

RECREATION AND WATER - POOLS AND FLOWS

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I would like to preface my remarks by referring to Nolan Hester's talk regarding the conflict between the water management insiders and outsiders by saying that if Gary Daves of the Albuquerque Water Resources Department thinks of himself as an outsider then the people on this panel must be extraterrestrials. I also would like to say that the inclusion of a panel of this type with representation from natural resource agencies at New Mexico's Annual Water Conference represents real progress.

The recreation industry in New Mexico is a huge, rapidly growing, but largely unrecognized part of the state's economy. Colorado's recreation industry which, like New Mexico's, is largely water dependent, is estimated at \$4.5 billion dollars. New Mexico's travel, tourism and recreation industry is in the \$1.9 billion dollar range. The recreation and tourism industry in New Mexico is alive and healthy while the state's mining, oil/gas and agricultural industries are depressed.

Recreational water uses are almost totally overlooked and unprotected under New Mexico's present system of water

law and policy.

The water needs of the recreation industry, which are often non-consumptive, are in many instances not in conflict with the requirements of the state's irrigation districts or municipalities. The rafting industry, interestingly could be in better shape as a result of dams, if the release patterns from those dams could be modified to better enhance recreational water needs.

It has become clear that although the recreation industry must piggyback on other water uses, (rafting, skiing, fishing, hunting, hiking, and sightseeing) those uses generate income in the same ballpark as agriculture, logging or mining. However, recreational uses depend upon water - water in streams, reservoirs and shallow aquifers to maintain wetlands and marshes.

It is interesting to note that Colorado's eleventh annual water workshop this year chose the theme, "Water and Colorado's Recreation Industry: Beauty, Bucks and Beneficial Use." I think it's clear that New Mexico's priorities relative to water management have yet to evolve in the same fashion as our neighbor to the north. More importantly, it has not evolved in the same fashion that our economy has. The doctrines of prior appropriation and beneficial use have not served to protect New Mexico's recreational industry or its environment.

How can New Mexico maximize the economic benefits attained from its water resources? I believe the solution does not lie in an abandonment of the doctrine of prior appropriation. However, we must recognize that the water originated in a stream or river before it was impounded or diverted. While some real progress has been made in negotiating releases for recreational boating and to reduce fishery impacts, these programs need to be broadened and made a component of the water management equation in New Mexico. If the same level of ingenuity and imagination that has been placed on capturing and using New Mexico's water surpluses the past few years was brought to bear on the equally important issues of recreational water use, New Mexico's economic woes might not be as serious as they now are. Many of the major water projects in the Rio Grande system were developed prior to enactment of the National Environmental Policy Act (NEPA). In some cases the management of these projects could be significantly improved by a thorough analysis of their impacts with an eye toward improved operation.

The importance of recognizing instream flow water rights has in many respects diverted, no pun intended, attention from what I feel is a more realistic and practical means of addressing this issue.

In the case of the San Juan River, Navajo Dam created a

blue ribbon fishery which has become an important part of the management equation for that river because of its popularity and importance both as an economic and natural resource. Unfortunately while the same potential exists on the Rio Chama, it has gone largely unrealized. However, if the river's fishery potential were developed, I don't doubt that it would receive the same degree of "administrative protection" as the San Juan.

The challenge for the water management community is that once the resource has been developed it has to be managed and protected. Management of recreational use can complicate management for more traditional agricultural and municipal uses which now receive 99 percent of the "managerial discretion" available under current water law and in the state's water management system. What is now needed is a change of thinking and management practices so that recreational uses can be fostered and developed. I believe that sufficient "managerial discretion" exists to accomplish this goal without major changes in the state's water law.

The solution does not lie in transferring water rights from irrigated farmland in order to create a recreational pool in a reservoir, (thereby sacrificing one economy for another) with financing provided by the state's severance tax bond fund. I believe water rights transfer is an

expensive substitute for improved management, when by modifying our management strategies we can improve both sectors of the state's economy. However, I would be remiss if I did not point out that there are many streams in New Mexico whose recreational uses are impacted by agricultural diversions and poor quality agricultural return flows that may only be protected by the transfer of water rights to preserve instream flows. Whether this is either practical or possible will have to be the subject of someone else's presentation at a future water conference.

Several other important facts have become clear as a result of the surplus flows in the Rio Grande system this year. First, flood control in one location means flooding in another. This fact became graphically clear when additional water held at Abiquiu Reservoir inundated the lower section of the state's only scenic and pastoral river.

Second, more water doesn't necessarily improve recreational opportunities, even in dry New Mexico. The primary interest of the water management hierarchy was to convert flood water storage to conservation storage. However, little consideration was given to improving recreational flows that most likely could have been achieved. Also, the filling of Elephant Butte Reservoir to its spillway elevation has caused the loss or destruction of many of Elephant Butte Lake State Park's recreational

facilities.

Third, water, even inexpensive water, isn't always marketable. This fact was illustrated not only by the surplus in the Rio Grande system but also by the earlier surplus that occurred in the Colorado system. Albuquerque continues to be frustrated in its attempts to sell its surplus San Juan-Chama water even at bargain prices.

People who use water recreationally are willing to pay reasonable user fees for the privilege. Whether the fee covers the total cost of this nonconsumptive usage will depend upon the number of users and how the costs are defined. This year's first recreational releases on the Chama were reasonably successful but would have been more so if the releases were more predictable and if the U.S. Bureau of Reclamation would have initiated Sunday releases three hours earlier in order to compensate for downstream flow delays. If costs are involved, users are willing to pay reasonable fees.

The U.S. Army Corps of Engineers has adapted well to Gramm-Rudman-Hollings by biting the cost-sharing bullet. The Abiquiu Reservoir expansion project will go a long way toward determining how much cost-sharing it will take to kill what many view as a boondoggle. If the users won't pay, then the benefit of this publicly financed dam should be focused on the public with river based recreation being

recognized as one of those benefits. Recreational benefits are almost always a part of the cost-benefit justification for the construction of a new project. Somehow though, recreational benefits never seem to become a part the project's management framework after it's been constructed.

And finally, the relative importance of a minimum pool to recreational benefits can be determined only by the surface/capacity characteristics of the reservoir and the aesthetic impacts that low reservoir elevations have on recreational use.

In keeping with the long held axiom of western water law that "Water is for fighting, liquor is for drinking," I thought it would be timely, although potentially self-destructive, to discuss some of my views relative to a real "sacred cow" of New Mexico water management -- the Elephant Butte minimum pool. I think it's an appropriate time to put the minimum pool into perspective. You may have noticed that I didn't say the Elephant Butte "recreational" pool because the pool at Elephant Butte has very little to do with recreation. However, it does have a lot to do with agriculture and potentially public health. The Elephant Butte Irrigation District (EBID) is placed in an extremely difficult position without the minimum pool in Elephant Butte Reservoir. Because if they drain the reservoir in order to save their crops they potentially cause a

significant fish kill with all of its associated public health and economic implications.

While some 400,000 acre-feet of flood water has flowed past Fort Quitman, Texas, this year, only the 50,000 acre-foot pool from Elephant Butte was accompanied by hand wringing and mourning. The New Mexico Department of Natural Resources, the State Engineer Office and various federal agencies have primarily, through sleight of hand, mirrors and some extraordinarily innovative maneuvering, shuffled the Elephant Butte minimum pool to Abiquiu and Cochiti reservoirs the past two years. However, this year the burden of surplus water in the Rio Grande system was simply too great and the pool has been temporarily lost.

Ultimately it will be recovered under the terms of the Department of Natural Resources's contract with the city of Albuquerque, which provides evaporative loss protection for the pool through the year 2010. This recovery is due to the fact that because the pool is gone, it can no longer suffer evaporative losses. Therefore, the approximately 6,000 acre-feet that would normally evaporate from the pool in Elephant Butte Reservoir can be used to recover the pool in continuously decreasing amounts until the pool is restored. Unfortunately, as a result of this year's high water there is no storage point where that recovery process can begin, for as soon as the 6,000 acre-feet is delivered, it will



also spill as well.

The Elephant Butte pool has an interesting history. It was originally authorized in Public Law 93-493 in 1974. However, it's authorization was subordinated to any other San Juan-Chama water use and also to the recreational pool in Cochiti Reservoir. Also its protection from evaporation and transport losses was only for 10 years with an expiration date of 1986. In addition, the Elephant Butte pool was required to spill from Elephant Butte Reservoir before the spill of "native waters." Thus, its existence while hard fought was tenuous at best. In 1978 and 1979 the New Mexico State Legislature appropriated \$2.5 million dollars for the acquisition of water rights to provide continued protection for the minimum pool. Sounds reasonable doesn't it, maybe a bit expensive, but let me fill in some of the blanks.

Although 6,000 acre-feet are required to offset evaporation from a 50,000 acre-foot minimum pool, approximately 8,600 acre-feet of pre-1907 water rights (4.5 square miles) would have to be purchased "as is, where is" in order to deliver 6,000 acre-feet to Elephant Butte after transport and ground water recharge losses are deducted. This translates into 2,866 acres, or 4.5 square miles, which clearly is a lot of irrigated agriculture in a state like New Mexico.

Land ownership patterns are such that the acquisition of 8,600 acre-feet would require 200-300 separate real estate transactions at what would most likely be an incredibly high administrative cost.

Elephant Butte Reservoir since constructed in 1916 or 1917 has only dropped below the 50,000 acre-foot recreation pool level six times during the normal recreational season (April to December). These events occurred in 1951, 1954, 1956, 1964, 1971 (one month), and 1972 (one week).

The 50,000 acre-foot recreational pool is far too small to offer any real recreational benefits in a reservoir the size of Elephant Butte because at that size the boat ramps will not be operative nor will the fishery be a productive or viable one.

The current cost of pre-1907 water rights, which are the only type that can be transferred with any reasonable chance of success, is approximately \$1,200 per acre foot. Thus, the full acquisition program would cost in excess of \$10,300,000. This figure assumes that water rights would not increase in price during the term of the purchase program, which obviously is not likely.

Also at the time the Legislature appropriated the funds for the water right acquisition program they did so with the understanding that the water rights would be acquired from lands that were no longer under production as a result of

urbanization in the middle valley. However, these urbanizing lands rarely coincide with lands holding pre-1907 rights. Thus, the Natural Resources Department was placed in the position of purchasing water rights and retiring what were often prime agricultural lands from production. The EBID fortunately was protected by language in the bill that required that all acquisitions be made from above Elephant Butte Dam. However the Middle Rio Grande Conservancy District enjoyed no such protection. It initiated protests relative to any transfer that did not pre-date the establishment of the district. Thus, the importance of the pre-1907 rights. It is interesting to note that had the EBID not been exempted by law, the Elephant Butte minimum pool water rights acquisition program could have become involved in the pending litigation regarding the El Paso case as well as the dispute between the EBID and the city of Las Cruces regarding the dedication of water rights on annexed lands.

Each purchase and transfer that we submitted required more than four months of administrative processing time within the New Mexico State Engineer Office. Each transfer is subject to protest and potential litigation by other water users in addition to lengthy legal advertisement procedures.

In view of the aforementioned facts and recognition that public health considerations may preclude any drawdown below a 50,000 acre-foot level, it did not appear financially responsible to pursue this multi-million dollar purchase program.

In addition, once Elephant Butte Reservoir is again in a position to store San Juan-Chama water, it is likely that given the extremely soft market for Albuquerque's surplus San Juan-Chama water and the lack of available storage elsewhere, that the city will be storing at least 50,000 acre-feet in Elephant Butte Reservoir. That storage is in addition to the minimum pool that will be recovered under the Natural Resources Department contract. Also, the city could amend its storage contract to permit even more San Juan-Chama water storage.

In recognition of these important facts, the New Mexico Legislature in Chapter 287 of the 1983 laws, amended the appropriation language of the 1978 and 1979 laws to permit the acquisition of water in lieu of water rights. The contract with the city of Albuquerque, which I previously mentioned was a result of this change and currently protects the minimum pool from evaporative losses. However, nothing protects the pool from a spill. Given the current water surplus in the Rio Grande system and the lack of buyers or users for Albuquerque's surplus San Juan-Chama water, it

does not appear likely that the minimum pool will play an important role in the foreseeable future. However, it will undoubtedly continue to influence water management decisions.

The important message I would like to leave with you is that as New Mexico's economy changes from its heavy dependency on extractive industries and agriculture, our attitudes toward water management must evolve as well. We have to place the same importance and emphasis on recreational uses of water as we have traditionally placed on agricultural and municipal uses. The same type of innovative thinking and imaginative management techniques must be brought into play if New Mexico is to maximize the benefits it receives from its scant water resources. Ultimately that should be every water manager's bottom line.