



United States Department of Agriculture

FY2021 – Soils Section Update

 **State Technical
Advisory
Committee
Meeting**



Natural
Resources
Conservation
Service

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NE State Soils Section



State Soil Scientist: Carlos Villarreal

Assistant State Soil Scientist: Patrick Cowser

Soil Scientists:

Tyler Durre

Riley Hackbart

Alex Urban

Josh Wehrbein

Programs:

Technical Soil Services

Soil Health

Wetland Compliance

Geographic Information Systems (GIS)



NE Soil Health Program

State Soil Health Specialist – Aaron Hird

Partnerships

- UNL's Soil Health Clinics
- Eastern Nebraska's Soil Health Conference
- NE's On Farm Research Network
- UNL Soil Color and Soil Organic Carbon Relationships
- UNL IANR Impact of Land Use on Deep Soil Organic Carbon Dynamics in NE
- UNL IANR Developing an Interactive Soil Health Research Site Map for NE to Understand the Soil Health Gap
- Soil Water Movement Study (Nemaha County, NE)

Dynamic Soil Properties (DSP)

- **Over 30 Research Sites across the state**

Nebraska NRCS Soil Health Initiative

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Impacts of NRCS Programs

Total by Ag Census vs. USDA Conservation Program Cover Crop Acres

State/Year	Acres In Cover Crops ^{1,2}	% of Total Harvested Acres
Nebraska: 2017	747,903 ac	3.8
2012	357,264 ac	1.9
Program/Year	Acres In Cover Crops ³	Program \$
EQIP - 2017 ³	61,920.9 ac	\$2,748,767.27
CSP – 2017 ³	4,850.7 ac	\$36,316.75
Total Acres	66,771.6 ac	\$2,785,083.90
2017 NRCS Cons. Program Funded Ac. Percent of Total	% of 2017 Total Cover Crop Acres 8.9%	% of Total Harvested Acres 0.3%
2019 Snapshot - Cons. Program Funded Disaster Recovery Only³	~42,339.54 acres	~\$1,484,027.00

¹ Source: USDA National Agricultural Statistics Service, 2017 Census of Agriculture – State Data

² Excluding CRP Acres

³ USDA - NRCS

Impacts of USDA Conservation Programs on Cover Crop Acres

The conservation efforts by NRCS is reflected in 8.9% of the total cover crop acres in Nebraska.

This practice is used to control erosion, add fertility and organic material to the soil, improve soil tilth, and increase infiltration and aeration of the soil.

Natural Resources Conservation Service

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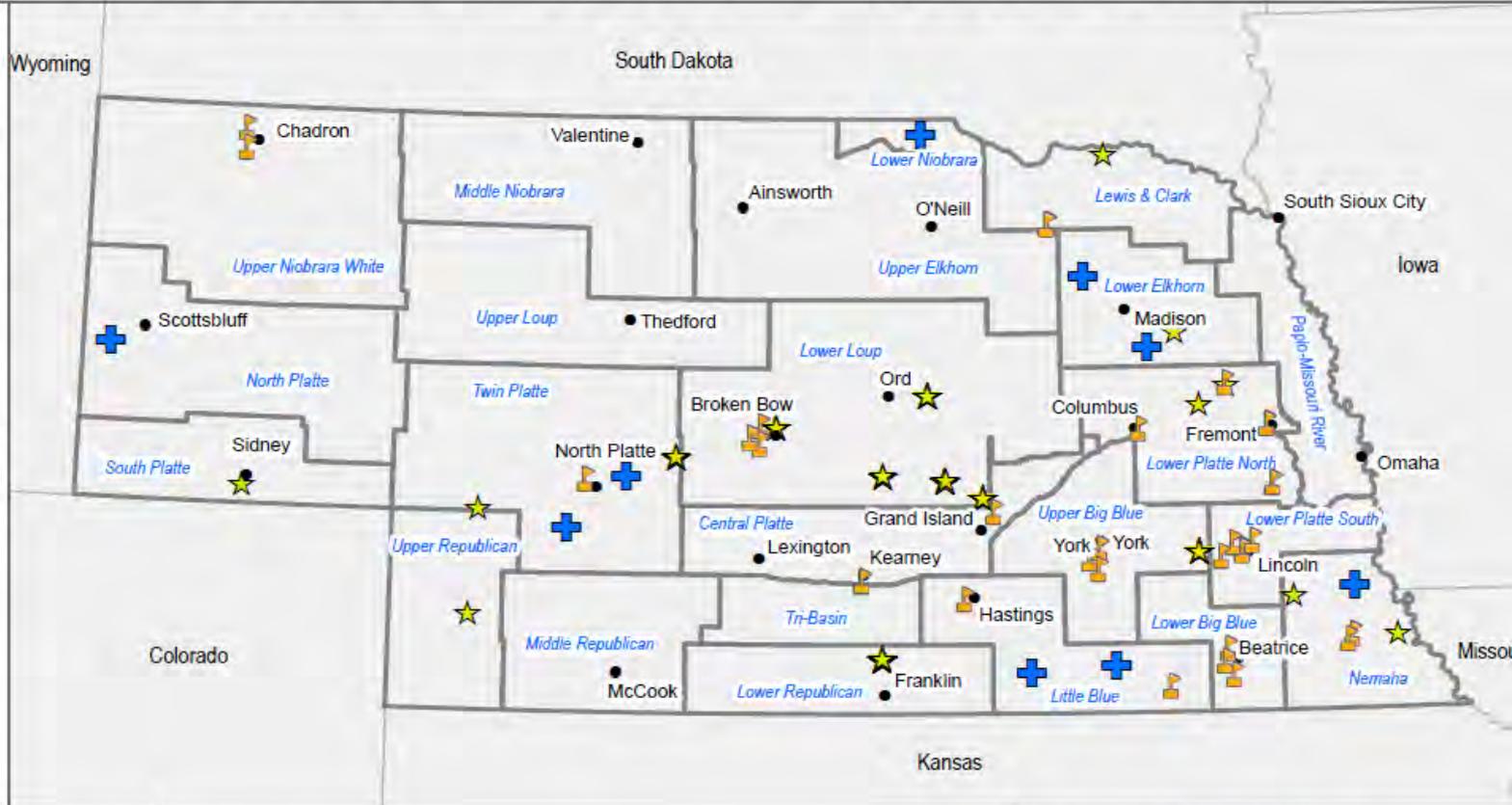
USDA-NRCS Nebraska Soil Health Impact - FY2020

In 2020, the USDA-NRCS NE Soil Health Team has prioritized outreach and partnerships, while adapting to the COVID-19 pandemic. The Team used innovative approaches to providing soil health trainings and hosting soil health workshops for NRCS Conservation Planners, Partners, and Nebraska's Agricultural Producers across the State.

Additionally, the Team inventoried soil physical, chemical, and biological properties from over 25 study sites, representing Nebraska's croplands and rangelands. In these challenging times, the Team will continue their efforts to promote natural resource conservation in Nebraska in partnership with Nebraska's Farmers and Ranchers.

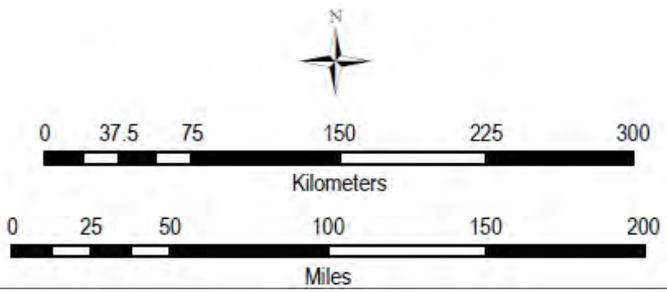
For more information, contact:

Aaron Hird
NE State Soil Health Splst.
Aaron.Hird@usda.gov



Legend

- FY20 Soil Health Outreach Events
- Rangeland Soil Health Study Areas
- Cropland Soil Health Study Areas



Map creation by the USDA- NRCS
100 Centennial Mall N., Rm 152
Lincoln, NE 68502

October 28, 2020
Datum: North American 1983
Projection: Geographic Coordinate System
Project ID: SH201029CV01

The USDA is an equal opportunity provider, employer, and lender.

Wetland Compliance Team

Compliance Coordinator – Corey King

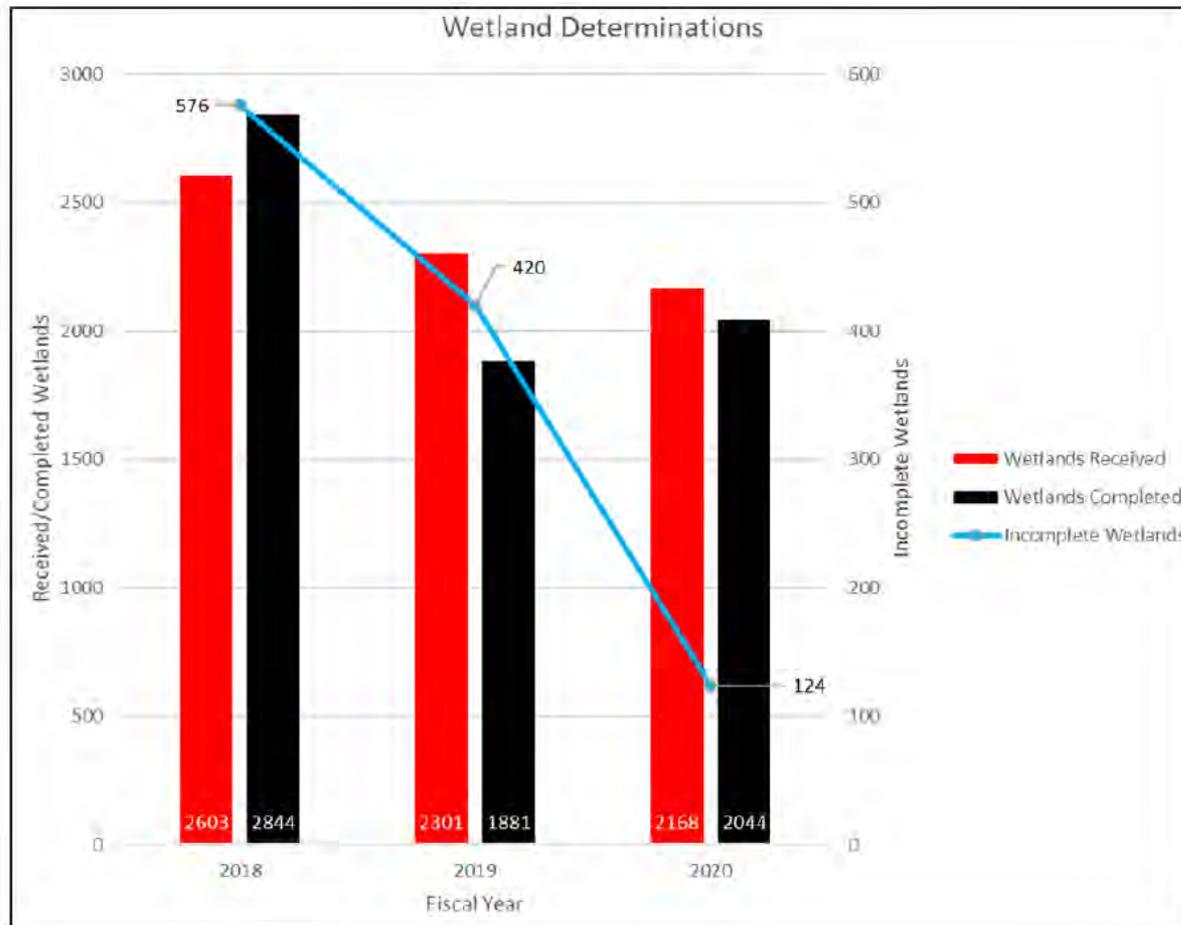
Wetland Team works exclusively on wetland determinations, reconsiderations, and restorations/mitigation requests.

13 biologists/soil scientists throughout Eastern and Central Nebraska

Nebraska receives about 2,350 wetland determinations annually.



Wetland Team Successes



Reducing the Workload...

The increase in staff correlates directly with the increase in the number of determinations completed.

NRCS will continue to improve the wetland determination process to assist agriculture producers in Nebraska as effectively as possible.



Goals for FY2021 – Soils/TSS

- 1. Increase involvement with MLRA Soil Survey Activities**
 1. Management and Technical Team Meetings
 2. Field visits and Quality Assurance Reviews
 3. State Soils Staff assistance
- 2. Provide Conservation Activity Reports to increase awareness of planned practices and involved soils**
 1. Assist in project design
- 3. Share Web Soil Survey metrics with Nebraska Leadership**
 1. What information is being accessed
 2. Location and size of Area of Interests
- 4. Review Current Available Interpretations**
 1. Developed interpretations not available in WSS



Goals for FY2021 - GIS

- 1. Expand online presence using ArcGIS Online platform**
 1. Soil Health and Conservation Planning Success Stories
 2. Streamline data sharing with partners and cooperators
- 2. Develop and Implement Performance Monitoring Tools**
 1. Analyze trends in Contract Management, Customer Service, Practice Implementation
 2. Integrated Data for Enterprise Analysis (IDEA)
 3. Monitor program and high priority areas for environmental impacts
- 3. Improve/Integrate in-field data collection**
 1. Review available data collection methods
 2. Solicit feedback from end-user
 3. Provide training to field staff



ArcGIS Online (AGOL)



← → ↻ 🏠 nrcs.maps.arcgis.com/apps/opsdashboard/index.html#/52b82bd1bab74ce1be4cd91e323eb765

Select Soil and Water Conservation

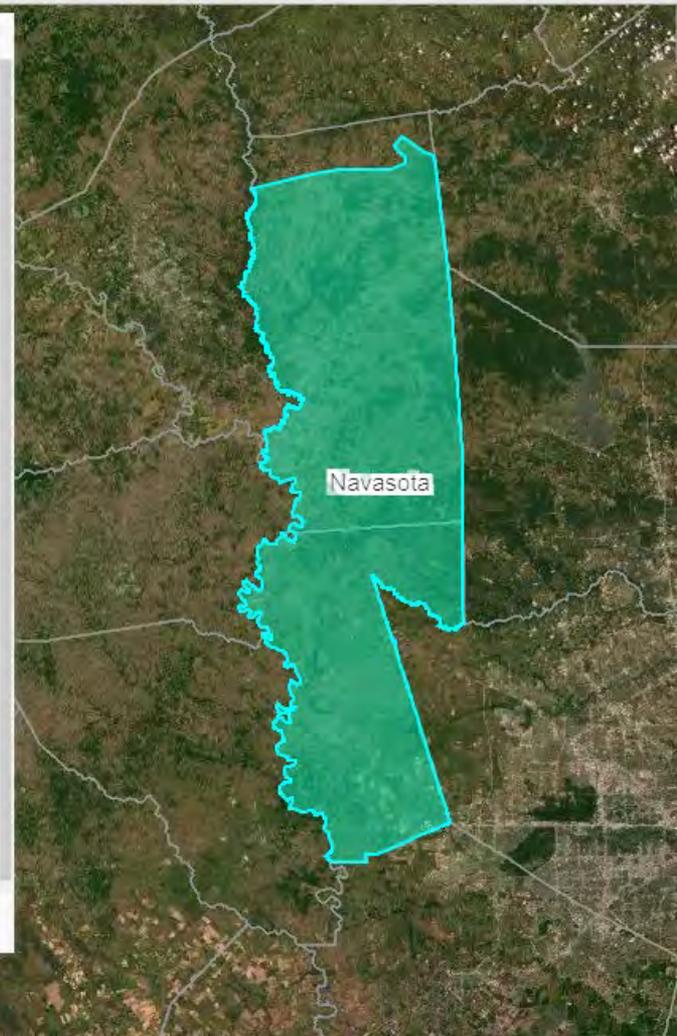
District:

Navasota

Showing 1

Navasota SWCD: Resource Concern Priorities

- Non irrigated cropland (1): Plant-Plant productivity and health
- Non irrigated cropland (2): Soil-Organic matter depletion
- Non irrigated cropland (3): Water-Nutrients transported to surface water
- Irrigated cropland (1): Water-Inefficient irrigation water use
- Irrigated cropland (2): Soil-Organic matter depletion
- Irrigated cropland (3): Water-Nutrients transported to surface water
- Pastureland (1): Animal-Feed and forage imbalance
- Pastureland (2): Plant-Plant productivity and health
- Pastureland (3): Water-Nutrients transported to surface water
- Rangeland (1): Plant-Plant pest pressure
- Rangeland (2): Animal-Feed and forage imbalance
- Rangeland (3): Soil-Bank erosion from streams, shorelines, or water conveyance channels
- Forestland (1): Plant-Plant productivity and health
- Forestland (2): Plant-Wildfire hazard from excessive biomass accumulation
- Forestland (3): Animal-Terrestrial habitat for wildlife and invertebrates



Questions, Comments, Concerns?



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