

Update - Nebraska's 5-Alt

National Training Workshop for CWA 303(d)
Listing and TMDL Staff

Laura Johnson

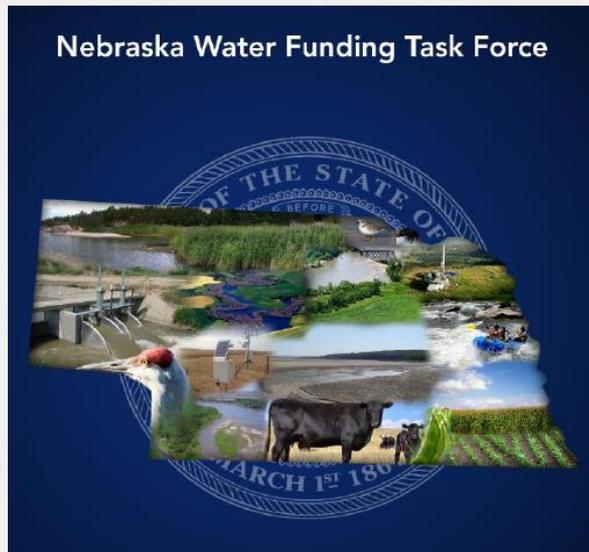
June 2, 2017



Sandhills in Holt County, NE

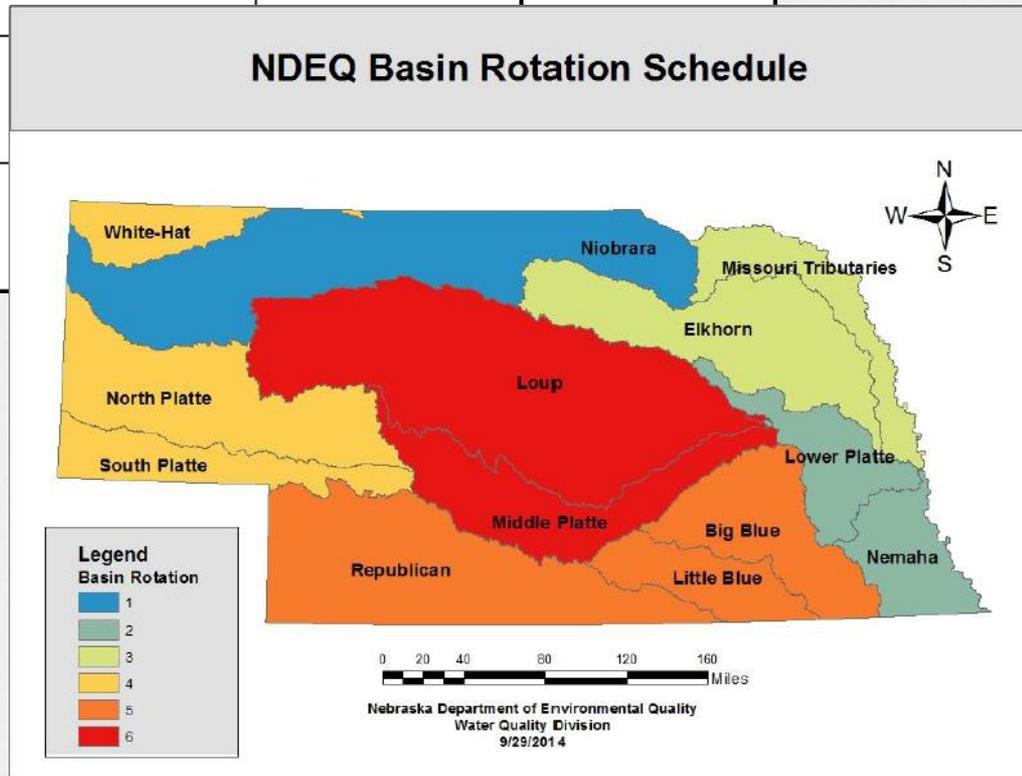
The Situation

- o TMDL Program Staff = 1/2 Person
- o TMDL Funding = CWA Section 106
- o Implementation = Collaboration



Long-Term Vision Priorities

			Social Impact of the Impaired Use			
			High			Low
			Public Drinking Water	Recreation	Aquatic Life	Other
Likelihood of TMDL Implemented	High	Local Government Interested				
		Active Local group interested				
	Low	No Interested parties				



Nebraska's Main Water Quality Issues

Streams

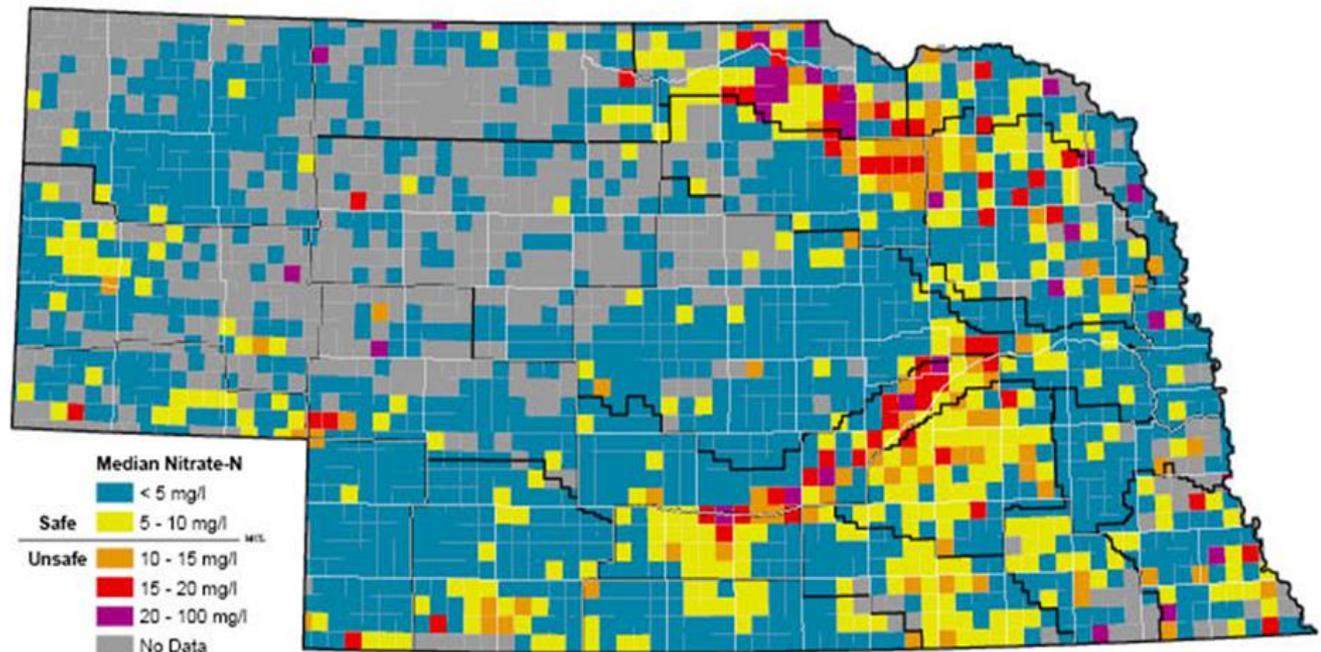
- 179 E.coli
 - (88 TMDLs)
 - 25% or 22 implemented
 - 5-alt = 41 straight to implementation

Lakes

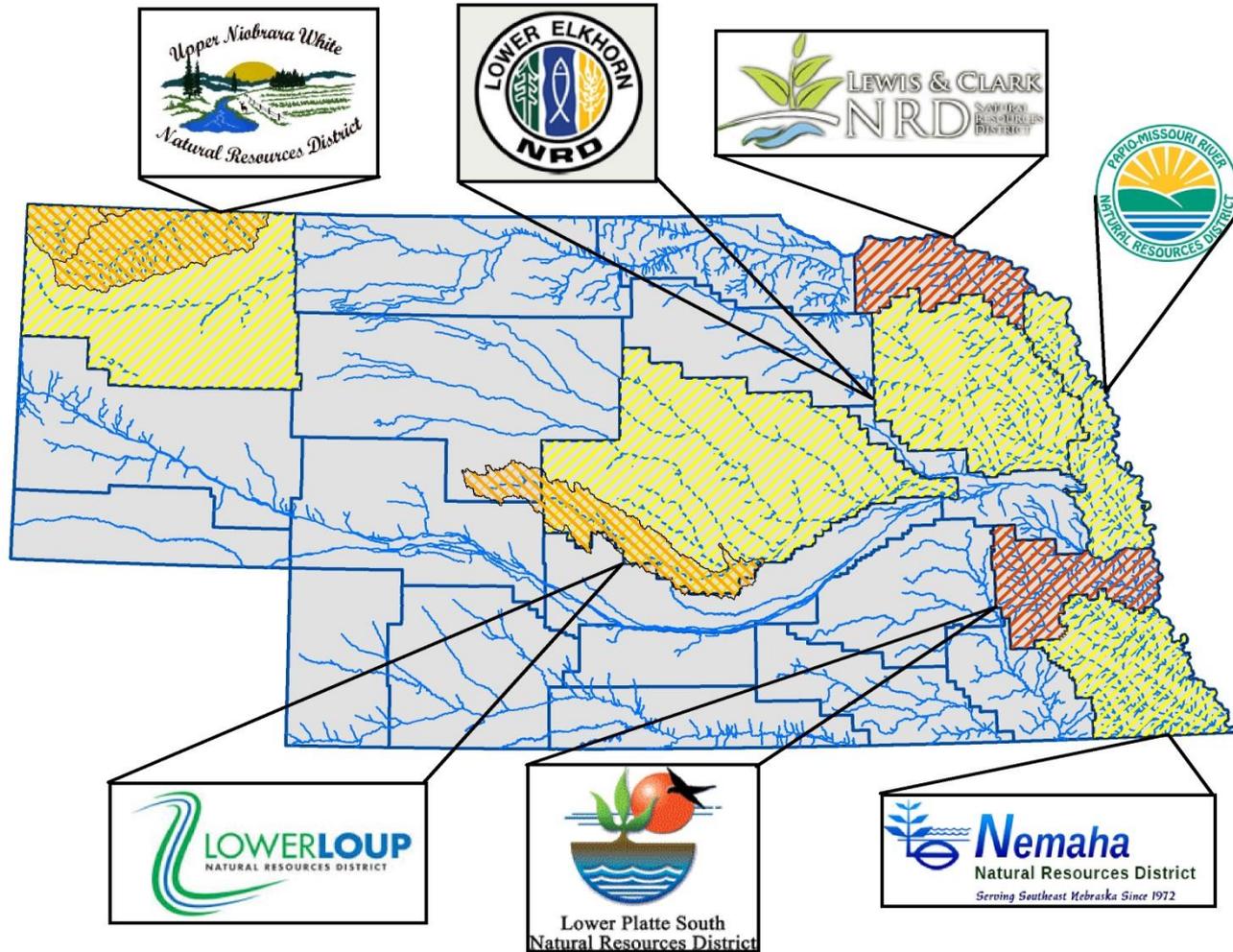
- 93 Nutrient
 - (18 TMDLs)
 - 33% or 6 implemented
 - 5-alt = 1 straight to implementation



10% OF NEBRASKA'S TOWNSHIPS SAMPLED HAVE MEDIAN NITRATE LEVELS OVER THE SAFE DRINKING WATER LIMIT



Current 5-alt Partners



5-alt Package

- 1) **Letter:** explaining contents of the package
- 2) **Notes file:** data sources and overall results
- 3) **E.coli file:** data analysis, load reduction %, load duration curves, and NPDES facilities
- 4) **Allocations file:** charts and graphs of results broken into LC, MOS, WLA, and LA
- 5) **Components file:** insertable language with appropriate element locations and references

5-alt Components Paragraphs

Additional 5-alt Components to be included in the 9-element Watershed Management Plan

(Adjust to fit your Watershed Management Plan)

1. Demonstration of how the plan is expected to achieve water quality standards more rapidly than pursuing a TMDL in the near term. Add the following to the (element) listed:

- (Management Measures) By implementing the ABCNRD Basin plan it is expected the ABCNRD will meet water quality standards quicker than pursuing the development of a TMDL due to active stakeholder interest and investment in implementing BMPs in areas that have been identified in section X to be contributing the highest E.coli loads.
- (Loadings/Reductions) Currently the ABCNRD Basin Watershed has Y E.coli reducing BMPs implemented throughout the watershed. Of the Y BMPs currently in place Z are located within sub basins determined to be contributing the highest E.coli loads.

2. Identification of specific impaired waterbodies addressed by an alternative restoration approach including: NDEQ waterbody ID, impaired use, type of pollutants causing the impairment (both point and nonpoint sources), nature of receiving waterbody, and severity of the pollution (both point and nonpoint sources).

- ⇒ NDEQ will provide point source contributions (WLA) data and pollution severity data for waterbodies impaired by E.coli that do not have EPA approved TMDLs to be included in the plan.
- ⇒ Watershed Management Plans must discuss point sources. NDEQ will provide language to be included in the plan that refers to the NPDES programs responsible to addressing point source contamination. Add:

- (Causes/Sources) Point sources discharge or have the potential to discharge wastewater to waters of the state in the ABCNRD Basin. Facility types include: municipal, commercial, and industrial wastewater treatment facilities (WWTF). The facilities that have been issued a National Pollutant Discharge Elimination System (NPDES) Permit (according to EPA's Enforcement and Compliance History Online) in the ABCNRD Basin Watershed are listed in Appendix X and are shown in Figure Y. Under Section 503 of the Clean Water Act (CWA), WWTFs may dispose of sewage sludge through land applications (EPA 1993). Sludge is land applied after proper stabilization and is incorporated into the soil at agronomic rates. Improper or over-application of sludge may potentially cause bacteria impairment to surface water. Nebraska is not a 503 authorized State, therefore administration of section 503 of the CWA falls within the authority of EPA's Bio Solids program.
- (Causes/Sources) Illicit connections, discharges, combined sewer overflows, sanitary sewer overflows, straight pipes from septic tanks or failing septic systems or other failing onsite wastewater systems can also be sources for E.coli bacteria. Under Title 124, Chapter 3, NDEQ requires anyone doing work associated with onsite wastewater

systems be certified by the State of Nebraska and requires systems constructed, reconstructed, altered, or modified to be registered (NDEQ 2012). As of Month Year a total of X onsite wastewater systems have been registered within the ABCNRD Basin. Systems installed prior to 2001 were not required to be registered; therefore the exact number of septic systems or failing septic systems is not possible to determine. According to the National Environmental Services Center it is estimated that 40% of all septic systems are presently failing and about 6% of systems are either repaired or replaced annually (NESC 2013).

- (Causes/Sources) Active animal feeding operations (AFOs) are considered potential sources of E. coli bacteria. Figure Z shows the AFOs within the ABCNRD Basin Watershed that have been entered into the NDEQ database as being inspected. As of Month Year there were X AFOs within the ABCNRD Basin Watershed, see Appendix Y for a complete list. Each AFO may have more than one livestock waste control facility (LWCF). An operation that has discharged livestock waste to waters of the State, or has been determined by NDEQ that such a discharge is more likely than not to occur is required to obtain a permit issued by the State of Nebraska for construction and operation of LWCF. These facilities are designed to contain any run off that is generated by storm events that are less than or equal to a 25-year, 24-hour rainfall event.

3. Implementation strategy for how the plan is expected to achieve water quality standards. The implementation plan must document actions to address all sources (point and nonpoint), as necessary to achieve water quality standards and include a schedule of actions designed to meet water quality standards (clear major milestones, target dates, including minor interim milestones with clear deliverables). Add:

- (Evaluate Effectiveness) Achievement of the ABCNRD Basin plan endpoints indicate E.coli pollutant loads are within the loading capacity of each impaired stream segment, the water quality standard of 126 cfu/100 ml is attained, and full support of the Designated recreational use has been restored.
- (Evaluate Effectiveness) During the 5-year plan update an evaluation will be made as to the degree of implementation that has occurred within the watershed. If X unit of BMPs, which were estimated to be needed in order to meet water quality standards, have been installed, the stream will be re-evaluated for possible delisting of the impairment on the Year 303(d) list. If not, Phase II of this implementation plan will begin.

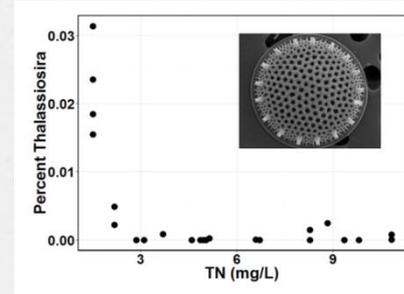
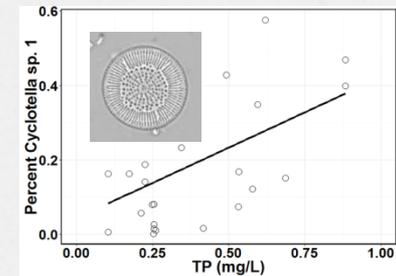
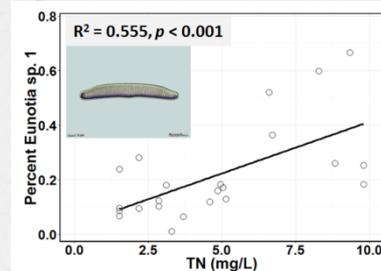
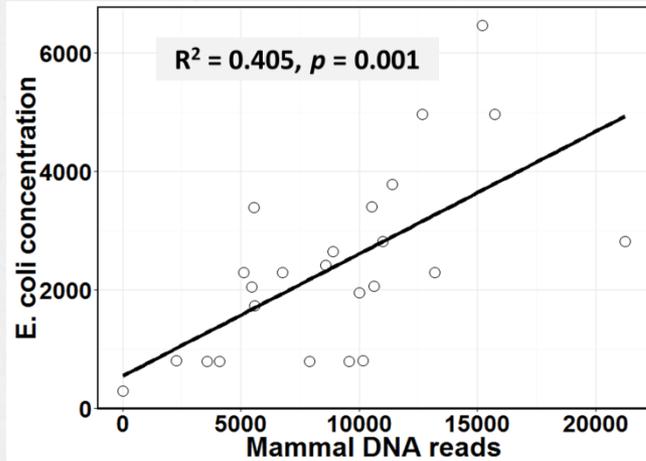
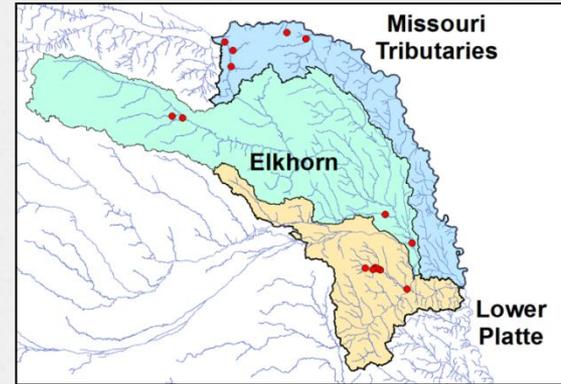
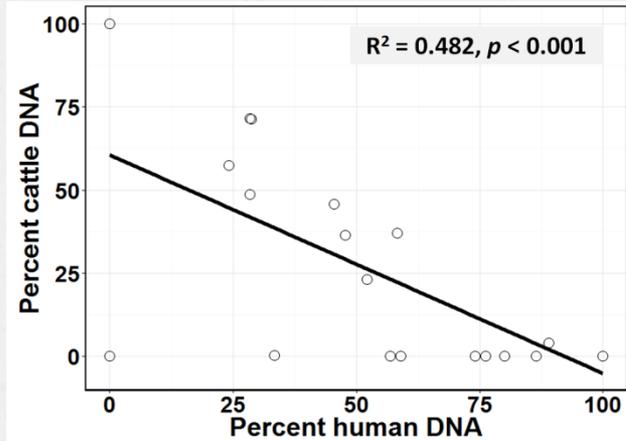
References:

EPA 1993. Part 503 – Standards for the Use or Disposal of Sewage Sludge. U.S. Environmental Protection Agency. Office of Water. Washington, D.C.

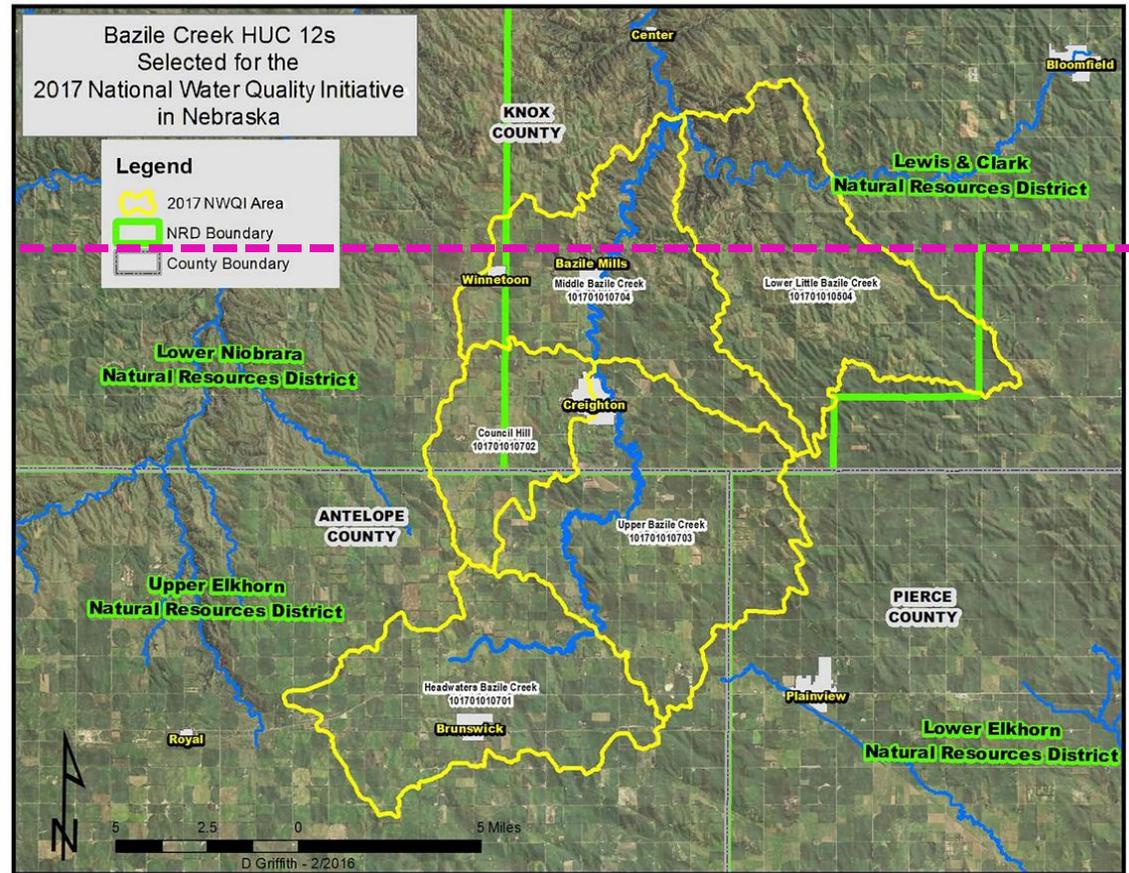
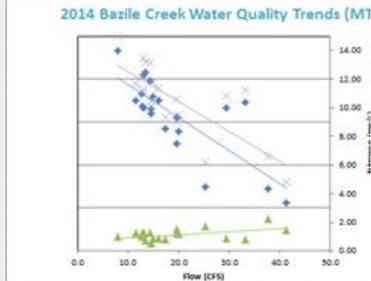
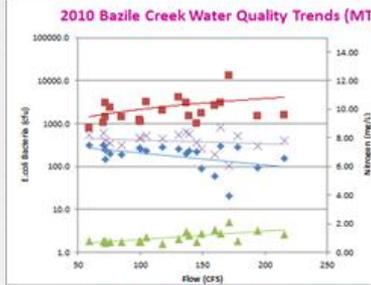
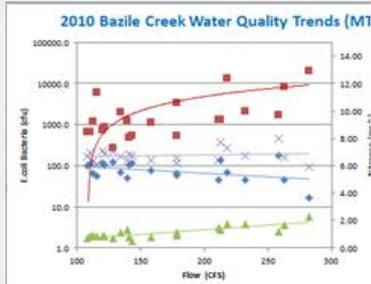
NDEQ 2012. Title 124 – Rules and Regulations for the Design, Operation and Maintenance of Onsite Wastewater Treatment Systems. Nebraska Department of Environmental Quality. Lincoln, NE.

NESC 2013. National Environmental Services Center web site. National Environmental Services Center. http://www.nesc.wvu.edu/septic_idb/nebraska.htm#septicstats.

Implementation: eDNA Partnerships



Implementation: BMP Partnerships





Questions?

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