

Subject: FYI: San Pedro River Forum Raises New Questions**Date:** Fri, 01 May 1998 12:13:41 -0700**From:** Bruce Goff <bgoff@tucson.ars.ag.gov>**Organization:** USDA-ARS**To:** salsa-cooperator@tucson.ars.ag.gov

FYI:

two items concerning the Upper San Pedro Basin:

1. River Forum Raises New Questions, Tombstone Tumbleweed
2. Soil and Water Conservation Fair, Hereford Natural Resources Conservation District

See text below.

RIVER FORUM RAISES NEW QUESTIONS

By Pat Koester

Tombstone Tumbleweed April 30, 1998

<http://www.theriver.com/tombstonenews/index.html>

The hydrologist whose doomsday warnings have provided ammunition for environmental activists in their crusade to stop growth in the Sierra Vista area was the featured speaker at a Tuesday night forum that was billed as a "seminar" about "The San Pedro - A Threatened River."

Dr. Robert Mac Nish, Adjunct Professor of the University of Arizona's Department of Hydrology, told a small group of reporters and researchers last fall that he felt people here had been lulled into a false sense of security because he and other scientists had misled them by speaking about the estimated 30 million gallons of water that are contained in the Sierra Vista Basin's underground aquifer.

Tuesday night, Mac Nish took his message to the public. "The biggest problem in the Sierra Vista area - and other water basins - is that hydrologists have messed with your head," Mac Nish told an audience of more than 200 people at Buena High School. "We have misused the word 'storage' in relation to groundwater. Groundwater storage isn't static. We should have called it groundwater 'limbo' because the water is always moving."

Mac Nish said an underground aquifer should be thought of not as a storage room, but as a moving van. The water in the aquifer is like our possessions that we put in the moving van when we move from one city to another. But suppose that, along the way, some of those possessions are lost out of the moving van. If the lost items are small, we might not notice their absence right away.

That, said Mac Nish, is the state we are in today in regard to the Sierra Vista aquifer.

He said computer models using data collected since 1940 show that water, which is constantly moving toward the river from the mountains on either side, has been lost along the way, creating a water deficit. In other words, more water is being taken out of the ground than is being put in by precipitation.

The reason for the deficit, Mac Nish said, is pumping of the water by humans, which began on a large scale in the 1940s.

As a result, he said, a drawdown of the water table has occurred from the Mexican border to Fairbank, and the base flow of the San Pedro River has dropped 4,000 acre feet per year. One acre foot is approximately 326,000 gallons.

When asked what the current water deficit is, Mac Nish answered, "We don't know because we don't know how much mountain front recharge there is."

Several years ago, Mac Nish said his computer model had calculated the deficit at 11,000 acre feet per year. Skeptics have challenged that number, because there has been no reliable way to measure the two largest variables in the computer model - mountain front recharge and the amount of water used by vegetation along the river. Instead, the modelers have made educated guesses by extrapolating numbers from other available data.

When asked after the meeting Tuesday night about current estimates of the water deficit, Mac Nish said it "could be anywhere between 3,500 and 11,000 acre feet per year."

Mac Nish has more than once drawn the ire of local authorities and hydrologists with what they consider his unsubstantiated opinions and speculations.

Many members of Tuesday's audience were also skeptical because Mac Nish's presentation was sponsored by the Huachuca Audubon Society and by Wick Communications, publishers of Sierra Vista's daily newspaper, in an apparent effort to influence public input to a water management study currently being conducted by the international Commission for Environmental Cooperation (CEC). "The public will soon be asked for input regarding the fate of the San Pedro River and of our community," read the newspaper ad. "Informed public opinion is crucial in this very important decision-making process."

Tuesday night, Huachuca Audubon Society President LeAnn Whetstone told the audience, "You have heard from the politicians, bureaucrats and activists, we thought you should also hear from the scientists."

Whetstone encouraged audience members to provide input to the CEC and to members of another study being carried out by Harvard University. "If you don't make your beliefs known, they will probably make decisions that don't agree with your values," Whetstone said.

Jim Horton, one of the county's most vocal anti-growth activists who consistently criticizes county, city, and fort authorities for allegedly failing to address the water situation, read a statement made several years ago by a scientist who said it was critical that steps be taken soon to reduce water usage in the area.

"What do you think he would say today?" Horton asked Mac Nish. "I think he would be encouraged," Mac Nish answered. "Not ecstatic, but encouraged."

Several audience members asked Mac Nish about various measures that have been proposed to alleviate the water situation.

What about building a dam to create a lake at Charleston, as was planned several decades ago, one person asked. "I don't want to talk about it," said Mac Nish. "Why not?" Asked another person. "Have you even read the report?" "No, I haven't," said Mac Nish. However, he said, creating a lake would increase evaporation, and there is no certainty that enough water would be backed up to meet the area's needs anyway.

Besides, added fellow US hydrologist Tom Maddock, a lake would be considered surface water, and thus would be subject to water rights laws, which means Sierra Vista probably wouldn't get any of the water anyway because others with much older claims would have first rights.

What about bringing in CAP (Central Arizona Project) water, another person asked.

Mac Nish said that would be cost-prohibitive. He said the cost was estimated at \$90 million. Bringing in desalinated water from the Sea of Cortez would probably cost even more, he said, in answer to another question.

Mac Nish said BLM's plan to reintroduce beavers into the river was also not a good solution. He said if the beavers built dams, the river's water table might rise up far enough so that sacaton and other vegetation which currently do not draw water from the river's aquifer would start to do so.

In addition to Mac Nish and Maddock, several other scientists from Tucson spoke briefly.

Although other hydrologists, including those employed by the county, the City of Sierra Vista, and Fort Huachuca, have questioned many of Mac Nish's and Maddock's findings, none of them was invited to participate in Tuesday's seminar.

After the meeting, the Tumbleweed asked Huachuca Audubon President Whetstone why none of the local hydrologists were invited to speak. "These are the ones that did the studies on the river several years ago," Whetstone answered.

When reminded that the local hydrologists have also done studies on the river, she replied, "Well, perhaps it would have been too overwhelming to have so many at one time. Perhaps at a later date we will ask them to speak."

Sierra Vista Councilman Casey Jones, who has been an outspoken critic of the doomsday predictions about the San Pedro, said he thought the evening's presentation was "pretty balanced." Jones was especially pleased that Mac Nish was encouraged by local efforts by the city and others to conserve water and enhance recharging of the aquifer.

Cochise County Supervisor Les Thompson, however, said he plans to have the county sponsor a similar forum, where local hydrologists will be invited to present their views.

(from information provided by Hereford NRCD)

Soil and Water Conservation Fair

Saturday May 9, From 9 am To 12 pm at Coronado School, on Moson Road in Hereford. Learn How to Conserve Water and Soil, Pick Up Information Brochures and Speak to Experts on Conservation. See a Demonstration Project to Stop Erosion, Trap Stormwater and, Reduce Pollution. Learn Simple, Inexpensive Steps You Can Take to Conserve Water and Enhance Wildlife, Habitat in Your Backyard! Directions: South of Highway 90 on Moson Road and One Quarter-Mile North of Ramsey on Moson Road. Sponsored By: The Hereford Natural Resource Conservation District, For Information Call: Bill Lindsey 457-3437, Mary Ann Black 459-5252, Jack Ladd 432-4312.

Note: Mary Ann Black, local rancher and member of the Hereford NRCD, is an enthusiastic promoter of watershed management in the Sierra Vista Sub-watershed. She points out very clearly the need for a comprehensive approach toward managing land and water resources within the basin. I would encourage anyone interested in this issue to contact her for more information. Her email address is:

racing@c2i2.com

I've recommended to her that the Hereford NRCD consider developing an informational website like that done by the Verde NRCD for the Verde River Watershed in central Arizona:

<http://www.verde.org/>

this would be a very useful service to the community.

BFG

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