

RLI COLORADO

Newsletter

SPRING 2009



PRESIDENT'S Paddock

By: Kirk Goble

Hello Colorado RLI members and Happy Spring to you! As we watch nature's wonders grow and bloom and flourish this time of year we have renewed hope and faith in the future, even as the man-created financial world around us seems to be withering and dying on the vine. I prefer to look forward with optimism, knowing that we'll have to make adjustments, even sacrifices, in the short run to help create a better future in the long run. I sure don't pretend to have the answers, but I know that every crisis provides opportunity. The lyric of one of my favorite songs says "Once in a while you can get shown the light in the strangest of places – if you look at it right." Here's to all of us looking for the light!

I know many of you have been making the sacrifices required of us all – from changes in your office procedures, to minimizing unnecessary travel, all the way up to taking on another job in order to fill in the blank spots. It is important in times like this to have a network of professional

peers to depend on and even to commiserate with. REALTORS Land Institute can provide that network with our quality membership, applicable education, and real live active marketing.

I was very pleased and gratified with our January meeting in Denver. When you think that tough economic times might reduce our attendance, we had a near-record number of folks come to Denver. We had a productive Board of Directors meeting one day prior to the meetings – thanks to all the members of the Board for your dedication and participation. It takes all of us to make this machine run. Our marketing session took a good long day and was filled with excellent listings and opportunities – several members reported potential deals coming out of those sessions. Everyone's PowerPoint packages are getting better and make for very effective property presentations – thanks for



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all your efforts to put those slide shows together – keep up the good work!

Our January Education session on Friday featured a panel of experts who brought us up to date on critical issues for land brokers in the arena of renewable energy – specifically wind and solar power generation and biofuels. Thanks to Christy Belton for organizing the class! There are few more important issues than working toward energy independence and Colorado is very well situated to capitalize on that industry with our blessings of natural resources and trained workforce. These changes are bound to have effects across the board for real estate brokers, from dealing with the facilities themselves (locating appropriate parcels, evaluating them for potential, negotiating leases, etc.) all the way through transition and development lands for plant sites and (hopefully) a recovering housing market in the state. The economic crisis affects us all, this kind of knowledge can serve to help work through it toward a brighter future.

We had a successful Land 101 course in Fort Collins in January that was well received and may yield a few new members. Thanks to the members who attended that are working toward the ALC (Accredited Land Consultant) designation. I have also been strongly promoting RLI as I teach the CAR Water Course throughout the state.

CALL FOR VOLUNTEERS - The REALTOR Rally is coming up on April 9th at the Colorado Convention Center in Denver. As in the past, Colorado RLI will host a booth at the trade show – an event that has recruited numerous new members over the years. We have a few folks signed up to help man the booth and chat with folks throughout the day, but we could use a few more. I would really appreciate any help you can offer – even an hour to help spell someone else



RANCH LAND TOUR

The dates are set – so mark your calendar for: Thursday/Friday, June 11 & 12th.
Location: Montrose/Crawford/Paonia Area
Hotel, lunches, reception, etc. information will be forthcoming.
You will receive your invitation with all the details as soon as they are finalized.

2009 CALENDAR OF EVENTS

April 9	REALTOR Rally	Denver
May 7 & 8	Marketing Session & Education	Grand Junction
May 11-15	NAR & National RLI Meetings	Washington, DC
June 8 & 9	CAR Summer Conference	Crested Butte
June 10 & 11	CAR Business Meetings	Crested Butte
June 11 & 12	Ranch Land Tour	Montrose area
July 16 & 17	Marketing Session & Education	Denver
Sept. 17 & 18	Marketing Session & Education	Grand Junction
October 19 & 20	CAR State Convention	Colorado Springs
October 21 & 22	CAR Business Meetings	Colorado Springs
Nov. 11-16	NAR & National RLI Meetings	San Diego, CA

is helpful. Plus you get a chance to talk to lots of other brokers and expand your networking. Please contact Maggie at the CAR office to volunteer for a short shift at the booth – I hope to see you there!

We've had a few suggestions for the Annual Ranch Tour and the committee is reviewing the likely locations and will soon be setting a date for the tour – watch your newsletter and e-mail for more info.

I'm pleased to tell you that we have maintained our member-

ship numbers from last year to this – 134 members last year; 138 members for 2009. Thanks for your dedication to the Institute and helping us to provide value to our members. It really does take everyone working together to create success.

We will hold our Spring meeting in Grand Junction on May 7th and 8th. Plan to attend and make reservations soon! We have great momentum built up and we can keep this going! We will have our dynamic marketing session on Thursday with an interesting Ed Session on Friday.

Our presenter will be David Fisher with Fisher Equity Advisors. David is one of our valued sponsors and has developed a good presentation on tenant-in-common (TIC) 1031 options. We can use every tool we can get to keep ahead in tough markets – David has some great knowledge to offer us. I hope to see you all there! Thanks!

Kirk Goble, ALC

Marketing Corner

Hopefully by now everyone has booked their rooms & is planning on attending our Spring Grand Junction Meeting May 7 & 8th.

Now more than ever we need to take advantage of this marketing session to get our inventory and our buyers in front of the best land brokers out there.

Bring a list of all your buyers to present at our buyer session. Everyone will be very interested to see what buyers are in the market today.

Also visit with your sellers about the shortage of cash in the market place and ask about exchanging or owner financing possibilities.

Come prepared to do some deals – will see you in May!!

Steve Fleming

FARM CREDIT SERVICES

In the wake of the federal government's take-over of the nation's housing GSEs, Fannie Mae and Freddie Mac, the Farm Credit System stands as an example of everything that is right and working with GSEs (government-sponsored enterprises).

As the nation's first GSE, Congress chartered the Farm Credit System in 1916 to ensure a permanent source of reliable and competitive credit for the agriculture industry and rural America. Over the years, Farm Credit has accomplished that mission and continues to play an important role in the economic viability of agriculture and rural communities throughout the country.

Why is Mountain Plains Farm Credit different? There are several reasons:

- We remain financially strong. Our 2008 Annual Report to Shareholders shows a year of favorable net income, credit quality, loan growth, and a positive capital position.

- Our mission comes first. Because we don't issue publicly traded stock, we avoid the conflict with mission that has troubled other GSEs. Furthermore, our cooperative structure ensures that profits are either returned to customers through the Ownership Dividend Program (\$6.0 million in 2008, and \$42.5 million since 2004) or used to capitalize additional mission-related activity.

- Our financial reporting is transparent. Quarterly and annual financial disclosure information providing detailed information about our performance and financial condition is available on our web site at www.ifeedtheworld.com.

- We are subject to strong, independent regulatory oversight. The Farm Credit Administration (FCA) is the independent Federal regulatory agency overseeing our safety and soundness. Their experienced, professional staff regularly examine our operations to ensure compliance with regulations and law.

- Our unique, self-funded insurance fund provides protection. We are the only GSE with a self-funded insurance fund that protects to the extent available investors in Systemwide debt securities.

Not all GSEs are alike. The Farm Credit System serves as a positive example of how government-sponsored enterprises can and should work. Mountain Plains Farm Credit remains sound as it continues to successfully fulfill its mission.



Mountain Plains Farm Credit Services

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women who feed the world.*



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Note From Your Chairman

George R. Harvey, Jr.



As we all know this is one of the toughest markets we've ever seen, no matter how long you've been practicing real estate in Colorado. I thought I would give you a little feedback about what the National Association of REALTORS® and Colorado Association of REALTORS® is doing for you. First, there was some controversy from the Department of Housing & Urban Development potentially regulating seller financing throughout the U.S. Colorado has dealt with this HUD requirement and allows sellers to offer seller financing without being regulated. The Colorado Association of REALTORS® is currently exploring the federal regulation to see if there is any overriding impact on seller financing that we are not currently aware of. I have personally asked Laurie Janik, lead general counsel for the National Association of REALTORS®, to research this item for us. As soon as we get a clear answer, Colorado RLI will be the first to know.

This is the time of the year that the CAR legislative committee is monitoring all of the bills that are introduced into the Colorado legislature to see their impact

from a regulatory basis on water, land and property rights regulation. The committee is comprised of a phenomenal group of 30 volunteer REALTORS® from across the state that monitors these individual areas of concern. Each year there are anywhere from 700-800 bills that are introduced into the state legislature. As a rule of thumb about 100-125 are passed each year that specifically affect real estate brokerage in Colorado or individual sellers or buyers of real estate. One item has been the discussion of increasing the cost of well permits from \$100 to as high as \$500-\$600 per permit. Currently CAR legislative water committee is monitoring this bill and is trying to speak out against such a high increase. As many of you know, the state of Colorado budget is fiscally short anywhere from \$600-\$900 million and the state legislature is trying to find places to get more money to balance the budget.

Lastly, with my involvement in the land business several of you have told me you don't use Realtor.com or participate in any MLS because of the specialization of your practice. You might be

interested to know a few statistics I received from Realtor.com

about how many land and ranch listings there are on their website. On any given day the total number of listings on Realtor.com is approximately 3.5 to 4 million properties. Of those about 1 million are land or ranch listings which come from almost 500 MLS throughout the U.S. Additionally all of the land and ranch listings on Realtor.com are automatically put on WorldProperties.com which goes out to over 70 countries and an additional 2 million real estate agents. I thought you would like to know the tremendous exposure your land and ranch properties get through Realtor.com with the idea it might benefit your practice.

I look forward to seeing you in Grand Junction in May. Hopefully by then we will see an increase of business for our summer season.

HOW LOW WILL IT GO?

Colorado may face a dry and difficult future of fighting for water

By Matt Jenkins

Eric Kuhn is not the person you'd expect to deliver ominous revelations about Colorado's future.

Kuhn runs the Colorado River Water Conservation District, which represents 15 counties on the state's Western Slope. Compared to some of Colorado's other water agencies, the River District leads a relatively low-profile existence on one floor of a small office building in the mountain town of Glenwood Springs. The district has 23 employees, a dog-friendly office policy and a vehicle fleet composed mainly of Subarus, all of which gives the enterprise the folksy charm of an REI catalog.

At the age of 59, Kuhn is resistant to many of the most rudimentary conventions of the water business -- things like bolo ties and golf -- and he is not particularly partial to the back-slapping bonhomie in which even the staunchest water adversaries often engage. He favors jeans and Nikes, and sometimes leaves the office to walk a footpath along the river and turn over problems in his mind.

Kuhn has a warm personality and a fierce, focused intelligence. He devotes a great deal of energy to understanding things like the relative performance characteristics of various types of weather radar, and he has been known to wander off in the middle of a conversation when an important breakthrough materializes in his head. "He's one of these scary-brilliant people," says his wife, Sue. "It's just kind of how he's wired."

He also has something of the manner of a well-read naval officer -- which, it turns out, he once was. He spent six years aboard submarines, spying on the Soviets' nuclear weapons program. It's tempting to think that Kuhn's way of thinking about the Colorado River was shaped by those long deployments in the murky depths, when his submarine's survival depended on the intelligent interpretation of what little data

could be gathered.

Kuhn has lately become obsessed with one of the bigger riddles hanging over Colorado's future, and his quest for answers has challenged some of the fundamental tenets of the state's water orthodoxy.

"I've always been concerned that our reliable water supply is a lot less than what we've been suggesting," he says. "I think there's a lot less available than we thought there was."

More than 3 million people in Colorado -- roughly two-thirds of the state's population -- rely on water from the Colorado River. The river sustains alfalfa, apples and pears, Olathe sweet corn, and ski and ranch towns across the Western Slope. Yet its water may be even more important to the Front Range -- Denver and its cluster of urban and suburban satellites that lie hard against the eastern foothills of the Rockies.

More than a dozen tunnels channel water underneath the Continental Divide to roughly 2.5 million people on the Front Range. Moreover, the state is expected to grow by 2.9 million people over the next 25 years, and the Colorado River has long been seen as the only real source of water for the future.

So it's not surprising that water managers have, for years, privately asked: How much more of the Colorado River can the state use?

Publicly, the state's water managers tend to stick to a time-worn mantra: Under the terms of the interstate treaties that govern the river, Colorado still has as much as 1.5 million acre-feet left to develop. That's enough water for about 12 million new residents, more than four times the state's official population projection for the next quarter of a century.

But there has always been an unspoken acknowledgment of a much grimmer

possibility. Six other states also rely on the Colorado River. And between the peculiarities of the so-called Law of the River and mistaken assumptions about the river's long-term performance, Colorado may have to content itself with little more than "the right to leftovers," as two observers once put it. In a severe drought, in fact, cities and farms within the state could be pitted against each other in a fight for water.

That always seemed like an abstract possibility, until just such a drought wrapped its hands around the river in 1999, and kept them there right up to the present day. And so Kuhn decided it was time he figured out just how much water was left for Colorado -- and, by extension, how long the state could continue to grow.

Until recently, "the thought in Colorado was that it would take another hundred years," Kuhn says. "But the water supply we thought we had isn't there."

Kuhn was born on July 4, 1950, in Edmonton, Alberta, where his father was working as a petroleum geologist for Texaco. When Kuhn was 8, his family moved to Flagstaff, Ariz.

Kuhn's grandfather, who lived in Prescott, would often fly up in his Piper Cub -- a tail-dragger without a radio -- and take Kuhn flying over the Grand Canyon and the Indian country of northern Arizona. "In those days," Kuhn says, "you didn't need a pilot's license. All you needed was an airfield."

Kuhn's dad flew, too -- he had been a Marine pilot in World War II -- and for a while, Kuhn seemed set to carry on the family's aviating tradition. He went to the University of New Mexico on a naval ROTC scholarship, where he got his pilot's license. But his vision wasn't good enough to meet the Navy's requirements, and so Kuhn, who graduated in 1971 with an engineering degree, went into the submarine service instead.

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In late 1972, Kuhn found himself aboard a submarine called the Halibut as it steamed under the Golden Gate Bridge and then dove deep beneath the Pacific -- headed for the Kamchatka Peninsula on the easternmost edge of Siberia. Kuhn found himself wondering, "What have I gotten into?"

The Halibut carried a contingent of operatives from the National Security Agency, and it slowly crept into the Sea of Okhotsk, where the Soviets conducted many of their ballistic missile tests. There, in 28.6-degree water 500 feet below the surface, the Halibut deployed a dive team. Breathing helium to counteract the intense pressure, kept alive by hot water continuously pumped through their dive suits and working in pitch black, the divers located a Soviet underwater communications cable. Then they wiretapped it.

That mission and several others would yield crucial information about the Soviets' ballistic missile-testing program, helping the Navy maintain its edge in a spiraling arms race between the Soviets' nuclear-armed "boomers" and the American attack subs designed to destroy them before they could vaporize the U.S. But the voyages were so secret that it would be 20 years before Kuhn finally told his family exactly what he had done aboard the Halibut.

After his discharge from the Navy in 1978, Kuhn got a graduate degree at Pepperdine and went to work for the engineering giant Bechtel, starting up the Palo Verde nuclear power plant near Phoenix and the San Onofre nuclear plant outside San Diego. But he didn't stay long: Three Mile Island melted down in 1979, and "the handwriting was on the wall," he says. "No one was building any new power plants."

An ad in the Wall Street Journal, for an engineering position at the River District, led him to Colorado.

Kuhn arrived at the River District in 1981 with no particular expertise in water but filled with his trademark curiosity. "It looked like an adventure to

me," he recalls.

From the start, Kuhn immersed himself in the river's convoluted history, and as he worked his way up the ladder (he became general manager in 1996), his curiosity intensified. Then that curiosity became a professional imperative.

In 1999, the drought set in. In 2002, the river's flow was just 25 percent of average. And by 2004, Lake Powell and Lake Mead -- the main backup supply for water in the Colorado River -- were half-empty.

Sometime late in 2006, Kuhn embarked on an exhaustive review of the literature to understand how much water the river could reliably deliver. He estimates that he spent almost 25 hours a week over the next seven months, reading some 10,000 to 15,000 pages.

Kuhn pored over reports from the river's earliest explorers, congressional testimony and comprehensive plans for development, pleadings from court cases, and an avalanche of scientific papers about El Nino, tree-ring chronologies, climate change and obscure phenomena like the Atlantic Multi-Decadal Oscillation and shifts in the onset of spring runoff. Along the way, he became one of a handful of people who have developed a true connoisseur's delight in the exegetical nuances of the 1922 Colorado River Compact and its reams of related documents and scholarly analysis.

He gradually synthesized what he had learned into a 111-page report. Much of it he wrote out longhand, making reference along the way to Deuteronomy, the modified Blaney-Criddle methodology for determining the consumptive water use of pasture grasses, and The Incredible Shrinking Man. "When he was writing, it was constant. He would come home and write till he went to bed," says Sue Kuhn. "He was really excited about the whole thing. He was thrilled."

Kuhn's office bookshelf holds several ink-stained, broken-spined old gov-

ernment publications, and, his report makes clear, they stand as a useful metaphor for the broader history of the river. They are essentially a series of warnings that came at the wrong time.

In 1924, just two years after the Colorado Compact was signed, a government hydrologist calculated that the actual flow of the river was 10 percent less than the Compact negotiators had assumed. In 1965, a water engineer named Royce Tipton estimated that the river's reliable flow was really about 14 percent less. "That was pretty shocking at the time," Kuhn says. It only got worse: Subsequent reports found that long-term flows were fully 22 percent less. "But then we just kind of put those reports on the table and went back to saying there's a lot of water.

"About the time the Tipton report was done, things turned wet. And they stayed wet through the late '90s," he says. "That wet period was the beginning of the Rocky Mountain boom days. That's when our growth exploded in the West."

The wet cycle meant there was more than enough water to accommodate the growth spurt, at least for the next 35 years. It also caused a weird psychological drift for water managers. Although severe droughts had left their mark hundreds of years back in the paleologic record, the 20th century was abnormally wet. Consequently, what we think of as normal is, in fact, unnaturally wet, compared to the much longer lifetime of the Colorado River.

Throw in climate change, which will almost certainly result in a decrease in average flows for the Colorado River (though to what extent is still hotly contested), and things really start looking grim. The desert Southwest is facing the slow decay of the water supply upon which the region has been built.

"An 80 percent year is not that bad. But if we had 20 years of 80 percent runoff on the Colorado River, we'd drain Lake Mead and Lake Powell," Kuhn says. "We're so close between supply and

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demand that a long period of 80- or 85-percent years will bankrupt the system."

Kuhn's quest to understand the river put him at the front of a sometimes lonely fight to challenge the conventional wisdom in Colorado. Some saw his argument as a self-interested effort to keep the Front Range from stealing the Western Slope's water, by arguing that there wasn't any water left to take. But during the summer of 2007, Kuhn's conclusions were validated in a surprising way.

Several Western Slope communities sued Denver to prevent the city from securing new rights to Colorado River water. They argued, basically, that there simply wasn't enough water in the river.

Glenn Porzak was the lawyer who argued against Denver in the case. And, as it happened, he had seen a copy of Kuhn's report. "(Kuhn) sent it out to a number of people, saying, 'Give me your comments,'" says Porzak. "I read this thing and said, 'I'll give you my comment: I want you as a witness in this case.'"

So Kuhn took the stand on June 13, and carefully noted that "there's no single answer to how much water Colorado has left to develop. The answer is a function of how much risk the water users in Colorado are willing to take." But, he testified, the amount of water that the state can reliably count on is no more than 150,000 acre-feet -- considerably less than half of what would be needed for the 2.9 million people projected to arrive over the next quarter century.

Denver Water's attorney, Casey Funk, opened his cross-examination by remarking, "Boy, that's a pretty pessimistic view of the future, Mr. Kuhn. Does the state of Colorado share that same opinion?"

As a matter of fact, the state of Colorado did share that opinion, although that wouldn't become clear until 13 days later. On June 26, Denver Water

called its own witness: a man named Randy Seaholm, who is the state's chief of water supply protection.

Funk walked Seaholm through the process of calculating how much water remained available for development. Based on what might be termed a constructionist reading of the Colorado River Compact, that number works out to roughly 1.5 million acre-feet. Still, most water managers recognize that the numbers on which the Compact is based are at least somewhat higher than the river itself can reliably deliver. So Funk took Seaholm through a second set of calculations, this one based on a recent "hydrologic determination" by the federal government.

"And that would leave, then, an amount of around 600,000 acre-feet left to develop under the Compact, based upon that determination?" Funk asked. "Correct," answered Seaholm.

Still, that wasn't bad. It's enough for about 4.8 million people.

Just before the hearing, however, Glenn Porzak secured a copy of an internal document, prepared by Seaholm only eight days earlier. The document showed that, at the time of the trial, Colorado actually had only 474,000 acre-feet of water left to develop. More importantly, it showed that once existing and approved projects were built and operating at full capacity -- which, according to the document, will be next year -- only 159,000 acre-feet of water will be left.

The number almost exactly matched Eric Kuhn's, and it is only about one-tenth of what the state had officially been saying was available.

"Denver led him through the state mantra: 'OK, on paper, we've got this amount, and we're never gonna admit anything to the contrary,'" Porzak says. "And then it turns out there's this internal document that's just unbelievably close to Eric Kuhn's number.

"I've been practicing 35 years," he add-

ed, "and I've had some good moments. But it was the closest thing I've ever had to a Perry Mason moment."

It was never a great secret that the limits of Colorado's water allocation have been gradually closing in. But Kuhn's emperor-has-no-clothes pronouncements have nonetheless come at considerable cost to the state's self-respect.

His findings mean, first, that reliable water supplies for each additional bit of growth are becoming increasingly uncertain. Second, they call into question the viability of at least two proposals to divert water to the Front Range: One that would draw as much as 300,000 acre-feet of water from the Yampa River, a tributary of the Colorado; and another, floated by an entrepreneur named Aaron Million, that would pump roughly 250,000 acre-feet from the Green River, itself a Colorado tributary. Kuhn's findings also suggest that there's little water left for the predicted explosion of oil shale development in western Colorado, which could require up to 400,000 acre-feet per year. It's anybody's guess when, or whether, oil shale will go forward, but large energy companies like Shell have already filed claims for hundreds of thousands of acre-feet of water.

All of that raises the prospect that growth -- or at least growth with a dependable water supply -- may soon be finished in Colorado. And that's not a message that has been well received.

For roughly the past decade, Scott Balcomb was Colorado's lead representative in negotiations with the six other states that use the river. His task was, basically, to protect the state's water allocation from its rivals. "If we voluntarily decide that we're limited to x acre-feet in our development, and we want to be very safe, we're almost inevitably going to leave water on the table that we could develop," he says. "And I don't like that very much."

In fact, the issue is so sensitive that when Randy Seaholm testified at the Denver water trial in 2007, a state as-

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sistant attorney general accompanied him to intervene if he said anything that might compromise Colorado's negotiating position against the other states. Why the attorney general's office didn't move to have Seaholm's water-availability estimates put under seal is not clear. Balcomb, for his part, says that if the state publicly acknowledges that it has only 150,000 acre-feet left -- which it essentially did in the trial -- that number will boomerang back against Colorado in some future fight between the states over the river's last remaining water.

The Colorado River Compact is essentially a contract between the seven states, and its terms were consciously crafted to enable a kind of mutual coexistence. If legal rights to the river had simply been apportioned following Western custom -- the hallowed doctrine of "prior appropriation," which grants rights to whoever first uses the water -- early-blooming California could have laid claim to a large portion of the river's water in 1922.

As part of the Compact bargain, then, Colorado and the other Upper Basin states -- Utah, Wyoming and New Mexico -- managed to reserve 7.5 million acre-feet for themselves. That gave them certainty that their share of the river wouldn't be gobbled up by California before they needed it. But the price of that certainty was a deal that gives the Lower Basin a significant advantage when times get tight.

That proviso says -- stick with this for a moment -- that the Upper Basin states "will not cause the flow of the river at Lee Ferry" -- the dividing line between the two basins -- "to be depleted below an aggregate of 75,000,000 acre-feet for any period of ten consecutive years." Put differently, that means the Upper Basin will do nothing to prevent the flow of 7.5 million acre-feet downstream to the Lower Basin each year. (As Compact aficionados will rush to point out, the precise terms of the clause dictate that the amount be calculated as a running average of 75 million acre-feet over 10 years -- or "75 over 10," in Compact-ese.)

The problem, of course, is that the Compact promises more than the river can deliver. The Lower Basin gets 7.5 million acre-feet of water from the river's mainstem; the Upper Basin gets its 7.5 million acre-feet; and Mexico gets 1.5 million acre-feet, for a total of 16.5 million acre-feet. But over the long run, the river's mainstem can probably only reliably deliver about 13.5 million acre-feet. In 1986, that mismatch caused John Carlson, then special counsel to the River District, to write, "Unfortunately, the mathematics of the law of the river simply have not worked: The sum of the parts is greater than the whole."

Still, that hasn't been a problem -- yet. Lake Mead and Lake Powell provide the backup capacity that ensures enough water for every state. "But what makes that sustainable is only these rare -- and maybe becoming rarer -- big, wet (El Nino) events that fill Lake Powell," says Kuhn. In the middle of an extended drought, a powerful El Nino could temporarily boost reservoir levels. But if the drought continues, levels will continue dropping again. "Then," he says, "you're waiting to see if you have another wet year."

After nearly a decade of drought, the reservoirs are half empty. If they continue to drop, that will touch off a fight over what little water is in the river, like creditors battling over the carcass of a bankrupted company. And, owing to the 75-over-10 provision, California and the other Lower Basin states get first dibs on their 7.5 million acre-feet. If conditions get bad enough, the Lower Basin states could make a legal "call" on the river and demand that the Upper Basin not take any of its Compact water until the 10-year average once more rose above 75 million acre-feet.

Legal scholars David Getches and Charles Meyers described the predicament poignantly 23 years ago: "How to build a future on the right to leftovers?"

While there may not be much water left for new projects in Colorado, there is also a high risk that existing users -- anyone whose rights post-date the

1922 signing of the Compact -- will be "called out" and cut off to meet the Lower Basin's demands. That could set off a civil war within the state.

To comply with a call, Colorado and the other Upper Basin states would have to shut down their own water users to satisfy their share of the "delivery obligation." Currently, that would be done according to the rules of prior appropriation: More recent, or "junior," users would be shut down first; then the state government would work its way backwards, shutting down increasingly senior rights until the delivery obligation was met. But some of the most junior -- which is to say, the most at-risk -- water users are the water agencies that pipe Colorado River water under the Continental Divide to supply the Front Range. Chips Barry is the manager of Denver Water, the state's largest urban water agency, which supplies about 1.3 million people. In a worst-case scenario, "every right on the Colorado River, post-1922, gets called out," he says. "Now if that happens, that's a disaster for the state of Colorado, and for Denver Water."

Denver would implement strict water conservation and efficiency measures, but beyond that its only option would be to buy water rights around the state that were in use prior to 1922. And every acre-foot that Denver tried to grab would be one that someone else in Colorado already uses.

That would pit the state's cities against its farmers, and put the problem straight back in Kuhn's lap: Most of those pre-1922 rights are held by farms in the River District's territory. And so Kuhn is already thinking about how to prevent the Front Range from buying up farms on the Western Slope, taking their water, and leaving them dry.

The plan -- which he's been developing with Denver Water and several other water agencies -- is to create a water "bank" that bundles together pre-1922 water rights on the Western Slope. Those could then be used to cover deficits on the Front Range in a call. The bank would sign agreements with farm-

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HOW LOW WILL IT GO? cont.

ers in advance, and pay them to irrigate, say, only half their ground in a bad year. The water that would have been used on the other half would then go to cover critical municipal uses. When the drought ended, the farmers would get back full use of their water.

Kuhn insists that such a deal can only come if the Front Range cities put aggressive water-austerity measures in place and use Western Slope water for only the most critical uses. But he acknowledges that it would be impossible for the Western Slope to simply stone-wall the Front Range if its cities are clamoring for water in an emergency. "You can ask them to brown their lawns, but their fire hydrants still have to be charged," he says. "You can't ask them to go without (drinking) water."

Despite occasional rancor, the questions that drive Eric Kuhn are increasingly ones that Colorado's water managers are willing to discuss in their own polite company. And there is growing hope that real answers may burn through the miasmal haze that has, till now, shrouded the crucial question of how much more water Colorado can develop.

In 2007, largely thanks to Kuhn's urging, the Colorado Legislature passed a bill funding a far-more-detailed analysis of water availability than the state has yet attempted. In addition, the Colorado Water Conservation Board is working to assess exactly how the state's water users might be shut off to meet a Compact call.

That process is sure to bring many uncomfortable questions into the open. "I have no illusions that we're going to get through this without a lot of bloodletting," says Randy Seaholm. Still, he said

last December, the prospect of a call is not as dire as Kuhn would have it: "Eric is right when he says every additional drop of water you develop increases the risk that a senior water right may be curtailed in the future. But that's been the case since we started developing water."

Yet the margin of error is thinner today than ever before. Kuhn frequently invokes a cautionary example of the human cost of a call.

Along the South Platte River in northeastern Colorado, farmers for nearly 30 years had made massive investments to pump groundwater for their farms. In reality, the water they were pumping was being sucked out of the river -- and it was water that had other, more senior farmers' names on it.

The pumping was technically illegal. But a series of jerry-rigged compromises were made. And for decades, things were wet enough that there was enough water to go around.

Then there wasn't.

In 2002 -- the same year that rang alarm bells for the Colorado River's water managers -- water supplies on the South Platte plummeted, and a judge ordered that more than 2,000 wells be shut down so that the senior river-water users could get their water. Many farms have never recovered.

"It's just a nightmare," says Tom Cech, the head of the Central Colorado Water Conservancy District. "It's just a terrible, terrible tragedy."

Many farmers have had to move out of the area. Those who can still pump can only run every other pump, and even then at rates far below what they did in

the past. Still other farmers have been reduced to dryland farming. "They're trying to survive on dryland income," Cech says, "which is kind of like going from a salaried position to minimum wage."

That's the kind of disaster Kuhn says the state can't afford to repeat. "In the South Platte, we intentionally chose political expedience over good science," he says. "We knew better, but people chose to make the wrong decision because it was the political path of least resistance."

Kuhn has had to contend with the old Biblical maxim that prophets are rejected in their home towns. He understands that he has cracked open an ugly Pandora's box. But he also has spoken out only after considerable soul searching about the consequences of not doing so.

"Look, I don't know that I'm right," he said last December, as he gunned one of the River District's Subarus over Vail Pass en route to a water meeting. "But I don't think I should be criticized for openly stating what everybody else understands, but is unwilling to talk about."

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