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Report on water needs downplays climate change

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HOLDING WATER

Highlights of the 2007 State Water Plan, which does not include the possibility that global warming could further deplete the state's water by 2060:

- **Population:** The Texas population is expected to grow from 21 million in 2000 to 46 million by 2060.
- **Demand:** Largely as a result of this growth, demand for water is expected to increase 27 percent by 2060.
- **Supply:** Because of aquifer depletion and sediment accumulation in reservoirs the water available from current infrastructure is expected to decrease by 18 percent by 2060.
- **Strategy:** The planning group identified 4,500 water management strategies and projects to cover this shortfall, with an estimated cost of \$30.7 billion.
- **Results:** If Texas does not implement the water plan about 85 percent of the state's population will not have adequate water during drought conditions by 2060.

Source: Water for Texas 2007

The board tasked with meeting the state's water needs through 2060 says climate change is uncertain enough that it's not worth accounting for in its long-range plans.

The statements on global warming, written into the 2007 State Water Plan, have puzzled some of the top climate scientists in Texas who expect increasing evaporation but not additional rainfall as temperatures warm.

"It is very hard to distinguish between ignorance and political motivation, but both hypotheses fit the data," said Gerald North, distinguished professor of geosciences at Texas A&M University.

North noted the state's average temperature has increased by 2 degrees Fahrenheit in the last three decades as the world also has warmed.

Approved by Texas Water Development Board members late last year, the Water for Texas 2007 plan concludes a short section on global warming by stating:

"When considering the uncertainties of population and water demand projections, the effect of climate change on the state's water resources over the next 50 years is probably small enough that it is unnecessary to plan for it specifically."

The report also states that warming trends around the world "do not necessarily hold true for Texas," saying the temperature has not warmed significantly in Texas.

Rewritten every five years, the water plan attempts to identify potential growth in demand on a regional basis, determine whether existing water supplies will meet that local demand and, if not, identify viable projects to meet future water needs.

If the water plan is not implemented, its authors say, 85 percent of the state's projected population in 2060 will not have enough water during drought conditions.

Global warming would only exacerbate this problem.

A spokeswoman for the water board, Carla Daws, said its members, who are appointed by the governor, were not motivated by politics.

Nor were the planners ignorant of climate change, said Bill Mullican, a deputy executive director with the board charged with putting the plan together. If the evidence for global warming in Texas increases, Mullican said, the water board planning process will consider it when the next 50-year report is written in 2012.

"With respect to the criticisms, the Texas model for regional water planning is absolutely designed to address changing climate conditions," he said.

North said he remains concerned about the report, especially considering the political climate surrounding global warming in Texas, where the construction of 11 coal-fired power plants, which emit more greenhouse gas than most other fossil fuels, has been fast-tracked.

In recent news articles, including one appearing in the Fort Worth Star-Telegram, Gov. Rick Perry, Lt. Gov. David Dewhurst and Speaker of the House Tom Craddick have expressed significant doubts about global warming.

Their views clash with those of many climate scientists. Earlier this month, the Intergovernmental Panel of Climate Change, an international consortium of scientists convened to reach a consensus on global warming, began releasing a series of reports concluding the evidence for a warming world caused in large part by human activity is stronger than ever.

Among the predictions were more heat waves and extreme droughts.

If the climate scientists' report is correct, then Texas can expect the state's winters, on average, to warm between 2 and 5 degrees Fahrenheit, and summers between 4 and 11 degrees by midcentury, said Katharine Hayhoe, a Texas Tech University geoscientist.

When temperatures rise, evaporation increases. Consider that after many days of steady rain in the Houston area, the skies finally cleared last week, with several days of sunshine. But many backyards remained muddy. Those same yards probably would be bone dry if it was August.

So it goes with surface water, which much of the state now relies upon for its drinking and agricultural needs. As temperatures continue rising throughout the century, precipitation would have to increase 25 percent to 40 percent by 2060 to maintain current water volumes in the state's rivers and lakes, North said.

Unlike temperature, however, it's not clear that rainfall in Texas will increase. There has been no discernible trend during the last century of Texas rainfall. Although computer models that might provide specific answers for Texas remain speculative, those used in the IPCC report actually suggest very moderate decreases in precipitation.

In a warming world where the water board projects that Texas' water demand will increase 27 percent by 2060, no gain in rainfall actually would be a loss.

After the IPCC report's release, a number of Texas climate scientists, including Eric Barron, dean of Jackson School of Geosciences at the University of Texas at Austin, concluded that global warming presented the greatest threat to the state's water resources.

"Our water resources are already vulnerable," Barron said. "My view is, if you already sense that have you a vulnerability to climate, and these models are suggesting a consistent picture, then you need to address the societal factors."

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