

Where The Wild Lands Are: Colorado

THE IMPORTANCE OF ROADLESS AREAS TO
COLORADO'S FISH, WILDLIFE, HUNTING & ANGLING



A Report Produced by Trout Unlimited



FOREST SERVICE LAND COLORADO

-  Streams
-  Lakes
-  Wilderness
-  Roadless Areas
-  Other USFS Land
-  Other Congressionally Designated Protection Areas

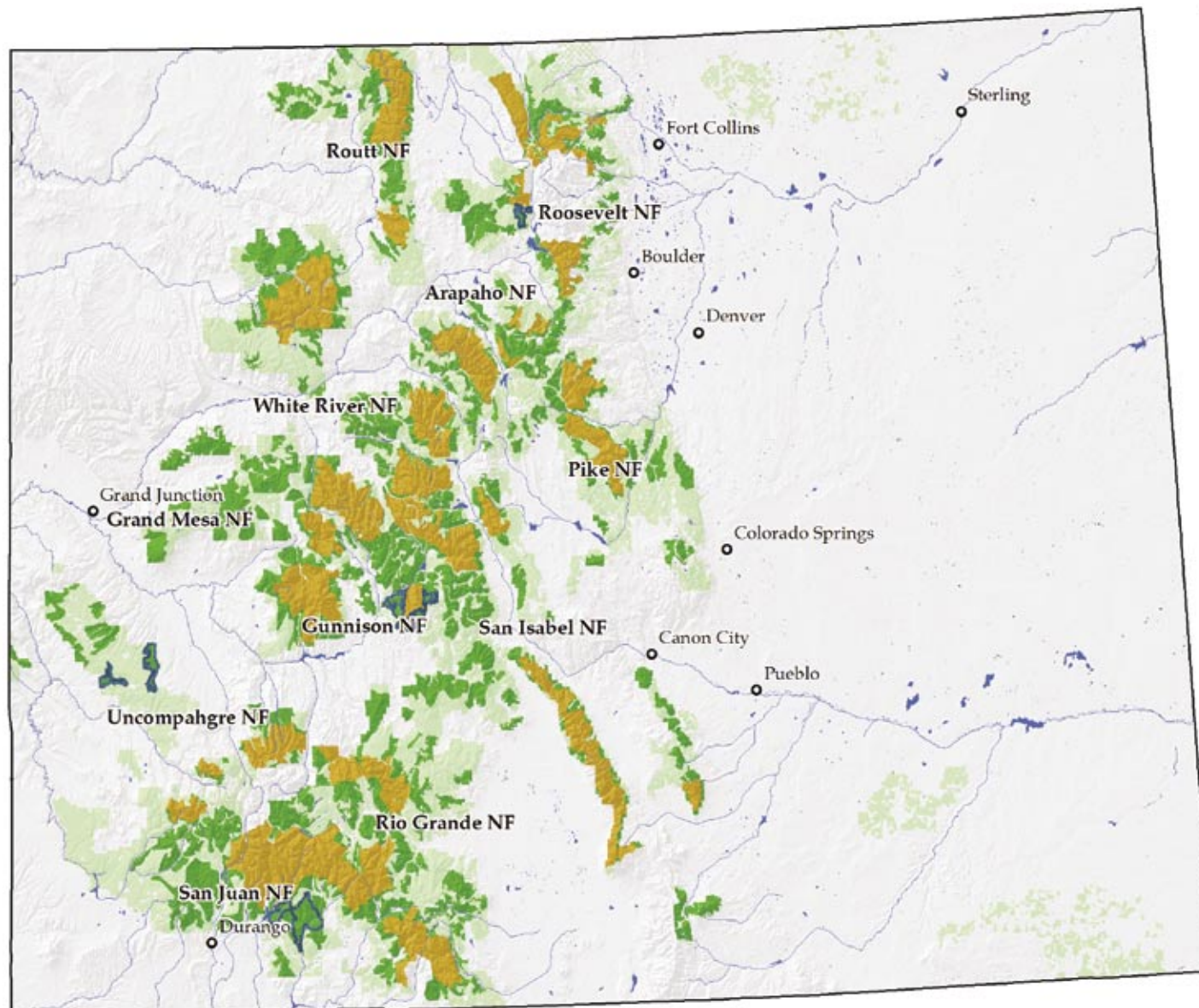




photo: Branson Reynolds

ROADLESS AREAS

Roadless areas are undeveloped tracts of public land, generally without roads that are managed by the U.S. Forest Service (USFS). In addition to its 4.4 million acres of roadless areas, Colorado is blessed with nearly 3.4 million acres of congressionally designated wilderness. Together, Colorado's designated wilderness and roadless areas provide the headwaters for almost all of Colorado's renowned trout fisheries, habitat for the majority of Colorado's native cutthroat trout populations, and essential seasonal habitat and migration corridors for elk, deer, and other big game animals. In sum, Colorado's public wildlands help to maintain access to some of the finest backcountry fishing and hunting in a state that hosts more outdoorsmen and women than any other in the Rocky Mountain West.

As this report demonstrates, all hunters and anglers benefit from backcountry areas whether they fish and hunt exclusively in remote areas or never venture far from a road. Because ongoing agency and political decisions regarding the management of public lands will shape the future of wildlife, hunting, and fishing in Colorado, Trout Unlimited has prepared this report for your benefit and use. Anglers, hunters, and all who care about the outdoors have an important role to play in ensuring the health, diversity, and productivity of Colorado's forests, rivers, and rangelands. Ensuring that backcountry areas continue to provide clean water, abundant fish and game, and habitat for fish and wildlife is essential.

National Forest Acreage Summary

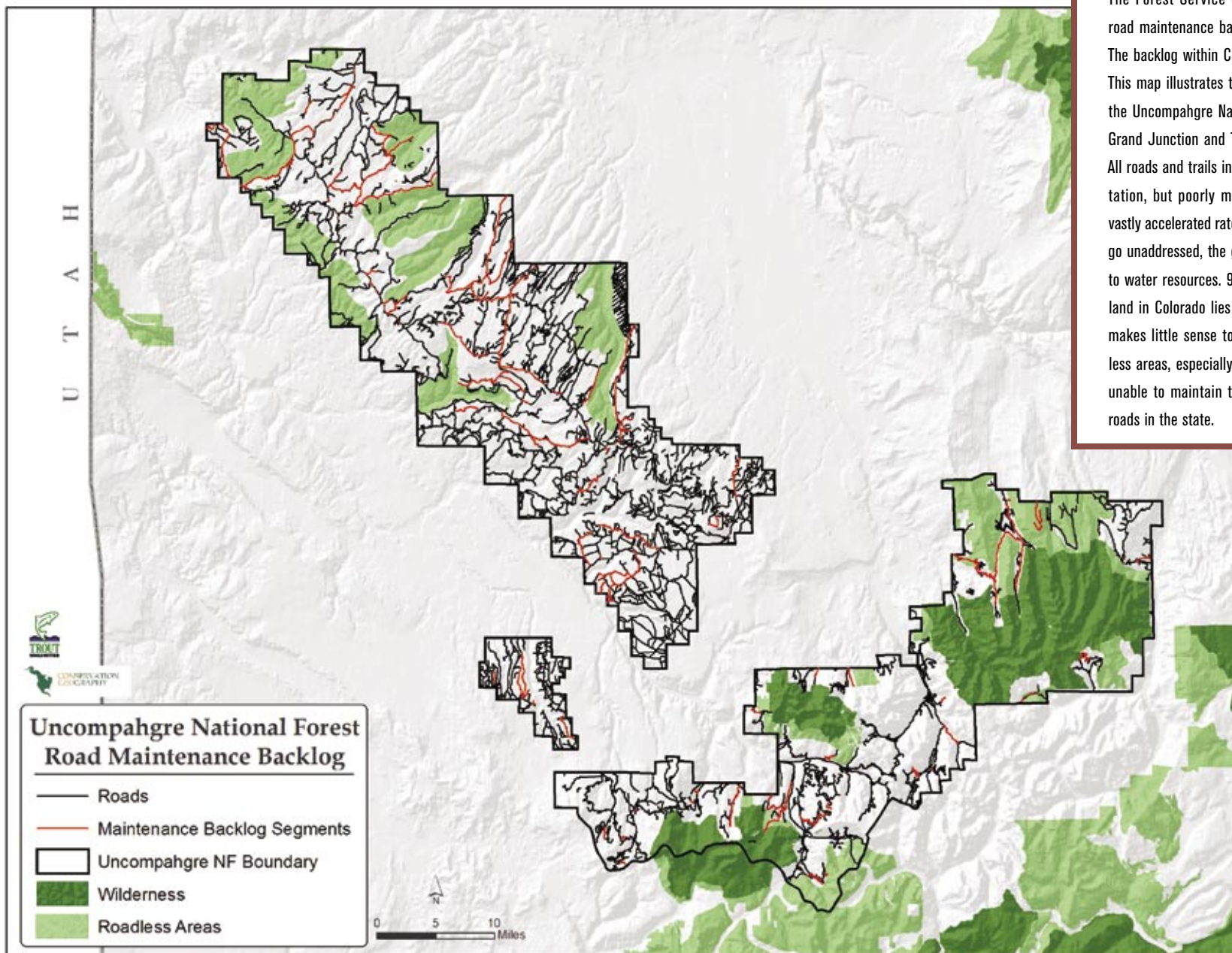
National Forest: 14,509,000 acres

Designated Wilderness: 3,368,000 acres

Inventoried Roadless Areas: 4,433,000 acres

FOREST SERVICE ROAD MAINTENANCE BACKLOG

The Forest Service currently faces a national road maintenance backlog exceeding \$10 billion. The backlog within Colorado alone is \$68 million. This map illustrates the maintenance backlog on the Uncompahgre National Forest lying between Grand Junction and Telluride: some \$5.7 million. All roads and trails increase erosion and sedimentation, but poorly maintained roads do so at a vastly accelerated rate. The longer these problems go unaddressed, the greater the harmful impacts to water resources. 92 percent of national forest land in Colorado lies within 1 mile of a road.¹ It makes little sense to build new roads into roadless areas, especially when the Forest Service is unable to maintain the 17,700 miles of existing roads in the state.



Roads, Roadless Areas, and Water Resources

Roadless areas contribute to Colorado's fisheries in three important ways:

1. Roadless headwaters provide the primary source of cold, clean water for popular mainstem fisheries.
2. Roadless areas provide the majority of habitat for all three of Colorado's native cutthroat subspecies: greenback, Rio Grande, and Colorado River.
3. Roadless areas provide premium, uncrowded angling opportunities.

Impact of Roads

Roads, paved as well as unpaved, and off-road vehicle (ORV) trails, can deposit large quantities of sediment into stream channels, where it buries the gravel necessary to trout spawning, fills the spaces between rocks where aquatic insects reside, and reduces pool depths, raising water temperatures. Roads and ORV trails also accelerate runoff, causing downslope erosion.

The culverts installed at stream crossings often create barriers for fish and other aquatic organisms, reducing access to important seasonal habitat. And of course roads invite motorized traffic, facilitating a host of human impacts including logging, mining, and energy development; ORV abuse, roadkill, littering, and poaching; chemical, light, and noise pollution; and the introduction of noxious weeds.

“Roads and other travelways probably have more impact on aquatic resources than any other activity on the forest.”

*– U.S. Forest Service White River National Forest
Final Environmental Impact Statement 2002²*



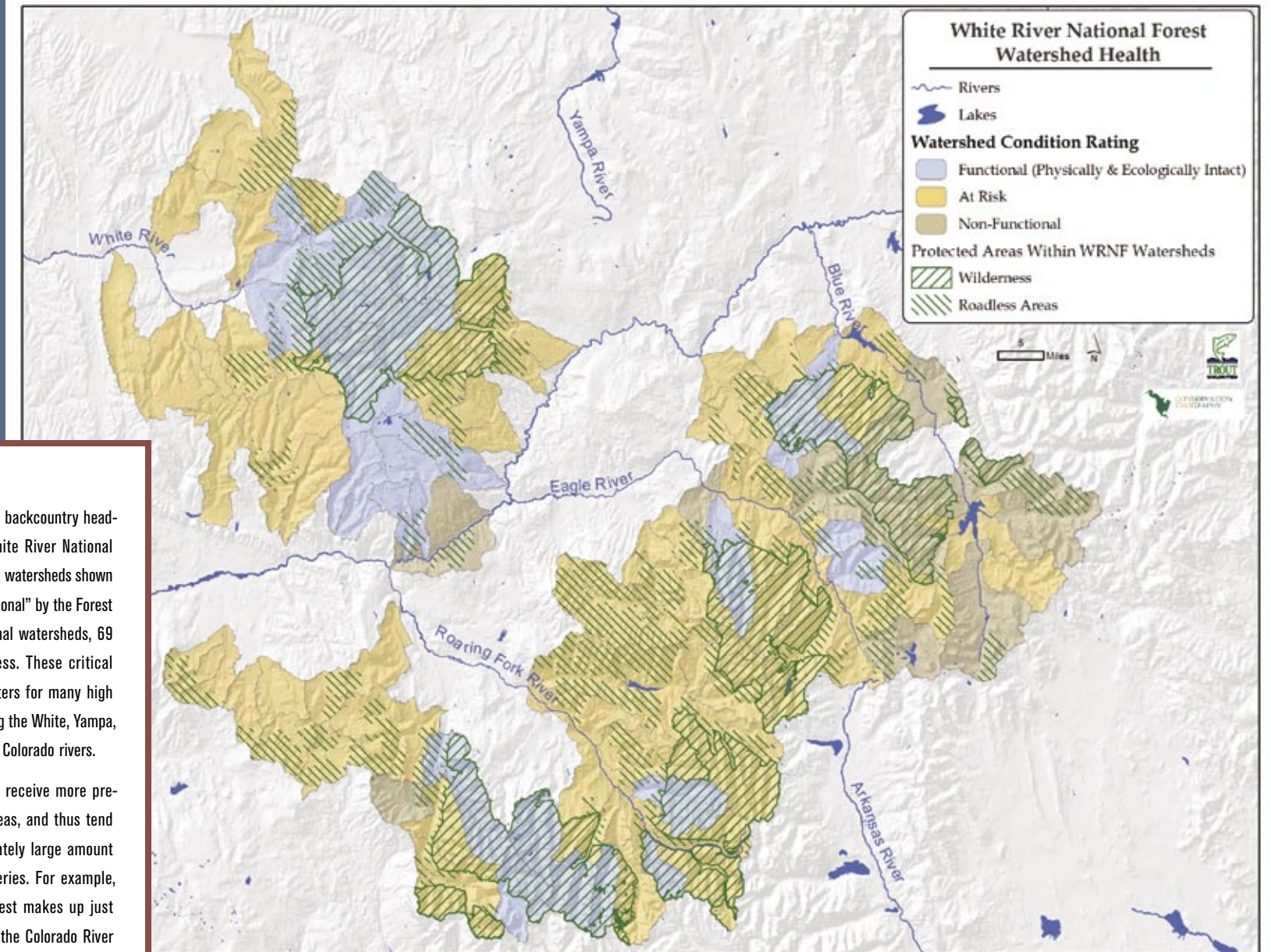
photos: David Petersen



HEADWATERS

This map illustrates the role of backcountry headwaters in and around the White River National Forest, near Vail. Only 31 of 121 watersheds shown on the map are rated as "functional" by the Forest Service. Within those functional watersheds, 69 percent of the land is roadless. These critical watersheds form the headwaters for many high quality trout fisheries, including the White, Yampa, Eagle, Roaring Fork, Blue, and Colorado rivers.

High-elevation roadless areas receive more precipitation than lower-lying areas, and thus tend to contribute a disproportionately large amount of water to downstream fisheries. For example, the White River National Forest makes up just 4 percent of the land base of the Colorado River Basin, but its watersheds contribute 16 percent of the flow measured at Lees Ferry, Arizona. Given this heightened per-acre contribution, protection of unroaded public lands is essential to maintaining water quality in downstream fisheries.



Native Trout Habitat

Because native cutthroat trout require clean, cold water, their presence is a good indication of healthy water quality. Since the arrival of European settlers, Colorado's cutthroats have been displaced from their native habitat by stocking of non-native trout, over-harvest, and habitat degradation via grazing, logging, mining, road building, and water diversion projects. Only backcountry streams, remote enough to largely escape these cumulative impacts, have been able to sustain their native cutthroats.

Just as aquatic habitat found on roadless public lands helped save Colorado's native trout from extinction, it is now essential to restoring these fish to their historically occupied habitat.

Status of Colorado's Native Cutthroats			
Species	Status	Lost from ...	Current Habitat in Roadless Areas
Yellowfin cutthroat	Extinct	100% of historic range	NA
Greenback cutthroat	Threatened (state and federally)	95% of historic range	76 percent
Rio Grande cutthroat	State – special concern	> 90% of historic range	58 percent
Colorado River cutthroat	State – special concern	> 90% of historic range	71 percent

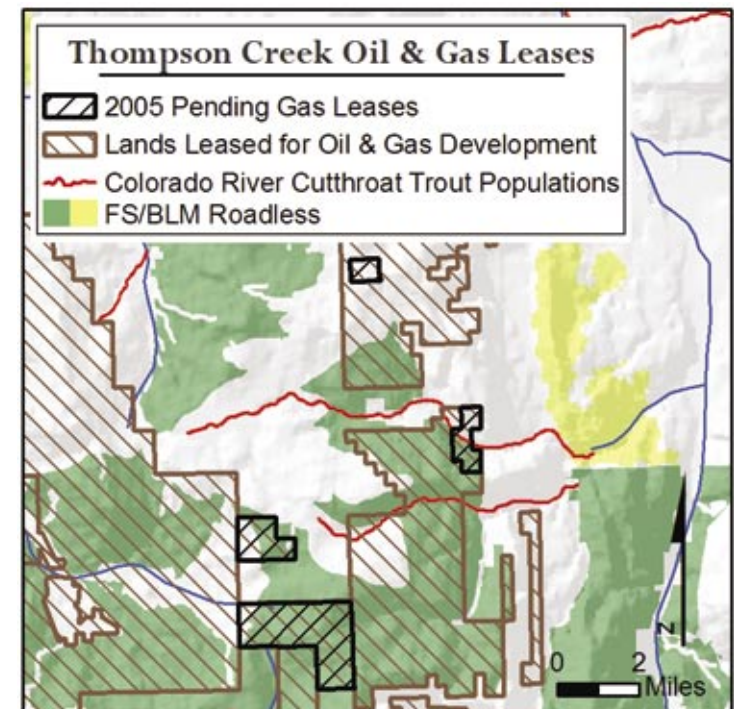
Native Cutthroat Restoration

Genetically pure cutthroats surviving in roadless areas provide the broodstocks being used to repopulate historic habitat. These reintroductions take place where habitat has been reclaimed from non-native species, and in streams where restoration efforts have again made habitat suitable for native cutthroats. Protecting roadless areas – and, in so doing, safeguarding the essential fish populations they harbor – is utterly essential to reestablishing Colorado's native cutthroat trout.

Tremendous progress has been made over the past 30 years in rescuing native cutthroat populations from the brink of extinction. Through reintroduction, the number of streams hosting pure strains of greenback cutthroats has increased from two in 1970 to over 40 today, 20 of which are stable and reproducing. Since 1998, the number of Colorado River cutthroat streams has increased by 66 percent from 87 to 144. Although precise figures are not available for Rio Grande cutthroats, their numbers have been increasing since the early 1980s. While not all of these populations are naturally reproducing, recovery continues to gain ground. Greenbacks have been down-listed from federally Endangered to Threatened. Rio Grande cutthroats have been down-listed from Threatened to a state species of special concern. And catch-and-release fisheries now exist for all three natives.

Connectivity is Key

While the increase in the number of waters containing pure Colorado River cutthroats is encouraging, it is important to remember that most of these waters are small and isolated, and many populations comprise fewer than 500 fish. The Colorado Division of Wildlife (CDOW) has been working to establish "meta-populations," sets of local populations that are connected via migration, to improve long-term genetic viability. One opportunity to establish a meta-population exists in the Thompson Creek area, in western Pitkin County, southwest of Carbondale. However, a potential conflict is planned natural gas development within the Thompson Creek roadless areas. Protection of natural wild areas such as those around Thompson Creek not only preserves native trout habitat, but helps to ensure that the efforts of CDOW and others are not negated by short-sighted land management decisions.



Habitat Limitations

Although roadless areas have become crucial to the long-term survival of Colorado's trout, historically, these high-elevation areas with steep slopes and generally erosive soil were among the least biologically productive portions of the landscape. With the development and conversion of lower-elevation lands, however, roadless areas serve as refuges for native species. Today, lower-elevation streams also contain non-native trout, making cutthroat susceptible to predation, hybridization, and competition. Blocked from accessing the historically more productive lower-elevation areas, these fish lead perilous lives. Since one major disturbance could wipe out an entire local population, recovery efforts must strive to expand habitat size, quality, and interconnectivity to ensure long-term viability.

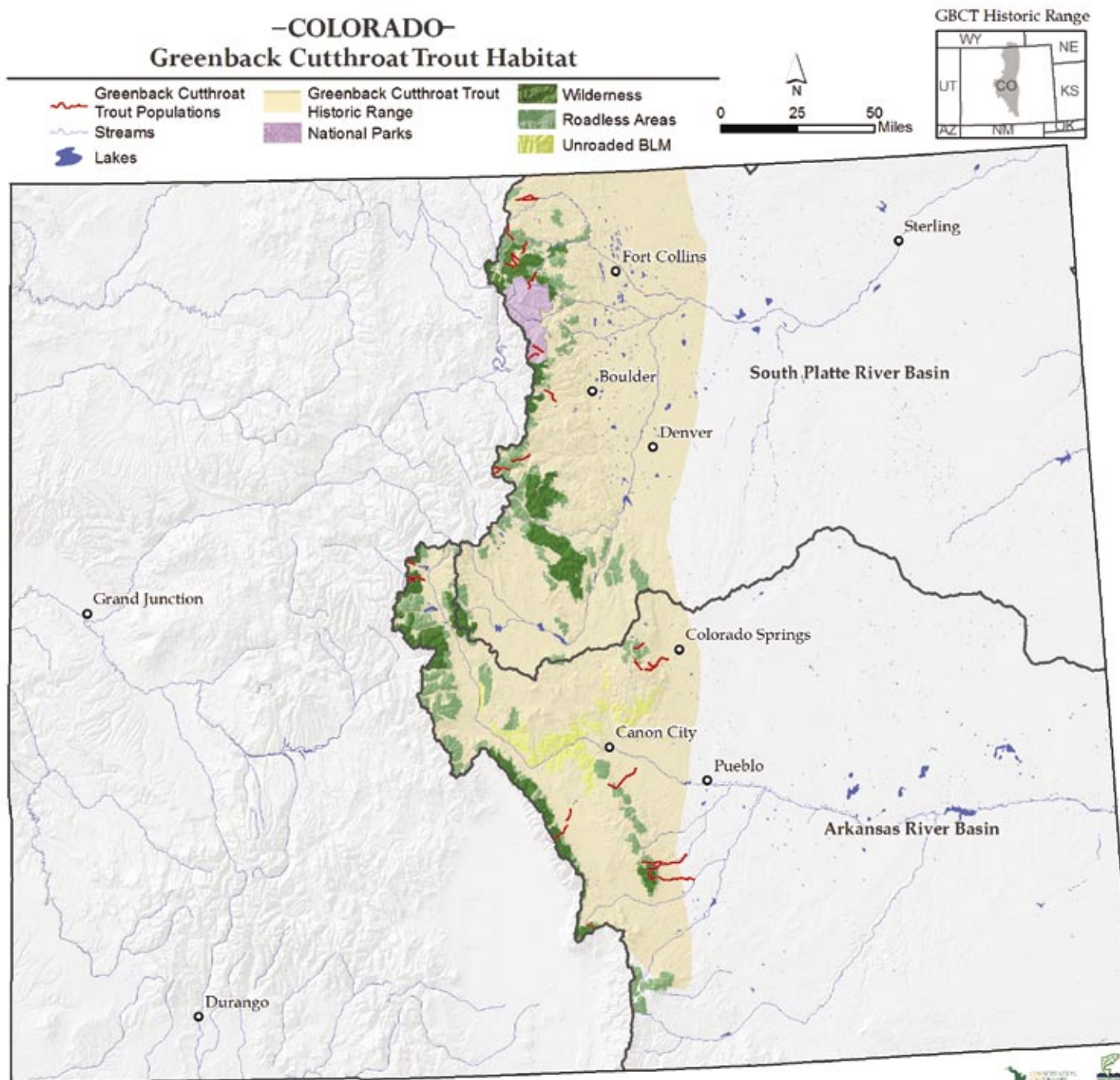
Protecting Adaptive Traits

Trout reproduction at higher elevations is often tenuous due to juvenile winter mortality. Cutthroats spawn in the spring, and the hatched juveniles spend the summer feeding and growing before the onset of winter. At high altitudes, the growing season is short, preventing juveniles from reaching a size sufficient for winter survival. In response to this challenge, the greenback cutts of the Little South Poudre River headwaters have evolved eggs that hatch more quickly than most, extending the growing season and improving survival rates.³ Preserving unique adaptive traits such as this is just one among many, often subtle, reasons to protect backcountry aquatic habitat.



photo: Branson Reynolds

—COLORADO— Greenback Cutthroat Trout Habitat



GREENBACK CUTTHROAT

- 76 percent of Colorado's greenback streams flow through roadless areas or national parks.

PHYSICAL DESCRIPTION: Since greenbacks evolved from Colorado River cutthroats, the two subspecies resemble one another. The greenback, however, tends to have larger spots than its Colorado River relative, more sparsely and evenly distributed. Interestingly, the greenback's back is not notably green.

HISTORICAL DISTRIBUTION: The greenback cutthroat was historically found in mountain and foothill habitats of the Arkansas and South Platte drainages. Today, its range is only about 5 percent of the original.

STATUS: The greenback subspecies is currently listed as Threatened, both federally and by the state of Colorado, after being down-listed from Endangered in 1978.

Greenback cutthroat trout were dangerously close to extinction before serious restoration efforts began in 1970. In fact, they were long thought to be extinct, until remnant populations were discovered in Como Creek and the South Fork Cache la Poudre River. Through reintroduction, populations have expanded to 42, of which 20 are stable and naturally reproducing.

RIO GRANDE CUTTHROAT

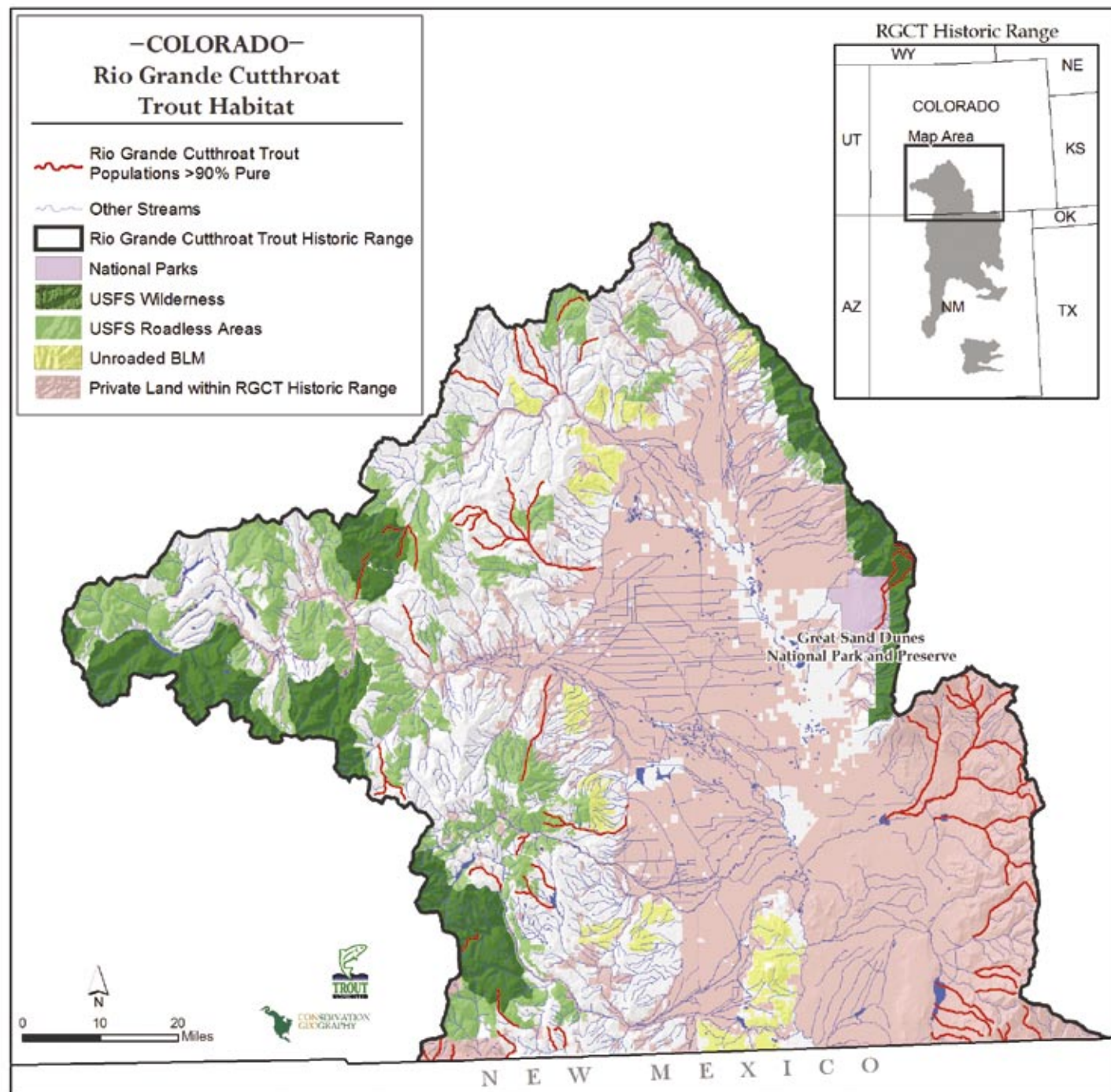
- 58 percent of the most genetically pure Rio Grande cutthroat waters on public lands originate in or flow through roadless areas.

PHYSICAL DESCRIPTION: Similar in appearance to the Colorado River cutthroat, adult Rio Grande cutts are distinguished by large, club-shaped spots, concentrated near the tail and above the lateral line.

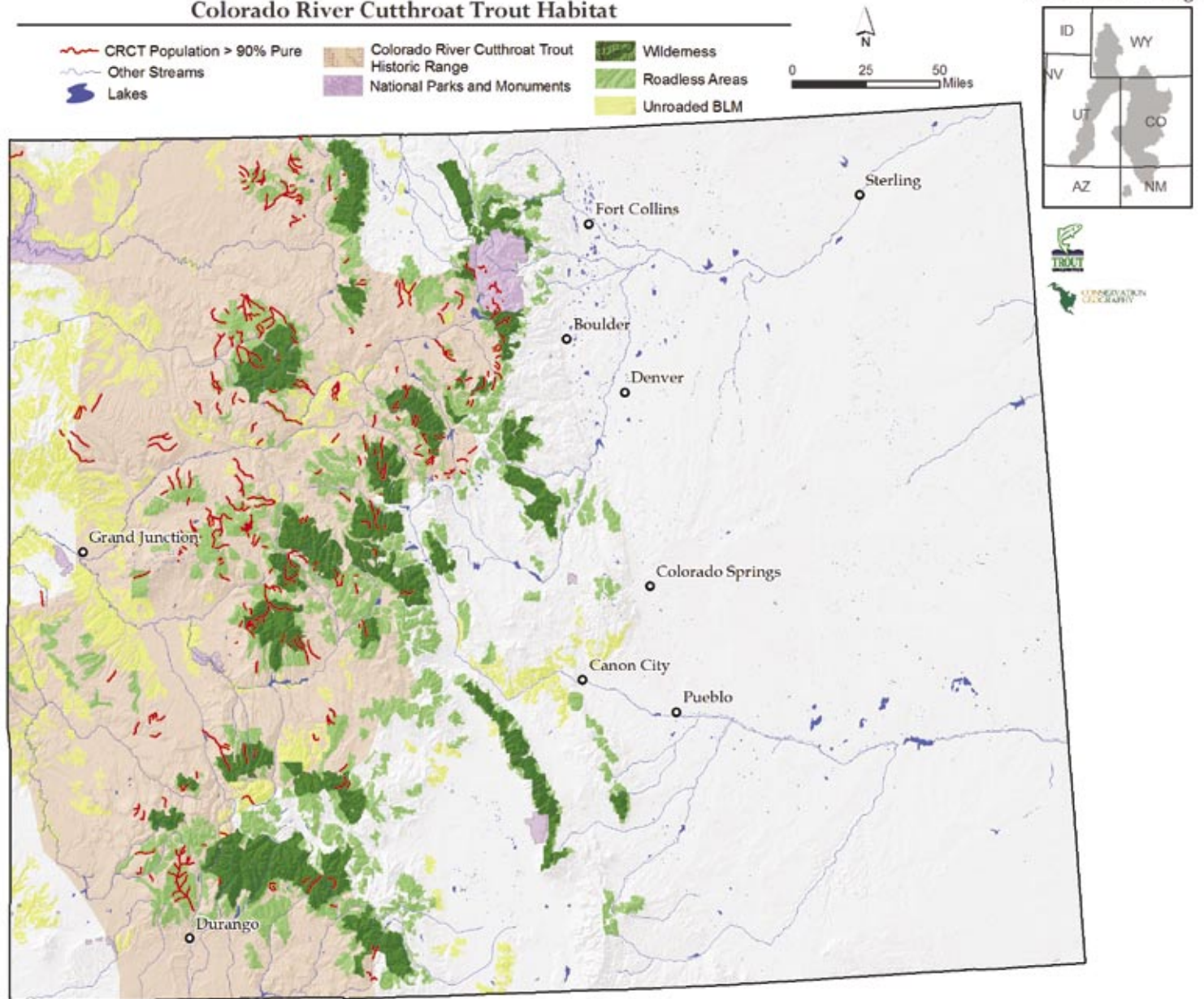
HISTORICAL DISTRIBUTION: Historically found in coldwater streams of the Rio Grande Basin, the Rio Grande cutthroat has been reduced to less than 10 percent of its original range.

ESSENTIAL PRIVATE LANDS: 44 percent of Rio Grande cutthroat habitat is found on private land. Fortunately, the managers of two large ranches rich in Rio Grande waters actively support cutthroat restoration.

RECOVERY STATUS: Restoration efforts for the Rio Grande cutthroat led to the subspecies being downlisted from Threatened to a state species of special concern in the 1980s. According to the state, 62 percent of Rio Grande cutthroat populations remain at risk or are declining. Much work remains to be done, and protecting roadless public land cutthroat habitat remains a key element in the recovery effort.



—COLORADO— Colorado River Cutthroat Trout Habitat



COLORADO RIVER CUTTHROAT

- 71 percent of Colorado River cutthroat waters flow through roadless areas.

PHYSICAL DESCRIPTION: The Colorado River cutthroat trout is a descendant of the Yellowstone cutthroat. The spots on the Colorado River cutthroat are rounded, and their size and pattern vary.

HISTORICAL DISTRIBUTION: The Colorado River cutthroat trout was originally found in portions of the Colorado River drainage in Wyoming, Colorado, Utah, and parts of Arizona and New Mexico, and probably included stretches of larger streams such as the Green, Yampa, White, Colorado, and San Juan rivers.

Today, Colorado's populations remain only in remote headwater streams and lakes of the Yampa, Colorado, Gunnison, White, Dolores, and San Juan drainages. Estimates are that pure populations of Colorado River cutthroat trout remain in less than 10 percent of their historic range.

RECOVERY STATUS: The Colorado River cutthroat trout is currently listed as a species of special concern by the state of Colorado. Recovery efforts began in Rocky Mountain National Park in 1979 and have expanded throughout the historic range of the subspecies. Of the 144 populations, 56 have been reestablished or augmented through stocking and/or translocation.

Hunting

Roadless areas help to:

1. Keep game on public lands
2. Improve herd health
3. Promote hunter satisfaction
4. Enhance trophy production and quality hunting opportunity

Keeping Game on Public Lands and Improving Herd Health

Where they have not habituated to human disturbance, elk flee from motorists, running until they find security. Too often, however, on Colorado's more heavily roaded public lands, they find only more roads and more motorized hunters. Big game biologists note cases where motorized disturbance – roads and ORV trails – prompt elk to prematurely abandon rich forage and cover on national forest summer range, in favor of sparser winter range on private land, seeking enhanced security. An example of this can be seen on Grand Mesa, north of Delta, where biologists have observed elk leaving historically prime habitat on the top of the mesa in favor of steep sides and agricultural bottoms to escape disturbance. Some of these animals never return to public land, instead spending the entire year on large tracts of private property, decreasing hunting opportunity and complicating management goals.

Forced changes in distribution may impact herd health. Every time an elk is driven out of its desired habitat by human disturbance, it is forced to vacate preferred foraging grounds and waste energy searching for an alternative. During rut, forced habitat changes also complicate and potentially prolong breeding efforts. As elk biologist Alan Christiansen explains: "Everything changes when summer ranges are suddenly disturbed by too many people. These animals are laid up for the day in a cool area, when, all of a sudden, they have to leap to their feet, run a mile or two to another suitable place – if they can find one – and then try to settle down again – if they can." Nothing increases disturbance more than roads and ORV trails.

Roadless areas provide a place for elk to escape motorists and motorized hunters. Where they are able to utilize roadless habitat, elk can follow more natural seasonal movement patterns, spending more time on public lands and accessing productive foraging grounds. As the map on the following page shows, elk demonstrate a preference for roadless habitat during the summer months.

- On public lands, 54 percent of elk summer herd concentrations are in roadless areas.

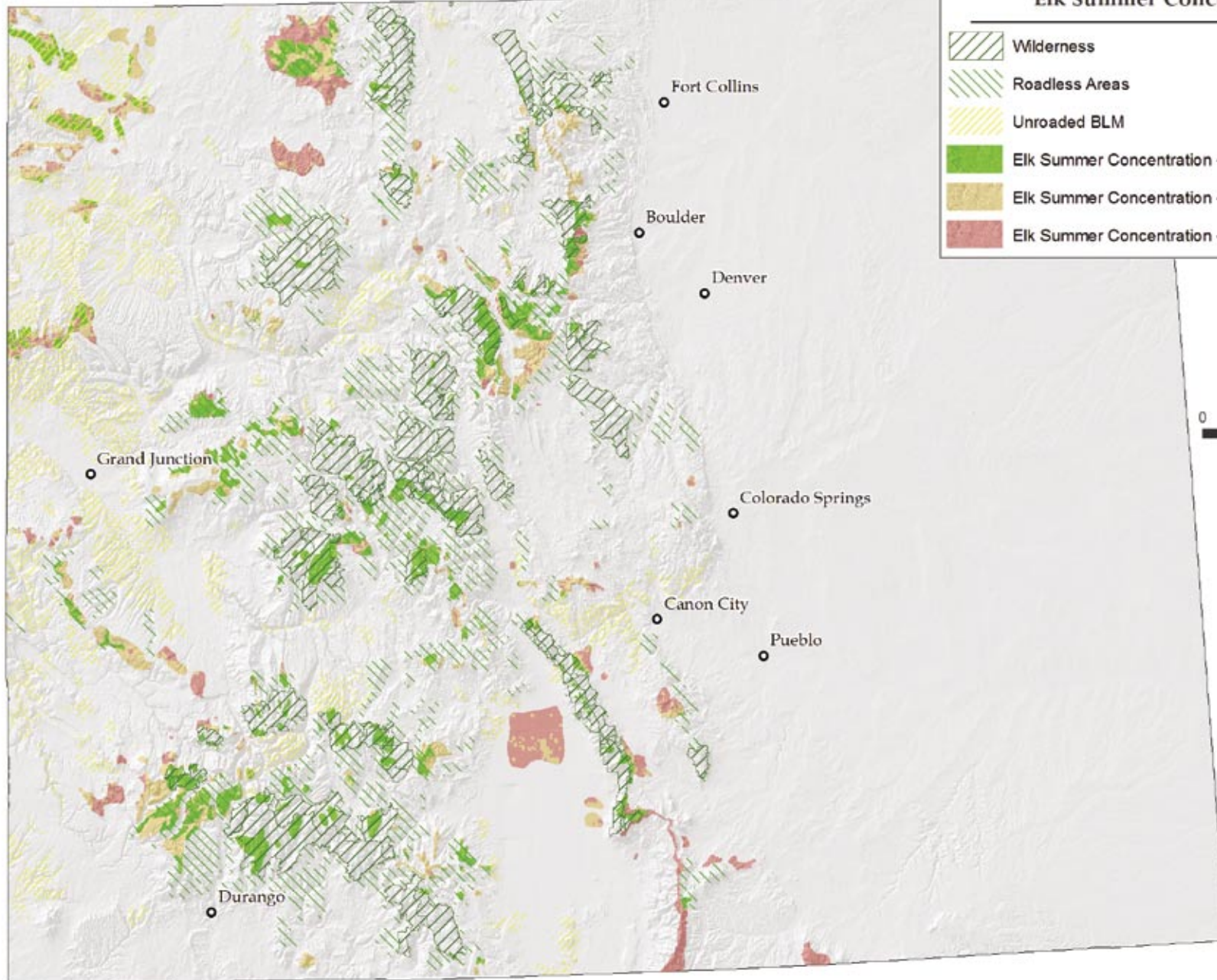
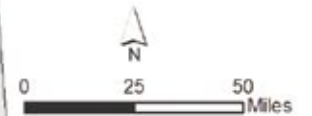


photo: Branson Reynolds

“Entire ranges can be abandoned if disturbance from traffic on roads and the associated habitat loss and fragmentation exceed some threshold level.”

– Rowland et al.⁴

-COLORADO- **Elk Summer Concentration**

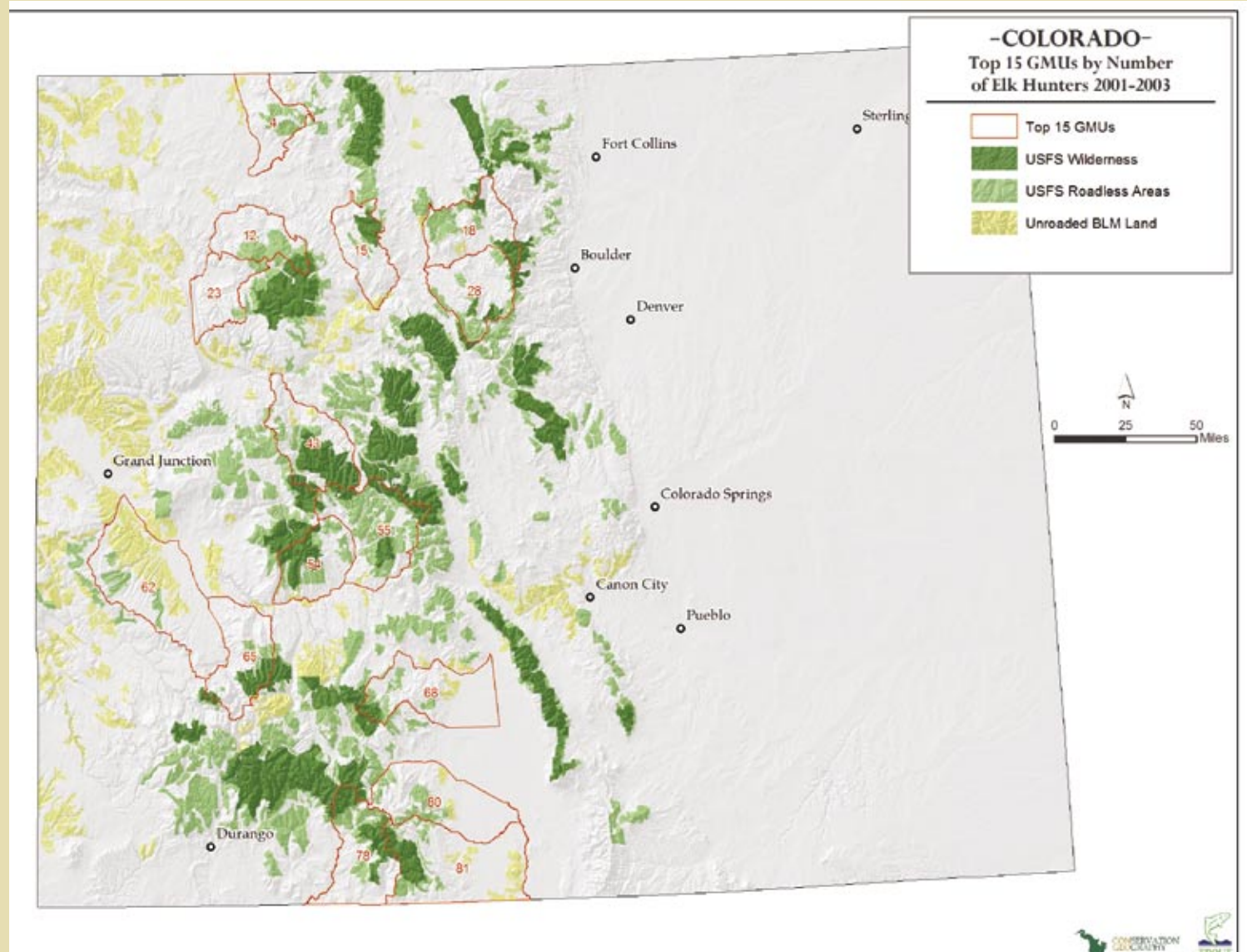


Promoting Hunter Satisfaction

In 2004, more than 250,000 people hunted big game in Colorado, representing a wide variety of goals, techniques, and ethics. Fortunately, there are places and situations to suit every preference. West of I-25, 35 percent of elk habitat is on roaded public land, 38 percent on private land, and 27 percent within roadless areas.

In order to maximize hunter satisfaction and assure dispersed hunting opportunities, Colorado's remaining roadless areas must be maintained. Many hunters prefer to roam the wild backcountry in order to escape the intrusion and noise of motorized vehicles, and the crowded hunting they bring. Says retired Colorado Division of Wildlife senior research biologist Tom Beck, "I know some really nice habitat with good deer densities, but I won't hunt there because of the high density of motorized hunters. With so many hunters in the field today, to avoid conflicts and maximize satisfaction, we need to maintain a mix of roadless as well as roaded public lands."

An examination of the 15 most heavily hunted game management units (GMUs) in the state proves the popularity of roadless areas among hunters. Of the 15 GMUs attracting the greatest number of elk hunters since 2000, 14 contain at least 66,000 acres of roadless land, and 12 have over 100,000 backcountry acres. Overall, 50 percent of the public land in these 15 most popular units is roadless. Road-free public land is an irreplaceable resource to hunters as well as wildlife.



“With so many hunters in the field today, to avoid conflicts and maximize satisfaction, we need to maintain a mix of roadless as well as roaded public lands.”

– Tom Beck

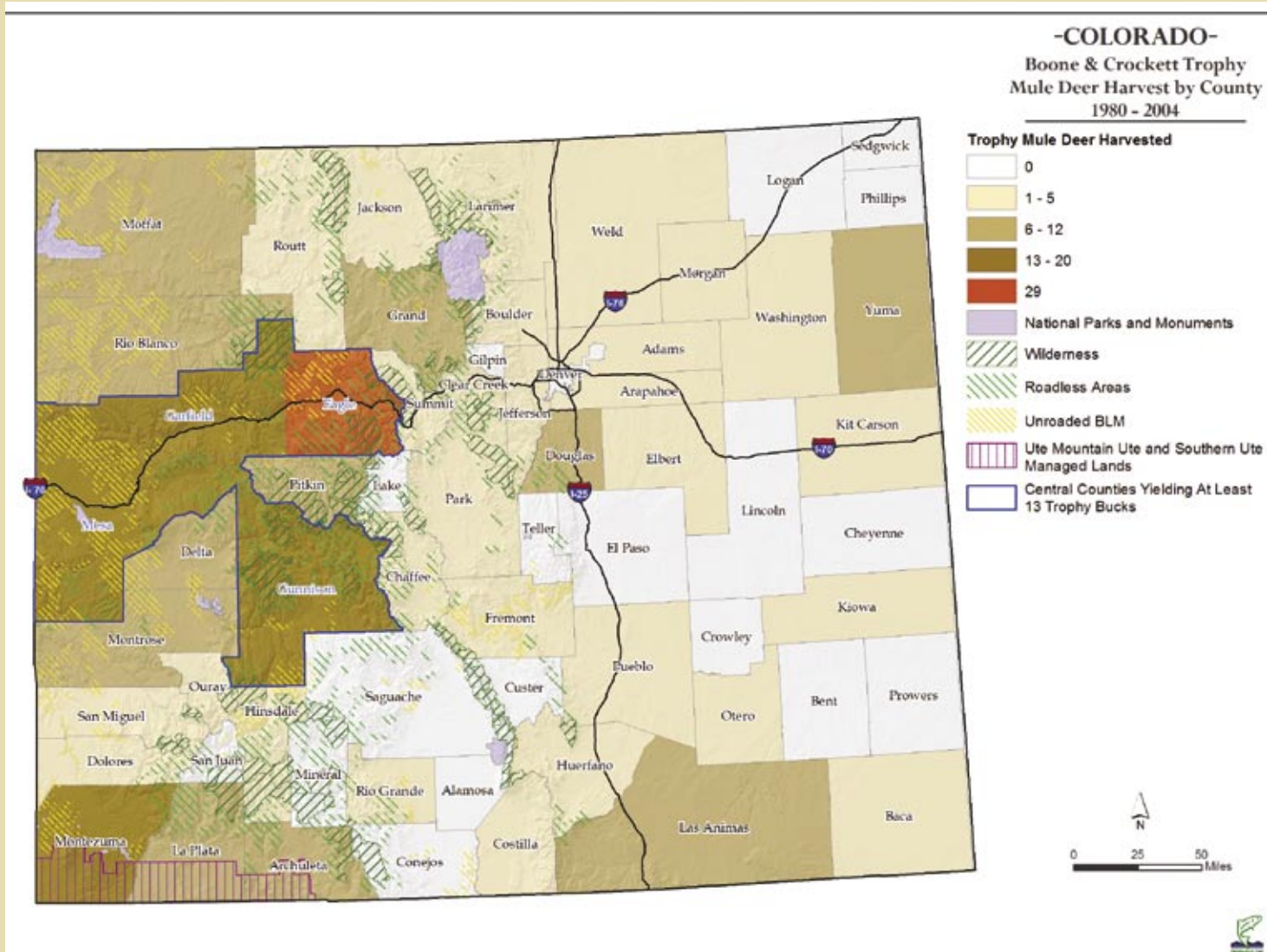
“The value of having roadless areas is that they provide a much higher quality hunt, with fewer people, less interference, and the opportunity to harvest a bigger animal.”

– Len Carpenter, Southwest Field Representative, Wildlife Management Institute

Enhancing Trophy Production and Trophy Hunting Opportunities

Roadless areas contribute significantly to two primary requirements for trophy antler production: nutrition and longevity. Backcountry habitat provides the security necessary to allow big game to remain within and maximize prime seasonal foraging habitat, optimizing not only nutrition, but rest and social harmony as well. Roadless habitat also decreases hunting pressure, allowing more bulls and bucks to live long enough to grow trophy antlers. This backcountry source of mature males helps assure a natural breeding hierarchy and social structure, and a strong gene pool for future generations of healthy herds and trophy males, benefiting all hunters, no matter where they hunt. Because big game animals move frequently, especially during hunting seasons, backcountry stocks of mature males act as “trophy pumps,” enhancing hunting opportunities even for roadside hunters, and for deer as well as elk.

- 41 percent of all land in the Colorado counties yielding the highest number of trophy mule deer is roadless.



HD Mountains Roadless Area – a vital habitat link for big game herds

The HD Mountains roadless area, near Durango in southwest Colorado, is a critical habitat linkage and winter grounds for San Juan deer and elk herds. In summer, deer and elk have access to over 700,000 acres of high-altitude backcountry habitat to the north. When late-fall snows begin to pile up in those higher elevations, the herds migrate down to lower winter ranges to the south.

In recent years, normal big game migration on the edges of the HDs has become increasingly threatened by extensive oil and gas development to the west, and sprawling subdivisions to the east. This surrounding disturbance is what makes the HD Mountains roadless area such a vital piece of wildlife habitat, providing secure winter range as well as an uninterrupted seasonal migration corridor.

The HD Mountains as a microcosm of Colorado's habitat issues:

1. Habitat Conversion – The push for oil and gas development is carving an extensive network of roads across deer and elk habitat. In addition, private lands are being subdivided and developed. In the midst of these disturbed landscapes sit islands of roadless land that have become invaluable to deer and elk as a source of secure seasonal habitat and unimpeded migration.

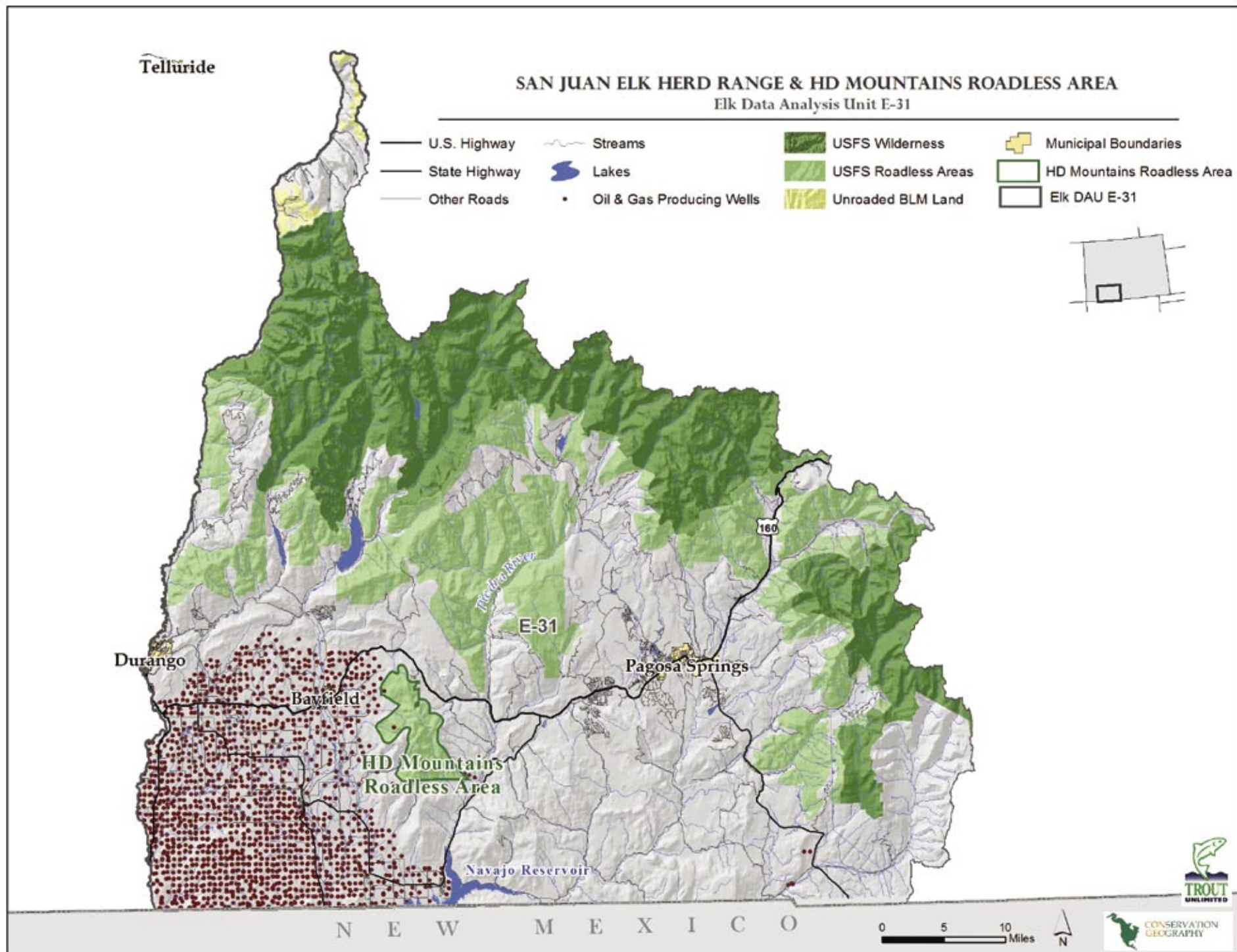
The West-wide decrease in mule deer numbers in recent years is attributable to a host of influences, including overhunting, wildfire management, and livestock overgrazing. Yet nothing has had a greater negative impact on mule deer numbers than habitat conversion. Today, people are living where deer lived yesterday. As the convergent forces of public land resource extraction and private land subdividing convert previously productive habitat to other uses, big game animals become increasingly dependent on remaining backcountry habitat.

2. Backcountry Hunting and Economic Impact – As veteran Colorado big game guide and outfitter T. Mike Murphy, of T Bar M Outfitters, attests, as development progresses and roadside hunting pressure intensifies, backcountry hunts are increasingly in demand among hunters searching for a quiet, quality outdoor experience. Murphy has hunted the HD Mountains for 37 years and outfitted there for 26. Throughout western Colorado, guides and outfitters like Mike Murphy have based traditional lifestyles on backcountry hunting, making up part of a \$60 million guiding industry that adds to the sustainable economic health of rural communities. The HD Mountains, like most roadless areas, is a special place. It brims with big

game, but because of its remoteness from roads and motorized access, it is not overhunted. The intrusion of roads for oil and gas development would end all of that, likely forever. Mike Murphy is concerned not only for the future of his business, which his son Danny had hoped to continue, but also for the integrity of a wild natural place that has played an essential role in his life. “The HDs is one of the few places I know of,” says Murphy, “where you can still find the remains of bull elk that have died naturally. And if you don’t have bulls out there dying of old age, you’re over-harvesting the resource. This middle-altitude roadless area comprises some of the last intact elk and deer wintering grounds in the region that are essentially undisturbed by humans. The whole area is amazingly quiet – a restful place to visit – and lovely, with diverse vegetation including some magnificent old-growth ponderosa pine. If we allow places like this to be trampled under the wheels of so-called progress, where will tomorrow’s hunters, anglers and backcountry wanderers have left to go to escape the sound of gasoline engines?”



photo: Branson Reynolds



Mamm Peak Roadless Area

According to those who know and love it, the Mamm Peak roadless area is a back-country hunter's paradise. Located southwest of Rifle, on the White River National Forest, in west-central Colorado, Mamm Peak roadless area encompasses 25,330 acres. According to Jeff Mead, whose family has operated Mamm Peaks Outfitters for the past 15 years, Mamm is one of the premiere big game hunting areas in all of Colorado. "As soon as archery and black powder seasons open in September," Mead explains, "motorized hunter traffic up on Grand Mesa sends elk fleeing downhill, and right into our laps. Consequently, hunter success on elk – for my clients and anyone else willing to ride horseback or walk into this rugged backcountry – is consistently high." Likewise, says Mead, "this is one of the best areas in the state for black bear, mountain lion, and mule deer. The two top-scoring muley bucks in Colorado came out of the Mamm Peak backcountry."

But here again, as with the HD Mountains near Durango, gas and oil development threatens to destroy paradise. Wells have already been drilled and many more are planned. "Until three years ago," says Mead, "my wife, my two sons and I outfitted 40 hunters a year. Now we're down to 18 because of the noise of exploratory drilling and road-building below and to the east. Not only does it ruin the wilderness experience for hunters, it chases the elk away. Even some of my best repeat customers, old friends, have quit coming, and I can't blame them." Like T. Mike Murphy down in the HDs, gas

and oil development threatens to put Jeff Mead out of business and smashes cherished plans to pass the family business along to his sons. "But it's not just my business," says Mead. "My whole family is passionate about this place. We love to ride into the Mamm just to be there – it's so quiet and pristine. No roads, no ATVs, no crowds – just the woods, the wildlife and us."

Locals also worry about the future of two small streams in the area, Beaver and Brush creeks, which currently support marginal populations of Colorado River cutthroat trout. "This whole area is rich with natural springs," explains Mead, "but if they keep putting down new wells,

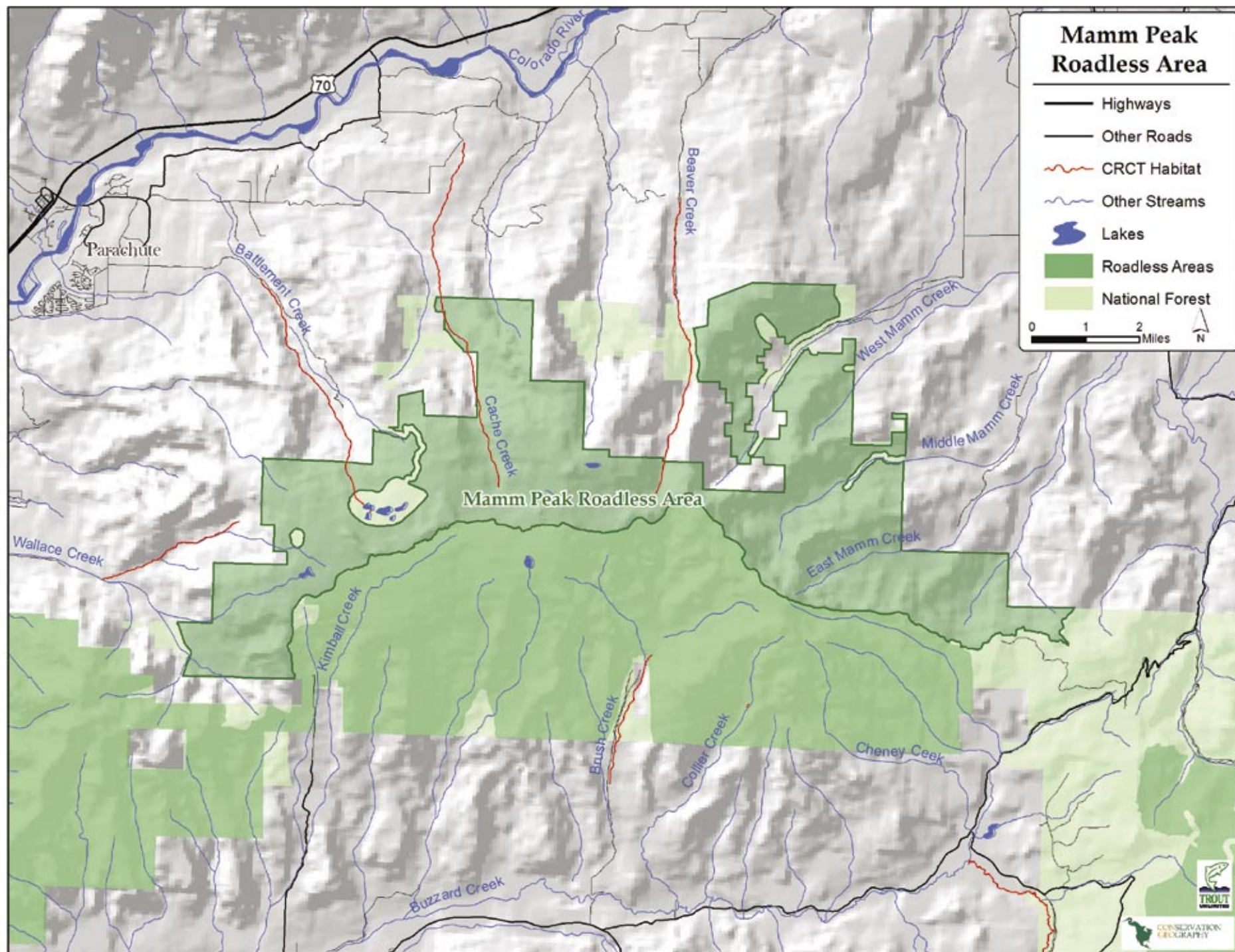
sooner or later they're going to get into the ground water and mess everything up." Jeff Mead, along with fellow outfitter Mike Murphy and thousands of hunters and anglers throughout Colorado, recognize all too well the threat that new road building poses to rural western culture and customs.



photo: Branson Reynolds



photo: Dave Reed / Wilderness Workshop



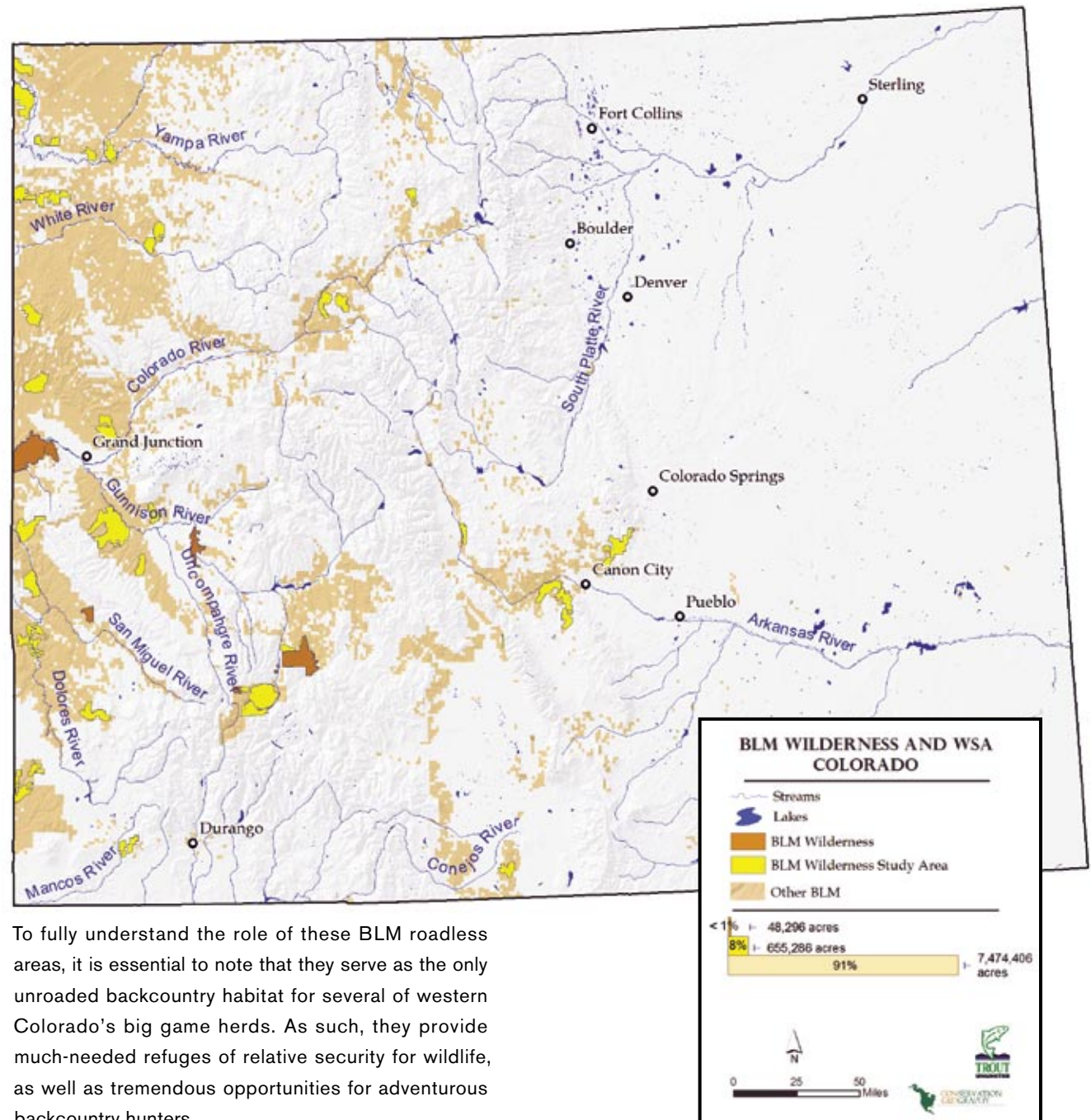
Other Roadless Areas

In addition to the approximately 4.4 million inventoried acres of USFS roadless lands in Colorado, the BLM (Bureau of Land Management) oversees in excess of half a million acres more. Just 4 percent of Colorado's BLM land lies beyond one mile of a road.¹ While this report is concerned primarily with USFS lands, the following overview of BLM holdings and spotlighted example help to provide a broader roadless picture.

Wilderness Study Areas

Wilderness Study Areas (WSAs) are BLM roadless areas of 5,000 acres or more. The BLM is directed by Congress to study these areas and recommend that they either be designated as wilderness, or be dropped from the roadless inventory and managed under BLM multiple-use mandates. Once the BLM has made its recommendation, it is up to Congress to decide whether to designate them as wilderness. Meanwhile, WSAs are to be managed to preserve their wilderness characteristics – meaning, among other things, that new road building and motorized access are prohibited. Grazing, meanwhile, is generally allowed.

BLM lands constitute much of western Colorado's arid canyon country, including some extraordinary big game habitat. However, only a small percentage of BLM lands receive any type of protection from development. Less than 1 percent of BLM land in Colorado is designated wilderness. The 621,737 acres that fall within Colorado's 54 wilderness study areas make up only 8 percent of the state's BLM lands.

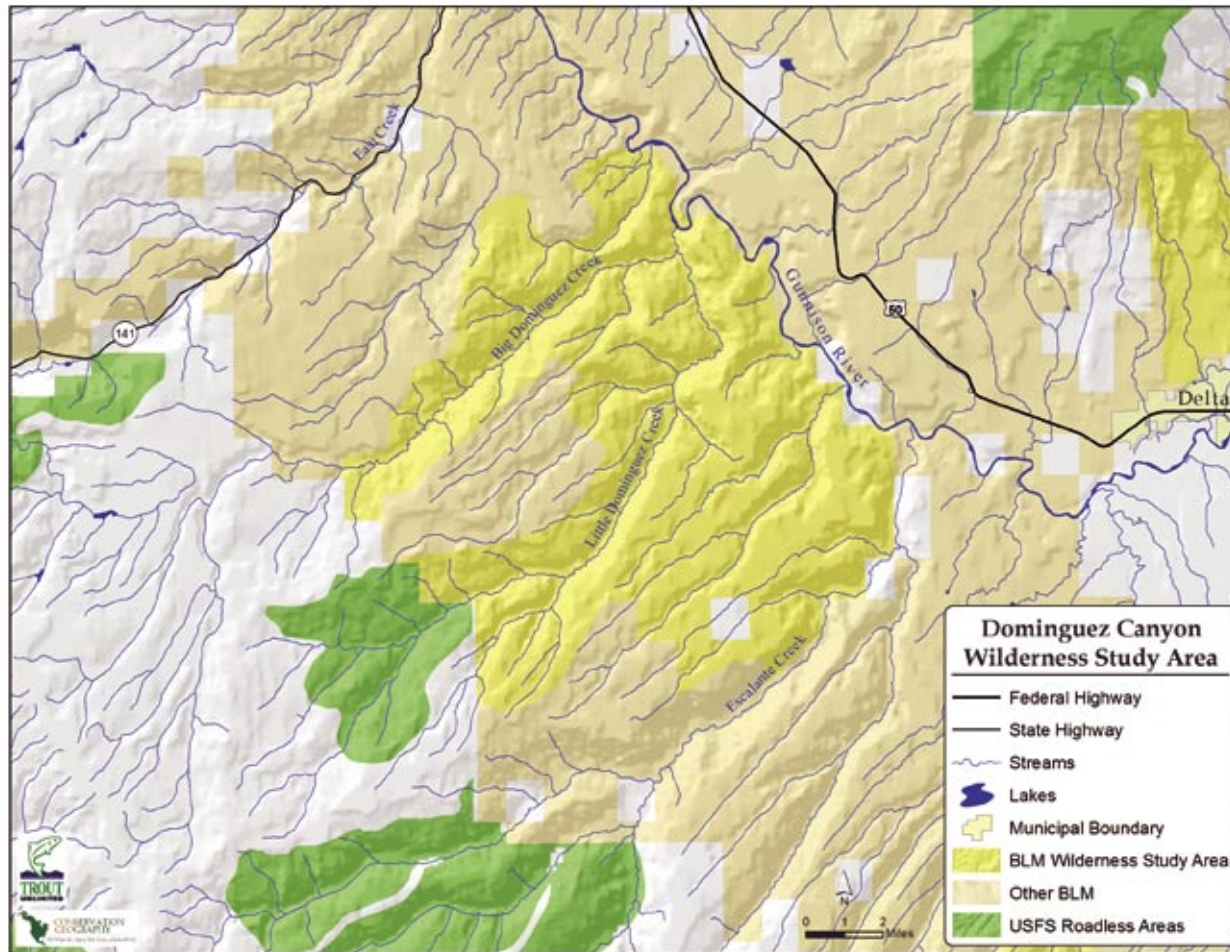


To fully understand the role of these BLM roadless areas, it is essential to note that they serve as the only unroaded backcountry habitat for several of western Colorado's big game herds. As such, they provide much-needed refuges of relative security for wildlife, as well as tremendous opportunities for adventurous backcountry hunters.

Dominguez Canyon Wilderness Study Area

The Dominguez WSA, located on the eastern edge of the Uncompahgre Plateau, is the largest BLM wilderness study area in Colorado. All 73,568 acres have been recommended by BLM for permanent protection against roading and development under wilderness designation, though Congress has yet to act.

For now, the roadless Dominguez backcountry continues to support an abundance of wildlife, including Rocky Mountain bighorn sheep, mule deer, elk, mountain lion, black bear, chukar, and wild turkey, as well as trout populations in Big and Little Dominguez creeks. While the area supports a year-round population of elk, wapiti numbers swell in the fall, as herds move onto the WSA for winter range and to escape intense hunting pressure on nearby roaded lands. Adventurous hunters, those willing to horseback or walk into the Dominguez backcountry, are usually amply rewarded for their efforts.



“I hunt big game in the Dominguez WSA because I love rim-rock country, and elk, and mule deer, and because this area brings all three together. Elk prefer the area in part because it’s closed to motorized vehicles, which they fear. It’s also classic canyon-type mule deer country that supports bighorn sheep and a host of other wildlife. For serious western big game hunters like me, the real value of the WSA lies in its wild nature, as well as its role as a refuge for elk and other big game. The absence of motorized vehicles makes it extraordinarily valuable as wildlife habitat and thus a great place to hunt.”

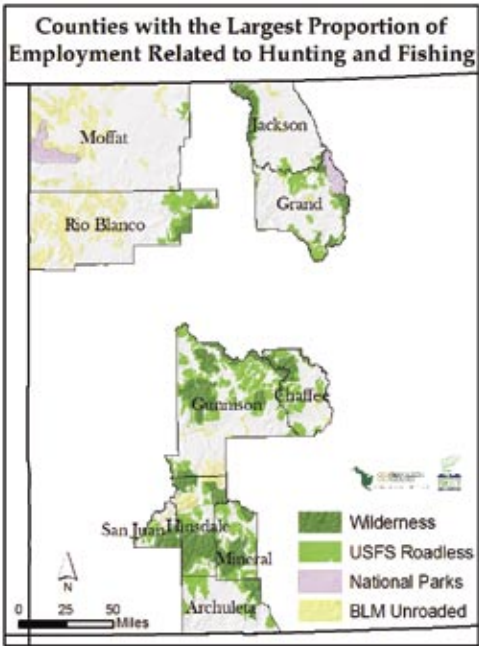
- Greg Corle, hunter, Grand Junction, Colorado.

Economics

Tourism has grown from a cottage industry to one of the most important economic activities in Colorado, employing 8 percent of the state’s workforce.⁵ Fishing, hunting, and wildlife viewing alone accounted for more than \$1.5 billion in 2001 and provided more than 20,000 jobs. These jobs are particularly significant in rural communities, and as the map shows, the 10 counties with the highest proportion of fishing and hunting jobs possess abundant roadless land.

Statewide Economic Impacts of Hunting and Fishing in 2002:

- Fishing: \$820 million
- Elk Hunting: \$340.1 million
- Deer Hunting: \$97.5 million
- Other Big Game Hunting: \$12 million
- Small Game Hunting: \$153 million



Non-residents account for much of the economic benefit from outdoor recreation, particularly by those who hunt elk, as Colorado is the only state where over-the-counter elk tags are available to non-resident hunters.

Hunting and Fishing Trip-Related Expenditures:⁶

	Resident	Non-Resident	Total
Hunting	\$156 million	\$181 million	\$337 million
Fishing	\$307.8 million	\$150 million	\$458 million
Wildlife-Watching Expenditures			\$624,402,000 ⁷

County	Jobs from Hunting and Fishing	Total Jobs in the County
Jackson	200	1,154
Rio Blanco	360	4,343
San Juan	30	475
Grand	560	10,370
Mineral	40	742
Hinsdale	30	632
Gunnison	540	11,381
Moffat	330	7,440
Archuleta	280	6,405
Chaffee	380	9,745

Economic research contributed by Jason Kuiken.



photo: Branson Reynolds

Trout Unlimited's Public Lands Initiative

Protecting The Places We Hunt and Fish

All of our actions on the land are ultimately reflected in the quality of fish and wildlife habitat. More than 50 million Americans hunt and fish. Too often, their voices and interests are lost in the din of controversy that has come to define public land management. The intent of TU's Public Lands Initiative is to cut through the noise and:

- Develop sound scientific and technical information demonstrating the importance of public lands to coldwater fisheries, wildlife and fishing/hunting opportunities;
- Build an alliance of TU members, wildlife and fisheries conservation groups, hunting and angling clubs, and fish and wildlife professionals to advocate for management policies on public lands that protect the long-term health of coldwater fisheries as well as wildlife; and
- Inform the broader public on how incredibly important public lands are to protecting and restoring coldwater fisheries and wildlife habitat, and the tremendous fishing, hunting and other outdoor opportunities public lands provide.

Under this Initiative, Trout Unlimited has established specific field programs to address three major management issues affecting fish and wildlife habitat on public lands:

- Restoring lands degraded by abandoned hard rock mines;
- Oil, gas and coal bed methane development in the Interior West; and
- Roadless and wilderness area protection.

photo: Branson Reynolds



Literature Cited

1. Ecosystem Management Research Institute. *Hunter Access to Federal Lands in Colorado: An Analysis of Past and Current Conditions*. February 2003.
2. USDA Forest Service. 2002. Final Environmental Impact Statement to Accompany the Land and Resource Management Plan – 2002 Revision. White River National Forest.
3. Behnke, Robert J. *Trout and Salmon of North America*. New York, NY. 2002. p. 197.
4. Rowland, M. M., M. J. Wisdom, B. K. Johnson, and M. A. Penninger. 2004. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. *Transactions of the North American Wildlife and Natural Resource Conference* 69: in press.
5. Center for Business and Economic Forecasting (CBEF). 2001. *Tourism Jobs in Colorado: Estimates of a Critical Part of the State & County Economies*. Colorado Department of Local Affairs, Denver, CO.
6. BBC Research and Consulting. 2004. *The Economic Impacts of Hunting, Fishing and Wildlife Viewing in Colorado*. Colorado Division of Wildlife.
7. U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. 2001. *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.

Trout Unlimited staff Keith Curley and David Petersen produced this report.

To learn more, please visit our website at <http://www.tu.org>

Join Trout Unlimited on-line at <http://www.tu.org> or call (800) 834-2419

Cover photo credits (left to right):

Colorado River Cutthroat, photo by Colorado Division of Wildlife; Crystal Lake, CO, photo by Branson Reynolds; Bugling Elk, photo by Branson Reynolds



Sneffels Range, southwest Colorado. photo by Branson Reynolds

For more information, please contact:

David Petersen

Trout Unlimited

Colorado Roadless Coordinator

Durango, Colorado

dpetersen@tu.org

printed on recycled paper 