

Will Colorado River be tapped out?

Arizona Daily Sun – 8/5/05

By Cyndy Cole, staff writer

The Colorado River would gradually warm two or three degrees, become a less reliable source of water for Arizona, California and Mexico and produce half as much power as it does now during the next century under one scientific scenario discussed Thursday.

Hydrologists, water managers, tribal members, politicians and other experts are still gathered at Northern Arizona University today to talk about water, drought, global warming, conservation and how cities and tribes will adapt to a drought that some say is far from over and projected water shortages in the decades ahead.

Gov. Janet Napolitano delivered the keynoted address last night, calling for renewed focus on conservation, innovative technology and its integration in our communities and daily lives.

The Department of Interior has named the Colorado River -- a main source of water for 25 million people -- the most completely allocated of any in the world and one of the most regulated, according to research collected by University of Washington researcher Niklas Christensen and colleagues.

Christensen modeled the ways global warming might impact three western rivers, including the Colorado, based on data from 1870 to 2000. He doesn't factor in projected population growth.

His findings paint a picture of coming decades during which human or environmental stresses could put far more demands on the river than the Colorado could meet.

Phoenix and Tucson wouldn't get their full deliveries of water from the river, power output would decline by half, and the 1922 law dividing water between the states would be broken as river levels fell off, according to data generated by extending current conditions and uses into the future.

"These trends could possibly lead to water shortages... in this century," said Greg Garfin, a University of Arizona researcher who projects the Southwest's climate.

Garfin predicts earlier snowmelts in the Rocky Mountains where the river begins, increased evaporation and higher temperatures.

He proposed general water conservation, water-saving subdivisions and less reliance on fossil fuels as solutions, with other researchers offering solutions too.

Demand has exceeded inflows into the river in past years as an average, though Lake Powell's low water levels have made a small turnaround this year.

Garfin compared the situation in northern Arizona to Rockland County in New York, where there's been three water emergencies in the last decade.

There, as here, the groundwater system is fractured. The county can't draw water from the Hudson River. Demand outstripped water supply as more people moved into the county. Researchers' controversial suggestion in that county was to stop growth.

The biggest source of freshwater, groundwater, is monitored in some areas of the state, like Tucson, more than others as it is used, researchers said. In recent years of drought, groundwater pumping increased, drawing down the southern Arizona aquifers. #

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ARIZONA WATER ISSUES:

Governor seeks lawmakers' help on rural water; Says communities' shortages need immediate attention

Arizona Republic – 8/5/05

By Shaun McKinnon, staff writer

FLAGSTAFF - Gov. Janet Napolitano pledged Thursday to help rural Arizona find ways to meet its growing demand for water, and she challenged the Legislature to make the issue a priority next year.

She also promised to defend the state's share of the Colorado River, even as Colorado and other states question the way Arizona stashes some of its

allocation in underground water banks.

And, renewing her call for Arizonans to use water wisely, she said she would take the conservation measure to the youngest citizens, distributing booklets this fall to every fourth-grader.

"We have to make conservation a part of our daily routine," she said at an evening session of the Arizona Water Summit. "It can be done, and it can be done without any real loss in quality of life."

More than 150 people, including water managers, local officials and business leaders, are attending the three-day water summit, held at Northern Arizona University. On Thursday, Napolitano outlined her strategies for dealing with a wide range of water issues, calling water "the center of our future."

Rural Arizona needs immediate help in finding and securing long-term water supplies, Napolitano said. Those communities, which rely almost exclusively on groundwater, will face shortages long before the state's cities, which can draw on renewable sources such as the Colorado River.

The state will restart a rural water study program with some of the extra funding lawmakers gave the Department of Water Resources this year, but that money is just a beginning, the governor said.

"I believe the Legislature will need to take water up again this session and if they don't do enough, the session after that, and the session after that and the session after that," Napolitano said.

Lawmakers focused on rural water issues in a smattering of bills that passed in the recent session, but rejected key proposals, such as one that would have helped counties and cities stop development in areas without adequate water supplies.

The Legislature also failed to address illegal subdivisions, which drain water resources and strain local governments that must provide services. Napolitano noted that her drought task force recommended giving counties more authority to regulate those so-called wildcat subdivisions, which sprout up outside zoning laws and general plans.

"I think we need to go back to the Legislature on that," she said. "We cannot provide quality development without quality planning."

Continuing tensions along the Colorado River also will challenge Arizona leaders, the governor said. Colorado and other states on the upper river are discussing legal action to force changes in the way Arizona and lower river states manage water.

Arizona's water bank, which stores some of the state's river allocation for future use, has drawn particular ire from Colorado, which insists the bank is not a legitimate use of water.

"I hope we can avoid litigation and find harmony with the upper basin states," Napolitano said. "But the plain truth is, with the growth in Arizona, Nevada and California, the Colorado River is under tremendous strain."

Conservation provides one answer to almost every water problem and the governor again called on Arizonans to help create a "culture of conservation." Napolitano ordered all state agencies and universities last year to reduce their water use by 5 percent. They responded by cutting consumption by 11 percent.

"If we can do it with the state government, we can do it anywhere," Napolitano said. "Just by doing some common-sense things and by hammering on it every day, we got it."

Her plans to distribute conservation books to fourth-graders is an attempt to start wise habits young, Napolitano said. The state also will work to help develop new conservation technology and find ways to use it.

One pilot program is about to begin here in Flagstaff, where the state will work with small restaurants to install special cleaning nozzles. Used properly, those nozzles can save one restaurant 50,000 gallons of water a year.

Napolitano used the speech to tout her pet water project, the Virtual Water University, which was designed to bring together research and expertise from the state's three universities. One of the university's first projects, a comprehensive water Web site, will go on line soon and other initiatives are in the works.