Integrated Water Management Options in the Nebraska Ground Water Management & Protection Act

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Nebraska statutes authorize natural resources districts (NRDs) and the Nebraska Department of Natural Resources (DNR) to regulate ground water and surface water uses respectively when there is insufficient water for all uses. These 1996 "integrated water management" authorities have yet to be implemented.

This handout describes

1. the general framework of the Nebraska Ground Water Management & Protection Act (GMPA)
2. the special GMPA integrated water management options,
3. an overview of how conflicts between surface and ground water users are resolved in the West generally, with special reference to Colorado law
4. how such water conflicts might be resolved within a correlative rights framework, and
5. what additional water management tools are needed to effectively deal with surface-ground water disputes in Nebraska.

Ground Water Management and Protection Act

In Nebraska ground water management is largely a local (NRD) rather than a state responsibility. Under the GMPA all NRDs must prepare ground water management plans (GMPs). The GMP is the framework within which NRDs may regulate ground water development (well spacing regulations, well drilling prohibitions) and ground water use (well metering, pumping restrictions) in ground water management areas (GMAs).

The GMP must address a variety of issues, including ground water depletion and ground water protection from agricultural chemical use. The GMP must be reviewed by the DNR before it can be implemented by the NRD. The GMP must also identify the regulations the NRD intends to implement to deal with specified ground water management issues. NRD approval of the GMP and establishing GMA regulations both are subject to public notice and hearing requirements.

Authorized GMA regulations include:

1. ground water allocation (i.e. pumping quotas)
2. rotation of use
3. well spacing
4. well metering
5. irrigated acreage reduction
6. mandatory ag chemical best management practices
7. soil testing
8. voluntary or mandatory educational programs
9. water quality monitoring and reporting
10. limit or prevent the expansion of irrigated acres
11. other reasonable rules and regulations.

Regulations may be varied within an GMA based upon different GMA conditions, including different irrigation systems and differing hydrologic relationships between ground water and surface water. When ground water problems are so severe that they cannot be addressed solely by implementing the above GMA regulations, well drilling may be halted or conditioned. NRD permits are required before new wells pumping more than 50 gallons per minute may be constructed. The permit fee is $17.50 ($250 for late permits.)

Most if not all NRDs have established water quality GMAs to deal with nitrate contamination from fertilizer use. Some water quality GMAs also deal with pesticide contamination of ground water.

The Nebraska Department of Environmental Quality (DEQ) may in some circumstances establish ground water regulations to protect ground water quality from ag chemical use if the local NRD does not regulate or if its water quality GMA regulations are ineffective. A few NRDs have established GMAs to manage ground water depletion. No NRDs have yet established a GMP to deal with surface-ground water conflicts

**Integrated Water Management Options**

NRDs have the option to deal with current or future surface-ground water conflicts in integrated management GMAs (IM-GMAs). IM-GMA regulations may treat new wells differently from existing wells when a the IM-GMA is established.

**Joint action plan (JAP)**

If the NRD deals with surface-ground water conflicts on its own, only ground water uses will be subject to IM-GMA regulation. If the NRD wishes to bring surface water uses into the IM-GMA program, the NRD may request the DNR to study the surface-ground water conflicts. When the DNR study is completed and if DNR concludes that surface-ground water problems exist, the DNR holds a public hearing. Within 90 days of the hearing the NRD determines whether it will pursue an IM-GMA to deal with surface-ground water conflicts. If so, and the DNR concurs, the NRD develops an IM-GMA joint action plan (JAP) with the DNR.

The NRD and DNR JAP is adopted within one year of the determination to proceed. The NRD portion deals with ground water regulations and the DNR portion deals with surface water regulations. Possible DNR JAP surface water regulations include
1. increased monitoring and enforcement of surface water appropriator diversion rates and quantities
2. prohibiting or limiting new appropriations
3. requiring surface appropriators to implement reasonable conservation measures or best management practices
4. other reasonable regulations

The GMPA acknowledges that hydrologically connected surface and ground water may need to be managed differently than other surface or ground water.

If the JAP establishes surface water conservation measures or best management practices, appropriators are given up to 180 days to identify such measures or practices and develop an implementation schedule. Neither well registration dates nor appropriation priority dates can be a factor in determining whether an IM-GMA is established or a JAP prepared.

When the NRD and DNR have each completed their portion of the JAP, a public hearing must be held within 60 days. The notice must include a general description of the area to be include in the IM-GMA, and the complete text of proposed regulations. The NRD determines within 90 days whether the JAP should be implemented in an integrated management GMA. If the JAP is implemented, a monitoring program must be established. The NRD may also establish a temporary 3-year ban on well drilling while the JAP is being prepared (authority expires 12/31/02).

**Interstate surface-ground water dispute**

The DNR may initiate the IM-GMA JAP process on its own motion where interstate surface-ground water disputes are at issue. If the affected NRD does not participate in the JAP process, the DNR assumes the NRD responsibilities for developing IM-GMA regulations, but only with the approval of the Integrated Water Review Committee (IWRC). The IWRC is composed of the Governor and two disinterested members of the Natural Resources Commission.

The IM-GMA study that is conducted prior to preparing the JAP would be invaluable for identifying surface and ground water management options for dealing with the surface-ground water conflicts.

**Colorado Approach**

In Colorado (as well as in the West generally) the priority doctrine of "first in time is first in right" applies to surface water and to ground water tributary to a surface stream. Colorado has the most advanced administrative system for dealing with surface-ground water conflicts and is a good model to consider.

In Colorado, ground water users who are "junior" (i.e. later in time) to "senior" surface appropriators are prohibited from pumping their junior wells unless sufficient replacement water is provided to meet the priority calls of senior surface appropriators. This may be accomplished
1. by purchasing and retiring surface water appropriations
2. purchasing stored surface water which can be released as needed to meet senior priority calls
3. providing ground water directly to a senior surface appropriator
4. pumping ground water directly into a stream.

Replacement water programs in Colorado are implemented through state-approved water "augmentation plans." Ground water users join user associations and pay a fee (usually based on acres irrigated) to fund the augmentation plan. Water augmentation plans are approved by the Colorado State Engineer if the plan provides sufficient replacement water to cover the association members' well pumping.

**Correlative Rights**

Colorado’s surface-ground water conflicts are based on the theory of priority, first in time is first in right. This favors surface water appropriators, whose priority dates may be decades older than most irrigation well priority dates.

In contrast, Nebraska ground water law has historically been based on correlative rights: those using water for the same purpose have equal rights to the water, regardless of well priority date.

One approach to resolving surface-ground water conflicts in Nebraska other than priority is correlative rights. Under this approach, if a water management study determined that there were sufficient water to supply all irrigators (surface and ground water) with e.g. 60% of their normal irrigation water supply, that is what each user would be entitled to. All users (not just junior ground water users) would pay a fee to fund water management activities to

1. see that as many irrigators as possible received their 60% allocation
2. purchased the water rights of those irrigators whose uses could not be supplied.

This approach would guarantee senior surface appropriators only a partial irrigation water supply, not the full water supply they would receive under the priority rule. It would also lessen the financial burden on ground water irrigators by having all irrigators pay for supply augmentation, not just the junior ground water irrigators.

**Needed Water Management Tools**

The correlative rights approach could be implemented

1. by mutual agreement of surface and ground water irrigators
2. possibly within a JAP, or
3. pursuant to new legislation authorizing water marketing and supply augmentation activities.

This approach would not likely be implemented through litigation unless it were by mutual agreement. This approach also represents the most favorable outcome ground water irrigators
would likely be able to legally achieve where wells are depleting streamflow appropriated by senior surface appropriators.