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## Community Options for Wellhead Protection Areas

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# Cornhusker Economics

## Cooperative Extension

Institute of Agriculture & Natural Resources  
Department of Agricultural Economics  
University of Nebraska – Lincoln

### Community Options for Wellhead Protection Areas

Market Report	Yr Ago	4 Wks Ago	11/23/01
<b><u>Livestock and Products,</u></b>			
<b><u>Average Prices for Week Ending</u></b>			
Slaughter Steers, Ch. 204, 1100-1300 lb Omaha, cwt	\$72.68	\$65.35	\$65.64
Feeder Steers, Med. Frame, 600-650 lb Dodge City, KS, cwt	90.50	84.83	*
Feeder Steers, Med. Frame 600-650 lb, Nebraska Auction Wght. Avg	97.20	92.88	92.84
Carcass Price, Ch. 1-3, 550-700 lb Cent. US, Equiv. Index Value, cwt	111.37	104.40	102.76
Hogs, US 1-2, 220-230 lb Sioux Falls, SD, cwt	38.50	37.00	36.50
Feeder Pigs, US 1-2, 40-45 lb Sioux Falls, SD, hd	*	50.00	*
Vacuum Packed Pork Loins, Wholesale, 13-19 lb, 1/4" Trim, Cent. US, cwt	105.75	106.25	96.88
Slaughter Lambs, Ch. & Pr., 115-125 lb Sioux Falls, SD, cwt	*	*	54.43
Carcass Lambs, Ch. & Pr., 1-4, 55-65 lb FOB Midwest, cwt	149.00	123.47	123.53
<b><u>Crops,</u></b>			
<b><u>Cash Truck Prices for Date Shown</u></b>			
Wheat, No. 1, H.W. Omaha, bu	*	2.97	3.05
Corn, No. 2, Yellow Omaha, bu	1.93	1.79	1.93
Soybeans, No. 1, Yellow Omaha, bu	4.79	3.96	4.32
Grain Sorghum, No. 2, Yellow Kansas City, cwt	3.42	3.40	3.51
Oats, No. 2, Heavy Minneapolis, MN, bu	1.31	2.04	2.29
<b><u>Hay,</u></b>			
<b><u>First Day of Week Pile Prices</u></b>			
Alfalfa, Sm. Square, RFV 150 or better Platte Valley, ton	115.00	115.00	115.00
Alfalfa, Lg. Round, Good Northeast Nebraska, ton	72.50	77.50	77.50
Prairie, Sm. Square, Good Northeast Nebraska, ton	82.50	105.00	105.00
* No market.			

The Wellhead Protection Area Act (WHPA Act) was adopted in 1998. The WHPA Act authorizes public water suppliers (primarily cities and villages) to designate wellhead protection areas (WHPAs) to protect community water supplies from pollution.

Under the Nebraska Safe Drinking Water Quality Act, the quality of water provided by public water supply systems is regulated by the Nebraska Department of Health & Human Services. If a community's water violates drinking water standards, the community can operate only under NDHHS administrative order until the violations are corrected. Nitrate is Nebraska's most widespread groundwater contaminant. If a community's water exceeds the 10 parts per million (ppm) nitrate drinking water standard, a community may use a WHPA program as a long-term solution to nitrate contamination, avoiding costly replacement of existing wells or developing advanced water treatment systems to remove nitrates from drinking water. The WHPA can be used so long as nitrates are less than 15 ppm and the community provides bottled water to infants and pregnant women.

This newsletter examines the wellhead protection area program, and evaluates different community legal authorities to protect the community's drinking water supplies for first and second class cities and villages.

#### Wellhead Protection Area Act Process Overview

**Summary** (1) Have a wellhead protection area (WHPA) delineated; (2) Inventory potential contaminant sources within the WHPA; (3) Describe the program to protect the water supply from such contamination (including contingency plans for location of alternate drinking water supplies in the event of contamination); (4) Propose the controls necessary to provide protection from contaminants; (5) WHPA program submitted to DEC for approval; (6) If program is approved, adopt program by ordinance.

**WHPA boundary delineation.** A WHPA is the community well's groundwater recharge zone. Most WHPAs are based on a 20 year time of travel. This means a contaminant deposited on the edge of the WHPA would take up to 20 years to reach the water well. The Nebraska Department of Environmental Quality (DEQ) will delineate a community's WHPA in cooperation with the community. WHPAs may also be delineated by the Nebraska



Rural Water Association (402) 443-5216. Some Natural Resource Districts (NRDs) will delineate WHPAs.

**Contaminant source inventory.** Potential contaminant sources include: fuel, oil and chemical storage, chemical use, dumps, and waste collection, storage and disposal. DEQ has WHPA inventory forms. Often inventories are conducted as a school science project or by community service groups.

**WHPA plan preparation.** DEQ staff have prepared a sample WHPA plan for communities to use in developing their own plan. Proposed sample WHPA protection ordinance checklists are also being developed for DEQ.

**Possible WHPA control strategies.** DEQ has identified a number of possible steps communities could take to protect local ground water supplies from contamination: (1) establish setbacks for certain potential contaminant sources; (2) require connection to municipal water supply system within 5 years; (3) NDHHS water well inspections every 5 years; (4) require connection to municipal sewer system within 5 years; (5) establish building permit program; (7) establish well permit program, including extraterritorial wells; and (8) WHPA zoning overlay district.

#### **Community WHPA Legal Authorities**

Under existing Nebraska statutes, communities and other public water suppliers can engage in education activities publicizing the WHPA and what activities and practices will help prevent WHPA contamination. Communities may also regulate activities threatening public water supplies as public nuisances.

**Police power regulations.** Police power authority is the broadest legal authority available to any governmental unit at the state, local or federal level. The police power is simply the power of the state to regulate virtually anything in order to protect the public health, safety and welfare. Such police power regulations are illegal only when they violate state or federal constitutional provisions, including when private property is confiscated and (more commonly) when procedural mistakes are made in adopting or implementing regulations. The police power is a state legal authority, which the state may delegate (with limits) to local political subdivisions, such as cities and counties. Examples of police WHPA power regulations might include setback requirements and prohibiting the location of specified facilities or activities within a WHPA.

First class cities (population 5,001-100,000) may establish police power regulations within their community limits and up to two miles outside their city limits. NRS 16-246. Second class cities (population 801-5,000) and villages (population 800 or less) may establish police power regulations within their municipal limits. NRS 17-505. Police power regulations of property for second class cities and villages may be extended for one mile beyond the city or village limit, but may not interfere with existing farming, livestock operations, business or industry. NRS 17-1001. Police power regulations may not violate state statutes.

**Sanitary & water ordinances.** Rural communities are also authorized to establish sanitary regulations and to protect city water supplies. First class cities may regulate waste disposal for two miles, and may adopt sanitary regulations and regulate nuisances (including livestock operations) for two miles. NRS 16-231, -240, -901. The property regulations of second class cities and villages may extend one mile. NRS 17-1001. Villages may adopt sanitary and nuisance regulations. NRS 17-207. Second class cities and villages may regulate to prevent pollution of the municipal water supply 15 miles. NRS 17-536. This later provision gives smaller communities broad authority to adopt

WHPA regulations 15 miles out from the community, a very broad regulatory grant. Second class cities and villages have explicit well regulatory authority. NRS 17-529.

**Public nuisances.** All cities and villages may regulate public nuisances to the limits of their zoning jurisdiction (1-3 miles). NRS 18-1720. This includes the authority to define what constitutes a nuisance, to require that nuisances be controlled and to require that nuisances be terminated (without compensation). In the latter case, the property owner will typically contest the nuisance determination in court. Nuisances need only interfere with the public health, welfare or convenience, and anything threatening the municipal water supply would clearly be a public nuisance.

**Livestock nuisance exceptions.** There are two livestock nuisance exceptions on municipal public nuisance authorities [NRS 2-4403, 81-1506(1)(b)]. However, under either statute the livestock operation must have been in existence before the community in order to qualify for the exception, which would be rare.

**Zoning.** In Nebraska, municipalities may establish land use zones and regulate land use through zoning regulations after preparing a comprehensive plan. NRS 16-901 to -933. First class cities may zone for two miles, and smaller communities may zone one mile beyond their border. Zoning regulations supersede less strict state regulations, but stricter state requirements supersede zoning regulations. NRS 16-914. Municipal building permits may be required without zoning. NRS 19-902(4).

**Other issues.** Natural Resource Districts may regulate agricultural chemical use and manure application in ground water management areas to protect groundwater quality. Some NRDs trigger groundwater quality protection regulations sooner within designated WHPAs. Communities may purchase land within a WHPA in order to control the use of the land (e.g. putting land into pasture or leasing the land to farmers who follow specified ag chemical management practices). Communities may also purchase conservation easements from land owners to protect public water supplies if the owner agrees to certain land use restrictions designed to protect community water supplies. Communities may also provide cost-sharing assistance to farmers to implement agricultural chemical best management practices to reduce or prevent pollution of municipal water supplies.

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