CITIZEN'S GUIDE TO
COLORADO'S ENVIRONMENTAL ERA

Prepared by

Colorado Foundation for Water Education

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Citizen's Guide to Colorado's Environmental Era

This *Citizen's Guide to Colorado's Environmental Era* is part of a series of educational booklets designed to provide Colorado citizens with balanced and accurate information on a variety of subjects related to water resources. ISBN 0-9754075-7-0

Acknowledgements

The Colorado Foundation for Water Education thanks the following people and organizations for their review, comment, and assistance. The authors and the Foundation are solely responsible for the contents of this Guide.

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The Foundation would like to extend a special thank you to John Fielder for the generous donation of his photographs found throughout this guide, and his concluding remarks (see back cover.)

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Mission Statement

The mission of the Colorado Foundation for Water Education is to promote a better understanding of water issues through educational opportunities and resources, so Colorado citizens will understand water as a limited resource and make informed decisions. The Foundation does not take an advocacy position on any water issue.

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Introduction

In the early 1970s the United States Congress passed some of the most stringent environmental laws in the world, including the Clean Air and Clean Water acts. The Endangered Species Act of 1973 is still among the most stringent national laws for the protection of plants and animals. This era of environmental regulation changed the way we do business and manage water—in addition to generating reams of environmental impact reports, legal briefs and statutes.

This *Citizen's Guide to Colorado's Environmental Era* is the second history-related guide in the Colorado Foundation for Water Education's ongoing citizen' guide series. As a follow-on to the *Citizen's Guide to Colorado's Water Heritage,* our authors extend the history timeline to recent years, what we have labeled "the environmental era."

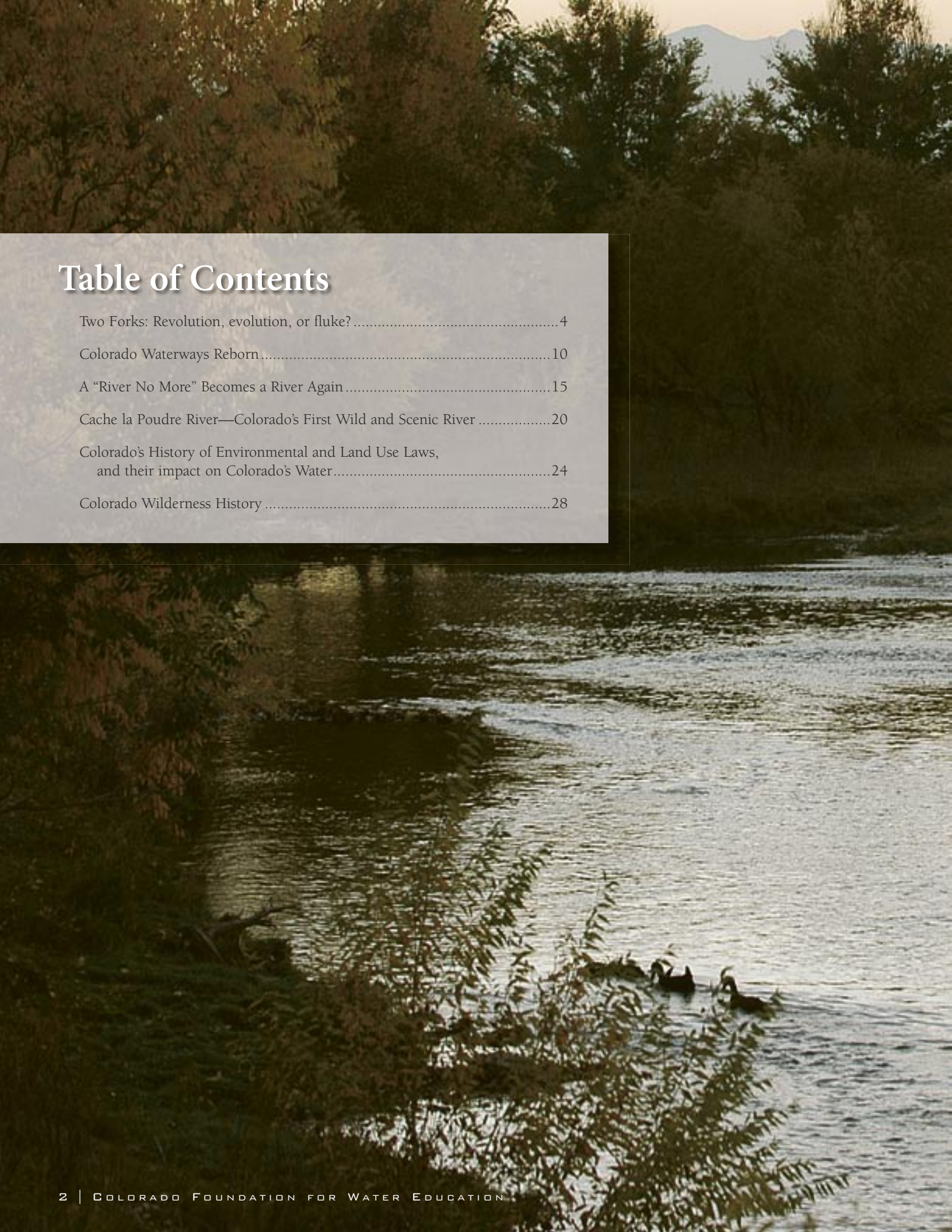
This project draws together the expertise of prominent historians and scholars from throughout Colorado and the West. Their essays show how recent decades and the environmental movement have shaped Colorado's culture, communities and landscapes.

Concern for the environment comes out of a long tradition of preservation and conservation in the United States. Around the turn of the century, the establishment of Yellowstone Park and the Conservation Movement of President Theodore Roosevelt marked some of the first organized advocacy for the sustainable use of forests, soils and water.

The modern American environmental movement has built itself of these conservationist and preservationist roots—as well as on a mound of paperwork.

Karla A. Brown

Karla Brown
Editor and Executive Director



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TWO FORKS

In the early 1990s, a massive coalition of Denver governments was defeated in its quest to build a one-billion-dollar water project called Two Forks. Among the questions we ask here is whether this defeat represented a permanent turning away from large water projects?

Was the West, or at least the Denver metro area, no longer defining itself in terms of aridity and water? Or was Two Forks' defeat what the Brits call a one-off and we Americans call a fluke? Finally, how did the defeat of Two Forks affect the Denver metro area and what does it tell us about the West's environmental movement?

The evidence for a transformation of values and behavior is impressive. Denver and 42 surrounding governments had spent $40 million and close to a decade putting together their case for a 1 million-acre-foot reservoir. With a yield of 98,000 acre-feet—enough water for several hundred thousand additional

Two Forks dam, as proposed by Denver Water and the Metropolitan Water Providers, was to be located in Waterton Canyon on the South Platte River about one mile downstream from its confluence with the North Fork of the South Platte. The multicurvature thin arch concrete dam would have been 615 feet high with a crest length of about 1,700 feet. The reservoir created by Two Forks dam would have had an active storage capacity of 1.1 million acre-feet, with a surface area of 7,300 acres and a perimeter shoreline of about 100 miles. The reservoir would have inundated about 21 miles of the South Platte River and about 9 miles of the North Fork. Two Forks reservoir would have provided a firm water supply yield of 98,000 acre-feet per year, with 42 percent of the yield derived from the Blue River, 33 percent derived from the South Platte, and about 25 percent from the Fraser and Williams Fork rivers.

Revolution, evolution, or fluke? by Ed Marston

people—it was a significant water project and it was about more than water.

In the early and mid 1980s, Colorado suffered a crushing economic setback when the national energy bubble burst. Denver emptied out as the companies masterminding oil and gas drilling, and coal-mine, power-plant and synthetic fuel development fled. Part of the purpose of Two Forks was to provide an economic boost for this flattened metro area.

Two Forks was portrayed as an instrument of cooperation. At the time, the Denver metro area was as balkanized as the Balkans. For example, in an act of naked aggression, the suburbs had locked Denver into its 1974 boundaries by passing the Poundstone Amendment to the Colorado Constitution, barring Denver from annexing land in adjacent counties.

The suburbanites who passed the amendment hoped to wall themselves off from Denver's problems with school busing, poverty and ethnic diversity. But they had overlooked the power of water. The Denver Water Department was already supplying water to about 80 surrounding entities. And Denver had long ago obtained conditional water rights in Western Colorado that the outer ring of suburbs would need if they were to continue to expand.

And so, a few years after passage of the Poundstone Amendment, Denver and 42 neighboring water providers reached an agreement. The suburbs got the use of Denver's expertise and water rights to build Two Forks Dam. Denver got a metro partnership it hoped would upgrade its cultural and sports facilities; settle the many fights over shopping center locations and their sales tax dollars; and lead to cooperative land use planning and mass transit to reduce sprawl and congestion.

Any of these three arguments—water for growth, economic lift-off or metro cooperation—should have carried the

The proposed location of Two Forks dam (above) would have backed up the South Platte River some 21 miles, as well as inundating some 9 miles of the North Fork.

day. Instead, the U.S. Environmental Protection Agency, operating with the tacit consent of President George H.W. Bush, vetoed the project on Nov. 23, 1990, after 19 months of high-level federal consideration and intense lobbying for and against the project.

The defeat was followed by the Denver metro area more or less redefining itself as a place with urban values, rather than as a village living off crops, cattle, and oil and gas produced by the rural areas around it.

Among the many changes that followed Two Forks was the one-time breaking of the Poundstone Amendment, when voters in suburban Adams County allowed Denver to annex a portion of their county to build Denver International Airport and ancillary development. The vote also meant that Denver could redevelop Stapleton Airport once it was abandoned.

Hamlet "Chips" Barry was appointed head of the Denver Water Department soon after the defeat of Two Forks. Under his leadership, Denver Water chose not to attempt to overturn the veto. "It's not worth the brain damage, cost or loss of public credibility," Barry said.

More recently, metro area voters in eight counties approved a sales tax increase to finance a $4.7 billion expansion of the area's light rail system. On the same day, and despite a severe drought, every county in the metro area rejected Referendum A, which would have provided $2 billion in bonding for water projects.

Denver and its suburbs had earlier voted to tax themselves to build two sports stadia—one for the Broncos and one for the Colorado Rockies. The metro voters had also imposed on themselves a cultural facilities sales tax to support museums, performing arts centers and the like, with much of the money going to Denver institutions that serve the region.

Metro governments also joined to solve an air pollution problem that was the second worst in the United States, after Los Angeles. Finally, a Metropolitan Mayors' Council now meets monthly, and has smoothed some of the friction that previously hampered cooperation between area governments.

Some gaps remain. Denver's central library gets no help from the surrounding area even though suburbanites use it heavily. And Denver's emergency room facilities are still the sole responsibility of Denver even though they serve the metro area.

And what of the water needed for growth? After the Two Forks federal veto, other Front Range water entities and water developers, sensing a vacuum, proposed grandiose water projects such as the Poudre River Project, American Water Development Inc. (AWDI) in the San Luis Valley, and Union Park and Collegiate Range in the upper reaches of the Gunnison River. Their assumption was that a large project would have to be built somewhere.

Instead the vacuum was filled by small-scale solutions, such as the joint-use Western Slope Wolford Reservoir, cooperation (sharing of raw water, pipelines, treatment plants), conservation, drying-up of nearby farmland, increased reliance on Denver Basin groundwater, and toilet-to-lawn recycling.

Superficially, at least, this looks like a transformation. The traditional solution to aridity—big dams and aqueducts—is replaced by governments sharing water and facilities, conservation, and recycling. At the same time that Denver-area governments avoid a billion-dollar investment in a water project, they invest heavily in cultural, sports and mass transit.

But these events may be coincidental, or conditional. If drought persists, if population growth accelerates, the Denver metro area may be building dams before the decade is over. All we can say with certainty in 2005 is that in a moment of inspired citizen activism, accompanied by enlightened behavior at the federal level, the Denver metro area rowed itself away from an expensive and destructive piece of hardware and toward another form of urban development.

If the Two Forks defeat had represented a profound societal shift, it should also have affected the movement that did so much to make that defeat happen. But looking back 15 years, it appears that Two Forks' impact on environmentalism in the interior

West has been minimal. A victory comparable to the defeat of dams proposed in the 1950s for Echo Park, in Dinosaur National Monument, and for the Grand Canyon in the 1960s hasn't left a ripple on the public face of environmentalism.

Overall the movement's philosophy and strategy at Two Forks is proving, so far, to be the "one-off," the fluke. Why? Unlike most anti-dam campaigns, the fight against Two Forks came from the technocratic wing of the environmental movement. Led by a Ph.D. hydrologist and former Marine named Dan Luecke and a long-time veteran of environmental fights named Bob Golten, the Environmental Caucus—a coalition of national and Colorado environmental groups—built a case during the 1980s that the metro area could have all the growth it wanted by metering houses, building small reservoirs, and sharing water across governmental boundaries.

The Caucus also revealed that Denver and its suburbs had more water supplies than they were admitting to, and that the growth projections were exaggerated.

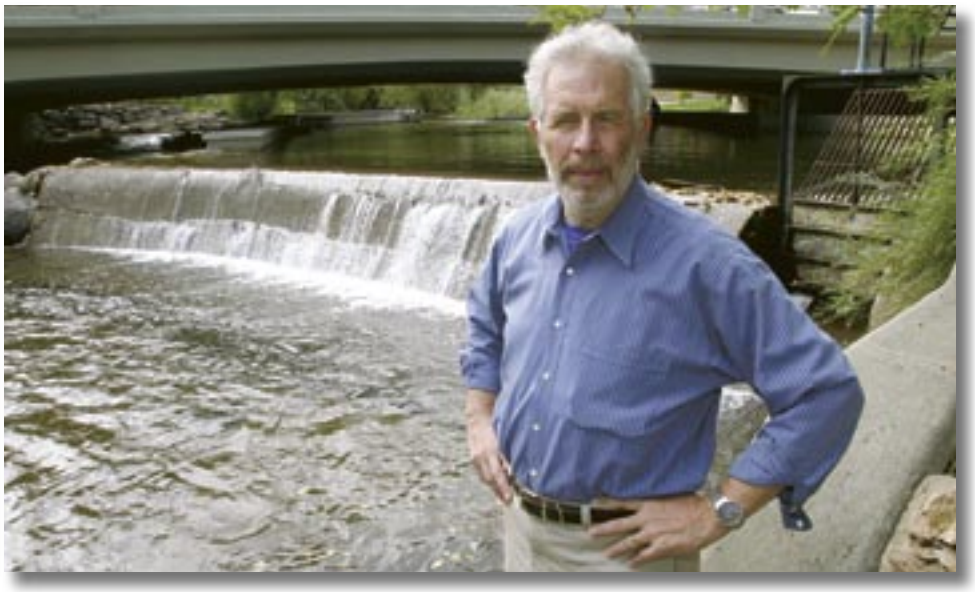
In the end, the people of the metro area, who turned out in huge numbers to testify against Two Forks, as well as Governor Roy Romer and the Bush Administration, accepted the idea that Denver could at least postpone Two Forks. And by doing so, the metro area could save $1 billion and spare miles of a beautiful canyon close to Denver, as well as eliminate a possible threat to the whooping cranes that use the Platte River in central Nebraska.

The Environmental Caucus beat Two Forks by breaking two cardinal environmental rules. Instead of fighting growth as evil, it chose to meet growth's needs in least-cost, light-impact ways. And while it spoke of the beauty and ecological damage Two Forks would do, the bottom-line in this fight was on economic efficiency and least-cost alternatives that could spare the beauty and ecological values.

There are all sorts of environmental struggles, of course, and all sorts of tactics. But the approach to high-profile issues such as Two Forks has been shaped by two fights that formed the West's modern environmental movement. In the early 1950s, the U.S. Bureau of Reclamation proposed construction of two dams within Dinosaur National Monument. Echo Park and Split Mountain were to dam beautiful canyons in remote northwestern Colorado, where the Yampa (still un-dammed) and Green rivers mingle.

To the amazement of almost everyone during those conservative Eisenhower years, citizens buried Congress in letters and telegrams, demanding that this national park unit be spared. In response, Congress shifted the two dams to a single dam at Glen Canyon in Arizona, creating Lake Powell.

A decade later, a proposal to put two dams into the Grand Canyon was also smote by public outrage. The dams were dropped, and a large coal-fired power plant, which still smudges the Southwest's air, was built to pump water out of the Colorado River to Phoenix and Tucson as part of the Central Arizona Project.



Dan Luecke, a Ph.D. hydrologist and former Marine, successfully built the case that the metro area could have all the growth it wanted by metering houses, building small reservoirs, and sharing water across governmental boundaries. He and his partners in the Environmental Caucus were successful in a way the water developers may not have foreseen, by showing how metro Denver could have growth without a new dam.

The environmental coalitions that defeated these two sets of dams were led by David Brower, the head of the Sierra Club, and a brilliant advertising man and political tactician. It was he who created the ad about the Grand Canyon, asking if we should also flood the Sistine Chapel to get closer to Michelangelo's painting on its ceiling.

But because environmentalists had traded away Glen Canyon to save Dinosaur, and because Glen Canyon was later revealed as a place of great beauty, Brower vowed never again to compromise: "Polite conservationists leave no mark save the scars upon the Earth that could have been prevented had they stood their ground."

That philosophy was amplified by writers such as Edward Abbey and activists such as Dave Foreman, a co-founder of Earth First! "Thou shalt not compromise nor collaborate" became the first commandment of the environmental movement in the West.

The Environmental Caucus broke this

Two Forks Chronology

1890s—Denver water officials look into building a dam at the confluence of the South Platte River and its North Fork located southwest of Denver

1931—Denver files for water rights for area.

1970s—Denver Water Board and U.S. Bureau of Reclamation plan dam at Two Forks. Water Board opts instead for Foothills Treatment Plant.

1982—Forty suburban governments and water districts unite and form the Metropolitan Water Providers and join Denver in the Two Forks project.

1986—Denver Water Board files for permit to build Two Forks dam.

April 1987—Denver water officials unveil 15-year, $45 million plan to ease environmental damage from the dam.

June 1987—U.S. Fish and Wildlife Service finds that dam won't harm endangered species.

March 1988—U.S. Army Corps of Engineers issues environmental impact statement, stating dam potentially could cause environmental damage.

May 1988—Environmental Protection Agency officials in Denver oppose immediate construction of dam.

June 1988—Governor Roy Romer recommends that the Army Corps of Engineers approve a 25-year permit to build dam, but says he would like to see it built elsewhere.

July 1988—Colorado Water Quality Control Division issues state certification for Two Forks.

January 1989—Army Corps of Engineers announces it intends to issue a permit for the dam, including restrictions and conditions that must be met before the dam can be built.

February 1989—New EPA Administrator William Reilly halts decision-making process while he considers the proposal.

March 1989—Reilly orders EPA Regional Administrator Jim Scherer to begin process to veto Two Forks. Two days later, the EPA's Atlanta Regional Administrator Lee DeHihns announces the agency will continue the veto process, virtually dooming the project.

July 1990—In an effort to change the EPA's decision, Denver Water Board proposes cutting the planned size of Two Fork's reservoir by 59 percent.

November 22, 1990—A draft of the final decision by EPA Administrator William Reilly indicates the dam project will be vetoed.

Excerpted from the Rocky Mountains News article "EPA chief to veto Two Forks" November 23, 1990.

commandment, too, and thereby won the biggest water victory in the interior West since the Grand Canyon. The Caucus achieved its victory by becoming a member of Governor Richard Lamm's Water Roundtable, and by pledging to work to provide the metro area with enough water to fuel growth through the first part of the 21st century. And cooperate they did, in a way the water developers may not have foreseen, by showing how metro Denver could have growth without a new dam.

Two Forks had an immediate impact on those who ran the Denver metro area's water systems. Many of the existing water managers were replaced by a new breed, typified by Chips Barry. Barry was appointed head of the Denver Water Department soon after the defeat of Two Forks. His attitude is illustrated by his reaction to the decision by some of the suburbs to sue the federal government to overturn the Two Forks veto:

"I would just as soon not have the [Denver Water] Board appeal the Two Forks decision. It's not worth the brain damage, cost or loss of public credibility." Operationally, Barry has created a low-key, cooperative approach to Colorado's water problems that could not be more different from that of his department's preceding leaders.

Barry was not alone. As the Bush Administration veto loomed, Governor Romer said that Two Forks demonstrated that the state's institutions were "out of step…with the values of its citizens and in need of reform or overhaul."

The victory appears to have had less effect on the victors. That may be because the defeat of Two Forks didn't fit in with how many environmental leaders and groups and funders viewed the world.

Strategically, Two Forks showed that collaboration and consensus seeking could protect the earth even while enabling growth.

Politically, the veto was delivered by a conservative Republican administration, not a liberal Democratic one

Republican-driven environmentalism, growth, collaboration and consensus are all deeply suspect within western environmentalism.

As a non-resident, I cannot tell why the citizens and leaders of the Denver area were ready for a substantial change in water and urban policy. Perhaps it is as simple, and distressing, as urban people thinking that water comes from faucets the way food comes from Safeway.

I have more feel for environmentalism's thinking. If we resisted the lesson of Two Forks, it may be because many of us are romantics about "nature" and therefore determined to resist modern society.

For a while, the movement flirted with the idea of violence, as in Abbey's widely hailed *Monkey Wrench Gang,* or Earth First! fantasies about blowing up Glen Canyon Dam. Attempts were made to use violence although that tactic was quickly abandoned.

Not abandoned was the underlying attitude: hostility to working rural landscapes—to grazing, mining, logging, dam building—and to the Western towns and rural people who live off those activities. Environmentalist Andy Kerr, who led the fight against old-growth logging in the Pacific Northwest, told displaced forest workers to find new jobs making Nikes and pouring cappuccino. The "cattle free" and "zero cut" campaigns created a public image of a movement that puts the earth first and people last.

Every movement has its fringes. But no major environmental group has confronted the Kerrs and their anti-rural rhetoric. The movement's flagship, the Sierra Club, has even adopted a "zero cut" policy for public lands. In the West, the result has been to marginalize environmentalism. By comparison, the Denver metro water establishment appears to have moved miles, and the voters to have moved with them, in redefining the values of a major Western city.

This is a grim view: elected and appointed officials acting in a progressive way while the most public face of environmentalism, at least, still seems to be following an old model, in which good guys fight bad guys in no-compromise defense of Mother Earth. Not one tree is to be cut; not one cow is to graze; not one dam is to be built.

It is a grim view because a strong and vital environmental movement is needed. Nationally, the environmental movement is publicly despairing in widely circulated papers within the movement carrying titles like *The Death of Environmentalism* by Michael Shellenberger and Ted Nordhaus and *Nature's Crisis* by Dave Foreman, a founder of Earth First!

Colorado and the interior West, at least, provide more reason for hope. While the public face of environmentalism may be confrontational, and may be focused on endangered species and endangered landscapes, large parts of the movement have quietly changed. Many of those who won the Two Forks victory have continued to work on the problems of metro area water needs in cooperation with the new water establishment.

In the area of electric energy, which is a West-wide problem, Colorado-based groups are attempting to forge Two Forks-like solutions based on efficiency, fuel diversity, and renewable energy.

More broadly, groups that focus on private land conservation, watershed restoration, market-based approaches to land protection, solar and wind power energy and the like have quietly proliferated.

So while Two Forks may not have had a profound effect on the public face of environmentalism, it may be emblematic of environmentalism's new approach to problems. Unlike, let's say, a Denver Water Board or a Colorado River Water Conservation District, the environmental movement cannot turn on a dime in response to what works and what doesn't work. The last generation's emotions and experience and money are likely to keep the no-compromise, confrontational approach alive for a long time. It may take awhile for the new face of environmentalism to make it onto the evening news in a way that is recognizable to most viewers.

So I'd like to close this piece with an anecdote about the nature of change. I serve on the board of a rural electric co-operative in Western Colorado. A few of us board members had been struggling for years to change the co-op's policy toward solar and wind energy when a young woman, a staff member of a local solar energy group, began attending our meetings.

In a few months, this ex-electrician had convinced the board and staff to make it much easier for people to hook up small wind and solar units to our system. Delta-Montrose Electric Association would both be their battery and buy any excess electricity from them at our retail price. We are one of a very few co-ops to adopt this policy.

I remember saying to her after the vote that she must stand out in her group since she came over as non-ideological, has a blue collar background, and was at home—actually, she enjoyed herself—in a board room made up of conservative ranchers and small business people in their fifties and sixties.

"Not at all," she said. "Everyone I know in alternative energy is like me."

I had just seen Two Forks writ small. ❑

About the Author: Ed Marston has published newspapers out of Paonia, Colorado, since 1974. He is the author or editor of several books, including a 35,000-word memoir in Colorado: 1870-2000 *by W.H. Jackson and John Fielder.*

In 1996 Federal District Judge Richard P. Matsch issued an opinion finding that the U.S. Environmental Protection Agency (EPA) acted properly in vetoing the permit that would have allowed Two Forks dam to be built. His opinion concluded that the EPA showed "record support for the conclusion that even after mitigation, the three proposals for the Two Forks dam would result in significant and unacceptable adverse impacts."

"If it were my river, I would not leave it out at night. Some coyote pup might come along and drink it all up."

— attributed to Mark Twain

Colorado Waterways Reborn

By Thomas J. Noel

Mark Twain worried about Colorado's meager rivers in his classic account of the American West, *Roughing It*. Of the trickle he crossed in a stagecoach at Julesburg, he wrote: "We came to the shallow, yellow, muddy South Platte, with its low banks and its scattering flat sand-bars and pigmy islands—a melancholy stream straggling through the centre of the enormous flat plain…The Platte was 'up,' they said—which made me wish I could see it when it was down, if it could look any sicker and sorrier."

Mother of Rivers

Although Colorado's rivers have been maligned as skimpy and unnavigable, the Highest State is actually the Mother of Western rivers. Four major arteries of the American West begin on Colorado's Continental Divide where rivulets only inches apart lead to the world's two great oceans. The Platte, Arkansas and Rio Grande flow through eastern Colorado into the Gulf of Mexico and the Atlantic Ocean. The Colorado River drains the Western half of the state on its way to the Sea of Cortez and the Pacific Ocean. Meager as they may have appeared to Mark Twain, Colorado's rivers were, and still are, destined for greatness.

For more than 14,000 years, they served the Native Americans who camped along them. Four hundred years ago, Spanish missionaries, explorers and Conquistadores began traveling north along these waterways, mapping them with the sonorous names of saints and, in the case of the South Platte, Jesus y Maria.

Religious names, however, did not protect Hispanic Colorado from an invasion of 100,000 fortune seekers. After the 1859 Colorado Gold Rush, once clear waterways became muddied with mining and human waste. Coloradans traditionally dammed, ditched, diverted and trashed their creeks and rivers. Not until the 1970s did Colorado communities begin focusing on cleaning up their waterways as scenic, recreational and alternative transportation routes.

Since its establishment in 1971, the State Trails Program of Colorado State Parks has championed trail development. The State Trails Master Plan is an inventory of Colorado's trail system used by the Colorado Greenway Project, which funds local trail construction using Colorado Lottery proceeds and other sources. Since 1983, the Greenway program has put more than $11.5 million into more than 303 trail projects. The Trails Program also aids local communities

Flooding took a terrible environmental and economic toll on early Denver. Here Cherry Creek has washed a huge erosive channel through the middle of town. Denver Mayor Robert W. Speer cleaned up, channeled and landscaped Cherry Creek and began work on making the South Platte River a parkway drive.

and citizens' groups with technical assistance, trail planning, and coordination with other agencies.

Waterway restoration also received a lift in 1992 when Coloradans voted to create the Great Outdoors Colorado (GOCO) Trust Fund. The GOCO Amendment to the State Constitution allows a state lottery whose proceeds help preserve and enhance parks, rivers, trails and open spaces. Since it began awarding grants in 1994, GOCO has conferred almost $500 million for more than 2,100 projects statewide, including many waterway improvements.

River restoration and reclamation projects are occurring all around the state of Colorado. In many instances, it's as easy as heading to the nearest waterway to discover local improvements.

South Platte River

Both the North and South Platte rivers are born in Colorado, cradled respectively in mountain-rimmed North Park and South Park. Two French explorers, the brothers Paul and Pierre Mallet, en route to Santa Fe in 1739 dubbed it La Rivière Platte (flat or shallow). Major Stephen H. Long, who first officially explored the South Platte for the U.S., was, like Mark Twain, underwhelmed by this Western river whose valley he mapped as "The Great American Desert." Long argued that Colorado's waterways would not support agriculturally-minded Americans.

Nevertheless, the South Platte riverbank became the most traveled immigrant trail into Colorado during the Gold Rush. From a foot and wagon path, it evolved into the state's main railroad and industrial corridor. The stream that Stephen Long described in 1820 as clear, cool and delicious became murky with smelter, stockyard, factory and other waste. By 1900, Denver's South Platte River and Cherry Creek had been declared unsafe health hazards. Some proposed covering the streams over and officially converting them to the public sewers they had become. Fortunately, Denver Mayor Robert W. Speer had a better idea. He cleaned up, channeled and landscaped Cherry Creek and began work on making the South Platte River a parkway drive. Speer's plan much later became reality thanks to Mayors Bill McNichols, Federico Peña and Wellington Webb, who gave Denver the state's first greenway park and trail system.

The transformation of waterways to greenway trails for non-motorized transportation began in Denver after June 16, 1965. That day the normally tame river, swollen by rain, overflowed its channel, washed out 26 major bridges and destroyed more than $300 million in property.

After the 1965 flood, Denver Mayor William H. McNichols, Jr., State Senator Joe Shoemaker, and others began the cleanup. Shoemaker, who had been Denver's manager of public works and then a state senator and head of the powerful Legislative Joint Budget Committee, took a keen interest in the South Platte Bottoms. He noted that the South Platte was the city's longtime dump. In his book, *Returning the Platte to*

"Ugly things do not please. It is much easier to love a thing of beauty—and this applies to cities, fountains, statues, lights, music and parks make people love the place in which they live," proclaimed Denver mayor Robert Speer in 1916.

Boulder Creek spills out of Fourmile Canyon and flows east through the middle of the City of Boulder. Following beside the creek for some seven miles, well-used trails provide access to several city parks, a kayak slalom course, fishing ponds, and sculpture garden, among other amenities.

Sand Creek, which flows through some of North Denver's most industrial areas, has undergone a major renaissance in recent years. Miles of trails and rejuvenated wetland areas now provide an attractive, healthy refuge for wildlife and city dwellers alike.

the People, Shoemaker observed:

> *Instead of a place to stroll or listen to a band on a summer evening, the Platte became…a place for slaughter houses and railyards, storm water discharges and trash discards. The pall over the valley became thicker and heavier as people forgot that the South Platte once offered Denverites the amenities of a clean river with its refreshing, running water.*

This time, as part of a massive cleanup of the Central Platte Valley, Denverites finally reclaimed the river and gave it a park-like border where grass, shrubs and trees could soak up excess runoff. Coloradans were finally learning that floodplains are for parks and open space that soak up rainfall and floodwaters—not for concrete roads, parking lots and development that only exacerbate flooding.

This farsighted approach to flood prevention led to the opening of Confluence Park at the junction of the South Platte River and Cherry Creek on July 4, 1976. It was the first of many waterside trails and parks that now line Colorado waters. Soon other Denver metro governments began converting the fouled, odoriferous South Platte into a series of trails, parks and boating opportunities.

The Greenway has been extended along most of the South Platte within Metro Denver, following the Arapahoe Greenway into Waterton Canyon where the river bursts from the mountains. There, hikers and bicyclists follow the old grade of the Denver, South Park & Pacific Railroad as it snakes its way into the high country.

Waterton Trail doubles as the start of the Colorado Trail which enables you to walk, run, or bike all the way to Durango. Waterton Canyon also launches one of the state's oldest man-made waterways, the Highline Canal built in 1879. Its 71-mile-long cottonwood shaded banks distinguish a pedestrian and bicycle trail that meanders through Denver and its suburbs to what is now Denver International Airport.

Despite the Highline Canal prototype, Coloradans could do more to convert the state's vast network of irrigation canals and ditches to greenways. Only a few, such as Broomfield's Farmers Highline, Adams County's Niver Canal and Thornton's Union Ditch capitalize on the recreational possibilities of these historic human-made waterways.

Adams County has installed a greenway along the South Platte where reformed quarries and sand dredging pits are now lakes and ponds. From the South Platte River, side trails follow tributaries such as Sand Creek and Clear Creek. In Jefferson County, trails follow Clear and Ralston creeks, which teased early prospectors with their golden sands. The narrow Clear Creek Canyon, unfortunately, has little room for trails beyond U.S. 6, although stretches of pathway adorn Idaho Springs with its spectacular Charlie Taylor Waterwheel.

Golden transformed its once-trashy, inaccessible Clear Creek into interactive history and water parks where adventurers of all ages pan for gold, tour a log village or ride the white water. Littleton has also done well by its South Platte Riverway which seduces travelers with its beautiful Hudson Gardens, a botanic haven adorning the former riverbed.

Starting at Denver's Confluence Park, the Cherry Creek Greenway is one of the state's most extensive recreational corridors. It includes Cherry Creek and Castlewood Canyon state parks as well as the Four Mile House, a living history farm wrapped around the oldest (1859) structure in the metro area.

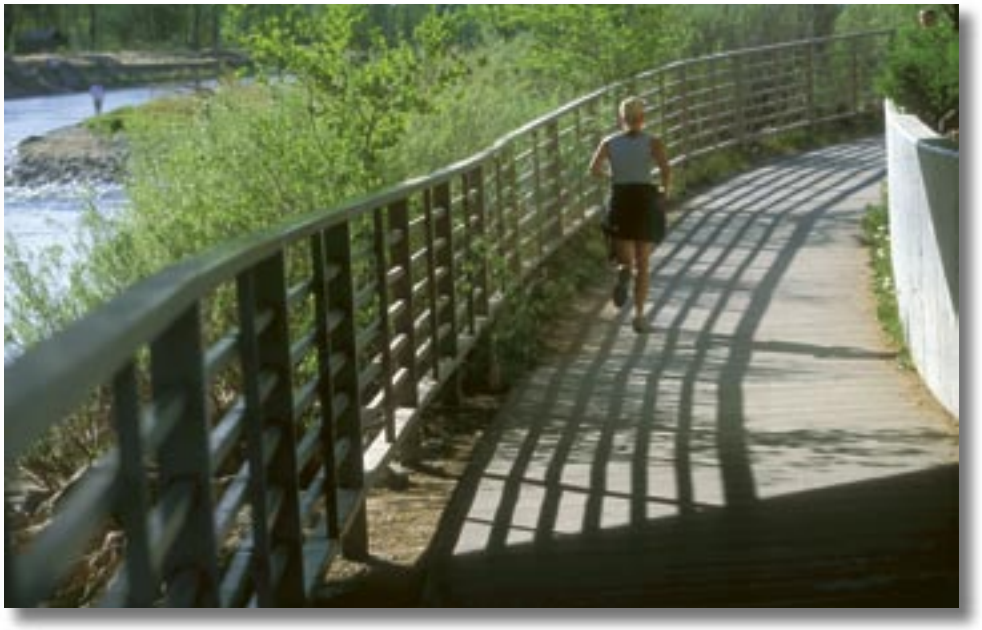
More than a century ago, Boulder also helped pioneer the greenway initiative when it followed the advice of Frederick Law Olmsted, Jr., the father of landscape architecture and park planning. Olmsted traveled worldwide advising local governments how to convert waterways to parks. His 1910 *Improvement to Boulder Colorado: Report to the City Improvement Association,* urged:

> *…keep open for public use near the heart of the city a simple piece of pretty bottom-land of the very sort that Boulder Creek has been…people in Boulder have got so accustomed to thinking of the creek and its banks as a place to throw tin cans and rubbish that it may require too great a feat of the imagination to conceive of it as a pretty shady spot with a well-kept park path running beside the murmuring waters…*

Such improvements, Olmsted argued, would make citizens proud of their commu-

nity and incline them to use it recreationally as well as residentially and occupationally. Since then, Boulder has expanded its Greenway to follow Boulder Creek from its mountain canyon out onto the plains. Among other novelties, the Boulder Creek Trail offers a fish observatory where a sunken stretch of trail leads down to a glass walled look into the creek bottom.

While the South Platte and its tributaries are pacesetting efforts to turn waterways into walkways, progress is slower in rural northeastern Colorado. River trekkers there more often follow roads than paths. Yet there are bright spots such as Fort Morgan's restoration of its fabulous Rainbow Bridge as a pedestrian crossing over the South Platte.



In the Canon City area, six miles of trails wind along the Arkansas River traversing cottonwoods and wetlands and following the railroad bed through what was once a homestead and farm. Birds are abundant along this quiet corridor.

Arkansas River

The Arkansas River became the second greatest immigrant trail into Colorado while doubling as the Santa Fe Trail. Agricultural towns such as Holly, Lamar, Las Animas, Rocky Ford and La Junta sprang up along the river, as did the urban centers of Pueblo and Cañon City. Upstream in the mountains, Leadville, the state's second largest city in 1880, soon filled the Arkansas River headwaters with the refuse from the state's richest silver mining bonanza. Downstream, the industrial steel city of Pueblo also abused the Arkansas.

A dramatic turnaround for the Arkansas came in 1989 when the stretch of river from Granite to Pueblo Reservoir was designated an Arkansas Headwaters State Recreation Area. This 148-mile park—the state's longest and skinniest—has transformed the river into a scenic and recreational wonder. Claiming to be the most rafted river in America, the Arkansas is a superstar in recreational river floating, which has been the splashiest and most lucrative newcomer to Colorado tourism since 1990.

Pueblo has outdone every other Colorado city when it comes to reincarnating its river core. The Historic Arkansas Riverwalk is a 26-acre urban waterfront in the heart of the old steel city. After the 1921 flood killed more than a hundred people and destroyed much of the city's downtown, the river was diverted through a monstrous concrete canal. Now, as part of an ongoing $26.6 million project, the river has been partially returned to its historic bed through town. Today a stroll or boat ride along the Riverwalk traverses public plazas, the Sangre de Cristo Arts & Conference Center and the Union Avenue Historic District. From the Riverwalk, the Arkansas River Trail leads to City Park, the Pueblo Zoo, and west to Pueblo Reservoir with its water sports and fishing.

The Riverwalk in Pueblo moved the Arkansas River channel back to its original location. Pedestrian pathways and bike paths encompass 26 acres of urban waterfront.

Colorado River

The Colorado River carries more water than the other three rivers combined—around two-thirds of the state's steam flow in an average year. Rising in Rocky Mountain National Park, the Colorado is reinforced by major tributaries such as the Blue, Gunnison, Eagle and Roaring Fork rivers. Diversion of Colorado River water to the thirsty Eastern Slope is the most extensive and controversial rearrangement of Colorado's waterways. Walking along Colorado River headwaters trails, such as Jim Creek in Grand County, hikers will notice creeks disappearing into diversion pipes bound for the Front Range. Downstream states—Utah, Arizona, Nevada and California—also fight for Colorado River water, which is the lifeblood of the American Southwest.

The Colorado River lacks water walks along most of its course, although Grand Junction has begun a riverside trail system that improves once-littered river banks and industrial sites. The city's Colorado River Trail encompasses a number of different trail sections. Blue Heron is a hike-bike-horse trail with a handicapped accessible fishing pier. The Audubon Trail section through cottonwood groves is a nature preserve running parallel to Redlands Canal. In order to extend the Audubon Trail as far

"...keeping open for public use near the heart of the city a simple piece of pretty bottom-land of the very sort that Boulder Creek has been...people in Boulder have got so accustomed to thinking of the creek and its banks as a place to throw tin cans and rubbish that it may require too great a feat of the imagination to conceive of it as a pretty shady spot with a well-kept park path running beside the murmuring waters..."

—Law Olmsted, Jr.

1910

The crusade to convert waterways to paths and parks has grown to include more than a hundred trails that celebrate Colorado's lakes, rivers, streams, gulches and irrigation ditches. In addition to those spotlighted here, there are wonderful projects in Telluride, Estes Park, Colorado Springs, Glenwood Springs, Fort Collins and more.

as Utah, the Grand Valley Audubon Society is working with Mesa County, the City of Grand Junction and private landowners, with a grant from the Colorado Department of Parks and Outdoor Recreation.

Gore Creek

Certain tributaries to the Colorado River offer notable river walks. The Gore Creek Trail in Vail wanders through deep woods which screen out some of the condos and take eastbound trail users to botanical heaven—the Betty Ford Alpine Gardens. This state of the art Gore Creek Stream Walk, as it is officially called, offers separate trails for foot traffic and bicyclists. The soft bark chip trail adds spring to the footstep, a welcome discovery for pedestrians. Many interpretive signs and diversions, including bird feeding stations and mini-nature trails, make this one of the state's best river walks, although on the eastern end a paved golf course road grabs the creek away.

Vail also offers the Vail Pass/Copper Mountain/Ten Mile Canyon and Frisco trail. Besides being an acrobatic asphalt ribbon that adorns I-70, this trail takes foot and bike traffic through alpine scenery along Black Gore Creek and Ten Mile Creek through wetlands, meadows and forests. The trail also follows sections of the Blue River in Summit County.

Yampa River

The Yampa, long a favorite for boaters, is also becoming a grand river trail. A paved and soft surface riverside trail starts east of Steamboat Springs at the Yampa River Botanic Park, fabulous gardens that since their 1997 opening have grown to rival Betty Ford's Alpine Gardens at Vail. Free umbrellas and brochures welcome visitors at the flowery trailhead just off U.S. 40.

From the Yampa River Botanic Park, the water trail leads through Steamboat Springs, with links to the city's Hot Springs interpretive trail, the Howelsen Ski Hill Sports Complex and Rodeo Grounds and the library. Downstream at Hayden, the Yampa adorns the well preserved Carpenter Ranch, a famous Hereford and hay ranch that is now a major Nature Conservancy project with riverside nature trails open to the public.

Re-Animating the Animas

The Animas River Greenway Trail offers a fast and scenic route through Durango. On high-water days, trail users are joined by river runners as well as bikers, rollerbladers, dog walkers and fishermen. A paved trail follows the river and the Durango & Silverton Narrow Gauge Railroad track from 32nd Street south to the Durango Mall.

The Roaring Fork of the Colorado

Aspen's Roaring Fork River trail leads to the Holden Marolt Museum, a notable celebration of Aspen's mining and ranching past, at the town's north entrance. From Holden Marolt, cyclists and foot traffic can follow the river walk to the Aspen Institute with its earth sculpture gourds and famous Music Tent, to the Aspen Art Museum and the Ute Cemetery, which has been converted to a park featuring a tombstone history walk.

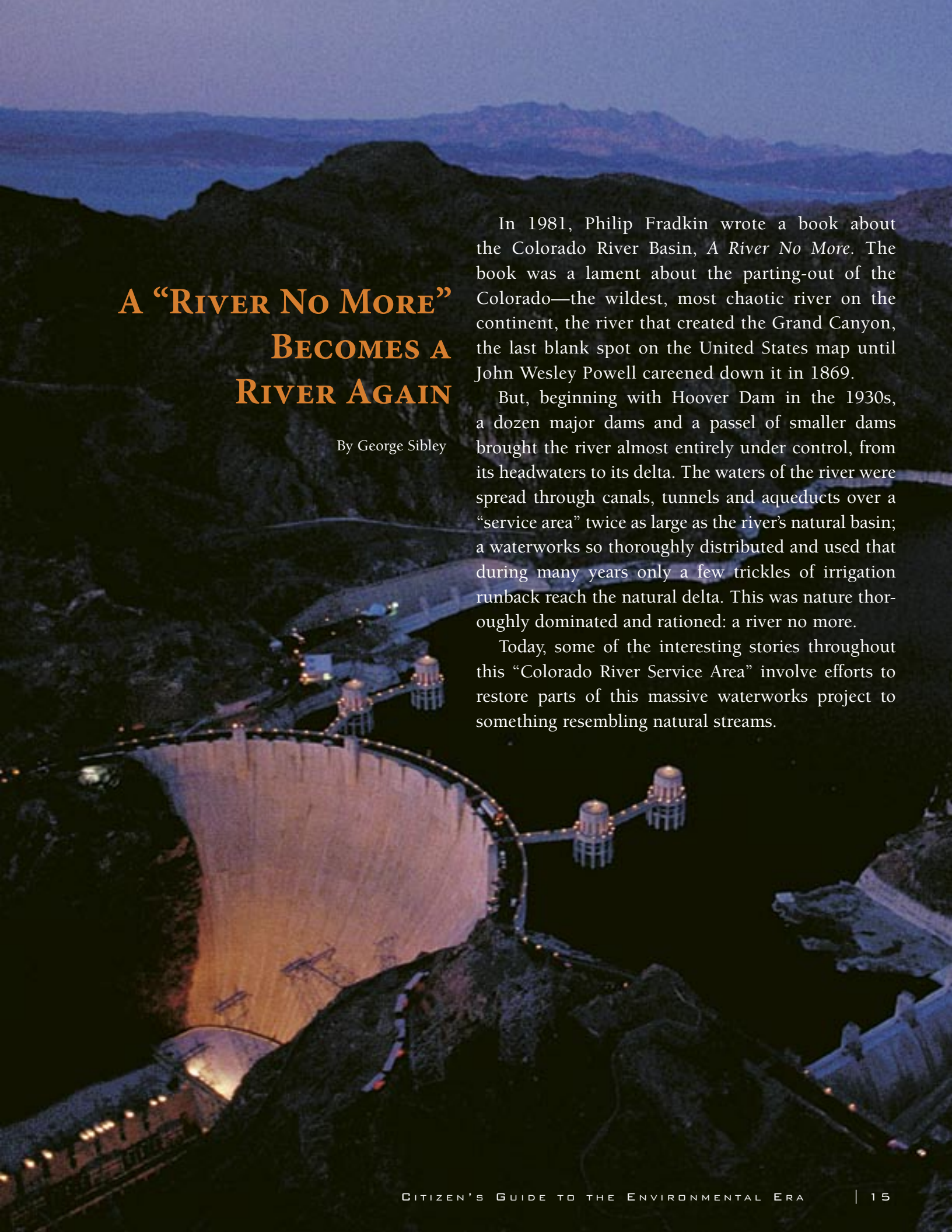
Breckenridge on the Blue

Breckenridge boasts one of the busiest and most beautiful river trails. The Blue River Walk takes you through the center of a town that was almost gobbled up by gold dredge boats. Today's remnant is the Dredge Restaurant & Bar. Sitting in the middle of the Blue, it offers food, drink, dredge boat history exhibits, and a great view of the surrounding snow capped mountains and the Blue River Trail leading to the town's Alpine Gardens, Music Tent and other attractions. Besides many people and dogs, the river is also adorned with water sculptures thanks to the city's "Sculpture on the Blue" program.

Minturn on the Eagle

Smaller, less glamorous towns are also cleaning up their waterways. Tiny Minturn, a blue-collar town of miners and more recently of service workers for nearby ski resorts has actively pursued and implemented a turnaround of the Eagle River for more than a decade. "Mines had really killed the river," admitted former Mayor Earle Bidez. "The joke was that you could catch more fish with a magnet than a fishing pole." However, with mitigation funds from the Eagle Mine—which had polluted its namesake river—the Eagle has undergone a $70 million cleanup. Now the trout and the fishermen have returned to the rehabilitated river as it flows through Minturn. ❑

About the author: Thomas J. Noel, a professor of history at CU-Denver, writes the Dr. Colorado Column for the Saturday Rocky Mountain News/Denver Post and appears as the good doctor on Channel 9's Colorado & Company. Tom has authored or co-authored 35 books including Buildings of Colorado; Colorado: A Liquid History & Tavern Guide, Riding High: Colorado Ranchers & 100 Years of the National Western Stock Show, Denver: Mining Camp to Metropolis *and Historical Atlas of Colorado. Tom also conducts tours of Denver cemeteries, railroads, saloons and waterways for the Colorado Historical Society and the Smithsonian Institution.*



A "River No More" Becomes a River Again

By George Sibley

In 1981, Philip Fradkin wrote a book about the Colorado River Basin, *A River No More.* The book was a lament about the parting-out of the Colorado—the wildest, most chaotic river on the continent, the river that created the Grand Canyon, the last blank spot on the United States map until John Wesley Powell careened down it in 1869.

But, beginning with Hoover Dam in the 1930s, a dozen major dams and a passel of smaller dams brought the river almost entirely under control, from its headwaters to its delta. The waters of the river were spread through canals, tunnels and aqueducts over a "service area" twice as large as the river's natural basin; a waterworks so thoroughly distributed and used that during many years only a few trickles of irrigation runback reach the natural delta. This was nature thoroughly dominated and rationed: a river no more.

Today, some of the interesting stories throughout this "Colorado River Service Area" involve efforts to restore parts of this massive waterworks project to something resembling natural streams.

Taylor Park Reservoir located in the Upper Gunnison River Basin was officially dedicated in 1937. Faced with pressing water demands, the river below the reservoir was changed to a system that went from very low to high flows with little concern for its environmental needs. Ironically, what enabled the resurrection of the Taylor from a waterworks to a river again was the addition of more dams downstream.

One of Colorado's more interesting examples of this reconstruction process is the Taylor River, which joins with the East River to form the Gunnison River, 10 miles north of the City of Gunnison. To the visitor driving up the 20-mile canyon the Taylor has carved, it is just a beautiful mountain river—until one reaches the head of the canyon, where a 200-foot rock and earth-fill dam backs up a 110,000 acre-foot reservoir. The Taylor watershed accumulates water from the west side of the Collegiate Peaks on the Continental Divide in a big open park now partially filled by the reservoir, then cuts its canyon through the Fossil Range. Today, as it splashes over the rocks and through the pools in the canyon, it's as natural-looking a mountain river as you would want to see. But as the old dam's presence indicates, the Taylor was one of the first parts of the Colorado River and its tributaries to be fully controlled and harnessed for human uses, "a river no more" for several decades.

The story of the Taylor River's death and resurrection has two beginnings: one in nature and one in culture. Culturally, the story is grounded in the "first come, first served" water law that evolved in the arid West. This "appropriations doctrine" was purely utilitarian, and humans were the only 'beneficial users" that counted. Water rights were granted for "beneficial uses" that originally had to involve diversion out of the river for some human use. It was not a beneficial use to leave the water in the river just because you liked free-running rivers, or because it was good for the fish. That political and economic framework was applied to most of the American Southwest after the Mexican War.

Nature's role in the Taylor's demise begins farther downstream, where an accident of geology created the canyons of the Gunnison River, including the deep canyon now preserved as the Black Canyon of the Gunnison National Park. Some millions of years ago the San Juan volcano blew its top and laid several hundred feet of welded ash over what is now the Gunnison's canyon region. The water shedding off the nearby mountains worked its way down through that relatively soft rock, establishing a river channel—only to encounter a big blurp of ancient pre-Cambrian granite. Already captured in a channel, the river had no option but to continue on carving down into that hard granite rather than finding the softer rock a half-mile or so to the south. So instead of gnawing out a "normal" river valley, the Gunnison created 50 miles of canyon that include one of the narrowest gorges in the world.

This was construed by early settlers in the adjacent Uncompahgre River valley as a minor error in nature's design; surely that river was meant to irrigate the mostly dry land east of the Uncompahgre. So in 1902, the Uncompahgre Water Users Association set about correcting the error with an ambitious tunnel from the canyon out into the valley.

This "Gunnison Tunnel" began as a local project with some state funding, but soon exhausted those relatively limited resources, leaving the tunnel far from done. But also in 1902, the federal government had put its larger resources behind the development of water in the West, through the Newlands Act that created the Bureau of Reclamation. The Bureau cut its teeth, along with a lot of rock, in the Black Canyon: one of the first Reclamation projects was completing the Gunnison Tunnel, between 1905 and 1910.

When water started running in the tunnel in 1910, irrigating hundreds of new acres of farmland in the Montrose area, the Bureau looked on its work and saw that it was good—but not good enough. The Gunnison was still a mountain river in a dry region; most of its flow came in a couple of months in the spring and early summer as the winter snowpack melted. So the tunnel ran full through the early summer but then trailed off to a trickle right when those farmers and ranchers needed water to finish their crops. Storage was

needed to regulate the runoff.

So the Bureau looked upstream and found a big (mostly) empty mountain park narrowing down to a canyon on the Taylor River above Gunnison. In the mid-1930s the Bureau built the 200-foot dam at the head of the Taylor River canyon, and for the next 40 years the Taylor ceased to be a river; most of the year it was just a canal for conveying water on demand for the Uncompahgre valley irrigators. A few small Fossil Range tributaries downstream from the dam usually kept a little water in the Taylor, but an Environmental Assessment of the river in the 1970s showed that the winter flow of the Taylor below the dam was sometimes zero cubic feet per second. Rough on fish and river aesthetics—which of course weren't beneficial uses anyway. According to Dick Bratton, a Gunnison water lawyer (and fisherman) who became deeply involved with the Taylor, "When the river was operated for irrigation only, it was bad for the fish when there was low flow, and bad for the fishermen when there was high flow."

Ironically, what enabled the resurrection of the Taylor from a waterworks to a river again was not the removal of a dam, but the addition of more dams downstream.

Before and during World War II, the once wild Lower Colorado River (below the Grand Canyon) had been reconstructed as the most massive manmade waterworks in the world. After World War II, the four states of the Upper Colorado River (above the Grand Canyon), under the leadership of Western Colorado Congressman Wayne Aspinall, decided it was their turn. In 1956, Aspinall and the Western water establishment managed to push a Colorado River Storage Project Act (CRSP) through Congress, a plan for turning the Upper Colorado into a waterworks at least as impressive as the Lower Colorado.

A big part of CRSP was a series of three power-generating dams in the canyon region of the Gunnison River, above the Black Canyon of the Gunnison National Monument (elevated to Park status in 1999). These three dams, known collectively as the Aspinall Unit, were built on the Gunnison beginning in the early 1960s—Blue Mesa, a big storage reservoir (940,800 acre-feet) with an 87-megawatt power plant; then Morrow Point Dam, with a narrow fjord-like 117,000 acre-feet reservoir and a 120-megawatt power plant; and finally Crystal Dam, completed in 1976, a small 26,000 acre-feet regulating reservoir for evening out the flow below the dam complex, also equipped with a small power plant.

The waters of these reservoirs covered some of the best fishing streams in the West, if not the world, according to long-time Gunnison residents. A local "Gunnison Navy" spent many weekends on those river reaches in homemade kayak-type boats—a brass-heavy organization because everyone who spilled became a "Rear Admiral." But that stretch of the river was also lined with little "river resorts" that attracted the rich and famous for its fabulous fishing. Bob Hope, golfer Ben Hogan, Denver newspaper magnate Palmer Hoyt and other celebrities came to fish the Gunnison and float with the Gunnison Navy. In 1943, the Army made an apple-pie "morale booster" film about the Gunnison Navy and that stretch of the Gunnison for the troops overseas. A further measure of the quality of that stretch of the Gunnison River is seen in the fact that the U.S. Fish and Wildlife Service—a brother agency of the Bureau in the Department of Interior—filed formal objections against the dams the Bureau planned for the Aspinall Unit.

If the loss of the river gave Gunnisonites second thoughts about the whole concept of "beneficial uses," they weren't alone. About halfway through the construction of the Aspinall Unit dams, in the mid-1960s, a sea-change in American political and economic ideology about the West kicked in. Many people began to see the West not just as the place from which to

In 1956, Congressman Wayne Aspinall launched the Colorado River Storage Project Act which included a series of three power-generating dams in the canyon region of the Gunnison River. These three dams, known collectively as the Aspinall Unit, were built on the Gunnison River beginning in the early 1960s.

The canyon region of the Gunnison River comprised some of the best fishing streams in the West, according to long-time Gunnison residents. A local "Gunnison Navy" spent many weekends on those river reaches in homemade kayak-type boats. Bob Hope (left), golfer Ben Hogan, Denver newspaper magnate Palmer Hoyt and other celebrities often came to fish on the Gunnison-area streams before major dam construction in the 1960s changed the character of the river.

extract the resources of American industry, but as a place to go to escape the intense logic of American industry—via some new industries that were growing up around a more sustainable kind of Western resource exploitation: rafting on rivers, fishing in rivers, sitting on a cabin or condo deck on the river bank and looking at rivers. Some dared to argue that there was more "beneficial use" (money-making potential) in these activities than in all the high-altitude hay production, tree harvest and metal mining the rivers could water.

In 1968, some of this thinking was codified in a Colorado River Basin Project Act—a complex act in which the powerful Wayne Aspinall traded his support for the huge Central Arizona Project down in the deserts to secure funding for smaller CRSP projects. But in that Act, for the first time, "basic public outdoor recreation" and "improving conditions for fish and wildlife" were made primary purposes for dams and reservoirs along the Colorado River. This wasn't necessarily sympathy for the fish; it was "beneficial" because humans were making money off of fishermen. But it was one of the first major concessions won from the Old West vision: this idea that humans might be able to thrive in the West without having to spread the streams and rivers out to dry for one economic purpose or another.

Water users in the Upper Gunnison had created a conservancy district when construction began on the Aspinall Project dams. "Conservancy districts" are local agencies originally established to collaborate with the Bureau of Reclamation on "participating projects" to be funded by power production revenues and other federal sources. The Upper Gunnison River Water Conservancy District had been formed to develop, with Bureau funding, an "Upper Gunnison Project" that would have included several small high-altitude reservoirs and some distribution canals. Most of that plan has since been abandoned, given the drying-up of federal funding for water projects.

But the Upper Gunnison Conservancy, with the counsel of the aforementioned Dick Bratton, has taken a leadership role in the "reconstruction" of the Taylor River. Bob Jennings, of the Bureau of Reclamation's Western Colorado office, suggested a "storage credit" trade, whereby the Bureau would allow some of the Uncompahgre Water Users Association's Taylor Reservoir

Black Canyon of the Gunnison.

water to be stored in Blue Mesa Reservoir. This meant that water could be continually released from the Taylor Park reservoir for further storage in Blue Mesa—thereby enabling the Taylor River below Taylor Dam to be operated as a river again, not an on-again off-again irrigation canal.

Jennings, Bratton and the Uncompahgre Users worked out and signed a complex agreement to that effect in 1975—an agreement that, alone, would more or less have rendered Taylor Dam and Reservoir irrelevant. But Bratton and the Conservancy pushed the process farther into relatively uncharted territory: Taylor Reservoir's capacity was 110,000 acre-feet, but the annual flow through the reservoir averaged about 150,000 acre-feet, and considerably more in heavy snow years. So, since the Taylor Park reservoir was now being drawn down essentially to keep the Taylor River running, the Upper Gunnison Conservancy filed for enough water for a second filling of the 110,000 acre-foot reservoir, for the beneficial uses legitimized by the 1968 Act—fish and recreation as cash crops in the Taylor River.

Historically, remember, the only "beneficial uses" recognized under Colorado water law were those that diverted water out of a stream; but over the past quarter century the law has loosened up to include rights for water "diverted, stored, or otherwise captured, possessed, and controlled" for some beneficial use. The refill claim depended on the fact that all Taylor River water had to come through the dam first, and was therefore clearly "stored…and controlled." But that "second refill" water was also clearly not going to be diverted; it was basically an application for an in-stream right. Colorado had led the way in 1973, in creating state-owned water rights for minimum in-stream flows for "environmental purposes," to keep streams from being completely dried up by legal users. But the Taylor "second refill" claim, filed in 1986, was revolutionary in Western water in that it was an in-stream right neither state-owned nor for a mere "minimum in-stream flow."

The Division Four Water Court heard the Upper Gunnison Conservancy's "second refill" claim, and in 1990 granted that claim—an innovative decision made more significant because it effectively undercut a proposal for a huge pumped-storage project above Taylor Park to divert water to Denver suburbs. "When you're smaller," Bratton has said, "you've got to be smarter."

Thus it was that those two paper transactions—the 1975 storage exchange agreement and the 1990 second-refill right—were all it took to resurrect the Taylor River from a river no more. But is it really a river again?

It is very much a "man-made river" in some respects. The day-to-day operation of the Taylor River is controlled by the Bureau of Reclamation, with formal input from the "Four Parties" to the 1975 agreement: the Upper Gunnison River Water Conservancy District, the Uncompaghre Valley Water Users Association, the Colorado River Water Conservation District, and the United States Bureau of Reclamation.

The catch-and-release area below Taylor Dam now provides some of the largest rainbow trout in Colorado. This area is less than a half-mile long, and is visited by many anglers throughout the year.

The "Four Parties" in turn consult with a "local users" advisory group made up of representatives from the reservoir concessionaires above the dam, the irrigators between the Taylor and Aspinall Dams, the local anglers group, the companies that run commercial rafts on the river, and a group of wealthy people who own and fence off most of the first five miles of river below the dam. These local users have some conflicting desires. Rafters, for example, would usually like a higher flow than the fishermen want; the concessionaires above the dam would like the reservoir kept as high as possible (meaning minimum releases); the irrigators want to take out water at certain times on their own schedule, et cetera.

But they work out their differences in a very "grassroots" process, now being developed more formally in other situations as "adaptive management": an ongoing process of modifying management on the basis of continual feedback. It is a process we will probably see more frequently throughout the West as ever more users confront a finite supply of water.

The river's fishery is also mostly man-made. According to a local Colorado Division of Wildlife official, there are still some wild cutthroat trout left in the river, but below a short public catch-and-release area at the foot of the dam and the five-mile private stretch, the Taylor is stocked throughout the summer season with exotic rainbow "catchables."

To drive up the Taylor Canyon today, below the Taylor Reservoir, is to pass through a spectacularly beautiful place with only a handful of the increasingly ubiquitous lovely homes disrupting the sense of being in a thoroughly natural place. Yet to look beneath that surface appearance is to see what might be considered the ultimate human illusion: a thoroughly controlled waterworks that has been made to look as natural as nature could make it.

So how should we think of this river? Is this a restoration of the natural? Or is it the ultimate industrial repackaging of nature for human purposes? Is it maybe both in a kind of codependency? But down on the rocks at the edge of the Taylor, maybe flipping a fly over the water to the far side pool, another question might arise: Are those questions even worth worrying about? If, after the expenditure of vast quantities of money to control and manipulate the waters, we can manipulate them just a little farther so that their original beauty and "utility to nature" are there again, and yet they are still fulfilling the human purposes on which we depend—is this not a good thing?

Take your rod up the Taylor and decide for yourself. ❑

About the Author: George Sibley is a writer living in the Upper Gunnison River valley for most of the past 40 years. Since 1988 he has taught journalism and regional studies at Western State College. As a writer, he has two published essay collections, Part of a Winter *(1977) and* Dragons in Paradise *(2004). His essays and articles have appeared in Harper's Magazine, The High Country News, Mountain Gazette, New Age Journal, Colorado Central, Technology Illustrated, Crested Butte Magazine, and other local and regional publications.*

Cache la Poudre River

By Rose Laflin and Brian Werner

The Cache la Poudre River means different things to different people, and their perceptions have changed over time. The Cache la Poudre was once the engine for an agricultural society whose success lured settlers to Northern Colorado from all over the world. As this population diversified and urbanized, the river's value became more than just economic. Some residents wanted to protect and recognize the river corridor as a unique recreational and heritage area.

In the late 20th century, intense negotiations led up to two special federal designations for the Cache la Poudre—as a Wild and Scenic River and a National Heritage Area. The discussions and compromises that led up to these designations revealed the changing values of those who care about this river, and the difficulties they face in finding a balance between its protection and use.

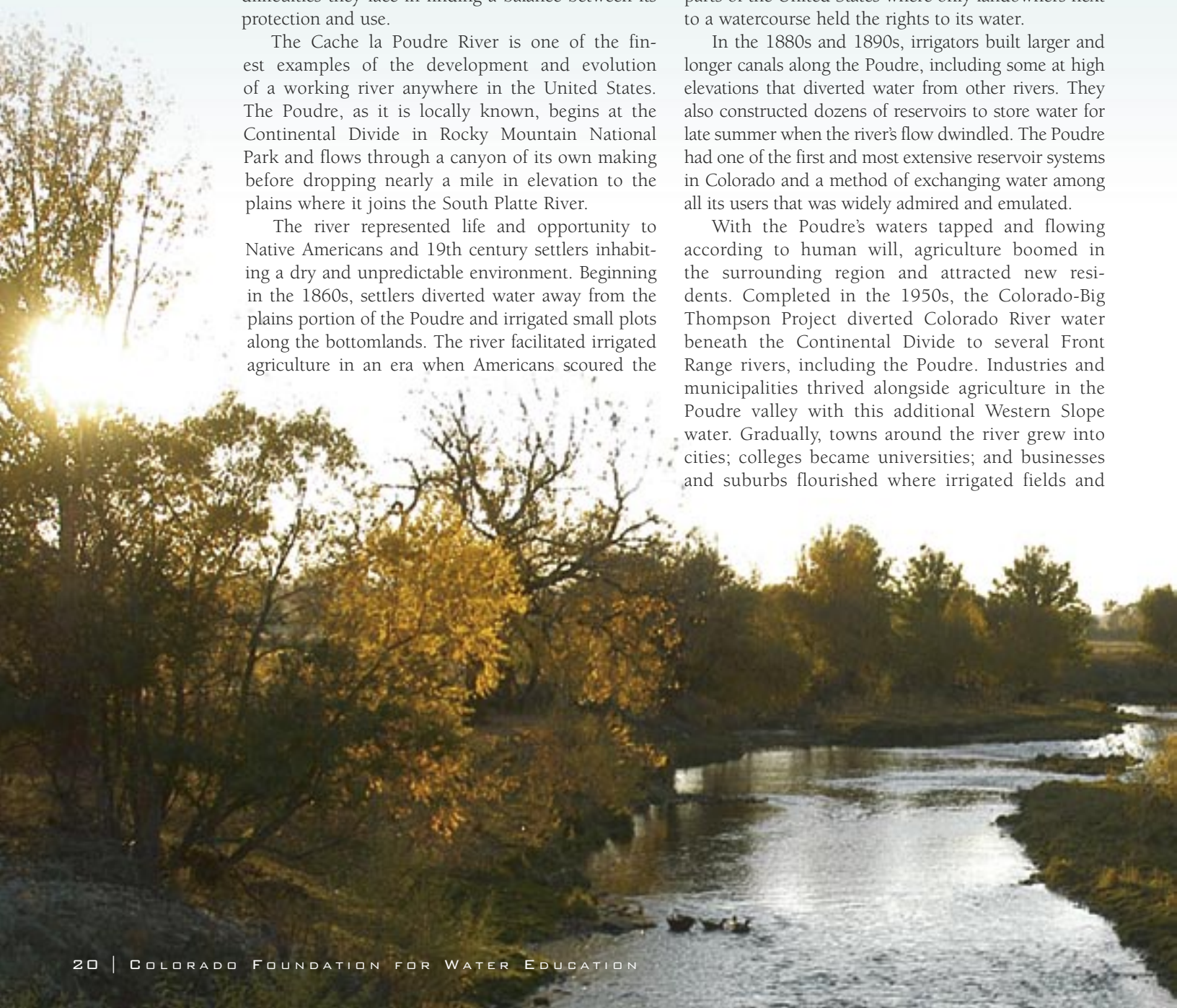
The Cache la Poudre River is one of the finest examples of the development and evolution of a working river anywhere in the United States. The Poudre, as it is locally known, begins at the Continental Divide in Rocky Mountain National Park and flows through a canyon of its own making before dropping nearly a mile in elevation to the plains where it joins the South Platte River.

The river represented life and opportunity to Native Americans and 19th century settlers inhabiting a dry and unpredictable environment. Beginning in the 1860s, settlers diverted water away from the plains portion of the Poudre and irrigated small plots along the bottomlands. The river facilitated irrigated agriculture in an era when Americans scoured the West looking for fertile land of their own to farm. In 1870, Union Colonists settled on the river's eastern reaches and founded the town of Greeley. They constructed the first large canals off the river and gained national attention as much for their adventures with large-scale irrigation as for their experiment in communal living.

The dry summer of 1874 ignited a dispute over the Poudre's water between Union Colony residents and those upstream in Fort Collins. This friction prompted the codification of Colorado water law, based on the doctrine of prior appropriation. Prior appropriation meant that those who had a prior claim to water, or were first in time, had first right to the water. This differed from the system used in the more humid, eastern parts of the United States where only landowners next to a watercourse held the rights to its water.

In the 1880s and 1890s, irrigators built larger and longer canals along the Poudre, including some at high elevations that diverted water from other rivers. They also constructed dozens of reservoirs to store water for late summer when the river's flow dwindled. The Poudre had one of the first and most extensive reservoir systems in Colorado and a method of exchanging water among all its users that was widely admired and emulated.

With the Poudre's waters tapped and flowing according to human will, agriculture boomed in the surrounding region and attracted new residents. Completed in the 1950s, the Colorado-Big Thompson Project diverted Colorado River water beneath the Continental Divide to several Front Range rivers, including the Poudre. Industries and municipalities thrived alongside agriculture in the Poudre valley with this additional Western Slope water. Gradually, towns around the river grew into cities; colleges became universities; and businesses and suburbs flourished where irrigated fields and



Colorado's First Wild and Scenic River

farmhouses once stood. By the 1980s, much of the Poudre, both in the canyon and on the plains, was easily accessible by trails and paved roads. It was surrounded by a national park, national forests, private and municipal land. Its waters were scrupulously divided, extensively used and jealously guarded by farmers, municipalities, industries and, increasingly, recreators.

The Road to Wild and Scenic

Inevitably, the issue of protecting this important resource arose. Those who wanted to safeguard the Poudre from future development and overuse faced off against those who had traditionally used the river's water and depended on it economically. Intense negotiations and compromises ensued over the status of the Cache la Poudre—as a working river and protected river.

Congressman Hank Brown was instrumental in getting the Cache la Poudre Wild and Scenic River and National Heritage Area acts passed through Congress. Much of his success came through political persistence, and the cultivation of active local partnerships.

The story of how the Poudre became Colorado's first and only Wild and Scenic River is a lesson in compromise. Cooperation between various water management agencies and environmental groups on Wild and Scenic legislation is a testament to all those involved, including one of Colorado's most remarkable public servants—Hank Brown.

The Wild and Scenic story began in 1968 when Congress passed the National Wild and Scenic Rivers System Act. This was one of many new environmental laws passed in the 1960s and 1970s as the United States entered an era of environmental consciousness and contention.

In 1977, the U.S. Forest Service (USFS) undertook a study to determine if the Poudre qualified for Wild and Scenic status. As the study evolved, water users, environmentalists, public officials and others became actively involved in the process.

The USFS released an environmental impact statement in April 1980 recommending

that 83 miles of the Poudre be designated as either wild or recreational. This included most of the mainstem of the river from its source in Rocky Mountain National Park to the canyon mouth along with the South Fork of the river near Fort Collins.

The report received a mixed reaction. Support came from the environmental community; opposition came from the water management community that wanted further study of potential reservoir sites. The Colorado Mountain Club, Audubon Society and a newly formed local group, Preserve Our Poudre, all wrote letters in support of the draft proposal. The water management community talked of possible court action. Its concerns centered on the potential for the Wild and Scenic designation to preclude any and all storage sites from future development.

One of the Poudre's oldest and most well established irrigation companies, the Water Supply and Storage Company, responded to the USFS, "…the study seems superficial and the recommendations totally contrary to the best interests of the people of the state." The Northern Colorado Water Conservancy District (NCWCD) asked the USFS to defer a decision on 30 miles of the proposed designation until after a basin-wide water resource development study could be completed.

Taking these comments into consideration, the USFS studied five alternative designation combinations as it prepared to issue a final Environmental Impact Statement. Its final recommendation, issued in 1983, included 62 miles for designation, or 21 miles less than the draft report had proposed. The USFS had listened to water management input and excluded the proposed Idylwilde, Rockwell and Grey Mountain reservoir sites from its final recommendation.

Idylwilde was a mainstem reservoir to be located upstream of the confluence with the South Fork. Grey Mountain was a mainstem reservoir proposed in the lower 7.5 miles of the canyon. The Rockwell site on the South Fork was to be a joint effort between the cities of Greeley and Fort Collins.

After the USFS recommendation, Colorado Governor Dick Lamm surprised many when he came out in favor of designating the entire upper Poudre, 12 miles more than the USFS proposal.

With battle lines drawn, a Wild and Scenic designation was no sure thing. Into the fray stepped newly elected Congressman Hank Brown. A well-respected former state legislator from Greeley, Brown was familiar with the Poudre and knew most of the key interests on a personal basis. To those who he was a stranger, he soon made acquaintances.

Former Colorado Governor Dick Lamm surprised many when he came out in favor of designating the entire Upper Poudre as a Wild and Scenic River. This was some 12 miles more than the USFS recommendation.

Brown went to work immediately. He had a strong desire to see the Poudre become Colorado's first Wild and Scenic River, and he was willing to compromise. He was also in a position to bring the water management and environmental communities together. In November 1983, Brown invited 11 local and vocal members of key water management, environmental and governmental agencies to a meeting. From that meeting, he created a Citizen's Advisory Panel charged with reviewing the USFS recommendations and advising him on a course of action.

Brown sought a compromise that would allow for designation and still leave critical storage sites open for development. And he knew he needed broad local support. Public meetings in Fort Collins indicated that the majority of residents supported designation, yet a few key interests still held out. Brown brought a smaller citizen's group together with the task of crafting a bill that would pass Congress. With Brown's guidance and forceful personality, the group eventually negotiated a compromise acceptable to all parties.

This compromise would have designated 70 miles of the river as Wild or Scenic and exempted from designation and permit review a couple of possible storage projects as long as fish bypasses were made. It also included protective language exempting present water development from impacts associated with Wild or Scenic designation.

However, Brown's first attempt failed after national environmental groups objected. The bill never made it out of committee. Yet Brown persevered, once again asking a small local group to help write the legislation. After months of negotiations, the group forwarded its compromise bill to Congressman Brown. It proposed designating 75 miles of the Poudre as Wild or Scenic, leaving undesignated the lower 7.5 miles above the canyon mouth.

Water managers gave up reservoir sites upstream at Idylwilde and Indian Meadows, rendering those projects unbuildable. Environmentalists agreed that a reservoir site below Poudre Park and the Rockwell site on the South Fork would be left undesignated and open to possible future development.

Brown spoke eloquently before the House Subcommittee on Interior and Insular Affairs about the Poudre's treasures and that it stood to become Colorado's first Wild and Scenic River. He added that the bill reflected the joint recommendations of the region's conservation and water supply interests.

Brown must have been convincing. President Ronald Reagan signed Public Law 99-590 making the Cache la Poudre Colorado's first Wild and Scenic River in October 1986. Northern Colorado water management interests and environmentalists had supported and helped pass legislation protecting 90 percent of one of Colorado's most beautiful river canyons for all time, while leaving a small stretch open for potential future development.

Carefully crafted language in the new agreement also helped resolve a long-standing issue of contention for the Poudre—federal reserved water rights. Filed in the Greeley water court, resolution came in the form of an agreed-upon decree for an express federal reserved water right with a priority date of October 30, 1986, for "all of the native water arising upon or flowing through the designated segments of the Cache la Poudre River, subject to valid prior appropriations under Colorado law." This agreement also protected use of the Poudre for importation and carriage of trans-mountain imported water. Because water management interests had long fought against federal reserved water right claims, the agreement to recognize such a right for the Poudre speaks volumes about the compromise.

Christopher Brown of the American Rivers Conservation Council held up the compromise as a new precedent for national action, calling it "a major breakthrough in the Wild and Scenic River Act."

Next Steps: A Heritage Area

Brown next turned his attention toward implementation of a National Recreation Area Study on the Poudre River, also authorized under the Wild and Scenic Act. The three-year study investigated the potential federal recreation designation of an 18.5-mile section through the Fort Collins urban growth area.

Brown viewed a National Recreation Area as a means of improving recreational opportunities in the corridor between Greeley and Fort Collins where a bike trail was under construction to ultimately connect the two cities. He stressed that water and private property rights would be preserved.

By the time the study was finalized in September 1989, it had evolved and expanded into creation of a "National Heritage Corridor" with emphasis on environmental and historic education within the entire Poudre basin.

Brown introduced the "Cache la Poudre National Heritage Corridor Act" in June 1990. Surrounded by political infighting, the bill died in committee. However, Brown remembered his early defeats with the Wild and Scenic designation and kept pursuing a bill. He also increased his leverage with a move from the United States House of Representatives to the United States Senate. Elected in 1990, he vowed to get another Poudre bill passed before he left office. Little did he know how close he would cut it.

Brown asked again for local help. The City of Fort Collins, Larimer County and the Northern Colorado Water Conservancy District responded by funding a study to determine how to proceed. The theme "History of Water Development in the Westward Expansion of the United States" emerged as the basis for legislation. The National Park Service prepared a study assessing the Poudre's national significance. It determined that the Poudre had national significance relating to water law and water development.

Brown introduced two more bills in 1991 and 1993 seeking Heritage Area designation for the Poudre; both failed. In February 1995, after nearly two years of rewriting, Brown introduced Senate Bill 342, the "Cache la Poudre River National Water Heritage Act." On the last day of the legislative session—and Brown's last official day as a senator—the 104th Congress passed the bill giving the Poudre status as Colorado's first National Water Heritage Area. The bill authorized a commission to coordinate and develop a plan to interpret the history of water law and water development on the Poudre.

Brown prepared to leave Congress after 16 years. He had spent a good deal of his energy promoting the Poudre River and he deserved much of the credit for the two bills passed by Congress nearly 10 years apart. Brown facilitated negotiations between very diverse groups, including environmentalists, concerned citizens and water managers, all of whom viewed the Poudre as an essential resource in their community, albeit for different reasons.

By the 21st century, the citizen's of northern Colorado had two national designations for the Cache la Poudre River that they could all take pride in. The Poudre is Colorado's only Wild and Scenic River and it is also a National Heritage Area. But more than that, the Poudre is a unique river born of compromise—a working resource and a protected treasure. ❑

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Colorado's History of Environmental and Land Use Laws, and their Impact on Colorado's Water

By H. Lawrence Hoyt

Colorado's "Wild West" heritage has colored our current environmental regulations and land use laws, as much as the parceling out of her notoriously shallow rivers has shaped modern-day water law.

Much of Colorado's basic water law is derived from the state's chief economic engines in the mid to late 1800s—mining and agriculture.

The Wild West

In Colorado's early settlement years, water's power over people—not the strength of its current, but its irresistible necessity—was pervasive, dictatorial and unequivocal. There was no choice but to stay within easy reaching distance of water. By necessity, settlers sought out the floodplains of various creek and river basins. Without a physical system of irrigation canals and ditches, and the legal system necessary to assure cooperation in getting the water from where it was to where it wasn't, community viability was extremely limited.

Agriculture and mining were Colorado's chief economic engines in the late 1800s, and both were very thirsty endeavors. Agriculture, of course, required water to convert dry-land pasture into cropland, or to increase the animal units per acre production of pastureland. Increasing hay productivity through irrigation permitted over-wintering of larger herds of cattle as well as the horses needed by all segments of society. Placer mining by definition required significant on-site water resources, and other labor-intensive mining activities required water for the work force.

Like any high-demand commodity, water's value is inversely proportional to its availability. The scarcer it is, the more valuable it is. And the more likely it is to cause disputes and friction between those who have it and those who need it. Hence the first laws concerning Colorado's scarce and precious water dealt with determining the priority of individuals' rights to use that water. Their focus was on access and quantity, rather than on water quality.

These first water laws were enacted against a background of mostly laissez-faire attitudes about the environment, land use and development. Government regulation was intended to promote economic development. Favorable legislation eased the way for public entities and private ventures to finance and build irrigation canals and ditches. New laws also granted the state's power of eminent domain to water developers, both governmental and private, thus ensuring that private property rights would not stand in the way of progress.

The only regulation of land use and development, including what we now call environmental laws, came about haphazardly and ad hoc via the legal concepts of nuisance and trespass. The law of nuisance establishes that when a landowner causes substantial harm to a neighbor by conducting activities on the landowner's property that otherwise are perfectly legal, the neighbor can bring a legal action in court to get the nuisance activity stopped, or to recoup damages suffered from it. Trespass laws did then just as they do now; they protect landowners by making it illegal for people to occupy property, even temporarily, without ownership or permission of the landowner.

These laws, based on custom and not necessarily covered in statutes, worked for decades when most of the population was rural and the distances between landowners were great. However, as the population grew more urbanized and became more socially and economically complex, such recourse was only available to those who could afford to pay lawyers and await court actions and appeals.

One of the few cases where municipalities chose to regulate land use related to their drinking water supplies. As early as the late 19th century, state law allowed municipalities to regulate land uses in the watersheds where they had water supply reservoirs, even when those watersheds were far away from the municipalities themselves. It has long been understood that clean, safe, domestic water supplies are an important public good, and they needed to be safeguarded against impacts from mining, agriculture and other uses. The statute has been used with varying degrees of success over the years to prevent, limit or modify intensive development proposed for these watersheds.

The 20th Century: the Regulatory Era

By the early 20th century, urbanization and the varied interests of property owners highlighted the inadequacy of these old, often-uncodifed laws based on custom and precedent and pressed the need for new legislation. In the late 1930s, zoning regulations were first established. Colorado was one of a number of states that adopted the Standard Zoning Enabling Act. Zoning laws placed compatible land uses in districts, and also designated districts for specific types of land uses. Zoning laws primarily regulated uses of land based on impacts to the immediate area. This approach was fine when impacts were localized, but inadequate in situations which the impacts had more far-reaching implications.

Soon came subdivisions, and the division of land into ever-smaller units was creating negative impacts. Increased concentrations of people, traffic, and services—much of which was developing outside city boundaries—indicated that some restrictions were needed. In addition, much of this growth was supplied by concentrated numbers of individual wells which in some cases started mining (withdrawing water faster than the recharge rate) local aquifers, and robbing water from nearby streams.

Colorado's first general law authorizing subdivision regulation was adopted in 1972. The law addressed a number of concerns about the impacts of subdivision of land, including mandates to local jurisdictions to manage traffic impacts, the park and recreational needs of future residents and visitors, as well as the water needs of the future owners and users of these lands.

A developer seeking subdivision approval was required to show that water quantity and quality would be adequate for future residents. One of the more interesting questions that arose under this requirement was whether residential subdivisions could be approved with a limited underground aquifer serving as the main water supply. When El Paso County adopted a 300-year water sufficiency standard for subdivisions seeking to provide water service via such an aquifer, the Court of Appeals found that the regulation was "…designed to insure that no development take place where there (is) not adequate water supplies for the future." The court also found that the government's interest in ensuring such supplies was valid, and clearly authorized by the state subdivision law.

Developers seeking subdivision approvals are required to show that the amount and quality of the water provided will be adequate for future residents.

Unique Colorado Environmental Laws Affecting Water Resources

Colorado has always been a "local control" state meaning that regulations and enforcement are entrusted at the level of government closest to the citizens that can get the job done—often at the city or county level.

The Colorado Land Use Act (LUC) adopted in 1970, established a State Land

Use Commission with certain limited powers. The LUC was funded by the legislature to provide financial assistance to needy local governments seeking to implement land use planning and environmental impact analyses. Although the commission's funding was largely gone by 1980, during the 1970s the commission assisted many local governments.

One of the statutes which the LUC was authorized to implement and enforce was the Areas and Activities of State Interest Act, commonly known as House Bill 1041, adopted in 1974. This statute authorizes local governments to regulate the development of "areas and activities of state interest" within their jurisdictions such as:

- Major domestic water and sewage treatment systems
- Municipal and industrial water projects
- New communities
- Natural hazard areas, including floodplains
- Areas containing or having a significant impact upon, historical, natural, or archaeological resources of statewide importance.

These 1041 powers have far-reaching implications for water development. For example, consider what happened when Aurora and Colorado Springs planned to exert their right to divert water from the Eagle River in Eagle County to the Homestake II Reservoir. The 1041 statute required Aurora and Colorado Springs to obtain a permit from Eagle County to build their diversion structures in that county. That request was denied, and subsequently went to court.

In this case, the Court of Appeals ruled that "…the cities' entitlement to take water from the Eagle River basin, while a valid property right, should not be understood to carry with it absolute rights to build and operate any particular water diversion project." Sent back to the drawing board, Aurora and Colorado Springs are now working to redesign the project to locate it outside the Holy Cross Wilderness Area and to reduce its environmental impacts, but to date they have not reapplied for a 1041 permit from Eagle County.

Eagle County's 1041 powers stopped Aurora and Colorado Springs from diverting water in the Holy Cross Wilderness Area (above) to help fill Homestake II Reservoir. The cities are now working to redesign the project to locate it outside the wilderness area and to reduce its environmental impacts. To date they have not reapplied for a 1041 permit from Eagle County.

Early use of 1041 powers in the context of water projects often focused on trans-basin diversion proposals. Recently, however, counties on the Eastern Plains have started to take an interest in this unique land use authority. Counties along the Lower Arkansas River have adopted 1041 regulations requiring a permit for, among other things, the removal of irrigation water from land which has historically been irrigated. These regulations are meant to address the environmental impacts of agricultural dry-up: topsoil loss, noxious weed invasion, and loss of wildlife habitat. Often, these regulations emphasize revegetation and wildlife mitigation plans as key permit conditions.

Environmental Law: the Federal Government Leads the Way

In the late 1960s, grassroots citizens' movements nationwide began to demand a cleaner environment, especially in regard to air and water pollution. Various organizations began national advertising campaigns to dramatize the plight of the air and water, motivated in many ways by the popularity of Rachel Carson's book, *Silent Spring,* first published in 1962. Others were moved to action by the sight of the Cuyahoga River in Cleveland which was literally on fire in the summer of 1969.

In response, in 1972 Congress expanded its previously limited federal role in protection of water quality by adopting the Clean Water Act, and later the Safe Drinking Water Act in 1974. These acts set goals and minimum requirements, as well as establishing incentives for states to create their own clean air and water laws and to take over the enforcement of the federal laws.

Although Colorado adopted a Water Pollution Control Act in 1966, it was not broadly expanded until 1972 when it agreed to a comprehensive Water Quality Control Act, requiring a new Water Quality Control Commission to adopt standards and to enforce them.

The process of adopting new regulations to improve or monitor water quality is still ongoing. For example, for many years stormwater systems were designed primarily to reduce flooding. They generally bypass the city's wastewater treatment plant and simply discharge runoff from the streets and adjacent properties into the nearest stream. Not until 2004 did the federal government begin to require municipal stormwater runoff systems to reduce their pollutant load to the streams and rivers, and enforcement will not start until 2006.

Most municipalities have responded by adopting codes prohibiting the introduction of the pollutants into the stormwater sewer system. These codes typically limit the use of petrochemicals and pesticides in areas where they are likely to run off into the gutter and, ultimately, through the stormwater sewer into the stream. How effective these regulations will be depends on how actively the municipalities can educate their populace about the problem

and how well they enforce against "midnight dumpers."

No Mucking in the Stream, and Don't Hurt the Wetlands

The federal statute—and accompanying regulations—that probably have had the most impact on water resource development in the West is Section 404. This law, which appears as a section of the Clean Water Act, requires any proposed developer of a water resource within the natural bounds of a federally recognized stream to obtain a permit from the Army Corps of Engineers—a so-called "dredge and fill" permit. This permitting system governs everything from placing a culvert in a streambed to construct a road, to the damming of a stream to create reservoirs.

In the early days of Section 404 regulation, the destruction of naturally existing wetlands was a significant issue. Permit requirements mandated wetlands preservation if at all possible, and many water projects were stymied by this requirement. Eventually, the regulations were amended to what is known as the "no net loss" approach, which means that if there is a natural wetland which would be lost due to new development, the proponents can simply rehabilitate that wetland after construction, or, where this is not possible, can propose to build a new wetland equal in size somewhere else.

In the early 1970s, the federal government also adopted a series of laws which have significantly changed how we construct water supply projects. The National Environmental Policy Act (NEPA) adopted in 1970, requires any project funded with federal funds or any private project located on federal lands, to go through an environmental assessment to see what impacts on the environment may be created by the project. Where there are significant impacts, a full environmental protection study must be undertaken, and alternatives to the project must be explored. If the project is permitted, it is subject to conditions imposed by the Environmental Protection Agency (EPA).

Unlike most other federal laws, the Endangered Species Act adopted (ESA) in 1973 applies to virtually all lands and waters of the United States both private and public. It requires analysis of the existence of threatened or endangered species and mandates that future land management be consistent with maintaining the viability of the endangered species population, excepting only "incidental takes" (i.e. the unintentional killing of individuals of the species by development activity that does not destroy critical habitat or threaten the viability of the species.)

More recently, the ESA has been amended to permit the destruction of a species and its habitat in particular development locations where an alternative habitat and relocation of the species can be arranged. Many local jurisdictions have cooperated to create regional habitat conservation plans in order to permit some development of sensitive lands and waters while ensuring that appropriate conditions exist for species to thrive in other locations.

Management of federal lands is regulated by the Federal Land Policy and Management Act (FLPMA). More than one third of Colorado's land is owned by the federal government, primarily managed by the Forest Service and the Bureau of Land Management. FLPMA mandates a "multiple use" doctrine for federal lands, and directs that land use plans developed by the Secretary of the Interior, e.g. for a national forest, "…shall be consistent with state and local plans to the maximum extent [the Secretary] finds consistent with federal law…"

To put a new or expanded water facility on these lands requires a FLPMA permit. Since federal lands comprise a large amount of Colorado's upper watersheds, which are the source of a great deal of our water supply, this act enables federal agencies to have significant power to refuse or condition the construction and operation of some water projects.

Other newcomers on the federal stage were the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response and Liability Act of 1980 (CERCLA or "Superfund"). RCRA requires generators and transporters of certain listed hazardous materials/chemicals to obtain permits and to file plans for emergency containment and disposal. CERCLA, originally the Superfund law, holds liable landowners and other "potentially responsible parties" (mostly prior users of properties) for toxic and other hazardous materials that migrate—or have the likelihood of migrating—off-site, generally as water pollution. Superfund got its name from the large appropriations of federal funds made in the early years of cleanup. Declining federal appropriations now put the emphasis on establishing the liability of parties for cleanup.

Section 404 of the Clean Water Act requires a U.S. Army Corps of Engineers permit to place dredged or fill material in waters of the United States, which includes rivers and wetlands. This means that virtually all dams require federal approval.

Conclusion

Vestiges of the Wild West remain in Colorado. Most property owners don't like being limited in their use—or in how they use—their property and water rights. At the same time, the need for land use regulation and pollution prevention and control is well accepted. A constant tension exists between the regulators and the regulated in the areas of environmental and land use laws, including those applied to water resource development.

In the end, the job of government, law and the courts is always to balance the needs of society for inexpensive resources, with the need for a livable and desirable environment.❑

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Colorado Wilderness History

By Steve Smith

The place that launched the Wilderness Act in America still is not a wilderness area, and the debate that finally led to creation of the National Wilderness Preservation System was not about wilderness. It was about water.

The Yampa River in Dinosaur National Monument.

From vigorous debate over a large dam proposed inside Dinosaur National Monument nearly 50 years ago to the most recent consideration of possible new wilderness designations in Rocky Mountain National Park and along the Arkansas River, the role of water in wilderness preservation has been a continual and lively theme.

Debates over water—its maintenance in streams and its economic use when diverted from streams—have challenged the imaginations of many bright advocates and resulted in some of the more convoluted legislative passages known. Such debates also delayed approval of one Colorado wilderness bill for 10 years.

Wilderness proponents contend that to truly deserve the designation, wilderness areas must enjoy a natural flow of water within their boundaries. But in an arid region, water development advocates have been steadfast that we cannot afford to squander precious water supplies by leaving them in streams. This polarizing debate continues to this day.

The first official designation of an area as "wilderness" came in 1924 when forest ranger and naturalist Aldo Leopold persuaded regional managers in the U.S. Forest Service to set aside the Gila Wilderness Area in southwest New Mexico. However, Colorado's wilderness preservation history actually got under way some five years earlier, near a beautiful mountain lake.

In 1919, working for the Forest Service near Trappers Lake in northwest Colorado, Arthur Carhart suggested that lands around the lake be preserved in their wild and natural condition rather than plotted for rows of summer cabins. His enthusiasm for protecting wilderness persuaded the senior Forest Service staff to agree. The cabins project was called off, and much of the lake's margin and surrounding Flat Tops backcountry was administratively protected as a wild preserve.

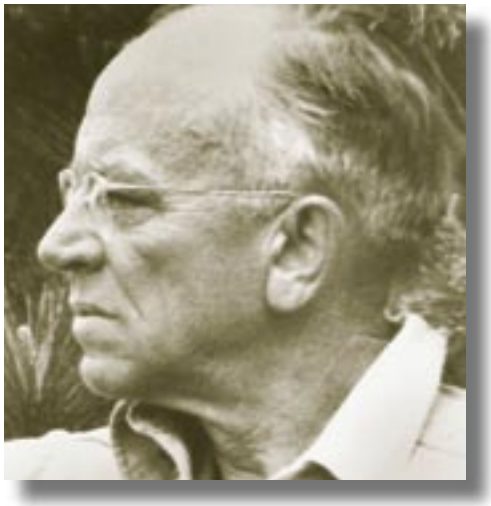
Soon, Carhart and Leopold were conferring. Together with yet another forest ranger, Bob Marshall of Montana (who later became chief of recreation and lands for the Forest Service), they began to turn the longstanding idea of wilderness preservation into policy. In 1935, the trio of foresters joined fabled naturalists Olaus and Mardy Murie of Wyoming, as well as other conservation giants, to form The Wilderness Society.

The new organization quickly teamed with experienced conservation groups including the Sierra Club, Isaak Walton League and National Parks Association, in pressing for enduring—rather than temporary administrative—protections for wilderness.

The concept of wilderness preservation had already been in circulation for more than a century. Members of Congress chatted about ways to define and accomplish it. Even so, it would take nearly 30 more years to secure permanent protection in the form of the Wilderness Act.

Colorado's people, places and water played key roles in the long and detailed drama that finally led to approval of the Wilderness Act and creation of the National Wilderness Preservation System.

When newly elected Congressman Wayne Aspinall went to the U.S. House of



Aldo Leopold (1887-1948) is often called the "father of wildlife ecology" for his ground-breaking theories on ecological communities and management. He also helped secure the first designation of an area as "wilderness" in 1924.

Representatives in 1949 from Colorado's Western Slope Fourth Congressional District, his visions were about water development…not about wilderness.

The Palisade lawyer, peach grower and state legislator had always viewed land as a source of production and revenue. In the arid country of Western Colorado, he knew that making the land produce required harnessing water for irrigation, power and urban growth. The notion of preserving land in its wild and uncultivated state was difficult for Aspinall and his neighbors to conceive.

During a long career in the Colorado state legislature spanning the 1930s and 1940s, Aspinall had a major hand in state water policy. He served, among other assignments, as Speaker of the House of Representatives and as a member of the newly created Colorado Water Conservation Board. To the chagrin of some among his Western Slope constituents, he helped negotiate agreements and funding that resulted in construction of the controversial Colorado-Big Thompson Project, still among the state's primary diversions of water from Western Colorado to the Front Range.

After retirement from Congress and well after the great wilderness debates, Aspinall reflected on the values he had long held dear and firmly. In his autobiography, he described his view that land and water were "to be used wisely." What he called the "non-harvesting philosophy," which he attributed to environmental advocates, was "not a part of my thinking."

In his youth, Wayne Aspinall's family survived as fruit growers and farmers because of cooperative private water diversion projects in the Grand Valley. Their efforts began to thrive when the U.S. Reclamation Service arrived, bringing significant federal subsidies to consolidate and improve the valley's deteriorating networks of impoundments, canals and ditches.

Citizen Aspinall's interest in water development in western states—and the federal government's key role in that development—was sharpened in 1922 when the seven states in the Colorado River basin reached agreement on dividing the river's water.

Delphus E. Carpenter of Greeley, another Coloradan with water savvy and the state's delegate to the Colorado River Compact Commission, coordinated and pressed negotiators into crafting the historic and still standing Colorado River Compact. The agreement provided Colorado, among other things, with the right to develop a specified share of the river's flow.

Carpenter, Aspinall (then a freshman law student) and other Colorado water observers recognized early that such a right to develop would be of little value unless it were actually exercised. Unless Colorado captured significant volumes of Colorado River water before it left the state, that water soon would be diverted, put to use and jealously guarded by quickly growing states downstream, particularly California.

As his career in Congress began, Aspinall believed he had been elected to ensure a reliable and enduring supply of water for his district, state and region. In the early 1950s, he quickly set about securing the policies and funding to build a series of dams and diversions on the upper Colorado River, particularly in Colorado.

The reclamation booster's efforts as a member of the House Committee on Interior and Insular Affairs began with the

Between 1956 and 1964, Howard Zahniser wrote 66 drafts of the Wilderness Act bill and steered it through 18 hearings. He passed away just five months before President Lyndon Johnson signed the Act into law on September 3, 1964. He is pictured here in the Adirondacks about 1960. Courtesy of the Zahniser family.

Collbran Project east of Grand Junction. Even before approval of the project in 1952, Aspinall and federal engineers already were working on a much larger water development scheme and accompanying legislative campaign.

The Colorado River Storage Project (CRSP) proposed a series of six high dams and seventeen companion structures on the Colorado River and its upper basin tributaries, many of the projects in Colorado.

One proposal, in particular, set the stage for an historic clash between the Reclamation promoters, led by now Interior Committee Chairman Aspinall, and the nation's growing conservation movement. By the time it was concluded, the fight over the proposed Echo Park Dam put in place the momentum and points of conflict that would lead to passage of The Wilderness Act.

The dam as to have been built at the stunning confluence of the Green and Yampa rivers, between towering canyon walls in a remote, little known portion of Colorado's Moffat County. Complicating the proposal, and motivating conservationists, was the dam's location inside Dinosaur National Monument, managed by the National Park Service, and that the reservoir would inundate portions of the monument.

Originally established to protect significant collections of fossils, the monument had been expanded twice to include some of the more colorful and diverse landforms in America. The confluence boasts sweeping bends around towering sandstone cliffs, a broad, rolling park of lower rock formations and high desert forests.

The prospect of building a new dam inside a component of the National Park System rallied advocates of wilderness protection as few proposals had. Led by the Sierra Club's zealous director, David Brower, and by The Wilderness Society's Howard Zahniser, conservationists used two basic arguments in their attempt to stop the project: economy and preservation of special places.

The groups used the Bureau of Reclamation's own data that showed storing water elsewhere would be more efficient and cost effective. In an important turning point for the wilderness movement, however, the advocates also successfully made the point that certain lands should be preserved in their natural and untrammeled condition.

At Echo Park, such lands were found in a National Park System area, but the debate launched the broader theme of wildlands preservation for many different public lands.

During five years of debate over the CRSP, conservation groups untiringly pressed those two themes—economy and the preservation of special places. Along the way, they honed their skills as researchers, lobbyists and expert witnesses. They also greatly expanded their support with growing memberships and finances. The network of environmental organizations developed a seasoned leadership team in Brower and Zahniser and a collective sense of confidence to take on a revived campaign for wilderness protection.

In 1956, President Dwight Eisenhower signed into law the Colorado River Storage Project—minus Echo Park Dam. That same year, the first version of The Wilderness Act was introduced in the United States Senate.

Removal of Echo Park Dam from the CRSP had been confirmed earlier in the year in an exchange of letters between Colorado's Aspinall and The Wilderness Society's Zahniser. Not coincidentally, it was Zahniser's hand-written text that became that first wilderness bill.

Over the next eight years, the two advocates expertly refined and pressed their polar views on wilderness preservation, couched in terms of great mutual respect. In September 1964, the Wilderness Act became law with nearly equal parts from each man's hand and sense of compromise.

The Wilderness Act itself included five areas in Colorado—La Garita in the towering high country near Creede; Maroon Bells-Snowmass, defining the wild country near Aspen; Mount Zirkel and Rawah near the Wyoming border; and the quintessential West Elk, dramatically dividing the country between Crested Butte and Paonia.

These were the more dramatic and untouched gems among lands the Forest Service had administratively protected. Significantly, they also were places at the top of watersheds.

That geographical theme continued over the next 16 years, as 22 more wilderness areas were added in Colorado. The additional areas included Carhart's Flat Tops in 1975 and Black Canyon of the Gunnison—another National Park Service area—in 1976. Every Colorado area designated through 1980, save two, was atop or near the top of watersheds.

With little opportunity for water impoundments or diversions above these high country wilderness areas, conflict with

Echo Park in Dinosaur National Monument.

Colorado's water history and development was largely avoided. Correspondingly, most wilderness areas designated by 1980 enjoy a robust, natural cycle of water flows, adding to and enhancing their wild character.

Water issues did leave their mark on a few wilderness areas designated in Colorado up to 1980. Some boundaries for Eagle's Nest Wilderness (1976) in Summit County, were drawn upstream from several proposed water diversions, and the Holy Cross Wilderness (1980) in Eagle County carried an allowance for future development of a major water diversion (although that project has not been built and its construction now is considered unlikely). For the greater part, however, Colorado wilderness approved before and in 1980 was largely free of water development conflicts.

Portions of the West Elk and Maroon Bells-Snowmass mountains were two of the five original Colorado wilderness areas designated by the 1964 Wilderness Act. That designation comprised only the most rugged core of the range, and it took the devoted efforts of local conservationists to enlarge the area through Colorado wilderness legislation passed in 1980. This expanded area includes such notable landmarks as Mount Sopris, Castle Peak, and the lower reaches of the Conundrum Creek valley. Today, Maroon Bell-Snowmass is Colorado's fourth largest wilderness area.

That trend changed abruptly in 1983. The Colorado Wilderness Act of 1980 designated 14 new wilderness areas. It also placed several other areas into a study category, with instructions to the Forest Service to report back within three years on their wilderness potential.

Some of those areas postponed for further study included private land inholdings; others needed boundaries clarified. However, some delays occurred because not all proposed areas were not at the top of watersheds. The notion of natural flows of water for those wilderness areas became more controversial.

By 1983, the Forest Service completed its studies, and legislation was introduced to designate them as wilderness. About the same time, and not entirely coincidentally, wilderness advocates pressed in court for a formal recognition of water protection inside wilderness.

Up until the 1980 Colorado Wilderness Act, the status of water in wilderness had been mentioned only in the Wilderness Act itself, yet without conclusive instructions for federal wilderness managers.

The Wilderness Act implies a federal obligation to protect an amount of water necessary to fulfill the purposes of a wilderness designation, stating: "…each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area…" It does not specify, however, how much water should be protected, or in what manner, in order to follow those instructions.

The Wilderness Act does state, "Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from state water laws." The Act also allows the president to approve future water projects inside wilderness if those projects are in the national interest. (Even in 1964, facing a collection of headwaters wilderness proposals, Chairman Aspinall could see that water and water law would become a wilderness issue.)

Before 1983, no federal wilderness manager in Colorado, primarily the Forest Service, had claimed a right to water in wilderness streams. In 1984, wilderness advocates asked the court to direct the Forest Service to assert such a claim. Since Colorado water law only delegates authority to claim instream flows to the state government itself, a fight was engaged.

For nearly a decade, and long after wilderness boundaries and management issues had generally been settled, the water issue delayed new Colorado wilderness legislation. Since the great majority of lands included in the Forest Service's 1983 report were headwaters areas, the debate over federal water rights and instream flow protections was essentially a theoretical one. That fact did not make the controversy and its resolution any less real or difficult.

Finally, late in 1992, negotiators led by Senators Hank Brown and Tim Wirth crafted new water language. Somewhat simplistically stated, extensive passages of what became the Colorado Wilderness Act of 1993 imply a federal water right for wilderness purposes may be allowable, but bar federal officers from asserting such a right for wilderness areas in the new bill.

As a gesture to wilderness protection, the bill also exempts the 1993 areas from the presidential approval of water projects.

The 1993 act designated as wilderness only areas in headwaters locales. Two other areas located downstream were given status protecting their wilderness values in every manner except name.

Meanwhile, one federal court determined that protection of wilderness areas may warrant protection of water flowing through them, but in that case the federal government was not obliged to seek water rights for that purpose. Some opponents of wilderness water rights argued that the court's ruling meant if Congress wants wilderness areas to have water protection, then it must stipulate how to apply that protection.

While some wilderness designations approved by Congress since 1993 have specifically granted federally reserved water rights for wilderness, none of those designations has been made in Colorado.

As the Colorado experience from 1983-1993 suggests, the issue of federal reserved water rights or other means of protecting natural flows of water in wilderness becomes more practical and poignant in proposed wilderness areas below headwaters. Such is the case for many proposals on federal land administrated by the Bureau of Land

Management and on lower elevation portions of national forests.

Debate about lower elevation, midstream wilderness water is magnified because most of the areas involved are arid and there is little water to fight over. Proponents of wilderness and non-wilderness values decry their need for all the rare water they can acquire.

Those geographical facts, combined with a long history of key wilderness controversies initiated and settled regarding Colorado landscapes, suggest Colorado will very likely be the forum in which this new wilderness water issue is finally, and variously, resolved. ❑

About the Author: Steve Smith has been an advocate for wilderness and public lands protection in Colorado for 35 years, beginning with his student days at Colorado State University and including 12 years as Senior Congressional Assistant to Congressman David Skaggs. He currently serves as Assistant Regional Director for The Wilderness Society. Steve lives in Glenwood Springs, where he enjoys hiking, bicycling, skiing, river rafting, and other outdoor explorations when not working—sometimes while working—on wilderness legislation and research.

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Colorado Wilderness Designations

1964
- La Garita (1)
- Maroon Bells-Snowmass (2)
- Mount Zirkel (3)
- Rawah (4)
- West Elk (5)

1975
- Flat Tops (6)
- Weminuche (7)

1976
- Black Canyon of the Gunnison (8)
- Eagle's Nest (9)
- Great Sand Dunes (10)
- Mesa Verde (11)

1978
- Indian Peaks (12)
- Hunter-Frying Pan (13)

1980
- Holy Cross (14)
- Lizard Head (15)
- Cache la Poudre (16)
- Collegiate Peaks (17)
- Comanche Peak (18)
- Lost Creek (19)
- Mount Evans (20)
- Mount Massive (21)
- Mount Sneffels (22)
- Neota (23)
- Never Summer (24)
- Raggeds (25)
- South San Juan (26)
- Uncompahgre (27)

1984
- Platte River (28)

1993
- Buffalo Peaks (29)
- Byers Peak (30)
- Fossil Ridge (31)
- Greenhorn Mountain (32)
- Powderhorn (33)
- Ptarmigan Peak (34)
- Sangre de Cristo (35)
- Sarvis Creek (36)
- Vasquez Peak (37)

1999
- Gunnison Gorge (38)

2000
- Black Ridge Canyons (39)
- Spanish Peaks (40)

2002
- James Peak (41)

Preserving Our Great Outdoors

I've been fortunate to have seen much of Colorado over the past 40 years. From the plains through the mountains to the western river canyons, I've hauled 65 pounds of large format camera gear from one end of Colorado to the other. With llamas in tow, or my recruited "sherpas" right behind, on backcountry skis, and in my inflatable raft, I've been able to document on film Colorado's ecosystems from desert to alpine. Though the wildflowers may change from one elevation to the next, the weather may change from hot and dry to cold and monsoonal, or the geology from redrock to granite, there's a common feature that pervades all of these places: Water.

Coloradans should be proud of the ways in which they've protected our natural and rural environment, and the riparian areas of those environments, over the last 40 years. From the Wilderness Act of 1964 to the creation of the Great Outdoors Colorado Trust Fund in 1992, we've made laws that give us the tools to substantially preserve the reasons why most of us came to Colorado in the first place. We've made land and water protection the highest of our community goals and for that our descendents will be able to experience much of what we have. They will catch those hard-to-catch trout in lakes at 12,000 feet in designated federal wilderness; they will raft Class III rapids in the Gunnison Gorge BLM Wilderness; and they will walk with their children along the South Platte River through massive groves of Fremont cottonwood, not unlike the ones John C. Fremont himself walked through in the 1840s.

Water runs from mountains on high to the desert canyons below. It connects ecosystems and connectivity is the essence of biodiversity. No plant nor wild animal species can maintain its genetic integrity without seasonal movement from one ecosystem to another. The protection of our water resources, the preservation of wilderness on high as well as ranches at low elevations, and the preservation and enhancement of migratory corridors for wildlife will sustain a Colorado that we've always known, and a quality of life that we will be proud to pass down to our children's children.

John Fielder
Nature Photographer

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