

May 18, 2005

To: Roger Patterson  
From: Steve Gaul  
Subject: Nebraska Water Use Fee Scenarios for Brainstorming Purposes

Below are a number of brainstorming scenarios under which water use fees or charges could be used to raise varying amounts of funds for the types of water resources management activity that have been outlined by the Water Policy Task Force. These may help consider how to the draft language in LB 425 which states "*It is the intent of the Legislature that the Department of Natural Resources develop and propose a system of fees and charges to provide an ongoing source of funding for this program beginning in FY2006-2007.*" I have tried to include a spectrum of fees. My stating of an option/scenario in no way signifies support for that option. Making sure that surface water irrigators, groundwater irrigators, public water suppliers and other users share the burden on some type of water used basis and that the system still has low administrative costs and is simple may be challenging. The following paragraphs address some of the administrative challenges involved with each fee and discusses what types of funds could be raised given various fees.

*Examples of Potential Fee Options*

1. Charge an annual fee to all irrigators based on irrigated acres
2. Charge a per well fee to owners of all irrigation wells with capacities over 50 gallons per minute.
3. A combination fee that assigns different fee amounts to a) public water supply wells based upon either their metered withdrawals or population served and b) irrigated acres.
4. Increase NDNR application fees (there are about 20 different types of application fees)
5. A fee based upon metered water use for all metered wells and diversions with non-metered irrigation wells and diversions averaged.
6. A per irrigated acre or per well fee and diversion fee levied only in areas with moratoriums on installation of new high capacity wells with funds returned for uses in those basins.
7. A fee to public water systems based on population served and dedicated to addressing public water supply issues including water conservation and transfers.

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- 8. A fee on thermoelectric withdrawals
- 9. A per acre fee on dryland agriculture

General

In balancing fees between users it is helpful to know total water use in the state. US Geological Survey water use estimates for the year 2000 indicate that combined water withdrawals from both surface water and groundwater in the year 2000 were about 12,300 million gallons per day. Withdrawals were divided approximately as follows:

Irrigation	71.46%
Thermoelectric Power	22.93%
Public Water Supply	2.68%
Mining	1.08%
Livestock	.76%
Rural Domestic	.39%
Industrial	.31%

Thermoelectric Power is generally considered as primarily a non-consumptive use (39% of withdrawals and 4% of consumption on a nationwide basis) and these figures could alternately be viewed with thermoelectric power effectively removed. The options below do not include fees on Mining, Livestock, Rural Domestic, and Industrial. An argument can be made for any of those, although administrative costs would be a deterrent for most.

Discussion of Each Fee Option

In most of the options below \$4 million annually is used as the rough base amount which is being raised. This is a simplifying convenience since Nebraska has approximately 8 million irrigated acres and that is what 50 cents per acre would raise. The amount to be raised can be adjusted to whatever level is deemed appropriate.

1. **Charge an annual fee to all irrigators based on irrigated acres** – This option would need to use local property tax information and would probably be one of the *relatively* easier things to do from an administrative standpoint. There may be some legal questions relating to whether this would constitute a property tax by the state, which wouldn't be allowed. Like many of the other fees listed, if equity is a concern it would probably need balance from some type of fees or regulations on other non-irrigation water uses. I did ask Jim Cook about the legality question his response indicated "Article VIII, Sec. 1A of the Nebraska Constitution provides as follows: *"The state shall be prohibited from levying a property tax for state purposes."* There have been several cases interpreting that provision, but none seem to be on point. I continue to be of the opinion that a fee structure that uses the property tax system only for the purposes of identification of irrigated lands and collection of the fee would not violate that provision, especially if it is carefully written and if there are fees collected in different ways from water users other than irrigators."

*Income generation* - There are about 8 million irrigated acres in Nebraska. Therefore a fee of about 50 cents per irrigated acre would likely generate about \$4 million. The per acre fee could be adjusted to raise the needed amount. This fee could be used in combination with other fees on other uses. One potential difficulty is that our current estimates on irrigated acres not based on property tax roles. There might be a somewhat different irrigated acreage total if that source is used.

- 2. Charge a per well fee to owners of all irrigation wells with capacities over 50 gallons per minute** – This would take some additional staff to make the databases more accurate and we still aren't entirely there even in the Republican Basin where we are trying to get an accurate wells database for settlement implementation purposes. Certainly some wells may also be pumping more than others let alone how consumptive use might vary between pumpers. For purposes of irrigation this option probably doesn't as closely correspond to use as the irrigated acres option does. This option also doesn't deal with surface water or small wells but could be mixed with other options.

*Income generation* - There are nearly 101,000 registered irrigation wells in Nebraska of which only 364 are recorded as having a capacity of less than 50 gallons per minute. In order to generate \$4 million annually through irrigation wells only with no surface water or thermoelectric fee there would need to be an annual fee of approximately \$40 per well. This amount could be adjusted depending upon the amount of money that needed to be raised.

- 3. A combination fee that assigns different fee amounts to a) public water supply wells based upon either their metered withdrawals or population served and b) irrigated acres** – This option would attempt to combine methods by placing fees on two types of water use. If thermoelectric power uses, which consume very little water, are not counted irrigation in 2000 accounted for about 92.7% of consumptive use and public supply about another 3.5%. However, this method without other fees would miss thermoelectric power and other uses.

*Income generation* – If the approximately 4 million irrigated acres in the state each were subject to a fee of 50 cents per acre, then the public water supply fee at the same rate based on proportion of withdrawals and no other uses (such as thermoelectric) being charged would be about \$158,792. Thus the total fee from these two sources would be \$4,158,792.

- 4. Increase NDNR application fees (there are about 20 different types of application fees)** – The cost of staff time required for processing many types of water related applications is far higher than the fee involved. The types of transactions could be examined for the likely average administrative cost involved and increased to make applicants bear a larger portion of the cost, especially for those types of applications (such as transfers) which are especially time

consuming to process. In 2003 California's Legislature adopted a budget in which its Division of Water Rights was funded about 50% by fees. Funding could conceivably be directly applied to administering the application process. This option might tend to cut down on the number of applications by making very sure that an applicant finds a significant value in the application before they apply. Conversely, the monetary barrier also might prove a burden to water right holders and could discourage beneficial changes.

Income generation – Well registration fees raised about \$650,000 and surface water administration fees raised about \$6,700 in FY04. Separate fees were raised for Dams and Power Leases. At this point I have not gathered the monetary amounts for those. It is possible that there might be some reduction in irrigation well registrations in future years in which case money raised might diminish. However, domestic registrations can probably be expected to continue. Even with a doubling of fees and continuation of registration, this option would still only raise an additional \$656,700 beyond what was raised in FY04..

5. **A fee based upon metered water use for all metered wells and diversions with non-metered irrigation wells and diversions averaged** - Where wells are metered it is possible to gage withdrawals and because we have estimates for overall pumping it would be possible to come up with ways to average other areas. The accuracy of meters might encourage some to add meters. However, there would be some difficulties in both checking and administering meters and perhaps in equity between metered and non-metered areas. Some types of wells such as commercial or industrial might be left out. An alternate of this option would be to eventually require meters on all wells and diversions and then begin charging based upon withdrawals.

Income generation - Although this could be set to raise the same overall amount as other options, there might be some equity achieved by having withdrawals being monitored. The difficulty would likely be in administration and there could be significant costs involved. The average meter costs in the vicinity of \$1,100 to \$1,200 installed and paying \$1,100 simply to raise \$40.00 per year may not be a wise investment unless there are other water management objectives in mind.

6. **A per irrigated acre or per well fee and diversion fee levied only in areas with moratoriums on installation of new high capacity wells with funds returned for uses in those areas** – the idea here would be targeting funds for incentives or other uses in the basins where the fee was levied. It could also be combined with other fees or matched with outside funds to solve problems in the basin. Since incentives are likely to be needed more in some basins than others, this would help provide what some may consider equity by having those basins pay as a whole for a larger portion of incentives than those basins where the money is not spent.

Income generation – This amount would vary depending upon the irrigated acreage in any one area.

7. **A fee to public water systems based on population served and dedicated to addressing public water supply issues including water conservation and transfers** – Public water supplies withdraw only a small percentage of water. However, it is still important. The idea here would be to charge a fee on the withdrawals and dedicate it to conservation within this use. Fees could be set so that the amount per unit of withdrawal is similar to that of irrigation uses. Certainly public water systems have major water quality challenges in addition to water conservation and transfer issues. The amount likely to be raised is modest enough that the potential use of funds may need to be closely defined.

Income generation – As noted earlier, if irrigated acreage had fees assessed that amounted to \$4 million, then a public water system fee based upon their relative portion of withdrawals would be about \$150,000. This could potentially be collected from public water systems on a customer served or population basis.

8. **A fee on thermoelectric withdrawals** – Nationwide thermoelectric uses account for about 39% of withdrawals and 4% of consumptive use. In Nebraska they account for just under 23% of withdrawals. The quantity withdrawn and the importance of the use could be cited as a rationale for a fee. However, consumptive use is likely low. Fees could be set so that they are similar to other uses based on the rate of withdrawal. Alternately they could be set to be similar to other uses based on the expected consumptive use.

Income generation – obviously the trick here is whether consumptive use or withdrawals are used as the basis for any fee. If the relative level of fees was based solely on withdrawals to be shared by irrigated agriculture, public water supplies, and thermoelectric power, then a breakdown might be as follows. If irrigated agriculture was assessed fees of \$4 million, then thermoelectric power would need to be assessed fees of \$1,283,500 and public water supplies would need to be assessed fees of \$150,000 in order to keep their fees in line with withdrawals. However if consumptive use were used the fee to thermoelectric power users would be far smaller. Nonetheless the water is very valuable for that purpose. I've included the potential for a thermoelectric withdrawal fee in my description, but it would probably be more appropriate to base it on consumption than on withdrawals as I have done. If I had time to find a reliable consumptive use figure for Nebraska thermoelectric I probably would have included it.

9. **A per acre fee on dryland agriculture** - I'm really hesitant about this idea. However, increasing use of no-till and better overall conservation practices have helped enable more production/better yields on dryland. This has probably contributed to a decrease in runoff and probably some other water quantity/water balance effects in some areas. The idea of an acreage fee would be to help recoup from any increased consumptive use of water in dryland areas. There would be

significant administrative questions in this option. For instance would grassland, pasture, or any general type of non-cropland be treated differently? This type of fee might have legal difficulties due to property tax issues. Administrative costs may be high for the amounts generated.

Income generation – The per acre fee could be set to generate the needed amounts.