



# Worth More Wild

## THE VALUE OF COLORADO'S ROADLESS NATIONAL FORESTS

ENVIRONMENT COLORADO RESEARCH & POLICY CENTER



environment colorado research & policy center  
september 2007

AUTHORED BY CHRISTINA GOLDFUSS

FOR MORE INFO  
CONTACT :

**ENVIRONMENT COLORADO  
RESEARCH & POLICY CENTER**

1536 Wynkoop Street,  
Suite 100  
Denver, CO 80202  
(303) 573-3871

[www.environmentcolorado.org](http://www.environmentcolorado.org)

OR

**CHRISTINA GOLDFUSS**

Environment Colorado  
Research & Policy Center  
218 D Street, SE  
Washington, DC 20003  
(202) 546-9707

# contents

EXECUTIVE SUMMARY -----	2
BACKGROUND -----	4
PUBLIC SUPPORT -----	4
FEDERAL ACTION -----	4
THE COURTS -----	4
STATE SUPPORT -----	5
A RULING -----	5
STATE ACTION -----	6
AFTER THE CHANGES -----	6
WATER RESOURCES -----	8
RECREATION -----	9
WILDLIFE HABITAT -----	10
THREATS -----	12
OIL AND GAS DRILLING -----	12
CONCLUSION -----	14
ENDNOTES -----	15
CREDITS -----	15

# executive summary

After decades of scientific inquiry, 600 public hearings, and a record 1.6 million comments from the American public, the Clinton administration issued the Roadless Area Conservation Rule in January 2001. The Roadless Rule, as it is commonly known, originally protected 58.5 million acres of wild national forest land from most commercial logging and road-building, and associated mining and drilling. Since then, the Bush administration has removed these protections from 9.5 million acres of roadless areas in the Tongass National Forest.

For the remaining 49 million acres of America's last wild national forests, the 2001 Roadless Rule ensures that they will continue to provide clean drinking water for millions of Americans, wildlife habitat, endless recreational opportunities, and other important values. The rule also compels the U.S. Forest Service to address the estimated \$10.3 billion backlog in needed maintenance for existing roads, instead of using taxpayer dollars to build new roads.

The American people have spoken in favor of protecting roadless areas within our national forests. Since 2000, Colorado residents have submitted 96,988 comments, with the overwhelming majority of them in favor of protecting the state's 4.4 million acres of roadless forests.

The strong public support for protecting roadless areas can be understood by looking at their economic and ecological values:

Sixty million Americans rely on drinking water from national forests. Roadless areas, because of their pristine condition, provide some of the purest sources of these essential water supplies. In the Rocky Mountain Forest Service Region, which includes Colorado, drinking water is worth \$241.5 million annually.

Recreation in national forests has become more and more popular over time as Americans participate in activities from bicycling and hiking to fishing and hunting. In 2006, 1.6 million Colorado residents took part in hunting, fishing, and wildlife-watching; that same year, wildlife-related recreation contributed \$2.4 billion to the state economy.

Some of the most unspoiled habitat for threatened, endangered, and declining species is found in roadless areas. Colorado's national forests are home to 21 at-risk species that could be harmed by destruction of roadless areas.

Despite the many benefits national forests provide, historically, their value has been measured solely by the timber products they produce. Through subsidies to the timber industry and road construction at taxpayers' expense, the Forest Service has sold timber from national forest land to timber companies at such a low price that the agency loses millions of dollars each year.

More recently, the Bush administration has fought to dismantle the 2001 Roadless Rule and to open these pristine lands to development. This threatens not only the ecological value of these lands but the revenue provided by those who participate in recreational activities in our last wild national forests. For hunters, hikers, and campers alike, the wild characteristics of these untouched lands are what draw them to our national forests. The 2001 Roadless Rule ensures that communities that rely on income from recreation in these last wild national forests will continue to have it for years to come. After all, national forest roadless areas belong to all Americans and deserve federal protection.

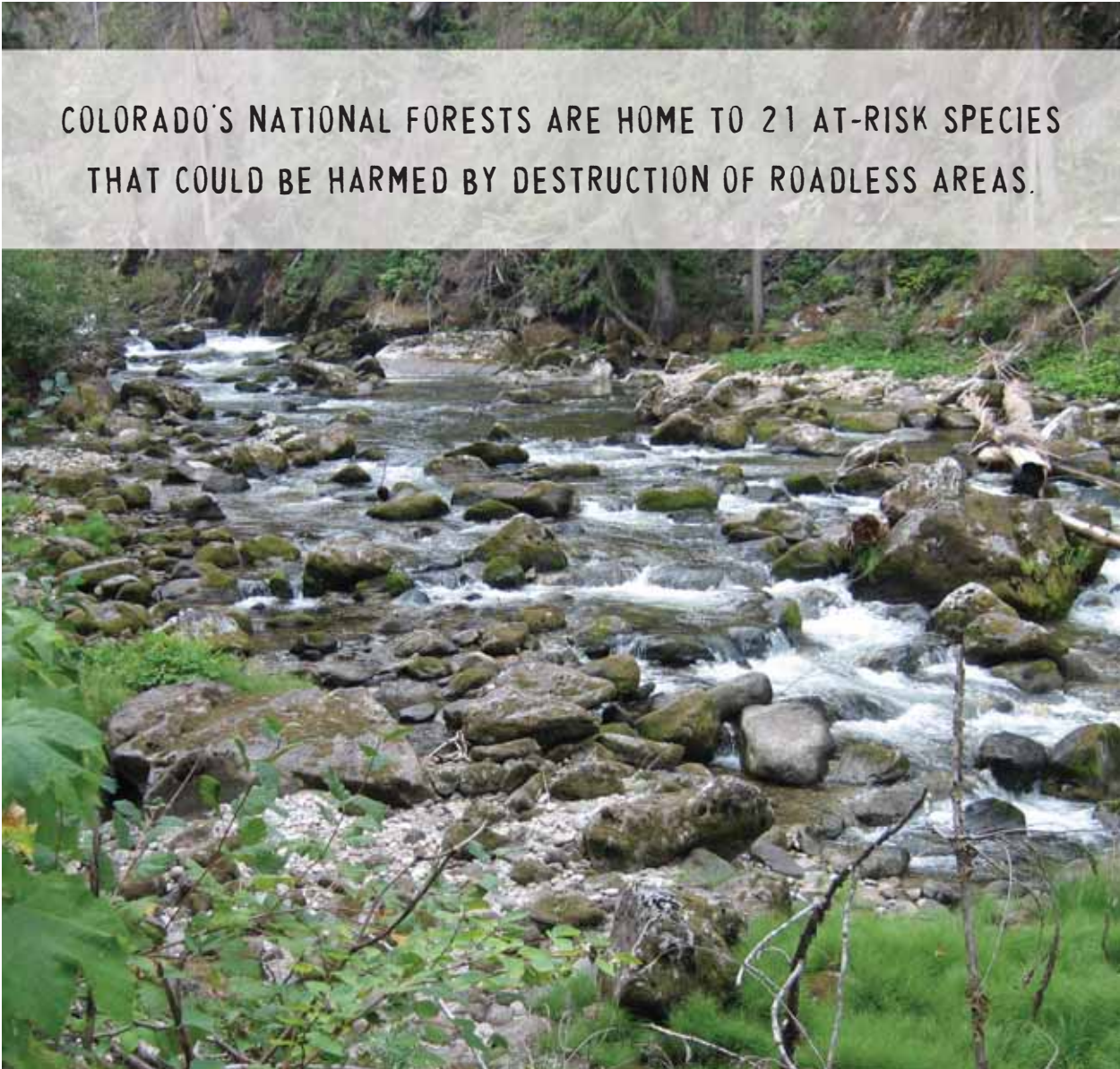
The Bush administration's attack on the Roadless Rule is in keeping with their other numerous harmful policies, such as the so-

---

called “Healthy Forests” initiative, which increases logging and removes environmental safeguards under the guise of preventing forest fires.

In the short term, the timber companies, mining companies, and energy companies that support the Bush administration’s policies stand to benefit from attacks on pro-

tections for roadless forests, making millions at taxpayers’ expense. However, it is the long term losses to the American public that we need to consider. Roadless areas are among the nation’s greatest natural assets and their ecological and economic value is too great to sacrifice. Our last wild national forests should be protected once and for all.



COLORADO’S NATIONAL FORESTS ARE HOME TO 21 AT-RISK SPECIES THAT COULD BE HARMED BY DESTRUCTION OF ROADLESS AREAS.

© Tom Turner

# background

## PUBLIC SUPPORT

From the rainforests of the Pacific Northwest to the hardwood groves of the Southern Appalachians, America's national forests are home to some of the most strikingly beautiful landscapes on earth. Colorado's 14.5 million acres of national forests provide so many benefits--clean water, recreation, and wildlife habitat--that one might assume they are already protected. The truth is that they are not. More than half of our national forests have already been subjected to decades of logging, mining, road-building, and other development activities. These and other new threats, such as oil and gas drilling, continue to endanger what is left.

The American people have been unwavering in their support for protecting roadless areas in our national forests. A look at public support for the 2001 Roadless Area Conservation Rule clearly paints the picture. When the Department of Agriculture proposed the Roadless Rule, it sought to protect 58.5 million acres of national forest lands from most commercial logging and road-building. In response to this proposal, the U.S. Forest Service, as part of the Department of Agriculture, received 1.6 million comments from the American public--far more than have ever been submitted for any federal rulemaking in history. More than 95 percent of those comments called for the complete protection of these wild forestlands. In 2004, citizens submitted another 1.8 million comments in response to a Bush administration proposal to repeal the rule and replace it with a voluntary state by state petition process. More than 95 percent of these comments opposed the repeal of the Roadless Rule. In the state of Colorado since 2000, 96,988 comments were submitted,<sup>1</sup> with the overwhelming

majority of them in favor of protecting the state's 4.4 million acres of roadless forests.

## FEDERAL ACTION

Despite the clear and repeated public support for protecting our last wild places, the Bush administration suspended the Roadless Rule almost immediately after taking office. Later, the administration refused to defend the Roadless Rule from legal challenges by the timber industry and other development interests. The Bush administration continued its attack on multiple fronts, hoping to dismantle roadless area protections piece by piece and open our natural heritage to more industrial activities. In a 2003 legal settlement, the administration and the State of Alaska agreed to exclude the Tongass National Forest, the earth's largest, intact temperate rainforest, from the Roadless Rule's protection. With 9.5 million acres of roadless areas, the Tongass National Forest has immeasurable ecological value, including ancient forests containing spruce, hemlock, and yellow and red cedar.

The Tongass National Forest's fate was only the beginning of the administration's efforts to remove protections for America's last wild forests.

## THE COURTS

In 2003, the Bush administration failed to defend the Roadless Rule in another lawsuit, and a Wyoming court found the rule illegal, issuing a nationwide injunction against it. The administration did not appeal this decision, and the responsibility of defending the Roadless Rule fell on the shoulders of environmental attorneys, who appealed the injunction to the Tenth Circuit Court of Appeals.

On May 12, 2005, before a decision came in

---

that appeal, the Bush administration repealed the Roadless Rule and replaced it with a new rule. The new rule required governors to file a petition with the federal government, if they wanted to protect roadless areas in their states. The petition process placed new burdens on governors while offering no guarantee of protection. Not surprisingly, the 2005 rule garnered great support from the logging and timber industries. Environmental organizations promptly took the battle to court.

That summer, the roadless fight heated up when the Attorneys General of California and New Mexico and the Governor of Oregon filed a suit challenging the Bush administration's state petition process. The State of Washington later joined this effort. The states' suit sought to reinstate the original Roadless Rule. Several months later, 20 conservation groups filed a similar lawsuit.

## STATE SUPPORT

While the battle for roadless protection continued to move through the courts, environmental groups coordinated efforts at the state level to use the Bush administration's rule to show support for roadless area protections. Governors from both parties submitted petitions through the Bush administration's process, asking for inventoried roadless areas in their states to have the same protections outlined in the 2001 Roadless Rule or greater. Now governors could add their names to the growing list of those who support protecting our last wild places.

## A RULING

In the fall of 2006, the federal district court in San Francisco ruled that the Bush administration's repeal of the 2001 Roadless Area



THE AMERICAN PEOPLE HAVE BEEN UNWAVERING IN THEIR SUPPORT  
FOR PROTECTING ROADLESS AREAS IN OUR NATIONAL FORESTS.

© Joel Webster

---

Conservation Rule was illegal. The court found that the administration violated the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). As a result, the court reinstated the 2001 Roadless Rule as the law of the land, with the notable exception of the Tongass National Forest, which had been previously exempted by the Bush administration from the rule's protections.

Immediately after the reinstatement of the 2001 Roadless Rule, the Bush administration announced that it would still consider petitions, but it would then be under an existing law, the Administrative Procedure Act (APA). States were encouraged to submit petitions to start this process. New Mexico, Virginia, California, North Carolina and South Carolina had all previously submitted petitions for strong roadless protections through the Bush administration's 2005 state petition process. With the 2001 Roadless Rule back in place, these states did not resubmit those petitions under the APA, satisfied that the Roadless Rule sufficiently protected their states' last wild national forests.

## STATE ACTION

After the administration began supporting the APA process, the state of Idaho filed a petition. The state had been a longtime supporter of the administration's attempts to weaken the provisions in the 2001 Roadless Rule.

Shortly afterward, the Bush administration filed an appeal of the California decision in the Ninth Circuit Court of Appeals, but this appeal will likely not be resolved for several years.

With the appeal pending and the district court in Wyoming again considering a challenge to the Roadless Rule, Colorado's Governor Ritter wanted an "insurance policy" to guarantee some protection for Colorado's

roadless areas. In the spring of 2007, he submitted a state petition under the APA outlining management policy for 4.1 million acres of roadless areas. Governor Ritter specifically mentioned his support for the 2001 Roadless Rule when he submitted the petition and pointed to the questionable actions of the Bush administration as his reason for seeking a Colorado-specific Roadless Rule.

## AFTER THE CHANGES

Why the constant changes to the Roadless Rule? The Forest Service falls within the Department of Agriculture, implying that the greatest value of the forests is realized by harvesting them like a crop. Approximately 49 percent of the landmass of the United States was forestland prior to European settlement;<sup>2</sup> today, only 33 percent is forested.<sup>3</sup> While the overall rate of clearing has slowed, the trend in deforestation could pick up again, due to increasing threats from new sources, if we do not take measures to preserve these lands.

Of the 747 million acres of remaining forestland in the United States, only 193 million are national forests.<sup>4</sup> National forests are far from protected-51 percent of these forests are open to commercial harvest. Fortunately, 18 percent are protected as wilderness areas,<sup>5</sup> but the remaining 31 percent of our last wild forests have only the Roadless Rule to protect them.<sup>6</sup>

Many studies have shown that the ecological and economic benefits from the national forests outweigh those from timber sales, oil and gas drilling, and mining. This report highlights the value of roadless areas for Colorado, where the most precious aspects of our forests are threatened by those who want to develop them with miles and miles of new roads.



# COLORADO

## Inventoried Roadless Areas on National Forest System Lands

**Categories of National Forest System Lands Within Colorado**

RIA, allows road construction or reconstruction	29% (3,438,000 acres)
RIA, does not allow road construction or reconstruction	8% (905,000 acres)
RIA, recommended wilderness	2% (11,000 acres)
Designated Areas outside of RIA	22% (2,186,000 acres)
All Other National Forest System Lands	47% (8,890,000 acres)

- Inventoried Roadless Area where road construction or reconstruction is allowed
- Inventoried Roadless Area where road construction or reconstruction is not allowed
- Inventoried Roadless Area where road construction or reconstruction is not allowed, and the forest plan recommends as wilderness
- Designated Areas outside of Inventoried Roadless Areas
- National Forest System lands outside of Inventoried Roadless Areas - not all private land is shown on the map
- Interstate Highway
- Other Highways
- County boundaries

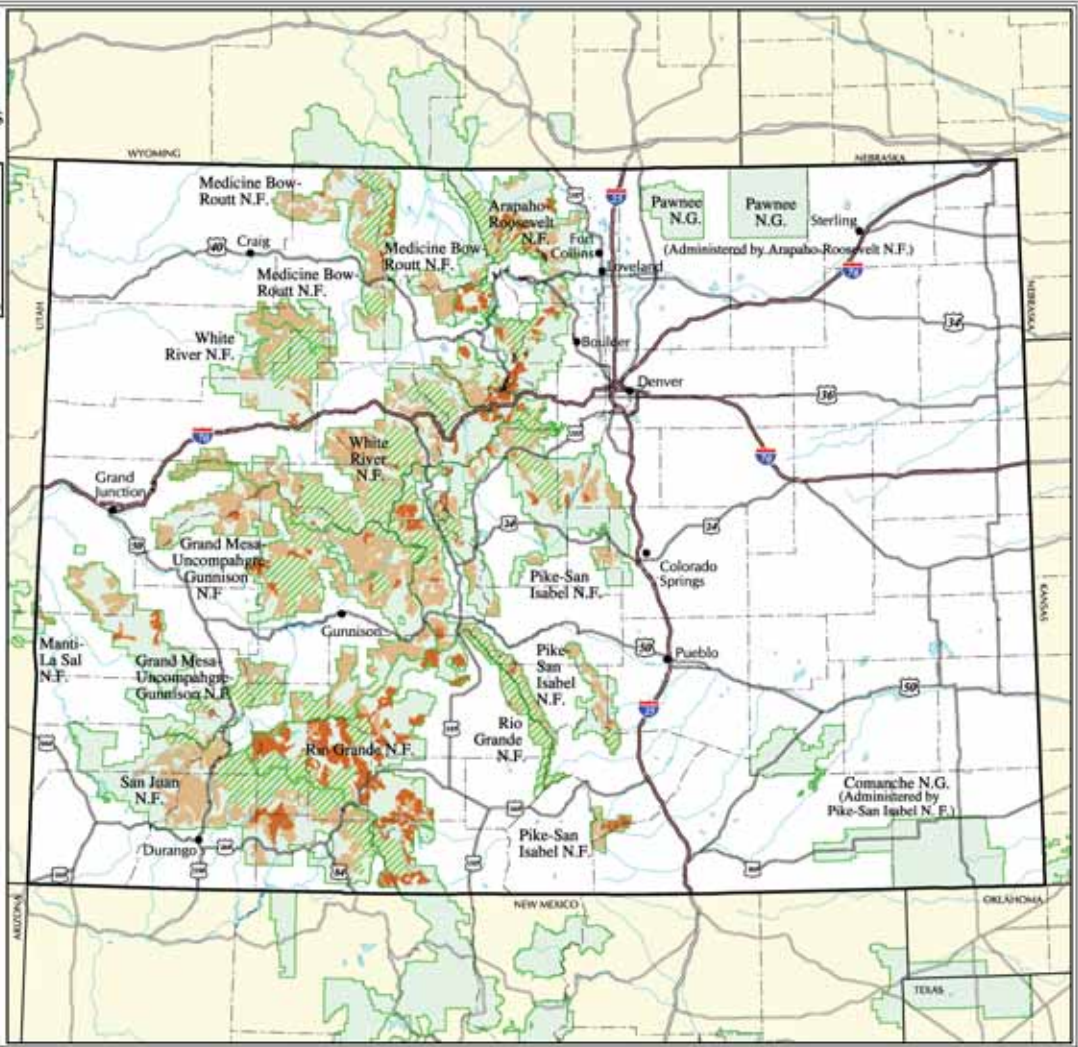


40 0 40 Miles

September 15, 2000  
Data Supplied by Individual National Forests.  
Contact the National Forest Offices for further information.

Lambert Conformal Conic Projection

The USDA Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. Using GIS products for purposes other than those for which they were intended may yield inaccurate or misleading results. The USDA Forest Service reserves the right to correct, update, modify, or replace GIS products without notification.



# water resources



© Tom Turner

The first federally preserved forests were set aside in 1891 to protect the nation's water resources. Now, national forests are one of our greatest sources of clean drinking water.

In the United States, approximately 14 percent of the drinking water gathered from rain and snowfall comes from our national forests.<sup>7</sup> More than 900 municipal watersheds are found on national forest lands,<sup>8</sup> and more than 60 million Americans depend on drinking water from those watersheds.<sup>9</sup> Road construction and other development can lead to runoff and greater contamination of these watersheds. The Roadless Rule keeps these untouched forests intact as filters for healthy drinking water.

By evaluating the public's willingness to pay for drinking water, economists have been able to place a monetary value on the water that comes from the national forests. Water can be managed in two ways: it can be used by irrigators or municipalities, or it can remain in-stream. Economists have estimated that water withdrawn for off-stream use is worth \$40 per acre-foot, and in-stream

water is worth \$17 per acre-foot in the West and \$8 per acre-foot in the East.<sup>10</sup>

Within the Rocky Mountain Forest Service region, which encompasses Colorado, 9.1 million acre-feet of water remain in-stream and 2.2 million acre-feet are withdrawn for off-stream use.<sup>11</sup> Applying the value of the water for its respective use, the freshwater in the Rocky Mountain region is worth \$241.5 million annually. With all Forest Service regions combined, water from our national forests is conservatively valued at \$3.7 billion per year.<sup>12</sup> This is a conservative estimate because the projected value of the water does not take into consideration a number of other benefits associated with water, including but not limited to navigational benefits, ecological services and aquatic habitat, and aesthetic and recreational values.

Research shows that forests play a critical role in safeguarding streams from contamination by processing organic matter and pollutants. When stream-side forests are cut down, both the water quality and the quantity within the ecosystem suffer.<sup>13</sup>

Roadless forests enhance water quality by naturally filtering pollutants through the soil. They increase water quantity by directing more water into groundwater reserves, and they slow surface runoff, reducing flooding and soil erosion.

Americans use more water from underground aquifers than precipitation can replenish. Given that demand for water resources is likely to continue to increase in the coming years, the federal government should do whatever is necessary to ensure that our watersheds are protected. In fact, the Forest Service should not only protect our existing intact forests, but also restore and preserve forests that have been used commercially as a means of planning for the nation's future water needs.

# recreation

Opportunities for recreation abound within the national forest system. The Seneca Rocks of West Virginia's Monongahela National Forest provide some of the best rock climbing formations on the East Coast. The Boundary Waters Canoe Area in Minnesota's Superior National Forest has been named one of National Geographic's 50 destinations of a lifetime for its breathtaking forested wilderness.

Taking advantage of the nation's diverse landscape, an estimated 87 million Americans participated in wildlife-related recreation--fishing, hunting, and wildlife watching--in 2006 alone.<sup>14</sup> Those outdoor enthusiasts fed \$120.1 billion into the U.S. economy that year.<sup>15</sup> These numbers are conservative, taking into account only fishing, hunting, and wildlife watching, but not other outdoor activities such as mountain biking, rock climbing, and skiing (see box for more state statistics).

Following the national trend, in Colorado outdoor recreation is an indispensable part of life, both culturally and economically. In 2006, 1.6 million Colorado residents--44 percent of the state's population--participated in fishing, hunting, and wildlife-watching.<sup>16</sup> Through these three activities alone, trip expenses, equipment purchases, and other costs, recreationists spent \$2.4 billion in Colorado.<sup>17</sup> In communities near recreation areas, money spent on food, lodging, transportation, outdoor equipment, and licenses helps sustain the local economy.

For many outdoor recreationists, the more pristine the land, the better the recreation experience. Recreation in wilderness areas, the most well-preserved lands in the country, has consistently increased over the years. It follows that protecting roadless areas will further increase the number of

days that people visit the national forests.

Visits to roadless areas also generate significant economic benefits. Data from several studies that explore the value people place on recreation indicates that a recreation day in a roadless area is worth \$42.<sup>18</sup> That is, recreationists would rather pay \$42 than forego a day of recreation in a roadless area.

As long as roadless areas remain intact through the Roadless Rule, they will continue to bolster local economies and allow visitors to enjoy the remarkable outdoor opportunities they provide. Without the Roadless Rule, America's last wild national forests are in danger of being developed, sending those who seek untouched lands for their recreation elsewhere.

<b>Colorado Residents' Participation in Outdoor Activities</b>		
<b>Activity</b>	<b>% Involved*</b>	<b># Involved*</b>
Bicycling	35%	1,212,400
Camping	28%	982,690
Fishing	15%	541,520
Hunting	4%	156,297
Paddling	11%	392,451
Snow Sports	21%	743,263
Trail Sports	41%	1,405,329
Wildlife Viewing	33%	1,190,000
Source: Outdoor Industry Foundation, <i>State-Level Economic Contributions of Active Outdoor Recreation-Technical Report on Methods and Findings</i> , April 2007		
* Do not add, there is overlap in participation in activities		

# wildlife habitat

**A**cross the United States, forestland, farmland, and other open spaces are rapidly vanishing. Urban development has quadrupled in the United States since 1954; by 1997, three million acres of land were developed each year. Due to poor planning, development has grown more quickly than the population. In most large metropolitan areas, urban land area increased more than twice as fast as population between 1950 and 1990.<sup>19</sup>

A serious consequence of development is the loss of wildlife habitat. National forests, which are home to 32 percent of the nation's proposed, threatened, and endangered species, provide some of these species' last remaining habitat.<sup>20</sup>

Roads criss-crossing our national forests fragment species habitat, breaking large tracts into small uninhabitable pieces or "fragments". In Colorado, at least 21 of the state's proposed, threatened, and endangered species could be negatively affect-

ed by the destruction of roadless areas near their habitats, including the Mexican Spotted Owl, the Canada Lynx, and the Whooping Crane.<sup>21</sup>

The goal of the Endangered Species Act is to restore at-risk wildlife to self-sustaining levels. The Roadless Rule, in protecting nearly 50 million acres of wildlife habitat in the U.S., offers hope that sensitive species will be able to recover on those lands and that other species will be able to remain unthreatened. The logging, mining, and road-building that would follow the loss of roadless protections could reverse years of recovery efforts.<sup>22</sup>

**I**f the Bush administration wants to demonstrate its commitment to America's natural heritage, it must do so by preserving habitat to help reverse these species' downward spiral. Habitat destruction will only hasten the decline of sensitive species and ensure their need for protection.



A SERIOUS CONSEQUENCE OF DEVELOPMENT IS THE  
LOSS OF WILDLIFE HABITAT.

© Scott Stouder

<b>Wildlife Species in Colorado Affected by Changes to Roadless Areas</b>		
<b>Common Name</b>	<b>Group</b>	<b>Status*</b>
American Burying Beetle	Insect	E
Bonytail Chub	Fish	E
Canada Lynx	Mammal	T
Colorado (=squawfish) Pikeminnow	Fish	E
Colorado Butterfly Plant	Plant	T
Greenback Cutthroat Trout	Fish	T
Humpback Chub	Fish	E
Least Tern	Bird	E
Mexican Spotted Owl	Bird	T
Pallid Sturgeon	Fish	E
Pawnee Montane Skipper	Insect	T
Penland Alpine Fen Mustard	Plant	T
Piping Plover	Bird	T / E
Preble's Meadow Jumping Mouse	Mammal	T
Razorback Sucker	Fish	E
Southwestern Willow Flycatcher	Bird	E
Uncompahgre Fritillary Butterfly	Insect	E
Unita Basin Hookless Cactus	Plant	T
Ute Ladies'-tresses	Plant	T
Western Prairie Fringed Orchid	Plant	T
Whooping Crane	Bird	E
*PT = Proposed Threatened; T = Threatened; E = Endangered		

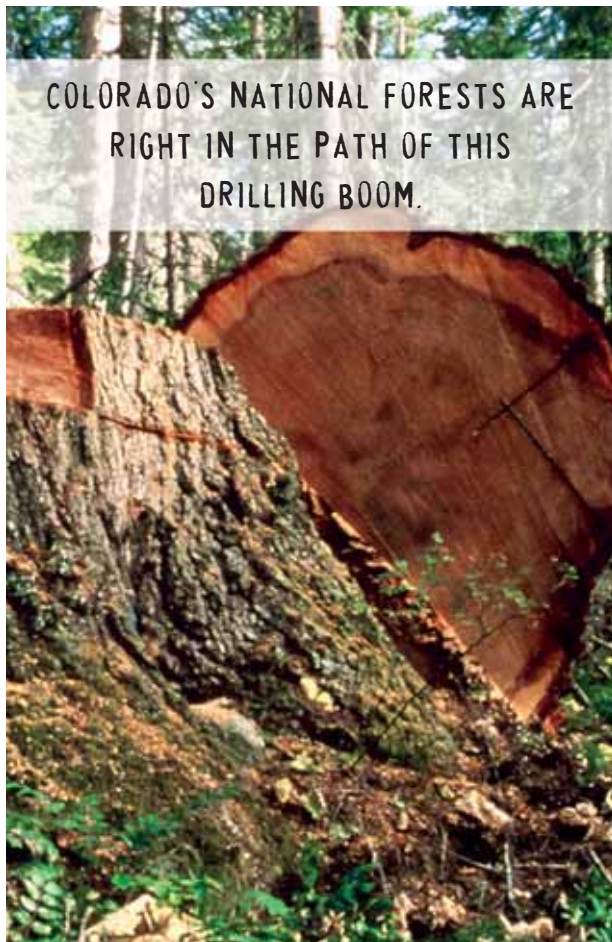
Source: USDA Forest Service

# threats

## OIL AND GAS DRILLING

Most people would assume that the primary threat to our national forests is logging and sprawling development. While this remains true in many locations, the oil and gas industry also is pushing to open up some of our national forests to drilling. Colorado's national forests in particular face growing threats from current and proposed oil and gas drilling.

Oil and gas drilling occurs throughout Colorado and within its national forests. The state is home to 14.5 million acres of nation-



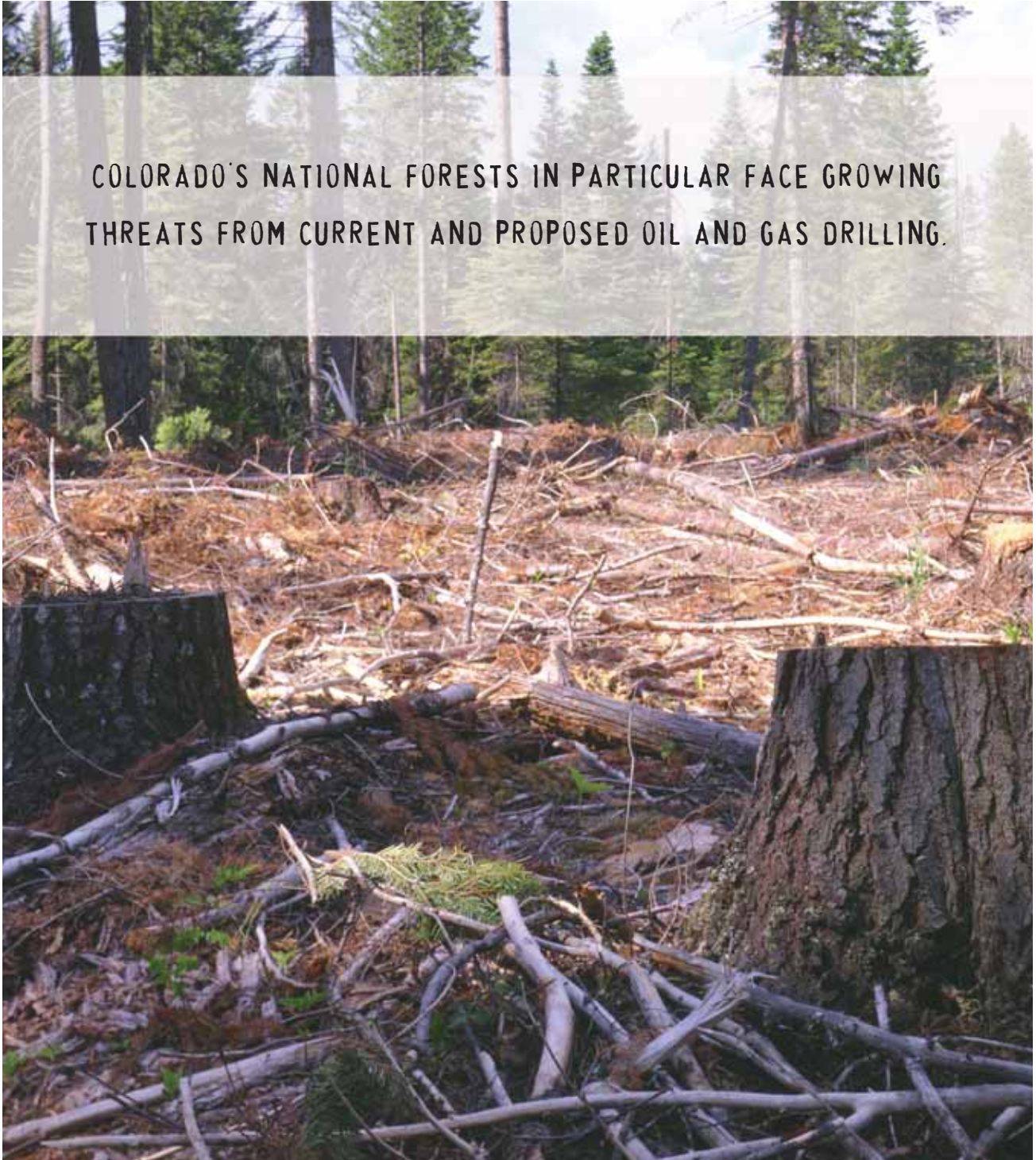
al forest land, including 4.4 million acres of roadless areas.<sup>23</sup> Colorado also is home to extensive oil and gas drilling, which threatens to encroach on national forest land and even into roadless areas as the amount of drilling increases. In 2005, Colorado set a new state record by issuing 4,000 new drilling permits.<sup>24</sup> The northwestern region of Colorado, including portions of the White River and Medicine Bow-Routt National Forests, already contains up to 5,000 natural gas wells and an additional 55,000 wells may eventually be drilled in the region.<sup>25</sup>

Colorado's national forests are right in the path of this drilling boom. The federal government already has leased 300 square miles of the White River and Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forests to oil and gas companies. An August 2006 lease sale auctioned off almost 20,000 acres of roadless areas within the White River and GMUG National Forests to drilling companies.<sup>26</sup> In addition, a recent Record of Decision released by the Forest Service allows the construction of roads and well-pads in 5,000 acres of inventoried roadless areas in the San Juan National Forest.<sup>27</sup>

Oil and gas drilling in our national forests threatens to permanently alter the landscape of these last wild places. The additional road construction that accompanies drilling activity fragments vital wildlife habitat, increases sediment and waste runoff into streams, and diminishes the recreational opportunities of the area. Colorado's roadless areas provide important habitats for 21 endangered or threatened species and supply valuable freshwater resources.<sup>28</sup> Increased oil and gas drilling diminishes these benefits and puts Colorado's national forests at risk.

---

COLORADO'S NATIONAL FORESTS IN PARTICULAR FACE GROWING  
THREATS FROM CURRENT AND PROPOSED OIL AND GAS DRILLING.



© Chuck Pezeshki

# conclusion

The American people have voiced their opinion through the millions of comments they have sent to the federal government: the preservation of intact forests under the Roadless Area Conservation Rule makes sense for the nation and for Colorado. Roadless areas within our national forests are an indispensable resource, providing some of the cleanest drinking water in the country, recreation for millions of Americans, and habitat for some of the nation's most sensitive species.

The Bush administration's continued attack

on the Roadless Rule jeopardizes those significant economic and ecological values. At risk in Colorado is \$2.6 billion annually in clean water and recreation benefits and the survival of 21 species.

These are long term and recurring benefits that must be preserved for future generations, not sacrificed for short term corporate gain. Our last wild forests need strong and lasting protections that live up to those that the American people have demanded for years.



© Nathan Newcomer



# endnotes / credits

- 1 Heritage Forests Campaign, *Public Comments in Support of the Roadless Rule*, [http://www.ourforests.org/fact/public\\_comments\\_support\\_fact.pdf](http://www.ourforests.org/fact/public_comments_support_fact.pdf), August 2007; as collected by the Heritage Forests Campaign.
- 2 Douglas MacCleery, USDA Forest Service, *American Forests: A History of Resiliency and Recovery*, FS-540, 1992.
- 3 National Atlas of the United States, *Forest Resources of the United States, 2006*, downloaded from [http://nationalatlas.gov/articles/biology/a\\_forest.html#one](http://nationalatlas.gov/articles/biology/a_forest.html#one), June 2007.
- 4 USDA Forest Service, *Meet the Forest Service*, downloaded from <http://www.fs.fed.us/aboutus/meetfs.shtml>, July 2007.
- 5 Wilderness Coalition, *Protecting Our Last Remaining Roadless Forests*, downloaded from [http://www.wawild.org/campaigns/roadless\\_forests.htm](http://www.wawild.org/campaigns/roadless_forests.htm), July 2007.
- 6 National Atlas of the United States, *Forest Resources of the United States, 2006*, downloaded from [http://nationalatlas.gov/articles/biology/a\\_forest.html#one](http://nationalatlas.gov/articles/biology/a_forest.html#one), June 2007.
- 7 USDA Forest Service, *Water & The Forest Service*, FS-660, January 2000.
- 8 John Talberth and Karyn Moskowitz, *The Economic Case Against National Forest Logging*, 1999.
- 9 USDA Forest Service, *Water & The Forest Service*, FS-660, January 2000.
- 10 Ibid.
- 11 Ibid.
- 12 Ibid.
- 13 The Trust for Public Land, *Protecting the Source*, 2004.
- 14 U.S. Fish & Wildlife Service, *Preliminary National Report, 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, 2007, downloaded from <http://federalasst.fws.gov/surveys/surveys.html>, June 2007.
- 15 Ibid.
- 16 U.S. Department of Interior, Fish and Wildlife Service, *Preliminary State Reports, 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, 2007.
- 17 Ibid.
- 18 The Wilderness Society and Heritage Forests Campaign, *Economic Values of Protecting Roadless Areas in the United States*, June 2000.
- 19 Environmental Protection Agency, *Our Built and Natural Environments*, January 2001.
- 20 Forest Service, *History of Threatened and Endangered Species on National Forest System Lands*, 2007, downloaded from [http://www.fs.fed.us/biology/resources/pubs/tes/te\\_nfs\\_1967\\_2007.pdf](http://www.fs.fed.us/biology/resources/pubs/tes/te_nfs_1967_2007.pdf), June 2007.
- 21 Ibid.
- 22 USDA Forest Service, *Proposed, Threatened and Endangered Species National Master List By Region and Species Group (spreadsheet data)*, 2000, downloaded from [www.roadless.fs.fed.us/documents/feis/data/sdata.shtml](http://www.roadless.fs.fed.us/documents/feis/data/sdata.shtml), June 2007.
- 23 Heritage Forests Campaign, *State by State Figures*, downloaded from <http://www.ourforests.org/local/>, July 2007.
- 24 The Wilderness Society, *Too Wild to Drill: Clear Fork Divide, Colorado*, downloaded from <http://www.wilderness.org/WhereWeWork/Colorado/TWTD-Clearfork.cfm>, July 2007.
- 25 Vail Daily, *'We don't need to be gluttons' for gas*, 7 July 2007, downloaded from <http://www.vaildaily.com/article/20070707/NEWS/70705027/0/FRONTPAGE>, July 2007.
- 26 The Wilderness Society, *Too Wild to Drill: Clear Fork Divide, Colorado*, downloaded from <http://www.wilderness.org/WhereWeWork/Colorado/TWTD-Clearfork.cfm>, July 2007.
- 27 USDA Forest Service, *San Juan National Forest, News Release: Record of Decision Released for Northern San Juan Basin Coalbed Methane Project*, 4 April 2007, downloaded from <http://www.fs.fed.us/r2/sanjuan/news/2007/nsjb.shtml>, July 2007.
- 28 USDA Forest Service, *Summary of Threatened, Endangered, and Proposed Species (spreadsheet data)*, downloaded from [www.roadless.fs.fed.us/documents/feis/data/sdata.shtml](http://www.roadless.fs.fed.us/documents/feis/data/sdata.shtml), June 2007.

---

**The author would like to thank** Angela Kilbert for her contributions to the report. In addition, we thank Kristen Boyles of Earthjustice, Amy Mall of Natural Resources Defense Council, and Mat Jacobson and Rob Vandermark of the Heritage Forests Campaign and National Environmental Trust for their review of the material. This report is made possible with funding from The Pew Charitable Trusts. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of our funders.

**Report Designed by** Elan and Jonathan Bogarin

**Cover Photo:** © Nathan Newcomer



**U.S. PIRG Education Fund** issues this report under a Creative Commons "some rights reserved" license. You are free to copy, distribute or display the work for non-commercial purposes, with attribution. For more information about this Creative Commons license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/>.



1536 WYNKOOP STREET, SUITE 100  
DENVER, CO 80202  
(303) 573-3871  
[WWW.ENVIRONMENTCOLORADO.ORG](http://WWW.ENVIRONMENTCOLORADO.ORG)