

WATER IN THE WEST

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COLUMBIA RIVER GORGE © MILTON RAND, TOM STACK & ASSOCIATES

There has never been more, and there will never be less. Water is the essence of all life. It is also perhaps the most indestructible substance on our planet, for while it may be altered in form and mass and become the carrier of other elements, there is little if any difference in the amount of water on the planet today than there has been through the eons of time. Even with the infinite uses mankind makes of it, there exists enough fresh water alone to provide every human being with more than 40 million gallons—far more in constantly replenished form than could be consumed in any lifetime.

Of all the paradoxes of existence, this one is the true master of human behavior and social order—thirst on a planet virtually made of water. Famine and feast, war and peace, civilization and extinction all begin in what seems the whim of a winter cloud.

Water defines the continental expanse of the United States in a manner so dramatically obvious that it appears planned as a challenge to human ingenuity. Running in nearly perfect line along the 100th Meridian north to south, the nation is cut in half between arid regions west of the Rockies and the humid green of the region from the Mississippi east. Even the transition zone of the Great Plains receives more annual rainfall than much of the West.

But the difference drawn by the mother of all American rivers is more complex. For while the East is a climate of showers and rain pumped through the spring and summer by sturdy, short



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ivers, the West is winter-born with its greatest treasure locked sometimes for years on frozen peaks before it is released into its two greatest drainage systems of the Colorado and the Columbia. There, in the mountains, is the eternal secret of western survival, still as coldly unpredictable as winter itself.

America as a nation has confronted this distinction for nearly half its two centuries of formation, yet it may be these early years of a new millennium that will define our greatest differences in the fundamental conflict—east to west.

Once again, as it has in some ways done continually, Congress is taking up the issue of western water resources this year in hearings before the subcommittee on Energy and Water Development. Implied by such interest are potentially far-reaching decisions to be made on not only the nature of the resource, but on its future use to provide power, domestic supplies, and ultimately, food. Overstated, perhaps, but still at the heart of what actions government can take, is a question not about water, but about social and cultural survival in the West. ■

OF THE HUNDREDS OF LEGAL CASES AND CHALLENGES FILED OVER WATER IN THE LAST TWO DECADES, MOST, IF NOT ALL, ARE STILL HELD IN A GRID-LOCK OF APPEALS AND ARGUMENTS TO HIGHER COURTS. NO DECISIVE CASE IS CONSIDERED AS YET TO HAVE BEEN PUT BEFORE THE U.S. SUPREME COURT, ALTHOUGH SEVERAL INVOLVING LAND AND WATER ISSUES APPEAR LIKELY TO REACH THAT LEVEL. CONGRESS, BY SEVERAL ACTIONS OVER THE LAST CENTURY, HAS STRONGLY AFFIRMED THE AUTHORITY OF THE STATES OVER WATER IN THEIR BOUNDARIES, BUT NEWER KEY ISSUES CENTERING ESPECIALLY ON THE ENDANGERED SPECIES ACT REMAIN TO BE RESOLVED. A DECISION THIS YEAR BY A FEDERAL CLAIMS COURT FOUND THAT DENYING IRRIGATION FROM TULELAKE, CALIF., IN ORDER TO SAVE FISH AMOUNTED TO A "TAKING" OF PROPERTY PROHIBITED BY THE FIFTH AMENDMENT. THE RULING SAID THE FEDERAL ACTION HAD THE EFFECT OF "COMPLETE EXTINCTION OF ALL VALUE" TO WATER DUE FARMERS. FEDERAL AND ENVIRONMENTAL APPEALS ON THAT CASE ARE CONSIDERED BY MANY TO PRESENT THE MOST SIGNIFICANT POSSIBILITIES OF A LANDMARK U.S. SUPREME COURT DECISION.

Caught in the high beams

HERE WAS A MOMENT FOR COURAGE. INSTEAD, THE SECRETARY CALLED SECRET MEETINGS AND ASKED FOR PATIENCE.

By all accounts, Interior Secretary Gale Norton is an extremely bright, well-informed person, particularly on the matter of water and water law. But there is no doubt that from time to time since taking office she has seemed to have that look—the deer in the headlights.

What happened on the Klamath in April (see next page) was in part a left hook delivered by the National Marine Fisheries Service, an agency of the Department of Commerce, not Norton's own Interior Department. But when the dominoes fell so neatly and so quickly from U.S. Fish & Wildlife Service to the Bureau of Reclamation to the Bureau of Indian Affairs in a flat shut-down of all irrigation, it should not have come as quite so stunning a surprise. For one thing, Norton and the Bush administration had to know that what was still firmly in place as they took office was an apparatus of "green" domination throughout the entire bureaucracy of Interior policy in general that was put in place by Bruce Babbitt. Even beyond that, the Klamath Basin and the entire river system had been singled out by well-funded environmentalists since the '70s as the most "savable" river in the U.S.

By that they meant actions to halt logging with the surrogate use of the spotted owl, eliminate grazing through a long "adjudicated" process of restoring water rights to the Klamath tribe, and finally free the river from irrigated agriculture in the name of threatened or endangered fish. The pieces had been slowly falling into place during Babbitt's administration, from the timbered Shasta shoulders of the Siskiyou all the way to the gill nets of the Klamath's main stem as



The Reclamation Act of 1902 intended "homemaking"—creating small homes on farms for American families like these early settlers on the Boise Project, Idaho. Date unknown.

COST AND EXPENDITURE OF TIME BY THE FEDERAL GOVERNMENT IN DEFENDING THE ENDANGERED SPECIES ACT HAS BEEN ENORMOUS. THE U.S. FISH & WILDLIFE SERVICE CURRENTLY FACES MORE THAN 80 LAWSUITS COVERING SOME 400 SPECIES AND IS ON NOTICE FOR AT LEAST 100 MORE LEGAL ACTIONS ON 600 SPECIES. CURRENTLY, THERE ARE 500 ANIMALS AND 730 PLANTS LISTED AS THREATENED OR ENDANGERED IN THE U.S. WITH ANOTHER 250 IN BOTH CATEGORIES UNDER REVIEW.

it enters the sea in California. It was the whole system environmentalists planned to "save," and it wasn't just patience they lost this spring. They knew their opportunity might be closing under a new Republican administration.

Amazingly, Norton and the Bush administration had apparently not thought about it. They were caught by surprise with a bureaucratic coup leaving them no easy way out. So, for the most part, was the national media, but even the stodgy *Wall Street Journal* weighed in after the implications were clear, sharply blaming Norton herself for an action favoring "suckers" over people. Less than three months on the job, and with no appointments yet made to lead the major

divisions of her department, Norton faced what politicians call a "lose-lose" situation.

Here was a moment for courage. Norton instead called secret meetings and asked for patience. Caught in the high beams.

It's too late this season to meaningfully restore irrigation to the lower basin on the Klamath, but what is even more troubling is whether the same procedures will remain in place to deny irrigation next season, and whether, in fact, the still remaining pieces intended to block irrigation supplies on the upper basin may be allowed to fall in place. The battle is by no means over, yet Norton still has not made clear to her own bureaucracy which side she will be on. ■

BETRAYED BY



Lower Klamath Wildlife Refuge. Trillions of birds on the Pacific Flyway glean the post-harvest stubble of irrigated fields in the shadow of Mt. Shasta. Without these irrigated crops, they will find very little winter feed. LEFT: John Bowen stands in his empty irrigation ditch. Because of the lack of water for crops many farmers in the area will not survive until next year.

THE FEDS



IT IS A DROUGHT DECREED BY LAWSUIT AND BEING ENFORCED, IRONICALLY, BY THE U.S. BUREAU OF RECLAMATION IN KLAMATH BASIN. SOME ESTIMATES ARE THAT THE RESULT MAY BE THE DEATH OF FARM-DEPENDANT COMMUNITIES LIKE MERRILL AND MALIN AND TULELAKE, AND VARYING DEGREES OF ECONOMIC DISASTER FOR AS MANY AS 25,000 RESIDENTS OF THE KLAMATH BASIN, INCLUDING THE CITY OF KLAMATH FALLS ITSELF. A RURAL ECONOMY PRODUCTIVE OF AT LEAST \$300 MILLION A YEAR IS ON THE VERGE OF CATASTROPHE.

WRITTEN BY TIM FINDLEY

PHOTOS BY LARRY TURNER

Even at 10 a.m., a light chill still drifted off Lake Ewauna and huddled in the deep willow shade of Veterans Park in Klamath Falls. It would melt away in record heat for the first Monday in May before the day ended, but as the crowd steadily filtered in that morning, many wore jackets or light sweaters. Most of them lugged signs and placards of their own making, stapled on to wooden staffs or draped around their necks like sandwich boards, and they milled about below the park's long slope of lawn like a grieving parade, a personal story behind vir-



Due to federal decisions and environmental pressure, what was once a lush, green valley below Klamath Lake is drying up and blowing away with the wind. America's biggest export, ahead of all produce and goods, is eroded soil. INSET: Elizabeth Prates, one of the 20,000-plus participants in the Bucket Brigade. Their message is clear. The decision to save suckers over family farms is devastating not only to farmers but to all businesses and schools and in the area.

tually every painted message.

"Klamath Betrayed," said one. "Four Communities Destroyed," read another. "Dial 911," proclaimed the best, "some sucker stole my water."

The earliest arrivals had driven the half hour or less north from the "project" communities of Merrill or Tulelake or from the little gem of Czechoslovakian settlement in Malin where the kids dressed in brightly ornate ethnic costumes that made statements of their own. It presented a steadily-growing splash of colorful reunion among country people and town neighbors, even among fishermen and farmers, brought together by the promise of a great river and a crisis threatening them all.

There is a drought in the Klamath Basin this spring. Early in April, when a huge dry windstorm blew down inland from Alaska, it

struck the lower Klamath Basin with swirling brown clouds of dust blown up from unplanted fields, presenting unmistakable silhouette images of the Depression-era "Dust Bowl" against empty sheds and vaguely struggling people and machines. The previous winter produced barely 30 percent of the average snow pack in the thickly wooded mountains soaring west to the vast shoulders of Mt. Shasta in the distance. In April, it seemed like Oklahoma, and the kids in Merrill High School were directed to read Steinbeck's "Grapes of Wrath" for explanation.

And yet, it was not the natural dry winter drought that left the fields of potatoes and onions and alfalfa choked in dust. Even in early May, the spring-fed upper lake that would normally provide water for early planting was still brim full, slapping nearly over the boards that blocked irrigation sup-

plies under court order and that will deny all irrigation to the lower basin for this entire season. Klamath Basin's rural economy is on the verge of catastrophe and this in order to serve the needs of an officially endangered sucker fish in the lake and a threatened species of salmon at least 60 miles downstream.

That was what brought them together around Lake Ewauna, itself a scenic symbolic portion of the river system, but still bank-full along the shores of a park dedicated to military service in an Oregon county that meaningfully proclaims in its road signs, "Klamath County Honors Veterans."

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In the sunny, pin-perfect living room of her farm home near Tulelake, 84-year-old Eleanor Bolesta busily shifted between sitting briefly in a firm rocker and getting up to

answer the telephone or tend to some incidental chore. She has always been a strong woman, not inclined to let time be wasted. The little white Scottie dog constantly at her side seemed almost hard put to keep up.

“Betrayed, that’s how I feel. Betrayed, like I’m in a bad dream,” Bolesta said flatly, not looking for sympathy or even agreement. Among some 1,200 farmers, she is one of about 40 veterans of World Wars I and II still living on the project who were awarded their land of 110 acres or so as recognition and gratitude for their military service. Eleanor, a former Navy WAVE and aircraft machinist, was one of only two women to succeed in the lottery for a homestead here after World War II. Delighted with that, she ran the farm with her husband, a Marine veteran wounded on Guam, until they split up. Since then she has worked it alone with admiration and respect from her neighbors and irrigation officials.

“I just felt lucky,” she recalled. “It was the greatest excitement in my life to have a farm.”

Never before in the entire 94-year history of the Klamath Irrigation Project, not even in the severe fifth year of drought in 1992, have farmers been denied all water to their crops. The total loss of an entire season is incalculable to most of them, but the costs of maintaining equipment or merely paying bills looms today in potential bankruptcy for many. Eleanor Bolesta fought a war and a field of ragged sage to get the farm going. She raised her kids through recessions and droughts and even divorce. She is a strong,

independent, woman.

But on that sunny morning when she did at last sit down to think about it, she admitted that what worries her most now is, “that I won’t have anything left to give my children.” And then, embarrassed by her show of emotion, she wept. “I wanted to leave them my land,” she said, trying to choke back the tears, “but now I feel like I’m betraying my children.”

□ □ □

In the shady park dedicated to veterans, Ric Costales and his wife, Judy, moved continuously through the growing crowd, welcoming the latest arrivals, renewing old friendships and acquaintances. This was a triumph in the making for Costales who represents People for the USA/Frontiers of Freedom in this region. The idea for a “bucket brigade” to symbolically restore water to the irrigators came to him from the success of the Jarbidge Shovel Brigade that



Tree faller Ric Costales, shown with his wife Judy, led the Bucket Brigade. He recognized the difference between good stewardship and ideological arrogance. He learned the tactics of public protest and mass dissent from his adversaries who waged an unrighteous war against resource users.

reopened a Nevada road closed by actions of the U.S. Forest Service and U.S. Fish & Wildlife Service. He spent weeks organizing by Internet and through endless calls and meetings, piecing together support from often distrusting groups in the two-state irrigation project, and drawing backing for them from throughout the West.

Costales, bearded, broad-chested and seeming ever to find delight in the energy of it all, is not a farmer. He is a tree faller, a lumberman, working when he can from the log house he and Judy built themselves in Scott Valley, 80 miles west as the crow flies across Mt. Shasta from the Klamath Basin. At heart, however, Costales is a self-reliant free spirit from a time when “Hippie” became an abused term to define a youthful quest into the “counter culture” of the Vietnam era. The son of a prominent San Francisco Bay Area physician, Costales left school in the 1970s in search of the flower-child freedom that was the false promise of his generation. He and Judy lived in a teepee for a year before they began building their own cabin on land he had purchased off a still-remote road from Ft. Jones, Calif. He found work in logging, but was disturbed by what he saw as abuses from Forest Service management. And what he saw of the then emerging environmentalist movement troubled him even more.



Rob Crawford, left, and brother John, center, talk to investigative reporter Tim Findley.



Tens of thousands gathered in parks and on the streets of Klamath Falls to support the farmers and the May 7 Bucket Brigade. **BELOW:** Buckets of water from Lake Ewauna were passed hand to hand for two miles through town to the A line irrigation canal. It was a gesture of defiance against the Bureau of Reclamation.

There was a difference he recognized between good stewardship and ideological arrogance, but what was lacking among his friends and neighbors in the lumber community was the willingness to use the same tactics of public protest and mass dissent that was employed so effectively against them by people like activist Andy Kerr and others promoting the fraud of the spotted owl to halt all logging.

"All of us, I guess, had the idea that com-

mon sense would somehow prevail," Costales said. "But it didn't. Now, we've found success in organizing people who've finally decided they've had a bellyful."

The Bucket Brigade was Costales' idea, but he would make only a small introductory speech that day, and his presence was otherwise never at the podium, but always among the crowd and their great dazzling clutter of signs and posters.

"Endangered Farmer, Will Work for Food" and "Fish Before Farms?" the signs read in obvious statements. And there was one more mean-spirited, that required some intimate knowledge. "Felice Pace—Your Village Called. They're Missing Their Idiot."

Pace might be the most disliked, or at least the most misunderstood, man in all of the border region of southern Oregon and northern California, but Felice Pace still believes he can find peace and happiness among the rural people he has chosen to be his neighbors there. Some of them admit to hating him, many more think his antics on behalf of his Klamath Forest Alliance are the actions of a deranged environmental extremist determined to unreasonably ruin their lives.

Oddly, Felice Pace and Ric Costales have much in common, almost like opposite sides of a vintage coin. Pace, the grandson of Italian immigrants raised in Philadelphia, came west to the "counter culture" capital of the San Francisco Bay Area in the 1970s after

graduating from Yale as a poor, but gifted, student in economics. He remembers a student one year ahead of him who was among the "preppy" types he said sneered at scholarship kids like him. That student, George W. Bush, epitomized what Pace saw as class divisions in American society. Dabbling first in communal idealism, he chose to escape those postured layers by settling with his family in the charming and gracefully gardened lumber town of Etna, Calif. He was hardly 20 miles across the Scott Valley from where at almost the same time, and for much the same reason, the Costales' had begun their new life in a tepee. Costales became a logger; Pace made a living as a teacher and counselor among the Indian communities.

Pace lives in a peeler core house built with the poles of timber stripped for plywood manufacture. His Klamath Forest Alliance is one of many environmental fronts he has championed, and some say shattered, over the last 25 years in causes ranging from saving the spotted owl and protecting riparian streams, to halting irrigation this year in the Klamath Basin.

"This is happening all over the West," he said confidently. "We've been advocating for years the downsizing of farming in the Klamath Valley, but they've been stone-walling against change. So what happens is when change does come inevitably, it's a crisis."

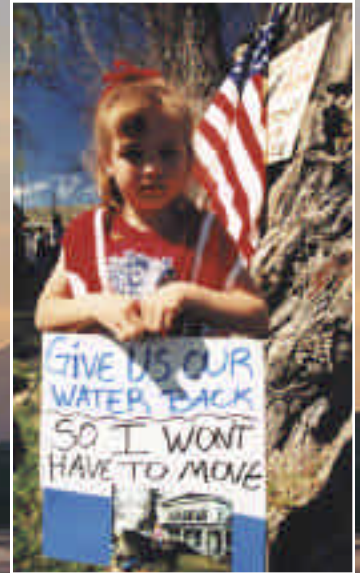
His is one of the two names attached to the federal lawsuit brought before an Oakland, Calif., judge in April that resulted in an order to the U.S. Bureau of Reclamation to halt irrigation in the lower basin project. Pace says it was necessary to save the short-nosed sucker fish in the upper lake during this drought year, but, he adds, the real objective is to balance the use of water on an "over-allocated" system that he feels would be better managed by the Klamath Indian tribe, which sacrificed much of its land in a 1950s agreement to termination. Court rulings since then have restored hunting and fishing rights to the tribe.

In person, Pace is not so irrational or demagogic as many detractors describe him, but he knows he is the villain to many farmers and others facing disaster from his actions. Ten years ago, Pace fronted a water resource group in Scott Valley in an attempt to increase stream flows for salmon. He was defeated by a grass roots group formed among the logging and ranching community including Ric Costales.

In Scott Valley, as in the Klamath Basin,



TIM FINDLEY



people feel resentment toward Pace and his environmental demands, but he chose this place himself as somewhere to raise his family among a rural community of friendly people. It is not so unlikely. This year, his daughter was the high school homecoming queen. “I’ve been here 25 years,” Pace points out, “and I’ve only been beat up once.”

Though many from Etna and Scott Valley were there, Pace, of course, was not among those at Costales’ “Bucket Brigade” demonstration. By its promised start at 11 a.m., hard sunlight stole away the shadows in the park and splayed across the hillside lawn where more and more people were choosing their spots. All the nearby parking places were taken, and people now arrived by shuttle bus from the county fairgrounds. Main Street of Klamath Falls, bordering northeast of the park, was already shut down for its entire length. Thousands more were said to be

AN ACRE-FOOT OF WATER COVERS ONE ACRE OF LAND ONE FOOT DEEP, AND AMOUNTS TO 325,851 GALLONS. THE AVERAGE AMERICAN FAMILY IS CONSIDERED TO USE ONE ACRE-FOOT A YEAR.

gathering there, out of earshot from the opening rally and the sound truck playing familiar patriotic tunes—“Proud to be an American,” “My Country ’Tis of Thee...”

Simple pride is part of what defines the lower basin. It’s the kind of pride that comes from self-reliance and shows itself best in doors that have no locks or in pickups parked head-in along the old high curbs of Tulelake with the keys still dangling in the ignition. It’s a sense of mutual pride expressed in casual trust that never needed to be mentioned. But by early June, even that would begin to crack in unpredictable patterns like the bottom of a dried up ditch.

Michael Sheets, the nurse practitioner who serves as the country doctor for three clinics in Klamath Falls, Merrill, and Bonanza, began seeing more and more people coming to him for help with sleeplessness, headaches, and, some would reluctantly

The Lower Klamath National Wildlife Refuge has been home to millions of birds and other wildlife. A good future is now in doubt. INSET: Meghan Parks from Merrill, Ore., doesn’t want to leave her home in the Klamath Basin.

admit, drinking too much. By early June, Sheets would find that one in every three of his patients was suffering from depression. It had never been higher before than one in 15, but now families were coming apart, divorces being filed. People were talking about giving up. Sheets, traveling a 68-mile loop between his clinics every day, handed out more and more pills for depression, and by mid June, was trying to fight off his own.

“I’ve got to get away from it for a while,” he admitted. “I’ve got to get my perspective back.”

Tall, muscular Rocky Schneider stood a head above most of the crowd at the Bucket Brigade already, but the large, heavy sign he raised added gigantic height. “Del Norte County Commercial Fishermen Support the Farmers,” it said. “Glen Spain doesn’t represent us,” Schneider, a Eureka commercial fisherman said roughly. “He’s in this purely for himself. We voted him out.”

Along with Felice Pace, the other petitioner in the federal suit to halt Klamath irrigation was Spain, representing the Pacific Coast Federation of Fishermen. Spain, too, came to the Klamath by way of San Francisco, though he counts his own family background as being in Arizona ranching and some California farming on his own. A little too slick and somehow too sinister to pretend it, Spain doesn't really claim to be a fisherman, and though he holds a law degree, he admits he hasn't practiced in quite some time. Spain, in his early 50s as well, works for Zeke Grader, a very well known salmon party boat operator out of San Francisco Bay. In the lawsuit, he presented himself as

representing the interests of commercial salmon fishermen.

"This is a major drought, and this is going to happen a lot of other places where people won't be getting the water they expected," said Spain, echoing Pace's warning. Like Pace, he cites the North American Free Trade Agreement (NAFTA) and world trade talks as responsible for the farmers' basic problem. "Those people are in shock right now, but the reality is the project is too big and too wasteful and it doesn't take into account the needs of other businesses and other users."

Felice Pace and Glen Spain were two names most of them knew as the throng of

people from the Klamath Basin grew steadily beyond the bounds of Veterans Park. But despite what might be said or feared among the least informed, the people in the Bucket Brigade are not inclined by character or custom to focus their frustrations on strangers, or the strange. The hurt most of them felt and expressed was from those they once trusted most of all. "My Government Lied," read one sign.

"We are obligated to carry out the law of the land," replied Karl Wirkus, almost too obviously trying to portray the bureaucratic discipline he knew would be expected of him. Wirkus has been the Bureau of Reclamation manager on the Klamath Project for the last five years. Trimly fit and businesslike, he regards himself still as a scientist and engineer in a job intended for those skills, but he knows that by announcing the end of all irrigation on the project, he made political history.

"If the question is, 'If we had no constraints by the Endangered Species Act, would we have delivered water this year?' the answer is 'absolutely,'" Wirkus said. "But that wasn't the case."

The Bureau of Reclamation got word of the scientific conclusions from U.S. Fish & Wildlife Service and the National Marine Fisheries Service by letters transmitted on the same date and concluding jointly that the BOR had already been in violation of the Endangered Species Act by their irrigation releases in 2000, a year before the onset of the current "drought." The letters directing that BOR halt such releases this year were dated January 19, 2001, one day before the inauguration of President George W. Bush.

Wirkus left only silence on questions about the land mine timing and the holdover presence of Clinton appointees in both agencies. He is, after all, a career bureaucrat himself who believes in the purpose of the 1902 Reclamation Act. In the calendar celebrating a century of western reclamation, he has a favorite photo. It shows a family in front of their homestead near his own home region around Boise, Idaho. They have made a sign that says, "Thank God for the USA...and for the Bureau of Reclamation."

But there is another photo that at one time was so favored among Reclamation officials that it became their poster of success. It still hangs in the front reception area of the Klamath BOR office, showing a pretty young woman behind the wheel of a



No irrigation, no crops. In April it seemed like Oklahoma during the "Dust Bowl" and eroding soil from water-deprived farms blew across roads throughout Klamath Basin. The kids in Merrill High School were directed to read John Steinbeck's "Grapes of Wrath" for explanation. INSET: Maxine Wirth's family began farming in 1885. She worries that their multi-generations of work have been for nothing.



The pride of the Bureau of Reclamation is a poster of Eleanor Bolesta taken in 1952.

INSET: The same Eleanor Bolesta, now 84, fought back tears when the irrigation water was cut off to the farm she was awarded as gratitude for her military service during World War II.



tractor, determination and country grit brightening her smile. It was taken of Eleanor Bolesta in 1952.

Politicians from all parts of Oregon began lining up for their turn to speak at the Veterans Park rally, now swollen beyond what one of them estimated to be 8,000 people, many from other regions joining in support of the lower basin irrigators. Ambrose McAuliffe, a rancher in the upper basin reaches of the drainage system near Ft. Klamath, was among them. He and other ranchers south and west of the huge lake know they will be next in the drive to reallocate water supplies in the region. Some of their vested water rights go back to 1864, but the Klamath Tribe, and its sacred cause for the supposedly endangered short-nosed sucker fish, will argue their historic rights come first.

Although the decision to halt irrigation in the lower basin came in April like a sud-

den gut punch to many of the farmers, the plan had been laid years before, awaiting the right political moment—and the useful condition of drought. A few years ago, Andy Kerr, as usual full of himself and of his Oregon Natural Resources Council success over the timber industry, had bluntly warned the farmers in Tulelake that agriculture, like logging, would soon be “finished” in their region. And only a year ago, Interior Secretary Bruce Babbitt, riding the same arrogant high horse he used all over the

West in the closing days of his administration, warned the farmers that if they thought decisions on the future of the basin would be made by “local input” they were sadly mistaken.

The threats were there since at least 1993 when U.S. Fish & Wildlife Service on behalf of the Bureau of Indian Affairs began studying the condition of the sucker fish. But the final step needed the help in 2000 of a scientific opinion, like that on the spotted owl, to seal the case. At Utah State University, biologist Thomas Hardy is considered something of a scientist for hire in the battles over western environment. His contribution this time was a set of conclusions based on his study of Coho salmon in the Klamath at least 60 miles below the farming region. The so-called “Hardy Flows” report, phases one and two, were the basis for National Marine Fisheries to join with Fish & Wildlife in the assault on the farmers.

The farmers were not totally unprepared. For a decade, they had employed biologists and hydrologists of their own to study the condition of the “threatened” salmon. But their conclusions questioning the scientific validity of the Hardy report were not considered by the federal agencies in their rush to halt irrigation. In fact, biologist David Vogel, who has worked for the irrigation district for

10 years, was not even permitted to speak to Hardy or examine his methods before Hardy was accepted as gospel on the Klamath in Washington, D.C.

“Hardy was what they call a ‘desktop’ report that doesn’t even require that anyone go out in the field,” said Vogel. “It’s based on records and conclusions and is the kind of thing that can be useful to people who know what they want.”

Hardy’s Phase II report has not even been produced, but will require scientific peer review. The “peers” are being selected by the U.S. Bureau of Indian Affairs. Vogel’s own findings weren’t even considered by the government. Among those findings was that Coho losses are more jeopardized among adult fish taken “incidentally” offshore and young fry lost in tributaries downstream, not in the main stem of the Klamath.

“None of this really has to do with science,” said Vogel, who formerly worked for both Fish & Wildlife and National Marine Fisheries. “It has to do with provisions in the Endangered Species Act that allow one individual to have final say-so on what he thinks is the ‘best’ science. Often that simply fits an agenda.”

It might have been easier among the grossly green Clinton appointees in these two agencies if their expectations of Al Gore’s election had come true, but there was sardonic cynicism in the way they strung a booby trap for George W. Bush the day before he officially took office.

Tulelake farmer John Crawford and his brother Rob were among those not so surprised by the April shut down. Tacitly acknowledged as leaders among the irrigators, they had watched in frustration before as their local political representatives vainly promised to counter the relentless and deaf autocracy of Clinton bureaucrats. What hopes they brought with them to Veterans Park were tempered by disappointing experience. “I can’t say that anything in the process so far has been hopeful,” said John Crawford, “but I can’t avoid saying it just seems to get worse.”

Senator Gordon Smith (R-Ore.) and Congressman Wally Herger (R-Ore.) repeated their oft-made promise to the Bucket Brigade crowd that they would work to amend, or even abolish, the Endangered Species Act, and they hinted that times had changed since the last election.

Indeed they had, and many adding to the numbers that day had reason to feel that per-



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LEFT: Glenn Spain, a lawyer who doesn't practice, works for a party boat operator out of San Francisco. He claims to be a spokesman for commercial fishermen. **RIGHT:** Felice Pace has been advocating the downsizing of farming in the Klamath Valley, "but [the farmers] have been stone-walling against change."

haps the Bush administration had been blind-sided and would now respond to the obviously overpowering local sentiment against the "fish over farms" decision. But few of them beyond John Crawford and a select handful of local leaders were aware that Bush and his Interior Secretary Gale Norton had already let the opportunity slide through their fingers.

Even in May, four months into her administration, Norton was still way behind in appointing deputies to carry out leadership of the complex and internally contentious divisions of Interior. No names had even been mentioned for Congressional consideration to head the Bureau of Reclamation, or, for that matter, the Bureau of Land Management and U.S. Fish & Wildlife. Norton, in fact, seemed to have only one secure aide in place, Deputy Chief of Staff Sue Ellen Woolridge. Vogel knew that Woolridge, admittedly new to the job, had reviewed the Hardy Flows report and even data contradicting its findings, and yet did nothing.

In the last weeks of April, as bitter and desperate last minute legal moves failed to restore irrigation rights, Klamath Basin residents confronted Oregon Governor John Kitzhaber in a meeting of some 6,000 people at the local fairground. Kitzhaber, a former emergency room doctor who strikes a handsome mustachioed pose as a western governor, had ridden with Babbitt in his helicopter during the secretary's tours of intimidation last year. "If you're not going to help us, take off the proud rural symbol, those cowboy

boots, because you don't deserve to wear them," taunted one woman in the April crowd. Kitzhaber fumbled and dodged, vaguely and clumsily, suggesting his own interest in somehow "modifying" the ESA.

Felice Pace and Glen Spain chose a California federal court in Oakland to make their case for fish. The judge, Sandra Brown Armstrong, was a late appointee of former President George Bush. She had earned her reputation rising through law enforcement from the time during the Black Panther period of the 1970s when she became Oakland's first black woman police officer.

Lawyers for the irrigation district elected to appeal for an injunction in an Oregon federal court. There, in the college-centered city

Rocky Schneider is a commercial fisherman who says, "Glenn Spain does not speak for us."



TIM FENDLEY

of Eugene before Judge Ann Aiken, they failed. "Given the high priority the law places on species threatened with extinction, I cannot find that the balance of hardship tips sharply in the plaintiff's favor," the judge wrote in her opinion.

Political action seemed the only hope. As a sham of mediation between the sides went on in Eugene, Norton herself met secretly with some of those most affected. She offered understanding, but begged the excuse of an as yet unfinished apparatus in the new administration. John Crawford would only acknowledge to having met with Norton's staffer, Sue Ellen Woolridge, and he had promised not to reveal the details. It was in the midst of it that the Crawfords lost their mother to a long illness. It became difficult to find a line between personal and community grief, but the usually joking Crawford was not quite himself as he spoke to the crowd in Veterans Park.

"I seem to have lost my sense of humor," he told them. "It's time to treat those who bring harm to our basin accordingly. We cannot let them destroy our lives."

At least 10,000 now strained the border of the park and cluttered against each other along the shores of Lake Ewauna where buckets were waiting. The politicians had spoken and made their promises, although Kitzhaber and his mudless boots stayed home. The last few at the microphone told personal stories. Teenager Hollis Baley eloquently related that of her best friend whose Hispanic family had already been driven to bankruptcy and forced to leave because of

the lack of farm work in the valley.

"Where is the justice when my friend's college dreams are shattered?" she asked. "When we are told our community has no value? Where is the justice? Where is the honor in giving land to veterans and then turning around and taking it away? There is no honor, no justice, in this terrible betrayal."

One by one, 50 plastic buckets, each painted with the name of a state, began passing from hand to hand out of Lake Ewauna. Even that symbolic act was, under the court order, illegal, but watching police did nothing as the buckets made their steady way, fist-by-fist through two parallel lines out of the park and then, astonishingly, up the paved street to the waiting grip of thousands more in long ragged rails of people—men, women, and children—eager to pass the message all the way up Klamath Falls' Main Street. The parallel lines reached on at least two miles into and through the athletic fields of the high school and atop a concrete bridge crossing the "A" line irrigation canal. It took more than an hour for the first bucket to reach the canal, which was nearly empty except for leakage from a closed headgate. No single bucket need have been touched more than once by those in the long, snaking line. It was easy to believe they now numbered 25,000 and represented perhaps the largest demonstration in Oregon history.

A helicopter clattered over their heads, and many believed, or hoped, that it carried news media who would find an impressive picture. But it was a craft filled with federal and police agents. Looking for what? On the high roof of the county government building, two men peered over its peak with binoculars, like snipers. Looking for what?

California Governor Gray Davis, silent on the subject until then, sent an emissary to the concluding rally in the high school stadium. She announced that the governor had declared a drought disaster in Modoc and Siskiyou counties and would provide at least \$5 million for California farmers in those counties to sink new wells. It was a gesture fraught with complications. What would be the energy costs of pumping the wells? How would the Oregon side of the irrigation project react? Did new wells imply a final end to

all surface water supply in the future?

It was hot. People straggled back in small groups down the town's main street, now reopened for business. Main Street has been given careful attention in Klamath Falls. It retains the brick and plate glass stability from buildings as much as a century in place, but it has the upbeat contemporary feel of Yuppie success in pricey department stores, coffee shops and taverns serving exclusive brews of beer. In the windows of almost every shop, however, were signs in support of the

were unknown, and other signs "For Rent" remind the residents that the first to leave have been the workers from the fields and the packing sheds, and the fertilizer barns, some of whom have themselves been here with their families for 20 years or more.

This, as Karl Wirkus of the BOR pointed out, "is definitely a family farm community" three and four generations deep. "And I continue to be astonished at the way we [in the BOR] are treated in the basin as human beings, friends, neighbors. It's an incredibly



ABOVE: Mike Webb, owner of Mike & Wanda's Diner in Tulelake, ponders a bleak future for his once-thriving business.

INSET, LEFT/RIGHT: Katelyn Harris, Shyla Crawford and sister Callie help spread the word at the pro-ag rally. Already some of their friends have left school, moving to California or Washington to look for work on other farms.

Bucket Brigade.

South and east toward the towns of Merrill and Malin and Tulelake, the roadside messages mark the route as in the days of Burma Shave. "Federally Created Disaster Area," "Danger, Dust Storms Next 30 Miles Thanks to Fish & Wildlife." A light breeze blew up to greet the evening, not enough to raise the dust again, and maybe well water will at least provide ground cover for dry days ahead. But "For Sale" signs have appeared in the little towns where once they

civil community considering the pressure they're under." Less than a month after the May demonstration, Wirkus was transferred to a new post with greater authority in the mid-West. He was replaced by a new manager whose background on the Columbia River was noted for his successful relationship with Native Americans.

Except for what can be produced from wells to hold the topsoil, most crops won't be grown in the lower basin this year. In the small cafes like Mike and Wanda's in Tule-



For almost a century the Klamath Basin has flourished through productive farms. Agriculture from the basin is responsible for \$300 million per year sustaining a once-vigorous community. INSET: No one in the area can understand why a sucker fish can cause so much devastation.

lake or Sid's in Merrill, the usually boisterous morning business is already empty of but a few older men and their coffee. There is nothing to do for many of them, but no money to spend, and just talking about it among each other has begun only to add to the sense of disintegration. A common feeling among them all is beginning to come apart.

Even in the motels that depend not only on farm labor, but later in the year on visiting duck and goose hunters, there is sagging despair. Local schools have already lost enough students to bring doubt into the future of many teachers. So common in the West as being unnecessary to mention it, the political vultures have already circled. The American Land Conservancy is offering as much as \$4,000 an acre for the first "willing sellers" ready to give up, knowing those most "willing" will be those least able to stand the strain of the phony season. Others can be made more willing at lower prices as it goes on.

Pride still holds most of them together. In June, two local supermarkets tried to keep that pride in mind by quietly offering to share the strain in a gift of food on the strength of a local signature. It was too

quickly gone, and "Doc" Michael Sheets in his clinic tours tried to divide his time in finding more donations. A veteran of 20 years with the U.S. Public Health Service and two more with the Army, Sheets has never seen anything like this. "Not like grenades or bullets, but by this blind action that takes your legs out from under you," he said. He still looked for time he desperately needed away from it all, but in his off hours he began organizing a Farm Aid concert with Willie Nelson and any other performer with a root in the country that he could find. There were two suicides that month in one of the counties.

Without water on the fields to make crops, the geese so normally common in this center of the Pacific Flyway will find no stubble for forage. Ducks and other wildlife dependent on the water will, even by admission of environmentalists themselves, be stressed for survival. In the truly natural drought of 1992, a wave of botulism spread through the bird population, killing hundreds of water fowl. Even the impressive population of 200 pairs of bald eagles in the nearby sanctuary may find their prey lacking this year.

Records of U.S. Fish & Wildlife Service

itself indicate that historically the greatest losses in numbers of supposedly endangered short-nosed sucker fish occurred when Klamath Lake was at its highest, as it is now, dammed from irrigation. And studies by biologists on the lower stem of the river have found that Coho salmon died in large numbers from previous late releases of water warmed by steady evaporation in the shallow Klamath Lake.

At last, as even the relatively cool June dried the prized lawn of the Tulelake fairgrounds into a crumbling gray, John Crawford offered at least a small part of what he had heard from Secretary Norton's aide. "She said not to offer these people false hope for the next year," Crawford recalled. "And I said what else can we offer them when you've taken everything?"

Fish and farmers are suffering, and some are dying. Not all the buckets in all the 20,000 hands that passed them along that long, hot day in May can save them, but that wasn't the intent. The reason was for a message even more clear, and still apparently unheard:

The disaster ahead in this summer of political drought on the Klamath won't be to farmers alone. ■

THERE ARE TWO TRULY GREAT RIVERS IN THE WEST. EACH ASSEMBLES ITS POWER FROM THE GRASP OF SOARING PEAKS IN THE ROCKIES

OR THE CASCADES OR FROM THE DOZENS OF OTHER RANGES THAT CAPTURE THE MOISTURE OFF AN EASTWARD LEADING JET STREAM AND GRIP IT IN ICE FOR A TIME BEFORE IT CAN SLIP AWAY, BACK TO THE PACIFIC. THE COLUMBIA OR THE COLORADO COULD BRING THE BRAVE ACROSS NEARLY HALF THE CONTINENT, FARTHER THAN ANY RIVERS RUNNING EAST OF THE DIVIDE, BUT THE JOURNEY TODAY WOULD UNFOLD THROUGH HAZARDS OF HISTORIC CHALLENGES AND MENACING IDEALS ENOUGH TO RIVAL A JOSEPH CONRAD EPIC.

THIS IS THE HEART OF CONFLICT IN THE WEST TODAY, THESE TWO RIVER SYSTEMS AND THE CONTENDING POWERS FOR THEIR WEALTH. AND IN SOME REMARKABLE WAYS, THERE ARE TELLING CONTRASTS IN THE STRUGGLE FOR EACH. ON THE COLORADO, IT IS AN ENDLESS DUELING CONTEST TO FILL THE TROUGHS OF THIRSTY CIVILIZATION. ON THE COLUMBIA, IT IS A TEST OF STRENGTH POWERFUL ENOUGH TO TURN BACK TIME. COMPARED AGAINST THE FORCES ARRAYED ON THESE TWO BASINS, WHAT RISES FROM THE MYRIAD OF OTHER WESTERN WATER BATTLES IS BUT THE SIGNALING SMOKE OF SKIRMISHES.

THE COLORADO

Virtually splitting the granite edge of the Great Divide, almost in a choice between diving toward the Platte or the Arkansas and the waiting Mississippi, or by building in small increments gathering south and west on a wilder side, the Colorado begins from converging streams in the central Rockies. Long before reaching its awesome full strength in the Grand Canyon, it tears its way through gorges and deep valleys of the western slope, slowing only occasionally in a still deceptively fast flow through orchards and scattered farms along the high plateau. Dropping more than 10,000 feet in a plunge covering over 1,450 miles, the Colorado

Basins



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Battles over the Colorado, with parts of seven states within its basin, have seldom focused on wildlife or fish. It is the one river in the West least likely to be granted more freedom by the multi-millions of urban westerners absolutely dependent upon it. If farmers fed more fields from it, if ranchers found more low pastures to graze near it, then surely they would be blamed for “stealing” the Colorado.

rages and charges more than it runs and flows to the sea. It seems almost always angry. John Wesley Powell's achievement in first riding the Colorado through the Grand Canyon was perhaps less an accomplishment of navigation than it was of survival. Even today, this river is a killer.

At the Memorial Day holiday this year, a family boating on Lake Powell behind Glen Canyon Dam complained that they were terrorized by a group of young people in a power boat racing in circles around them and shouting, "Drain it! Drain it!" Tearing down Glen Canyon is regarded by some in the environmentalist movement as the ultimate achievement which someday must be done in honor of Sierra Club leader and hysterian David Brower. Even Bruce Babbitt toyed with the idea, and at one point in the last decade there was a major release from the dam, proving not much of anything about how much of nature might be restored by the "freed" river, but establishing the passion of the movement.

Passion aside, however, the battles over the Colorado have seldom focused on wildlife or fish. It is, in fact, the one river in the West least likely to be granted more freedom by the multi-millions of urban westerners absolutely dependent upon it. If farmers fed more fields from it, if ranchers found more low pastures to graze near it, then surely they would be blamed, as some of them have, for "stealing" the Colorado. But political blame will not be borne in places where the West is now glibly defined as the "most urbanized" region of America. That means Las Vegas, once a tiny Mormon junction, where the population has swollen in just the last 10 years by 85 percent to nearly 1.4 million. Or Phoenix, which with more than 3 million in its metro area, grows by 20 new homes a day. Or the enormous sprawling expanse around Los Angeles, now home to more than 10 million people. None of them live really near it, but nearly all of them have tasted, and wasted, water from the Colorado, and must continue to do so for survival.

There are parts of seven states in the Colorado Basin, with those farthest west, especially California, contributing least in tributaries to its drainage. But even holding their "prior right" by water law, the upper basin states of Wyoming, Colorado, Utah, and New Mexico recognized early on in the struggle that the demands of the lower basin, especially California, would jeopardize their rights with political potency that could bring

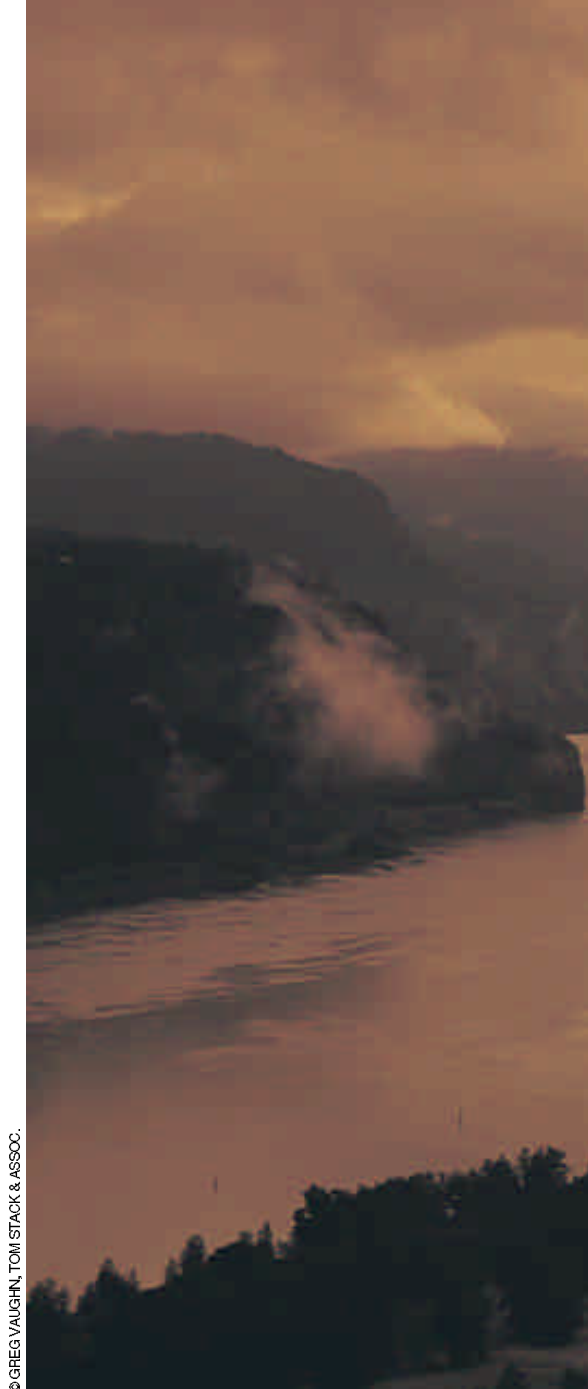
the least desired result of federal control over the river. The compact among the states begun in 1922 thus divided the Colorado Basin between its upper and lower halves with each entitled to an unrealistic 7.5 million acre-feet of water a year, and a million more given over in surplus just to satisfy Southern California. That still defines the basic terms in a contentious "deal" among the states that is not fully resolved 80 years later. California and its bottomless consumption has always been key to the problem, but in the last 10 years, the single Nevada county of Clark and its glitter-gorging capital of Las Vegas, America's fastest growing city, has proven to be an ever more important player.

Because it was still a time of building and of ambition, and paradoxically of economic depression, the nation was awed by the construction of Hoover Dam on the Colorado. Not only electrical power, but drinking water and irrigation supplies in abundant amounts would be made possible by the engineering feat. It was seen as not just meeting the needs of the West, but of opening it further to still more growth and opportunity.

The upper basin watched silently, and with perhaps some disgust, as expansion went on decade after decade in the southern regions of the basin. Those in the north were not using their full allocation, but in the south, especially in California, the demand was constantly for more and more to a region that contributed the least. Forgotten, indeed largely ignored after the last limpid remains of irrigation passed the Imperial Valley, were rights remaining in a mighty river choked into a drier and drier stream as it struggled through Mexico and all but died before reaching the Gulf of California.

If, as the experts say, the development of western water law is "writ large" by the agonizing process to share the Colorado, so also is the fundamental truth of political hypocrisy underlined by the epic.

Bruce Babbitt, acknowledged sometimes grudgingly by people in his own state of Arizona to be "a real expert on water," could justifiably take credit for development of projects that focused Arizona water resources, including its share of the Colorado drawn into the Central Arizona Project. Babbitt might talk the politically correct line, but he wasn't about to tear down any of the nine major dams on the Colorado if that would compromise his own success in the Phoenix megalith. Elsewhere, almost everywhere in the West, Babbitt made his jowly pontificat-



© GREG VAUGHN, TOM STACK & ASSOC.

ing promises to hammer down dams on behalf of fish or friendly tribes. But not on the Colorado.

To save a dubiously endangered fish on the Klamath in Oregon, Babbitt in his tenure made it thinkable to simply shut down irrigation for 1,500 farms, claiming federal authority crossing two states. But in the Colorado Basin, where Arizona holds a key card in the allocations, Babbitt proclaimed that, "Without water markets we can't solve the problem of meeting the future water needs of the West." In other words, sell it, swap it, move it state to state for beneficial needs, but



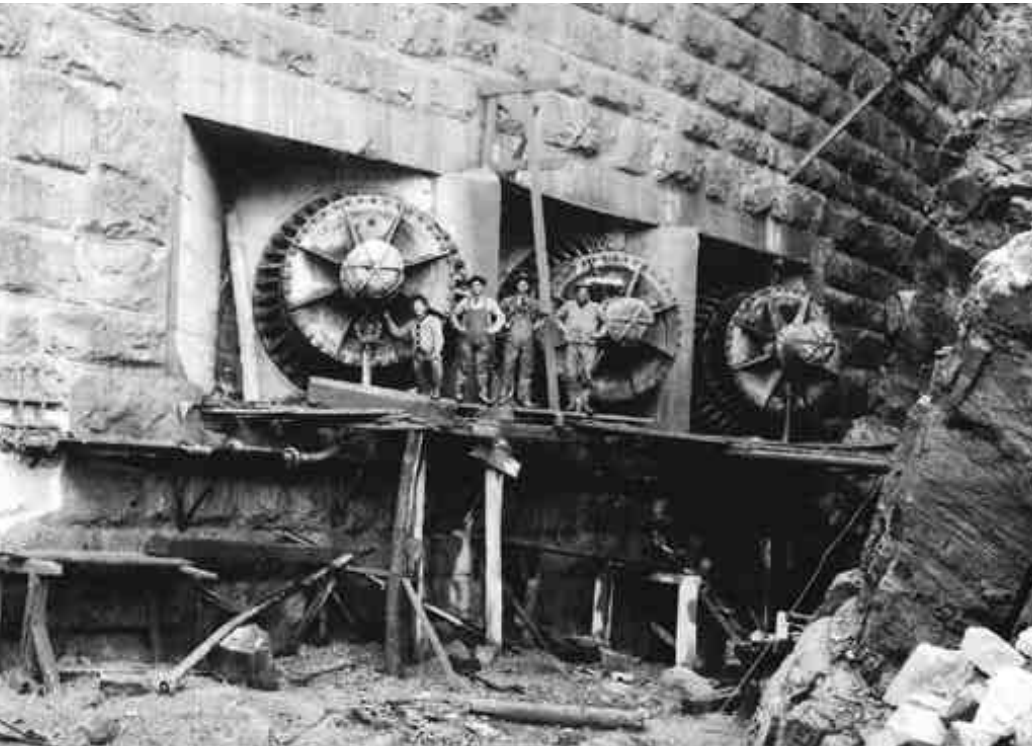
The Columbia River runs for more than 1,200 miles, its major tributary the 1,100-mile Snake. Two hundred and fifty-nine thousand square miles thus pour themselves into the Columbia Basin. Washington State alone has nearly 16 million acres of farmland, 1.6 million acres of that irrigated from the Columbia system. Many here, as elsewhere in the West, are heirs of families lured to the region by federal promises for just such irrigation supplies.

not under the old terms of “use it or lose it.” Water in the West, he was suggesting, could be traded around for profit. And who but the federal government could control such transactions? If more water must be found for the continued growth of the “urbanized” West, the source for it is most likely in the irrigated fields of Southern California, now utilizing some 3.85 million acre-feet of the state’s entitlement from the Colorado—an

amount nine times that of water used annually in San Diego County, and yet vital to the state’s chief industry and to food production in the United States. The tortured process of developing law on the use of water is today an issue muddier than the Colorado itself in determining “priority,” “beneficial use” and the newer confusion of “public trust” over what is still a priority right with too many hands dipped in the same basin.

THE COLUMBIA

Fifteen years before Lewis and Clark set out on their mission of discovery British explorer William Broughton had navigated and mapped 100 miles upstream from where the Columbia meets the Pacific and defined the veritable hydro engine of the entire Pacific Northwest. But it was always a hopeless task for Lewis and Clark to find the source of the Columbia as a means of linking the Ameri-



COURTESY BUREAU OF RECLAMATION, DEPT. OF INTERIOR

Roosevelt Dam, Salt River Project, Arizona, January 2, 1910. In 1922, Colorado River Basin states signed the Colorado River Compact at Bishop's Lodge in Santa Fe, N.M. Because Arizona could not agree with California about how allocations in the Lower Basin could be interpreted, ratification of this interstate compact by six states did not occur until 1929; Arizona did not ratify the compact until 1944. The states are still fighting for more allocation of the Colorado.

can continent. It starts in the Selkirk Range of British Columbia, and runs a contrary north before dipping down across the international border and beginning a headlong push west to a meeting with the Pacific at Astoria, Ore. In all, the Columbia runs for more than 1,200 miles, only slightly longer than its major tributary of the Snake which aims its own 1,100-mile course at last into a convergence from the south. Two hundred and fifty-nine thousand square miles thus pour themselves into the Columbia Basin.

The Colorado is sometimes called "America's Nile" for its creamed coffee surge through often truly barren territory of rock and desert, but the Columbia seems almost to drift in a widening amble down from high plateaus and pastures into a westward evolving garden of rich forests. It is filled along the way by 10 major tributaries draining the basin from north and south. Yet if the Columbia has somehow always promised safe passage to the Pacific, it has established its value more in power than navigation. The Colorado has nine key dams. The network of the Columbia Basin has more than 400 and is the most hydro-electrically developed river system in the world.

Between them—the Colorado and the

Columbia—there is a sense of historic distinction. Somehow, perhaps by the awesome nature of the Grand Canyon, the Colorado seems older, worn into the past, while the Columbia continues to hint of some new future, still in doubt. The last dam on the river system was erected in Canada in 1973, and even the enormous public works projects of Bonneville and Grand Coulee dams built in the late 1930s are still associated in contemporary fashion with making possible industry to win World War II, as well as with creation of a huge power grid that transmits electricity over much of the western half of the continent. Though the Columbia Basin also draws from parts of seven states, an interstate compact like that on the Colorado has never seemed necessary.

Here, the issue is much less of what water can supply the cities than it is of what water is due to serve the ecological past. Salmon is king on the river, and only raw power can stand ahead of the fish. That is, at least, the liturgy forced largely on farmers and ranchers in the Columbia Basin over the past quarter century since national and international environmental groups have focused a campaign not merely to save the Columbia Basin, but to restore it to a pristine state none

has ever seen.

There are agreed to be a multitude of reasons why salmon runs have declined on the Columbia, especially since the mid-1970s. Offshore fishing, change in sea temperature, takings in the river, and, of course, dams. This year, as choice became an option for increasing flows in the river to aid the fish, power shortages due to lack of fuel and the start of a drought alarmed the West Coast. The fish could wait. No such easy economic option seems offered, however, to the hundreds of thousands of farmers and farm-related families in Washington and Oregon dependent on the Columbia and its tributaries. Washington state alone has nearly 16 million acres of farmland, 1.6 million acres of that irrigated from the Columbia system. Many of them, as elsewhere in the West, are heirs of families lured to the region by federal promises for just such irrigation supplies.

Federal dominance over the control of dams, fisheries, and Native American tribes make the process of farmers and ranchers attempting to establish and defend their rights extraordinarily difficult. In 1992, the Snake River sockeye salmon was listed as endangered. In 1998, the Willamette steelhead joined the list. Wherever Bruce Babbitt went on his bullying tours of the Pacific Northwest at the end of the decade, he carried a sledgehammer, useless against the powerful might of Grand Coulee or Bonneville, but perfect for breaking up an irrigation reservoir. It would be fish before farms, but not before power on the Columbia.

The shape of the Northwest, already altered by the spotted owl and its effect on logging, was being remastered by the mutual ambitions of the Clinton administration and powerful environmental interests behind a banner to create an international biosphere of the Columbia Basin. Let the farmers beware, or as Babbitt indirectly offered them, become willing sellers to The Nature Conservancy and others waiting to reshape their lives.

THE CALIFORNIA BASIN

California is not one great basin, or at least, it was not until the engineers began to reshape it that way in a water project once noted by an astronaut as the only other man-made work visible from space beside the Great Wall of China.

Here you may find more trickery, treachery, and outright sinister deceit in the name of water than even Conrad could have con-



© NASATASDOTOM STACK & ASSOC.

Sediment deposited by the Mississippi River in the Delta as it joins the Gulf, viewed from space. Today the political strength of America's "agricultural empire" is greatly exaggerated. In fact, it is under seige by the trendy belief that agriculture is the enemy of the environment.

ceived. Hollywood took a crack at it with "Chinatown," but even the cinemasters could not quite make sense of the full story. Water, as it serves the most dominant of western states, defines past, present, and imaginable future in the place where, even from space, dreams are made to seem real.

If settlement according to natural water supply made more than just good sense, Los Angeles and most of Southern California might today still be just a series of sleepy little Spanish ports. Most of the water is in the north, and most of that bulks up from sources in the northern Siskiyou or the western Sierra for a muscular run down the Sacramento and into San Francisco Bay. The Sacramento, drawing down from Mt. Shasta, is not as long as the Colorado or the Columbia, but it pumps an enormous amount of water in a 384-mile run through 2.1 million acres of some of the richest farmland in the world. It then collides head-on with a force of Pacific sea tides from San Francisco Bay that meet it like an opposing locomotive. Thirty-one percent of all runoff in the Golden State is carried by the Sacramento alone, and 75 percent of the total precipitation in California falls north of the city of Sacramento. What defines California, however, is that 80 percent of the demand for water is south of its capital city.

Good sense was made of this resource in

the beginning when the Sacramento Valley and its neighboring fields fed from the Sierra tributaries of the San Joaquin River valley became the most potent agricultural region of America and, arguably of the entire world. Capable of feeding a significant portion of the planet's population, more than 2 million acres of irrigated cropland still make the Sacramento Valley a vital treasure of American food production and a hinge point of the state's \$27 billion a year agricultural industry. Even today, food and fiber produced from the northern border to the Imperial Valley on the edge of Mexico accounts for at least one in every 10 jobs in the state. But food economics alone can't define the value of water.

If there ever was going to be a real "war" over water in the West, it came to a near-shooting outbreak when the people of the Owens Valley, centered at a mid line of the state between its highest point of Mt. Whitney and its lowest of Death Valley, realized they had been conned by operatives from Los Angeles, 250 miles to the south. Many of those people thought they were following the familiar lure of the new U.S. Reclamation Service to provide irrigation facilities. The truth was that the federal engineer for reclamation was secretly on the payroll of the Los Angeles Water Department. Even at one point as Owens Valley men with rifles in

their arms stood on its banks and watched, the water they thought would be for farms was diverted into the Los Angeles aqueduct.

You can still see and sense it today, though not so many any more make the two lane trip on U.S. 395 down the gut of California. Thefts like those by Los Angeles from Owens Valley and Mono Lake have been patched up some in other deals for pumping and some restoration, but California history in the 20th century is veritably defined by feats necessary to move water from north to south. At one point on the California Aqueduct, it must be pumped uphill for some two thousand feet. At another on the Trinity River which would normally flow into the Klamath, the river is made, in effect, to run backward toward the Central Valley. Some of it was to service thirsty Los Angeles, but much of it was also to expand the empire of the state's agriculture.

Today, however, that "empire," much exaggerated from its actual political strength, is under general siege by a trendy belief that agriculture is the enemy of the environment. Nowhere is that conducted with more infuriating irony than in the Sacramento Valley itself, still the main water engine of the state and still, remarkably, one of the cleanest rivers in America. Salmon runs on the Sacramento steadily increased in the 1990s, water fowl and other wildlife remained abundant, and actual use of irrigation water by farmers decreased while production rose over the last half century. Yet craven politics in the now liberally-green northern half of California would play out with as much personally destructive means as had an earlier L.A. greed. New state laws and mandates attempting to preserve habitats not shown to be in any danger have taken wider and wider stripes of farmland along the river out of production.

On the San Joaquin and in the Central Valley, where water was once made to run backward for crops, irrigation supplies have been cut by 30 percent and more in the name of environmental demands. The collision of fresh and sea water at the head of San Francisco Bay is taken as if it can be seen as the temperature of a "dying" patient.

All that is really left, and that is most dreaded by farm families trying to survive, is the onset of a truly devastating drought that could put to a final test all the marvels of engineering and storage capacity that define the bitter-sweet history of California water. ■

The Map

West of the 100th meridian is a climate apart, and sometimes little understood, from the rest of the continental United States. It is a region that ranges from rain forests with over 100 inches of precipitation a year to desert depths with less than two inches of rainfall in a year.

More importantly, however, the West and its six major basins represent a multitude of mini-climates, where rainfall may vary by as much as a tenth of an inch within the space of a single campsite, and where the mountain effects of snowfall and "shadow" determine seasonal dryness or flood in sudden ways unknown in the East.

In each basin of the West, water is essential not just from its historic existence, but from its current beneficial use. United States law has always favored the states in the control of their own water in the West, but efforts over the last decade especially have been directed at taking federal control of those resources.

The Bureau of Land Management's claims alone to water include:

Arizona: The Gila River Basin and the Little Colorado River Basin (covering approximately two-thirds of the state).

California: Protected in some part by state law making an appropriated water right real property, the BLM nevertheless seeks rights in more than 70 wilderness areas and has utilized the Endangered Species Act and other federal laws to block transfers or other beneficial uses.

Colorado: State law opens sources to continuous new claims for beneficial use. The BLM applies for at least 25 new water rights in the state every year, with even more claims made for wildlife usage, resulting in almost continuous legal actions, hundreds of which remain unsettled.

Idaho: The Snake River Basin and the Bear River Basin. These two claims cover 38 of 43 Idaho counties and constitute the largest unsettled water adjudication in the United States.

Montana: Claims on "public" lands in 20 basins involving claims by the BLM of 22,000 water rights with 200 more submitted to state authorities each year.

Nevada: Virtually every river source flowing into the Great Basin or the Columbia Basin has claims by the BLM and other federal authorities, although unsettled state law regarding stock-watering rights questions many of them.

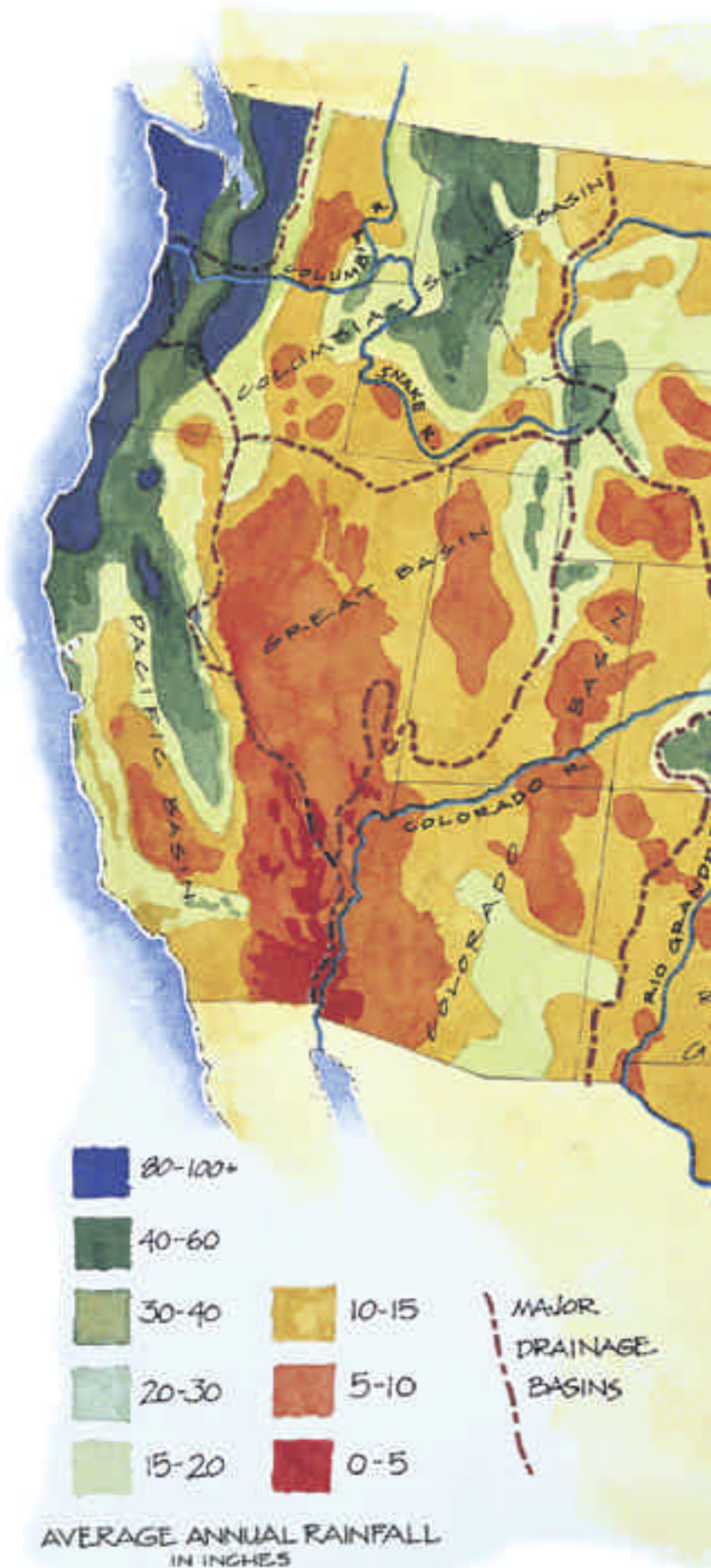
New Mexico: At least 17 rivers and tributaries of the Rio Grande are claimed or are being adjudicated as BLM claims for water rights. The total covers over 1,500 water sources in the state.

Oregon: Primarily the Yakima and Klamath Rivers, but particularly in conjunction with Native American tribes, the BLM files 20 new applications a year for state water appropriations.

Utah: The Jordan, the Price, the Colorado, the Virgin, and half a dozen more river systems in the state are claimed for priority rights by the BLM.

Wyoming: The Big Horn River. Wyoming authorities continue to assert their position on state control despite numerous federal claims over 700 stock watering wells and some 1,100 reservoirs.

The Bureau of Land Management has made no claims whatsoever to water resources east of the 100th meridian.



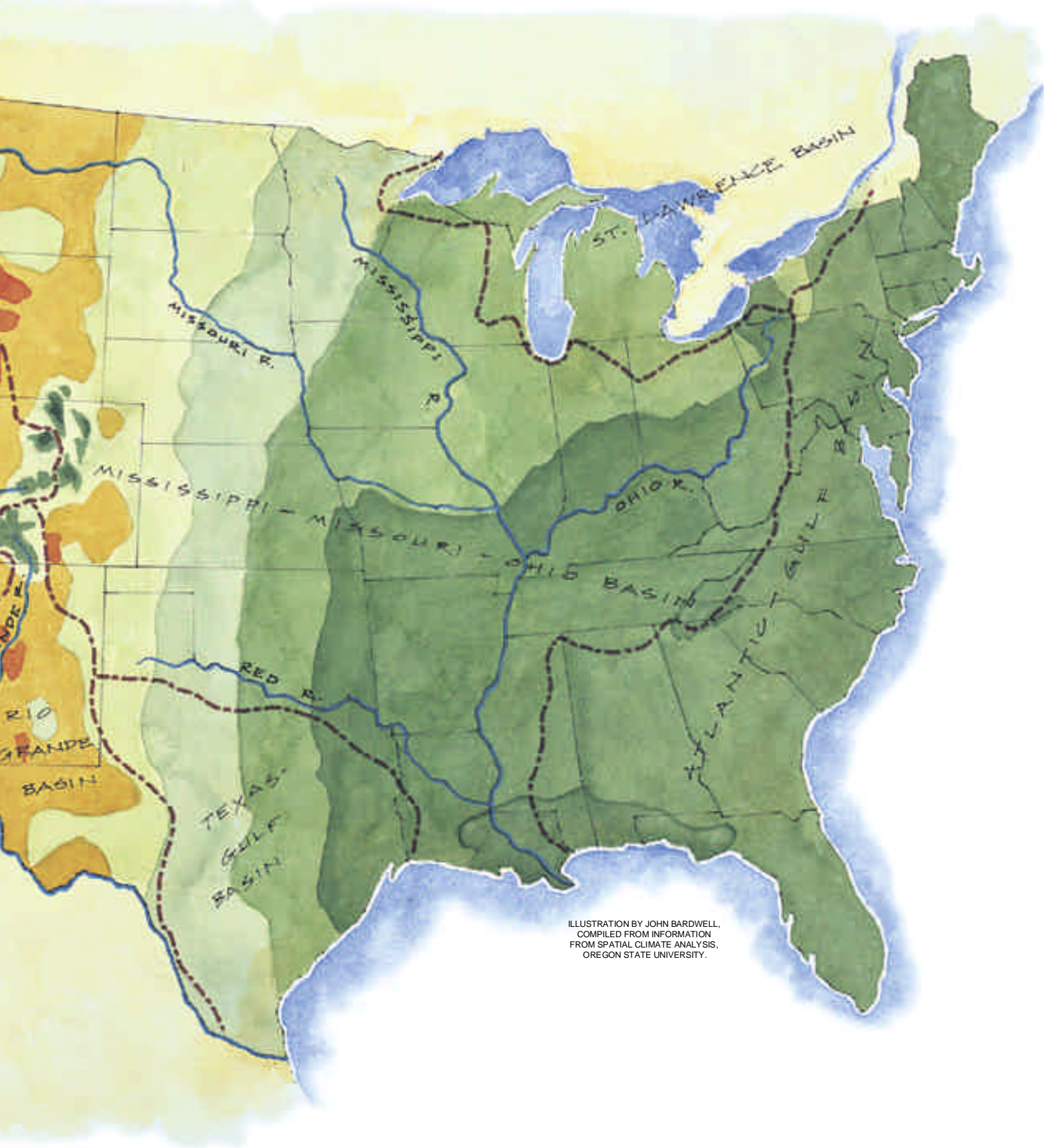


ILLUSTRATION BY JOHN BARDWELL,
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FROM SPATIAL CLIMATE ANALYSIS,
OREGON STATE UNIVERSITY.

AN UNDERGROUND OCEAN DEEP BELOW THE SURFACE OF THE EARTH HAS BECOME ANOTHER BATTLEGROUND IN THE RELENTLESS STRUGGLE BETWEEN WHERE THE WATER EXISTS AND WHERE THE PEOPLE HAVE GONE.

The mountains hold the secret West of the 100th meridian, but it is not a secret of a season or two. In geologic time, the snows of the Rockies especially accumulated a treasure not even fully realized until the middle part of the last century when, ironically, the devastation of the “Dust Bowl” led to the first efforts to mine the Ogallala Aquifer. Much of what gives the Mississippi its might rushes off from the Front Range of the Rockies into the Missouri or the Platte or the Arkansas, but even the Mississippi could not absorb what once slipped off these mountains from Ice Age glaciers. Like splayed fingers sliding beneath the cover of the Great Plains, that water, some of it thought to be 3 million years “old,” formed an underground ocean from the Dakotas to Texas with an eastern border that virtually defines the 100th Meridian.

Though not nearly as large, and scattered in separately locked basalt pools deep below the surface, the same is true in the “driest” state of Nevada where aquifers are thought still to be discovered. So it is in the deep southern desert of Arizona and in California, and all over the West, where water, seemingly in abundance, can be found if you drill deep enough. It can be seen erupting in those states where huge center pivot sprays of irrigation are fed by the pumping wells.

In Texas and Oklahoma it seemed a blessed solution as the 1930s ended in topsoil-scraped Depression. Catastrophic mistakes had been made in farming practices that contributed to the Dust Bowl disaster, but drought insurance had been there all along, below the feet that kicked at parched and useless fields. Almost immediately, there were warnings that the aquifer could not be limitless, that another, even more tragic mistake would be made in “mining out” this resource. Those warnings are heard more clearly today than ever, but the aquifers have

become another battleground in the relentless struggle between where the water exists and where the people have gone.

They’ve gone to cities like Denver and spilled out in sprawling Chicago-sized suburbs like Aurora, Colo., into the common two-bath, full kitchen, and backyard lawn that is the standard archeology of the modern West. They—we—are creatures of common expectations, the most common of them being food on the table and water in the pipes. So far, the assumption is that no choice need be made between the two.

But it is not so taken for granted in other parts of the West, particularly in southern Colorado where the agents from Denver have come over the years like a well-funded posse looking for an outlaw stronghold. Give it up, they promise the locals, and we will make you rich.

In some ways, it seems to make no sense. Denver exists because it sits at the outlet of a veritable funnel from the eastern slope of the Rockies, with the Platte River as its tube. But even during the Dust Bowl, the migrants—the “Okies”—came to Denver and for the most part kept on going. The “Queen City of the Plains” was unwelcoming to a surge of new poverty against its own shaky stability from dying mining claims. Half a century later, the city, but more importantly its suburbs, is growing by another 5,000 or more people every year, spreading in a way like the glacial excess all along the Front Range from at least Colorado Springs to Fort Collins. It seems possible, or by some common sense predictable, that the Denver area should simply establish more storage in the mountains behind it with new and bigger dams.

But the new wave of immigrants aren’t



Aquifers



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Even in the driest states, basalt pools deep below the surface can be tapped if you drill deep enough. Agriculture survives because of the huge pivot sprays of irrigation that are fed by the pumping wells. In Nevada particularly, aquifers are thought still to be discovered.
BELOW: Drip irrigated corn field.

IT SEEMS POSSIBLE, OR BY SOME COMMON SENSE PREDICTABLE, THAT THE DENVER AREA SHOULD SIMPLY ESTABLISH MORE STORAGE IN THE MOUNTAINS BEHIND IT WITH NEW AND BIGGER DAMS. BUT THE NEW WAVE OF IMMIGRANTS AREN'T STARVING "OKIES," THEY ARE BETTER EDUCATED, OFTEN SOCIALLY-CONCERNED "NEW WESTERNERS" IMBUED WITH A SENSE OF PROTECTING AN ENVIRONMENT FRESHLY DISCOVERED AS THEIR OWN.

starving "Okies," they are better educated, often socially-concerned "new Westerners" imbued with a sense of protecting an environment freshly discovered as their own. That is largely what doomed from its dawning a plan by Denver water authorities to build the Two Forks Dam in the mountains of the Front Range. The dam might have brought whooping cranes nearer to extinction in Nebraska or eliminated minnow fish in tributary streams. It was simply socially unacceptable in the Denver area after the 1970s.

But little attention was paid at the same time to the water rangers sent out hunting for other hideouts. The city of Aurora alone over the last 30 years has purchased water rights from farmers and irrigation districts and small communities up to 200 miles away, following the state's own established doctrine to divert the water for beneficial use through pumps and tunnels into the pipelines of suburbia. It was extraordinarily expensive, beginning with prices

for irrigated land at up to \$2,000 an acre, but it came off the tax base from a new city in need of at least 10,000 more acre-feet of water every decade. Environmental concerns stopped the Two Forks Dam. No such concerns were expressed for the loss of farmland in the southern counties.

Near the headwaters of the Rio Grande, the agents sought out new deals from farmers of the San Luis Valley. Further out into the border with Kansas, offers were made to farms reliant on the Ogallala Aquifer itself.

From the eastern edges of Aurora, looking out across the lightly rolling horizon of the plains, it is almost unimaginable that one can see the 100th Meridian itself and feel regret. There is where the West begins, and where the cities of the Front Range can sense it being lost. ■



SACRAMENTO VALLEY CORN FIELD © NIGA SPENCE, TOM STACK & ASSOC.



Drought

THE ICON OF AMERICAN ECONOMIC DISASTER IS STILL THE IMAGE OF THE DEPRESSION-ERA DUST BOWL. DROUGHT IS ALWAYS MADE TO SEEM MORE HOPELESS AND MORE DEVASTATING THAN EVEN THE ASSAULTS OF HURRICANES AND TORNADOS. BUT IT IS A NATURALLY RECURRING EVENT IN THE AMERICAN WEST ESPECIALLY, AND IN THESE TIMES THAT HAS PROVEN NOT ONLY COSTLY, BUT POLITICALLY USEFUL.

In some ways, it might be appropriate to compare drought in the West with floods in the Mississippi Basin. Both weather events, if not fully predictable, occur with some regularity. Like floods, droughts vary in their severity, sometimes lasting a season or less, and rarely going on into catastrophic years without adequate winter water supplies.

According to federal weather experts, the most expensive natural disaster in U.S. history was the three-year drought of 1987 to 1989. Actually, that drought, which at one point covered 36 percent of the United States from the West Coast to the northern Great Plains, was not broken in parts of the Far West until the winter of 1992-93. By then, it had cost an estimated \$39 billion in losses to agriculture, energy production, and environmental needs. Yet most people in the eastern United States are probably still unaware that it happened at all. It is, however, often cited by environmentalists as proof that western agriculture is unsustainable. Some of those in the “Green” movement undeniably await another great drought as a means of proving their political priority.

That is just what happened this year in the Klamath Basin. An exceptionally low snow pack in the Cascades and the Siskiyou showed up as a sharply dropping spike on state precipitation charts. By April, it was nearing the lowest point ever recorded in 1977, causing environmentalists to declare this shortage of barely four months duration to be the “second greatest drought” in state history. And yet, precisely as was intended by creation of federal reclamation services, the

dam at Klamath Lake was brim full. Despite that, drought was declared as one motivation for the Bureau of Reclamation to deny irrigation water to more than 170,000 acres of farm land. Never before, not even at the end of the years-long drought in 1992, had the bureau taken such drastic action. Certainly they did not after that last suddenly dry winter of 1977. And it may be instructive to note that the year preceding that dry plunge marks the highest precipitation ever recorded

in the region. In only one season, really, had the Klamath gone from its wettest to its driest year, and the following year, 1978, resumed a normal pattern. Though not as extreme at either end, the graph for 2000 to 2001 suggests a similar cycle. Is this the “second greatest drought” or another anomaly in a 100-year record of precipitation? The call was made by U.S. Fish & Wildlife Service and the National Marine Fisheries Service, eager to use

drought in an attempt to strangle farms. As phony a disaster as it may be, prevention of irrigation for a full season to the lower basin farms is expected to drive many of them into bankruptcy. When this “drought” is over, even if it’s this winter, it will be too late for many of them, and the cause for fish over farms will have at least made headway.

Such cynical use of natural phenomenon and even natural disaster is not uncommon in the politically charged battle over water for environmental purposes versus water for agriculture. Farmers and ranchers put at a

DESPITE POPULATION GROWTH, THE 339,000 MILLION GALLONS OF WATER PER DAY WITHDRAWN BY HOMES, FARMS, AND INDUSTRIES IN THE UNITED STATES IN 1990 WAS SEVEN PERCENT LESS THAN IN 1980, AND HAS CONTINUED TO SHOW A STABILIZING DOWNWARD TREND LARGELY DUE TO CONSERVATION AND NEW TECHNOLOGY.



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Glen Canyon, Ariz., a target of environmentalists who want to breach the dam.

sudden economic disadvantage, and deserted by the federal agencies originally designed to protect them, are thus disarmed in the fight. As always—in the Klamath Basin and everywhere else there emerge large and small water issues in the West—lurking predators from The Nature Conservancy and similar organizations stand ready with cash for the first farmers willing to give up.

It was drought, not mismanaged overgrowth, that the U.S. Forest Service preferred to blame last year when seven million acres of timberland, most of it in Idaho and Montana, were lost to wildfire. Still refusing to allow even the harvest of burned trees, let alone the thinning of admittedly overloaded forests, federal weather experts have warned this year that some 60 million acres and 23,000 communities are at “high risk” due to the low snow pack in the West. They point especially to Washington State, spared from much of the damage last year, but even more imperiled this summer.

Western drought, common as floods, was part of the reason the federal government took on its epic period of building dams, reservoirs and irrigation facilities in the first half of the last century. Ironically it is that very same phenomenon of western weather that is today being used as an argument for dismantling it all. ■





The West

“WE MUST CONTROL THE WATER,” SAID FORMER SECRETARY OF INTERIOR BRUCE BABBITT, “AND THEN WE WILL CONTROL THE WEST.”

Although the meaning may seem clear, Mark Twain’s crack about whiskey and water is often misquoted. What he actually said was, “Out West, God provided plenty of whiskey to drink, and just enough water to fight over.” It’s the nuance of this more accurate observation that is often lost on easterners. The battle over water in the West had begun even before Lewis and Clark pushed off up the Missouri. Native American tribes, by generations of experience and by simple common sense, knew the value of protecting their water—from each other and from the waves of Europeans about to overwhelm them. Though variously sold, stolen, or ignored over the last century, native claims to land, and especially to water rights, go on today, often at the core of intricate and decades-long legal cases.

“We must control the water, then we will control the West,” said Bruce Babbitt as he became U.S. Secretary of the Interior in 1993.

To think of the West in general as simply an arid semi-desert, a “wasteland” as even Daniel Webster had called it, is grossly misleading. There are parts of the Pacific Northwest where rainfall exceeds 100 inches a year, and areas of the Southwest where summer monsoons are common. In even more striking contrast to the eastern climate, the West experiences wild and sudden variations, so dramatic that in parts of the Cascades the difference in annual rainfall may vary by a tenth of an inch in only 10 feet—the length of an automobile. Most important, even modern hydrologic methods are still questioned for their accuracy in measuring snowfall on western peaks. What matters most in the

West is not summer rain, but the stream flows from winter, almost as to compare a season’s “new” water on which eastern agriculture is reliant, with the “old” water released sometimes over a year or more in melted snow cascading from the western mountains.

It is that climatological difference that is the basis of separately established water law in the East and the West. East of the Mississippi, the law of water is still generally based on riparian rights, a concept carried from the old world that water is inseparable from the land and that only those on the borders of streams and rivers have rights to its use. Upstream riparian users may not divert or block the water from those downstream, and rights to the water endure forever, whether or not the water is used.

Driven largely by conflicts in the mountain mining camps, western water law developed into a doctrine of appropriation first set down in Colorado in 1876. The law provides that the first user establishes priority rights on the stream, and as such may treat it as part of his property, selling it, transferring it elsewhere, or diverting it from its natural course for use elsewhere. The next user has second priority, and so on. Key to the doctrine is the requirement that in order to hold a water right, it must be put to beneficial use. Not really anticipated in that Colorado doctrine was a beneficial use that might not directly serve human needs, but in some cases esthetic and even spiritual priorities.

First come, first served, but use it or lose it. Twain was accurate—in the early West the application started gunfights, but even today, the idea is completely foreign to farmers and others in the East, making it difficult for them to grasp the nature and complexity of western water wars that rage still in courtrooms and Congressional hearings.

Strangely reflecting Greek philosophy, Native Americans observed that no man can

© DAVID MUECH
Field of grain, Ute Mountain, Colo., reaps the benefits of irrigation. To think of the West in general as simply an arid semi-desert, a “wasteland,” is grossly misleading.

ever touch the same water in crossing a stream. Who “owned” it could only be defined by who was using it. Early in western development, mining states especially saw the public asset to water in their domain, and, until recently, the federal government did not challenge state control of water beyond seriously navigable rivers. What is changed is the “beneficial uses” by which the federal government has in recent years claimed to own it all. The battle is not really over who “owns” the water as much as it is who has a priority to make best use of it.

With his remarkable foresight, John Wesley Powell tried at the turn of the last century to warn that the water of the West is limited not only by rainfall, but by the natural basins which serve its drainage. There are six major basins in the West. Those of the Columbia and the Colorado are the most powerful. That of the Pacific Basin is richest in production of agriculture. Those three pull the waters of strong rivers and tributaries to the Pacific Ocean.

In the south, the basin of the Rio Grande joins into the Texas Gulf. Yet in the Great Basin covering most of Nevada and half of Utah, the rivers and streams find no outlet. What rivers form there from the eastern Sierra to the western Wasatch eventually just disappear in evaporation. Compared to the mid-continent enormity of the Missouri and Mississippi Basin, the West seems fractured and in many ways strangled. Powell’s unheeded advice had been to settle the West according to the limitations of water in those basins. Instead, what has evolved is to let the people follow the sun, and move the water to the people. That forms the basin battleground.

For the most part, it was not water that brought people West, nor was it the lack of water that kept them back, even from the broiling depths of a valley named for death itself. For gold, for new opportunity, an essentially agrarian population shifted west in expectation of adventure and in hope for new freedom. Settlers came by the wagonload, but they were not merely immigrants into something unknown. It was the United States government itself that lured them into the chances and that made the promises to make real their dreams. Nor was that just federal generosity. It was in the

interests of the United States to expand markets and to develop the resources of the unsecured West—eastern interests, served by westward expansion into a land of uncertain, but enormous wealth.

Most of it was, and still is, federal land, supposedly held in trust for the people. Even then, however, the essential resource more valuable than gold was in dispute. The individual states, not the federal government, established water law within their boundaries, and the United States government was

THE STATE OF WASHINGTON’S DEPARTMENT OF ECOLOGY HAS SET ASIDE \$1 MILLION TO BUY OR LEASE WATER RIGHTS AS A MEANS FOR PROVIDING MORE WATER TO FISH. AT LEAST HALF THAT EXPENDITURE WAS EXPECTED TO BE MADE IN THE METHOW VALLEY OF NORTH CENTRAL WASHINGTON, WHERE THE MAYOR OF THE SMALL TOWN OF TWISP SAID THE PURCHASES WOULD LEAVE ALMOST NO WATER FOR MUNICIPAL SUPPLIES.

but a bit player in the contention for prior beneficial use. Time and again, and to this day, the federal government would contradict itself in the authority it claimed.

Theodore Roosevelt was a pragmatic visionary about the West. Even so, the history of western development turned on the fateful act of a madman who assassinated William McKinley in 1901. Up until then, the majority in Vice President Roosevelt’s own Republican Party firmly opposed federal expenditures to engineer western resources in a way that might benefit growth. Many of them openly suggested that such a policy would pose grave threats to eastern agriculture and industrial development. But Roosevelt was convinced, in part by the self-serving enthusiasm of Nevada Senator Francis Newlands who presented him with a plan for reclamation based primarily on capturing and channeling the water of the West.

“To make the desert bloom,” said Roosevelt and through his formidable powers of persuasion he brought his party into line behind creation of the United States Reclamation Service. Within a year, plans had been made and even tracks laid for an epic of western engineering. It began in Newlands’ own backyard to harness the flows of the Truckee and Carson Rivers, both of which lost themselves in the Great Basin, into an irrigation project of some 100,000 acres, including new dams and a system of more than 500 canals ranging over miles of low

swamps and sage desert. Close behind that, in 1907, came the plan for the Klamath, which would reverse the process of Newlands, virtually turning the sluggish Klamath in its lower basin back on itself and channeling it through another 200,000 irrigated acres. Six projects in all were proposed and begun within the first four years, each of them luring willing souls from the East with offers of 160 acres of land and guarantees of water to feed it.

People came to those promises for the next half-century. By the 1990s, the Bureau of Reclamation as it was now known, had built 348 reservoirs in the West, with a storage capacity totaling over 245 million acre-feet of water. Power generation from BOR facilities alone had an installed capacity of nearly 15,000 megawatts and generated enough elec-

tricity to serve 14 million people. One in every five farmers in the West was reliant on BOR irrigation producing 60 percent of the nation’s vegetables and 25 percent of the nation’s fruits and nuts. The livelihoods of multiple thousands, if not millions, of westerners were by then dependent on the engineering feat to harness western water.

Bruce Babbitt, the former governor of Arizona and the President of the League of Conservation Voters, stood in 1993 at the verge, or some might say the precipice, of his ultimate autocratic power as Secretary of the Interior overseeing a myriad of agencies controlling federal land, among them the BOR. In a speech to Oregon law students, he defined his position and his arrogance toward those historic promises.

“What we did when we invented the Bureau of Reclamation was set up an extraordinary, powerful political force composed of the United States Congress, local interests, and a hungry bureaucracy which said we will elect westerners to Congress by damming every single stream in the West in a continuous flow of tax dollars paid by people east of the Mississippi River to subsidize—to create a welfare state in the West.”

If it was an incredibly offensive and largely false canard against westerners who themselves had repaid the costs of reclamation and were still struggling for their own independence, it was certainly not the last insult Babbitt would direct toward what he pro-

claimed to be his own western heritage.

Babbitt, in fact, set out not only to undo the engineering work of the BOR, but to overturn state and private rights to water in the West by whatever means he could through what he saw as his capacity to be the monarch of its future. The doctrine of navigable streams, giving federal authority the last word over water crossing state lines, was one method. The hammer of the Environmental Protection Agency and the Clean Water Act another. His federal regulations defined “waters of the United States” to include all tributaries crossing state lines, and the U.S. Ninth Circuit Court of Appeals went even further by suggesting that such tributaries included man-made ditches.

But Babbitt saw the future in the best checkmate piece of them all, and he openly relished it.

“I am certain that the members of Congress who passed the Endangered Species Act didn’t understand the American West,” Babbitt said, gloating that, “they didn’t understand there are a lot of fish in the West. They had no idea, for example, that this law would impact a place like Nevada—yeah, there is some water in Nevada, not much, but the fact that there’s not much has extraordinary consequences....”

To Babbitt, and to what he unleashed in his new power over regulatory agencies, these issues would begin a fight “which will make the spotted owl seem like a relatively gentlemanly discussion.”

With Bruce Babbitt in power, it was simply and crudely clear to the people of the rural West that what had once been the promise of a federal government fulfilling their dreams in exchange for satisfying national goals was now a relentless threat from an enemy of their own creation. What least the West needed was a fight with its own government, even if Babbitt saw himself in a grander image.

However much of a ranch kid and outdoorsman Babbitt may have posed himself to be, he was a child born in Los Angeles and raised on political ambition. And in that way, he accurately characterized the West of his time. The population of the western states in the last 30 years has not merely grown, it has soared beyond proportion to the rest of the country and in many areas dangerously beyond the social capacity of the region.

Babbitt himself as governor of Arizona largely directed and fed the astonishing growth of Phoenix by altering agricultural



Family of migrant farm laborers from Ardmore Okla., camped on Highway 99 south of Tulare, Calif. They are headed for Modesto “to work in the fruit,” July 7, 1944.

rights to water in other parts of the state. But it still won’t be enough. Phoenix, toying with a major drought that some say is still coming, continues to grow (at a rate of up to 20 new households every day).


The same is true of Denver, and of Las Vegas, and of countless once mid-sized towns all over the West where technology has made possible population growth without permanent industry or essential infrastructure. Unpleasant though it may be, they can be counted for their impact by every single flush of water in their toilets. Despite the popular belief that the environment and ecology should be given first consideration, the pressure of choice is increasingly between toilets and food. Given the choice between a backed-up john and an acre of irrigated crops, it is easy to predict the politics of city and suburban dwellers.

For reasons still unclear, rural and farm households use substantially less water for personal purposes than do people in the cities. It is a miniscule matter, however, in the arguments over food production versus drinking water supplies. One calf will drink about 12 gallons of water a day. Yet the average split level with a family of three uses over 300 gallons a day. Food production is, by far, the greatest consumer of water, while attention to conservation has produced a general decline in individual use of water over the last 10 years. Figured in terms of the water needed to produce it, one day’s food supply for the average American family requires some 3,000 gallons of water. Yet that food is still delivered to the table at reliably low cost

to consumer income. Those are the figures that most deceive the people of the West in all their choices of lifestyle. Most non-farm families give no thought at all to the amount of water necessary to produce their groceries. Yet farm families know it to a narrow margin that is behind that fundamental tenet of western water law—use it, or lose it.

Brashly—and probably at the urging of his former boss, Bruce Babbitt—then-U.S. Forest Service Chief Michael Dombeck at one point in the 1990s proclaimed himself to be the veritable “water master” of the American West by his control of “source point” streams, springs and lakes in the vast federal holdings of the Forest Service. In California, for example, that would mean control over nearly 50 percent of total runoff in the state originating in National Forests. Dombeck, the former head of Babbitt’s Bureau of Land Management, was thus making a bold attempt to push federal claims ahead of even state water laws. At the same time, Babbitt was touring the West threatening to personally smash down almost every dam he saw in the name of flows for conveniently endangered or threatened fish, and, wherever he could, on behalf of the prior rights of Native American tribes sometimes bedazzled by this newly generous federal interest in their rights. It was cheap politics, bad law, and junk science, but it would cost rural westerners millions in an attempt to defend themselves.

Only gradually did state officials begin to recognize that they would have to enter the fray, or lose the war. ■

A landscape photograph showing a series of rolling hills and mountains in the distance. The sky is a uniform, hazy yellow, suggesting a sunrise or sunset. The foreground is a dark, textured hillside. The overall mood is serene and atmospheric.

**NEVADA WAS NOT THE PLACE WHERE
THERE WAS THE MOST WATER, OR THE
MOST PEOPLE, BUT WHERE THE
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FROM THE LACK OF BOTH.**

The Great Basin

THIS IS THE PLACE WHERE RIVERS SUDDENLY END AND EVEN MOUNTAINS BOIL THEIR FEET IN LOST HOT SPRINGS. IT IS THE RANCHERS HERE WHO GIVE ALL ANIMALS AND BIRDS A DRINK.

The sharp, high ridge of the still-mysterious Jarbidge Wilderness in Nevada forms a northern edge to the Great Basin, wisely spilling its snowpack north into tributaries that find the Snake in the plateaus of Idaho and eventually join with the mighty Columbia. Almost no one lives in that northern wilderness, and fewer would know about it except for claims in the last eight years that it harbors newly-endangered bull trout. On the south, there is an even more spectacular joining of the Green and the Colorado, together pounding their way out of the big dams into the Grand Canyon. There you will find at least five million people, nearly 70 percent of the state of Nevada, crowded together in its southeast corner.

The rest, virtually from the Great Salt Lake to Death Valley, is the Great Basin where rivers suddenly end and even mountains boil their feet in lost hot springs.

Yet, strangely perhaps, it was there, not on the killer force of the Colorado or the steady coil of the Snake and the Columbia, that federal water policy most affecting our times would be set—not in the place where there was the most water, or the most people, but where the government could make best use from the lack of both.

Never mind the great plunge west to Oregon and California of the past half century, or the spectacular resources found and preserved by Ulysses S. Grant in creation of Yellowstone, the eastern political establishment in 1900 was reluctant to spend federal money on western projects. Many of the politicians admitted their concerns that agricultural improvements in the West might threaten their own agrarian districts. In fact, had it not been for a madman who assassinated William McKinley in 1901,

federal history in the West might have taken an entirely different course.

It was McKinley's Vice President, Theodore Roosevelt, who convinced members of his own Republican Party that the West could be made to "bloom" with creation of the U.S. Reclamation Service (now Bureau of Reclamation). The first site selected with some suspicion of political payoff in 1902 was a project to combine portions of the Truckee River with that of the Carson River to create the Newlands Irrigation Project in western Nevada. Both rivers lost themselves in the desert, the Truckee into the deep but land-locked Pyramid Lake, and the Carson in a wide delta that finally simply vanished in a sink. Two



MULE DEER FAWN © LARRY TURNER

dams and over 500 miles of canals constructed over a remarkable decade would slowly convert the sink into thousands of acres of productive farmland. And although Newlands was only the first of

dozens of reclamation projects to come, the deal to make it possible added new elements to the law of water in the West.

The federal government wanted no interference in administration of the project, nor questions on the allocations of water. To meet federal demands, Nevada established the new office of State Engineer, whose primary job it would be to rule on the beneficial rights held by water owners, including the federal government. Some 90 years later, that would provide a conundrum for all sides. Senator Harry Reid (D-Nev.) by then recognized his growing power in the urban sensibilities of Las Vegas and sought to undo the Newlands Project on behalf of Native Americans and a supposedly endangered sucker fish at Pyramid Lake. Reid's 1990 "Settlement Act" posed as an interstate agreement with California over use of

water from Lake Tahoe and set off a decade of still-unfinished litigation.

Yet hardly noticed at all, even in the Silver State itself, is a microcosmic standoff over water for grazing that is a legacy of both the creation of the state engineer's office and, more directly, the autocratic ambition of Interior's Bruce Babbitt to gain federal control over water.

For nearly five years now, no new improvements have been made to the vast network of streams, springs, and wells used for stock watering all across the mountainous center of Nevada and the Great Basin itself. Those facilities in place in the remote meadows and little known canyons were built for the most part by ranchers themselves, or in later times in a cooperative effort with the Bureau of Land Management. There is no real

Across thousands of acres, the condition is like that confronted by Smith Valley rancher Fred Fulstone, who has been trying for three years to establish new troughs on his BLM allotments. "I can go to the state engineer and get a permit for a well on my deeded land," Fulstone said, "but then the BLM tells me I can't pipe it or trough it on to the allotment." Fulstone is thus forced to haul water for his sheep at costs ranging up to \$60 and \$70 an hour. "It just adds to the pressure," the beleaguered stockman said. "Somehow, there has to be a way to settle this thing."

The summer season of 2001 began in this region as perhaps the driest on record. Before the June solstice, one fire west of Reno had already blazed through more than 14,000 acres. More fires are expected, but even in areas where it is obvious some water improve-

ing ultimate authority over all resources, and all human behavior, in his domain. Yet Congress reacted in only silent shock when Babbitt arrogantly told them he didn't need their approval. "What we can't do legislatively," he said, "we will do by regulation."

Indirectly, the state of Nevada had already laid the way for Babbitt by providing legislation in 1969 allowing the state engineer to consider water for recreation and wildlife a beneficial use entitled to water rights.

It was in the unlikely and little-noticed expanse of upper and lower Blue Lakes near Winnemucca that another pivotal decision would be made on ever-less-subtle attempts by the feds to take control of state water. Based deceptively on the state law declaring recreation a beneficial use of water, the Bureau of Land Management applied for appropriation of rights to both lakes for recreation and fishery purposes, and at the same time for water rights on land around the lakes as useful for grazing, stock-watering purposes and wildlife.

This was trickery with implications beyond perhaps the understanding of even growth-centered state officials. Nevada stockmen and the state's Board of Agriculture saw it and moved to block the water appropriation on grounds that the BLM itself owned no cattle, watered no domestic livestock and was taking no action at Blue Lake to divert water for such beneficial purposes.

The legal battle thus was on between the state, represented by the Division of Water Resources and the Board of Agriculture, against federal authorities allied now with the Sierra Club and the Nevada Wildlife Federation. It was clear to ranchers, and ultimately to the state engineer himself, that the BLM was not after a water appropriation to graze cattle around Blue Lake, but rather a precedent-setting ruling that would give the feds ultimate authority over water in the vast dominant stretches of Nevada "public" land.

Leaving little more doubt to his intentions, Babbitt's Interior Department in 1995 produced Rangeland Reform regulations stating that any right to water for livestock on "public" land must be acquired under laws of the state, but, to the extent it is allowed, any such right can be acquired and administered "in the name of the United States." More in the name of Bruce Babbitt, however, the "reform" put the future rights to all improvements—those little dams and ponds and watering troughs established over generations by the ranchers themselves—firmly in the hands of the BLM,



H. T. COWLING PHOTO, COURTESY BUREAU OF RECLAMATION, DOI

At the turn of the last century President Roosevelt said, "Let the desert bloom." Congress was slower and approved the vast majority of reclamation's 180-plus construction projects in a 40-year period between 1928 and 1968. Photo above shows raking hay, Newlands Project, Nevada, August 16, 1914.

argument that such improvements in water storage greatly benefited wildlife as well as cattle and added to reserves sometimes desperately needed in the dry summer fire season. But now stock-watering is at a standstill, awaiting an odd showdown between the state of Nevada and the government of the United States which claims ownership over at least 86 percent of the state's land mass.

Summer is a serious season in the Great Basin, unpredictable in its heat or even in its sudden flash-flooding storms. For the last three years, the dry season has witnessed wildfires that raged over millions of acres of range and forest land, driving wildlife and livestock alike into new areas for forage. Yet where the vast remaining open land is still held hostage to the struggle over stock-watering rights, no improvements can be made, no new wells dug, no troughs established.

ments would provide protection, nothing can be done, not even by the feds themselves. A tinder box is waiting through a test of political wills.

The land question has been argued before—forcefully during the Reagan administration when the state legislature formally passed the law of the so-called "Sagebrush Rebellion" to secure state control over lands in its own boundaries. Enacted, but never imposed because of the state attorney general's doubts about its constitutionality, the 1970's act is all but forgotten.

But Bruce Babbitt made clear from the beginning that it was not the land he was after—it was the water. Babbitt's arbitrary and overly ambitious plan to establish "Rangeland Reform" at the very start of his administration encountered sharp and fatal resistance in Congress to the Secretary's attempts at secur-

not the water right holder, or “permittee” on federal lands.

Under Babbitt, the federal government was all hat, and no cattle of its own at all. Counter-punching to Rangeland “Reform,” Nevada state law, passed in 1995, reaffirmed that a water right could only be issued to those “legally entitled” to graze on public land. The BLM had no cattle, and thus no grazing right, and therefore, no water right. Babbitt and his people simply began to crack down on those entitled to permits, limiting them or eliminating them one way or another. What most may have seen as an attempt to set aside more federal land from grazing was actually a bold move to gain more federal control over the water.

Federal solicitors challenged the state law in the courts and lost the first round in a state District Court that ruled in favor of the ranchers. The feds appealed the decision to a higher court. Now, as it has for nearly three years, it awaits a final ruling from the Supreme Court of the State of Nevada.

Remarkably, many of the players in this side-show dispute were those with starring roles in the half-forgotten Sagebrush Rebellion. State Senator Dean Rhoads had authored the “rebellion” legislation in the ’70s and seen it stalled by the reluctance of Nevada Attorney General Frankie Sue Del Papa to test it in claims over federal lands. This time, however, with Rhoads as the author of the legislation and former State Engineer Mike Turnipseed as an advisor on its language, Del Papa’s office stood by the new state law.

“The truth is, we’re like soldiers who should follow the orders of the legislature,” said Deputy Attorney General Marta Adams in lukewarm defense of her own arguments before the state Supreme Court. “I don’t know if it will end up in some precedent. It’s really up to the court, or maybe it will go back to the legislature itself.”

State BLM Director Bob Abbey came in to his new job in 1997, virtually in the middle of



In the Great Basin, ranchers maintain water supplies for their livestock, allowing a variety of wildlife to prosper despite hot, dry summers and cold, snowy winters. It’s not unusual to find deer browsing amongst cattle.

the dispute, and admits now to taking direction on the whole issue from the U.S. Justice Department with its equal concerns about the “precedent” of a state ruling. Repeatedly, Abbey and the BLM have applied for stock-watering rights to the state engineer, almost as

a test. In every case, they have been denied. “We’ve pretty much put everything [in stock-watering developments] on hold,” said Abbey, who just as routinely denies ranchers permits for improvements on their own grazing allotments.

Abbey makes it clear without saying so that he would much prefer to restore some sort of cooperative relationship with the ranchers. But just in the last eight years, under Babbitt, there have been six directors of the BLM, and no one has been named for the job so far by the Bush administration. Abbey apparently has no more guiding policy than that

offered by the Justice Department.

There have been many efforts by stockmen to get some temporary relief, especially during fire emergencies like this year, to get some water to the range.

When the Nevada Supreme Court will rule on the case is anybody’s guess. What has taken them so long seems obvious in the

choice offered them between supporting state ranchers who number a miniscule few against the dominant population numbers of Las Vegas, or in caving in to the federal government and the legacy left by Bruce Babbitt.

More than that, however, the legal wrangle over what amounts to a relatively minor amount of water for stock purposes is being made to symbolize a showdown in the West that seems less and less willing to find room for compromise. Even a decision by the state Supreme Court might not result in more than appeals to federal courts and years more thirst for stock and wildlife where simple improvements might make it unnecessary.

□ □ □

Today as much as ever, only a fool would go far into the Great Basin without knowing where to find water. Very few have seriously ventured there in the last 30 years while ownership of what water there is remains in such bitter dispute. Both ranchers and the BLM watch in bleary disappointment as year after year improvements that could be made for stock grazing and the resource are held hostage by the courts. The irony of Nevada is that while astonishing, even appalling, concentration of growth around Las Vegas has made its population the most urbanized in America—beyond even New Jersey—human habitation in most of the state is still less than 11 persons per square mile. Most of the land mass of the state remains vacant, and in many places sags in the slow desert rust of towns all but abandoned within the last generation and a half. Nevada is growing and dying at the same time, strangely like the water that empties into the Great Basin and simply vanishes. ■

POPULATION GROWTH OF THE WEST IN THE 1990S EXCEEDED 10 MILLION PEOPLE, 40 PERCENT OF THEM IN CALIFORNIA. ONE IN EVERY THREE PERSONS COUNTED AS NEW TO THE UNITED STATES IN 2000 WAS LOCATED IN THE WEST, HALF OF THEM IN CALIFORNIA. WHILE FOUR OUT OF EVERY FIVE PEOPLE IN THE WEST LIVE IN URBAN AREAS, NEARLY ONE-THIRD OF THE REST OF THE NATION LIVES IN WHAT IS CONSIDERED A RURAL SETTING BY CENSUS OFFICIALS.

Big Lone Star Win

SEVEN HUNDRED EARLY TEXAS RANCHES ARE SAVED FROM DROWNING. BY JEFF GOODSON



JEFF GOODSON

than just a victory for 700 early Texas ranches. It's also a big win for Texas landowners in general, who for the first time engaged in sustained public debate to defeat a major water development project. And Sandies and Cuero were supported by just about all of the big boys, from the federal, state and municipal governments to the water supply corporations and river basin authorities.

At the same time, the fight opened up public debate on the larger issues of urban resource needs vs. rural communities, and large-scale commercial use of groundwater. Both issues have major implications in Texas and the West, and some of the more contentious aspects of commercial groundwater use—including rule of capture and the establishment of groundwater districts—are undergoing serious debate in the current



SUE SULSAR

Two lakes in south-central Texas, known as Sandies and Cuero, were part of an old federal Bureau of Reclamation project that would have built a canal and 21 major storage reservoirs to move water from east Texas to the Mexican border. That project died in the early '70s, a victim of overambition, bad project economics, changing agroindustrial circumstances and environmental vilification. (See "Damned if you Do, Dammed if you Don't," *RANGE*, Summer 2000.)

But plans for Sandies and Cuero survived. As environmentalists locked up water from the Edwards Aquifer to protect endangered cave bugs—water that San Antonio relies on for municipal use—the city suddenly faced a major long-term water deficit and started looking covetously at the two reservoir sites and land owned by 700 early ranches in DeWitt and Gonzales counties. Together the reservoirs would have inundated over 100 square miles of land in the cradle of Texas history, including ranches dating back to the days

of the Texas Revolution.

A lot of people had a dog in this fight. At the end of the day, though, it was won because affected landowners fought like hell to win it. Last January, the region's 50-year water plan was finalized without the two reservoirs that local ranchers had been fighting since the 1960s. Their property was saved from condemnation.

Since the regional water plans have to be revisited every five years for the indefinite future, the battle will have to be engaged again a few years down the road. But the signs on this one look pretty good: opposition to the reservoirs won't recede, and the economics of the projects won't be getting any better.

The win has turned out to be a lot more



JEFF GOODSON

CLOCKWISE FROM TOP: Sandies Creek. ■ Texas ranch family, back in the saddle. ■ Old cemetery.

Texas legislative session.

The water fight also, for the first time, opened public debate about alternatives to condemnation of land in fee simple. The enticing prospect of alternatives such as long-term leasing of land resources—including habitat, vegetation, water or (in the case of reservoirs) topographical relief—has profound implications about how land is taken for public use, what constitutes "just compensation" under the fifth amendment of the Bill of Rights, and rural economics in general.

At the end of the day, though, what this fight most highlighted is what it takes to win. We've done some serious thinking about the lessons learned from this fight, and hope that other landowners can take advantage of them.

How to win a property war

14 LESSONS LEARNED

■ **Land Has Weight.** There's an old saying that "land is the only thing that matters because land is the only thing that lasts." Don't underestimate your power as a landowner. Land has political weight, and so do the people who own or control it.

■ **Show Up.** Eighty percent of winning is just showing up. You can't win—hell, you can't even *fight*—unless you show up at the game. If you care about your land and your family legacy, then wake up, smell the coffee and get involved.

■ **Organize.** You either hang together or you hang apart. It's easy for the opposition to pick off isolated opponents, or simply overpower them when it gets down to final decision-making time. But nothing sobers people up, especially people operating in the cold glare of public exposure, like organized opposition.

■ **Understand What You're Up Against.** Every fight is different, and to fight effectively you need a cold, objective understanding of the nature of the threat. Sometimes the nature of the threat to property is simple and transparent. Sometimes it's not.

■ **Strategize Carefully.** Every fight needs a game plan that'll work. Size up the situation carefully before getting too far downstream, and aim before you shoot. A common early strategy decision is whether you're better off hiring lawyers and going straight to litigation, or constructively engaging whatever process it is that's trying to take your property from you.

■ **Decide Where To Sit.** When a strategic decision has been made to constructively engage a threat rather than go to litigation, a tactical decision has to be made whether it's better to have a seat at the table or better to engage the process as an outsider. Those at the table would almost always rather have their opposition on the inside looking out than the other way around, but it's often better tactically to engage from the

outside to avoid being co-opted. On the other hand, some fights are better fought from the inside—especially when property controls are pretty much of a done deal, and the best you can hope for is influencing the nature and extent of the damage.

■ **Realistically Define "Success".** There has to be a realistic assessment of what "success" will look like at the end of the day. On the Texas reservoir fight, success in the mid-term was keeping both reservoirs out of the new 50-year water plan. We knew we would always have to keep monitoring the plan, and fighting the fight again every five years, but we also knew that if the reservoirs weren't in the first plan then it would be a whole lot more difficult to put them in later.

■ **Leverage Political Support.** They may be politicians, but they're *your* politicians—local, state and national. You elected them. Even if you didn't vote for them, they represent you. Make them understand that helping their constituents save their property isn't a partisan issue. Let them know you vote. Keep them informed, and try to get them to commit to your side early in the game.

■ **Play Smart.** In almost every land battle, the stakes are high and the players are good. The only way to play the game competitively is to play it professionally. Don't whine, and don't make wild unsubstantiated allegations. First impressions matter, big time. Aggressively pursue your case, but base it on documented facts, good science, sound judgment and clear, compelling arguments. Stay cool. Argue calmly and persuasively, whether you're talking to the regulators or talking to the press. Take the high ground, and keep it. A well-researched, well-articulated issues paper can be invaluable for this purpose.

■ **Use Your People.** In every organization, there are people with all kinds of hidden talents just waiting to be discovered. People who can write. People who can speak. People who can communicate with the press. People who can lead. People who can get money out of other people. Some are retired, some are handicapped, some are students, some are just looking for something to do. Find 'em and use 'em.

■ **Hire Outside Help.** In most major land battles, landowners need outside professional help. Everyone affected by the threat is busy making a living, and few if any really understand the nature of what they're up against. Bringing in someone with the experience to manage or coordinate the fight is expensive—typically running \$100,000 or

more for a major fight. But the improved chances of winning with a professional on your side are usually more than worth the cost.

■ **Raise Money.** Lots of money. Big fights cost big money, and the bigger the fight the higher the tab. That means raising money. Typically, landowners are land rich and cash poor, and the hardest way to raise money is a few bucks at a time. It can be done, but it's a major and prolonged undertaking and very difficult to sustain. A better approach is to recognize that there are always a few people with deep pockets who are willing to bankroll a big part of the fight. These may be landowners, people with a special interest at stake, or corporations. Recognize that some deep pockets like to be on the front lines, and some want to stay below the radar screen. Work with 'em and accommodate 'em.

■ **Make Friends And Allies.** Lots of friends and allies. A successful fight means making friends with people who many landowners may never have had much interest in developing a relationship with. Bankers, county commissioners, rural electric cooperatives, corporations, politicians, non-governmental organizations, the media, the churches—basically anyone you can get on your side. Friends *always* pay off in these fights, usually in ways you had no way of predicting when you first shook their hand.

■ **Get Media Involved.** The media wields incredible influence. That especially includes the decision-makers and the politicians that they pressure. Make friends with the local and state media. Get to know them. Give them information about the fight, and why you think your position is right. Feed 'em barbecue. Write letters to the editor, put out press releases and find angles on the story that the newspapers will *want* to run. Make noise. Get on radio and television. In every landowner group, there's someone who turns out to have a natural talent for talking to the media. Find 'em, and get 'em involved.

■ **Hang In There.** Finally, *never* give up. Some families in the Texas reservoir battle had been fighting those projects for four generations. And they're ready to fight for another four. This is Texas tenacity at its best, and the enemy hates it. It raises spirits on your side, which demoralizes the opposition, and it establishes a sense of inevitability that is very, very difficult for your enemy to beat back.

Winning is a lot more fun than losing. Hang together, play smart, and don't quit. ■

The Texas Water Wars

NOW MOST PEOPLE DON'T KNOW GROUNDWATER FROM GRANOLA. BUT EVERYONE HAS AN OPINION ON "RULE OF CAPTURE," AND THIS BEING TEXAS SOME HAVE SEVERAL OPINIONS. RANCHERS DON'T WANT TO LOSE THEIR TRADITIONAL GROUNDWATER RIGHTS. WATER MANAGERS WANT THE STATE TO REGULATE THE RESOURCE. ENVIRONMENTALISTS WANT A SEPARATE WATER RIGHT FOR THE ENVIRONMENT. AND LAWYERS HATE HOW THE RULE LIMITS THEIR ABILITY TO SUE. MEANWHILE THE WATER HUSTLERS CIRCLE LIKE BUZZARDS, AND SOME LANDOWNERS WORRY THAT THEY'RE MISSING THE BIGGEST GAME OF TEXAS HOLD 'EM SINCE SPINDLE-TOP. AND SOME OF 'EM ARE. BY JEFF GOODSON

Not since the Spindletop gusher blew Texas into the oil age in 1901 has a natural resource generated so much consternation as water does today. The old saw that "whiskey's for drinkin' and water's for fightin'" is still just as true as it was a hundred years ago, but the nature of the Texas water wars has changed. Big time.

The simple but unpopular truth is that Texas has no statewide shortage of water.



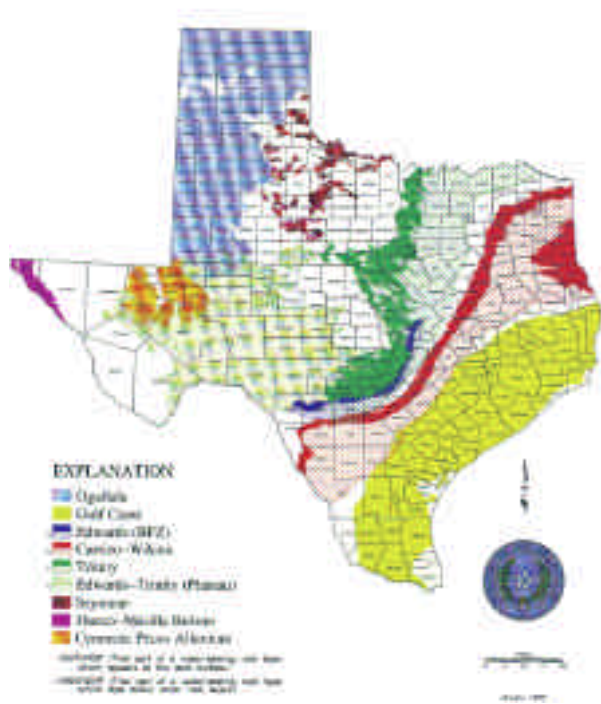
© LARRY TURNER

What it has is a major distribution imbalance between the water-rich east and the water-poor west, exacerbated by environmental restrictions on the use of both surface and ground water. Litigation over endangered species that rely on the Edwards Aquifer, for example, has now rendered some 45 million acre-feet of the purest ground water in Texas as inaccessible as Pluto.

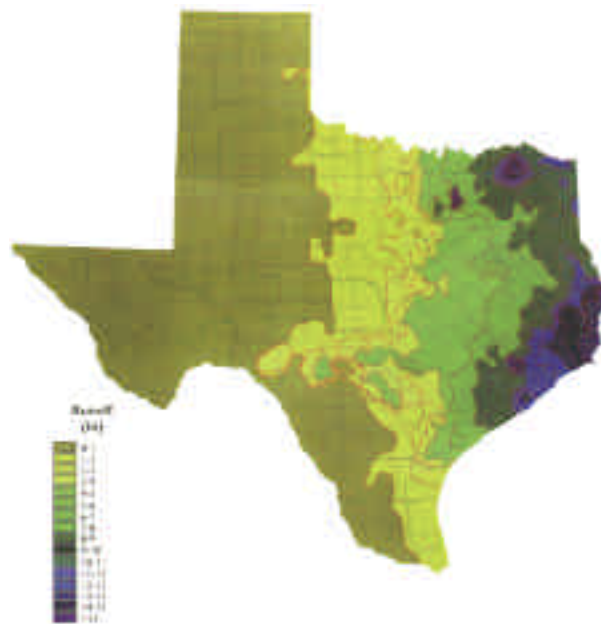
The modern Texas water wars reached

critical mass in 1997, when prolonged drought, growing urban demand, and environmental kneecapping of water development projects finally gridlocked state water planning efforts. This led to one of the more astonishing phenomena ever witnessed here—legislative agreement on something substantive.

In Texas the people only let the legislature meet once every two years, and then only for



ABOVE: Major aquifers of Texas. BELOW: Average annual runoff, 1961-1990. Maps courtesy Texas Water Development Board, 1994.



140 days. This limits collateral damage from activist government, something that anyone who has ever observed legislatures in action will immediately understand. But in 1997 the legislature passed a water bill that actually made sense. It gave up on centralized state water planning, established 16 regional water planning groups, and told *them* to prepare 50-year water plans for legislative approval in

2001. That shifted the battle to the field, and forced everyone to confront some hard future tradeoffs: surface vs. groundwater supplies, rural vs. urban economics, municipal vs. agricultural uses, private vs. public providers, and resident vs. absentee landowners.

The 800-pound gorilla in the future water equation is urban water demand, and the numbers are sobering. San Antonio alone is looking at a shortfall of over 360,000 acre-feet a year by 2050. The economics of large-scale surface reservoirs has become prohibitive in Texas, and while conservation will help it can only go so far. Desalinization is the only water source that is actually getting cheaper, but until that becomes economically viable most remaining shortfall will have to be met with groundwater.

Texas has abundant groundwater, and ranchers rely heavily on the state's aquifers. Texas is also nearly unique in that it operates under a groundwater system called "rule of capture." Rule of capture is the property right, guaranteed by law, to pump as much groundwater as you want so long as it doesn't constitute willful waste, intentionally hurt the neighbors, or cause land subsidence.

Under rule of capture, the biggest well gets the most water. That, and the need for large-scale groundwater production to meet growing urban demand, raised fears about the lack of legal recourse if a neighbor sucks your well dry. This in turn led

to proposed changes to the hallowed rule of capture, and to caterwaulin' by landowners from the Red River to the Rio Grande.

The rapidly escalating cost of the groundwater needed to meet urban demand is creating both winners and losers in rural Texas. Some communities, especially those that rely on cheap groundwater for crop production, are in dire straits. But those with a

large renewable groundwater surplus, a ready market to buy that water, and a locally controlled groundwater management district to sustain the supply, are headed for green pastures.

When a rancher's only making \$50 an acre, it doesn't take a genius to see what groundwater marketing can do for the bottom line. San Antonio was still leasing groundwater pumping rights for \$75 an acre-foot just a year ago, but the cost of water to San Antonio could go as high as \$1,000 an acre-foot by 2050. Not all of that would go to the groundwater rights holder, of course—transportation, treatment and distribution costs are also figured in—but even a fraction of it would dramatically improve ranch economics. Assume a pumping limit of 1-to-2-acre-feet per acre per year to sustain the supply, and do the math yourself.

A lot of landowners are doing just that. There has been a mad scramble to develop locally controlled groundwater management districts in Texas, and last year one of the very first property transactions occurred where the seller reserved partial groundwater rights just as oil rights have always been reserved.

Unfortunately, groundwater marketing doesn't work everywhere in Texas. The water doesn't always occur in sustainably marketable quantities, and even where large supplies do exist they're not always close enough to market to be competitive. T. Boone Pickens, for example—the famous Texas corporate raider—recently offered San Antonio 200,000 acre-feet a year from the Ogallala Aquifer in north Texas only to find that pipeline costs left him trying to compete with \$1,200 water in a \$600 market. He may have better luck in El Paso, where projected shortfalls are just as bad and water supply alternatives are a whole lot worse.

Water's still for fightin' in Texas, and whiskey's still for drinkin'. But the nature of the Texas water wars is changing radically, as urban economics begin to dominate the water market and the cost of groundwater soars. The new water economics are clearly bad news for some rural communities, but financial prospects have never looked better for those with the water, the market and the vision to put 'em together. ■

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Drowning in Albuquerque?

WHILE MANY OF US ARE DRAWN TO THE WEST BECAUSE OF ITS BEAUTY, OUR DAILY DECISIONS CAN ACTUALLY LEAD TO THE DEGRADATION OF THE LAND AND THE WATER UPON WHICH LIFE DEPENDS. BY ALLAN SAVORY



PHOTOS COURTESY ALLAN SAVORY, CENTER FOR HOLISTIC MANAGEMENT

The Rio Puerco carries more silt than any other tributary of the Rio Grande, which endangers Albuquerque because of dams and flood control. Planning without understanding how water cycles function in nature is simply asking for trouble.

When you think of the West, do you think of wide-open spaces where the deer and the antelope play? Or do you think of rapidly growing metropolitan areas like Phoenix, Denver, Salt Lake City, Las Vegas and Albuquerque—areas that increasingly draw on depleting or damaged natural resources?

As a citizen of Albuquerque, I am greatly disturbed by the short-sighted approach that our city planners are taking in addressing the needs of not only those of us who live in Albuquerque, but those who depend on the resources Albuquerque provides; i.e., medical, educational, and utility services to name a few.

Certainly these city planners are not the only planners in the world who are designing

cities with little or no regard for the way natural processes function. But when it's happening in my own backyard, I begin to wonder why I'm investing in a place that will one day be under water.

Under water in a desert? How could that be? Let's look at some basic facts.

UNDERSTANDING THE WATER CYCLE

Flooding is the greatest single cause of weather-related deaths in the United States. This was not always so. If we look at the first 100 years of records for the Mississippi River, 1844 to 1944, the river apparently flooded seriously three years or 3 percent. During the next 30 years it flooded seriously about 10 percent of the years, and in the following 20 years it flooded 25 percent of the years. As there has been no corresponding weather change, we must look at why floods are increasing.

Even in low rainfall areas, extremely large amounts of water fall over vast areas of land. It is easy to visualize this quantity when one realizes that 1 millimeter of rain equals 1 liter of water on each square meter of land. In other words, 10 inches of rain equals about one 44-gallon drum of water on each square yard of land. Over millions of acres of a catchment this is a mindboggling amount of water.

If most of the soil surface between plants is bare and exposed, the bulk of that water will soak in, *if rainfall is gentle*. However, over the following days, most of it (80 percent or more) evaporates from the exposed surface, resulting in drought in poor years despite adequate rainfall. When good or high rainfall occurs, the exposed soil sheds anywhere up to 90 percent of the water, resulting in floods. Most gardeners understand well the fate of water hitting land, so they will cover soil with plants and mulch to retain the moisture.

The catchment area of the Rio Grande, which flows past Albuquerque, receives low and erratic rainfall. Typically, such areas today have from 50 percent to over 90 percent bare or algae-covered soil between plants. In such climates, where the soils, plants, and all life evolved together, such high percentages of bare soil are not natural. Fortunately only two things cause such high levels of bare soil—too few large animals moving through to regenerate the land, and fire. There is no other known cause.

These environments evolved with millions of large animals, most of which became extinct within a few centuries following the arrival of skilled human hunters 10,000 years ago. Fire and unnatural pack hunting by humans changed the face of North America. Since then, there have been ever diminishing numbers of wildlife and, more lately, livestock.

For these reasons the Rio Grande and its tributaries, such as the Rio Puerco, carry extraordinarily high loads of soil, or silt. Albuquerque residents witness this in the discolored water of the river and irrigation ditches when river flow is high. In fact, nationwide, eroding soil is now our greatest annual export—outweighing all grain, timber, meat, military and commercial products.

Albuquerque, as a consequence of planning without understanding how water cycles function in nature, is endangered not only by the state of the Rio Grande catchment, but also by two dams and its flood control structures.

CAUGHT BETWEEN TWO DAMS

The ability of a river to carry silt is dependent on the velocity of the water. Any time water slows down, silt is deposited. Above Albuquerque, Cochiti Dam was built to mitigate flooding. Cochiti is a short-bodied dam built below a steep gradient stretch of the river, so when the fast flowing water hits it and slows down, the silt is deposited in the dam.

In the early 1980s, when I first moved to Albuquerque, there was some debate in the local papers as to whether the rapidly silting Cochiti Dam should have its wall raised one foot at a time or by several feet in one operation. No matter how high the wall is raised, the silt will overcome the dam. I have seen some short-bodied dams filled with silt in as little as 10 years on smaller catchments in Pakistan.

Below Albuquerque is Elephant Butte Dam. This is a long-bodied dam below a flat gradient stretch of the river, so it is not filling with silt. Anyone flying over the Rio Grande can see that even though the flowing river is full of silt, the water in the dam is clear. The reason for this is that the river slows its velocity as it hits the tail end of the dam and thus deposits its silt above the dam. I hunt ducks there in season, and the amount of silt being deposited is incredible, as the river has also picked up the silt load from the Rio Puerco before it reaches Elephant Butte. The Rio Puerco, I believe, carries more silt than any other tributary of the Rio Grande.

When silt is deposited above a dam, as in the case of Elephant Butte, it alters the gradient of the riverbed. This causes the silt to be deposited higher up the river in each successive season, altering the gradient further and causing yet more silt to be deposited higher up the river. I was informed some years ago that the bed of the Rio Grande where it passes Albuquerque is now higher than the center of Old Town. If true, this clearly was not the case when Old Town was founded, despite the Rio Grande having flowed by for millions of years.

FLOOD CONTROL TANK TRAPS

Residents of Albuquerque are not aware of how high the riverbed is because of the flood control structures all along the river as it passes through the city. These, plus the short-lived Cochiti Dam, control all floods—for the moment. Because of the fear of floods some years ago, the Corps of Engineers built miles of what I call Omaha Beach tank traps—cable and iron structures along the river inside the flood control earthworks.

Any river flowing past a city, and liable to flood, should be able to move the water and silt as rapidly as possible to avoid serious damage. Healthy living vegetation, and in particular grass cover, normally holds riverbanks, allowing water to flow by relatively harmlessly. The Rio Grande riparian area alongside Albuquerque, like its catchment, has no large animals interacting with the vegetation and soil as it did for millions of years, and is thus full of dead vegetation and almost no grass. The dead woody vegetation all along the river catches on the cable and iron structures so laboriously constructed by the Corps of Engineers. This, of course, slows water flow, deposits more silt, and exacerbates the likelihood of city flooding.

INVESTING WISELY

If anyone wanted to plan a short-life city, it would be hard to beat Albuquerque. A vast catchment is subjected every day to the two treatments that cause bare soil to abound. A short-bodied dam traps silt above the city ensuring a major catastrophic flood at some point. A long-bodied dam below the city ensures the river gradient is constantly altered to deposit silt higher and higher up river. Riparian area management practices ensure a high proportion of dead tree trunks, dead shrubs and sparse grass cover. Flood control earthworks confine and raise the water level where the river flows past the city, and many miles of iron and cable structures catch dead vegetation, slowing flow even more.

Would any knowledgeable and wise person invest long-term in such a city? No. Does it need to be this way? No. If city planners understood the relationship of cities to rivers and rural surroundings and how nature's processes function, all this could be changed.

How do I know?

For over 40 years, I have worked with people practicing Holistic Management. I have seen them take failing farms and ranches and turn them around. Where once their rivers and creeks were silting up, they have healed the catchment areas and lessened the erosion that leads to silt. Where once there was conflict about how to manage the land, people have come together to plan and make long-term investment in the land and businesses. Where once financial ruin was imminent, now there are profitable enterprises.

The same could be true for Albuquerque. If planners used the Holistic Management

decision-making process, they would begin to correct this entire situation at low cost while enhancing the economy of both city and its rural surroundings and villages.

Would you want to invest in a city that is doomed to unnatural disasters, or one that will offer a fulfilling life for your children and their children?

I believe we all can make a difference to the health of the Rio Grande catchment. I have seen what large effects a small group of people can have when they all agree on what they want (i.e., healthy catchments) and devote their time to working on that, rather than reacting to what they don't want (i.e., floods).

I hope you will take the time to learn more about the health of the natural processes at work in any catchment area and how to



Typical erosion in the arid West. BELOW: "Omaha Beach" tank traps constructed by the Corps of Engineers will slow water flow and exacerbate the likelihood of city flooding.



make them function well in your areas. That will enable you to meaningfully influence the policies and plans affecting your catchment.

It doesn't matter whether you live in the city or a rural village—we're all in the same boat. You can let your tax dollars go toward bailing out a sinking ship, or you can insist they be spent to dry dock that ship, repair it, and get it back into a clear flowing river. ■

Allan Savory founded the Center for Holistic Resource Management, Albuquerque, N.M. <allans@HolisticManagement.org>.

IN MAY, U.S. FISH & WILDLIFE SERVICE DESIGNATED SHORE AREAS COVERING SOME 200 MILES ALONG THE GREAT LAKES AS A "CRITICAL HABITAT" FOR PIPING PLOVERS. ANOTHER 1,700 MILES, FROM NORTH CAROLINA TO TEXAS, IS EXPECTED TO BE SET ASIDE AS WINTERING GROUND FOR THE THREATENED BIRD. THE U.S. ARMY CORPS OF ENGINEERS HAS SAID THAT ASIDE FROM THE GREAT ECONOMIC IMPACT, SUCH A DESIGNATION WOULD THWART THE CORPS' OBLIGATION TO PROTECT LIVES AND PROPERTY FROM LARGE STORMS AND HURRICANES.



SUNSET BUZZARD ROOST, NEVADA ©LINDA DUPPRENA

"I tell you, gentlemen, you are piling up a heritage of conflict and litigation over water rights, for there is not sufficient water to supply the land."

—John Wesley Powell, speaking to the Los Angeles Irrigation Congress, 1893

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