

**JOINT MEETING OF NEBRASKA GROUND WATER (NGWMAC)
AND SURFACE WATER MONITORING (NSWMC)
ADVISORY COMMITTEES**

<http://deq.ne.gov/GroundW.nsf/pages/GWSWMC>

**Tuesday, November 19, 2013
NDEQ Van Dorn Facility**

Meeting Notes

I. Attendees:

Larry Angle, LPNNRD	Jeremy Hammen, NDEQ	James Newman, LLCHD
Mike Archer, NDEQ	Nancy Harris, NDEQ	Anne Pamperl, NDEQ
Ken Bazata, NDEQ	John Hargrave, USACE	Lindsey Phillips, NDEQ
John Bender, NDEQ	Chris Hobza, USGS	Linda Rohn, NDEQ
Dave Bubb, NDEQ	Dan Inman, NDEQ	Craig Romary, NDA
Ryan Chapman, NDEQ	Scott Jarecki, NDEQ	Brad Routt, NDEQ
Karl Dietrich, LLCHD	Laura Johnson, NDEQ	Dave Rus, USGS
Dana Divine, UNL	John Keith, LWS	Dan Schulz, LPSNRD
Dick Ehrman, LPSNRD	Jon Kenning, NDEQ	Dave Schumacher, NDEQ
Elizabeth Esseks, NDHHS	Marty Link, NDEQ	Colleen Steele, UNL
Jason Garber, NDEQ	Ginny McGuire, USGS	Jennifer Swanson, NARD
Jane Griffin, The Groundwater Foundation	Greg Michl, NDEQ	Robert Swanson, USGS
Daniela Gurlin, NDEQ	John Miyoshi, LPNNRD	Dave Tunink, NG&PC
	Tyler Naprstek, LLNRD	

II. Agency Updates

a. USGS

1. Overview of the pesticides analytic research noting the method was in flux and as of yet unapproved. With gaps in data and pesticide data, it was hoped approval would come later in the calendar year. In the upcoming year plans for sampling sites include the Missouri, Dismal, and Niobrara rivers.

2. Dakota aquifer, 40 wells; high nitrates in Sarpy County; 2012 data is with clearing house already; sampling the city of Lincoln; explosives volatile organic compounds (VOCS) Nebraska Ordnance Plant (NOP) near Mead throughout well fields. Wells near public water supply observations; Nitrates in the clearinghouse? Still some concern with latitudes and longitudes. [USGS National Water Quality Assessment Data Warehouse](http://www.usgs.gov/nawqa), (NAWQA Data Warehouse)

b. NDEQ

1. Approximately 100 approved wellhead protection areas. A listing of approved wellhead protection areas available at: http://deq.ne.gov/WHP.nsf/WHPDsp_Pub.xsp

As of November 13, 2013, the list of approved WHPA included:

Plan_Approved	PWS_Name	County(ies)	NRD,NRDs
8/25/2003	Abie, Village of	Butler	Lower Platte North
6/18/2004	Albion, City of	Boone	Lower Loup
11/17/2010	Allen, Village of	Dixon	Lewis & Clark
1/29/2007	Ansley, Village of	Custer	Lower Loup
7/26/2005	Bayard, City of	Morrill	North Platte
10/19/2009	Beatrice, City of	Gage	Lower Big Blue
12/17/2004	Beaver Crossing, Village of	Seward	Upper Big Blue
8/20/2008	Bee, Village of	Seward	Upper Big Blue
2/22/2007	Belden, Village of	Cedar	Lower Elkhorn
9/26/2002	Benedict, Village of	York	Upper Big Blue
1/17/2003	Bertrand, Village of	Phelps, Gosper	Tri-Basin
7/8/2004	Blue Hill, City of	Webster, Adams	Little Blue
4/4/2007	Byron, Village of	Thayer	Little Blue
3/24/2003	Cass County RWD #2	Cass	Lower Platte South
10/16/2007	Chadron, City of	Dawes	Upper Niobrara White
5/5/2006	Chambers, Village of	Holt	Upper Elkhorn
2/15/2012	Chappell, City of	Deuel	South Platte
1/10/2007	Chester, Village of	Thayer	Little Blue
5/30/2003	Clarkson, City of	Colfax, Stanton	Lower Elkhorn
1/12/2004	Clay Center, City of	Clay	Little Blue, Upper Big Blue
9/22/2005	Crawford, City of	Dawes	Upper Niobrara White
8/24/2007	Curtis, City of	Frontier	Middle Republican
9/14/2012	Dalton, Village of	Cheyenne	South Platte
7/23/2004	Davenport, Village of	Nuckolls, Thayer	Little Blue
5/12/2003	David City, City of	Butler	Lower Platte North, Upper Big Blue
4/15/2002	Dodge, Village of	Cuming, Dodge, Colfax	Lower Elkhorn
12/31/2003	Doniphan, Village of	Hall	Central Platte
5/1/2008	Dwight, Village of	Butler	Upper Big Blue, Lower Platte South
2/2/2004	Edgar, Village of	Clay	Little Blue
8/25/2003	Emerson, Village of	Dakota, Dixon, Thurston	Lower Elkhorn
5/4/2009	Endicott, Village of	Jefferson	Little Blue
11/3/2003	Exeter, Village of	Fillmore	Upper Big Blue
6/18/2002	Fairbury, City of	Jefferson	Little Blue
10/24/2003	Fairfield, City of	Clay	Little Blue
2/2/2004	Fairmont, Village of	Fillmore	Upper Big Blue
4/5/2010	Fremont, City of	Dodge, Douglas	Lower Platte North, Papio-Missouri River
7/1/2008	Geneva, City of	Fillmore	Upper Big Blue
4/28/2005	Giltner, Village of	Hamilton	Upper Big Blue
10/14/2011	Glenvil, Village of	Clay	Little Blue
9/11/2009	Goehner, Village of	Seward	Upper Big Blue
5/16/2005	Grafton, Village of	Fillmore	Upper Big Blue
12/16/2005	Gresham, Village of	York, Polk	Upper Big Blue
7/21/2004	Harvard, City of	Clay	Upper Big Blue
7/12/2010	Hastings, City of	Adams	Little Blue, Upper Big Blue
9/28/2006	Hebron, City of	Thayer	Little Blue
3/8/2005	Henderson, City of	York, Hamilton	Upper Big Blue

8/31/2004	Holdrege, City of	Phelps	Tri-Basin
10/26/2005	Holstein, Village of	Adams	Little Blue
4/1/2005	Homer, Village of	Dakota	Papio-Missouri River
12/16/2004	Howells, Village of	Colfax, Cuming	Lower Elkhorn
9/4/2012	Hubbell, Village of	Thayer	Little Blue
7/5/2002	Humboldt, City of	Richardson	Nemaha
9/1/2006	Juniata, Village of	Adams	Little Blue
5/22/2007	Kenesaw, Village of	Adams	Little Blue
6/8/2011	Kimball, City of	Kimball	South Platte
1/22/2007	Lancaster County SID #6, Village of Emerald	Lancaster	Lower Platte South
6/21/2006	Lawrence, Village of	Adams	Little Blue
9/18/2000	Logan East Rural Water System	Cuming, Burt	Lower Elkhorn
12/17/2002	Loup City, City of	Sherman	Lower Loup
3/26/2007	Marquette, Village of	Hamilton	Upper Big Blue, Central Platte
11/23/2005	McCool Junction, Village of	York	Upper Big Blue
10/30/2013	Metropolitan Utilities District	Sarpy, Cass, Douglas, Saunders	Papio-Missouri River, Lower Platte North
6/23/2005	Milligan, Village of	Fillmore	Upper Big Blue
10/21/2011	Mullen, Village of	Hooker	Upper Loup
5/3/2004	Nelson, City of	Nuckolls	Little Blue
12/12/2008	Norfolk, City of	Madison	Lower Elkhorn
5/12/2003	North Bend, City of	Dodge	Lower Platte North
5/8/2006	Ogallala, City of	Keith	Twin Platte
12/17/2004	Ong, Village of	Clay	Little Blue
7/2/2013	Ord, City of	Valley	Lower Loup
8/25/2003	Osceola, City of	Polk	Upper Big Blue
5/1/2006	Palmer, Village of	Merrick, Howard	Lower Loup, Central Platte
8/8/2012	Pawnee City, City of	Pawnee	Nemaha
8/29/2003	Pender, Village of	Cuming, Thurston	Lower Elkhorn
11/18/2005	Ponca, City of	Dixon	Lewis & Clark
6/7/2004	Primrose, Village of	Boone	Lower Loup
5/17/2004	Prosser, Village of	Adams, Hall	Little Blue, Central Platte
11/24/2004	Ravenna, City of	Buffalo	Lower Loup
3/18/2002	Richardson County RWD #1	Richardson	Nemaha
9/17/2003	Roseland, Village of	Adams	Little Blue
12/16/2003	Ruskin, Village of	Nuckolls	Little Blue
12/28/2009	Seward, City of	Seward	Upper Big Blue
2/18/2005	Shickley, Village of	Fillmore	Little Blue
10/14/2010	Sidney, City of	Cheyenne	South Platte
7/27/2011	Stanton, City of	Stanton	Lower Elkhorn
9/22/2004	Steele City, Village of	Jefferson	Little Blue
8/25/2005	Stromsburg, City of	Polk	Upper Big Blue
10/20/2005	Trenton, Village of	Hitchcock	Middle Republican
5/3/2004	Ulysses, Village of	Butler	Upper Big Blue
1/14/2003	Utica, Village of	Seward	Upper Big Blue
8/25/2003	Waco, Village of	York	Upper Big Blue
2/3/2006	Wakefield, City of	Wayne, Dixon	Lower Elkhorn
5/9/2013	Wayne, City of	Wayne	Lower Elkhorn
5/27/2004	Western, Village of	Saline	Lower Big Blue
8/26/2005	Weston, Village of	Saunders	Lower Platte North
7/18/2001	Wilber, City of	Saline	Lower Big Blue

1/10/2002	Wilcox, Village of	Kearney, Phelps	Tri-Basin
9/1/2006	Woodcliff Water System	Saunders, Dodge	Lower Platte North
10/16/2006	York Mobile Plaza	York	Upper Big Blue
1/14/2003	Yutan, City of	Saunders	Lower Platte North

2. New 319 coordinator and source water persons
3. Integrated Report was in final planning stage
4. Surface water activities included twenty-eight lakes sampled mostly May through September. With 13 major river basins in the state, monitoring occurred on a rotating basis.

Sutherland and Maloney Reservoirs

Sampling Location	Distance (miles) downstream of Korty Diversion Dam	Bacteria Results 9/19/2013 (pre-flood diversion)	Bacteria Results 9/27/2013	Bacteria Results 10/04/2013	Bacteria Results 10/11/2013
Sutherland ^{PB}	21	17	15	24	50
Maloney ^{PB}	44	2	28	13	28

Tri-County Supply Canal (TCSC) System

(includes the reservoirs of Jeffrey, Midway, East Midway, Gallagher, Plum Creek Johnson, and Elwood)

Sampling Location	Distance (miles) downstream of TCSC diversion	Bacteria Results 9/16/2013 (pre-flood diversion)	Bacteria Results 9/23/2013	Bacteria Results 9/31/2013	Bacteria Results 10/7/2013
TCSC near North Platte ^{FW}	1.25	NA	214	91	53
Jeffrey Reservoir ^{FW}	23	NA	179	31	59
TCSC south of Gothenburg ^{BR}	41	4	101	78	45
East Midway Reservoir ^{BR}	50	11	210	33	32
Plum Creek Reservoir ^{BR}	60	1	74	291	20
Johnson Reservoir ^{PB}	65	44	222	548	219

Platte River

Sampling Location	Bacteria Results 9/19/2013 (pre-flood diversion)	Bacteria Results 9/23/2013	Bacteria Results 9/31/2013	Bacteria Results 10/7/2013	Bacteria Results 10/14/2013
Brady ^{BR}	687	2522	133	102	NA
Cozad ^{BR}	61	2417	78	73	NA
Overton ^{BR}	dry	3654	99	NA	42
Grand Island ^{BR}	24	727	488	NA	56
Duncan ^{BR}	dry	dry	2419	NA	387*

PB – Public Beach monitoring location sampled weekly May – September 2013.

FW – Additional Flood Water monitoring site.

BR – Basin Rotation monitoring location sampled weekly May – September 2013.

***Note** - Although Duncan's results on Oct. 14 were above 235 counts per 100 ml, NDEQ considers these numbers to be within normal sampling levels for the Platte River, particularly since there had been considerable rain previous to sampling, which can elevate bacteria levels. The NDEQ concluded that further sampling for floodwaters' impacts is not necessary.

5. Surface water quality data now in the STORET database, an EPA electronic data system for water quality monitoring data. <http://www.epa.gov/storet/about.html>
6. Fish tissue monitoring in the 13 major river basins rotating through all 13 on a six-year cycle. EPA no longer analyzing for organisms, only performing mercury analyses.
7. Cost savings with SPA coming in under budget, now spend \$2.5m
8. RFP for qualified contractor to drill and complete installation of monitoring wells in three-to-six regions; NRD managers will be contacted in next couple weeks to identify their needs; i.e., what pumps, generators, other equipment needed.
9. New water intake structure around power plants, how dealing with fish protection
10. Working on groundwater report for legislature, also known as report 528
11. Livestock really interesting project University probes around pond, real time recidivity; if see something, go in later for further analysis
12. Surface water seeing a lot of sand pit lakes, privately owned, not going thru 319 program; make sure receiving right information, making sure they are doing it right way

c. LPSNRD

1. Water quality concerns Brainard, Dwight; temporary 180-day moratorium on well drilling

d. LPNNRD

1. Looking at modifying rules for pumping, heavy irrigation and well drilling including new or expanded irrigated acres in effort to restrict and stabilize water usage. Neither well permits nor variances would be issued. Areas such as Brainard suffered seasonal declines in ground water levels. Domestic wells going dry resulting in groundwater shortages

e. NG&PC

1. New coordinator at UNL for invasive species. Lower Loup Pibel Lake on 303d list several elements; wellhead protection areas 500 additional water samples; largest cluster of wetlands located near Arnold; groundwater recharge wells inside wellhead protection areas

f. LLNRD

1. National water quality groundwater surface water, 100 sites across Midwest – studied for whole summer; stream biological, 8 sites sampled with focus on Loup basin

g. UNL

1. Data for 2012 added to the clearinghouse including 20 agencies. Clearinghouse has approximately 456,600 results representing about 25,300 wells. Nitrate analyses account for about 107,000 of the total results. The remainder is pesticides. The clearinghouse has 240 analytes. Website enhancements for ELISA Enzyme-Linked Immunosorbent Assay data is being worked and expected to have the website ready for ELISA in the upcoming weeks. This will add approximately 1,500 ELISA results for the public to access as soon as the website enhancements are ready. 25,300 wells, 107,000 nitrate analysis, amolytes; website enhancements – 1500 additional results:

<http://data.dnr.nebraska.gov/Clearinghouse/PDF/november2012revmetadata.pdf>

<http://data.dnr.nebraska.gov/Clearinghouse/Clearinghouse.aspx>

<http://data.dnr.nebraska.gov/Clearinghouse/Reports.aspx>

2. Nebraska Statewide Test Hole drilling and database in cooperation with NDEQ, Conservation and Survey Division, School of Natural Resources; basic geologic research relevant to Nebraska and the world, geologic mapping, studies of soils, sediments, sedimentary rocks, ancient environments and ancient life on earth. Evaluation of mineral and water resources through test-hole drilling, the collection of geophysical data, and laboratory analyses. evaluate geologic phenomenon in an environmental context
<http://snr.unl.edu/data/geologysoils/NebraskaTestHole/NebraskaTestHoleIntro.asp>

h. Corps of Engineers

1. Surface sampling Missouri River, Zebra mussel, plankton, substrates; 47 projects impacted LUST funds; ground water storage tank, 3 miles out inspected well samples 400 of 500 permitted.

i. LCHD

1. 400 wells nitrates 2007 could be entered in 500 wells in city limits fee funded – permits annexed 100 wells before city council, original driller no longer available. Question asked of 100, how many are registered? Responded not all registered, small percentage, less than 100; three mile wells would be in clearinghouse. Another questions purchase of water or drill their own well? Response four own, district LWS main to them; DEQ would have a “loup”. Reddish Brothers on SW Sixth and West High distinct correlation – rainfall and bacteria. Closer to Reddish Brothers, sulfates, sandy soils, water quality low, rapid infiltration, construction was pre standards.

j. NDA

1. Department of Agriculture, evaluation report presence of pesticides for water quality concerns, evaluate list of pesticides; link to: pesticides of interest, <http://bit.ly/NDApoireport>, http://www.nda.nebraska.gov/pesticide/pesticides_of_interests.html, Nebraska Pesticide Use Estimates: <http://bit.ly/NDAPestuse>, <http://www.nda.nebraska.gov/pesticide/trends.html>.

Animal & Plant Health Protection, Plant Health, water quality issues related to use of pesticides, health effects, evaluated ground water and surface water monitoring data, pesticide use data, and chemical property info for 74 active ingredients: Acetochlor, atrazine in mainly rivers and streams.

Pesticide Use Trends, <http://www.nda.nebraska.gov/pesticide/trends.html>

As part of report, pesticides use data have state and county data; posted survey at link to source Ag, USGS, USGS estimates available in map form for county, click, time shift. Some pretty dramatic changes since 90's

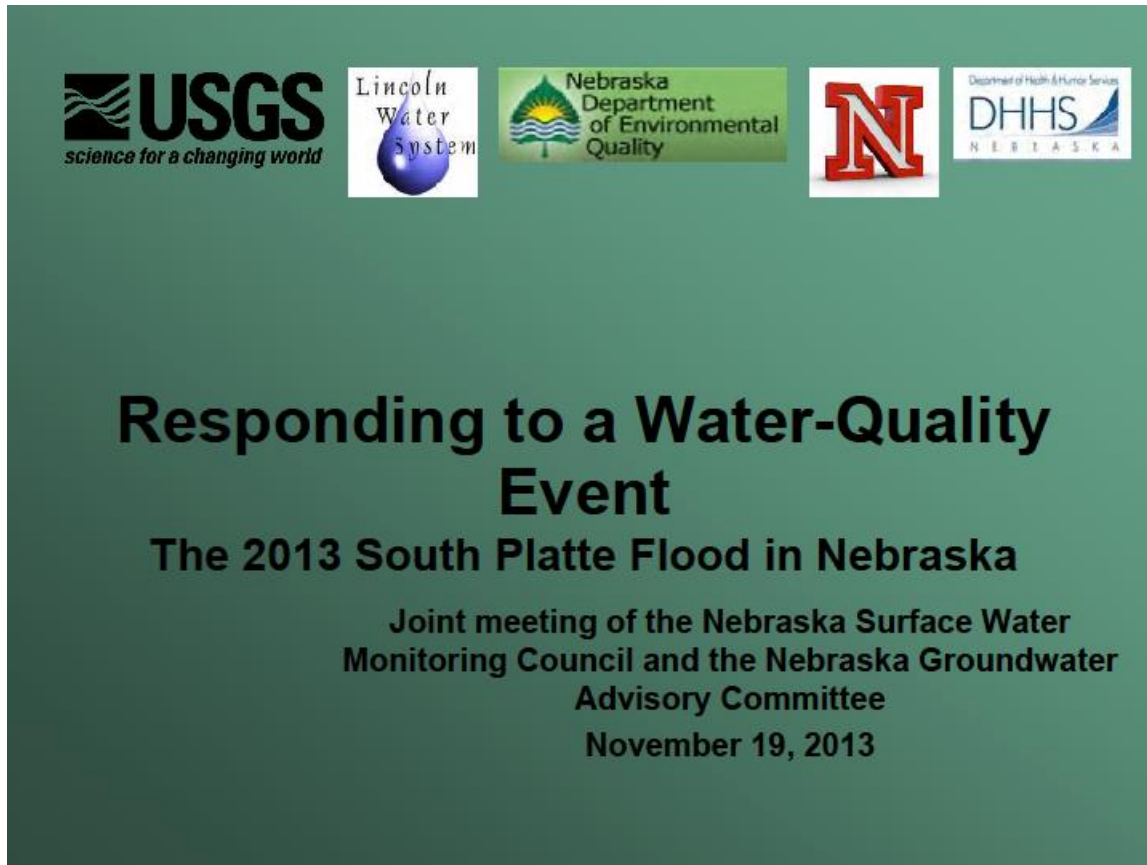
k. TGWF

1. Create awareness in all youth doing film documentaries has booklets. Event at Ross Riepman MARS being sponsored by Patagonia. Additional USGS – money for observation wells, near stream gages; sites: elevations at how monitor droughts, two Waterloo and at West Point



II. Presentations/Discussions

- a. Coordinating during a flood – Dave Rus, USGS, et.al.
 1. Examples/lesson learned from South Platte Flood of 2013
 2. Looking ahead



[http://deq.ne.gov/GroundW.nsf/23e5e39594c064ee852564ae004fa010/0857c7ae6545b50086257aed00551e1c/\\$FILE/2013-SPLATTE-Flood-WQ-Response.pdf](http://deq.ne.gov/GroundW.nsf/23e5e39594c064ee852564ae004fa010/0857c7ae6545b50086257aed00551e1c/$FILE/2013-SPLATTE-Flood-WQ-Response.pdf)

<http://ne.water.usgs.gov/floodwatch/>

- b. Groundwater Management Plan for the Bazile Creek Area, Ryan Chapman, NDEQ

Community Based Watershed Planning

Nebraska's Groundwater Management Plan for the Bazile Creek Area

Ryan Chapman & Many Others



Nebraska Department
of Environmental Quality

<http://deq.ne.gov/GroundW.nsf/pages/GWSWMC>

http://www.fsa.usda.gov/Internet/FSA_File/pnjanuary2014.pdf

NRCS

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/financial/eqip/?&cid=STELPRDB1047761>

national water quality initiative

Watersheds Eligible for the National Water Quality Initiative

State	Watershed	HUC
NE	Holmes Creek	102002030301
NE	Cottonwood Creek	102002030701
NE	Upper Cub Creek	102702020302
NE	Outlet Big Indian Creek	102702020506