

## **II. GROUNDWATER**

### **A. Federal Groundwater Laws and Regulations**

#### ***1. Safe Drinking Water Act***

The objectives of the Safe Drinking Water Act<sup>10</sup> (SDWA) are:

- The protection of public health by establishing safe limits, based upon the quality of tap water, for contaminants that may have an adverse effect on human health; and
- The prevention of ground and surface drinking water source contamination.

#### ***a. 1996 SDWA Amendments***

The 1996 amendments<sup>11</sup> to the SDWA give EPA authority to target contaminants for regulation which could pose the greatest threat to public health. These amendments also provide additional sources of financial assistance for public water systems.

The amendments create a voluntary source water protection program, which may include whole farm/ranch or voluntary agricultural resource management plans, to prevent contaminants from entering drinking water in the first place.

Other provisions include:

- Flexibility in monitoring of contaminants;
- Compliance exemptions for small water systems; and

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<sup>10</sup> 42 U.S.C. § 300g-1 *et seq.* (1996).

<sup>11</sup> Safe Drinking Water Act Amendments of 1996, P.L. 104-182.

- Programs which enable water systems to more fully comply with the law through capacity development.

Under the 1996 amendments, EPA is required to establish a program for monitoring unregulated contaminants and must use risk assessment and cost-benefit analysis in setting new standards for contaminants. In addition, states are now required to identify areas that provide source water for drinking water systems and must conduct vulnerability assessments for high priority areas.

Finally, the amendments include right-to-know provisions which require that when an SDWA violation presents a threat to public health, the public must be notified of the contaminants present in tap water within 24 hours. The law also requires standards for high-priority microbial contaminants and disinfection by-products.

**Producer Note:** The extent to which former requirements will be affected by the 1996 SDWA amendments will be fully realized when regulations implementing the amendments are adopted by EPA. Until that time, producers must closely monitor and maintain all previously required activity and consult frequently with their state agency that regulates drinking water to determine whether changes in an activity may be required by any new regulations.

***b. Comprehensive State Ground Water Protection Program***

Under regulations which implemented the prior SDWA, states could establish a Comprehensive State Ground Water Protection Program (CSGWPP) to protect underground sources of drinking water. Under this program, states could require the use of BMPs. Generally, agricultural operations were required to meet drinking water regulations only if the operation served piped water to an average of 25 people or had more than 15 service connections for more than 59 days per year. This regulation primarily affected those with drinking water wells or operations which provided drinking water to contract labor. Farms were required to sample for microbiological and nitrate problems based on schedules established by either the state or the appropriate EPA regional office.

**Producer Note:** Under the CSGWPP, each state must establish goals to guide all relevant groundwater protection programs in the state; prioritize water resources; identify sources of contamination and needs to achieve protection of the resource; define all authorities, roles, responsibilities, and resources within the state; coordinate information collection and management; and improve public information and education.

*c. Underground Injection Control Program*

Underground injection means the subsurface emplacement of fluids by well injection. The SDWA provides an underground injection control (UIC) program which is intended to protect groundwaters that may reasonably be expected to supply any public water system from contaminants which may result in noncompliance with drinking water regulations or otherwise adversely affect public health.

The SDWA classifies all injection wells into one of the following categories:

- Class I) Wells used to inject hazardous wastes and industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing an underground source of drinking water;
- Class II) Wells which inject fluids in connection with natural gas storage, conventional oil or natural gas production, enhanced recovery of oil or natural gas, and storage of hydrocarbons which are liquid at standard temperature and pressure;
- Class III) Wells which inject for extraction of minerals;
- Class IV) Wells used by generators of hazardous or radioactive waste disposing of the waste into or above a formation which within 1/4 mile contains an underground source of drinking water, and all other disposals of hazardous waste; and
- Class V) All injection wells not included in Classes I, II, III, or IV.

Generally, all underground injections are prohibited without a UIC permit. In addition, the construction of any well is prohibited until a permit has been issued.

**Producer Note:** Agricultural drainage wells are categorized as Class V wells in the UIC program. As a result, most producers will only need to be familiar with Class V well requirements.

Producers with Class V agricultural drainage wells are required to furnish inventory information concerning the wells to appropriate state agencies. In addition, states can require individual well permits. Class V agricultural drainage wells include:

- Air conditioning return flow wells;

- Cesspools receiving wastes with open bottoms and perforated sides;
- Cooling water return flow wells used to inject water used for cooling;
- Drainage wells primarily used to drain storm runoff;
- Dry wells used for waste injection;
- Recharge wells used to replenish aquifers;
- Salt water intrusion barrier wells;
- Sand backfill, other backfill wells, and injection wells used primarily in mining areas;
- Septic system wells used to inject waste or effluent from multiple dwelling or business septic tanks; and
- Subsidence control wells.<sup>12</sup>

In addition, producers are not allowed to inject contaminants into an underground source of drinking water which uses a well if the contaminant could cause a violation of any primary drinking water regulation or if the activity would adversely affect the public health.

## ***2. Groundwater State Management Plans***

In Nebraska, the Department of Agriculture is required by the Nebraska Pesticide Act<sup>13</sup> to adopt a state management plan for the prevention and mitigation of pesticides in ground and surface water. The plan may contain a list of limited use pesticides and include conditions for their use (see discussion of state pesticide laws on page NE-30).

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<sup>12</sup> 40 C.F.R. § 146.5 (1996).

<sup>13</sup> NEB. REV. STAT. § 2-2622 *et seq.* (Supp. 1996).

**Producer Note:** EPA has published a proposed regulation<sup>14</sup> which will require states to develop groundwater management plans to allow the continued use of five chemicals) alachlor, atrazine, cyanazine, simazine, and metolachlor. The rule is not expected to be effective until the fall of 1997. Producers should contact the state agriculture department for effective dates.

## **B. State Groundwater Laws and Regulations**

The Nebraska Ground Water Management and Protection Act<sup>15</sup> recognizes that groundwater is a valuable resource. The objective of the statute is to protect both the quantity and quality of groundwater within the state. Every landowner is entitled to a reasonable and beneficial use of the groundwater underlying his or her land. However, this right is subject to the provisions of the Act and the rights of other landowners when the groundwater supply is insufficient for all users.

The Act also addresses the contamination of groundwater supplies by nonpoint source pollutants such as nitrate nitrogen fertilizers as well as pollution from point sources and deterioration caused by the dewatering of aquifers.

**Producer Note:** The Act was substantially modified in 1996. Legislative Bill 108<sup>16</sup> added provisions for the integrated management of interconnected groundwater and surface water to the existing programs for managing groundwater quantity and quality.

The Natural Resources Districts may designate management areas for groundwater quantity, groundwater quality, integrated management, or any combination of the three. The Natural Resources Districts may also designate management areas for integrated management with participation and assistance by the state Department of Water Resources. DEQ may designate management areas on its own for groundwater quality. A special provision allows the Department of Water Resources to impose integrated management within the Republican River Basin before January 1, 1999.

The Act permits a number of mandatory groundwater controls to be imposed within management areas. These include:

- Allocation of water among users;

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<sup>14</sup> 61 Fed. Reg. 33260 (1996).

<sup>15</sup> NEB. REV. STAT. § 46-656.02 *et seq.* (Supp. 1996).

<sup>16</sup> 1996 Neb. Laws 108.

- Rotation in use among wells;
- Well-spacing requirements;
- Meters and other water use measuring devices;
- Reduction in irrigated acreage;
- Best management practices (BMPs) to conserve water and prevent contamination;
- Soil and water sampling and analysis;
- Educational programs;
- Water quality monitoring and reporting; and
- A moratorium on the drilling of new wells.

The following additional controls may be imposed on surface water within management areas:

- Increased monitoring and enforcement;
- A moratorium on additional appropriations of surface water;
- The use of reasonable water conservation measures; and
- Other reasonable restrictions on surface use.

The Natural Resources District in which a management area is located has the primary responsibility for enforcing groundwater controls. The Department of Natural Resources enforces surface water controls in integrated management areas in cases where DNR made the area designation on its own. DEQ can enforce controls necessary to protect groundwater quality. However, nothing in the Act limits the powers of the Nebraska Department of Health in relationship to groundwater protection.

**Producer Note:** Permits are required for new wells in management areas, and various types of allocations, restrictions, and controls may be imposed on water usage in these areas. Modifications of existing wells may also need a permit if the modified well would have needed a permit if newly built.

An application for a permit for a water well in a management area will be denied only in the following circumstances:

- The location or operation of the proposed well would conflict with any district regulations;
- The proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes; or
- In the case of a late permit application, the applicant did not act in good faith to obtain a timely permit.

All permits must be issued or denied within 30 days of receipt of the application by the District. Any person who is aggrieved by any order of the Natural Resources District, the Director of DEQ, or the Director of Water Resources may appeal the order. The appeal must be filed within 30 days of a final decision by DEQ.<sup>17</sup>

**Producer Note:** All producers must determine if their operations are located within a management area. Check with the local Natural Resources District or DEQ to determine if special requirements exist for an operation's location.

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<sup>17</sup> NEB REV. STAT. § 84-917 (1994).

<sup>18</sup> 42 U.S.C. § 7401 *et seq.* (1994).