

Nebraska Wellhead Protection Network Meeting Notes
Thursday, February 20, 2003, 10:00 a.m. – 2:30 p.m.

Central Platte NRD Office
Grand Island, Nebraska

Attending: Justin Apel, Nebraska Association of Resources Districts (NARD); Daryl Andersen, Little Blue Natural Resources District (NRD); Roger Andrews, Grand Island Groundwater Guardians; Lorrie Benson, The Groundwater Foundation (TGF); Richard Beran, Lower Loup NRD; Lisa Beethe, Nebraska Environmental Trust (NET); Charlie Bicak, Central Platte NRD Board; Larry Cast, Bureau of Reclamation (ret.); John Chess, Lincoln-Lancaster County Health Department (LLCHD); Dan Clement, Central Platte NRD; Clancy Dempsey, TGF; Allen Dutcher, University of Nebraska – Lincoln; Dick Ehrman, NARD; Jeremy Eschliman, Central District Health Department; Julie Frandsen, Grand Island Utilities; Ken Gnadt, City of Grand Island; Ralph Pulte, Nebraska Department of Health and Human Services (NHHS); Russ Gierhart, Upper Big Blue NRD; Randy Gunn, South Central Nebraska RC & D; Bruce Hansen, Nebraska Department of Environmental Quality (NDEQ); Rachael Herpel, TGF; Jan Hygnstrom, University of Nebraska; Deana Kelley, NDEQ; Eric Lee, Lincoln Water System; Marty Link, NDEQ; William Lukash, Nebraska Rural Water Association (NRWA); Gary Mader, Grand Island Utilities; Leon Marquart, LLCHD; Jonathan Mohr, TGF; Jennifer Nelson, TGF; Marty Norton, US Department of Agriculture Rural Development; Marlene Rasmussen, Village of Litchfield, Groundwater Foundation Board; Jack Shafer, Grand Island Groundwater Guardian Team, Groundwater Foundation Board; LeRoy Sievers, Knudsen, Berheimer, Richardson and Endicott; Doug Smith, LLCHD; Elbert Traylor, NDEQ; Neil Watson, NET; Carrie Wiese, Nemaha NRD; Hope Wise, NRWA.

I. Welcome

Special thanks go to Randy Gunn for arranging to have the meeting at the Central Platte NRD Office.

Marty Link updated the group on plans to have a Drinking Water Academy workshop in Nebraska. The workshop would focus on urban BMPs for source water protection.

This workshop will be held Friday, May 30 from 8:30 a.m. to 4:00 p.m. in Room S-1 at Southeast Community College, 84th and O Street, Lincoln. To pre-register for this workshop, call Marty Link at NDEQ (402/471-4270) or e-mail her at marty.link@ndeq.state.ne.us.

Gunn said he was interested in hearing about how WHP activities in Nebraska are going. Rachael Herpel advised the group that a general update was not included in the day's agenda, but that additional networking time was included to allow attendees to converse and get information

directly from each other. Herpel suggested that an update could be the topic for the next NE WHPN meeting.

Link informed the group that WHP plans for twelve Nebraska water systems had been approved; two are on her shelf waiting to be approved. Several water systems are gearing up to submit plans and should be ready to submit their plans soon.

II. Potential for Drought in 2003

Nebraska State Climatologist Allen Dutcher described how conditions are right to see “the perfect drought” this summer - it could be similar to the one that occurred in Nebraska in the 1950s. Drought occurs regularly in Nebraska. For example, last year Nebraska experienced a drought - Lincoln’s temperature was above 90 degrees for 67 days. In the 1990s McCook came close to breaking the drought record set in 1934. What will be unique about this year’s drought is its severity.

Extreme drought is one that occurs 1 in 25-50 years. An exceptional drought is one that occurs 1 in 50-100 years. The intermountain region has been experiencing both extreme and exceptional droughts. A decrease in the amount of snowfall has resulted in decreased snow pack, especially in the Platte and Republican River Basins. Normal snow pack lasts until mid-July – this year it may not last until May.

Computer models predict with a high probability that the intermountain region’s extreme/exceptional drought will move west, resulting in 40-60% of normal precipitation. Reservoirs in the Western U.S. will be at less than 50% capacity; some may even go dry. For example, runoff in the Platte River Basin was 50-60% less than normal on January 1, 2003 and 50% less than normal by February 1st. Very little runoff is coming from Wyoming. Lake McConaughy is rising at about one inch per day and is at 41% capacity. In the Republican River Basin, Harlan Reservoir is at 51% of capacity and Swanson Reservoir is at 20% of capacity. There has been no water in the South Platte River at the Colorado border for the last two weeks.

In summary, extreme drought is moving east at 150 miles per year and will soon engulf the entire state.

III. Water Scarcity in Nebraska

LeRoy Sievers gave an overview of how Nebraskans can manage water scarcity. History shows that this part of the country regularly experiences drought. One study shows that a drought occurred in what became Nebraska from 1279-1313 – a total of 38 years. Drought has a significant impact on surface water/groundwater interactions. This is incredibly important to Nebraskans who depend on both surface water and groundwater for their livelihoods and drinking water supplies.

In Nebraska a variety of water laws are in place to help determine who gets the water for what use when water is scarce. These laws are different for surface and ground waters.

Surface water rights were developed in Nebraska in the 1800s. Nebraska's prior appropriations system is defined as "first in time, first in right" – i.e. an August 1, 1885 water right is senior to an August 1, 1912 water right. In times of scarcity, senior water rights are served before junior water rights. Groundwater rights were developed as part of common law using decisions developed over time. Some of the main principles of Nebraska groundwater law are that a landowner can use groundwater for beneficial uses on their own land and a landowner does not own the groundwater, but rather it is owned in common by the people of Nebraska.

In periods of scarcity, both surface water and groundwater are governed by a system of preferences. For surface water, domestic uses are given first preference; agricultural uses come second; and manufacturing uses are third. For groundwater, domestic uses, such as those required for health, fire control, sanitation and domestic livestock, are given first preference; agricultural uses come second; and manufacturing uses are third. If scarcity is severe, public water suppliers also have the power to condemn land with groundwater wells and use them for domestic water supplies.

IV. Wood River Recharge Project

Dan Clement described the Wood River Recharge Project, an example of what municipalities can do to recharge groundwater in their drinking water source area. During this project water from the Platte River was diverted through a pipeline to two different recharge basins to improve the quality of groundwater in the area. This groundwater eventually would reach the Wood River public water supply system. The project showed that this type of diversion could successfully recharge the groundwater basin and improve both the quantity and quality of groundwater in the area. However, diminishing returns caused by algae growth and soil compaction under the recharge basins kept this approach from being a long-term solution to the area's groundwater concerns. At the end of the demonstration project the pipeline was closed and the recharge basins filled and returned to their original condition.

V. Source Water Protection on a Regional Scale

Hope Wise presented Crawford, Nebraska – a case study of regional groundwater protection. Crawford uses an infiltration gallery to direct surface water to their public water supply system and a well. The community's source water is "some of the most pristine water anywhere in the state." The community has decided to implement a source water protection program to keep their source water pristine. The community is also developing a water conservation plan to be implemented in times of water shortage. Education will be a big part of the community's protection and conservation efforts; many residents were not aware of where their drinking water comes from and how to manage it.

VI. Next Meeting Date and Time

Rather than hold meetings specifically for the NE WHPN, the group agreed that the Drinking Water Academy's Urban BMPs workshop would serve as the group's next meeting. Rachael Herpel also offered to host a NE WHPN meeting in conjunction with a septic system seminar and field trip Clancy Dempsey is organizing at Lake McConaughy. This seminar/field trip will be held sometime in June.

**The Drinking Water Academy's workshop – SOURCE WATER PROTECTION:
Best Management Practices and Other Measures for Protecting Drinking Water Supplies
will be held Friday, May 30 from 8:30 a.m. to 4:00 p.m. in
Room S-1 at Southeast Community College, 84th and O Street, Lincoln.
To pre-register for this workshop, call Marty Link at NDEQ (402/471-4270)
or e-mail her at marty.link@ndeq.state.ne.us.**

In order to have materials for everyone, please be sure to pre-register!