



## **Nebraska Wellhead Protection Network Meeting Notes**

**Wednesday, September 24, 2008, 11:00 a.m. to 2:00 p.m.**  
Nebraska Department of Environmental Quality's Van Dorn Facility  
2717 S. 8th Street, Lincoln, NE

### **Present:**

Carrie Wiese, Nebraska Department of Environmental Quality (NDEQ); Elbert Traylor, NDEQ; Brian Fuchs, National Drought Mitigation Center – UNL; Russ Gierhart, Upper Big Blue Natural Resource District (NRD); Daryl Anderson, Little Blue NRD; Dennis Watts, City of Norfolk; Scott Sprague, Department of Health and Human Services (DHHS) – Division of Public Health; Jim Newman, Lincoln Lancaster County Health Department; Harold Reynolds, Midwest Assistance Program; Greg Steele, United States Geological Survey (USGS); Dave Miesbach, NDEQ; Dick Ehrman, Nebraska Association of Resources Districts (NARD); Craig Romary, Nebraska Department of Agriculture (NDA); Jon Mohr, JEO Consulting; Brian Bruckner, Lower Elkhorn NRD; Lowell Johnson, City of Wayne; Mary Schroer, NDEQ, Randy Gunn, Natural Resources Conservation Services (NRCS) – South Central Nebraska Resource Conservation and Development (RC&D); John Keith, Lincoln Water System, Cindy Kreifels, The Groundwater Foundation (TGF); Jamie Oltman, TGF; Jane Griffin, TGF

### **I. Welcome and Introductions:**

**Jamie Oltman (TGF)** welcomed everyone to the meeting.

### **II. Nebraska Wellhead Protection Program and Field Updates**

**Dave Miesbach (NDEQ)** gave an update on the State Approved Wellhead Protection Plans. There have been 80 community plans approved. NDEQ uses EIMS database system to track public water supplies. Geneva, Dwight and Bee, Nebraska were the most recent communities to have their plan approved.

Right now at NDEQ there is no one in a permanent position drawing maps. NDEQ is able to get maps drawn however it may take longer than in the past. Some NRDs are able to help when they can. Bruce Hansen is working on maps as much as he can. Dave also mentioned that Bruce is looking to retire in the next year.

In the NDEQ move, Dave found boxed of the Wellhead Protection Area Management Manuals. Dave also has copies of reports and other publications that WHPN participants may be interested in. Dave mentioned that Department of Natural Resources (DNR) website/clearinghouse has tons of information and data (compiled from NRD, USGS and DEQ). Any information from the clearing house can be exported to an Excel spreadsheet. Data goes back to 1974. Dave has given presentations on how to utilize the data. He has copies of the presentation if anyone is interested. Dave added that the DNR website is ahead of other states' websites.

**Dick Ehrman (NARD)** commented on the 319 grants, he said that Wellhead Protection (WHP) activities have increased.

**Craig Romary (NDA)** works in pesticide regulations, licensing and certification. Please contact him if you have any pesticide related questions.

**Jon Mohr (JEO Consulting)** is working with the city of Auburn, Nebraska on Source Water Management Planning. Auburn is also developing a GIS database, for the city to monitor septic systems and wells.

**Brian Bruckner (Lower Elkhorn NRD)** is working with Wayne and Norfolk on their WHP plans.

**Lowell Johnson (City of Wayne)** working with the Lower Elkhorn NRD in early stages of developing their WHP Plan.

**Mary Schroer (NDEQ)** Awarded nine Source Water Protection (SWP) grants – Auburn, Grafton, Chester, McCool, Big Springs, and Hay Springs are some of the communities that will receive funding.

**Randy Gunn (NRCS – South Central RC&D)** is working with communities in his area that are in the process of updating strategic plans, next step for the future can be WHP.

**Jamie Oltman** reported on two Groundwater Foundation programs Groundwater Guardian Green Site (GGGS) and Wellhead Protection Area Management (WHPAM). GGGS is a recognition program for highly managed green spaces which can be anything from a park, ball field, office park, or golf course, basically any green space that is mowed or managed. She handed out brochures about the project and said she had copies of the application if anyone was interested. The WHPAM project is funding through NDEQ and is a project to move communities forward after completing their WHP plan. She is currently working with Beatrice, Nebraska and Emerson, Nebraska. She handed out brochures about this project as well and added that The Groundwater Foundation will be working with up to 5 communities through the span of the project, if anyone would like to recommend a community please do so.

**Mary Schroer** added that she recently attended a couple of meetings with Jennifer Wemhoff from TGF. The Green Sites program fits nicely with the storm water permit program and the program is good PR for communities.

**Carrie Wiese (NDEQ)** coordinates small 319 grants. These grants are up to \$15,000 for 1-2 year programs. They are non-competitive and right now are given out on a first come first serve basis. They are intended to help communities kick start non-point source programs.

**Elbert Traylor (NDEQ)** manages the non-point source 319 funds, which supports the WHPN. Elbert mentioned that NDEQ still has 319 funds/NET grants for well decommissioning. With this funding NDEQ has more ability to decommission larger wells (i.e. municipal wells).

Elbert mentioned that NDEQ created WHP manual with TGF, which was adapted from the Watershed planning manual.

There are 6 NRDs working on Wellhead Area Management Assistance (WHAMA).

Applications for Section 319 funding were in the first of September. NDEQ received 9 requests for \$3 million. NDEQ has about 1.5 million to distribute. Elbert and others will be doing follow up with some for the agencies requesting funding. Dick Ehrman and Marty Link worked to create criteria for judging groundwater projects. A preliminary list of funding recipients should be out by November.

**Dave Miesbach** added that there is still money available for well abandonment. The NRD will cover \$200-\$300; NDEQ covers the rest, up to \$2,000. Dave reminded the network that the paper work has to be done before any physical work is started in order to get the funding. Rulo, Nebraska just identified 38 wells and all were decommissioned at one time. It is a lot more cost effective to do multiple wells in one shot.

**Russ Gierhart (Upper Big Blue NRD)** started work on some of the first WHP plans. He commented that he has developed quite the back log. He tries to help all communities interested in WHP in his district to complete plans. Russ is currently working with Seward.

**Daryl Anderson (Lower Blue NRD)** commented that Nelson is ready to decommission wells.

Hastings is finished with their WHP plan, they are facing nitrate issues. Hastings, Nebraska is in both the Little Blue and Upper Big Blue NRD so both Daryl and Russ Gierhart have been working with Hastings. Endicott Nebraska's plan was submitted, but a few revisions were needed. Edgar, Nebraska received a grant for management around a live stock area. Fish and Wildlife were involved with the project. Buffers were designed based on flow values, some are 30 feet others 75 feet. Daryl believes that this system is the first one in Clay County and maybe the first in Nebraska.

More soil sampling by students and education will continue in Edgar.

**Dennis Watts (City of Norfolk)** turned in Norfolk's WHP plan in August. They have been working with the Lower Elkhorn NRD. Dennis commented that they are looking to move forward after plan is approved. Dennis voiced a concern brought up by land owners in the Norfolk WHP area regarding compensation. Dennis Watts noted that there are 227 separate land owners in the Norfolk WHP area.

**Russ Gierhart** asked if it would be like an easement and what would the city be buying?

**Brian Bruckner** said that compensation would be for the lost opportunity. Dennis had been in contact with Bruce Hansen and he had mentioned that possibly this has taken place in larger cities.

**Daryl Anderson** knew that Colorado Springs and Denver fought for water rights and in the Republican Basin there has been compensation for not irrigating.

**Dave Miesbach** added to look at other states and noted that you cannot buy groundwater rights in Nebraska.

**Craig Romary** mentioned that they might look into the Nebraska Land Trust.

**Daryl Anderson** mentioned the Equip program or a SWP grant as possibilities for Norfolk.

**Russ Gierhart** added that in the City of Seward there is owner operator assistance, covered by county zoning. A crop consultant was looked into but Seward decided to put in a reverse osmosis plant instead.

**Dennis Watts** said again that they are just getting started and was inquiring about compensation for future knowledge.

**Scott Sprague (DHHS)** is working on a capacity development program, which provides education for city council members, water operators, and plant operators in technical/managerial/financial areas. It teaches them to be proactive rather than reactive, in order to prevent contamination. Scott added that all water systems are a sustainable system at least that is what they shoot for and said he will be a cheerleader to help to promote WHP or other projects in communities.

**Jim Newman (Lincoln Lancaster County Health Department)** is working with communities on WHP, onsite waste water, and working with NRDs in sampling 250 wells. They have a good database of well information, especially for wells from before 1994.

**Harold Reynolds (Midwest Assistance Program)** is working in Wausa and Holdrege Rural Water system. He receives referrals for well abandonment.

**Greg Steele (USGS)** shared a few USGS projects that might be helpful/of interest for the WHPN. USGS is doing Helicopter Electro-magnetic Flight in eastern and western Nebraska. USGS is working with six NRDs (Lower Loup, Lower Elkhorn, Papio-Missouri, Lower Platte North, Lower Platte South, and Nemaha) on the project. The electromagnetic flights basically take a CAT scan of the Earth.

USGS is putting together groundwater models ranging from the panhandle to Norfolk, Nebraska, and from the Niobrara to the Platte River.

Through the National Water Quality Assessment (NAWQA) Program, USGS has recently studied how contaminants travel to public supply wells in the High Plains Aquifer.

For more information about these projects you can visit the USGS Nebraska Water Science Center website at, [ne.water.usgs.gov](http://ne.water.usgs.gov).

### **III. Climate Change Presentation**

#### **Brian Fuchs, Climatologist, National Drought Mitigation Center**

*Drought Projections into the future: What do we know and how do we cope?*

Brian discussed climate change or climate variability as he prefers to call the variation in the climate. Brian discussed drought, changes in precipitation, and groundwater levels over time among other data. He shared facts and points of discussion regarding climate variability and discussed potential impacts from climate change/variability, stresses on western water supplies and how this relates to Nebraska.

Some of the data for his presentation was taken from an Intergovernmental Panel on Climate Change (IPCC) Report. Reports from the IPCC are available from, <http://www.ipcc.ch/index.htm>.

(The PowerPoint from Brian's presentation will be posted on The Groundwater Foundation's website under the Nebraska Wellhead Protection Network page, <http://www.groundwater.org/pe/newhp.html>.)

#### **Questions following the presentation:**

**Daryl Anderson** asked if Evapotranspiration (ET) is up or down because of climate change/variability?

Brian answered that if temperature rises ET may drop, but ET maxes out, unlike evaporation. It was also noted that UNL is showing humidity is going down and when there is high humidity the yields on crops go down.

**Russ Gierhart** asked about the frequency of intense storms.

Brian explained that added heat allows situations where thunderstorms develop instead of long soft rains. So instead of a long rain you have a quick hard rain or a line of thunderstorms.

**Craig Romary** commented that Iowa State shows that this is happening now not something that will/could happen in the future.

**Brian Fuchs** said that if it is too warm, and the atmosphere heats up this creates intense and severe weather.

The group thanked Brian for his presentation and discussion about Climate Change.

#### **IV. Next Meeting Plans**

**Jamie Oltman** asked the group about future meeting plans. She asked the group if they liked having a lunch included in the meeting. And if there were any concerns over having to pay more than \$5-\$6 for lunch. The group seemed to think that paying more is fine since you pay \$8, \$9, \$10 for lunch anywhere you would go.

Jamie mentioned that future meeting location and venues may include the Nebraska State Irrigation Association and Nebraska Water Resource Association Conference in Kearney, November 23-25, a legislative breakfast in partnership with the Nebraska Well Drillers Association at the capital in Lincoln, Nebraska in January and in conjunction with the Nebraska Rural Water Association Conference in Columbus, March 16-18. These meetings venues and dates are not confirmed.

Jamie brought up that in the past there may have been interest in including tours in the WHPN meetings. The group discussed this possibility.

The group brought up that if they are talking a good portion of the day to meet they would like to get something out of it, tours, and presentations to learn something. Tagging something on or focusing on a unique practice or going somewhere to learn/see something different would be interesting.

**Dave Miesbach** brought up that at the last meeting the question was asked if the network meetings were still necessary. Dave commented that wellhead protection is the first and last line of defense and it was agreed to continue the meetings. He also commented not to let the tour dictate the meeting, if it fits great but still continue meetings even if a tour is not possible.

**Russ Gierhart** commented that it would be interesting to look at McCook, Nebraska (Nitrates, uranium, arsenic). What are their lessons learned.

The comment was made that NRDs are starting to see a decline in nitrates but now starting to see more metals in water.

**Russ Gierhart** suggested that we have a round robin of ideas for future network meetings. Russ started and suggested a tour of an alcohol plant (ethanol) to see how it works and how they handle their water use. There is one close to the city of Alma, Nebraska however it does not face any current problems or controversy. The comment was made that the newer plant design does have better water use efficiency.

**Dave Miesbach** mentioned that ethanol production doesn't usually consider waste and the water body going through a WHP areas (i.e. waste stream).

**Daryl Anderson** said that the WHPN could go to Edgar.

**Elbert Traylor** thought that learning how the coordination process worked in Edgar would be interesting. Also Elbert suggested learning about how soil samples are taken and processed.

**Mary Schroer** mentioned that Two Rivers Health Department has a pharmaceutical take back program that could be highlighted. She will also look through grants to see if there is anything going on that may be of interest to the WHPN.

**Elbert Traylor** then mentioned live stock waste system installation and how it works could be interesting too.

**Russ Gierhart** commented that if not a tour these ideas could be uses a presentation topics. Background knowledge (design, goal, etc.) would be beneficial.

**Harold Reynolds** said that a good place to go for a meeting might be the UNL Research and Development Center near Wahoo, Nebraska. There is potentially a lot of interesting information there, (i.e. wells, storage tanks) it is a little system within in a system.

**Jim Newman** suggested Salt Valley Restoration Plant.

**Jon Mohr** suggested the installation of a septic system or wells or seeing a well abandonment process take place. It was mentioned that there is a video that shows the process of decommissioning a well.

**Russ Gierhart** suggested WHP plans implementation process as a topic for a meeting. He added that examples of how to get on the ground implementation going would be useful and mentioned Holdrege, Nebraska as an example.

**Carrie Wiese** used the time to discuss a recent conference call she, Marty Link, and Bruce Hansen participated in with individuals involved in WHP in Nevada. They were very intrigued by the NE WHPN. Carrie added that if anyone has anything of interest to add in future WHP newsletters to let her know.

Interest was also communicated that there may be a new audience and other things to see if a meeting were held in the western part of the state.

#### **V. Adjourn**

**Jamie Oltman** thanked everyone for coming and said she would keep everyone posted on the date for the next WHPN meeting.

#### **Following the meeting a couple of comments were communicated to Jamie to be shared with the WHPN**

**Craig Romary** followed up with information about the Nebraska Buffer Strip Program. Sign-up continues through November 14<sup>th</sup>. More information on the program can be found at <http://www.agr.ne.gov/division/bpi/pes/buff.htm>

**Rachael Herpel** with the Water Center at UNL – School of Natural Resources was not able to attend the meeting however she would like to relay information to the WHPN about the University of Nebraska's new water website, [water.unl.edu](http://water.unl.edu). Also, the water-themed display the Institute of Agriculture and Natural Resources (IANR) had at Husker Harvest Days was very well received by visitors. The water center has plenty of free Nebraska water maps/posters. Anyone interested can order them through the *Nebraska Maps and More* store <http://nebraskamaps.unl.edu/home.asp>.