

*Straight Talk - Our Water is Over-Allocated*

**Impacts of Over Allocation on meeting State and Federal Obligations**

**Understanding the Rio Grande Compact  
and the Challenge Facing the Middle Rio Grande Valley**

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I want to give you some information on the Rio Grande Compact, and help you understand the water supply challenge facing the middle valley.

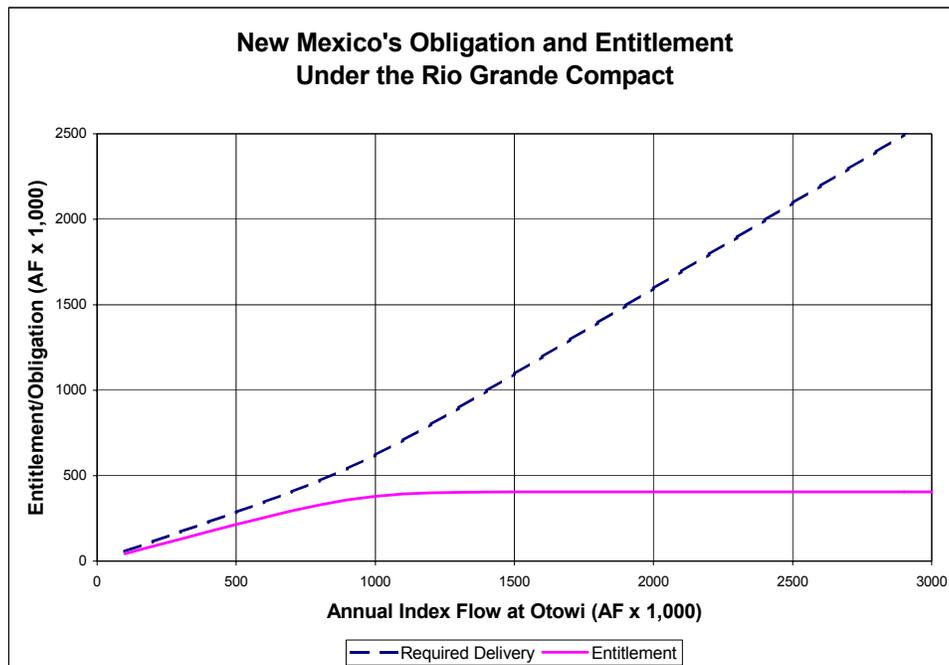
The Rio Grande Compact was signed up in Santa Fe in 1938 between the states of New Mexico, Colorado and Texas after a lengthy period of difficult negotiations. Prior to the signing of the compact, there was a lot of dispute and litigation before the Supreme Court regarding the allocation of the waters of the basin. The opening statement of the Compact optimistically states that it is meant to end all present and future controversy among the states, which as we know it unfortunately didn't, but that's a subject for another forum. What is important for everyone here to recognize is, when a state enters into a compact with another state, it is bound and obligated to observe the terms of that agreement, and those terms take precedence over conflicting state laws. As former State Engineer Tom Turney pointed out earlier, the U.S. Supreme Court has made it abundantly clear in rulings on the Pecos and

**The Upper Rio Grande Basin**



other basins that one way or another, the state *will* meet its obligations under the compact to other states, no ifs, ands or buts about it.

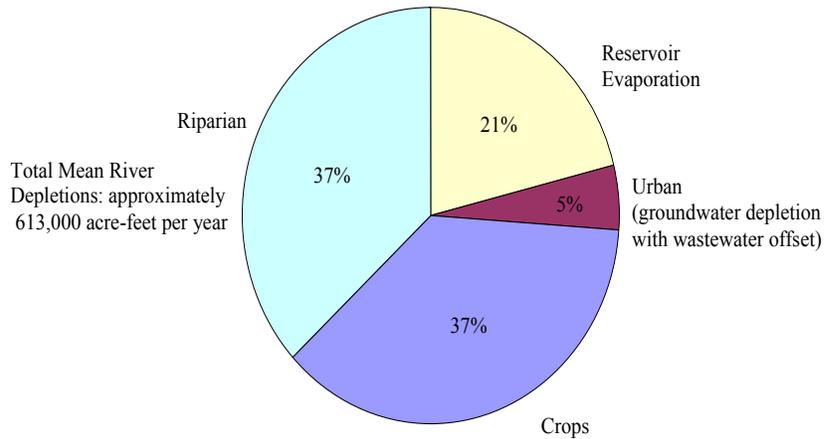
For the middle valley then, the water that is required by compact to be delivered to Texas has the highest legal priority within the basin, with the important caveat that Tom Turney mentioned earlier: Article Sixteen of the Compact states that it does not affect the obligations of the United States to the Indian tribes or impair their rights. Now essentially what the Compact requires from a water perspective is that Colorado must deliver so much water to New Mexico at the Colorado-New Mexico state line, and New Mexico must deliver so much water to Texas at Elephant Butte Reservoir. Probably a better way to think of it, though, the Compact does not



allow any one region in the basin to consume more than its fair share of the limited water supply. Now I know that a lot of people believe that New Mexico got a real bad deal out of this compact, and I believe that perception is incorrect. Under the Compact, New Mexico is allowed to consume, between the Colorado-New Mexico state line and Otowi gauge, the same amount of water it consumed in 1929. It is also allowed to consume within the middle valley between Otowi and Elephant Butte, up to 400,000 acre-feet per year plus all tributary inflow. And, New Mexico is allowed to consume 57% of the water delivered to Texas at Elephant Butte in the Rincon and Mesilla valleys in southern New Mexico. When you add it all up, New Mexico is allowed to consume roughly twice as much water as Colorado, and three times as much water as Texas. Hardly a bad deal.

This next slide shows, focusing on the middle valley, how much water New Mexico is allowed to deplete in a given year. On the bottom scale is the annual adjusted flow at the Otowi gauge. As an example, if the flow is a million acre-feet in a given year, we're allowed to consume roughly 400,000 acre-feet, and we must deliver about 600,000 acre-feet. You'll notice that the amount we're allowed to consume is capped at 405,000 acre-feet and in these very wet years, like the one we're having, we expect to see something like 1.5 or 1.7 million acre-feet flow past Otowi.

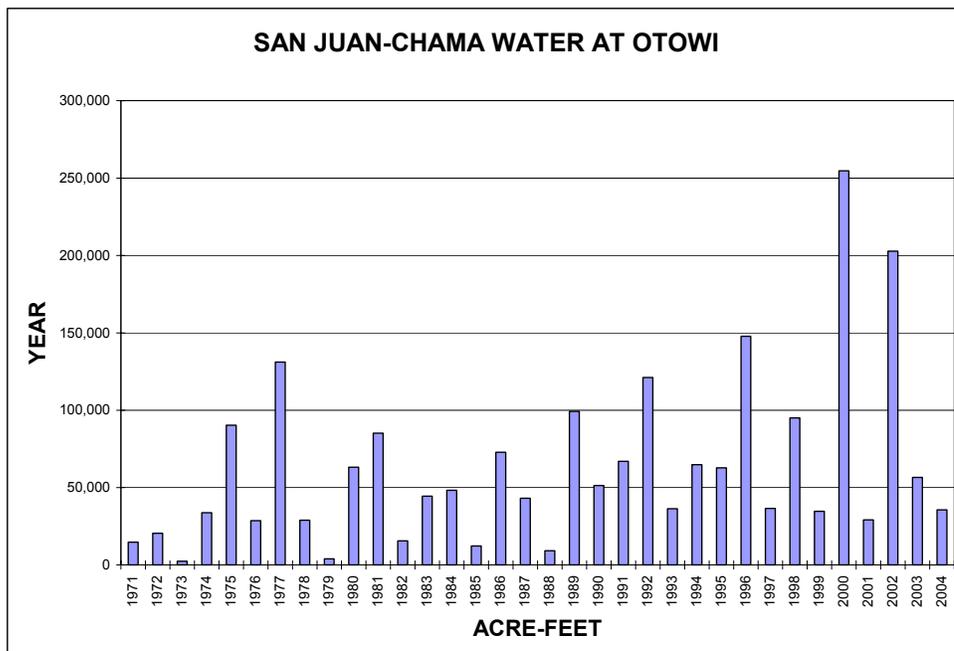
## *MRG River System Depletions*

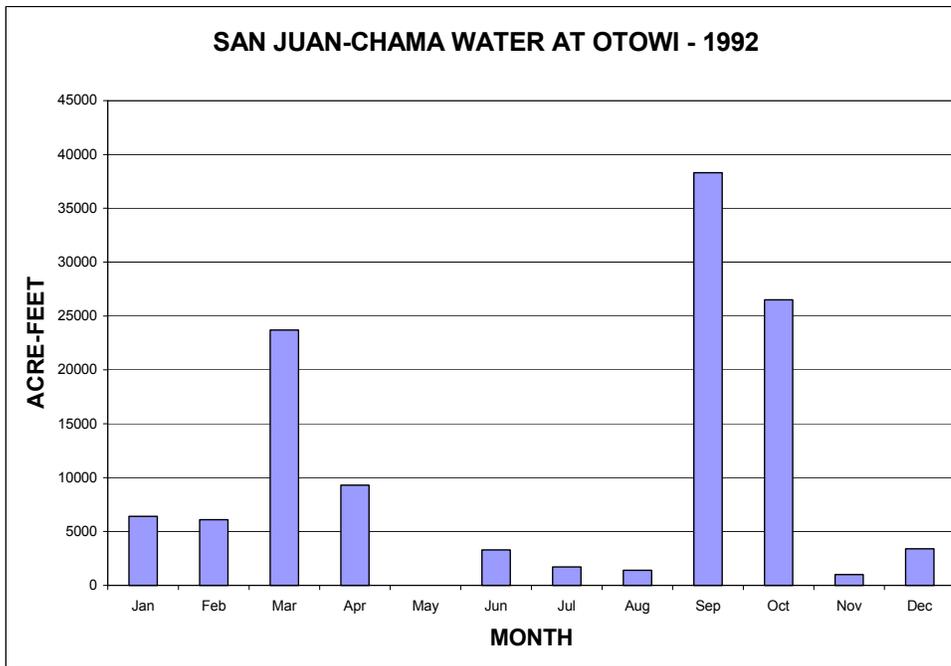


Source: SSPA, July 2000 Water Supply Study of the Middle Rio Grande

We can only consume, of that amount, 405,000 acre-feet, and have to deliver the bulk to Elephant Butte.

A couple of other important points about the Compact: [one is] Article Sixteen, about the Indian tribes, as I mentioned earlier, and [the other is] San Juan-Chama Project water, which is not subject to compact apportionment. That water originates in the Colorado River basin and the waters of that basin are allocated by the Upper Colorado River Compact. So New Mexico's San Juan-Chama water is a share or a portion of New Mexico's allocation under the Upper Colorado Compact. Another point not shown here but very important and mentioned earlier is that New Mexico is allowed to fully consume the tributary inflow between Otowi and Elephant Butte. Now that inflow is highly variable—it can range from very low numbers to very high numbers, primarily depending on the monsoon. Summer months can really make or break how New





Mexico fares in any given year under the Compact, and in particular, if we have a very strong monsoon in the middle valley below Otowi gauge, that's pure gravy—extra water to the middle valley. The opposite case, if there's a strong monsoon more northerly, above Otowi, that brings extra water into the basin, but of course it flows past Otowi, so we have to deliver some of that to Elephant Butte.

So the question is, where does the water that is consumed in the middle valley go? This slide answers that question. You should all be familiar with the Water Budget that a technical sub-committee of the Assembly prepared a few years back. This chart looks at the depletions portion of that budget—the numbers are very similar and it shows essentially that riparian, which is the bosque primarily, and agriculture together consume roughly three-quarters of the water supply. Now the problem is, some of these categories are increasing in use and also new uses are trying to wedge their way into the pie.

These include supplemental flow requirements for endangered species; habitat restoration activities for fish and wildlife that might increase depletions; there's a lot of historic groundwater pumping that is ultimately going to affect the river; a lot of domestic wells whose impacts on the river are not required to be offset; and possibly increased use of San Juan-Chama water, as well as quite a bit of increase in urban growth, and demand for economic development.

As our former state engineer mentioned, the situation is compounded by the fact that there are probably more paper rights within the basin than physical wet water supply. I'd like to focus on [the San Juan-Chama water.] This slide shows how much San Juan-Chama water has flowed into the middle valley at Otowi gauge on an annual basis. That project was completed in 1971 or so, and what you see here is that that additional water in the basin has been highly variable, and has ranged as high as 250,000 acre-feet back in 2000, when the bulk of the water went to meet unrealistic flow targets for the silvery minnow that year. So the question is, where has all this San Juan-Chama water gone in the middle valley?

A fair amount has gone to the MRGCD; a portion has offset municipal pumping effects on the river by the city of Santa Fe and some of the other smaller San Juan-Chama contractors such as Belen and Bernalillo; since 1996, large amounts have been used to provide supplemental flow for the endangered silvery minnow; a portion has been routed directly to storage in Elephant Butte Reservoir; and my agency, back in the '90s, leased a fair amount for the Jemez Canyon Reservoir sediment control pool. There are two important points I'd like to make about this San Juan-Chama water. The first is, while that water was released for a specific purpose with a specific destination, in reality what it did, except in very dry years, was to provide an extra supply to the basin above the demand for consumption in the basin. Now if depletions are constant over time and if those depletions are satisfied by the native inflow into the basin, then the extra San Juan-Chama is just that, extra water that assisted the basin in meeting its compact obligations. But we now have the problem that depletions in the basin are increasing, or are projected to increase to such an extent that they will offset the benefits provided by having that additional water in the basin.

The second point is explained by the next slide. This is 1992 and it shows that the San Juan-Chama water coming into the middle valley has not been released in a uniform manner that continually raised the base flow of the river; rather it's been released mainly as discreet chunks of flow of specific duration for a specific purpose.

To return the focus back to the issue of increasing depletions: the question is what do we do about this situation? Here are some of the potential solutions, or I should say they are partial potential solutions, since it will most likely take a combination of elements to deal with this problem. Priority administration—well, that would require adjudication of the basin, and that is nothing that is likely to happen any time soon. You might have heard of the State Engineer's Active Water Resource Management initiative, but that would also require extensive resources that the Office of the State Engineer doesn't have, and it too is not something that is likely to happen anytime soon. Can some sort of shortage sharing be implemented in the basin, or can a consensus plan be implemented such as has been done on the Pecos? Can reservoirs up north be operated differently to provide more benefits to the middle valley? The Interstate Stream Commission has been very successful in recent years in temporarily solving the ESA problem by the initiation of two such agreements, shown here on this slide.

There's the Strategic River Reserve passed this year by the legislature—how can that be used to help solve the problem in the middle basin? Water markets—can they be developed to efficiently move water from one demand to another? What role does water conservation have to play? The city of Albuquerque has made great strides in water conservation in recent years, and I was pleased to note that just recently, the town of Bernalillo passed an ordinance implementing a water conservation program. This is something that municipalities up and down the basin should be pursuing.

And the last item there with the double question marks, that is *you*—as the Water Assembly and as citizens of the basin, we need your input and ideas to help your local, state, and regional water management agencies solve this problem.

**Questions:**

*They have these portable damns they can pull across the entryway to a harbor. Would something like that work to say cut Elephant Butte in half during drought years to reduce evaporation so you'd just use half the lake instead of the full lake as your reservoir, so you'd have a better ratio of surface water to water stored. Half the lake could be dredged deeper and make the other half of the lake more shallow.*

Flanigan: What we have seen in these very dry times is that Elephant Butte naturally gets very low. This year it got down to some 200,000 acre-feet. The surface area, which controls the evaporation, was quite small in recent years, and now it's starting to come up. To really control the area covered by the reservoir you can do two things. You can either send water out the bottom, which you don't want to do, or you can store it up north in other reservoirs. That requires a number of actions because primarily, those reservoirs are federal reservoirs, and federal law controls how those reservoirs are operated.

*To follow up on this evaporation issue, it's been brought up a couple of times between Elephant Butte and up north: can you just give me a ball park? Is it a 10% savings, a 50% savings? Does anybody know—the evaporation rate?*

Flanigan: The amount of evaporation on that reservoir is quantified by using an evaporation pan. It ranges in these very low years I believe on the order of 30 to 40,000 acre-feet to over 200,000 acre-feet. I don't have an average for you. The U.S. Bureau of Reclamation keeps those statistics.

*I have a question concerning compact water. It's not really too clear to me. In 1955 I bought a ranch in the San Luis Valley around Alamosa Colorado. At that same time I purchased some water rights from the Costilla Ditch Company. Part of the ranch land is irrigable land and so I use ditch water coming out of the Rio Grande. For fifty years now, every year we have the same situation. The water company and my shares in the company do not get water until the compact water is met—we're sending water to New Mexico and Texas and wherever else down the river, and we don't get water until a certain level is reached in the river. I'm involved in Colorado and New Mexico and Texas with land and irrigation, and my question is, what happens that New Mexico is getting the amount of water it's allocated by compact—and they're pretty stinky up there, they don't give you a gallon of water until the river's up to a certain point—so why is it that New Mexico's always out of water and uses more water than they have, so to speak? Why is it all right in Colorado? Why are they able to control the water and the usage but when it gets to New Mexico, we've kind of lost control?*

Flanigan: That sounds like a very difficult situation up there. I can't really answer that question from what you've described. Sounds to me like you're governed by both the Costilla River Compact, which is separate from the Rio Grande Compact, and Colorado and New Mexico water rights law—I'm not sure where you're located. What I can do is put you in touch with my counterpart at the Interstate Stream Commission who works exclusively on the Costilla River.