (FLPMA), the BLM, like the Forest Service, manages its lands for multiple purposes—including timber, energy, recreation, range and wildlife resources. Although FLPMA advises the BLM to “take any action necessary to prevent unnecessary or undue degradation of the lands” and “to minimize adverse impacts on the natural, environmental, scientific, cultural and other resources and values of the public lands,” the BLM enjoys wide discretion in how to manage the fish and wildlife under its stewardship.²⁷ In addition, although the BLM has policies in place to help prevent species from being listed under the Endangered Species Act, the policies are vague and difficult to enforce. Historically, the agency’s culture has leaned toward promoting resource extraction and pursuing short-term economic objectives. This bias has been extremely evident in aggressive implementation of energy development projects in the last several years in several western states. From 2001 to 2007, nearly 21,000 gas and oil wells were drilled on federal public land in Colorado, Wyoming, Utah, New Mexico and Montana.²⁸ Between 1995 and 2000, fewer than 9,500 wells were drilled.²⁹

But times are changing on BLM lands. The call to sustain the fish, wildlife, recreation and other noncommodity values that exist on the BLM lands is growing louder from

all quarters, including western governors and sportsmen. All parties recognize that population growth, energy needs and an uncertain climatic future call for intelligent fish and wildlife planning on BLM lands.

To achieve the mandates set forth in FLPMA more effectively and bring the agency into the 21st century model of conservation, BLM needs a new direction and the necessary tools to do a better job of managing natural resources and providing multiple values to the American people.

TRANSCENDING AGENCY BOUNDARIES VIA THE VIABILITY STANDARD

For fish and wildlife, the problem extends beyond the regressive policies of the Bush administration that targeted the Forest Service and the BLM. There is a growing awareness that wildlife, particularly wide-ranging animals, needs to be maintained, managed and measured across agency boundaries—that the proper scale of management is at the landscape level, well beyond the boundaries of the administrative unit. For example, herds of mule deer, pronghorn and elk migrate seasonally between summer habitat on higher-elevation Forest Service lands and critical winter range on lower-elevation BLM lands. Many other species move



between Forest Service and BLM lands in their pursuit of food or mates or reside in populations that spatially transcend agency boundaries.

If we restore the wildlife viability standard to the Forest Service alone, the overall

VIABILITY TOOLS

APPLICATION OF ADVANCEMENTS in the field of conservation science and planning can provide land managers with new tools to efficiently and effectively maintain, manage and measure for ecological diversity. In the past, due to challenges concerning the appropriate methods to use and capacity constraints, land managers often had neither the incentive nor the ability to collect meaningful biological information. Consequently, they were vulnerable to making poorly informed decisions that placed fish and wildlife populations at risk.

Today, with more knowledge and better tools, managers can collect critical biological information more efficiently and cost-effectively and apply it to decision-making. For example, under what is known as a “coarse filter/fine filter” conservation planning system, managers do not have to conduct costly surveys for every population of fish, wildlife and plants found in a planning area. Instead, a combination of broad habitat measures (such as the composition and structure of a forest stand) and targeted surveys of select indicator fish, wildlife and plant populations can provide robust, policy-relevant information.

This combination of habitat and species information helps biologists establish quantifiable management objectives. It also provides a means of efficiently assessing the impact of management decisions with a comprehensive monitoring plan that outlines a strategy for collecting and analyzing data on habitat attributes, indicator species and at-risk species that may require special attention. A dedicated strategic monitoring plan acts as an early warning system, letting managers know when key habitat attributes and population trends indicate a need for adaptive response.



condition of a migratory population of mule deer, for example, may still be diminished when those animals move into BLM lands. Regressive policy by any land-managing agency hurts wildlife and conservation efforts everywhere.

In recent years we have seen firsthand the disastrous results of nonstandardized agency policies. With a new administration, however, we have an opportunity to enhance and standardize policies across agency boundaries. Given the pressure the demand for energy places on BLM lands and the importance and value of the wildlife that resides on those lands, we need to seize this opportunity and extend the wildlife population viability standard to BLM.

RECOMMENDATIONS

Our recommendations for changes in Forest Service and BLM fish and wildlife management policy amount to simple, common-sense reforms that will provide these agencies with the tools managers need to sustain the

health of our federal lands and to provide diverse and sustainable multiple-use benefits to present and future generations.

→ **Restore the wildlife population viability standard to the Forest Service.** The directive to maintain, manage and measure fish and wildlife populations is clearly provided by NFMA, and a comprehensive wildlife viability standard is the best means of meeting it.

→ **Modernize the wildlife population viability standard.** Updating the viability standard, which was originally established by the Forest Service in 1982, to reflect state-of-the-art conservation science will facilitate more efficient and effective land-management decision-making.

→ **Expand the wildlife viability standard to apply to BLM lands.** Adopting the wildlife population viability standard will:

- Enable BLM to elevate its fish and wildlife management criteria to match the values of the American people;

- Standardize fish and wildlife management and enhance cooperation across federal agency boundaries, particularly in the area of wildlife corridor management;
- Realize a vision of true landscape-level planning and connectivity management that policymakers are increasingly calling for and that will be needed to respond responsibly to the challenges of a changing climate.

These policy reforms centered on sustaining wildlife population viability will greatly improve the management of fish and wildlife on our federal lands and enhance the ability of our agencies with a multiple-use mission to maintain healthy lands. These reforms will bring the Forest Service and BLM into the 21st century and provide the two agencies with the tools they need to respond to the conservation and land-management challenges of today and tomorrow.

3

RESTORING BALANCE Case Studies, Challenges and Solutions

The following case studies demonstrate the urgent need for, and applicability of, the policy recommendations of this report. Each case highlights a critical problem for a particular species. The species highlighted range from the common to the rare found on Forest Service and BLM lands across the country.



CASE STUDY NO. I

Mule Deer in the Intermountain West

Background: In western Wyoming, at the southern edge of the greater Yellowstone ecosystem, ribbons of wetlands meander through a high-desert valley rimmed with five separate mountain ranges and scented with the savory-sweet perfume of wild

western sage. Upon this quintessential western landscape, as rugged as the Teton Mountains that cap the valley to the northwest, sagebrush spreads a pale green blanket over a valley floor where the world's largest congregation of mule deer roams. Lewis and Clark named these deer for their long, always twitching, mulelike ears. With bucks sporting antlers that can span four feet, mule

deer are a favorite of hunters and one of the West's most culturally, socially and economically important species.

Moving with a distinctive, stiff-legged gait, mule deer travel with the seasons of the landscape. In spring they forage on mountain grasses and forbs and give birth to, and rear, their young. In summer, they graze and browse the slopes and meadows. In winter,

they travel up to 100 miles to the valley lowlands where they can find forage not buried by deep winter snows. These winter months are long and snows hold spring at bay well after summer has begun elsewhere.

The Upper Green River Valley near Pinedale, Wyoming, provides the largest expanse of publicly owned winter habitat in the greater Yellowstone ecosystem. The importance of this land, managed by the BLM, cannot be overestimated. For mule deer and other migratory grazing animals like elk and pronghorn, this

Mule deer near Denver, Colorado | © Wendy Shattil/Bob Rozinski



sagebrush valley is life itself.

But there is another prize here, highly sought by energy companies. This region contains one of the largest natural-gas reserves in the United States—and offers a multi-billion-dollar payoff to energy corporations and the state and federal governments. Energy corporations like EnCana and Shell extract more than a billion cubic

feet of natural gas per day from area wells.³⁰ One drilling project on nearby Jonah Field is expected to yield \$6.1 billion in royalties to be split between the state and federal governments.³¹ In a time of fluctuating natural gas prices, concerns about the plight of mule deer and other creatures of the sagebrush are easily eclipsed by the politics of promise and potential profits in this energy-rich region.

The rapid expansion of energy development on our western Wyoming federal public lands hits the mule deer where it hurts most. While they are rugged creatures that have adapted well to this region, healthy winter range is essential for their survival and for their ability to bear and rear the next generation. Freezing temperatures and sparse food sources already put significant natural stress on the deer; habitat loss from natural gas development and the resulting infrastructure can simply be too much.

Nonetheless, with no mandate to maintain, manage or measure wildlife populations on the lands it manages, BLM has continually made decisions without regard to impacts on mule deer and other species like pronghorn, greater sage grouse, pygmy rabbit and elk. For example, in the Pinedale area, BLM has granted 70 percent to 90 percent of the industry requests it received for waivers to regulations designed to reduce risk to wildlife, such as guidelines to preserve critical mule deer winter range and to protect sage grouse, hawks, eagles and other species during sensitive breeding seasons.³² Since 2002, mule deer populations in the Pinedale area have dropped by 47 percent in areas where gas development is increasing.³³ Energy development machinery and infrastructure not only directly destroy habitat, but also push the deer away from surrounding habitat. Mule deer avoid machinery, noise and intense human activity, but still return to the same locations in their winter range every year—often crowding into areas away from drill pads and other development but nearly barren of food to forage.³⁴

And the situation is getting worse. In the absence of wildlife viability standards, the BLM continues to make management decisions that further imperil wild species. In the fall of 2008, the BLM issued a revised resource management plan for the lands under its jurisdiction in the Pinedale region. The revisions, which will guide management of these lands for the next 10 to 15 years, will allow corporations to drill more than 7,100 additional wells in that area.³⁵ Under a common-sense wildlife viability policy, BLM would be required to ensure that such large-scale development would not impair the future of species like the mule deer.

These changes in management will have devastating effects for wildlife. Mule deer, sage grouse, white-tailed prairie dog, pygmy rabbits, foxes and countless other sagebrush ecosystem species are already feeling the crush of a century of rapid human development in the West. Half of this ecosystem, which occurs nowhere else in the world, has been lost, and what remains continues to be threatened by unsustainable development, agriculture, non-native species, energy development and other extractive uses.

The inability of the BLM to maintain, manage and measure fish and wildlife populations will also have direct negative impacts on humans. Without information on the condition of fish and wildlife populations, managers expose themselves to poor decisions that may impair the health of the land and local economies.

The decline of mule deer and other big-game populations will also hurt people, businesses and communities. Healthy herds of mule deer, pronghorn, elk and bighorn sheep are important components in the economy of the new West, where hunting draws millions of people who spend considerable sums on food and drink, transportation, lodging, souvenirs, apparel, guide services and equipment. These economic benefits depend on significant, reliable wildlife populations, which in turn depend

on high-quality, interconnected habitat. Indirectly, mule deer represent the health of the land in these times of rapid energy development. Mule deer in poor condition may be indicative of negative changes in the rest of the ecosystem that could affect the quality of life in the region.

Challenge: Manage mule deer and other sagebrush-dependent fish and wildlife in the face of a booming energy-development cycle on BLM lands.

Solution: Plan for and assess the impact of these energy-development projects on fish and wildlife habitat well in advance of leasing and permitting decisions and at the appropriate landscape scales. Work cooperatively with state fish and wildlife agencies to manage these projects by applying quantifiable and enforceable population and habitat objectives. Also cooperatively monitor fish and wildlife populations and habitat to inform future decision-making.

CASE STUDY NO. 2

Pronghorn on the Western Range

Background: As North America's fastest land mammal, capable of speeds up to 60 miles per hour, Wyoming's wide-open spaces seem tailor-made for the shy, swift pronghorn. And for more than 6,000 years, pronghorn have been at home here, trekking through the mountains of the West to the valley lowlands every year as the cycles of nature bid them. Winter demands that they leave the deep snows of places like Wyoming's Teton Mountains and ride out the harshest months in places like the Upper Green River Valley, so that they are strong enough to give birth to and raise their young upon returning to the mountains in spring.

These spectacular migrations of pronghorn and other wanderers of the West such as elk, mule deer and bighorn sheep recall a time when the prairies of North America were



alive with roving herds of grazing wildlife. In the past century, each decade has made the pronghorn's journey more difficult as more land is fenced, developed and drilled to meet the energy demands of an ever-expanding human population. Unable to jump fences and other barriers, the pronghorn is not well-equipped to adapt to the changes that have swept the West. Pronghorn are often hit by cars as they try to navigate a landscape pocked with gas wells, housing developments

and shopping malls.

That the pronghorn has persevered in its seasonal wanderings thus far is a testament to its fortitude. In Wyoming's Upper Green River Valley; a biologically unique and fragile herd of pronghorn relies on a genetic roadmap to migrate nearly 150 miles twice a year, the longest land-mammal migration in the continental United States and the second longest in North America after Alaska's Porcupine caribou herd. But hous-



ing development and energy exploration are on the rise, narrowing the last linkages still available to these travelers. More than 75 percent of the 1.2 million acres of federal land in Wyoming's Upper Green River Valley region is already under lease for oil and gas.³⁶ In Colorado, more than 30 percent of pronghorn habitat falls within areas of potential energy development,³⁷ and large-scale proposals for drilling are pending, including one in BLM's Little

Snake unit that could bring 3,000 new oil and gas wells to the region.³⁸

In countless places, pronghorn migration routes have already been fragmented, narrowed or cut off altogether. Once there were eight possible routes a pronghorn could take from Grand Teton National Park to the Upper Green River Valley, now only two remain, each only about 330 feet wide in some spots.³⁹ The current pace of development threatens to sever all the pronghorn's

ancient paths. Once the pathways of pronghorn migration have been altered, this natural phenomenon may be lost forever.

No single agency or level of government can ensure the protection of wildlife migration corridors across jurisdictional boundaries. Thus neither the Bridger-Teton National Forest nor the Wyoming Game and Fish Department alone can ensure viable populations of pronghorn and other wide-ranging wildlife, even with adequate conservation tools in place. Unless all the governments and agencies involved work together and use the same tools, the management of the wildlife migration route will be haphazard, at best.

To halt the constriction and diminishment of seasonal migration routes for pronghorn and other wildlife, it is absolutely critical to standardize the management goals of the Forest Service and BLM. Policies must be put in place to direct these two agencies to actively cooperate with state fish and game agencies, other federal land-management agencies (such as the National Park Service and U.S. Fish and Wildlife Service) and other stakeholders. Efforts like the Western Governors' Association's *Wildlife Corridor Initiative*, which calls for cooperative wildlife habitat and corridor management involving various levels of government, underscores the on-the-ground need for this type of policy reform.

Challenge: Keep seasonal migration routes open and protected for pronghorn and other migratory wildlife populations that cross jurisdictional boundaries.

Solution: Enable the Forest Service and BLM to coordinate with the U.S. Fish and Wildlife Service, National Park Service and other federal, state and tribal agencies, local governments and nongovernmental organizations to maintain the viability of wide-ranging wildlife populations by preserving and establishing linkages between habitats.

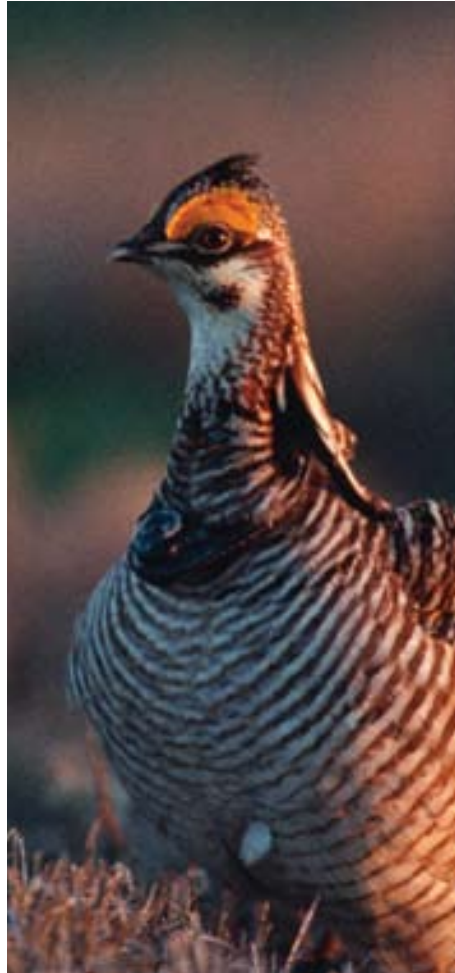
Prairie Chickens on the Great Plains

Background: A century and a half ago, spring mornings in the short-grass prairies of the Great Plains came alive with the melodious gargling-gobble of male lesser prairie chickens calling into the boundless prairie sky. In these wide-open spaces, their booming (the vocal component of their complex courtship ritual) could be heard for miles.

To defend his lek (a mating area that consists of an elevated, relatively bald patch of ground) the male struts and cackles, inflating flexible sacs on his neck until they look like red-orange balloons stuck to either side of his head. This annual ritual, the inspiration for some of the dances of the Plains Indians,⁴⁰ brought us generations of prairie chickens. But as grasslands habitat has disappeared over the past century, so has the prairie chicken. The population of lesser prairie chickens has declined by 97 percent since the 1800s.⁴¹ These remaining birds occupy a range that is just 8 percent of what it was historically.⁴² The lesser prairie chicken is at the point of consideration for listing under the Endangered Species Act.

Lesser prairie chickens are not the only ones to lose out as the American grasslands have disappeared to human development. A whole suite of grassland-dependent birds—including grasshopper sparrows, mountain plovers, long-billed curlews and chestnut-collared longspurs—are found only on the Great Plains. These grassland birds have been declining over the past three decades and are now considered the most imperiled group of birds on the continent.⁴³ A worsening condition for grassland-dependent birds means fewer opportunities for birders and photographers alike to observe these fascinating species. The lesser prairie chicken and health of the native grasslands have not only intrinsic biological value, but also great social and economic value.

Lesser prairie chicken, Oklahoma | © www.joelsartore.com



Conversion to agriculture, decimation of the wild bison herds that once shaped the landscape and fire suppression have altered and diminished all but the slightest fraction of the native grasslands of North America. Less than one percent of the Great Plains' nearly 500 million acres is set aside as national grasslands.⁴⁴ The 435,000-acre Comanche National Grassland in southeast Colorado consists of and acts as a key refuge for grassland creatures that have few other places to turn. With more than 70 percent of the lesser prairie chicken's current range found on vulnerable private land,⁴⁵ the Comanche and other national grasslands may be our best hope for maintenance and restoration of the species.

Due to the policy rollbacks of the Bush administration and failure to adhere to

the wildlife viability standard, the Forest Service now lacks the adequate conservation tools to manage effectively for fish and wildlife, and other associated public values, on the national grasslands. Revisions to the Forest Service management plan for Comanche National Grassland eliminate protections and management prescriptions that support wildlife viability on this landscape. The revised plan may allow resource extraction projects and other harmful uses to proceed without standards for maintaining viable and diverse wildlife populations. The fact is that development projects may or may not significantly impact wildlife populations, but without the mandate and tools to measure the effects, species are at greater risk. For wildlife managers, ignorance of population condition is not bliss.

Several grassland species, including the lesser prairie chicken, are already imperiled. Pursuing a management strategy that does not include wildlife viability tools clearly places these species at greater risk and restricts our ability to protect and restore one of the most threatened and biologically diverse ecosystems on the planet. When faced with species that are just holding on in scattered bastions of habitat, the federal land-management agencies must be given every necessary policy tool to contribute to the conservation of those species. In such cases, the Forest Service and BLM are our last best hope for conservation.

Challenge: Develop “upstream” conservation solutions to keep prairie chickens and other grassland species off the federal endangered and threatened species list and to protect the intact federal lands critical to grasslands and other at-risk ecosystems.

Solution: Give the Forest Service and BLM clear policy direction and science-based management tools to monitor and ensure the viability of at-risk wildlife and habitat.

CASE STUDY NO. 4

Three-toed Woodpeckers in Northwestern Old-Growth Forests

Background: In the ancient forests of Oregon's Cascade Mountains, a three-toed woodpecker works the wildfire-singed trunk of a large tree, feasting on bark beetles. These insects, a staple of the three-toed woodpecker diet, abound in the dying or recently dead trees called snags found in the dynamic forests of the Cascades.

The American three-toed and other woodpeckers thrive in these forests. They nest in large cavities they drill in the softened wood of standing snags and feed on the insects found in snags and in fallen, charred or rotting logs. As woodpeckers go about their work, drumming and

foraging, the entire forest prospers.

The nesting cavities of American three-toed woodpeckers are also used by more than a dozen other species, including the red tree vole and the threatened northern spotted owl. By eating wood-boring beetles, the three-toed and other woodpeckers help protect living trees from outbreaks of these pests, which can take over in a stressed forest and decimate acres of trees.

Because they are so dependent on large trees and so beneficial to other species, woodpeckers are ideal indicators of the overall health of western forests. Declining woodpecker populations indicate deteriorating forest conditions.

Monitoring the condition of indicator species like woodpeckers provides managers with an effective and efficient means of

measuring the health of forested habitats and associated wildlife. For example, managing for viable woodpecker populations will aid in the recovery of species such as the northern spotted owl by ensuring the availability of nesting cavities for the owls and their prey species.⁴⁶

Using the science-based tools of NFMA and the associated wildlife viability standard, the Willamette National Forest in Oregon spelled out guidelines in its 1990 forest plan for the management of indicator species like woodpeckers.⁴⁷ The plan required that minimum levels of standing dead trees be retained in logged areas, ensuring the persistence not only of the woodpeckers, but of the complex ecosystem that they represent. The use of the management indicator species policy and other provisions of the viability standard on the Willamette is an important success story for the old-growth forests and wildlife found on the national forests of Oregon.

Woodpeckers and other forest dwellers on adjacent BLM lands are not as fortunate. In western Oregon, BLM has proposed a 400 percent increase in clear-cutting and other logging on 2.6 million acres, including within rare, biologically rich, mature and old-growth forests.⁴⁸ Unlike its Forest Service neighbors, BLM does not incorporate the needs of snag-dependent species nor standards for snag retention into their plans.⁴⁹ Lacking the tools to maintain, manage and measure the condition of indicator species like woodpeckers places BLM lands, fish and wildlife at a disadvantage.

Challenge: Track and maintain the status of key species that are indicators of the health of dynamic forest ecosystems.

Solution: Provide the Forest Service and BLM with the ability and resources to develop comprehensive monitoring strategies that identify a limited set of key indicator species, such as woodpeckers, to provide the information needed to guide ecosystem-management decisions.



Three-toed woodpecker, northwestern old-growth forest | © Tom Munson

Cutthroat Trout in the Colorado River

Background: Where aspen leaves quiver and the headwaters of the upper Colorado River polish riverbed rocks, the colorful Colorado River cutthroat trout dwells. There the fish shelters its eggs in the cool, shaded waters that flow from nearby Pike's Peak and other surrounding mountains. Like more than a dozen other cutthroat trout species, the Colorado River cutthroat is characterized by the red slash of color found on the underside of its jaw. All cutthroat trout species are highly prized by the anglers who go to considerable effort to fish a blue-ribbon trout stream. More often than not, that valuable cutthroat stream is found on federal public lands.

Like other cutthroats, the population and range of the Colorado River cutthroat has been slashed over the past century of human expansion and development. Once found in the Colorado River drainage in Wyoming, Colorado, Utah, Arizona and New Mexico, the Colorado River cutthroat now occupies less than 14 percent of its former range. It has retreated to the isolated headwater streams of the Green and the upper Colorado rivers in Colorado, Utah and Wyoming, where there are few roads and little to no human activity.⁵⁰

Consequently, the fish, along with several

of its relatives, including the Yellowstone cutthroat trout and the Rio Grande cutthroat trout, have been designated "vulnerable" by the American Fisheries Society.⁵¹

These native species now rely on stronghold populations on undeveloped lands. Federal public lands offer some of the best habitat for these fish—74 percent of the Colorado River cutthroat trout's current habitat is located on lands managed by federal agencies, with approximately 66 percent managed by the Forest Service and 7 percent managed by BLM.⁵² Places like the Pike and San Isabel national forests harbor some of the remote streams on which the fish depend. These forests provide cutthroat trout with the well-shaded, cold, clear water they need.

An increase of just a few degrees can trigger spawning in trout and throw off everything from migration to the amount of time required for eggs to develop and hatch.⁵³ Forest management projects that remove vegetation along streams can expose the water to more sunlight and increase temperatures, with devastating effects on cutthroat trout life cycles.⁵⁴ And with global warming already altering water conditions, temperatures and availability, the last isolated populations of Colorado River cutthroat trout face an even more uncertain future.

Scientists are forecasting that climate change will result in changes in precipitation patterns, which will likely lead to large declines in the summer flows of rivers and streams that the cutthroat depend on, and increased temperatures, which will force these trout into even higher-elevation, more isolated waters.⁵⁵ Coupled with the fact that increased human demand for these limited water resources will occur from a rapidly expanding human population, their future is uncertain.

Despite this trout's habitat requirements, and the imperiled nature of the species, the Forest Service routinely moves forward with projects that exacerbate degradation of cutthroat trout habitat.⁵⁶ Activities like logging, road-building, mining and oil and gas production all require development that can impair water quality and damage riparian vegetation that is critical in preventing flooding, bank erosion and sedimentation that can suffocate fish and their eggs.⁵⁷ Given the pressure cutthroat trout are already facing from competition with non-native species and a changing climate, their fragile populations may not be able to handle the added stress of land-management decisions that do not adequately consider their needs.

In 2008, the Pike and San Isabel national forests of Colorado resumed the revision of their forest plans, without the tools provided through the wildlife viability standard. This means the long-term persistence of the Colorado River cutthroat trout and other aquatic species—as well as forest inhabitants such as black bear, bighorn sheep, elk and mountain lions—may not be fully addressed in these plans. The cutthroat trout is a strong indicator of aquatic system health. Failure to maintain, manage and measure Colorado cutthroat populations will have impacts on recreation and many other land values—and our nation's economy.

Pike and San Isabel are two of the most visited national forests, drawing people from all over the nation for river sports, hiking, mountain biking and fish-



Colorado River cutthroat trout, Utah | © Steve Stoner

Saguaro cactus, Arizona | © Carr Clifton/Minden Pictures/National Geographic Stock

ing opportunities. As Colorado cutthroat trout populations decline and the national forests these fish inhabit press forward with management plans that fail to account for the viability of cutthroat species, the quality and value of the recreational activities tied to these waters will also decline.

Challenge: Restore degraded habitat and prevent further damage from activities that impair water quality, damage streamside vegetation and exacerbate the impacts of global warming on coldwater streams.

Solution: Restore strong fish conservation standards to national forests and provide Forest Service and BLM managers the tools they need to maintain, manage and measure fish and wildlife populations under the uncertain conditions of a changing climate for the benefit of sportsmen and all Americans.

CASE STUDY NO. 6

Saguaro Cacti in the Sonoran Desert

Background: In the parts of the Sonoran Desert where it grows, the saguaro cactus stands alone against the desert skyline. But the rapid disappearance of intact desert as Arizona's human population has soared over the past 25 years has left only pockets of land for this desert trademark. One of these is the Sonoran Desert National Monument in southern Arizona. This 487,000-acre area managed by BLM was established in 2001 as an example of untrammeled Sonoran desert landscape. National monuments are designated by U.S. presidents and are supposed to be managed to higher standards protective of the values for which the monuments are specifically created. The presidential proclamation signed by President Clinton to create the Sonoran Desert National Monument in 2001 calls the saguaros in this area a "national treasure" and notes that "the most striking aspect of the plant communities within the



monument are the abundant saguaro cactus forests."⁵⁸ The monument is also part of BLM's National Landscape Conservation System (NLCS), created in 2000 to protect some of the West's most spectacular and nationally significant landscapes.

Lands managed by BLM in Arizona are also popular off-highway vehicle (OHV) recreation sites, and the saguaros and other cacti of the Sonoran Desert National Monument are showing the effects of poorly managed OHV use. A Northern Arizona University study assessing recreational impacts on the monument found that most damage to vegetation was connected to vehicle use—one-third of all the sites heavily affected by OHV use had damaged saguaros and other cacti.⁵⁹ The damage done is not limited to just these cacti—it has implications for a whole host of species for which the saguaro stands provide excellent habitat.

Although Sonoran Desert habitat is very

difficult to restore, the BLM will attempt to do so by closing 88 miles of road for the next two or three years.⁶⁰ National monuments and other units of the BLM's NLCS are supposed to be managed to higher standards, but without a population viability standard to guide efforts to protect saguaro cacti and other species, the future of this most biologically diverse North American desert and the plants and animals that live there will remain uncertain.

Challenge: Protect sensitive desert habitat from off-road vehicles and other high-impact recreational uses.

Solution: Expand strong habitat conservation standards to BLM lands, including places like the Sonoran Desert National Monument and other units of the National Landscape Conservation System, and provide BLM managers the tools they need to maintain, manage and measure key attributes of sensitive desert ecosystems.

CASE STUDY NO. 7

Ovenbirds in Southeastern Forests

Background: When fortune smiles, a patient birder can hear the loud “teacher, teacher, teacher” song of a male ovenbird resonating in mature deciduous forest on North Carolina’s Nantahala National Forest. Other ovenbirds looking for mates may soon join in for a sing-along that can last for up to 40 songs.⁶¹

Named for its on-the-ground nest’s resemblance to a Dutch oven, the ovenbird is one of the many neotropical migratory birds that spends its summers in our southeastern forests. Neotropical migrants make up the large majority of bird diversity—perhaps 80 percent in the southern Appalachian Mountains.⁶² The life of these small birds is brutally taxing. Some are tiny enough to fit in the palm of a child’s hand, yet they travel twice each year between the southeastern United States and Central and South America. For the ovenbird, this life is so hard that half of all adults are likely to perish each year during migration.⁶³

Like other neotropical migratory birds, ovenbirds need large, intact tracts of forest to survive. Clear-cutting and other logging practices that significantly alter interior forest habitat can negatively affect ovenbird reproductive success.⁶⁴ Agencies can use this type of information on the relationship between habitat and species as a “coarse filter” to more effectively and efficiently manage for groups of species with the same habitat needs. Rather than conduct a survey for each species, managers can assess how management of the common habitat type would affect a range of species and biological resources.

Some of the best and most expansive examples of mature forests that support neotropical bird populations are in the national forests of North Carolina.⁶⁵ In addition to providing crucial habitat for wing-weary migratory birds, these rare eastern forests known for their waterfalls



and wild azaleas offer people welcome escape from crowded cities and sprawling suburbs. The forests are an important destination for birders and other wildlife watchers. In 2006 alone, approximately 1.6 million people went birding in North Carolina.⁶⁶

The Nantahala was one of the first national forests established in the Southeast, and remains home to spectacular roadless areas and old-growth stands. But the administrative rollbacks of the Bush administration mean logging is on the rise in many of our national forests.⁶⁷ The Nantahala and Pisgah national forests will soon be revising their forest plans—using the Bush policy with no wildlife viability standards. Because there are relatively few federal publicly owned forests in the East, balanced science-based management of their resources is all the more vital for fish, wildlife and plant life. We cannot guarantee that neotropical migratory

birds will have habitat in their winter homes in Central America and South America, where deforestation constitutes an ongoing threat to many bird species. However, we can protect their breeding grounds here to give these colorful traveling birds the best chance possible for long-term survival.

Challenge: Preserve large tracts of mature deciduous forest to guarantee the reproductive success of dwindling populations of ovenbirds and other neotropical birds and wildlife with similar habitat requirements.

Solution: Enable Forest Service and BLM managers to apply the latest advances in conservation science and planning and choose the best possible options for managing and measuring sensitive avian populations and other wildlife for the benefit of birders and the American public.

CASE STUDY NO. 8

Wolverines in Northern Wildlands

Background: In the wildest reaches of Montana's Rocky Mountains, where winters rage with unforgiving cold, live some of the last few hundred members of a legendary species. Technically, they are weasels—but their unparalleled reputation for ferocity earned them the name wolverine. While grizzly bears are warm and slumbering in their dens, wolverines brave the elements to birth and raise their kits in the most rugged and remote country of the American West.

Although they weigh less than 40 pounds and stand only about two feet off the ground, stories are told of wolverines chasing grizzly bears off carcasses and taking down adult moose. In reality, they're more likely to eat something that requires a bit less energy—berries, carrion, small mammals—to satisfy the voracious appetite that earned them their Latin name, *Gulo gulo* (glutton), and sustains them in their long wanderings over immense home ranges.

The wolverine is an ideal case for illustrating the need for strong wildlife viability standards and a coordinated approach to wildlife management on national forest and BLM lands. Its large home range requires cooperative wildlife management across jurisdictional boundaries. Because the landscape they inhabit is so sparse with food sources, wolverines cover home ranges of up to 500 square miles, bridging multiple public and private land boundaries. This need to roam means that their populations cannot persist on a single national forest, but instead must have linkages between the lands that protect what remains of their dwindling habitat. To manage wide-ranging species like the wolverine effectively, multiple federal units need to collaborate on the management of large roadless areas and wildlife corridors.

The case of the wolverine is also a cautionary tale, because the lack of a proactive, coordinated wildlife management strategy on federal public

lands has already failed the species, leading to petitions and litigation to place the wolverine on the endangered species list.

Wolverines once ranged as far south as New Mexico, but trapping and the loss and fragmentation of habitat from logging, roads and other development have reduced them in number and range to an estimated 500 individuals within the most isolated places of the Rocky Mountains in Montana, Wyoming, Idaho and a small portion of Washington's Cascade range.⁶⁸ One stronghold has been in the Lewis and Clark National Forest in Montana. This national forest may well be the wildest in the lower 48 states and one of the most biologically rich. It covers more than three-quarters of a million acres and contains large swaths of land free of roads and motorized vehicle trails, as well as vital habitat for the wolverine population that remains here.⁶⁹

It is conceivable that the application of modern conservation-planning tools and enhanced wildlife management coordination between federal public land agencies could have sustained the wolverine in the region without special endangered status. But now listing the wolverine is necessary due to habitat loss and fragmentation

on the national forests that serve as vital islands of habitat for the species and the additional threats climate change poses for this montaintop mammal.

Alterations in snowfall patterns due to global warming threaten the wolverine's reproductive activities and winter survival, which are closely connected to the density and amount of snowpack. Further fragmentation and reduction of its denning habitat from climate change could mean the end of the wolverine in the contiguous United States. Protection under the Endangered Species Act and adoption of a strong wildlife viability management standard are the last hope for the recovery of this reclusive species.

Challenge: Manage large landscapes and habitat linkages for the conservation of wide-ranging species.

Solution: List the wolverine as a federally endangered species and provide Forest Service and BLM managers with the interagency, landscape-level planning tools needed to protect other wide-ranging species and help them survive and adapt to climate change.



Wolverine, northwestern Montana | © Ken Curtis



Camping, Adobe Town, Wyoming | © www.joelsartore.com



CONCLUSION

For more than a century, America's federal lands have defined our nation's character, influenced and reflected our culture and helped grow our national economy. Above all, our federal public lands have served as the source of our nation's natural capital, allowing us to reap the rewards of recreation, clean water and air, and the production of commodities such as timber, minerals and energy.

However, history has taught us that managing our lands for the present, with no thought to future generations, will not sustain our natural resources, our wildlife heritage, our public health or quality of life. To create a viable future for wildlife and a sustainable future for people, we must adopt a balanced approach to the management of our federal public lands. We must avoid viewing resource problems as zero-sum tradeoffs among the public values of wildlife, recreation, hunting and fishing and the use of natural resources. Instead, the times call for intelligent policies that recognize that the true implementation of multiple-use means sustainable use—no action should diminish our ability to provide values to future generations.

Our federal public lands have the potential to be great endowments of wealth that are sustained indefinitely for many generations and multiple purposes—from wood products and energy resources to recreation and wildlife. But, like a savings account, they must be managed wisely, with different values balanced. The viability of fish and wildlife on all our federal public lands can be a barometer of how well and how wisely we are maintaining our endowment. If we thoughtlessly extract too much, wild creatures will suffer and may ultimately disappear—and the health of our land, water, air and people will suffer as well. The triage policy of the Endangered Species Act, although necessary for imperiled species, is the conservation equivalent of the emergency room. Policies that promote conservation of native animal and plant species before they decline to the point where they must be listed as threatened or endangered are certainly more efficient and effective in the long run.

To ensure a balanced, standardized approach to wildlife management of our federal public lands—one that considers all the benefits, values and resources those lands harbor—policymakers should reclaim the wildlife viability standard by modernizing it to reflect the latest in conservation science, reinstating it as a guiding principle for managing our national forests and extending its application to BLM lands.

We must find ways to strengthen the health of our wild communities if they are to adapt to and survive the rapid changes global warming is bringing. We must be better stewards of our public lands and restore the balance we have lost in recent years. And we cannot wait to act. The time is now for a balanced shift in public lands policy that meets the needs of the present and honors the future by ensuring health and permanent protections for our lands and our wildlife.

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“I live in the perfect place because the BLM land in Pocatello is right out my backdoor! I have so many memories of my friend and me going on midnight hikes and camping at the tops of hills. While on our hikes and bike rides we usually get to see deer or moose and other wildlife.”

—Andrea Poole, Pocatello, Idaho

Excerpt from “Your Lands, Your Wildlife, Your Story” contest entry. To read more, visit www.yourlandyourwildlife.org.

