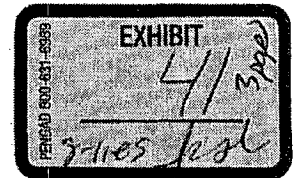


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Ex 17

TESTIMONY BY
RON BISHOP, MANAGER
CENTRAL PLATTE NRD



SUBJECT: DNR Rules & Regulations on Determining Whether a Basin is Fully Appropriated.

Mr. Patterson –

My name is Ron Bishop and I am General Manager of the Central Platte Natural Resources District headquartered in Grand Island, Nebraska. I am presenting testimony today on behalf of, and at the direction of the Central Platte NRD's Board of Directors.

Our NRD has a number of concerns about the proposed Rules. Those concerns fall into three general categories: lag effect, instream flows, and geographic boundaries of the area to be managed.

Regarding our concerns about "lag effect", it is not clear how they will be calculated and therefore there is a real question whether they should be included until the process that will be used is laid out and understood by those who will be impacted.

An even bigger contention about "lag effect" is the length of time that will be considered as an impact on surface flows. Our concern is that twenty-five years is too long a period to expect any degree of certainty due to changes in crop patterns, farm programs, weather, water use and a host of other items that can impact hydrology. As an example of how dramatic an impact things like farm programs or weather can have on hydrology, I would offer the Central Platte Valley during the early 1980's as a prime example. I believe it was 1983 that the Department of Agriculture offered the "PIK" (payment in-kind) program that idled half the irrigation wells and half the irrigated cornfields in the Valley. That year of greatly reduced pumping was followed the next year by an annual rainfall of up to forty-two inches, nearly double the normal rainfall, resulting in greatly increased recharge. The combined impact of those two years of decreased pumping and increased recharge, was ground water rises of up to ten feet or more, resulting in a major change in the groundwater/surface water interrelationship in just a matter of two years.

We would suggest that the Department either drop the lag effect or better define it and adopt ten years as a more realistic time period.

Instream flows were discussed at the negotiated rulemaking committee meeting, but are not mentioned in the report on proposed rule. Previous to LB 962 instream flow water rights were not considered in the management of groundwater for the benefit of inter-related surface water. Because of that exclusion, instream flow water rights could be granted for flows that were only there twenty percent of the time, a much lower standard than other water rights, which need to be there about ninety percent of the time.

Now instream flow can not only cause groundwater to be regulated just like other surface rights can, but can also cause basins to be declared fully appropriated. The Department

needs a rule for instream flow water rights that junior water rights are not administered, and basins are not declared fully appropriated unless, after reviewing the long-term historic average stream flows, the instream flow appropriations are being met less than twenty percent of the time. As an alternative to that "rule", the instream flow law should be changed to require the approved flow rate to be available at least ninety percent of the time in order to place instream flows on the same standard as all other water rights.

The third category of concern on the rules deals with the geographic area within which surface water and groundwater should be considered hydrologically connected (and thereby managed). For the last ten (10) years or more we have been led to believe, based upon policy discussions and decisions, that forty years and twenty-eight percent depletion would be the standard that would constitute any boundary for regulation.

- Nebraska's New Depletion Plan for the Platte River Cooperative Agreement uses 40 yr./28% as the management boundary.
- Nebraska agreed to use 40 yr./28% as the boundary in the Nebraska vs. Wyoming settlement.
- The Director of DNR asked our NRD to impose a suspension of drilling new wells in the western part of our NRD (above Elm Creek) within the 40 yr./28% boundary.
- The Department of Natural Resources set the 40 yr./28% boundary for over-appropriated parts of Central Platte NRD.

In addition to being the recognized "standard", utilizing the 40 yr./28% criteria has the advantage that it greatly reduces the "overlap" among basins and the potential necessity of rewriting an NRD's Integrated Management Plan every time an adjoining basin is declared "fully appropriated". As an example, I would offer Platte County in the eastern end of our NRD. Within that part of Platte County that lies inside Central Platte there is likely a piece of ground that if a ground water well was to be drilled it would impact the Platte River fifty percent of the pumped amount in forty years of pumping and fifty-three percent in fifty years.

Let us also hypothetically say that this same well would also impact the Loup River twenty-five percent in forty years, and twenty-eight percent in fifty years, and impact the Elkhorn Basin eight percent in forty years and eleven percent in fifty years. Under such a scenario, if all three basins had been declared fully appropriated, a "new use" at that location would be expected to offset fifty percent of it's pumpage to the Platte with a 40 yr./28% criteria for geographic boundary. However, if 50 yr./10% criteria for geographic boundary were used the "offset" requirement would be fifty-three percent to the Platte, twenty-eight percent to the Loup, and another eleven percent to the Elkhorn and the land area would be in three difference Integrated Management Plans for Central Platte. That same overlap and multi plan requirement would be repeated in the south part of Central Platte with the Platte, Big Blue, and Little Blue Basins.

We would strongly suggest that the Department reconsider their proposed 50/10 boundary, and return to the standard that has been utilized, the 40 yr./28%, as a boundary.

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One final comment that we want to provide deals with the tool that will be used to determine the geographic boundary, regardless of what year/percentage criteria is utilized.

We were glad that you had "groundwater models" in the listing of information that would be considered in making the determination required by Section 46-713 as we feel the COHYST model is far superior to Jenkins (SDF) method. Jenkins has a number of assumptions that are not true for the Central Platte River.

The assumptions are:

1. Transmissivity does not change with time. Thus for a water-table aquifer, drawdown is considered to be negligible when compared to the saturated thickness.

Comment: This is not true for the Central Platte Basin!

2. The temperature of the stream is assumed to be constant and to be the same as the temperature of the water in the aquifer.

Comment: This is never true in Nebraska!

3. The aquifer is isotropic, homogeneous, and semi-infinite in areal extent.

Comment: Not true of the Central Platte Basin!

4. The stream that forms a boundary is straight and fully penetrates the aquifer.

Comment: Not true of the Central Platte River!

5. Water is released instantaneously from storage.

Comment: Not true of the Central Platte Basin!

6. The well is open to the full saturated thickness of the aquifer.

Comment: Not true of the Central Platte Basin Wells!

7. The pumping rate is steady during any period of pumping.

Comment: Not true of the Central Platte Basin Wells!

All of the above make Jenkins a poor choice for determining the extent and magnitude of ground water impacts, especially on the Platte River, and we do support your proposed rule to utilize ground water models such as COHYST in your determinations.