

**CONTAMINANT SOURCE
MANAGEMENT
OPTIONS
FOR
WELLHEAD PROTECTION**



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By Thomas O'Connor

Under Contract with

Nebraska Department of Environmental Quality

PO Box 98922

Lincoln, NE 68509

402 471-2186

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Contaminant Source Management Options for Wellhead Protection

Abstract

Management of potential sources of contamination to a ground water supply by local communities and public water suppliers can involve a number of possible steps. These may include the enactment of sanitary and water ordinances, public nuisance laws, and zoning restrictions on specific land uses; the purchase of land or conservation easements; cooperative efforts with local NRDs; or voluntary actions. This document provides examples of some the above actions that have already been taken or considered by Nebraska municipalities and also discusses state and federal programs that are protective of ground water supplies.

A short introductory document explains the roles of different local, state, and federal entities in Wellhead Protection. Tables summarizing the ordinance and zoning examples are provided. All ordinance and county zoning examples are from Nebraska sources. All examples are provided in Adobe Acrobat format (*.pdf). The Adobe Acrobat reader is available free on the internet. If you have trouble downloading any of the examples or want the entire document with associated example files, a CD is available. Contact NDEQ at 402 471-0096 to request a copy.

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How to Use This Publication

The complete text of this publication includes numerous ordinances and documents from other sources. If you are reading a document about 20 pages long, please be aware that other associated materials are available. Please check NDEQ's web site at <http://deq.ne.gov/> and use the search button (type WHP). The complete publication is also available on CD. Contact NDEQ at 402/471-0096 to request one.

Contaminant Source Management Options for Wellhead Protection

Introduction

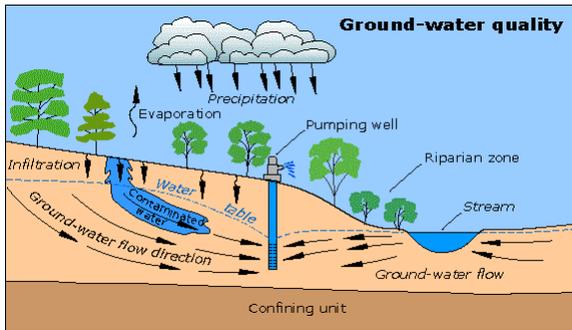
Management of a ground water supply by local communities can involve a number of possible steps. These may include the enactment of sanitary and water ordinances, public nuisance laws, and zoning restrictions on specific land uses; the purchase of land or conservation easements; cooperative efforts with local NRDs; or voluntary actions. This document provides examples of some the above actions that have already been taken or considered by Nebraska municipalities and also discusses state and federal programs that are protective of ground water supplies.

This collection is not “all-inclusive” and will be updated as new information is shared with the Department. Please check with the Village, City, agency or organization mentioned to get the most current information available or to discuss the problems and strengths of each approach. NDEQ is not presenting this information as a template for what towns should adopt for their own purposes. Rather, this information

is presented as examples that towns may use if they wish. The Department makes NO judgment as to the legality or effectiveness of any approach and recommends consulting with legal counsel before enacting any ordinances, regulations, or entering into any legally binding agreement.

NDEQ is not asking you to do anything regarding Wellhead Protection at this time. This information is being provided in hopes you will consider undertaking some type of voluntary action and/or consider the protection of public drinking water supplies the next time you update your local regulations. Please forward any other ordinances or zoning rules you may come across for inclusion in a future collection. Copies can be sent to:

Wellhead Protection Program
NDEQ - GW
PO Box 98922
Lincoln, NE 68509



City/Village/District Ordinances and Regulations

In discussing the jurisdictional power of a municipality to implement and enforce ordinances and regulations designed to protect ground water supplies, not only does the authority of the municipality to enforce its code have to be taken into account but also the interaction of this authority with jurisdiction at the State and County level. Therefore, legal questions may exist as to the power of a municipality to enact and enforce certain ordinances. The municipality must ensure that an ordinance or regulation does not violate any constitutional or statutory provisions and must carefully consider the legal implications of any proposed ordinance.

Ordinances are part of the police power authority of a community, which is simply the power of the state to regulate in order to protect the public health, safety and welfare.

The police power is a state legal authority, which the state has delegated (with limits) to local political subdivisions, such as cities and counties. For example, 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. Second class cities (population 801-5,000) and villages (population 800 or less) may establish police power regulations within their municipal limits and to within one-mile outside of their municipal boundary. Local water districts and sanitary improvement districts that operate wells have been granted limited police power authority over land within their district or over land they have purchased. (However, local districts may contract with landowners regarding land use or farming practices that are protective of a ground water supply).

Table 1 summarizes some of the ordinances used by Nebraska communities to protect ground water supplies. (Appendix A contains copies of these same ordinances). These ordinances include zoning requirements, nuisance prohibitions, and the adoption of sanitary and water ordinances (including requirements for backflow prevention devices, sewer and water line

connections, requirements for well permitting and well abandonment, and setback distances from municipal wells for specified activities).

One problem faced by many Nebraska communities is that the area inside their designated WHPA does not coincide with the traditional territorial and jurisdictional boundary of the community. Several Nebraska communities have attempted to address this problem by referring to a Nebraska statute that gives a general grant of power to second class cities and villages to acquire and protect land within fifteen miles of their corporate limits for the purpose of locating or constructing a waterworks and to prevent the pollution of such water supply or waterworks. The so-called 'fifteen mile' law states

“The jurisdiction of such city or village, to prevent any pollution or injury to the stream or source of water for the supply of such waterworks, shall extend fifteen miles beyond its corporate limits.” **Neb. Rev. Stat. § 17-536**

The power of a city or village to enforce this statute has been challenged at least twice in Nebraska courts. In 1988, Sarpy County and the State of Nebraska approved a site

located 1½ miles from Springfield's corporate limits as a sanitary landfill. The City of Springfield subsequently passed ordinances requiring a city license for the construction or operation of a solid waste landfill if such landfill was located within five miles of the corporate limits and located over a ground water source that supplied drinking water to the residents of Springfield. The county sought to have the ordinance declared invalid and to enjoin enforcement. The court agreed with the county, finding that the Nebraska Environmental Protection Act had limited the influence of a second class city to approve a solid waste facility within its zoning jurisdiction and that Section 17-536 did not grant such authority outside its zoning jurisdiction. However, the court did limit its ruling to the enactment and enforcement of the city's ordinances “as they apply to the present case.”

Approximately ten years later, the statute was again challenged when the City of Alma enacted ordinances requiring any person or entity seeking to construct or operate any manufacturing, livestock, or other facility within 15 miles of the city limits “which will create liquid or solid waste to be stored or disposed of into holding ponds, lagoons,

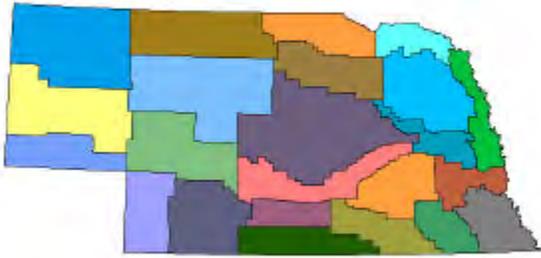
tanks, or other containers or which will be discharged into waterways or onto or under the soil” to first obtain a permit from the City. Two issues were ultimately presented at trial. The first was whether the Nebraska Environmental Protection Act had preempted the City’s ordinances. The second was whether the City’s ordinances were arbitrary and unreasonable and therefore constitutionally flawed. The District Court held for the City of Alma on both issues finding that the “the field of pollution control has not been preempted by the legislature” and that the City of Alma did not act arbitrarily or unreasonably as to the enactment of the ordinances. In finding that the ordinances were valid the District Court noted that the City had relied upon the opinion of experts that the lagoons presented a potential for contamination of the City’s water supply. The District Court opinion has been appealed to the Nebraska Supreme Court.¹ The Court has not issued a final opinion at this time.



County Zoning

Nebraska counties have the authority to regulate, make, adopt, amend and implement comprehensive development plans and adopt zoning resolutions that may complement or otherwise impact municipal codes designed to protect ground water supplies. County zoning regulations designed to protect a municipal WHPA can be adopted by the county board after the establishment of a county planning commission and the adoption of a county comprehensive development plan. Table 2 summarizes zoning regulations for four counties (Gage, Johnson, Pawnee and Valley) that recognize local Wellhead Protection Areas and limit the uses and structures that can take place within such an area. Appendix B contains copies of the county regulations.

¹ See *Sarpy County v. City of Springfield* [241 Neb. 978] and *State ex rel. City of Alma v. Furnas County Farms et al* [257 Neb. 189]



Natural Resources Districts

Nebraska's NRDs are involved in a wide variety of projects designed to conserve and protect the state's natural resources. Examples of NRD programs that directly or indirectly impact a designated WHPA include programs designed to develop, manage and conserve water supply for beneficial uses, and programs designed to control ground water pollution and soil erosion. As described by the Nebraska Association of Resources Districts:

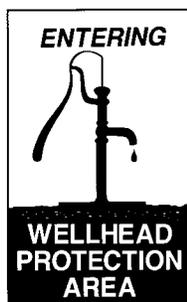
“While all NRDs share these responsibilities, each district sets its own priorities and develops its own programs to best serve local needs. Districts often team with other agencies to carry out projects. Technical services and administration for many NRD programs are provided by the Natural Resources Conservation Service. State funding for flood control and soil and water conservation projects is administered through the Nebraska

Department of Natural Resources. Local partners often include cities, counties, and extension offices. For further information, communities are encouraged to contact their local NRDs.”

Natural Resources Districts may require best management practices (BMPs) or regulate agricultural chemical use and manure application in ground water management areas (GWMAs) to protect ground water quality. Some NRDs are considering lowering the trigger levels for ground water management areas within designated WHPA. For example, upon the city's request the Little Blue NRD recently moved the Fairbury WHPA into a Phase/Level II GWMA. Many NRDs provide financing and technical assistance with the closure of abandoned or unused wells. Other NRDs such as the Lower Platte South have programs designed for specific community problems. The LPSNRD helps communities develop community water system protection areas (CWSPA) that are based upon their WHPA. Once a CWSPA is identified, the LPSNRD helps these communities locate potential sources of contamination and develops information programs to minimize the chance of future contamination.

Many NRDs have staff available for helping towns with WHP programs. Table 3

summarizes the programs currently available for wellhead protection and planning. For more information, contact your local NRD or visit the Nebraska Association of Resources Districts website at <http://www.nrdnet.org/>



Voluntary Options

Table 4 summarizes several types of educational and voluntary actions that communities can take to educate citizens regarding protection of their ground water resource. In addition to those programs listed in Table 4, Nebraska communities and other public water suppliers can engage in educational activities publicizing the WHPA and promote voluntary activities and practices that will help prevent ground water pollution. Educational activities may include distributing brochures, sponsoring poster contests in school, writing news articles, advertising in the local news media, posting signs regarding wellhead protection, assisting children who want to attend the annual ground water festival, or providing assistance to local businesses with best management practices or spill notification plans.



Groundwater Foundation

One example of a voluntary management option currently used by several Nebraska communities is the Groundwater Guardian Program, sponsored by the Groundwater Foundation. This program is a voluntary program designed to empower local citizens and communities to become involved and take steps toward protecting their ground water resources. Key elements of the program include formation of a Groundwater Guardian Team, development and implementation of a Results Oriented Activity Plan, and submittal of annual forms. Some Nebraska communities involved with the Groundwater Guardian Program include Grand Island, Imperial, Lincoln, North Platte, Offutt Air Force Base and Sidney. Several Nebraska counties including Douglas, Lancaster and Seward are also involved. The Foundation supplies assistance kits to help participating communities get started. More information on the Groundwater Foundation can be found at their website located at: www.groundwater.org.

Easements and Contracts

There are a number of ways a community can reach voluntary agreements with neighboring land owners. Communities and landowners may create agreements called conservation easements within a WHPA. Conservation easements are voluntary agreements to limit land uses and/or require agricultural chemical best management practices. Easements typically attach to specific tracts of land and are acquired by purchase or by lease. Communities may also provide cost share assistance to farmers for putting land into pasture, purchase land outright and lease the land back to farmers who must follow specified agricultural chemical management practices, or may contract with land owners for land use restrictions designed to protect community water supplies (Benkelman is an example of a community that has contracted with a neighboring land owner).

Although no conservation easements could be found at this time that is specifically written to protect a WHPA, Appendix C contains an example of a conservation easement used to limit development along the Niobrara River and also contains information on agricultural conservation easements.



US Dept. of Agriculture (USDA)

The USDA sponsors several voluntary conservation programs that could be used to help protect a community's ground water supplies. The Conservation Reserve Program (CRP) pays annual rent to landowners for planting permanent vegetation on idle, highly erodible farmland. Portions of wellhead protection areas are also eligible for a continuous sign-up CRP.

The Conservation Reserve Enhancement Program (CREP) is a state and federal partnerships that allows landowners to receive incentive payments for installing specific conservation practices. The Environmental Quality Incentives Program (EQIP) provides landowners with financial assistance to install land management practices such as nutrient management, pest management, and grazing land management. For more information on USDA programs, contact your local USDA office or visit their website at: <http://www.fsa.usda.gov>



US Environmental Protection Agency (USEPA)

The USEPA has several programs designed to protect local drinking water supplies and works with the NDEQ in providing technical assistance and funding to local communities. For example, the USEPA's Wellhead Protection Program (WHPP) is a pollution prevention and management program used to protect ground water as a source of drinking water. The Safe Drinking Water Act established the national WHP Program in 1986. Nebraska's WHP program is based on USEPA guidelines and approved in 1991. Source water assessments and protection measures are eligible uses of the Drinking Water State Revolving Fund (DWSRF) set-asides. States may use the funds for a mixture of source water related local assistance activities such as Land Acquisition and Conservation Easements. In addition, the USEPA Office of Water has developed model ordinance language that communities may use as a reference in developing their own ordinances and codes. The USEPA example ordinance establishes a Ground Water Protection Overlay District,

defines different zones within the district, encourages certain types of activities and designates other uses as prohibited or allowed only with a special exception permit. Information on the USEPA source water protection programs, including the model ordinance language and case Studies of Local Source Water Protection Programs is available at: <http://www.epa.gov/>, or go directly to their Source Water Protection Program located at:

<http://www.epa.gov/safewater/protect/protect.html>.



State Programs

At the State level, both the Nebraska Department of Health and Human Services (NHHS) and the Nebraska Department of Environmental Quality (NDEQ) have rules, regulations and guidelines that may impact a

municipality's options regarding their drinking water system.

Nebraska Health and Human Services System
Nebraska Department of Health and Human Services - Regulation and Licensure

Title 179 Regulations Governing Public Water Systems administered by the Nebraska Department of Health and Human Services Regulation and Licensure (NHHS R&L) include a variety of requirements and guidelines for the siting, design, construction, operation, and maintenance of public water supply systems. A municipality's permit to operate a public water supply system is subject to continued compliance with NHHS R&L regulations for preventive maintenance including actions to protect the system from certain encroachments. *Title 179 NAC 2* establishes minimum recommended set-back distances applicable to community public water supply wells from potential sources of contamination.

Title 178 NAC 12 Regulations Governing Water Well Construction, Pump Installation and Water Well Decommissioning Standards, also administered by NHHS R&L, include requirements for

decommissioning of water wells. In addition, *Title 178 NAC 12* establishes minimum set-back distances applicable to non-community public water supply wells if the owner of the non-community water system elects not to follow the same set-back distances in *Title 179 NAC 2* that are applicable to community water systems. (See also the Nebraska Safe Drinking Water Act, Neb. Rev. Stat. § 71:5301-13).

In *Title 178 NAC 12*, NHHS R&L has defined an abandoned well as any well the use of which has been accomplished or permanently discontinued because necessary operating equipment has been removed or a well is in such a state of disrepair that continual use for the purpose for which it was constructed is impractical. Decommissioning old and abandoned water wells is important because abandoned wells can act as a conduit for contamination to enter the ground water directly through runoff and spills.

Potential sources of contamination is defined in *Title 179 NAC 2* as "any biological, chemical, or radioactive substance or by the physical property of any substance from any cesspool, privy, septic tank, sub-surface tile system, sewer, drain, pit below ground surface, abandoned well,

animal or avian waste, or any other possible source of pollution that can adversely affect such water supply”.

NHHS R&L guidelines established in *Title 179 NAC 2* provide specific examples of minimum set-back distances from different categories of potential contamination sources. NHHS R&L may allow variances from these recommended set back distances only if circumstances require and then only if it can be shown that such variances will not constitute a pollution hazard to the well. (Appendix E contains the recommended setback distances from municipal wells contained in Title 179 NAC 2, Attachment 1. Note: While these minimum set-back distances established in regulation are protective if put into local ordinance, they DO NOT constitute a complete Wellhead Protection Plan. They are protective only up to 1000 feet. The average delineated WHPA in Nebraska is three square miles in area and can be up to as much as 50 square miles).

Many Nebraska communities have incorporated portions of the above NHHS R&L regulations and guidelines into ordinances, regulations, contracts, or other enforceable instruments as necessary to insure adequate protection (see Table 1 for specific examples). For more information

on regulations for public water supplies, contact the Nebraska Department of Health and Human Services Regulation and Licensure or visit their website at: <http://www.hhs.state.ne.us/enh/pwsindex.htm>



Nebraska Department of Environmental

Quality

The Nebraska Department of Environmental Quality (NDEQ) administers numerous programs, many of which may directly or indirectly impact a community’s ground water supply. Examples include agricultural, ground water, waste management, leaking underground storage tanks, hazardous waste, water monitoring, grants and loans, and water quality programs (see WHP Newsletter V for specific information on state ground water regulations and wellhead protection).

More specifically, the Nebraska DEQ and Nebraska Rural Water Association (NeRWA) draw Wellhead Protection Area

(WHPA) maps for ground water based public water supplies. These boundaries are “squared off” and drawn around the twenty-year time of travel zones, which are calculated by an EPA computer model. This model takes into account aquifer characteristics such as ground water flow direction, velocity, thickness of saturated sediments, and well pumping volumes. WHPA boundaries (based on time of travel zones from the methods of delineation) enclose the area thought to be most critical for the protection of the public water supply. Most of these maps show a horseshoe shaped WHPA that extends out from the well; however some maps drawn prior to 1997 were not done with a computer model and the WHPA for these towns look like concentric circles.

What kinds of measures are considered protective of ground water inside a WHPA? This is one of the hardest questions NDEQ receives in trying to help local water suppliers protect their drinking water source. Activities to consider controlling (i.e. limiting, eliminating, restricting, etc.) inside a WHPA include, but are not limited to:

- ✓ Concentrated or confined livestock operations,
- ✓ Storage of hazardous chemicals,
- ✓ Storage of petroleum products,

- ✓ Storage of agricultural chemicals such as fertilizer and pesticides,
- ✓ Waste handling facilities, such as landfills, waste water lagoons, etc.
- ✓ Sand, gravel, or limestone mining operations,
- ✓ Oil and gas exploration, and
- ✓ Septic tanks and leach fields.

For more information on the Wellhead Protection and the related Source Water Assessment Programs, you can look at the DEQ web site at <http://deq.ne.gov/>. Use the search button and type in “WHP” or “Source Water” or “Newsletters”.



Table 1 – Examples of Local Ordinances

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Albion	Municipal Code	Wellhead Protection	Follows NHHS guideline criteria	Potential contamination sources	Within corporate limits and within one mile of corporate boundary	
Alda	City Ordinance No. 229	Creation of wellhead protection area and regulation of future uses within a restricted proximity of municipal well field.	Follows NHHS guideline criteria	Drilling new well; operation of specific activities or construction of specified structures.	Within corporate limits and within one mile of corporate boundary	Abatement and/or misdemeanor every 24 hours of violation.
Alma	City Ordinance No. 10-217-1 through 10-217-3 and Neb. Rev. Stat. § 17-536	Limit ability to construct or expand solid or liquid waste facilities.		Constructing solid and liquid waste storage and disposal facilities.	Within fifteen miles of the corporate limits	Revocation of permit
Benedict	City Ordinance No. 141	Provide for wellhead protection and control the location of future sources of contamination	Follows NHHS guideline criteria	Requires permits for specified activities.	Within corporate limits and within one mile of corporate boundary	

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Benkelman	Ordinance No. 669; lease for well field, right of way easement.	Prohibition on drilling new wells. City has also contracted with nearby landowner for lease of new well field.	Contract contains restrictions (including setback requirements) on landowners use of property.		Within corporate limits and within new well field.	\$250.00 per day
Ceresco	City Ordinance No. 97-4 and Neb. Rev. Stat. § 17-536; §71-5301; Title 179, Ch. 2.	Prospective protection of new and existing well field.		Requires permits for specific activities within delineated wellhead capture zone.	Specified by legal descriptions and maps.	\$100.00 per 24 hrs
Clarkson	Municipal Code; Neb. Rev. Stat. § 18-1720; 28-1012; 28-1016.	Nuisance regulation making it unlawful to corrupt or render unwholesome or impure any water in or about the town.			Within corporate limits and within one mile of corporate boundary	Abatement
Creighton	Ordinance No. 612	Defines and designates the boundaries of the City's Wellhead Protection Area.				

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Doniphan	City Ordinance No. 357	Protection of municipal wellhead from hazardous chemicals.	500 ft. for bulk chemicals over one gallon.			\$100.00 per day
Fairbury	City Ordinance – 2848 References Nebr. Rev. Stat. § 17-536	Adopts a wellhead Protection Plan and restricts specific activities within Wellhead Protection Area	Follows NHHS guideline criteria	Placing, installing, constructing or replacing any specified structure.	Within Wellhead Protection Area	\$500.00 per day
Greenwood	Ordinance No. 310	Defines nuisance activities to include pollution of public water supply.	Follows NHHS guideline criteria		Within corporate limits and within one mile of corporate boundary	Abatement and property lien for costs.
Gretna	Municipal Code	Establishes Wellhead Protection prohibitions	Follows NHHS guideline criteria	Permit for existing wells within restricted areas.	Within corporate limits and within one mile of corporate boundary	\$200.00 per day
Hastings	City Ordinance No. 3754	Establishes Hastings Institutional Control Area.		Drilling of new wells, registration of existing wells	Within Control area and within two miles of corporate limits.	\$100.00 per offense plus enforcement as nuisance

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Hay Springs	Ordinance No. 01-305	Requires the City to comply with all State and Federal rules related to the protection of the municipal water supply from contamination.				
Juanita	Municipal Code	Control over future sources of pollution	Follows NHHS guideline criteria	Drilling of new wells and existing wells.	Within corporate limits and within one mile of corporate boundary	\$100.00 per day
Kearney	Ordinance	Draft - Establishes Wellhead Overlay District with four zones relating to the time of travel. Specific regulations and prohibitions apply to each zone.				
Loup City	Municipal Zoning Ordinance No. 441	Defines ground water Protection Overlay District.		Establishes categories of permitted conditional and special uses within District.	ground water Protection District.	

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Madison	Municipal Code	Control of wells and potential contamination sources	Follows NHHS guideline criteria	Drilling of wells and operation of specified activities.	Within corporate limits and within one mile of corporate boundary	Nuisance and abatement
Madrid	Municipal Code	Specifically defines certain activities as nuisances and requires registration for storage of flammable or poisonous gases.		Requires a permit for the storage of flammable or poisonous gas over 5 gallons and prohibits storage of anhydrous ammonia for over one hour.		Nuisance and abatement
Neligh	Municipal Code	Creates water commissioner, backflow regulations and safe zone around municipal wells.	Follows NHHS guideline criteria			
Oakdale	City Ordinance 91-1	Expands definition of nuisance to include pollution of public water supply.	Follows NHHS guideline criteria			Misdemeanor, not less than \$100.00 fine
Ogallala	Draft Ordinance	Wellhead Protection Ordinance that defines the City's Wellhead Protection Area.	1,500 ft. for certain activities within the city	Specifies design standards and prohibits specific activities.		

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Seward	Municipal Code	Restrictions on private wells		Requires permit for domestic wells.	Within corporate limits	
Stromsburg	Municipal Code	Restrictions on private wells		Domestic wells	Within corporate limits and within one mile of corporate boundary	
Theford	Ordinance No. 01-1	Establish control over the location of future potential sources of contamination.	Follows NHHS guideline criteria	Requires a permit for the drilling of a new well.	Within corporate limits and within one mile of corporate boundary	
Wayne	Municipal Code	Recognizes as essential the conservation of ground water.		Requires registration of existing wells, the abandonment of nonconforming wells and requires a permit for the construction of new wells.		
Wilber	Ordinance No. 766	Defines and designates the City's Wellhead Protection Area.				

City, Village or Community	Ordinance, Code or other Referenced Authority	General Purpose	Setback Required	Permit Requirements	Geographical Coverage	Penalties Defined
Wilcox	Ordinance No. 428, 431	Designates and defines the City's Wellhead Protection Area.	Follows NHHS guideline criteria	Drilling new well; operation of specific activities or construction of specified structures.	Within corporate limits and within one mile of corporate boundary	
Yutan	Municipal Code; Neb. Rev. Stat. § 17-536; 17-537;	Prevention of pollution to any source of municipal water supply.	Follows NHHS guideline criteria	Written permission of City Council required for installation of any new well; permit required for specified activities.	Within corporate limits and within one mile of corporate boundary	Refers to other sections of Code.

Table 2 - Examples of County Zoning

County	Reference	General Purpose	Requirements
Gage County	County zoning regulations; Section 5.9	Assist municipalities in providing protection for water wells. Allows creation of Wellhead Protection Overlay District that can be applied to municipal or rural water district Wellhead Protection Areas that meet all of the requirements of the Wellhead Protection Act.	Specifies permitted, conditional and prohibited structures and activities; Special Use Permit
Johnson County	County zoning regulations	Assist municipalities in providing protection for water wells. Allows creation of Wellhead Protection Overlay District that can be applied to municipal or rural water district Wellhead Protection Areas that meet all of the requirements of the Wellhead Protection Act.	Allows only permitted uses within District.
Pawnee County	County zoning regulations; Article 5	Defines and regulates Wellhead Protection Agricultural District	Specifies permitted, conditional and prohibited structures and activities
Valley County	County zoning regulations; Section 504	Assist municipalities in providing protection for water wells. Allows creation of Wellhead Protection Overlay District that can be applied to municipal or rural water district Wellhead Protection Areas that meet all of the requirements of the Wellhead Protection Act.	Specifies permitted, conditional and prohibited structures and activities

Table 3 – Examples of NRD Assistance with WHP Planning

Natural Resources District	Mapping for Planning Purposes	Planning Assistance to Local Boards	New Well Siting Assistance	Regulatory Efforts in Wellhead Areas	Cooperative Agreements with Communities
Central Platte				X	
Lewis and Clark					
Little Blue	X	X	X	X	X
Lower Big Blue	X		X		
Lower Elkhorn		X	X	X	
Lower Loup	X	X	X	X	X
Lower Niobrara					
Lower Platte North	X	X	X	X	
Lower Platte South			X	X	X
Lower Republican			X		
Middle Niobrara					
Middle Republican				X	X
Nemaha	X	X	X	X	X
North Platte			X		
Papio-Missouri River					
South Platte		X	X	X	
Tri Basin	X	X	X		X
Twin Platte		X	X		X
Upper Big Blue	X	X	X	X	
Upper Elkhorn	X		X		
Upper Loup					
Upper Niobrara White					
Upper Republican	X	X			

Please contact your local NRD for details and more information. This information may be out of date.

Table 4 – Examples of Voluntary Actions

Organization or Agency	General Purpose	Participants/Contacts
Groundwater Foundation - Groundwater Guardian Program	Requires community involvement and development of a Results Oriented Activities Plan	Various Nebraska communities have joined in the Program. See the Foundation's website at: www.groundwater.org
U.S. Environmental Protection Agency	Wellhead Protection Program; State Revolving Funds; Example of a Groundwater Protection Overlay Ordinance; information on case studies.	Browse the EPA water programs at: www.epa.gov .
U.S. Department of Agriculture	Conservation Reserve Program (CRP) - voluntary program that offers annual rental payments and cost-share assistance to establish long-term resource conserving covers on eligible land.	visit with a local office of the USDA or their website at: www.fsa.usda.gov .
Niobrara Council	Conservation Easement - Voluntary agreements to set aside private property to limit development.	Niobrara Council and landowners