

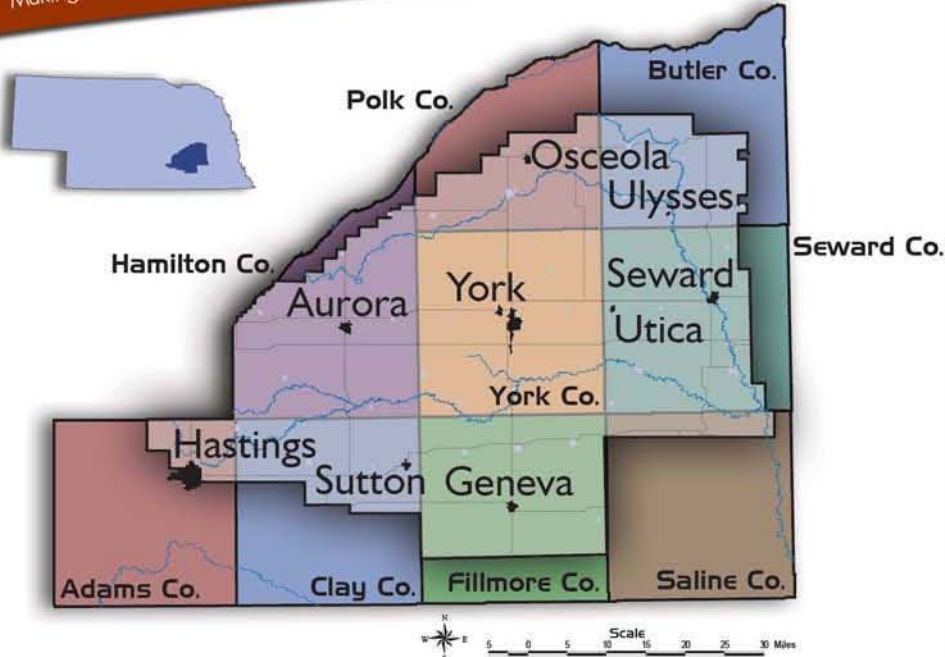
KNOW YOUR NRD



UPPER BIG BLUE
Natural Resources District
York, NE

Nebraska's Natural Resources Districts
Making the Good Life Better Since 1972

Spring 2009



UPPER BIG BLUE NRD

Upper Big Blue NRD Water Quality & Quantity FACTS

Groundwater irrigated acres: 1,146,385
2007 irrigation water use averaged
4.95 acre inches.

Free home water tests (1997-2008):
Nitrate tests: 1,937
Bacteria tests: 568

Irrigation flowmeter cost-share:
1,184 installed and inspected

Wellhead Protection Areas established:
22 communities

*The Upper Big Blue NRD
water management area is larger
than the state of Delaware...*

Flood control dams built (1972-2008):
45 structures

Recreation areas: 5 sites/ 640 acres of
water and land managed.

Forestry (1975-08): 1,617,045 trees sold

Protecting Lives



**Who is monitoring
the safety of our
drinking water?**
Dan Leininger is...

The Domestic Well
Testing Program
keeps rural residents
of the Upper Big
Blue NRD apprised of

the quality of their drinking water in
regard to nitrate levels. Federal
regulations state that nitrate-
nitrogen concentrations in drinking
water greater than 10 parts per
million (ppm) are potentially hazard-
ous to high-risk individuals such as
infants and the elderly.

In towns, the city government or
water supplier is required to annu-
ally inform residents of their water
quality. In 2008, the NRD tested
nitrate levels in 239 domestic wells.

Protecting Property

Who is working to control floods?
Jeff Ball is...



The Upper Big
Blue NRD has
built dams to
ensure the
safety of our
District's
citizens.

These dams are designed as multi-
purpose/use areas for flood control,
recreation, habitat establishment,
water quality protection, and soil
erosion prevention. Landscapes with
uncontrolled water sheds can present
many challenges such as flooding and
soil erosion. This can cause property
damage and possible water
contamination. In other cases,
uncontrolled areas can cause harm
to humans and livestock.

Protecting the Future

**Who ensures that
my grandchildren
will have enough
water in the
future?**

*Russ Gierhart
does...*



The purpose for our
regulations is to
manage groundwater in times of
shortage. This will ensure that we
can sustain our long-term water
supply for future generations and to
avoid conflicts between users. Over
500 observation wells are measured
in the spring of each year, allowing
the water table to rebound from the
previous irrigation season.
Reporting and allocation triggers
have been proactively put in place
should the groundwater levels fall
below a certain point.



Personal Safety: Knowing my family is safe

The Upper Big Blue NRD carries out a variety of projects and programs in ground water management, land treatment, flood control, forestry, and recreation. The Upper Big Blue NRD staff takes tremendous pride in their work because they also have families who daily rely upon and use the same resources that they monitor and test.

- Protects lives through flood protection
- Leaders in ground-water management
- Use taxpayer dollars efficiently

Flood Control & Soil Erosion Prevention

One of the main responsibilities of the NRD is flood control because of a variety of rivers and tributaries that flow through the District. With 45 flood control dams District-wide, the Upper Big Blue NRD works with producers, cities and county officials to improve storm water management and run-off. As an added benefit, the Upper Big Blue NRD maintains five recreational sites created through flood control dams that each form a lake for fishing and boating. Hiking, biking, and camping, as well as the development of wildlife habitat, are additional benefits incorporated into the design of these flood control sites. The NRD also works with landowners by cost-sharing on construction or installation of soil and/or water conservation practices. These practices prevent or reduce soil erosion, water contamination, and the overuse of both surface water and groundwater.



Formed in 1972, Nebraska's Natural Resources Districts are local government entities with broad responsibilities to protect our natural resources.

NRDs help Nebraskans respond to natural resource challenges with local control and local solutions. Major Nebraska river basins form the boundaries of the 23 NRDs, each of which is governed by locally elected boards of directors. The Upper Big Blue NRD is governed by a 17-member board of directors. These directors are elected by registered voters within the District. The board sets policy for the District and works closely with the staff through a committee system to carry out the District's goals.

Statewide, NRDs are largely funded by property taxes and make efficient use of those tax dollars; typically a Natural Resources District uses only 1% to 2% of all property taxes collected in a county.

For example, in the Upper Big Blue NRD on a \$100,000 home this would equate to \$2.78 of property tax per month; A small investment for peace of mind knowing that your NRD is "Water Conscious".

"Conservation is the Nature of Our Business"

Find out more about Nebraska's NRDs at www.nrdnet.org

CROP-TIP Agricultural Test Site

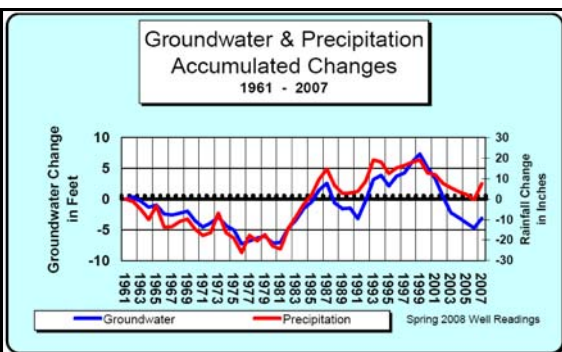
The NRD is helping producers increase their bottom-line while implementing conservation measures. This special agricultural test site managed by the NRD helps to demonstrate that calculated use of irrigation water and nitrogen application can help to save producers money, yet still allow similar or sometimes greater yields.



This project called CROP-TIP provides information farmers can use as a management tool in their farming operations by measuring the difference of irrigation water applied, energy costs, labor and yields of sub-surface drip irrigation versus gravity irrigation over a number of years. Soil moisture sensors and data loggers are used to measure and record soil moisture. Atmometers track evapo-transpiration for crop water use calculations.

Precipitation Mirrors Groundwater Levels

The graph shows annual change in rainfall from 1961 to 2007 compared to changes in groundwater levels. The rainfall data is from five rainfall gauges located in Aurora, Geneva, Osceola, Seward, and York. The groundwater level



data comes from over 500 observation wells monitored by the NRD. The changes reflect wet and dry periods. When groundwater and precipitation levels are placed together on a graph, the result is a mirror image, which indicates in our District that precipitation has a great deal to do with groundwater levels.