

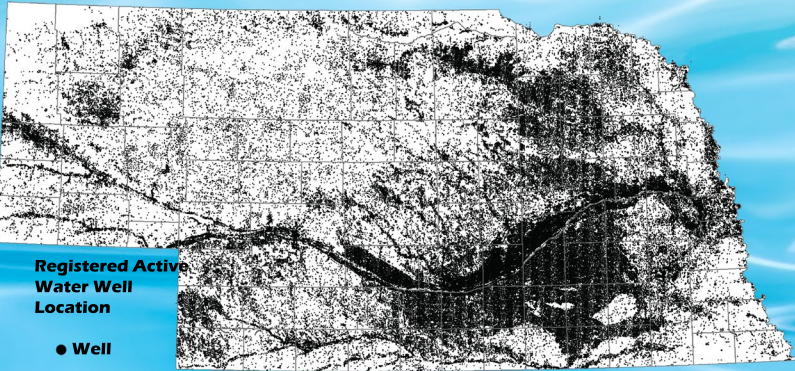
WHAT'S IN MY GROUNDWATER AND IS IT OK?

[THE QUALITY-ASSESSED AGRICHEMICAL CONTAMINANT DATABASE FOR NEBRASKA GROUND WATER](https://bit.ly/3NEGWagchemDB) is a unique repository of nitrate and pesticide data collected by federal, state, and local agencies. Each record in the database has been evaluated using well-defined criteria that address completeness of the well-attributes, analytical method, and field and laboratory quality control practices, and assigned to one of five quality levels. The database can be viewed and queried on-line, exported for further analysis, or downloaded in its entirety at bit.ly/3NEGWagchemDB.

80% of Nebraska public drinking water and 100% of domestic drinking water is supplied by groundwater.

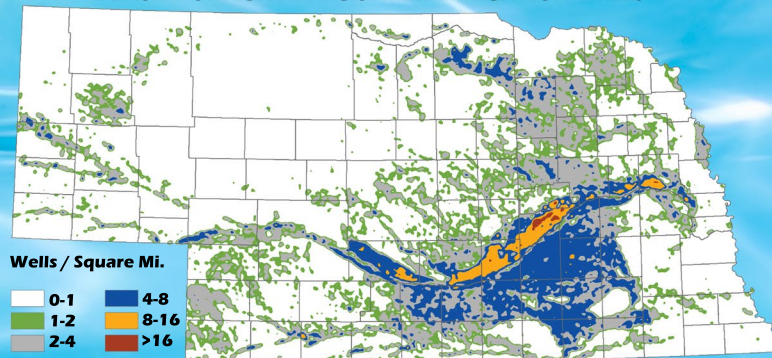


ACTIVE REGISTERED WATER WELLS

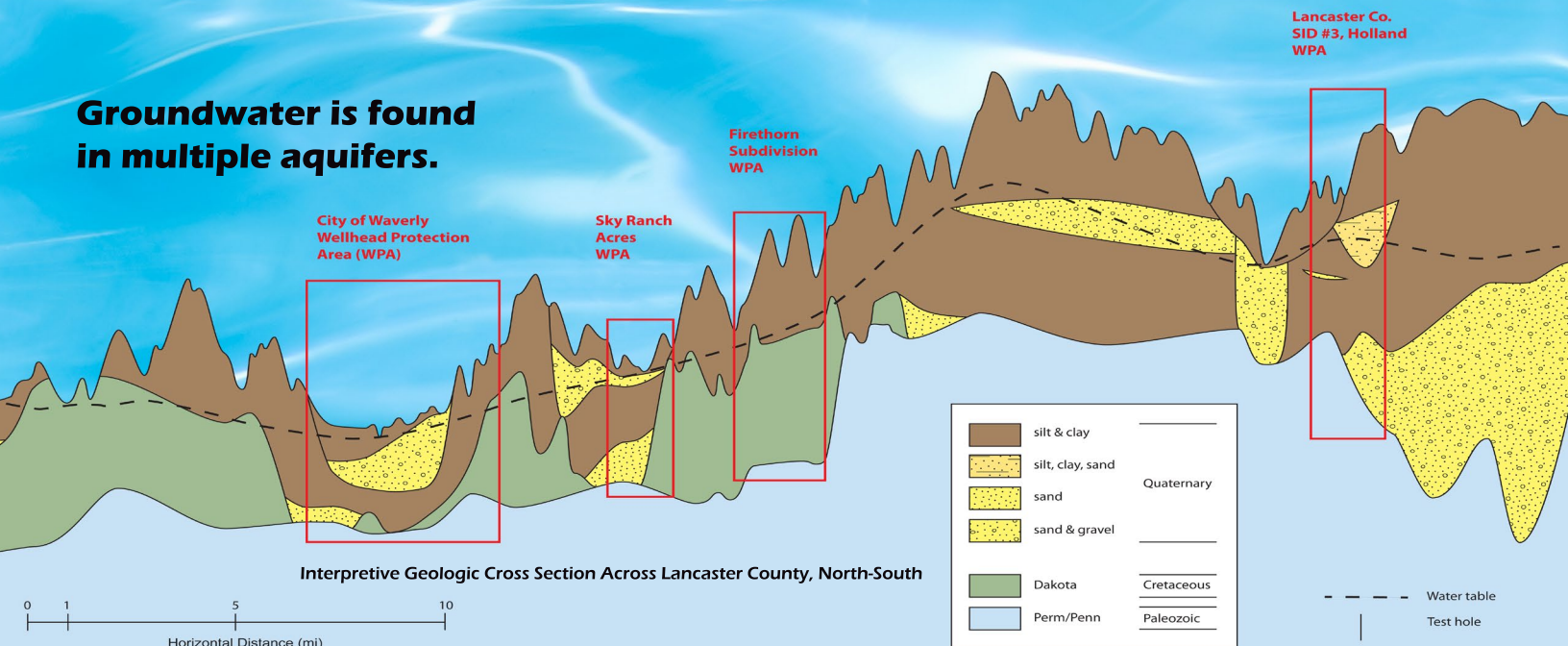


76% of all Nebraska irrigation water comes from groundwater. 91% of all groundwater used in Nebraska is for irrigation.

DENSITY OF ACTIVE REGISTERED IRRIGATION WELLS

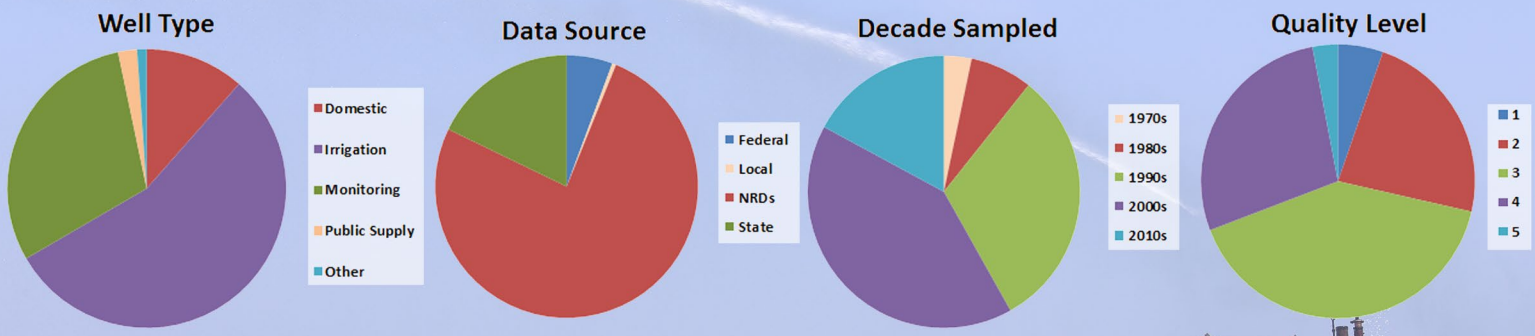


Groundwater is found in multiple aquifers.

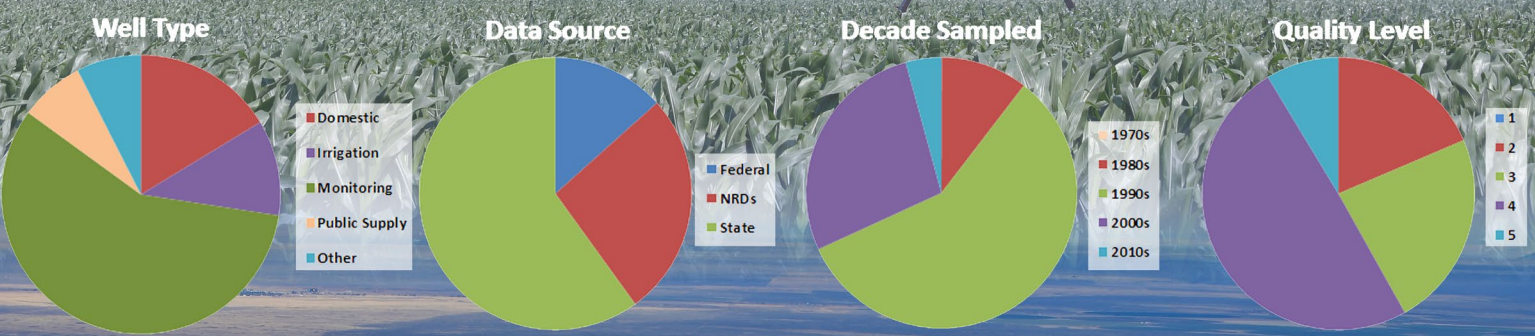




Nitrates: 110,992 analyses (25,014 wells sampled from 1974 to 2013)



Pesticides: 354,227 analyses* (240 analytes; 5,370 wells sampled from 1976 to 2013)



*additional pesticide data analyzed with immunoassay methods are accessible from this website, though not contained within this database and not included in the statistics above.

Web Features:

- Search by:
 - County, NRD, Contributing Agency, Legal Description, or well registration number
 - Analyte (pick list)
 - Quality Level (1-5)
 - Sample Date
 - Well type
- Select a geographic projection
- Export to a spreadsheet or as a web table
- Quick visual map query
- Download complete dataset

1. Select Search Criteria:

County
 NRD
 Well Location
 Agency Code
 Clearinghouse Number
 Registration Number

2. Select the Analyte(s) from the following list: The pesticide analytes are listed by chemical ingredient (e.g., atrazine, 2,4-D, acetochlor). If you know only the trade name (e.g., Roundup, Harness, Bladex**), please exit to the [National Pesticide Information Retrieval System](#) to find the chemical ingredient.

**Use of trade names on this site is for example only and does not constitute an endorsement.

To learn more about drinking water standards and regulations for these compounds, exit to the USEPA's [Drinking Water Health Advisories website](#).

Select Analyte(s) : Number of Analyses - 432601
(Number) = number of analyses in database.

All

1,1,1-trichloroethane (34)

1,2,4-trichlorobenzene (35)

1,2-dibromo-3-chloropropane (236)

(Use CTRL or SHIFT and Left Mouse button to select multiple list items)

Additional pesticide data are available at Pesticide Data Using Enzyme-Linked Immunosorbent Assay **ELISA** for Nebraska Ground Water.

3. Clearinghouse Quality Flag: (To learn more about how these data are ranked, refer to Tables 1 and 2 in the metadata link at the top of this page.)

(Use CTRL or SHIFT and Left Mouse button to select multiple

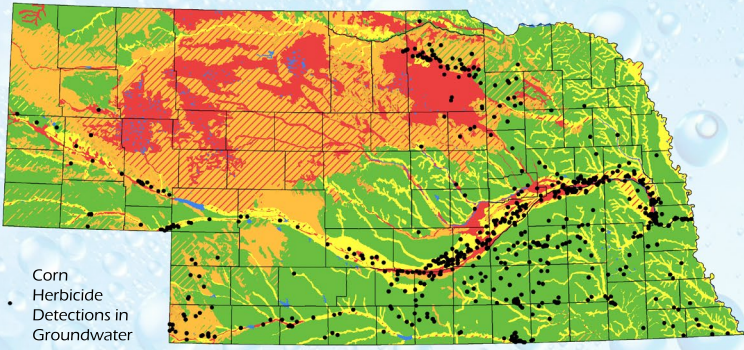
Quality Level based on documentation of:

- Well Location and Sampling Date
- Well Characteristics (type of well, screen depth)
- Sampling/Field Procedures Quality Assurance (QA)
- Analytical Method and Lab QA

Level 1 < 2 < 3 < 4 < Level 5
(5 = best documentation and analytical method)

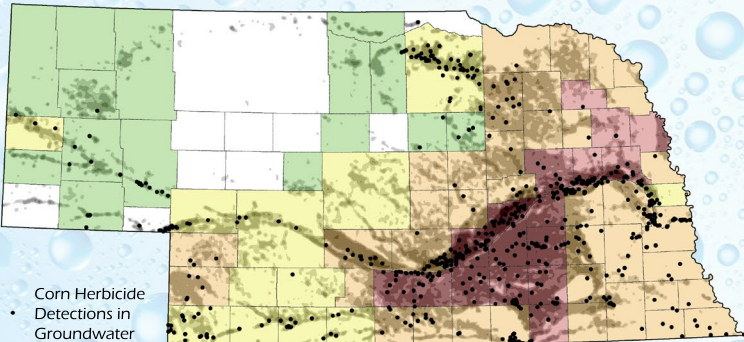
USING THE DATA

Assessing Groundwater Vulnerability for Potential Problem Areas

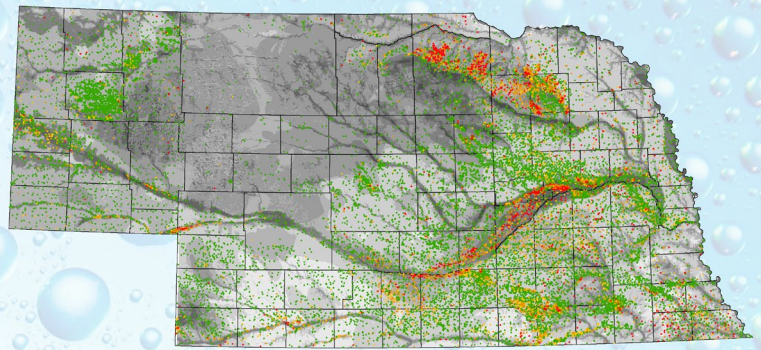
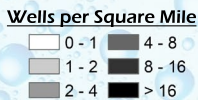
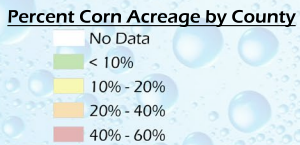


Corn Herbicide Detections in Groundwater

Groundwater Vulnerability to Pesticides



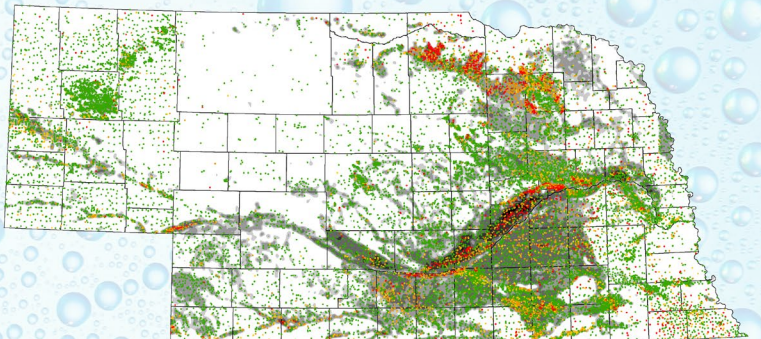
Corn Herbicide Detections in Groundwater



Most Recent Nitrate



Groundwater Vulnerability - DRASTIC method



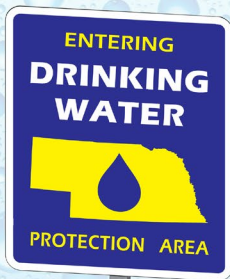
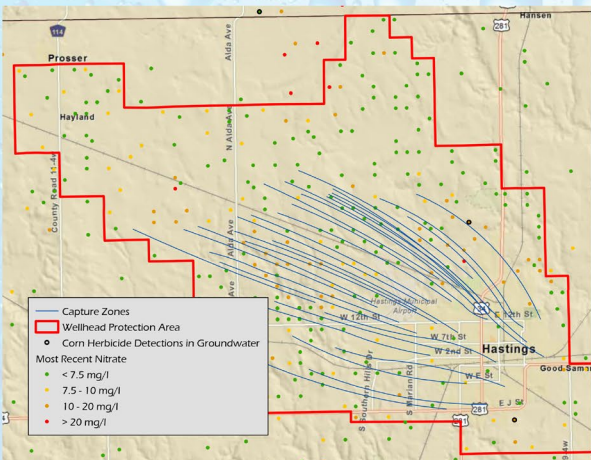
Most Recent Nitrate



Wells per Square Mile

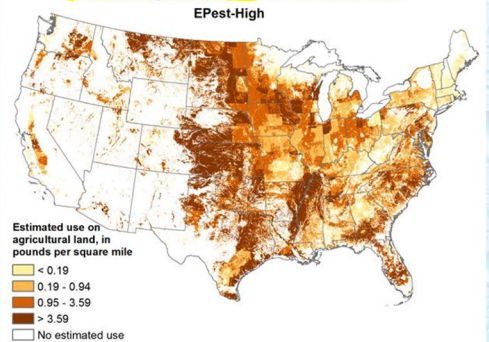


Community Water System Dealing with Agrichemical Contaminants



Evaluating Monitoring Needs

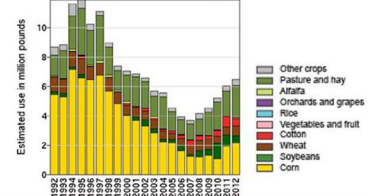
Estimated Agricultural Use for Dicamba, 2012



Estimated use on agricultural land, in pounds per square mile

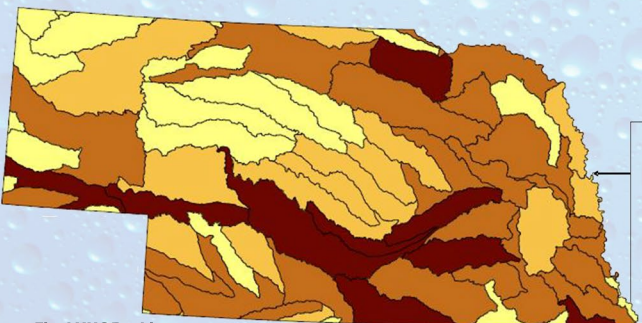
< 0.19
0.19 - 0.94
0.95 - 3.59
> 3.59
No estimated use

Use by Year and Crop

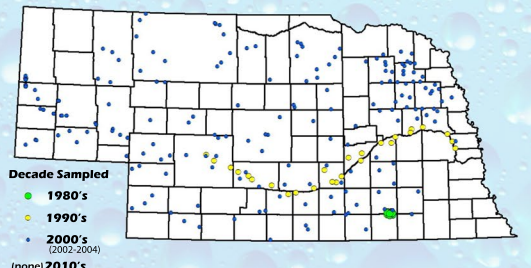
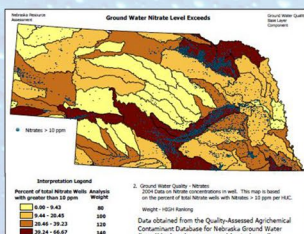
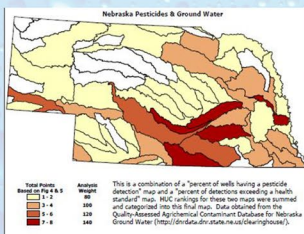


NRCS Resource Assessment

Cooperatively developed, science based assessment that will serve as a guide to federal, state and local units of government in focusing resources to hydrologic units with the greatest need.



Ground Water Pesticide and Nitrate levels are combined to create the final map analysis for Ground Water Quality. Two reference maps are shown here to provide additional information on ground water factors.



Decade Sampled

1980's
1990's
2000's (2002-2004)
(none) 2010's



Conservation and Survey Division

For more information, see: bit.ly/3NEGWagchemDB

References

- **Quality-Assessed Agrichemical Contaminant Database for Nebraska Ground Water - bit.ly/3NEGWagchemDB**
- **NDEE Nebraska Groundwater Quality Monitoring Report - bit.ly/NDEQh20prog**
- **Database Summary Report for Pesticides - bit.ly/GWchreports2**
- **USDA NRCS NERA (Nebraska Resource Assessment) - bit.ly/nrcsNERA**
- **USGS Circular 1405: Estimated use of water in the United States in 2010 - dx.doi.org/10.3133/cir1405**
- **USGS; Annual Pesticide Use Estimates: 1992-2012. on.doi.gov/ZeWkuR**