

## Overview: The Last Drop

By Jerd Smith and Todd Hartman  
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Two weekends a month, Angela Burdick and Bruce Rindahl flee metro Denver's grime and noise to seek refuge in Colorado's lush high country.

For this couple, and tens of thousands of other Coloradans, the lure of sunshine and a day under sail or on the ski slopes - all less than 100 miles from home - is simply too strong to resist.

But the very ingredient that makes their mountain retreat so magical - the cold clear water that purrs through rock-and-log-strewn streams - is under siege, threatening the high country that is Colorado's postcard to the world.

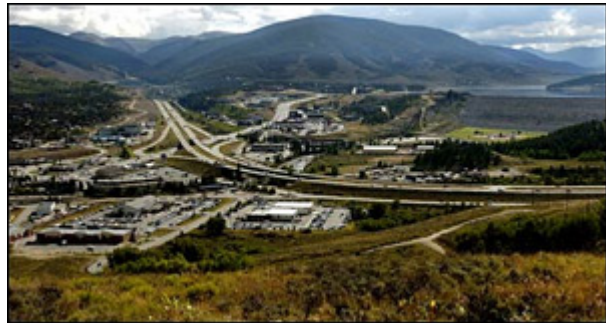


Photo: Ken Papaleo

Already, the Front Range takes vast amounts of water from the counties that are home to Winter Park, Keystone, Vail and Aspen.

But now Front Range utilities are reaching for the last of the extensive water claims staked out decades ago in Grand, Summit, Eagle and Pitkin counties. The utilities, including Denver Water, need more to satisfy the demands of ever-growing cities stretching from Fort Collins to Colorado Springs.

Unless new deals are struck between the Front Range and Western Slope, portions of the Fraser, the Blue, the Eagle and the Roaring Fork rivers - the waterways that give birth to the mighty Colorado River - could be mere trickles, or even go dry, for significant periods of the year. The results: stressed fish, stranded kayakers and mountain towns with polluted water and growth caps because they lack sufficient water supplies.

"I think we've all been guilty of believing the water supplies are endless, and they really aren't," said Burdick, a real estate agent keen to the irony of living in an urban area that depends on water from her cherished mountain getaway.

More and more, mountain residents will be forced to compete with the Front Range for the last trickles of Western Slope headwaters.

New studies predict that Grand and Summit counties will run short of water in 25 years. And officials in Eagle and Pitkin counties also foresee problems with water quantity and quality if Front Range utilities draw more from the Eagle and Roaring Fork rivers.

All this threatens the streams that have thrilled rafters, attracted anglers, made snow for skiers and fueled the economic boom brought by the second homes peppering Colorado's resort towns.

These fast-growing regions need more water for themselves, but the bigger drain comes from cities such as Denver, Colorado Springs and Fort Collins as they look for ways to satisfy the thirst of a projected 2 million new Front Range residents by 2030.

Thanks to a five-year drought, Western Slope locals see the cruel twist: mountain towns that spend winter knee-deep in snow must take steps to slow growth or limit water use because the Front Range has first dibs on most of the resource.

Even when the drought eases and the state returns to years of average precipitation, headwater communities could find themselves water-starved.

"It's a hard reality, but the water is owned by these cities, and they are going to bring it over," said Rindahl, a water engineer and Front Range resident who has spent much of the past 20 years seeking refuge in Colorado's high country.

The impacts are expected to be severe:

- In Grand County, water taps are being rationed because Winter Park doesn't have enough water for development. At the same time, Denver Water and the Northern Colorado Water Conservancy District are hoping to pull enough additional water from Grand County for a total of 80,000 homes.
- In Summit County over the next 12 to 24 years, Denver plans to boost by 77 percent the amount of water it collects from the Blue River. That will cause water levels to fluctuate dramatically at Dillon Reservoir, a recreation spot cherished by boaters and water skiers.
- In Pitkin County, portions of the Roaring Fork in a popular riverside park in Aspen could go dry if Colorado Springs, Pueblo and Arkansas Valley farmers succeed in diverting more water through the Twin Lakes Tunnel.
- In Eagle County, Aurora and Colorado Springs plan to nearly double the amount of water they're taking from the Eagle River. At the same time, Eagle County hopes to partner with Denver to build a major reservoir that would benefit the county and the Front Range.

Why the push for high country water? Why not tap the vast amounts of Colorado water used for farming? Or recycle more treated wastewater and drink it, instead of just irrigating parks and golf courses with it? Why not emphasize greater conservation?

Experts and utilities consider all those as potential sources for satisfying some of the expected new demand.

But it's the crisp, clear headwaters of the mountain counties that everyone covets.

"The fight up there is over the good water," said David Robbins, a Denver water attorney who can be found most weekends in his Summit County home.

That "good water" from the mountaintops is so named because it's comparatively clean, requires little treatment and lies close to vast water collection systems owned and operated by the cities.

"The headwaters are the most valuable (supplies) we have," said Neil Grigg, a water historian, author and Colorado State University engineering professor. "It doesn't make sense to de-water them too much.

"Economically, they're valuable because they're high up, and their diversion points are close by. Ecologically, they're important because they help sustain the whole ecosystem of the Colorado River.

"We've reached a critical balancing point," Grigg said. "(As a state) we're going to have to make some tough decisions."

#### Prospecting for water

In Colorado, there is an intimate connection between the water that city dwellers consume and the state's hallmark snow-covered mountains, where 80 percent of the state's drinking water is derived.

Diverting water from the once-remote mountain counties began in the last decades of the 1800s, when surveyors and water prospectors hiked the Never Summer Range in Grand County, the Ten Mile in Summit, the Holy Cross in Eagle and the Collegiate Peaks in Pitkin.

Back then, when fewer than 500,000 people populated the state, it was unlikely anyone envisioned that Colorado would one day be home to more than 4.3 million people.

To early water prospectors, the mountain streams' water supplies seemed eternal, finding new life with each spring snowmelt. Front Range cities drew freely on these supplies and made legal claims for more in the future - with few angry locals or environmental laws standing in their way.

The picture is much different now. With Colorado's population expected to reach 7 million by 2030, the limits of these once-bountiful streams are being tested, the last drop of their supplies in sight.

Increasingly, the water that keeps trout streams cool and clear, allows kayak courses to roar through Vail and Breckenridge, and fuels thousands of acres of snowmaking at ski resorts will be diverted to the Front Range.

"The Front Range is killing us," said Lane Wyatt, a water specialist with the Northwest Colorado Council of Governments. "But in a way, they are us."

Throughout the headwater counties, local officials are scrambling to capture what little is left of available water supplies while pressuring Front Range cities to share some here, store some there and leave as much in the streams as possible.

At odds are a \$3 billion mountain tourist economy whose core asset is water and an urban corridor with the political clout and the cash to simply take the water if compromises can't be made - even if taking it damages the wild places and weekend playgrounds that draw many to Colorado in the first place.

"People on the Front Range think water starts at their kitchen tap," said Scott Hummer, the top water cop on the Blue River. "But they're wrong. It ends there. Sometimes I just want to tell them, 'It's the same water.'"

Exploding mountain growth

It isn't simply Front Range growth testing these clear waters.

The counties' own populations have doubled in the past 50 years and are projected to double again by 2030, according to Colorado's state demographer.

Water demand for skiing and recreation is also straining supplies.

Making one acre of snow for a ski slope, for instance, requires 326,000 gallons of water a year, according to Vail Associates. That's enough to supply up to two Denver homes for a year.

Keeping the Vail kayak course afloat for 12 hours requires 130.4 million gallons of water, enough to keep about 800 homes in lawn water and showers for a year.

By 2030 each of the headwater counties will need about twice as much water as they use now, according to new data from the \$2.7 million Statewide Water Supply Initiative. Many mountain communities are just beginning to realize how little water they really own, thanks to water deals made decades ago.

Those early mass water claims - perfectly legal under Colorado water law - mean that nearly half of the natural flows in these rivers' headwaters are already moving to Front Range cities, according to the Northwest Colorado Council of Governments.

By 2030 that number will rise significantly.

In Summit County's Blue River, for instance, about 25 percent of the headwaters are diverted. That figure will rise to about 50 percent as Denver delivers new supplies through Dillon Reservoir and the Roberts Tunnel.

In Grand County, the Fraser River loses more than 60 percent of its flows to Denver Water and the Northern Colorado Water Conservancy District, which serves Fort Collins, Greeley, Loveland, Lafayette, Broomfield and part of Boulder.

In 25 years, more than 80 percent of the Fraser's flows will come to the Front Range, according to new studies.

"There's reason for alarm at this point," said Grand County Commissioner James Newberry.

In response, environmental coalitions are re-forming, anticipating new battles for water project permits. Citizen groups hold monthly water education sessions in the Eagle Public Library at Avon.

Heated negotiations are under way almost weekly as Denver, Aurora, Fort Collins and Colorado Springs push to launch the last wave of diversions while keeping their powerful Western Slope counterparts happy.

This year alone, Denver Water and the Northern water district are devoting nearly \$2 million to their high-country planning efforts.

"Our interests and the interests of the Western Slope are never going to be the same," said Ed Pokorney, director of planning at Denver Water, Colorado's largest municipal water supplier. "And they shouldn't be. They don't have to go to bed every night worrying about supplying water to 1.2 million people (Denver Water's customer base)."

The pressure on both sides is so fierce that Denver and other utilities - once used to taking the water with little interference - are eyeing agreements to give up blocks of undeveloped water rights and defer to local needs and environmental concerns. In exchange, the utilities hope to get at least some water immediately while avoiding the threat of lengthy legal action that could throttle their efforts to meet customer demand.

#### New coalitions

Partnerships deemed unthinkable even 15 years ago are beginning to emerge. Vail Associates, for instance, is working with Aurora and Denver to see whether maybe, just maybe, Eagle County and the Front Range might share the costs and benefits of a planned reservoir at Wolcott.

The Northern water district - the state's largest mover of water from west to east - argues that it's already given plenty to the West Slope over the years in exchange for water, including \$10 million in the 1980s to help build a reservoir.

Even so, Northern won't rule out giving up more to complete efforts at moving another 30,000 acre-feet in the coming years. It already takes 230,000 acre-feet - enough for 460,000 homes.

"Have we closed and locked the door for further discussion?" said Brian Werner, spokesman for Northern. "No, we're willing to talk."

Denver Water - historically the king on the state's water chess board - also operates under a new mandate to cooperate. That change began after the expensive defeat of its bitterly opposed Two

Forks dam 15 years ago and continues with Denver Mayor John Hickenlooper's focus on regional solutions.

But it isn't easy.

"We have a lot of issues in dispute and in common with those counties," said Denise Maes, a Denver Water Board member and past president. "I have to figure out how to get (new supplies for Denver) without p----- the rest of the state off. It's daunting. But we are not going to simply go get water and say, 'Hey, we love ya, but you're on your own.' That's not what we're about, and that's not what we're going to do."

Such words don't deliver much comfort to Western Slope water officials who have heard the language of compromise turn tough in negotiations.

After a long summer of meetings, Taylor Hawes, an attorney with the Northwest Colorado Council of Governments, said relationships had been strained almost to the breaking point.

"I've never seen it this tense."

## **Part 1 – Grand County: Grand's Last Stand**

Growth is taxing county's water supplies

By Todd Hartman

*Rocky Mountain News, Oct 3, 2004*

GRAND COUNTY – The mighty Colorado River is born here, delivered by the icy tundra of Rocky Mountain National Park and the wind-hammered peaks overlooking the Fraser Valley.

It nearly dies here, too.

Dozens of the river's tributaries abruptly stop cascading down the mountainsides, captured by simple dirt or concrete ditches gouged into the steep terrain. These remote structures send the water far away, through dark tunnels and open canals heading east, leaving the Colorado's main stem to wait in vain for a bounty that never comes.



It's been that way for decades, as the parched cities, cornfields and corporations of the northern Front Range drained Grand County of 60 percent of the Colorado River's headwaters. Still, the river hung on.

Photo: Ken Papaleo

Then, with the new century, came drought, and strained streams fell to trickles. Flows in Grand County's Fraser River, a tributary of the Colorado, dropped this year to levels never before recorded, as Denver, desperate to refill reservoirs, allowed even less to get by its mountain water traps.

Now, Colorado's two largest water utilities, pressured by relentless growth, plan to take even more water from still-reeling Grand County.

They are seeking new water diversions that will push as much as 80 percent of the county's headwaters to the Front Range, precipitating a crisis in this Western Slope community.

Denver Water and the Northern Colorado Water Conservancy District want to firm up unused water rights – legal claims staked out decades ago. The extra water is crucial to meeting customer demand, they say.

Denver Water says just one dry year could bring the utility dangerously close to running out of water for customers on the north side of the metro area – as it nearly did in the record-shattering drought year of 2002.

Meanwhile, the Northern water district, which serves Greeley, Fort Collins, Boulder, Broomfield and other towns, says it's under pressure to come up with new supplies quickly.

"Some of our participants needed this water yesterday," said Brian Werner, a spokesman for Northern.

But both utilities face a daunting hurdle: how to take the water from Grand County without further damaging the delicate environment and the region's economy, which is fueled by tourists who expect to play in the very water the Front Range wants to take.

"If you ruin the reason people like to live here and the reason people like to come here, you're just shooting yourself in the foot," said Sarah Clements, executive director of the Grand County Water Information Network, a new organization tracking the region's many water challenges.

Grand County is staring at a harsh irony: One of the most water-rich areas of Colorado, home to popular ski areas and fresh mountain streams, faces a shortage that could leave rivers, developers, fish, anglers and wastewater treatment plants without the water they need.

Already, poor snowfall in recent years and transmountain water transfers have taken a sweeping toll.

In Winter Park, water district officials have denied a developer's request to double the density of his luxury housing project, from 250 to 500 units, citing lack of water to supply it.

In the Colorado River, near Kremmling, water levels dropped so low this summer that intakes for irrigation pumps were left high and dry. Ranchers couldn't water their fields, so the Northern water district had to build small dams in the riverbed to raise water levels.

Treating wastewater has grown costlier because streams have less water to dilute the effluent discharged into them. Without more thorough treatment, the sewage would contaminate the streams.

Hazards to fish and other aquatic life have increased because low flows and shallow water have raised stream temperatures. Low flows have also cut access to river habitat for fish, which need diverse environments to feed, rest and reproduce.

Residents also complain that sediment is filling scenic Grand Lake, Colorado's largest natural lake. They argue that Northern's system for moving water to the Front Range is pulling the sediment into the lake – a claim Northern questions.

A recent study of Grand County and neighboring Summit County concluded that neither has enough water for predicted growth if Denver and Northern take what they want, and the study didn't consider a severe drought. It relied on data from 1947 to 1991, taking into account two drought periods – neither as bad as 2002.

"The participants of the study realize that the current 2002-03 drought may present conditions even more severe than past droughts," the study said.

Should the utilities succeed in taking more water, locals throughout Grand County fear they would end up with, in effect, a permanent state of drought – anemic, insufficient streams even in years with average snowmelt and rainfall.

And if real drought persists or returns, which history says is inevitable, they fear the effects could be far worse.

"This (drought-like condition) is going to be an every-year deal," said Bill Thompson, 53, a rancher near Kremmling since he was a youngster.

"The Colorado River has never been this low before in my life. There's just too much water going east."

Cursed by a blessing

In a way, Grand County is a victim of the gifts Mother Nature bestowed upon it.

Grand is home to the headwaters of the famed Colorado River – the river that begins as a million melting snowflakes and goes on to roar through the Grand Canyon and bring water to five other arid Western states. This headwater county also loses more water to the Front Range than any other county in the state.

By an accident of geography, Grand County backs up to the Continental Divide in a way convenient to the most populous stretch of Colorado, bookended by Denver on the south and Fort Collins on the north.

Most of the dozens of towns and hundreds of farms in between derive a portion of their water from Grand County. The water arrives via ditches, tunnels and pipelines that travel across or have been bored through the mountain peaks separating West Slope from East Slope.

In what appears to the naked eye as a gravity-defying feat, these conveyances seem to move water uphill. When water should be flowing west, toward the Colorado River, it flows east instead.

Credit skillful engineers who designed the century-old ditches to start high in the west and end lower in the east, employing techniques dating to the aqueducts of Rome. Later, more sophisticated technology allowed tunnels and pipelines to transfer more water.

On average, all these diversions move a whopping 305,000 acre-feet per year from the Fraser, Colorado and Williams Fork rivers – all headwaters of the Colorado's main stem.

That's more water than resides in Denver Water's gargantuan Dillon Reservoir in Summit County. The diversions amount to 60 percent of the water that would otherwise flow through most of Grand County, according to the Northwest Colorado Council of Governments.

But Denver and Northern want more.

Denver wants to pipe an average of 10,000 additional acre-feet a year – enough for up to 20,000 households annually – through the Moffat Tunnel to meet what it describes as growing demand. The move also will take pressure off its southern delivery system, which carries 80 percent of the utility's supply.

Northern wants to bring an average of 30,000 acre-feet more through the Adams Tunnel each year to "firm up" existing water rights connected to its Windy Gap project. That system, completed in the mid-1980s, collects water from the confluence of the Fraser and Colorado rivers and pipes it to Lake Granby.

Most water rights held by Front Range interests were claimed decades ago – long before environmental concerns might have put the brakes on or required leaving more water in the streams.

Even the U.S. Forest Service, which was alive and well in the 1920s and '30s, didn't raise a finger to stop Denver from capturing water with a 100-mile ditch and pipe system that rims the Fraser Valley.

And there was hardly a local constituency to protest.

"Nobody expected the second-home buyers and the skiers back then," said Bruce Hutchins, manager of Grand County Water and Sanitation District No. 1, the largest water provider in the Fraser Valley, supplying the equivalent of 2,500 single-family homes.

But making use of those long-held water rights won't be so simple today.

Denver Water and Northern will need federal environmental permits.

And counties have more protections against water grabs than they once had.

A 1974 state law says water utilities, even when they have water rights, can't lay down a massive project without locals getting a say in how and where it's built.

Denver and Northern, however, don't appear to need any more construction in Grand County to take additional water. Both can store it in new or expanded reservoirs on the Front Range. That takes away Grand County's best tool for combatting or controlling the projects.

"Obviously," said Grand County Commissioner James Newberry, "we're going to have to fight for our water."

Just an expression

Newberry, though, is speaking metaphorically.

Denver Water and Northern are desperate to avoid a legal fight. Wrangling in court could tie up their water rights for years, perhaps a decade – with no guarantee of the outcome.

"The easiest thing to do is fight," said Dave Little, Denver Water's manager of resource planning. But, "once you're in a court battle, there's no cooperation."

And Grand County officials have no stomach – or money – to take on Denver Water or Northern.

"We can't fight Denver," said Thompson, the Kremmling rancher. "They've got 25 lawyers on staff."

Instead, all parties seem willing to cooperate.

"We're trying to make this work for all of us," Newberry said.

Crafting compromise is crucial.

The planned diversions would leave Grand County's towns and water districts with a combined shortfall of up to 2,300 acre-feet annually once the counties are built out in the coming decades, though planners have no firm estimate of when that will be.

That 2,300 acre-feet shortage relates only to expected needs of homes and businesses. It doesn't include a predicted shortfall of about 8,000 acre-feet needed for streams to support fish and recreation. That water, like the water needed for development, could all be swallowed by Front Range transfers.

And those figures don't take into account the kind of shortages that could occur in an extremely dry year such as 2002.

Meanwhile, Grand County continues to boom. The county is among Colorado's fastest growing, with 12,884 permanent residents as of the 2000 Census, up nearly 5,000 from 1990. It had an average annual growth rate of 4 percent over the past decade.

Western Slope water officials say mountain counties may face stark choices between streamflows for fish or water for more condos and homes – choices some water districts already are facing in Grand County.

"We could probably figure out a way to serve the people at full build-out, but there wouldn't be any water in the stream, and no outdoor water use," Hutchins said.

The study of water needs in Grand and Summit counties, called the Upper Colorado River Basin Study, or UpCo, found many areas of potential water shortfall if Denver and Northern follow through on their plans.

Among them:

- Streamflows in the Fraser River above the town of Fraser would be at or below the minimum levels recommended by the Colorado Water Conservation Board during the winter and often during summer. The minimums are needed for the health of fish, wildlife and the stream ecosystem.
- Streamflows in the same stretch of river would often be too low for wastewater from the Grand County Water and Sanitation District No. 1 to comply with health standards.
- Flows in the Fraser River below Fraser would often be below the recommended minimum levels for fish and wildlife for October through January.
- Flows in the Colorado River below its confluence with the Fraser River would fall below minimum levels for fish and kayakers during some summer months. The stream would drop below minimum flows for August through March.

People who make their living off recreation – fishing suppliers and rafting guides, for example – say they're alarmed by the prospect of yet more water moving east.

"It could threaten the industry," said Art Krizman, owner of Raven Adventures, based in Hot Sulphur Springs in central Grand County.

Krizman said reduced flows in the Colorado already lengthen trips because the river moves slower with less water in the channel. A trip that once took five hours now takes six or seven hours.

"It's still a fun, beautiful place," Krizman said, "but nothing like we used to see just a few years ago."

Krizman acknowledges drought is partly to blame, but he also points a finger at the Front Range, where people "abuse water on green lawns, washing their sidewalks and act like there is no drought."

Falling water levels have also caught the attention of environmentalists with the technical knowledge to challenge the movement of more Western Slope water to the Front Range.

One group, Trout Unlimited, has raised detailed objections to the projects and submitted its concerns to the Army Corps of Engineers. The agency, in consultation with dozens of other agencies and interests, must decide whether to provide a federal permit for the work to go forward.

Among Trout Unlimited's demands: a better explanation of why the water is needed and whether both utilities can find other ways to address future needs.

"We've already got significant temperature issues below (the Fraser-Colorado confluence) because of low flows," said Melinda Kassen, an attorney for Trout Unlimited. "In this case, we're talking about exacerbating an existing problem."

During the 2002 drought, Kassen said her organization talked to a rancher who took water temperatures in the Colorado where he rents waterfront property for fishing.

"He just put his thermometer in the river, and it was 80 degrees. Trout can't live in 80 degrees," Kassen said. "The potential for continued elevated temperatures which will hammer the fishery is significant."

Almost a solution

Both Denver Water and Northern had originally proposed reservoirs for Grand County that would solve certain problems for locals and the utilities.

Denver Water had its eyes set on a site midway down the Fraser Valley to build Ranch Valley Reservoir, a 25,000 acre-feet storage pond. That reservoir could help both Denver and the Fraser Valley. Under one plan, Denver – instead of capturing water on the mountainsides – would let more water flow down the Fraser River for use in the valley. Then, that water would collect in the Ranch Valley Reservoir. When Denver needed it, water could be pumped from the reservoir into Denver Water's collection system and sent to the Front Range.

Northern had hoped to build 36,000 acre-feet Jasper Reservoir just west of Lake Granby to store water from Windy Gap.

But both proposals have run into trouble. Environmental surveys revealed both sites contain rare peat-forming wetland areas called fens.

Federal agencies, including the Environmental Protection Agency and the Fish and Wildlife Service, told the utilities to look somewhere else.

The news came as a blow and has sent planners scurrying for other options, none of which is likely to be as affordable or workable as their first choices.

"Everything else is not as good," said Little of Denver Water. "It's depressing."

Both parties are intent on closing a deal, however, and are looking at other possibilities.

Denver and Grand County, for example, could work out an agreement in which Grand County would pay to construct a Front Range reservoir. In wet years, Denver Water could fill the reservoir. In dry years, Denver would draw from the reservoir and take less from the Fraser Valley.

Northern has an interest in building a large Front Range reservoir, Chimney Hollow, near Carter Lake southwest of Loveland, to hold more than 100,000 acre-feet.

As for helping to ease the blow in Grand County, Northern officials note that they made all their concessions – or provided "mitigation," in the parlance of water wonks – when the Windy Gap project was built in 1985.

At the time, Northern pitched in \$10 million toward Wolford Mountain Reservoir, also in Grand County, so the Western Slope could store water in wet years to supplement streamflows in dry years. Northern also provides 3,000 acre-feet of water annually to the Middle Park Water Conservancy District, which supplies water to about 30 small utilities in Grand and Summit counties.

Even so, Northern is willing to consider other steps to preserve flows in the region, said spokesman Brian Werner.

"We haven't drawn a line in the sand and said, 'Nothing else,'" Werner said. "What we hope is we can reach some middle ground. If we can do X, we'll give you Y."

But before any deal can get done, Denver and Northern need buy-in from water interests throughout Grand County, as well as the Army Corps, the Bureau of Reclamation and other state and federal agencies.

Grand County locals are nervous. They know Denver and Northern probably have good legal standing to take their water. Some are skeptical that anything can be done to preserve water for the county known as the birthplace of the Colorado River.

They point to a Denver Water diversion high on the Fraser River. Early this summer, an aging steel gate was directing almost the entire flow of the river that day into a pipe that ultimately carried the river through Moffat Tunnel to the Front Range.

The flow left over – a single cubic foot per second, about the same amount sprayed from a 1 3/4-inch firefighting hose – was all that stayed in the river.

It was all perfectly legal – the legacy of water rights claimed decades ago, long before local objections and environmental concerns might have stopped the virtual eradication of a mountain stream.

That historical backdrop, and the sheer political power of two utilities that serve a combined 2 million customers, has Grand County wondering just how much water might be left for its future.

"We're just guppies swimming in the tank with sharks," said Hutchins. "The only reason they don't eat us is they don't even see us."

They also know that this could be the last opportunity to negotiate whatever benefits they can before the Front Range squeezes out the last drop of the headwaters.

Lane Wyatt, a water specialist with the Northwest Colorado Council of Governments, agrees.

"Whether it's the last drop, I don't know, but Grand County sees this as the last chance to negotiate something with these guys."

### **Part 3 – Summit County: Siphoning the Summit**

Dillon Reservoir faces more ups and downs

By Jerd Smith

*Rocky Mountain News, Oct 4, 2004*

FRISCO - The Blue River feeds Dillon Reservoir, lures anglers and kayakers, and fuels snowmaking at Keystone and other ski areas. But a new study predicts that Summit County will run short of water in the next 25 years as its own population booms and Denver Water takes more of the Blue's flows.

At 10 p.m., just off-shore at Dillon Reservoir, fireworks light the cold, night sky. With each display, thunderous echoes bounce off the surrounding mountains, offering a heavenly drumbeat to accompany the annual Fourth of July extravaganza.

Aboard a flotilla of sailboats, spectators watch the show from the middle of the lake, whistling and clapping, happy to be afloat even as a late-night storm sweeps rain across the decks of their sleek J-80 racing boats.



Photo: Ken Papaleo

Though half the boats on the reservoir are registered to metro-area residents, it's a safe bet that few of their owners are aware of other water storms brewing over Dillon's glorious shores.

Many who use Dillon each weekend don't yet realize that Denver Water will begin taking much larger gulps from its largest storage pond, raising and lowering its levels dramatically.

Nor do many know that the utility plans to increase by 77 percent the amount of water it diverts from the Blue River, the lifeline for the reservoir and Summit County.

That means about half of the Blue River's crisp, clear native flows will come to the Front Range in the next 25 years, up from about 25 percent now, according to the Northwest Colorado Council of Governments.

Because of this and Summit's spectacular growth, unless more water is stored for local water users, the county known as Colorado's playground will end up significantly drier. At times, the county could run short of water for snowmaking, golf courses and trout fisheries, according to a 2003 study known as the Upper Colorado River Project.

"It's a huge amount of water, and it's a huge problem in the county," said Bob Weaver, a water consultant who has examined long-term supply issues in Summit and other headwater counties.

Denver owns the rights to millions of gallons of additional Blue River water that it has not needed in the past 40 years. In Colorado, water in streams is a private property right and is often owned by someone other than those who live along the stream.

Summit officials, deeply worried that their bustling tourist-dominated home is in jeopardy, hope to rein in Colorado's largest municipal water supplier, even as they acknowledge its legal right to the water.

With a December deadline looming to keep both sides out of court, Denver has made an offer it has never made before: to permanently cap what it takes from the Blue River as part of a new collaborative approach to working with mountain counties.

"(Our) effort is to reduce the points of friction and to bring as much common understanding as we can, recognizing that our interests will never be the same," said Denver Water Manager Chips Barry.

Ticking clock

Rules on how Denver can use Blue River water and Dillon Reservoir were set up in a series of 1950s-era agreements known as the Blue River Decrees.

Questions about the agreements have always dogged Denver's relationship with Summit County, Barry said, but the drought and Denver's plans to take more water from the Blue put the two at loggerheads two years ago.

Summit County water users began raising serious legal questions about whether Denver's plans would comply with the decrees. They made clear they weren't going to let the water go easily without getting something in return.

Among their requests: the right to participate in setting guidelines for Dillon Reservoir levels, help with Summit's rising water treatment costs, and more water for streams and snowmaking.

"2002 (the worst year of the current drought) was a wake-up call to us," said Sue Boyd, assistant county manager who oversees water issues.

The debate was so heated in that blistering summer that the two sides agreed to a sort of legal cease-fire.

But the cooling-off period ends in December.

"That's the clock that's ticking," said Dave Little, Denver Water's manager of water resource planning. "If we can find a way to meet all their needs, there will be no reason to fight. We think there are solutions out there. We're searching for common ground. We're hopeful, and we're committed."

Denver has its own motivation to deal. Its long-term planning documents show that demand will outstrip supplies in 12 years, by 2016, assuming the utility maintains a 30,000 acre-foot backup pool mandated by its board in the mid-1990s.

Denver takes, on average, 66,000 acre-feet of Blue River water through the Roberts Tunnel each year. That's almost a fourth of what Denver Water customers use each year. It plans to boost that to 117,000 acre-feet, Little said. How quickly the jump in diversions will occur isn't clear.

At least a portion of the new Blue River supplies could begin coming across the mountains by 2011 to help Denver expand its supplies to the north metro area, Little said.

Still, with customers using less water because of the drought, the utility may be able to slow the new diversions from the scenic river.

"I think we have a little bit of time," said Denver Water Board member Denise Maes. "But I think we have a hell of a lot of work to do, and we need other communities to help us get it done."

Summit will see its own water demand more than double by 2030 to about 21,100 acre-feet a year, up from 11,000 acre-feet in 2000, according to the Statewide Water Supply Initiative study.

Those numbers pale in comparison to Denver's, but it's still water the ski resorts and towns of Summit County don't have.

Summit County has already seen water shortages crop up, thanks to the drought. Some subdivisions were on watering restrictions this summer. Frisco's water treatment plant may have to be rebuilt because water levels in Dillon are often too low to support the plant's old operating system, Summit County Commissioner Tom Long said.

The legal questions

Summit County has raised could have serious consequences for Denver.

Among the issues are whether Denver has the legal right to store more Blue River water on the Front Range, whether the water can be used to help suburbs within Denver's service area, and whether the utility's 1.2 million customers should be forced to drink recycled water before more Blue River water is diverted.

In exchange for a promise from Summit not to sue over those issues, Little said, Denver has offered to permanently cap the average amount of water it takes out of the Blue River at 131,000 acre-feet a year.

But Summit officials aren't ready to call a truce. Such legal questions give them critical leverage with the utility, whose \$227 million budget for 2004 is more than four times the size of Summit County's entire \$51 million annual spending plan.

One of Summit's biggest complaints is that it doesn't think Denver recycles enough water.

"The decree says that Denver has to re-use the water (multiple times)," Long said. But until Denver launched its new recycled water plant this year, it hadn't recycled any Blue River water. Now it recycles the water only once, treating it enough to use on parks and open space but not for drinking.

Denver, however, argues that it uses Blue River water efficiently enough to comply with the decrees.

If Summit County prevails in the negotiations or wins in a court battle, then some experts think metro-Denver residents could be forced to drink recycled water as part of a multiple-use program. That's never occurred before in a metro area that prides itself on its high-quality, sparkling mountain water.

But that doesn't bother Long. If city dwellers drink recycled H<sub>2</sub>O, "It would free up a lot of water for the Front Range without taking more water from us," he said.

Patti Wells, Denver Water's chief legal adviser, declined to comment on the Summit County negotiations, saying only that her agency was in compliance with the decree.

A legacy of tension

Friction between Summit and Denver Water dates back more than 50 years, when Denver began acquiring land to build Dillon Reservoir.

Using condemnation or the threat of it, the utility bought some of the county's most scenic ranches. It relocated the town of Dillon, moving schools and cemeteries. Later the agency sold parcels acquired through that process, something that still rankles locals, such as rancher Grady Culbreath.

"Seeing them turn around and sell some of that off, well, they shouldn't be allowed to condemn stuff and then sell it. That's all there is to it. Some of that land up around Dillon is worth per square foot what they gave for it per acre," Culbreath said.

Wells takes exception to such criticism, saying her agency has never profited improperly from land sales or disposed of land against the wishes of local government.

"When we have disposed of land, we have only done so in cooperation with the local land-use agency," Wells said.

George Beardsley, a Denver developer and Denver Water Board member appointed in February, has owned a ranch in Summit County for 20 years.

"I'm sort of the new kid on the block," he said. "But people in Summit know me, and they want to know what Denver's going to do. This is difficult. The asset (Dillon Reservoir) is Denver's, but there are ways to be sensitive to (Summit County's) concerns."

Denver Water has been under direct orders from its board to go out and collaborate ever since it failed in 1989 to win public and political support for Two Forks, a massive proposed reservoir on the Front Range.

Erasing memories of old water feuds, however, is never easy.

"When issues are this emotional, the hard thing is to keep people focused on things they can do," said David Robbins, a water attorney who spends about 30 weekends a year in a second home overlooking Silverthorne.

"Personally, I think it's hard to get aggravated with Denver for building a reservoir. There would be no Silverthorne if there weren't a Dillon Reservoir. But we're all under stress. We have 10 to 15 times more people living in Summit County now than we did 50 years ago, and they have completely different expectations."

Working on good will

Denver Water, well aware of the animosity Summit County residents feel, insists it has worked to cooperate with Summit and other counties. It has, for example:

- Helped pay to develop the \$385,000 UpCo study showing exactly where Summit county's towns and ski areas would need water in the future as Denver siphons out more.
- Helped Silverthorne reshape channels in the Blue River to make it appear fuller in times of low flows.
- Spent nearly \$3.5 million in 1992 to help purchase Clinton Reservoir on Fremont Pass, providing about 3,500 acre-feet of water for snowmaking to Keystone, Breckenridge, Winter Park, Copper Mountain and Vail ski resorts.
- Recently donated the 160-acre Roberts Peninsula to the town of Dillon as part of an open-space package.

But Denver Water officials, frustrated as the negotiations drag on, say nothing they do is ever enough.

"We sometimes think good will - up there - lasts about a half-hour," said Barry, the utility's manager.

Glenn Porzak, a water attorney who represents Vail Associates, Keystone and Breckenridge, said it's critical that Denver Water and Summit resolve their differences.

"Everyone knows if they go to court, it will be there for years," Porzak said.

Barry said his agency is trying hard to apply salve to old wounds and to find ways to avert future water shortages in Summit and other headwater counties.

"We are their best hope for solving their water problems," he said. "We're the only entity up there with the resources, with the pipes and infrastructure - with the water - to help."

#### Part 4 – Pitkin County: Trouble looms in Glamour Gulch

Aspen's Roaring Fork River could drop to a whisper

By Todd Hartman

*Rocky Mountain News, Oct 6, 2004*

ASPEN - The Roaring Fork gurgles through this gilded town, a sparkling accessory to Colorado's most glamorous locale.

Tumbling out of the Collegiate Peaks Wilderness in countless alpine rivulets, the river makes its way to Aspen's heart, where it parallels a meandering parkway filled with people who can afford to skate, pedal or dog-walk the days away.

The town, and its come-and-go, ultra-wealthy residents, cherish this stream as an oasis in a paradise of sorts, where they can go to contemplate life if gazing at granite peaks and forest-green mountainsides ever wears thin.

But many Aspenites who love the river today have no idea how grand it used to be - or how meager it could become.

The Roaring Fork is just a phantom version of the once-noisy beast that gave the waterway its evocative



Photo: Ken Papaleo

name.

In decades past, the river has been divided, diverted and drained. It has been steered toward ski areas and hayfields and even through mountains to irrigate the emerald corn and melon fields of southeastern Colorado's Arkansas River Valley and the pop-up suburbs of Colorado Springs.

Front Range diversions alone have cost the Roaring Fork above Aspen nearly 40 percent of its flow. Another 10 percent leaves the river above town at the Salvation Ditch, which waters hayfields and ranches down valley.

Few realize another troubling fact: The Roaring Fork appears to be on the verge of losing even more water, which could turn this Aspen landmark into the "Roaring Seep," as one Western Slope water official put it.

Losing more water could threaten fisheries as river levels - already dangerously low in some stretches - drop even lower for longer periods of time. The loss is stressful, even deadly, for creatures who prefer the streams deeper and colder.

It also could endanger Aspen's water supply as the river's overflow is no longer enough to recharge the city's key aquifer. It means less water pouring through the White River National Forest, and it risks the calendar image of high-country Colorado, where pure water rushes over black rock and through green trees.

Those on the Western Slope who follow the obscure world of water say this would be disastrous for Aspen and the Roaring Fork basin and will be greeted with fury even by the carefree rich of this gold-plated hamlet.

"Knowing what the stakes are," said Mark Fuller, a Pitkin County-based water expert who tracks river issues in the Roaring Fork Valley, "I find it hard to believe it would be acceptable to people when they see what we stand to lose."

Quietly - as all water deals tend to unfold, at least initially - Front Range water interests are gearing up to do again what they've been doing for almost 125 years: move water from this moisture-rich region west of the Continental Divide to the water-starved communities on the east side.

Just how much water is a matter of debate, with estimates ranging from 8,000 to 15,000 acre-feet on average per year. That amounts to another 7 to 14 percent of the Roaring Fork's headwaters, on top of the 50 percent already taken.

The Twin Lakes Reservoir and Canal Co., which wants to move the additional water, says the diversion would be perfectly legal under its water rights, which many on the Western Slope concede. The backers say the extra water probably could be taken only in wet years, when there's typically enough water for everyone, and not in drier years.

There are still several legal and political hurdles to overcome. The Twin Lakes company must secure more storage on the Front Range, and an existing streamflow agreement with the Western Slope would make it difficult for Twin Lakes to deplete river levels further in many cases.

Shareholders in Twin Lakes, including Pueblo and Colorado Springs utilities, have owned rights to this extra water for decades but have gotten by without claiming it. But the drought of the past four years has made it hard to resist.

"This drought has really put the exclamation mark on the need for additional storage," said Kevin Lusk, a senior project engineer for Colorado Springs Utilities, the major shareholder in the Twin Lakes company. "So we're pursuing" the Roaring Fork water, he said.

The Roaring Fork watershed begins in the tundra of three wilderness areas - the Hunter-Fryingpan, Collegiate Peaks and the Maroon Bells-Snowmass.

They are home to postcard Colorado landscapes: glacial lakes, jutting peaks, wildflower-carpeted meadows and thick, cold forests of spruce, fir, pine and aspen.

In springtime, snowmelt heads downhill, joining forces to form spectacular, boulder-strewn white-water streams. These are the beginnings of what become a parade of creeks and rivers that eventually join the Roaring Fork - Maroon Creek, Conundrum Creek, Castle Creek and the Fryingpan River among them.

These waterways make Pitkin County a treasure for fly fishing, kayaking and rafting, as well as a haven for fish and wildlife. It's home to what locals boast is the state's most-photographed scenery - the spectacular Maroon Bells, 14,000-foot sentinels towering over Maroon Lake in a wilderness area protected from any Front Range water diversions.

Over the past decade or two, more residents of what was long a sleepy, out-of-the-way county have recognized the river's economic and environmental bounty.

But few in Pitkin County seem to know how much water was long ago lost to the Front Range, diverted by farmers who had exhausted flows on the Arkansas River and turned west for more.

The earliest such project, a consortium of farmers that made up the Twin Lakes company, won legal claim to 60,000 acre-feet of water rights in the headwaters of the Roaring Fork back in 1936. The company built a system of ditches and reservoirs, capped with an eight-mile tunnel drilled under Independence Pass and into Twin Lakes Reservoir.

That gave Twin Lakes rights to more than half of the roughly 110,000 acre-feet produced annually by the headwaters of the Roaring Fork above Aspen.

But the Twin Lakes company has never had enough storage to exploit all its rights. It takes about 38 percent of the headwaters - 35,000 to 40,000 acre-feet that would normally pour off the peaks around Independence Pass and flow through the Roaring Fork to the Colorado River below.

Now, the Twin Lakes company is ramping up discussions with the Bureau of Reclamation, the federal dam-building agency, about storing water in federally owned reservoirs. Twin Lakes says it has a right to that storage space under an agreement dating to the 1960s.

If Twin Lakes' claim succeeds, company officials say they could legally divert - at least in theory - the full 60,000 acre-feet. That's roughly one-fifth of what Denver Water consumes each year.

Of course, nothing is simple in Colorado's east-west water wars. If history is any indication, environmentalists on the Western Slope will put up a ferocious legal fight. And they'll start by saying there's not enough water left to take, not without drastic effects on fish and recreation in the Roaring Fork Valley.

Tom Cardamone, director of the Aspen Center for Environmental Studies, said the ecological effects of water diversions are innumerable and damaging.

"To deplete that already overused ecosystem seems to be ill-advised ecologically and economically, and perhaps even morally," he said.

In 2002, the drought year that left most of Colorado reeling, Aspen residents were stunned to see their dependable Roaring Fork go almost completely dry in its mile-and-a-half run through town.

"You could walk across it without getting your feet wet," said Phil Overeynder, who, as head of Aspen Water and Electric, has tried to keep the area's thirst quenched for a decade.

In late summer that year, rainbow and brown trout became isolated in pools, unable to get to the tiny flows left in the river channel. Some made it, but some died.

"The stream's oxygen levels were down, the water temperatures up. No food was being conveyed through the stream," Overeynder said. "Every system (the fish) rely on for living is shut down."

Some residents called the utility department. Others called the mayor, wondering how this could be happening and can't you do something about it?

"They said, 'Can't you just put some water in the stream?' " recalled Overeynder with a chuckle.

That was the worst year in memory for the Roaring Fork through Aspen. But summertime flows in that stretch are never good any more.

Twin Lakes company diversions to the Front Range are not solely to blame. Perched right above Aspen, an aging concrete and steel structure steers much of what's left of the Roaring Fork River into a canal dubbed the Salvation Ditch.

It's a salvation to some downstream landowners - not to Aspen. On one day this June, the ditch was diverting about a third of the river to irrigate hayfields in the Roaring Fork Valley for the few remaining big-time ranchers and the many hobby ranches.

Typically, by July and August, more than half the river disappears into the Salvation Ditch. And for the next mile and half, until bolstered by the confluence with Hunter Creek, the remaining flows in the Roaring Fork often fail to meet what Colorado Division of Wildlife officials say are sufficient levels for fish.

Once flows get too low, waters become warmer and can harm, even kill, aquatic life. When waters hit 75 degrees, biologists get alarmed.

"When the water starts to warm up, the trout try to go deeper for cooler water," said Randy Hampton, a spokesman for the wildlife division. "The problem is, when they get too deep, they lose oxygen content. That's where you can get fish mortality."

Fish aside, the scenic damage caused by low flows is troubling, locals say.

"To have that stretch of river turn to gravel for a month to six weeks every summer, it's sort of a microcosm of the sort of things that make us crazy over here in relation to water diversions," said Fuller, head of the Ruedi Water and Power Authority, a consortium of local governments that tracks water issues in the Roaring Fork basin.

"It has aesthetic impact, recreational impact, fishery impact. It seems to us to be one of the places the state ought to be doing whatever it can to keep water in the river," he said.

Draining the bank account

Aspen officials worry that losing more Roaring Fork water could affect how much they have for town residents, too.

The bulk of the town's water comes directly from the Roaring Fork into a treatment plant, but Aspen also relies on a critical aquifer, which supplies 5 to 30 percent of the town's water, depending on the time of year.

This ancient lake bed is recharged with water when high springtime flows pour over the Roaring Fork's banks and soak into the porous valley floor.

But those crucial floodwaters have dwindled, thanks to Twin Lakes diversions and four to five years of drought.

Compounding the problem: ranchers trying to control the Roaring Fork took many of the bends out of the stream to make the water flow faster. But the fast water also cut a deeper streambed that is harder to overflow. While it once took a springtime flow of just 300 cubic feet of water per second to flood the valley, it now takes about 500 cfs.

Flows haven't broken the flood threshold since 1999, leaving the aquifer without the saturation required for Aspen to efficiently pump water. Though plenty of water still lies below ground, the lack of recharge makes it harder for the city to get to it.

Should the river lose even more to the Front Range, Overeynder expects greater impact on the aquifer, particularly by the time Aspen expands from its current one pump to three pumps drawing on groundwater.

In 2002, the depleted aquifer and low flows in the Roaring Fork forced Aspen to ask its customers to take voluntary conservation steps - which nearly half did, shrinking consumption by 10 percent.

They may have to conserve a lot more. Aspen has no reservoir to store water above ground, so its aquifer functions as an underground water bank account for low-flow times.

But for every year the river doesn't flood, the bank account dwindles.

A sleeping giant

Most Aspenites are so accustomed to the river flows that they don't realize one-third of the watershed never makes it to town, water brokers say.

And many of the West and East Coasters who populate the town have little idea of the ways of water in Colorado.

"They have to be here awhile before they understand Colorado is a dry place," said Cardamone of the Aspen Center for Environmental Studies.

But the low flows don't go completely unnoticed.

Maureen Poschman, a public relations whiz in Aspen, has deep affection for the Roaring Fork and its contributing streams. Hiking up Independence Pass, she's seen the concrete piping in the middle of the forest, where water disappears into small, dark tunnels, unseen again until it emerges on the other side of the Continental Divide.

"I'm very aware of it, certainly," Poschman said. "It's not my point to say what the laws should be, but at some points the rivers run too low, it doesn't seem very protective of the environment."

Poschman, like several others interviewed, including environmentalists, was surprised to learn that Twin Lakes Reservoir and Canal Co. is considering moving additional Roaring Fork water to the Front Range.

"This is the first I'd heard of it," said Sloan Shoemaker, executive director of the public lands-oriented Wilderness Workshop in Aspen. "This would have significant impacts for us."

Any new diversions out of the Roaring Fork would likely waken a sleeping giant.

After Twin Lakes began diverting water in the 1930s, the next major diversion of the Roaring Fork was the Fryngpan-Arkansas Project of the 1960s.

But since then, Pitkin County has attracted some of Colorado's wealthiest individuals, along with the now self-described aging hippies who arrived in the 1970s and are still wise to the ways of activism.

At the same time, population growth, drought and a creeping environmentalism have raised the profile of water. Streams and rivers, once seen as a flood-prone nuisance, are increasingly viewed as community treasures, locals say.

One big sign of that was the formation of the Roaring Fork Conservancy, a group that got its start in 1995 trying to protect riverside wildlife habitat from a planned golf course in Basalt.

Since then, the group has grown into Pitkin County's leading advocate for the Roaring Fork and its tributaries, monitoring water quality, protecting riverbanks from ecologically damaging development and educating schoolchildren about river science.

Kristine Crandall, a research specialist for the organization, said the conservancy would be on guard against any future cross-mountain diversions out of the Roaring Fork basin.

"I would say, politically, it would be a tough go. Communities would fight that very hard," Crandall said, noting that the group wants to learn more about the Twin Lakes company's plans.

"This is something we'll want to get more involved in," she said.

Crandall is struck by the irony of losing more water from Pitkin County and other headwater communities to the Front Range, when people from Denver and other cities love coming to the Western Slope to enjoy its waters.

"It's interesting because a lot of the Front Range benefits from our rivers and streams over here," Crandall said. "A lot of our tourism is built on these headwater communities and what they offer."

## **Part 5 – Eagle County: Highland vs. Flatland**

Talks under way on landmark water project in Eagle County

By Jerd Smith

*Rocky Mountain News, Oct 6, 2004*

Eagle County successfully battled in the 1980s to protect its wilderness from a proposed reservoir for Front Range utilities.

Today, officials in Vail's home county are negotiating what could become a landmark water project to benefit Eagle and metro residents while preserving the environment.

On a rainy June morning in a small conference room deep within Denver Water's headquarters, rural Eagle County has the Front Range outmanned, if only for an hour or so.

Seven men from the tony resort region face four powerful urban utility officials - two from Denver Water, one from Aurora, and one from the Northern Colorado Water Conservancy District, which serves Fort Collins, Boulder and other northern Front Range cities.



Photo: Ken Papaleo

Among those at the table, in jeans and a leather vest, is Vail ski resort executive Paul Testwuide, a man who has spent much of the past 40 years fighting to keep Eagle County's water at home, available for snowmaking, condos, kayak courses and fish.

Across the frigid conference room in a starched blue shirt and tie is Dave Little, Denver Water's manager of water resource planning. He is a 23-year veteran of the agency, the man charged with ensuring that the state's largest municipal water supplier has access to water rights it claimed decades ago but has never used.

For more than a year, West Slope power brokers and their urban counterparts have gathered quietly, holding nearly a dozen such meetings.

"In the water world, it's all about negotiations," Testwuide said. "The beautiful thing about these (talks) is that we will end up knowing how much water there is in Eagle County and how it's going to be used."

They are working toward a landmark agreement to build what would become the largest cooperative water project in Colorado - Wolcott Reservoir.

The project would transform a radical not-one-more-drop Western Slope county into a sort of demilitarized water zone. It could help keep a thriving resort county lush and moist, its wilderness areas intact, its future water supplies guaranteed.

At the same time, Wolcott would bring some - not a lot, but some - new water to Denver, Aurora, Colorado Springs and Fort Collins, among others.

Rick Sackbauer, president of the Eagle River Water and Sanitation District, hopes Wolcott will provide enough that the Front Range will agree never to come back for more, to leave behind most of the water that dances through Gore Creek, Cross Creek, Homestake Creek and countless others.

"We want Denver out of Eagle County," Sackbauer said.

But to get Denver out, these West Slope power brokers first have to get Denver in.

Everyone at the table, including Jim Pearce, a water engineer at the Colorado River Water Conservation District, knows that Denver must be carefully courted.

"Supplies are tight in Eagle County," Pearce said. "We can get a lot more done (with Denver) than we can without them."

A water pinch

Testwuide has called Eagle County home since he started work on the Vail ski patrol in 1966. But the Vail Valley isn't the carefree place of his youth.

Like other mountain counties whose streams feed the Colorado River, Eagle is expected to double its population in the next 25 years, growing from about 43,000 to 87,000 people. Water demand here will nearly double, according to a new state study.

Where once Eagle County's idyllic towns could simply pull water from streams each day as it was needed, now there are times - in dry spells and during the winter - when those streams can't satisfy everyone's immediate thirsts. When flows drop too low, Vail and other Eagle County communities ban outdoor watering.

Testwuide and others say the county needs more storage, another bucket to capture water when stream flows are high.

"Right now I believe Vail has enough water, but when streams hit low flows, it causes a lot of public concern. Will people start to look at Eagle County as water poor and then, not as nice a place to come?" Testwuide wonders.

As Colorado wrestles with a lingering five-year drought, on this Thursday morning at Denver Water, there is some good news besides the welcome rain.

The first Wolcott feasibility study indicates the reservoir would cost about \$180 million to build, depending on size. Cautiously, all the players, including Denver, say they're interested.

"To the extent this project isn't 'Denver against the world,' our board would probably be interested," Little tells the group. Everyone agrees to ante up more money to see if the project can work. Collectively, they've already spent about \$100,000 on studies.

The utility owns most of the land at the reservoir site and most of the water rights that could be tapped to fill it.

Key to making the Wolcott deal go is an agreement from Denver to permanently cap the amount of water it takes from the Eagle River. It would mean leaving behind millions of acre-feet of

undeveloped water rights, known as "paper water." In exchange, Denver would get a minimum of 5,000 acre-feet of usable "wet water" at Wolcott without a protracted court fight. That's enough for up to 10,000 urban households a year.

Aurora and Colorado Springs signed a similar deal in 1998.

But Denver hates the idea of abandoning any of the water it has claimed in Eagle County. "We try never to use the "A" word," Little said.

Denver Water Board members are reluctant to limit access to a potential water source.

"Personally, I hate the idea of giving up water rights," said Denver Water Board member Denise Maes. "That's our future."

It's also a lot of water - the utility's 200,000 acre-feet of undeveloped rights amounts to about two-thirds of what its 1.2 million customers use in a year.

Denver may ultimately agree to that deal but would want everyone to share in the cost of building Wolcott.

Money has become a big issue for Denver Water this year. Though it still has more than \$145 million in cash reserves and the ability to borrow more, water sales have fallen as customers have cut back to cope with the drought.

"Our board knows there are water rights in Gore Creek (an Eagle River tributary) that we will have difficulty putting to use," said Denver Water Manager Chips Barry. "I'm delighted that we have really good discussions going on about what gets traded off and who benefits.

"But you know what hasn't been talked about yet? Money. Everybody thinks somebody else will pay for the construction of Wolcott Reservoir. The West Slope thinks, 'Oh, this is Denver's reservoir. They'll construct it, and we'll get some benefit.' We're saying, 'Hey, we're not getting that much benefit. Somebody else is going to have to pay.' "

Environmental concerns about sage grouse and salinity, among others, also remain. Sage grouse, which live on the site, may be listed as threatened under the Endangered Species Act, making reservoir construction more difficult.

And farmers downstream, in Mesa County and elsewhere, worry that trapping the comparatively clean water of the Eagle River before it enters the Colorado River could make portions of the Colorado too salty to irrigate their fruit orchards.

How the public views a potential agreement could also affect what happens.

Caroline Bradford, executive director of the Eagle River Watershed Council, pushes quietly day in and day out to open up water talks that historically have occurred far from public view.

Two years ago she began running water education sessions at the Avon Public Library that attract dozens of people. And when water officials get together, however informally, she makes a point of being there.

But she wasn't aware of the June meeting in Denver, and it irks her. "I think they usually try to keep me informed," she said. "But I have to be persistent. . . . I don't think people mind not being considered experts, but we want to be part of the conversation."

By late summer, the utilities had agreed it was time to start showing the concept to the public and talking to West Slope environmental groups, farmers, ski areas and anglers.

### Eyes on Eagle

For the first half of the 20th century, geography buffered Eagle County from Front Range water prospecting.

Back then, the Front Range focused on bringing water across the Continental Divide from Summit and Grand counties, which lie about 70 miles and one mountain pass west of Denver. Diversions from Eagle County, two passes and nearly 100 miles away, were harder and more expensive.

By the 1950s and 1960s, however, Denver, Aurora and Colorado Springs began seeing Eagle County as a sort of untapped water bank.

They began spending long hours and hundreds of thousands of dollars staking vast claims to the Eagle County streams that water some of Colorado's wettest and wildest places, including what are now two prized wilderness areas, Holy Cross and Eagles Nest.

In 1968, Colorado Springs and Aurora completed Homestake Reservoir, high in the headwaters of the Eagle River at the top of Homestake Creek. The project in the White River National Forest transports about 28,000 acre-feet of water across the Continental Divide each year, according to Colorado Springs Utilities.

The cities faced little opposition. Only about 5,000 people lived in Eagle County then. At the time, cities with water rights and the proper federal permits could build water projects regardless of what rural counties thought.

But during the 1970s, environmentalists and politicians began building up their defenses, led by such activists as Chuck Ogilby, a former Vail councilman and former member of the Eagle River Water Authority Board.

Ogilby helped lock up thousands of acres of key Eagle County watersheds in federal wilderness areas, first the Eagles Nest in 1976, then the Holy Cross in 1980. President Ford, a Vail resident at the time, signed the authorizing legislation.

With critical mountain watersheds suddenly classified as wilderness, water plans up and down the Front Range were thrown into disarray. Wilderness areas, after all, aren't supposed to be disturbed by anything, let alone bulldozers, pipelines and pumping stations.

But Aurora and Colorado Springs, growing fast and with far fewer water rights than the behemoth Denver Water, came back in the late 1980s to try to take a second big drink out of Eagle County. They proposed building Homestake II reservoir high in the Holy Cross Wilderness.

This time, Eagle County took up every political weapon it could muster. The county's biggest bulwark against Homestake II was a 1974 state law known as 1041 for its legislative bill number.

The law said, among other things, that counties could stop construction on projects within their boundaries.

Eagle County did just that. There would be no water projects below the Mount of the Holy Cross.

"Someone had to take a stand and draw the line on what the Front Range could do here. Homestake II was that line," said Dennis Gelvin, manager of the Eagle Valley Water and Sanitation District.

At one point, Front Range utilities sought a federal exemption that would have allowed them to tunnel under the wilderness areas. Ogilby took a delegation to Washington, D.C., and squelched the proposal.

By 1992, the courts had upheld the defeat of Homestake II, offering strong proof that Eagle County was capable of waging holy war where water was concerned.

But the county's savvy, determined power brokers didn't rest.

"The Homestake fight didn't solve any problems. It just put the conflict off for another day," Testwuide said.

He and others knew the cities would return again, thirsty as always. Almost as soon as Homestake II was defeated, Testwuide, water attorney Glenn Porzak and others insisted that all the former combatants come back to the table.

It worked.

During six years of negotiations in the 1990s, Eagle County water users, the powerful Colorado River Water Conservation District and environmentalists persuaded Colorado Springs and Aurora to give up millions of gallons of undeveloped water rights. In exchange, the cities agreed to take a much smaller amount of "wet water" from the Eagle River.

The water diversions aren't finished, though. Under that 1998 agreement, the two cities can pull as much as 20,000 acre-feet of additional water from the river, nearly double their current draw.

### A mound of paper water

Denver has never sought to take any of its undeveloped water from the Eagle River Basin. That's partly because it hasn't needed those supplies and partly because the wilderness areas make extracting the water difficult.

But with Denver looking to ensure a steady supply for its growing number of customers, the utility's water rights hang like a heavy cloud over Eagle County.

Using the rights would require finalizing them in water court, where they almost certainly would be contested if county water users and environmentalists aren't happy with the Front Range.

And Eagle County has made clear no permits for new water projects will be forthcoming if Denver doesn't agree to permanently cap future diversions and if the county doesn't get some water from the deal, Porzak said.

Denver could try to develop all of its "paper" water, if it had the stomach and the cash for a big battle. But that's a big if.

"To firm up how this water is going to be used by talking is better than fighting each and every water right application in court," Testwuide said.

That talks have progressed this far still represents a sea change from the bitter, angry 1980s.

"We're building trust," said Gelvin of the Eagle water district, which supplies the majority of water to the county, along with the Upper Eagle Regional Valley Authority. "I don't know whether they trust us fully or whether we trust them fully. But I do think we've come a long way."

### Suspicious still linger

As Gore Creek, frothy and white, muscled its way past Chuck Ogilby's log cabin in West Vail, the gray-haired water activist is uneasy.

"Up here, we're peanuts compared to the big boys," said the former town councilman and water board veteran. "But we have had a big voice. We've spent a lot of money shoring up our water rights and protecting the water in our streams. Bit by bit, we've made it very difficult for cities to do anything."

That urban water bureaucrats are sniffing around more frequently saddens Ogilby, a self-described, not-one-more-drop West Slope idealist.

"I know in their hearts, Eagle County people believe they're doing the right thing. And I won't fight Wolcott. But in my heart, I'm worried they're going to compromise all of our water away."