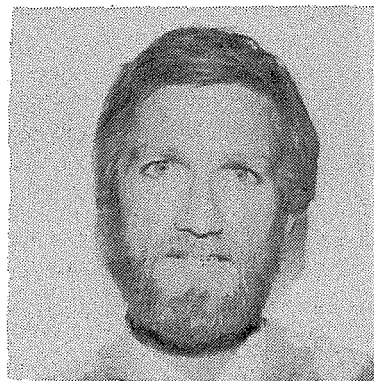


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RECREATIONAL ISSUES ON THE PECOS RIVER IN NEW MEXICO

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I appreciated the invitation from Tom Bahr to speak at this year's water conference regarding recreational issues along the Pecos River. It is especially significant that recreational issues are again a topic of discussion at the 34th Annual New Mexico Water Conference sponsored by the Water Resources Research Institute and I am pleased to be the flag bearer for this increasingly important issue in New Mexico water management.

The Pecos is an especially complex river system and as one might expect, that complexity carries over into any analysis one might attempt regarding recreational water issues. It is extremely difficult to speak with certainty given the many new and as yet unquantified variables existing in the Pecos system. Therefore, I will focus first on defining current recreation management issues and when possible, use quantitative terms. I will then speculate about the impacts new physical features and legal developments on the Pecos may have on the future resolution of these issues.

The first issue centers on recreational overuse of the upper Pecos, both on Santa Fe National Forest and New Mexico Department of

Game and Fish lands. Water quality is more an issue here than water management since only limited upstream diversions exist. Basically, the situation is a fairly classic example of largely unregulated recreational use over many decades resulting in predictable impacts. Impacts include erosion as a result of a loss of riparian vegetative cover from indiscriminate vehicular use, and unsanitary conditions caused by a lack of appropriate restroom facilities.

Public agencies involved have attempted to address the problem in the last few years with limited success. This is because alternative suitable recreation facility locations have a severed mineral estate, and businesses relying upon recreational use in the area have understandably resisted interim closures that could impact their gross receipts. Until surface and subsurface ownership of appropriate replacement recreation facility development sites can be consolidated, it is unlikely much progress will be made in restoring the impacted areas and thereby reducing water quality impacts. Hopefully, recent Forest Service facility improvements will divert some use to a site which can accommodate it without resource damage.

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Moving downstream we find some interest in whitewater boating between the Villanueva State Park and Anton Chico. Some whitewater enthusiasts have expressed an interest in seeing either minor modifications to irrigation diversions to reduce boating hazards or building portages to make circumnavigating those hazards easier. Little interest or attention has been placed on instream flow augmentation as river use is low and no upstream impoundment exists which could potentially make such an effort affordable.

The first significant storage reservoir on the Pecos is Santa Rosa Lake, formerly named "Los Esteros." Establishing a minimum pool at Santa Rosa has been a fairly controversial topic since the project's inception with primary obstacles being economic.

A 510 surface acre pool was cited as early as 1971 by fish and wildlife agencies as being an appropriate size for Santa Rosa Lake. The question of whether 510 surface acres represents a meaningful recreational water body is clearly subjective and until recently, I do not believe a clear understanding existed among minimum pool proponents regarding what size of pool was needed. In general, with regard to minimum pools, the "bigger the better" is usually preferred. Typically there is no magic cut-off point below which a pool is of no value. However, the ability of the pool to sustain a year-round fishery is commonly felt to be a good measure of a minimum pool's utility. The pool's ability to sustain a fishery is normally quantified by a depth over a sufficiently large percentage of its surface area necessary to maintain an appropriate water temperature for its resident fish species habitat requirements.

Basically, I believe the approach used by supporters of the minimum pool at Santa Rosa was simply to try to get a pool established, later increasing its size if it did not appear to be adequate. A reasonable strategy until you realize the extent to which water in the Pecos is either encumbered by irrigation district affiliation, a junior right of questionable value, or associated with a primarily northern New Mexico farming tradition which many consider threatened, as was recently portrayed in Robert Redford's film *The Milagro Beanfield War*.

More current estimates by Santa Rosa municipal officials of what they perceive to be an adequate minimum pool ranges between 10,000 to 20,000 acre-feet. While I don't have information regarding the specific quantity of

water that would be required to establish and maintain such a pool, I believe it could require the purchase and retirement of every irrigated acre above Santa Rosa Lake. This strikes me as an extremely costly and controversial endeavor, possibly even more so than the state's past efforts to secure water for the pool from lands in the Carlsbad Irrigation District (CID). I do not believe the state of New Mexico has the financial resources to pay for the creation of a meaningful minimum pool at Santa Rosa Lake.

Working further downstream, the next spot with any significant level of recreational use is Sumner Reservoir, formerly Alamogordo Reservoir. Isn't it strange how things on the Pecos are always changing, even the names of the innocent don't stay the same? Sumner has a minimum pool as opposed to a minimum recreational pool, as it has little to do with recreation and a lot to do with sediment control and irrigation. The pool is 2,500 acre feet in size and was established by the state engineer in the Findings and Order document, which resulted from the application of the CID to transfer irrigation storage capacity in Alamogordo Reservoir to Los Esteros Dam and Lake (now Santa Rosa Lake).

The pool was established to control sediment in the irrigation water available to the Fort Sumner Irrigation District when Sumner has little water. In general, it is not viewed as providing sufficient volume for a carry-over fishery during periods of low-water storage. A second feature of this pool is the requirement that irrigation releases from Sumner can not be made until the pool's volume is at least 5,000 acre-feet. At the conclusion of the release, the pool can again be reduced to 2,500 acre-feet.

Brantley Dam and Reservoir are the newest water related features on the Pecos. Brantley, which replaces McMillan, has a 2,000 acre-foot minimum pool. The pool was created by the acquisition and transfer of approximately 1,626 acre-feet of water rights associated with 620 acres of farm land subject to inundation by the new reservoir.

Obviously, it is hoped that the minimum pool will provide some recreational benefits. If it had not rained about 2 inches a few weeks ago, we probably would have gotten a pretty good idea what Brantley looks like with its minimum pool in place and little to no sediment. Over time, the constant volume pool will become progressively shallower and its boating benefits will likely improve a bit at the expense of its

Recreational Issues on the Pecos River

fishery. In general, it's safe to say that Brantley will be a better reservoir for fishing than was McMillan. However, at low-water volumes, its boating and sailboarding qualities will likely be inferior. There is some interest in increasing the size of Brantley's minimum pool and I believe that stands a much better chance of occurring than the creation of a meaningful minimum pool at Santa Rosa Lake.

I have received several phone calls from residents of southeastern New Mexico that begin, "I'm thinking of buying a new boat. How large is Brantley going to be compared to Elephant Butte?" It's always tough popping someone's bubble but the fact that there is now a new dam has done little to produce more water in the Pecos system. Dams consume water through evaporation, bank storage, and seepage. It is hoped that Brantley's relatively good storage characteristics as compared with McMillan will reduce some storage losses. However, we are not going to see anything resembling Elephant Butte Reservoir behind Brantley Dam, unless Brantley's probable maximum flood occurs, and even then, reservoir volume will only increase briefly.

A lot of the misconceptions about the size of Brantley Reservoir relate to the rather impressive size of Brantley Dam which is due largely to its flood control function, not to its conservation storage capacity. While Brantley will afford the CID with an improved conservation storage situation in Eddy County and could result in their storing more water closer to home, it's not going to provide any new water beyond that associated with Brantley's more efficient storage characteristics. At best, Brantley will offer reduced evaporation and bank storage losses of approximately 8,000 acre-feet. Any comparison between Elephant Butte's conservation storage capacity of more than 2,000,000 acre-feet and Brantley's conservation pool of 42,000 is unwarranted.

The way water is managed on the Pecos River in New Mexico will change both as a result of Brantley's completion and last year's Supreme Court decree. I can only speculate as to what those impacts will be at this point, but I believe that Santa Rosa Lake will be the recipient of many negative impacts particularly if, or more accurately when, New Mexico experiences a shortfall in its water delivery obligations to Texas under the Pecos River Compact. The decree requires "action by New Mexico that

will increase the amount of water at the state line prior to March 31 of the year following the accounting year by the amount of the shortfall."

Therefore, it is possible we may be seeing some decree-mandated Texas releases in March from Santa Rosa Lake. As a result, the CID may wish to schedule earlier irrigation water releases piggy-backed on a Texas delivery to the extent that it doesn't impact either the Fort Sumner Irrigation District or river pumping water rights. Naturally, Santa Rosa will continue to offer reduced evaporation and that may in large part offset any benefits associated with combining those releases, but it's certain to be a management option the CID will consider.

Avalon Reservoir, just below Brantley, is primarily used as the CID irrigation diversion. It's an old reservoir with a significant amount of sediment, which makes it rather shallow over most of its area. As a result, it will not support much of a fishery. Avalon will have a minimum pool of 600 acre-feet with an average depth of only 1.62 feet. Sailboard use may increase if this recreational user group finds either the wind or shoreline conditions at Brantley less desirable.

In summary, recreational issues just like all other water related issues on the Pecos are complicated by the river's rather bizarre hydrology, the Pecos River Compact, last year's Supreme Court decree, and the lack of any imported water that might offer the river's managers additional flexibility. The river has a large number of reservoirs with relatively little water. As the old joke goes: if you think your drowning, stand up.

Environmental conflicts on the Pecos, as with most other western rivers, focus on water storage and reservoir management. Relatively little interest to date has been given to instream flow issues as most recreational use occurs either on headwater river sections where existing diversions are not viewed as posing a threat to recreational use or on reservoirs. Both recreational users and irrigators would like to see those reservoirs full and to that extent they share a common goal, until the irrigators call for water. Unfortunately it's not a goal whose realization either group completely controls.