

# Professor: Good science needed when determining water policy

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One of the driving reasons why the Central Platte Natural Resources board of directors is considering a proposal to impose a temporary moratorium on new wells in parts of the district is the proposed Cooperative Agreement between Nebraska, Wyoming and Colorado.

The proposal to suspend new well drilling will allow the NRD and state to look over the situation between groundwater and surface water to determine if a problem exists and how bad it might be, along with the possibility that the Cooperative Agreement could be implemented.

The purpose of the Cooperative Agreement between the three states and the U.S. Department of Interior is to address endangered species issues affecting the Platte River Basin.

As part of the proposed cooperative agreement, a Cooperative Hydrology Study (COHYST) is being conducted to improve understanding of the hydrological and geological conditions in the Platte River Basin in Nebraska upstream from Columbus to meet Nebraska's obligation under the cooperative agreement.

But, according to Vincent Dreeszen, a noted hydrogeologist and a professor and director emeritus of the Conservation & Survey Division at the University of Nebraska-Lincoln, he has yet to see a regional groundwater model that has held up through the scrutiny of time.

"I have told COHYST people that when I met with them twice," he said.

On Monday, Dreeszen released a paper that was commissioned by the Nebraska Well Drillers Association.

In his study, Dreeszen said withdrawal of groundwater for irrigation has had little impact in reducing Nebraska's available supply.

While he said there is evidence that water use has been depleting stream flow in certain regions of the state by about 1.5 million to 2 million acre-feet since the early 1990s, water taken from groundwater storage is less than the amount added as a result of surface water storage, loss from canals and application of supplemental water on the land.

Dreeszen will be at a meeting of the Central Platte NRD Water Resources Committee at 10:30 a.m. Thursday at the NRD's headquarters in Grand Island.

"I have hopes that regional models can be developed," Dreeszen said. "There has been a half dozen on the Platte already and none of them have proven to have any value. If done correctly, and possibly a groundwater model can be

done, they have to take into consideration evapotranspiration salvage and they have to take into consideration that precipitation is the main source of recharge in the Platte Valley. If you cannot operate the model to show the historical conditions that have happened over time, you don't have a verifiable model, in my view."

He also said sometimes when a model is developed, there are built-in biases before the process begins.

"That is often true," Dreeszen said. "You start out with an idea in mind. I'm afraid that this is the case here, too."

He said in dealing with any potential problem, good science is needed to have information available, especially when it impacts public policy.

Dreeszen said the whole purpose of his study was to educate the public and policy makers and that good science is needed.

"I have no axes to grind other than I hate to see good science not being used," he said. "I hate to see paranoia and politics replace the need for good science."

Dreeszen said while his report is not directly tied into the proposed new well drilling moratorium in the Central Platte NRD, indirectly it is by saying, "Where's the problem?"

"Is there any real evidence that groundwater pumping has impacted the streamflow there?" Dreeszen asked. "I did work in 1984 and 1985 and I looked at all the flow records and there's no question that the Platte at Grand Island has been depleted on an annual basis by 1.3 million to 1.5 million acre-feet. But that is a result of the diversion of water out of the Platte. It is not from groundwater pumping."

Joe Holly of Dorchester, president of the Nebraska Well Drillers Association, which sponsored Dreeszen's study, said all of Nebraska needs to be concerned because a temporary moratorium on new well drilling in the Central Platte NRD impacts the whole state.

"The entire state is an ag-driven economy and we're not just talking about well drillers or farmers. There are a lot of businesses that depend on the ag economy," he said. "Any time you have a moratorium, you are going to change the way the ag economy is functioning. You are going to make them maybe less efficient. You might drive some operators out of business. The bottom line is that while moratoriums themselves may have a purpose, they need to be based on sound science. You can't just look at one thing. You have to look at the whole process -- the surface water, the groundwater and economic implication that goes with a moratorium."

Holly said the hardest thing to do is to separate emotion and politics from the process.

"If you can base the implementation of a moratorium on sound science, then you have to look at that as an option," he said. "But you never want to have a

knee-jerk reaction."

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