

A history of RWB wetland restoration projects on WMA's and an update on the most recent project at Redhead WMA

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Photo by Ethan Freese, PBT

- **History**
 - **Approach Used**
 - **Practices Applied**
 - **Outcomes**
 - **Redhead WMA Project**
 - **Planned Projects**

Kirkpatrick Basin South WMA

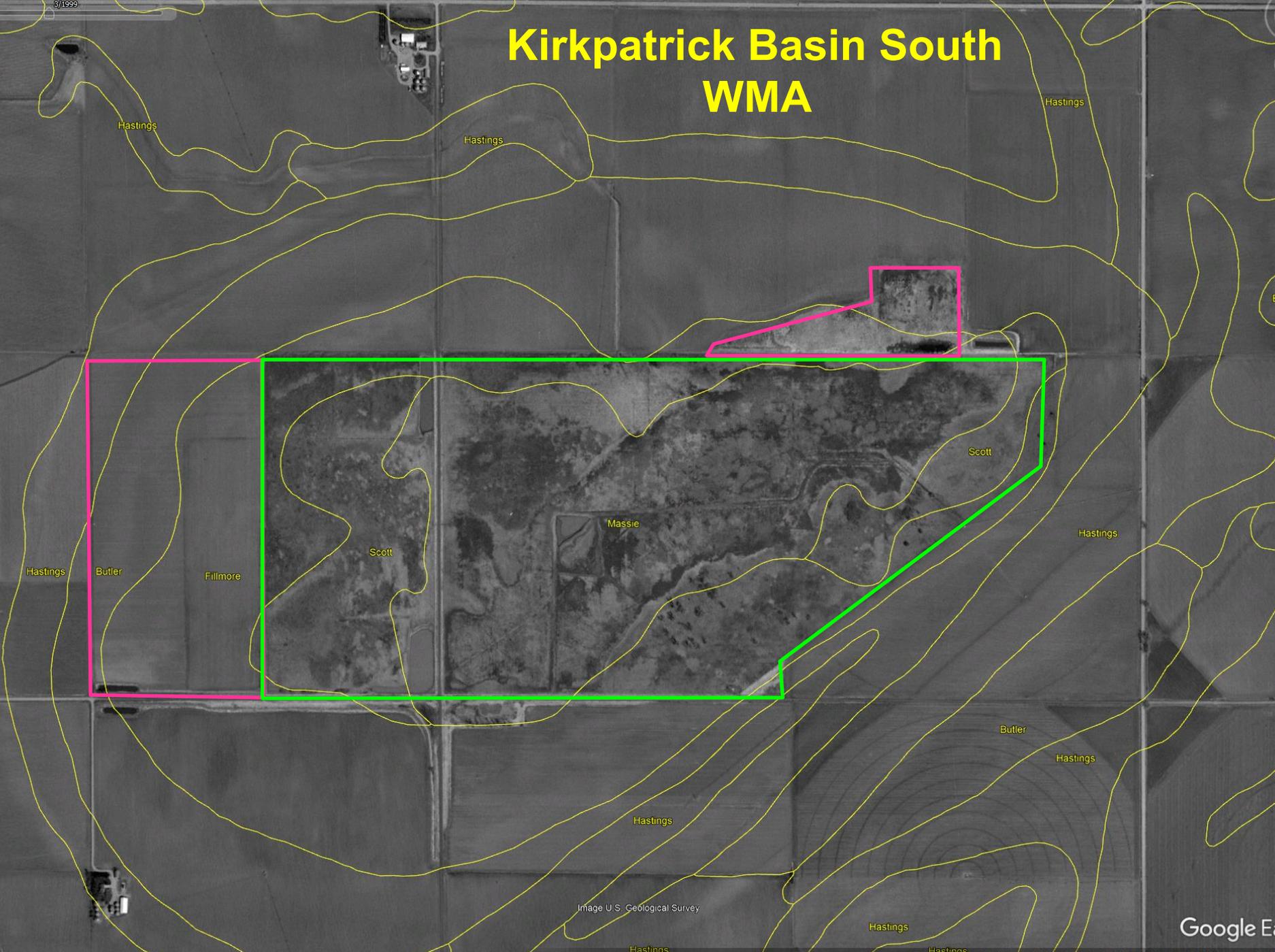


Image U.S. Geological Survey

- **1986- North American Waterfowl Management Plan approved**
- **1989- North American Wetlands Conservation Act (NAWCA) passed**
- **1990- Farm Bill**
 - **WRP was funded**
 - **Implemented in Nebraska in 1994**
 - **Had a 10-year cost-share option**
- **1992- Nebraska Environmental Trust established**
- **1992- Rainwater Basin Joint Venture formed**
 - **Coordinator (Steve Moran) hired in 1994**
- **2000- Ducks Unlimited established their Nebraska program**

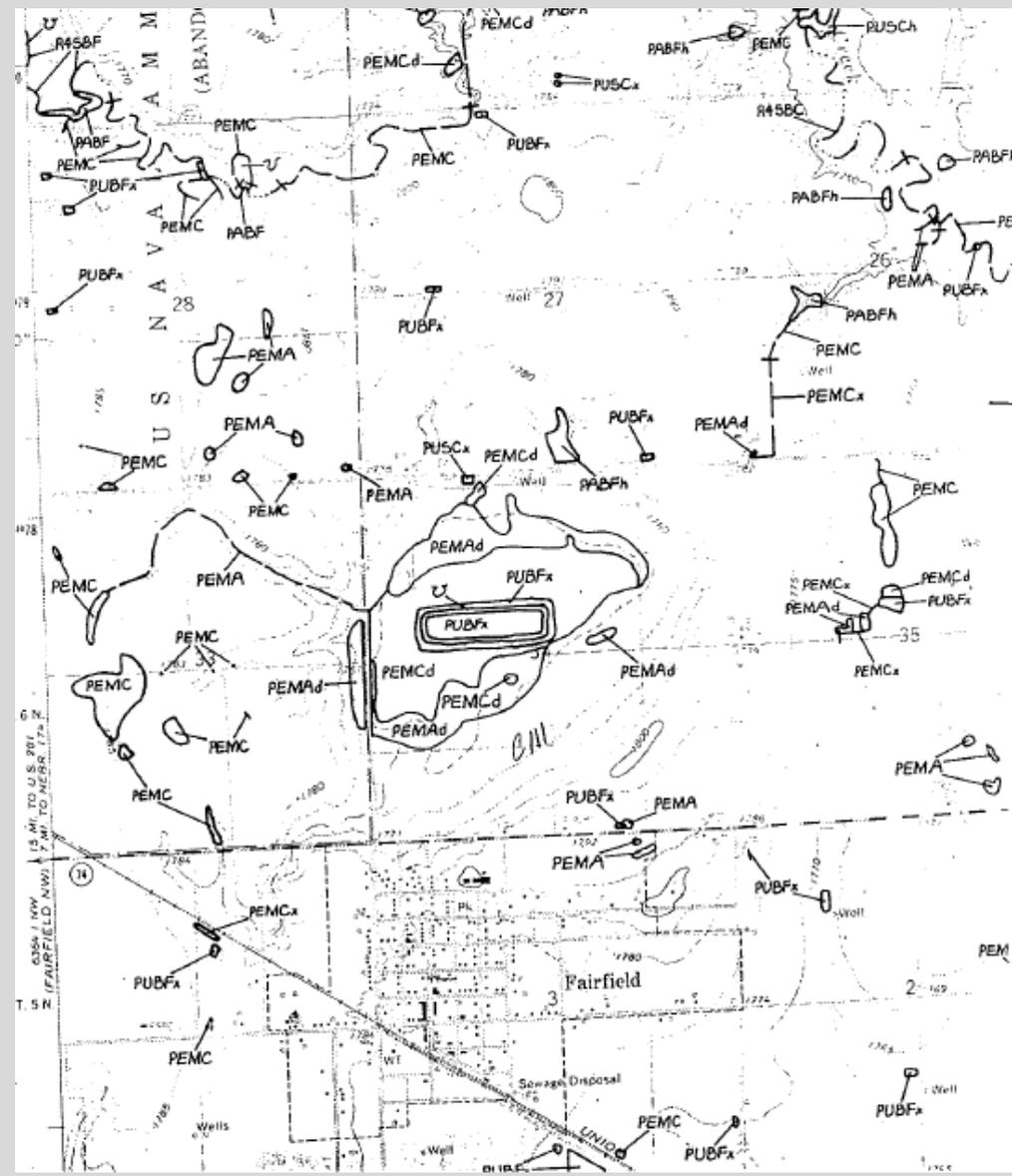
**RAINWATER BASIN
WETLAND DEVELOPMENT PROJECTS**



**WILDLIFE DIVISION
SEPTEMBER 24, 1990**



GAME and PARKS







Rainwater Basin Joint Venture
1233 North Webb Road Suite 100
Grand Island, NE 68803
308-385-6465
(FAX)308-385-6469



North American Waterfowl
Management Plan

September 5, 1997

Mary Harding
Executive Director
NE Environmental Trust
PO Box 30370
Lincoln, NE 68503

Dear Mary,

Enclosed is the original and six copies of an application for Environmental Trust funding entitled *Rainwater Basin Public Lands Engineering Services*. Nebraska's Rainwater Basins are an internationally critical habitat for millions of migratory waterfowl, hundreds-of-thousands of migratory shorebirds, and endangered/threatened species. In addition, the Basins serve important water quality and quantity functions, and provide a source of recreation for Nebraska's citizens.

The Rainwater Basin Joint Venture Implementation Plan outlined a goal and objectives to meet the conservation needs of the Basins. A vital component of this Plan is to optimize the wetland habitat function on publicly owned basins. Partners have been working on the steps required to develop restoration and enhancement programs for publicly owned lands. There are several phases to the process: prioritization of projects, preparing a scope of needed restoration work, developing engineering plans for construction activities, developing a wetland management plan, and constructing needed improvements.

The NE Game & Parks Commission has completed the prioritization and listed restoration needs for eighteen of their properties in the Rainwater Basin. The enclosed application utilizes a partnership between the Joint Venture, NE Game & Parks Commission, Ducks Unlimited, and the Natural Resources Conservation Service to provide engineering services to the prioritized NGPC basins.

The application creates a new paradigm for engineering services by providing tools which will enable partners to perform services they normally would not have the time to accomplish even though they have the desire and expertise. The Joint Venture is excited to play a role in a partnership which enables partners to move to a higher level of service for not only the Joint Venture but for all of the natural resource management customers.

Thank you for your consideration of this application. We look forward to continuing our important partnership with the Nebraska Environmental Trust.

Sincerely,

Steve Moran
Coordinator

Board Members:

Les Sheets
NE Game & Parks Com
Lincoln, NE

Carl W. Andersen
Landowner
Edgar, NE

Terry Terrell
US Fish & Wildlife Service
Denver, CO

Vince Shay
The Nature Conservancy
Omaha, NE

John McKenzie
Landowner
Harvard, NE

Mike Onnen
NE Assoc of
Resource Districts
Davenport, NE

Rick Warhurst
Ducks Unlimited Inc
Bismarck, ND

Craig Derickson
Natural Resources
Conservation Service
Lincoln, NE

It takes a village---

- **Private Landowners**
- **Central Public Power and Irrigation District**
- **County Road Departments**
- **Ducks Unlimited**
- **Friends of the Rainwater Basin**
- **Natural Resources Conservation Service**
- **Natural Resources Districts**
- **Nebraska Cattlemen**
- **Nebraska Department of Water, Energy, and Environment**
- **Nebraska Environmental Trust**
- **Nebraska Game and Parks Commission**
- **North American Wetlands Conservation Act (NAWCA)**
- **Pheasants Forever**
- **Platte Basin Timelapse**
- **Prairie Plains Resource Institute**
- **Rainwater Basin Joint Venture**
- **The Nature Conservancy**
- **U.S. Army Corps of Engineers (Section 206)**
- **U.S. Bureau of Reclamation**
- **U.S. Environmental Protection Agency**
- **U.S. Fish and Wildlife Service**
- **U.S. Geological Survey**
- **University of Nebraska**
- **University of Missouri**
- **Oklahoma State University**
- **Texas Tech University**



**When you reach the edge of your knowledge
get help!**



Interdisciplinary (Bio-Engineering) Team

- **Wetland Project Coordinator (Randy and now Jessi)**
- **Area manager**
- **Soil scientist**
- **Surveyor**
- **Engineer and/or CET**
- **GIS specialist**
- **Hydrologist**
- **Other biologists (waterfowl, nongame birds, botanist, etc.)**
- **Grant manager and contracting specialist**
- **Permit compliance specialist**
- **Contractor**

Interdisciplinary Team







Practices Applied

- **Pit fills**
- **Ditch plugs**
- **Tile/tunnel blockage**
- **Berm and fill removal**
- **County road ditch reshaping**
- **Removal of culturally-accelerated Sediment**
 - **Pumping pools**
- **Wells, pumps, power, and pipelines**
- **Water control structures**
- **Drainage swales**
- **Grazing infrastructure**
- **Tree removal**
- **Seeding**
- **Buffers**
- **Watershed improvements**
 - **Pit fills**
 - **Variable flow tailwater recovery systems**
 - **Sediment retention structures**
- **Roundouts or private land agreements**

Pit Fill, Removal of Culturally-accelerated Sediment



Water Delivery



Grazing Infrastructure



Watershed Improvements



Upland Pit Fill on private land



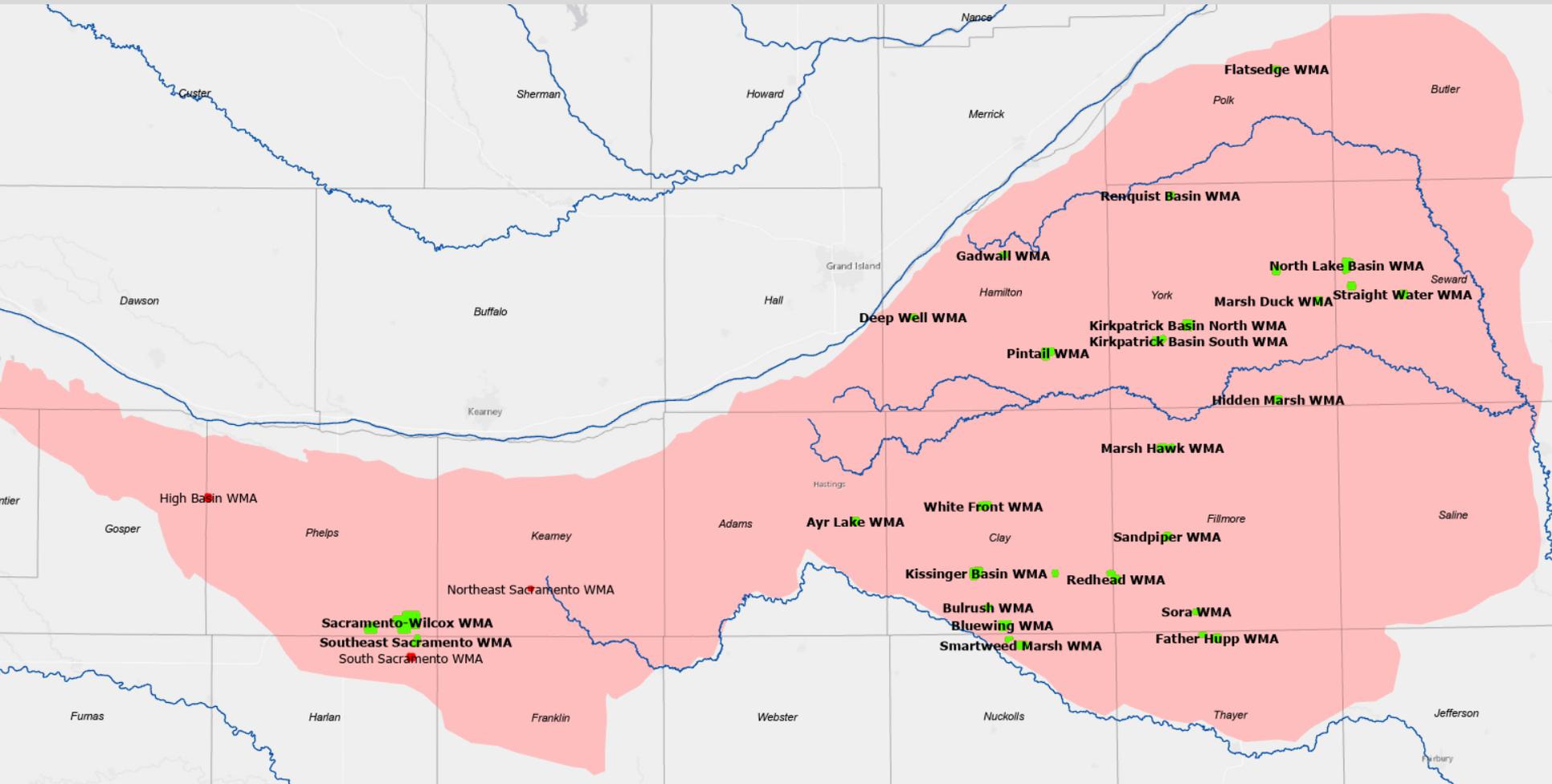
Upland buffer

Restoration Practices	Number of WMAs
Wetland Pit Fills	18
Drainage Plugs (external drain)	3
Water Control Structures (internal)	9
County Road Ditch Fills	18
Removal of Culturally-accelerated Sediment or Fill	30
Water Delivery Improvement (wells, pumps, pipelines, power)	29
Grazing Infrastructure (fence, livestock water)	29
Upland Pit Fills or Variable Flow Tailwater Systems	13





Restoration projects have been completed on 32 of the 35 WMAs in the RWB. In addition, restoration projects have been completed on 28 WMAs outside the RWB.













Redhead WMA 2017



10 acres - 6" deep
~ 8100 cu yds

-  Well
-  Spoil Area
-  Excavation
-  GPCProps



March 24, 2025



A wide, flat, muddy area, likely a filled pit, surrounded by green grass and a cornfield under a clear blue sky. The ground is a mix of brown mud and green grass, with some tire tracks visible. In the background, there is a dense line of green corn plants. The sky is a clear, bright blue.

Carlson's Pit - *Filled*



Redhead Basin - *Expanded*

Other restoration/enhancement projects

- Darr Strip WMA Slough restoration and tree clearing
- Bassway Strip WMA Slough restoration and tree clearing
- Kirkpatrick Basin South WMA hydrologic investigations
- West Sacramento WMA soil investigations
- Ponca SP sediment removal
- Peru Bottoms WMA tree clearing
- North River WMA Slough restoration and tree clearing
- Platte WMA Slough restoration and tree clearing

Infrastructure additions/upgrades

- Pintail WMA upgrade to electric
- Renquist WMA well replacement
- Nick Lyman WMA fencing
- Platte WMA fencing
- North River WMA fencing/solar well

Looking ahead...

- Roundout opportunities as they arise
- Updates to aging infrastructure (upgrade to electric)
- Remote well operation
- Grazing infrastructure (fencing, solar wells)
- Water quality treatment
wetland opportunities



Take home points

- **Be patient**
- **Have a plan and be ready to strike when there are opportunities**
- **Collaborate**
- **Learn from others**
- **Evaluate**
- **There is no silver bullet and no finish line**



Ethan Freese / Platte Basin Timelapse

Thank You!

For more information visit:

NebraskaWetlands.com

