

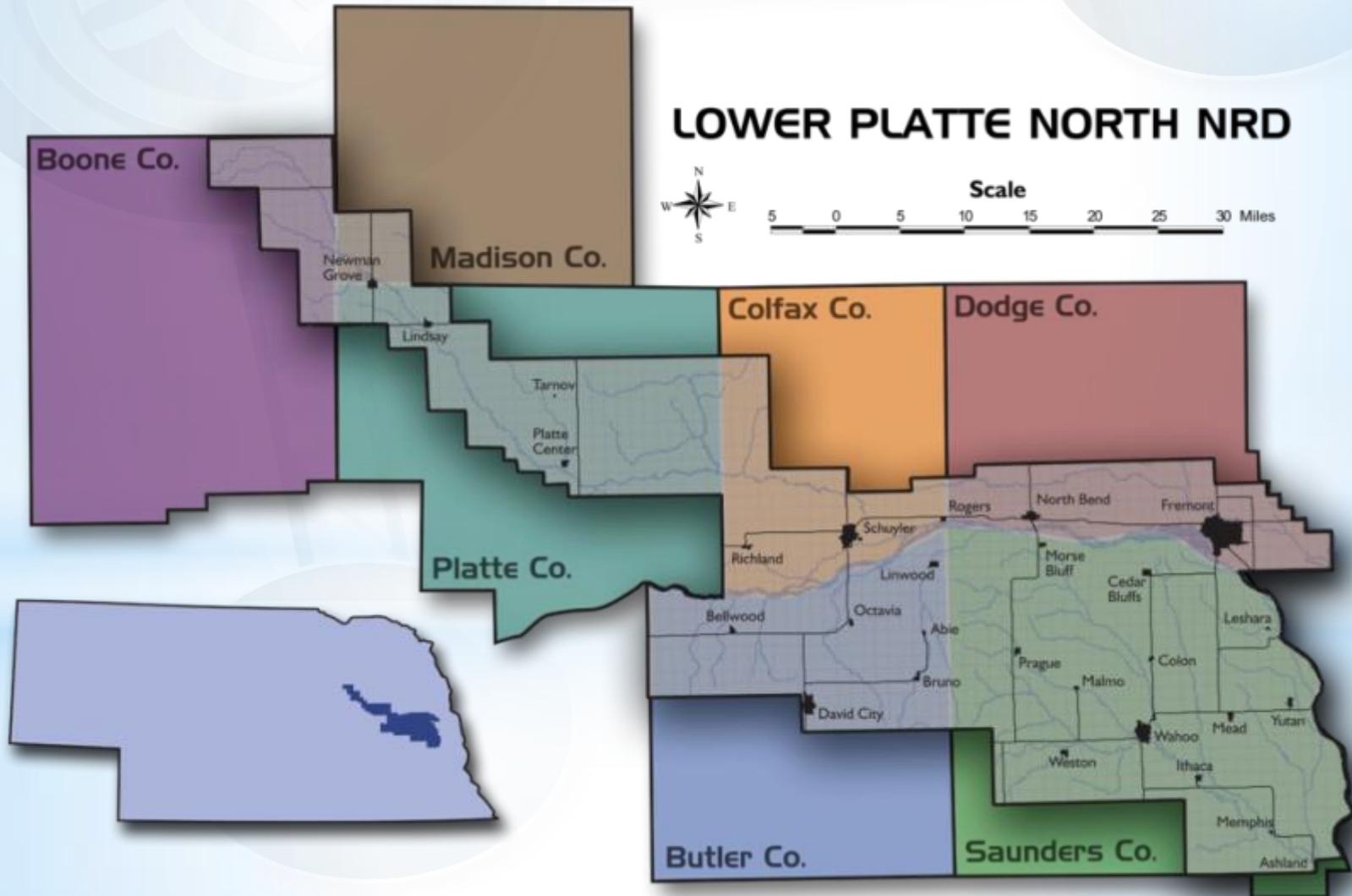
Water Funding Task Force

Lower Platte North N.R.D.

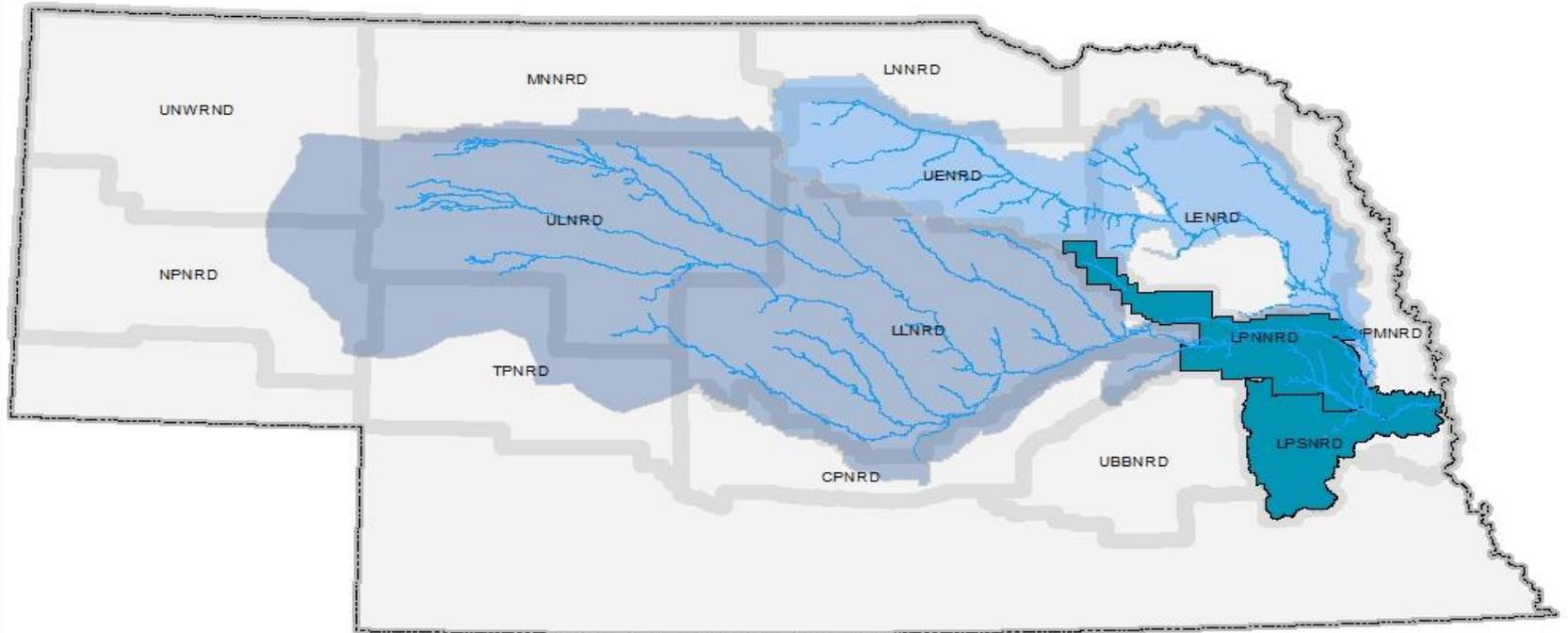
Presented by: John Miyoshi

August 29, 2013

Lower Platte North NRD Boundaries



Lower Platte Basin



Sub Basins

- Eikhorn
- Lower Platte

Rivers and Streams

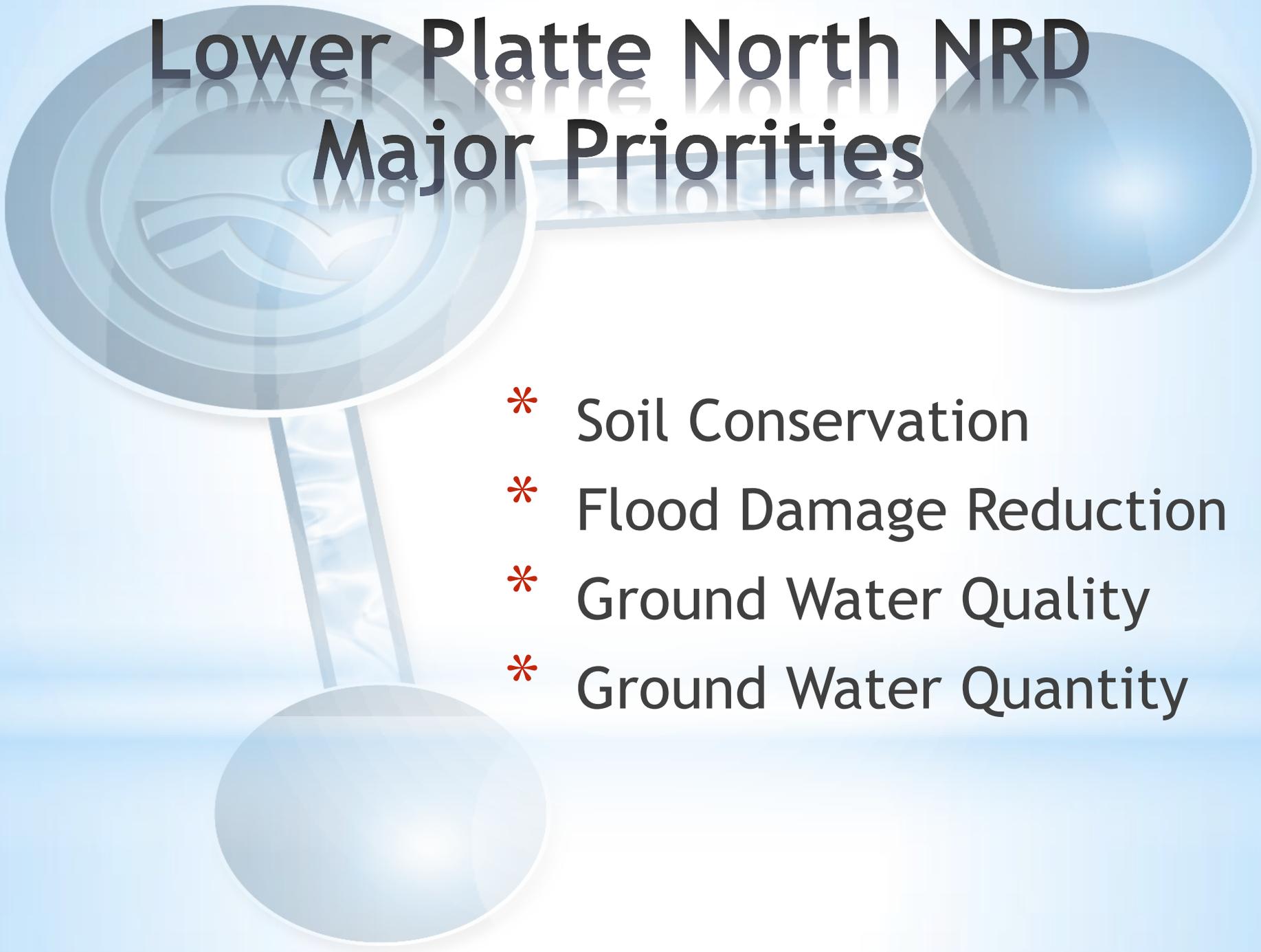
Nebraska

NRDS in LPB

NRDs in Lower Platte Sub Basin



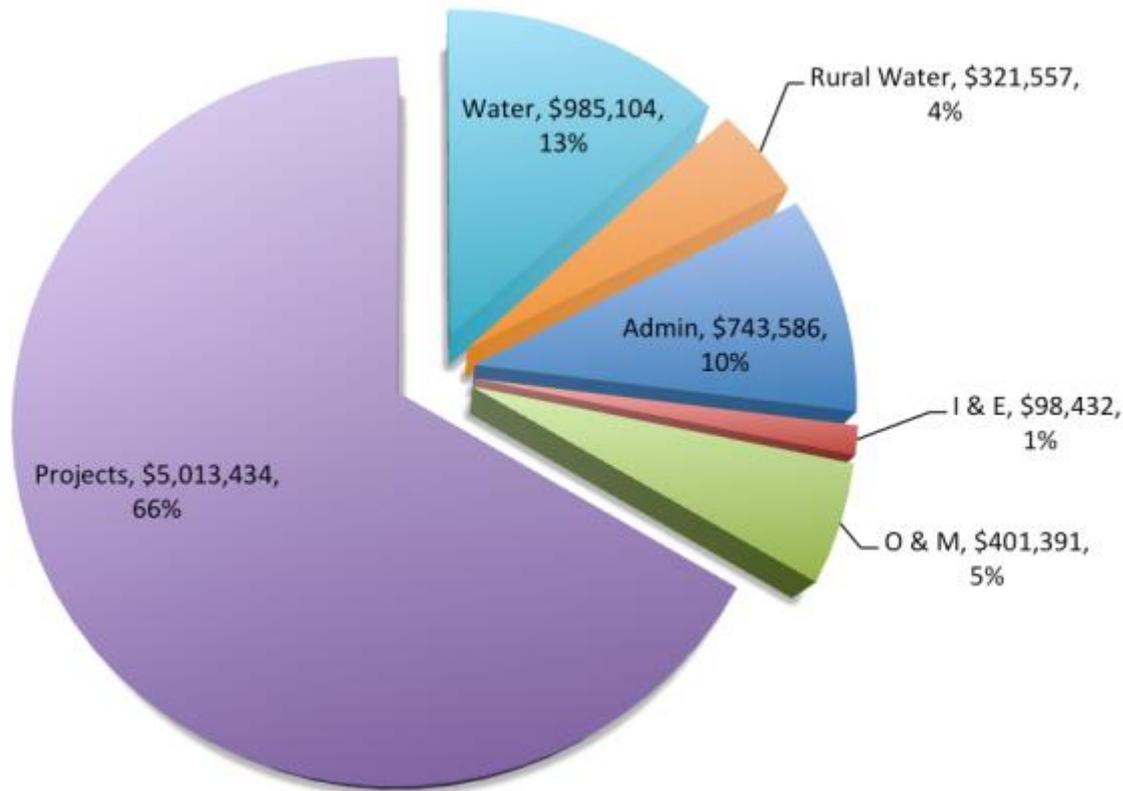
Lower Platte North NRD Major Priorities



- * Soil Conservation
- * Flood Damage Reduction
- * Ground Water Quality
- * Ground Water Quantity

Lower Platte North NRD Budget - Where it goes

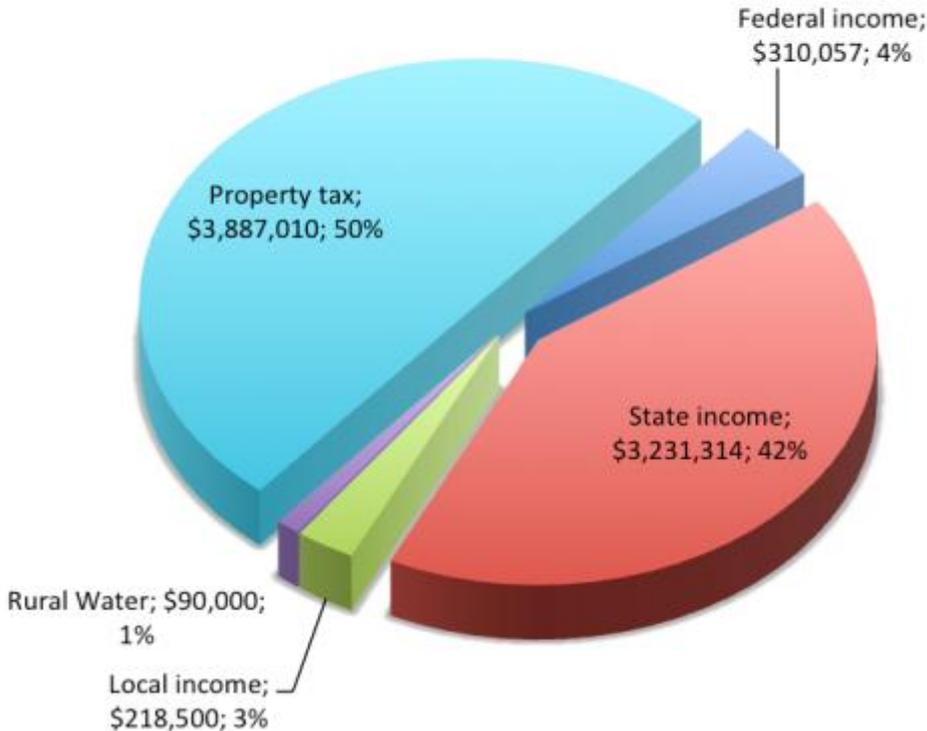
Budget by Department



**Total Budget
\$7,563,504**

Lower Platte North NRD Budget - Where it comes from

Budgeted Income



Budgeted Income
\$7,563,504

Lower Platte North NRD Soil Conservation

- * 1930's to 1990's - focus was to save top soil
- * 2000's - focus is driven by water quality

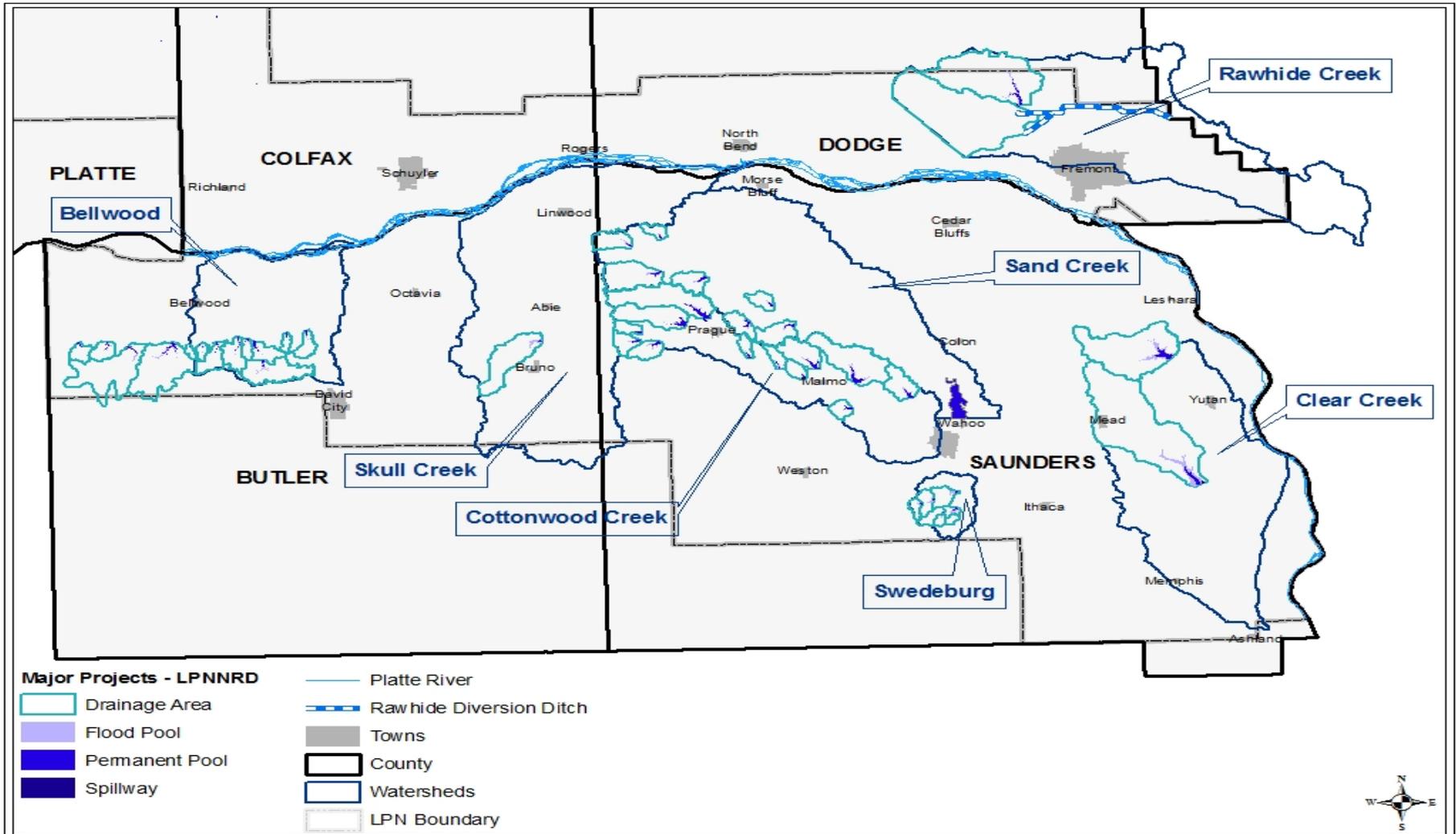
Lower Platte North NRD Land Treatment Program

- * Combination of Funds and Programs
 - * LPNNRD
 - * Nebraska Soil and Water Conservation Program
 - * DEQ/EPA 319
 - * EQUIP
-
- * Managed by watershed groups, NRD's, State, and Federal partners

Lower Platte North NRD Land Treatment Target Areas

- * Bone Creek - P.L. 566
- * Sand/Duck Creek - 319
- * Shell Creek - Environmental Trust & 319
- * Wahoo Creek - 319
- * Cottonwood - EQUIP & 319
- * Shell Creek II - 319

Lower Platte North NRD Major Projects



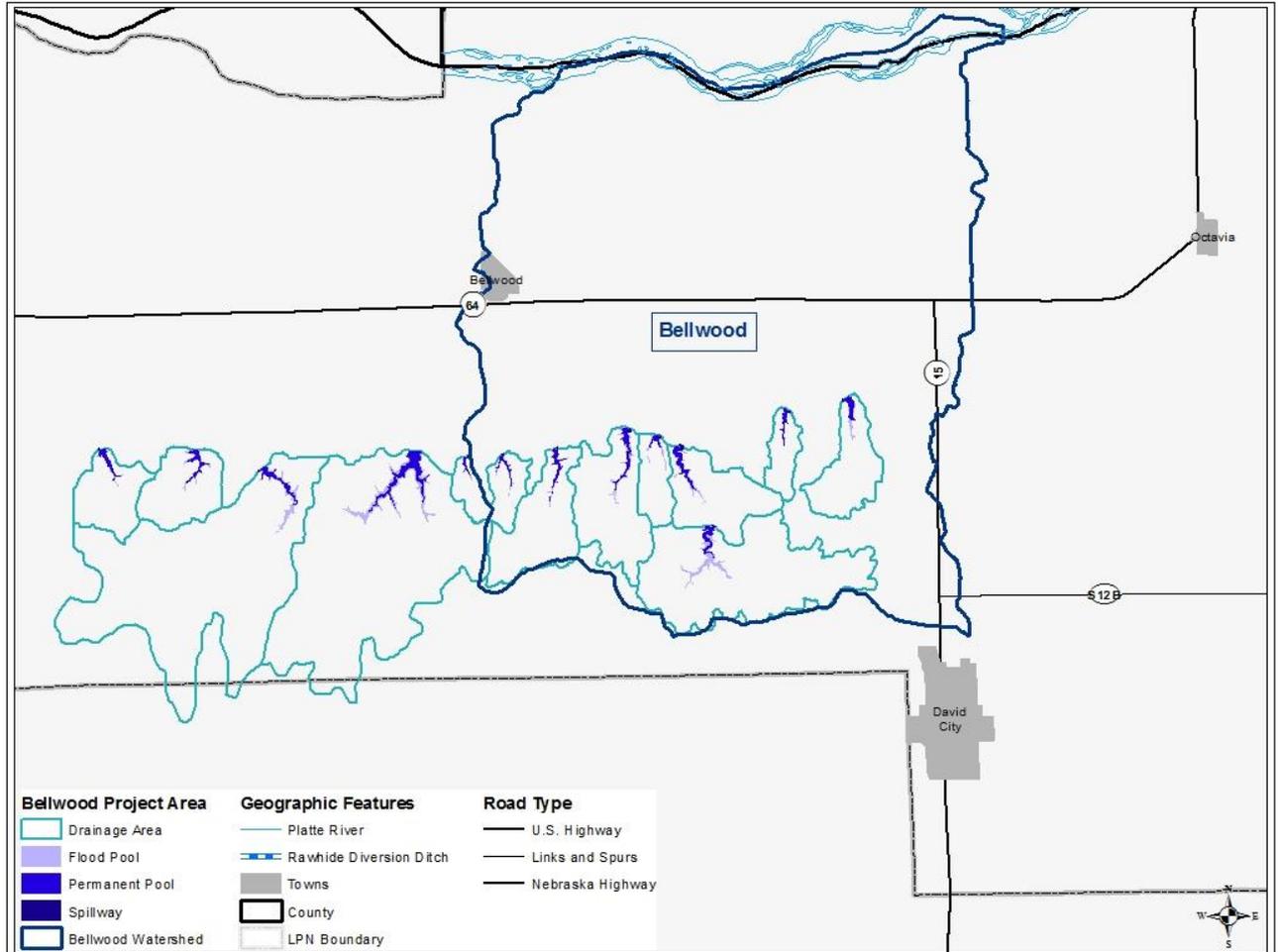
Lower Platte North NRD

Bellwood Flood Damage Reduction Project

* 1965 to 1991

* P.L. 566

* 13 dams



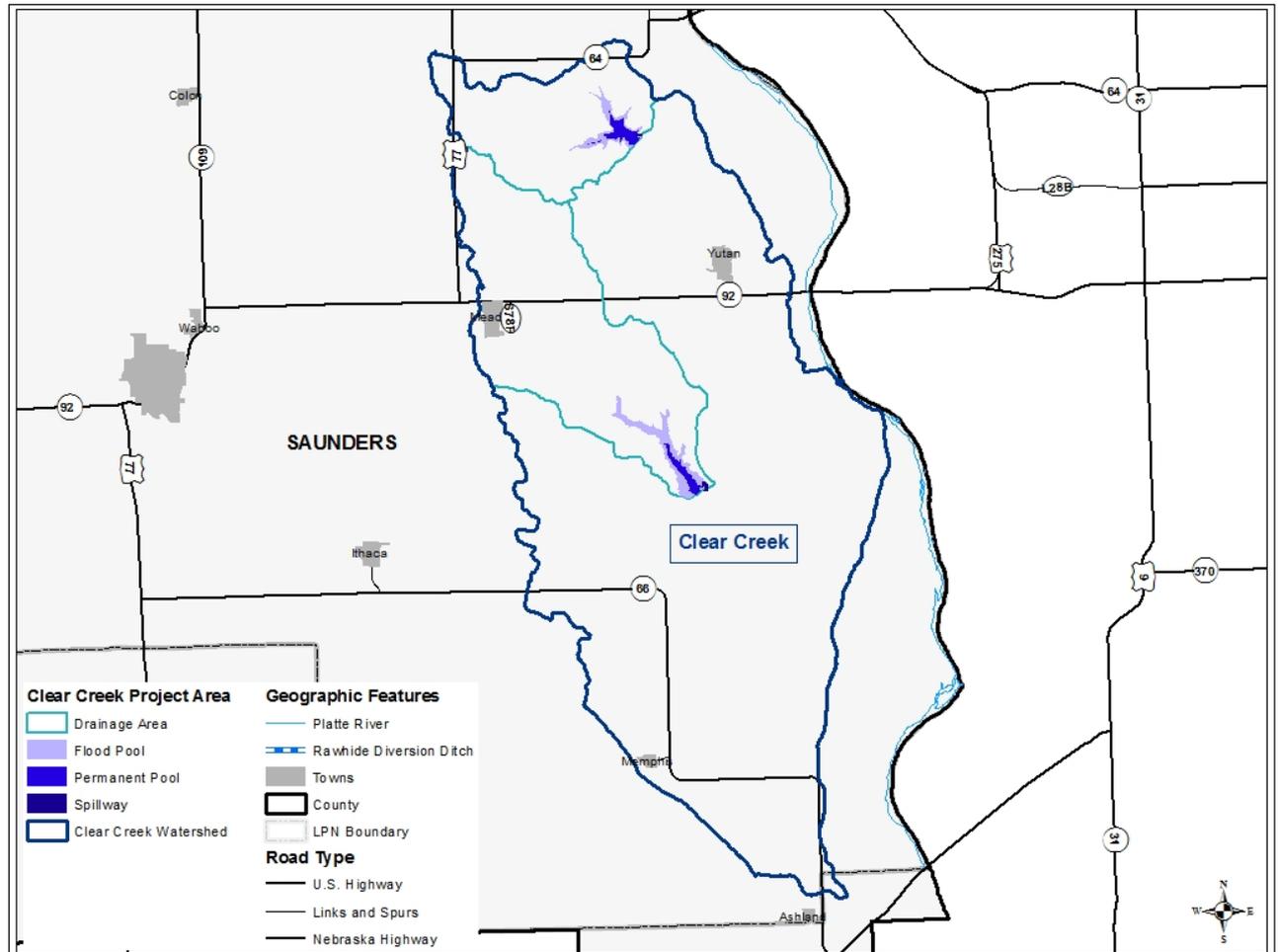
Lower Platte North NRD

Clear Creek Flood Damage Reduction Project

* 1978 to 1986

* P.L. 566

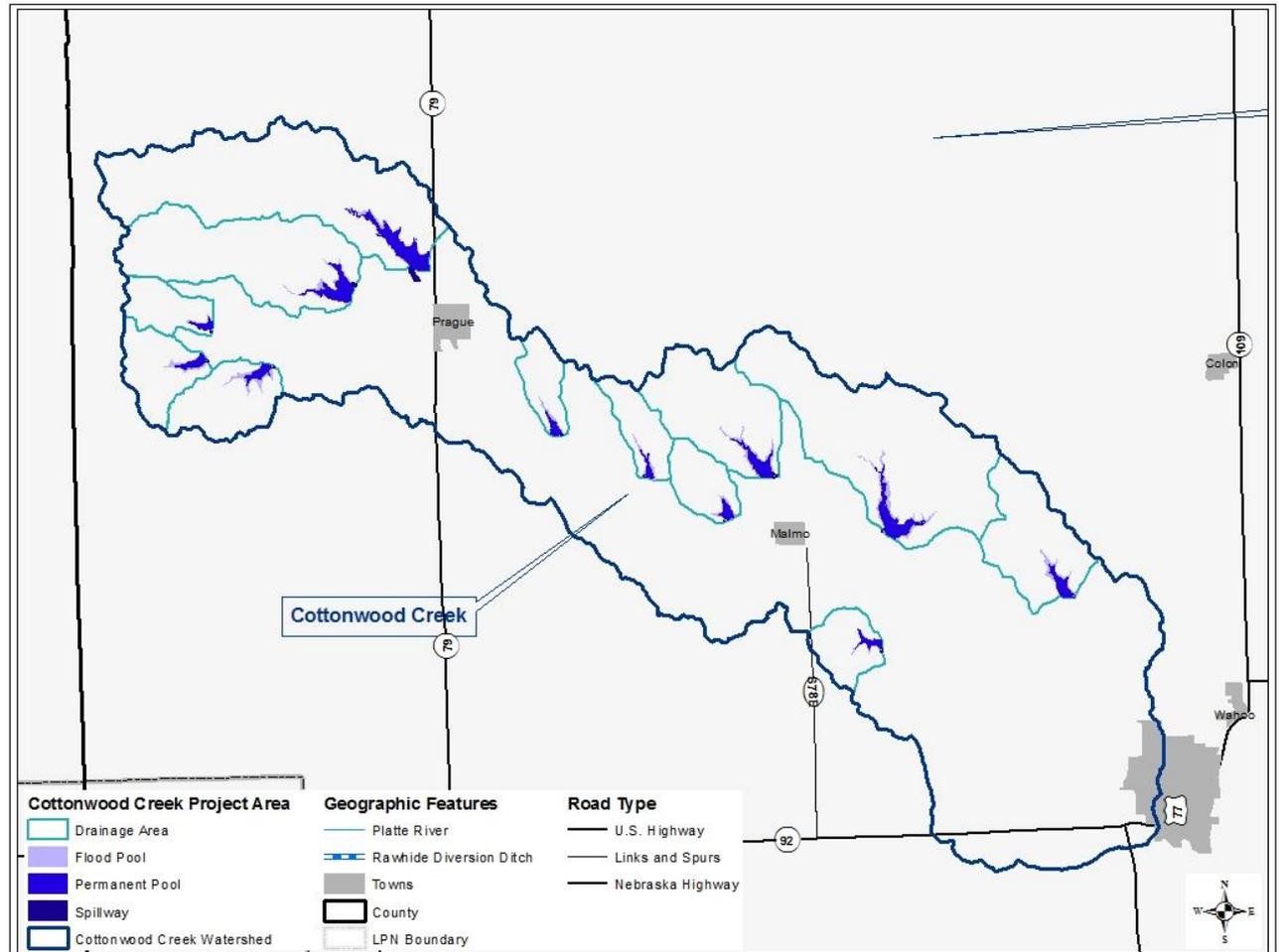
* 2 dams



Lower Platte North NRD

Cottonwood Creek

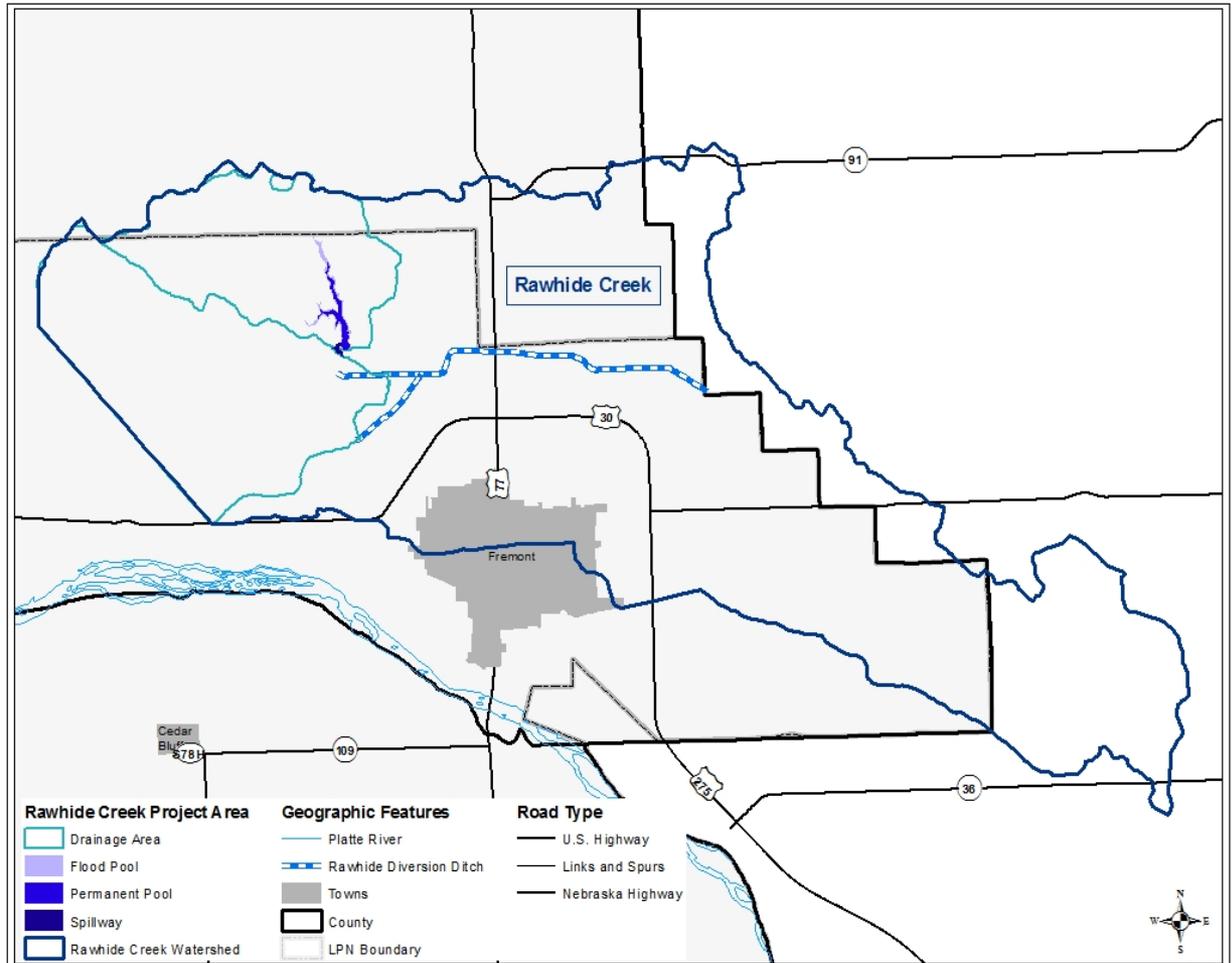
- * 1965 to 1990
- * P.L. 566
- * 13 dams
- * 1 recreation site using NRDF funding



Lower Platte North NRD

Rawhide

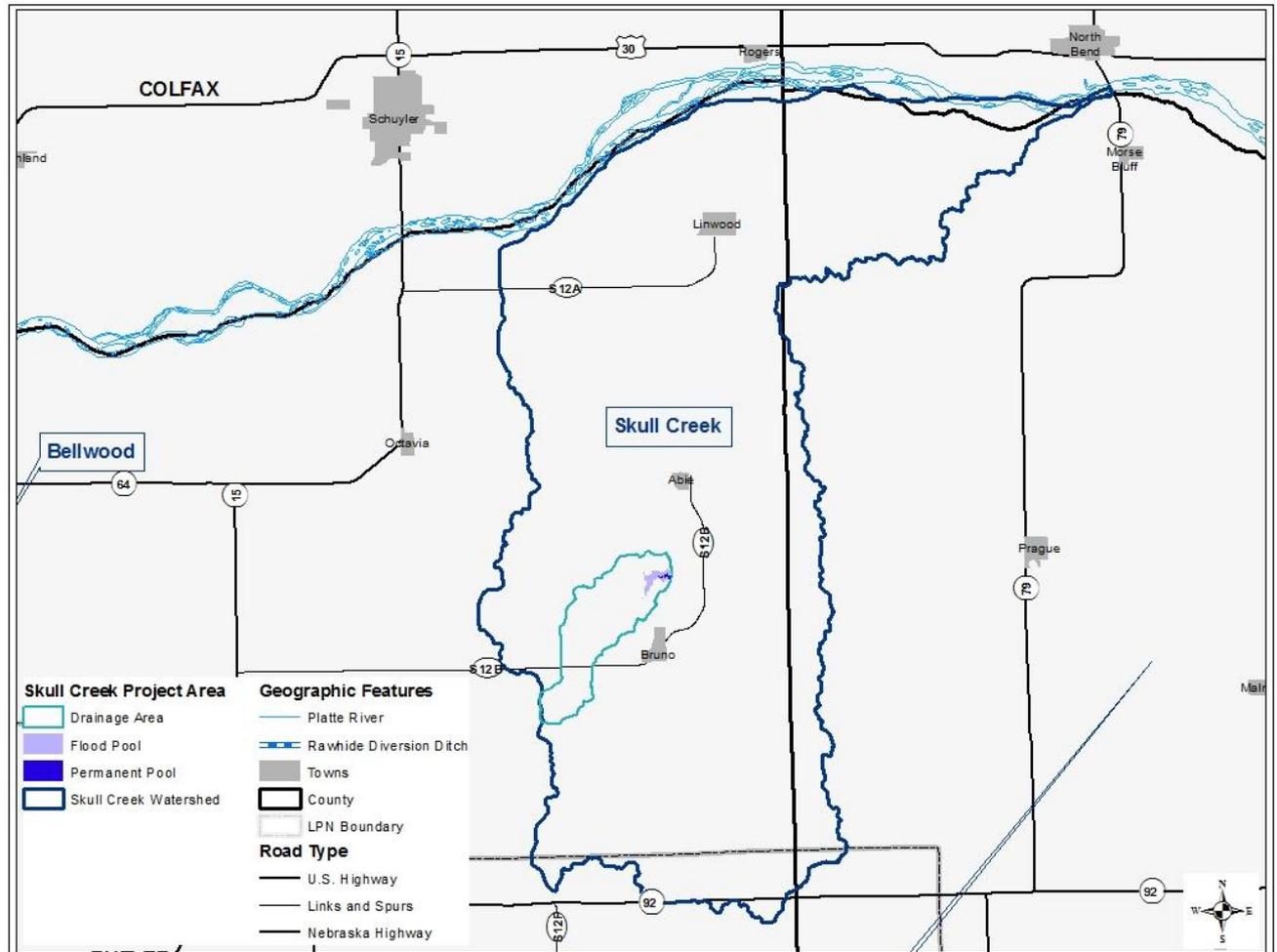
- * 1984 to 1990
- * NRDF
- * 1 Flood Control Dam
- * 3 Flood Retention Basins (Dry Dam)
- * 12 Miles of Ditch and Levee



Lower Platte North NRD

Skull Creek Flood Damage Reduction Project

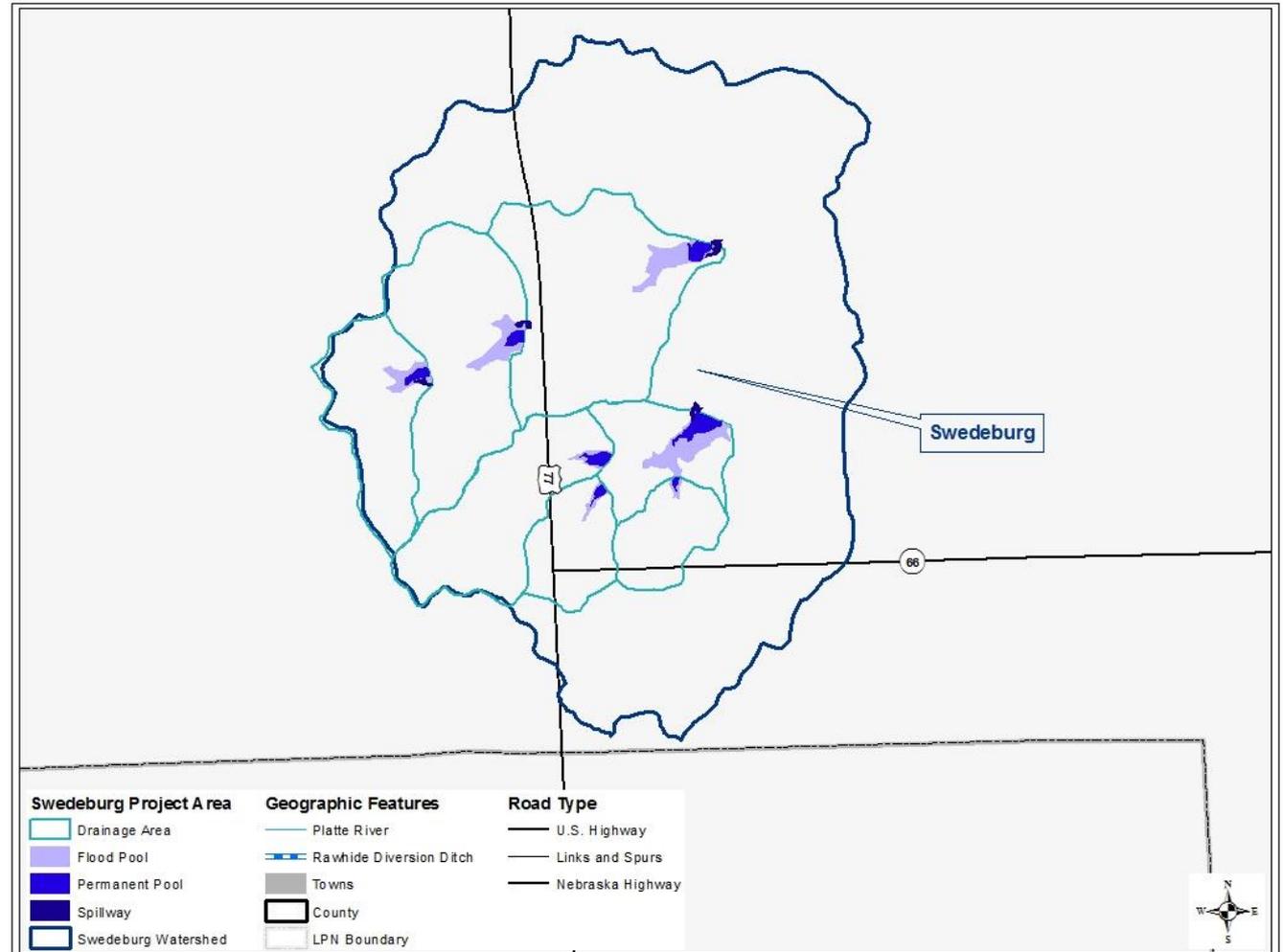
- * 1990's
- * NRDF
- * 1 Dam w/
Recreation



Lower Platte North NRD

Swedeburg Flood Damage Reduction Project

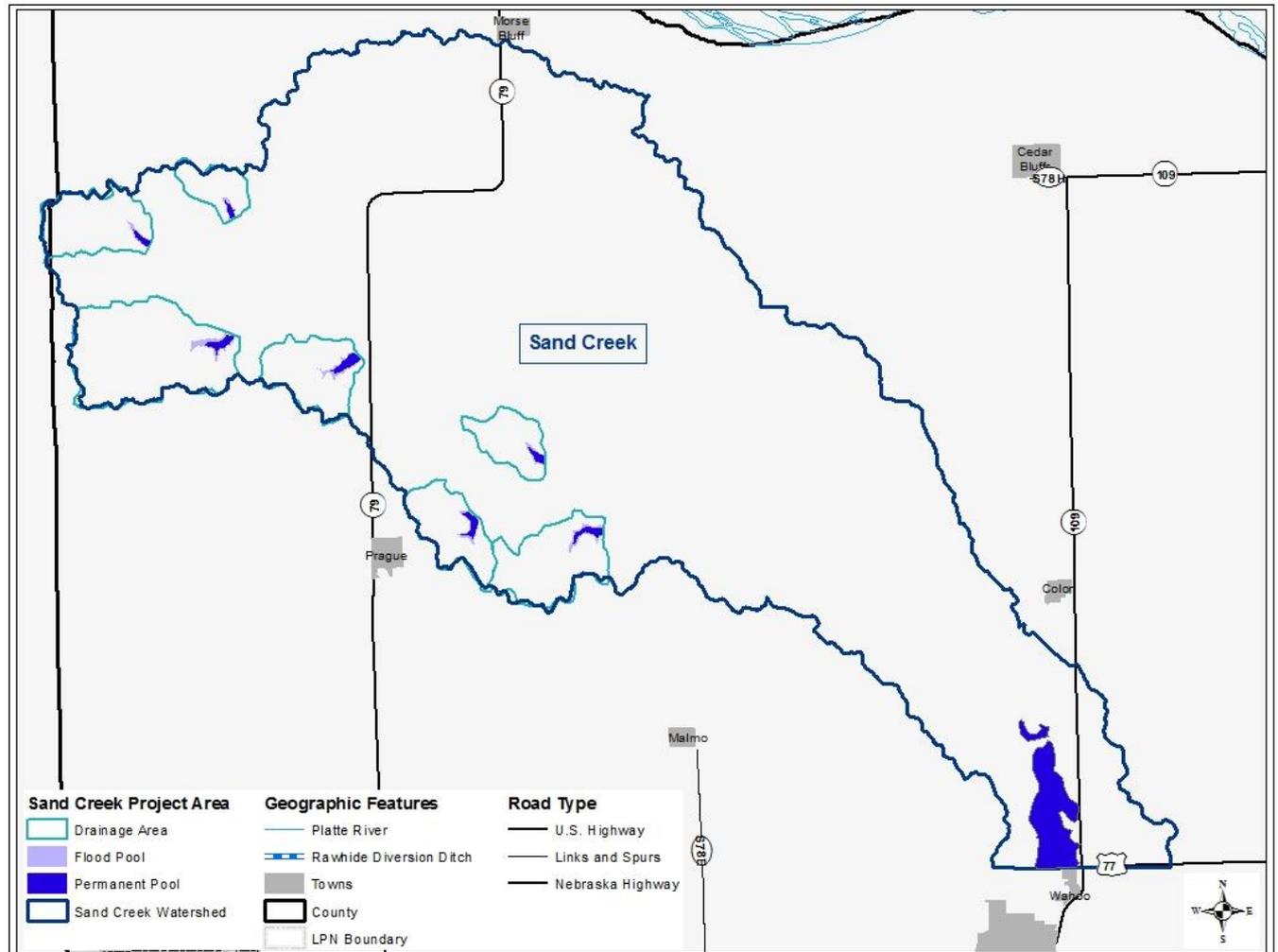
- * 1957 to 1962
- * P.L. 534
- * 7 dams



Lower Platte North NRD

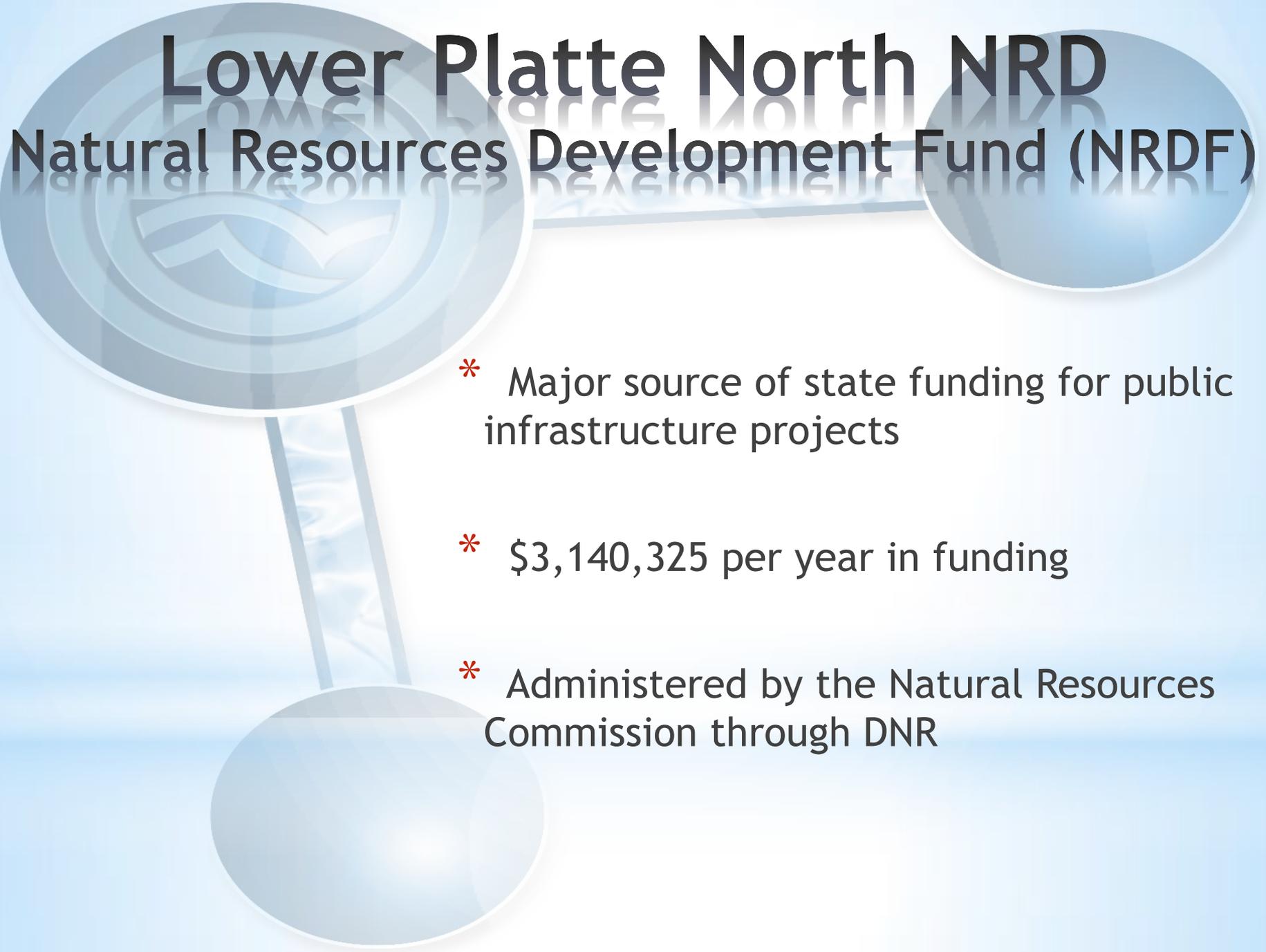
Sand Creek Environmental Restoration Project

- * 1 large dam - Lake Wanahoo
- * Large wetland complex
- * 7 upstream sediment nutrient traps



Lower Platte North NRD

Natural Resources Development Fund (NRDF)



- * Major source of state funding for public infrastructure projects
- * \$3,140,325 per year in funding
- * Administered by the Natural Resources Commission through DNR

Lower Platte North NRD NRDF Needs

- * Finish Funding Sand Creek - \$8.4 million
- * Schuyler 205 Flood Damage Reduction - \$5.5 million
- * Fremont 205 Flood Damage Reduction - \$7.8 million

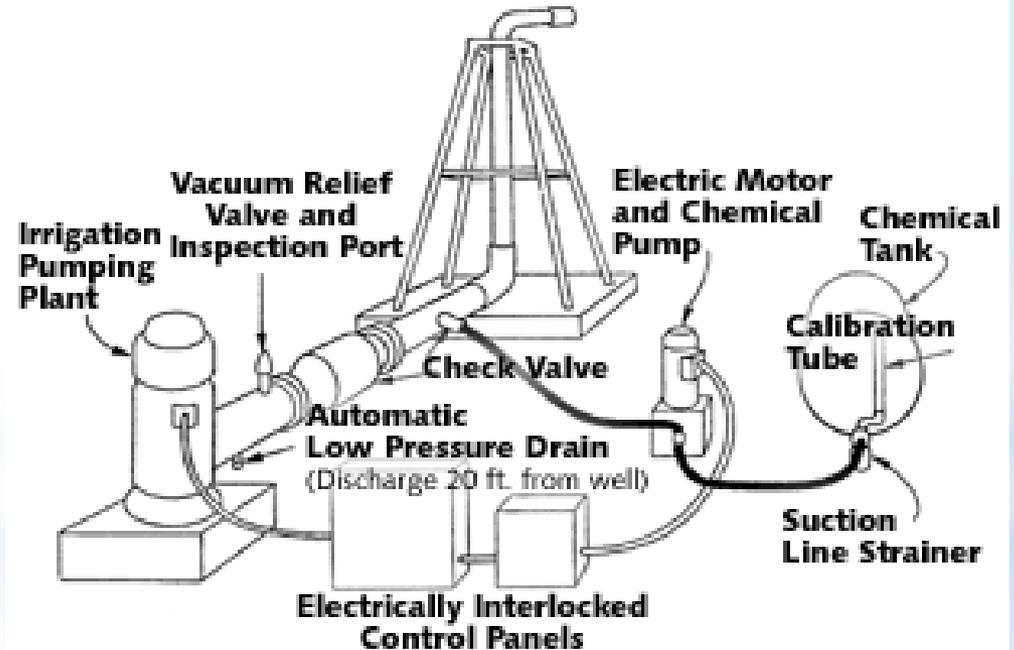
Lower Platte North NRD Rehabilitation of Structures

- * Swedeburg Structures - 25 year life (1962)
- * All other dams - 50 year life

Lower Platte North NRD Ground Water Quality Programs

- * Chemigation Inspections
- * Nitrogen Certification
- * Annual Sampling

ANTI-POLLUTION PROTECTION

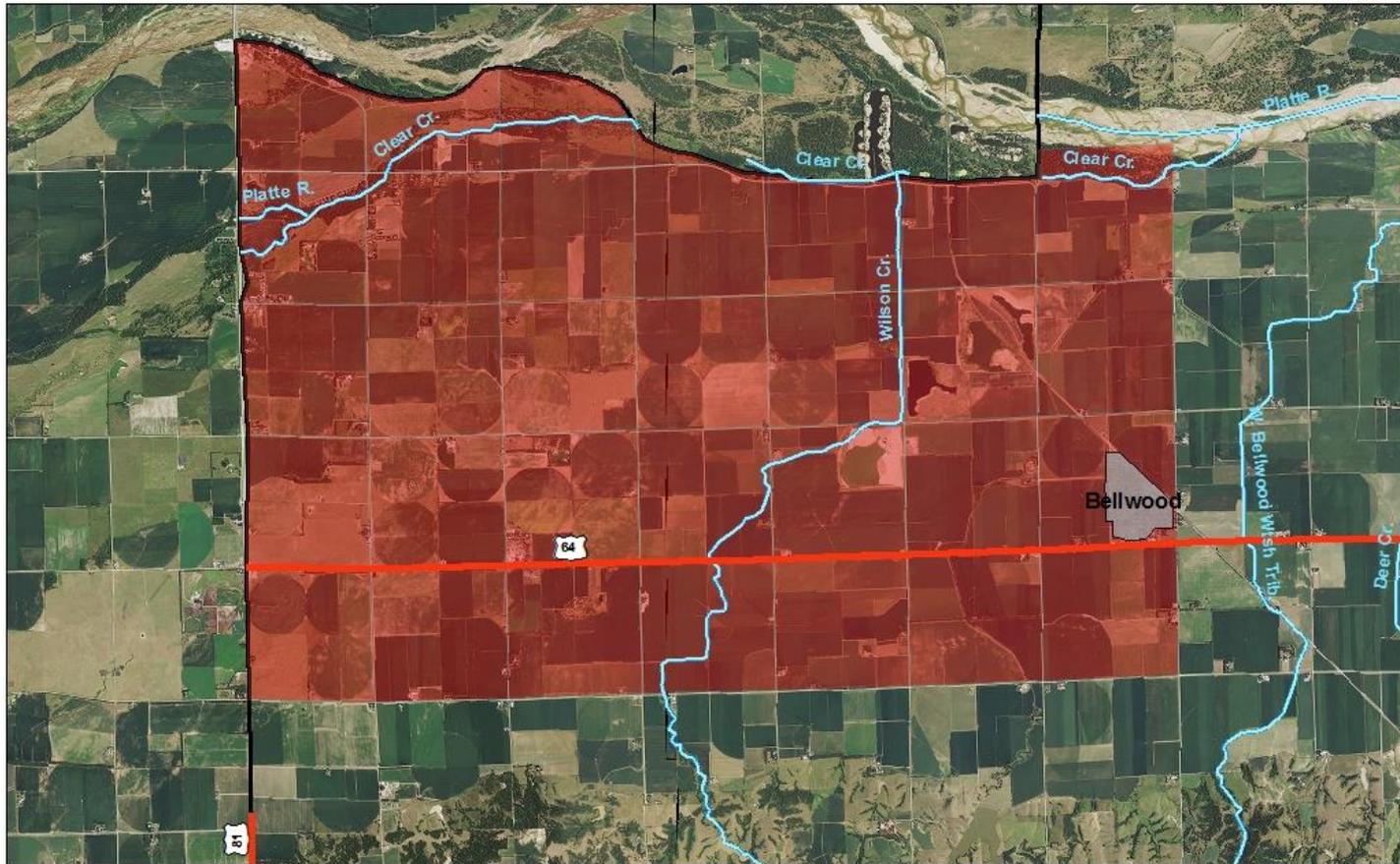


Lower Platte North NRD Ground Water Sampling

- * Statewide sampling network
- * Rotational sampling throughout District
- * Bellwood/Schuyler - producer sampling

Lower Platte North NRD Bellwood Phase II Area

Bellwood Phase II Area



- Legend**
- LPNNRD Major Roads
 - LPNNRD Major Streams
 - LPN Boundary
 - LPN Towns
 - Phase II Sections

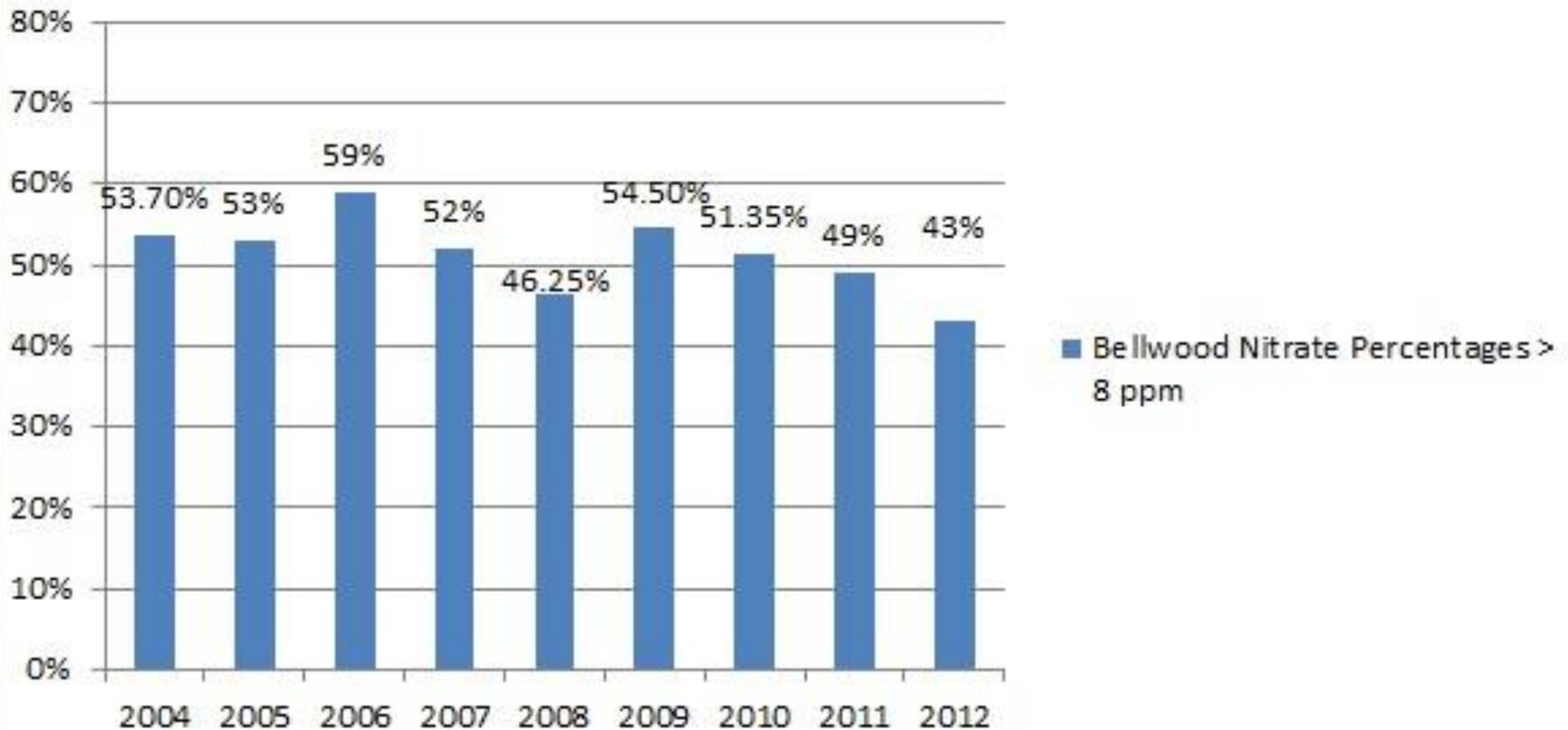


Map Created By: LPNNRD GIS Department / Water Department
Author: Greg Schomer
Sources: NRCS, USDA, Nebraska DNR, Nebraska DOR
Created 8/27/2013



Lower Platte North NRD Bellwood Phase II Area

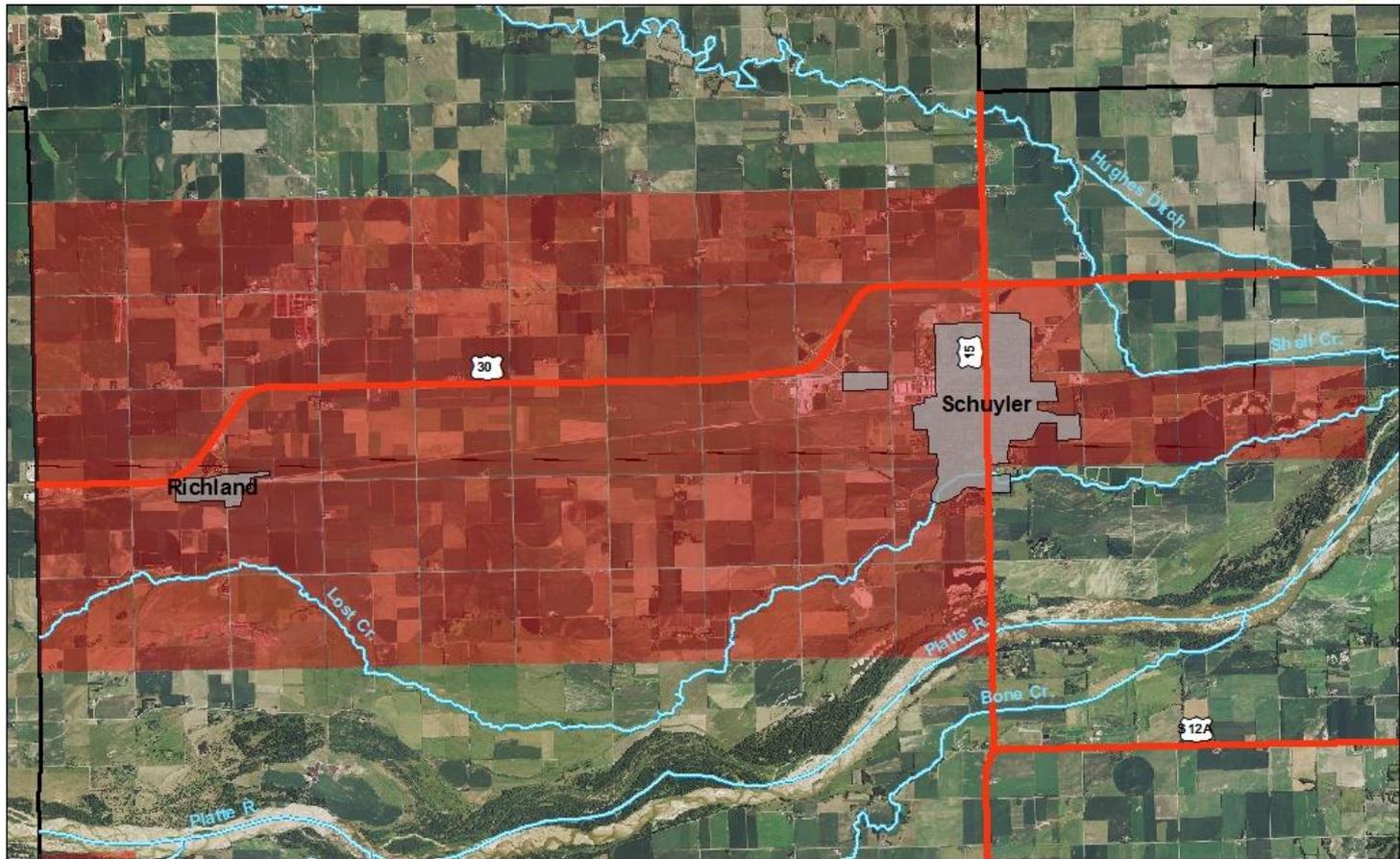
Bellwood Nitrate Percentages Above 8.00 ppm



Lower Platte North NRD

Schuyler Phase II Area

Richland Schuyler Phase II Area



- Legend**
- LPNRD Major Roads
 - LPNRD Major Streams
 - LPN Boundary
 - LPN Towns
 - Phase II Sections

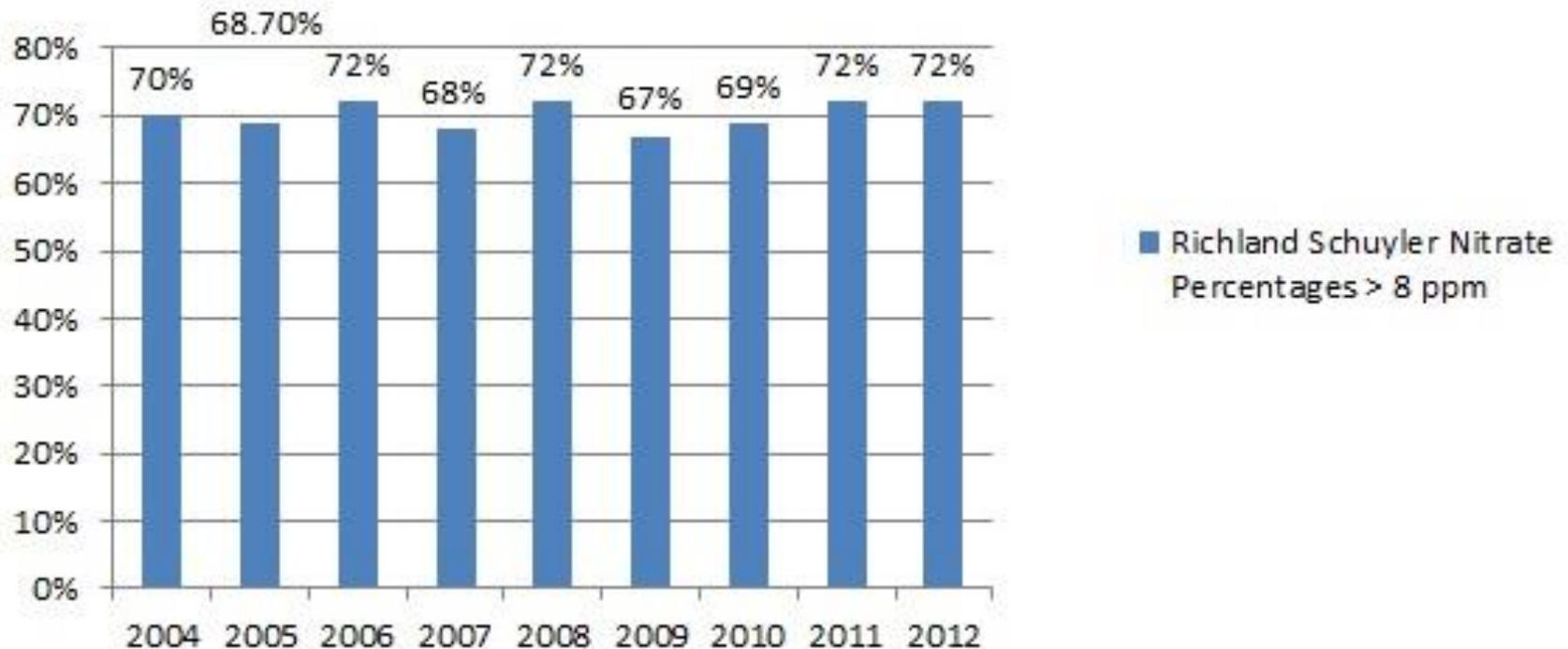


Map Created By: LPNRD GIS Department / Water Department
Author: Greg Schomer
Sources: NRCS, USDA, Nebraska DNR, Nebraska DOR
Created 5/27/2013



Lower Platte North NRD Schuyler Phase II Area

Richland Schuyler Nitrate Percentages Above 8.00 ppm



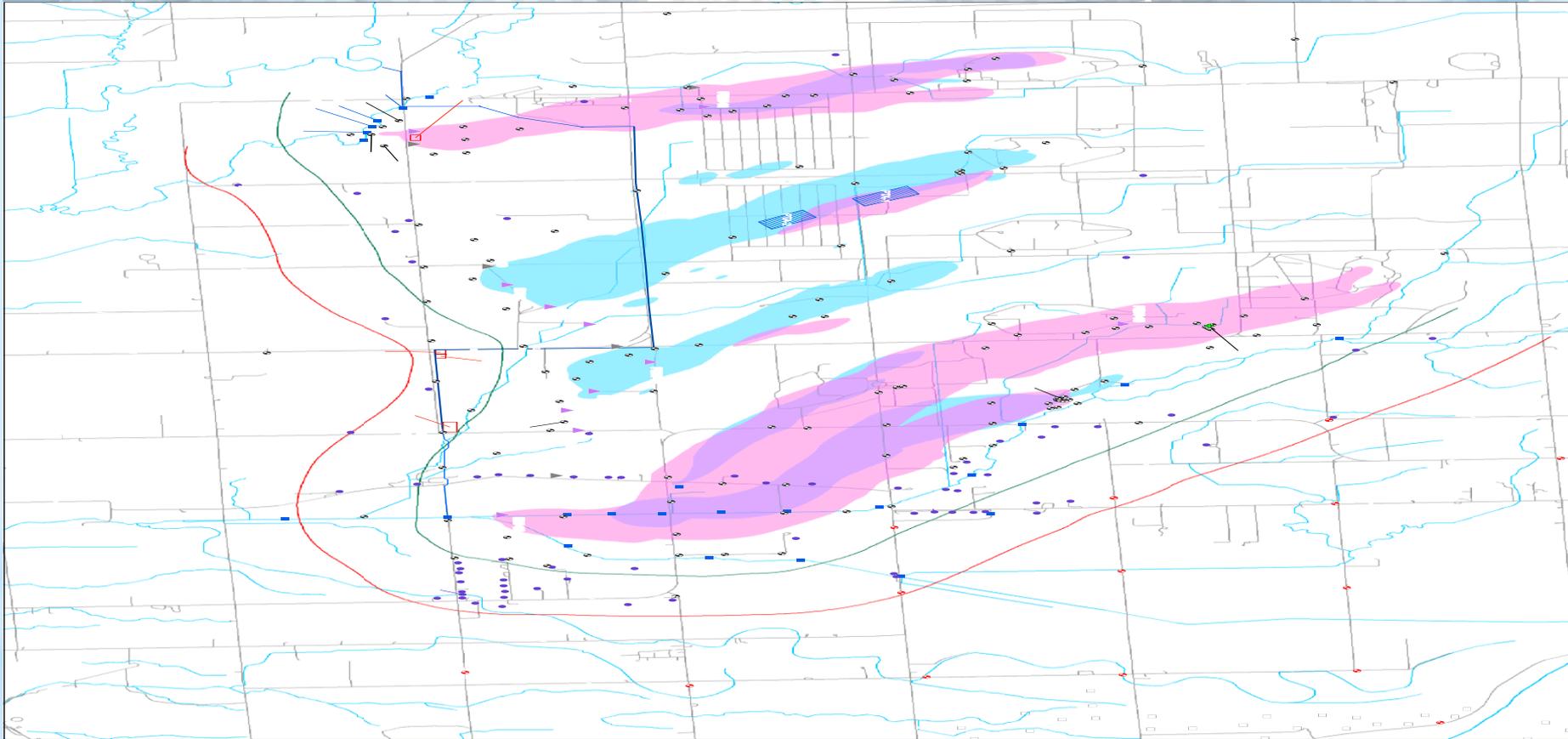
Lower Platte North NRD Superfund Cleanup Site near Mead

- * Former Nebraska Ordnance Plant (NOP)
- * Bomb making for WWII
- * Ground Water Contaminated w/
 - * TCE - Trichloroethylene
 - * RDX - Royal Demolition Explosive



Wellhead and ultra violet contactor -- groundwater circulation well 2 at the former Nebraska Ordnance Plant Superfund site near Mead.

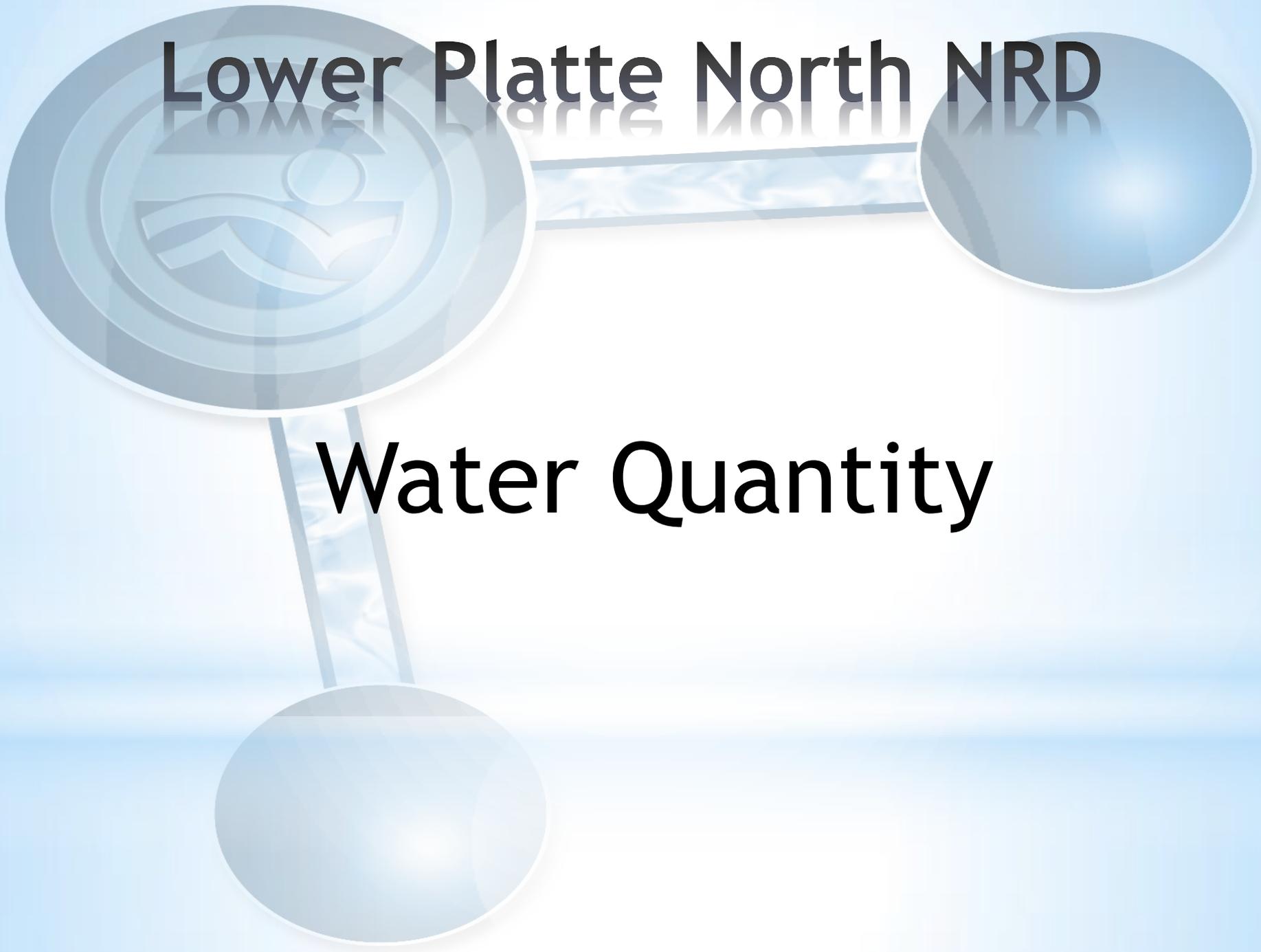
Lower Platte North NRD Superfund Cleanup Site near Mead



US Army Corps
of Engineers
Nebraska District

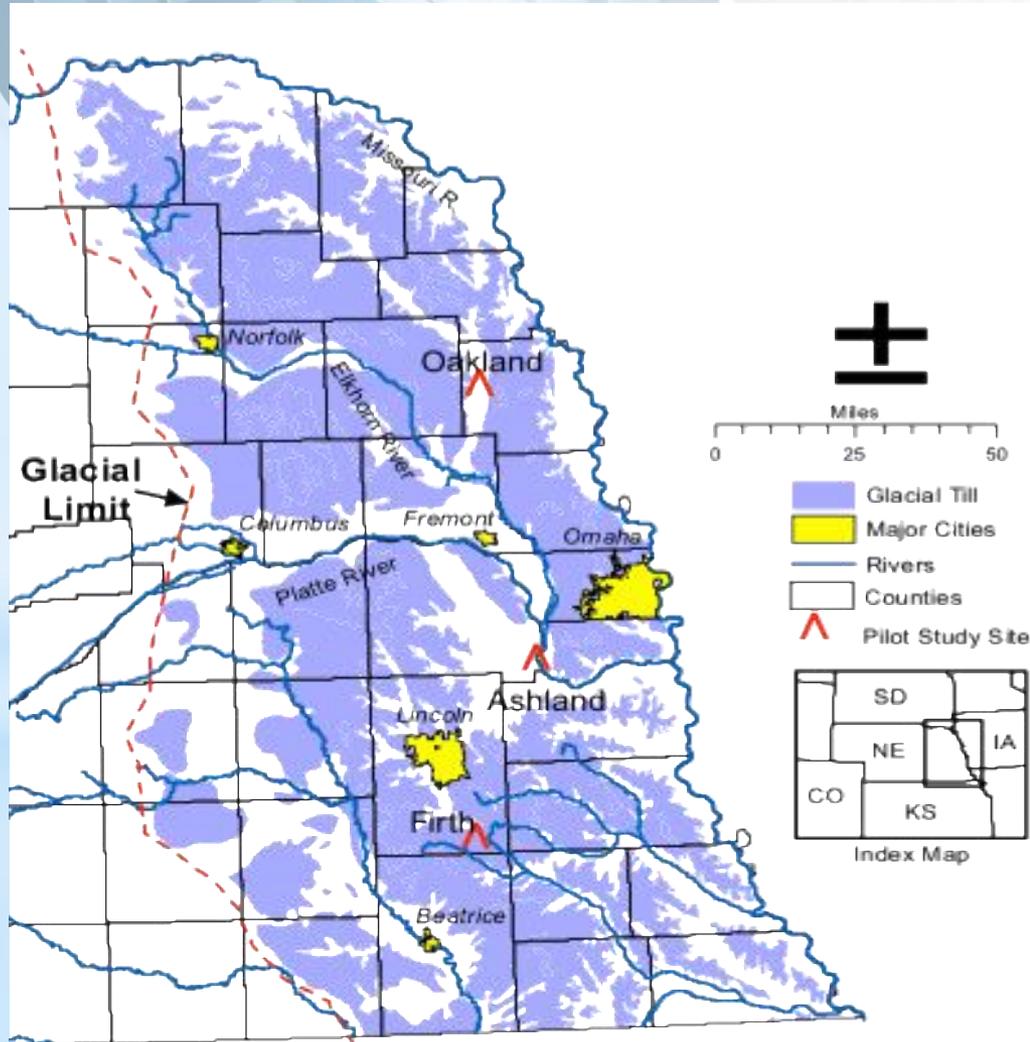


Lower Platte North NRD



Water Quantity

Lower Platte North NRD Major Aquifers



*Map from
ENWRA
Project*

Lower Platte North NRD Irrigation Statistics

* # of active
irrigation wells -
4,492

* # of irrigated
acres - 338,084



Lower Platte North NRD Groundwater Levels

Spring 2012 Compared to Spring 2013

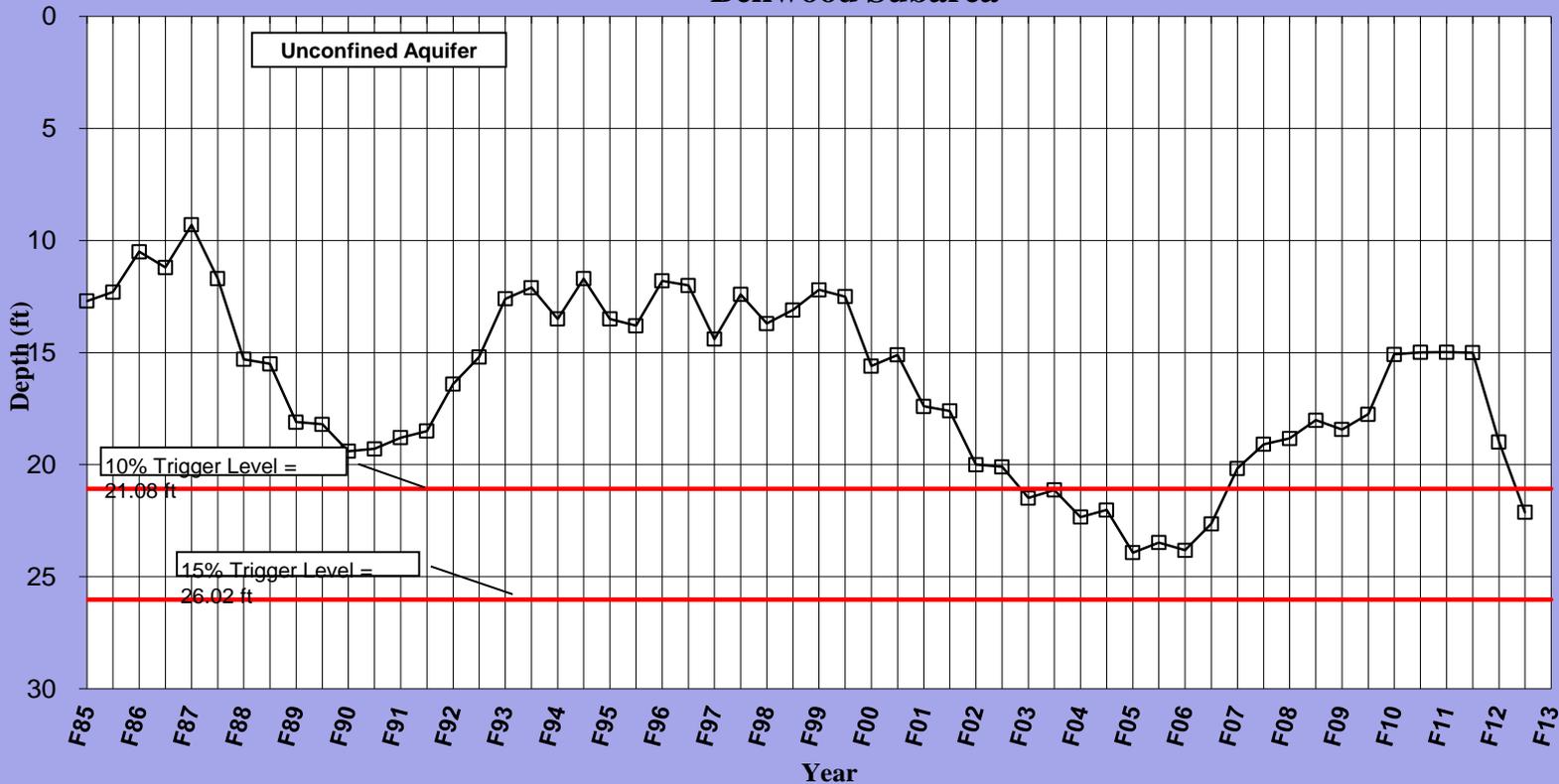
- * Number of wells in Network = 166
- * Wells Increased = 1
 - Swedeburg Subarea (1 of 5 wells)
- * Wells Unchanged (+ or - 0.3 ft.) = 3
 - Platte Valley Area (3 of 54 wells)
- * Wells Decreased = 162



Lower Platte North NRD Groundwater Levels

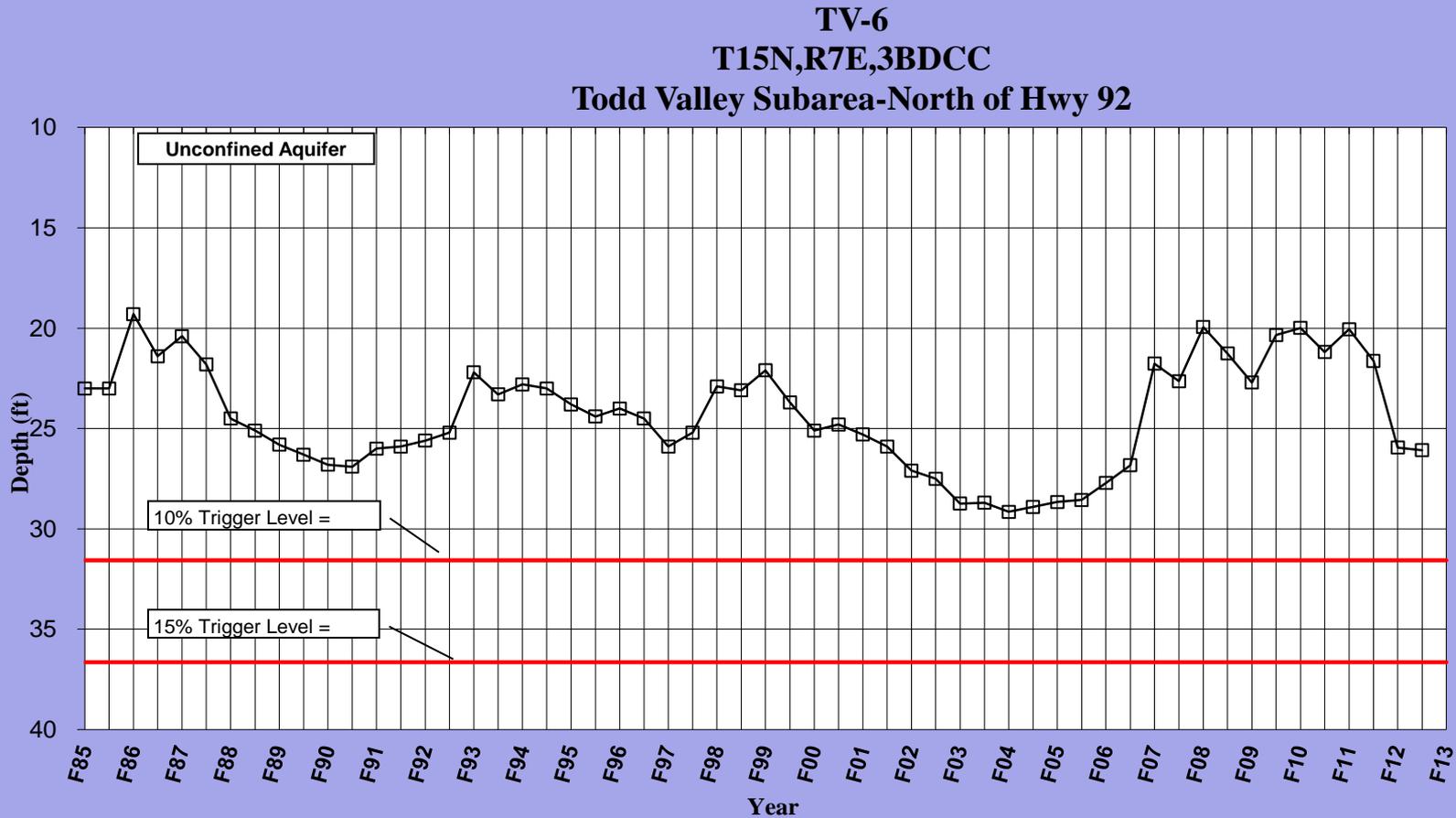
Platte Valley

PV-27
T16N,R2E,19CCAD
Bellwood Subarea



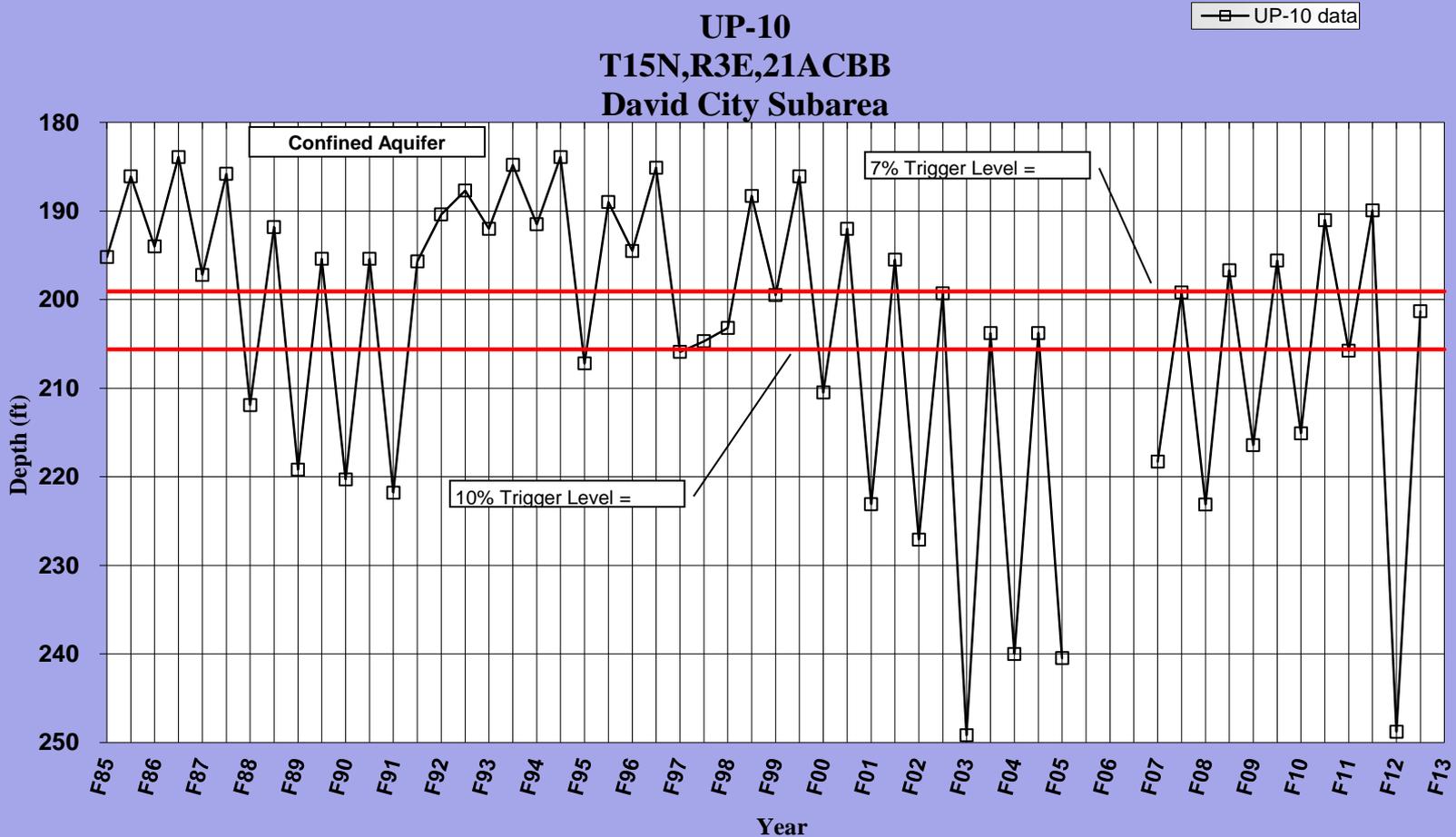
Lower Platte North NRD Groundwater Levels

Todd Valley



Lower Platte North NRD Groundwater Levels

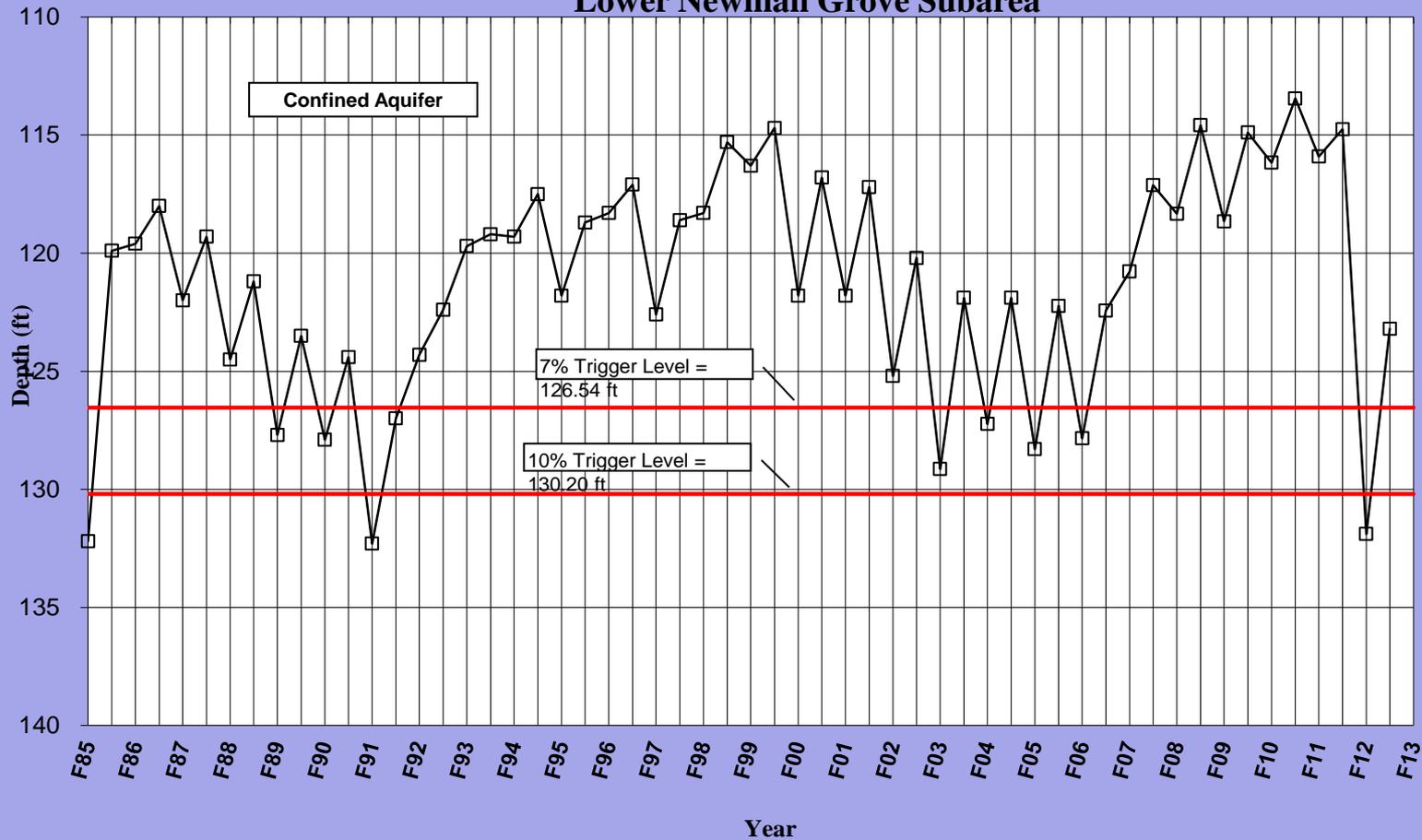
David City



Lower Platte North NRD Groundwater Levels

Shell Creek

SC-16
T20N,R3W,22DDCC
Lower Newman Grove Subarea



Lower Platte North NRD Groundwater Management Plan



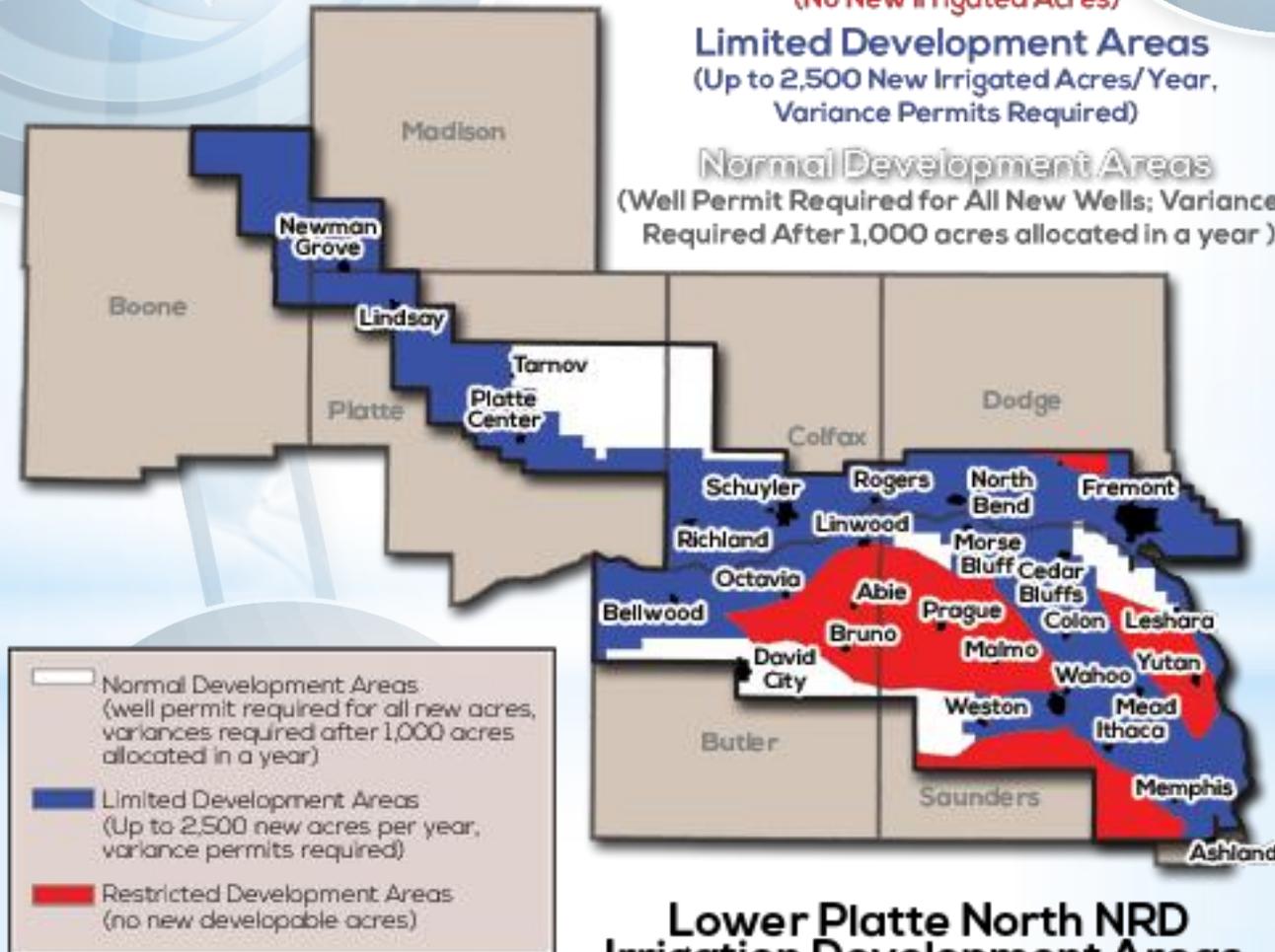
- * Originally adopted in 1986
- * Has had numerous updates
- * Currently working on Voluntary Integrated Management Plan

Lower Platte North NRD Irrigation Development Allowed

Restricted Development Areas
(No New Irrigated Acres)

Limited Development Areas
(Up to 2,500 New Irrigated Acres/Year,
Variance Permits Required)

Normal Development Areas
(Well Permit Required for All New Wells; Variances
Required After 1,000 acres allocated in a year)



**Lower Platte North NRD
Irrigation Development Areas**

Lower Platte North NRD Elkhorn Loup Model (ELM)

- * Partners - LCNRD, LENRD, LLNRD, LNNRD, LPNNRD, MNRRD, UENRD, ULNRD, NDNR, USGS, UNL Conservation and Survey
- * Major Goals: Assist NDNR and NRD's by characterizing the groundwater system in the Elkhorn and Loup River basins and provide a regional groundwater flow model
- * Major Funding Source: Grant from the Nebraska Integrated Water Management Plan Program

Lower Platte North NRD Eastern NE Water Resources Assessment (ENWRA)

- * Partners - LCNRD, LENRD, LPNNRD, LPSNRD, NNRD, PMRNRD, NDEQ, NDNR, USGS, UNL Conservation and Survey
- * Major Goals: Complete a geologic framework of eastern NE using different methods and techniques to map the subsurface. This groundwork will improve modeling efforts
- * Major Funding Source : Grant from the Nebraska Integrated Water Management Plan Program

Lower Platte North NRD Lower Platte River Basin Coalition

- * Partners - NDNR, LPSNRD, LPNNRD, PMRNRD, LLNRD, LENRD, UENRD, ULNRD
- * Major Goals: To pursue and discuss the various components that may ultimately comprise a voluntary water management plan for the Lower Platte River basin
- * Major Funding Source : Local Property Tax

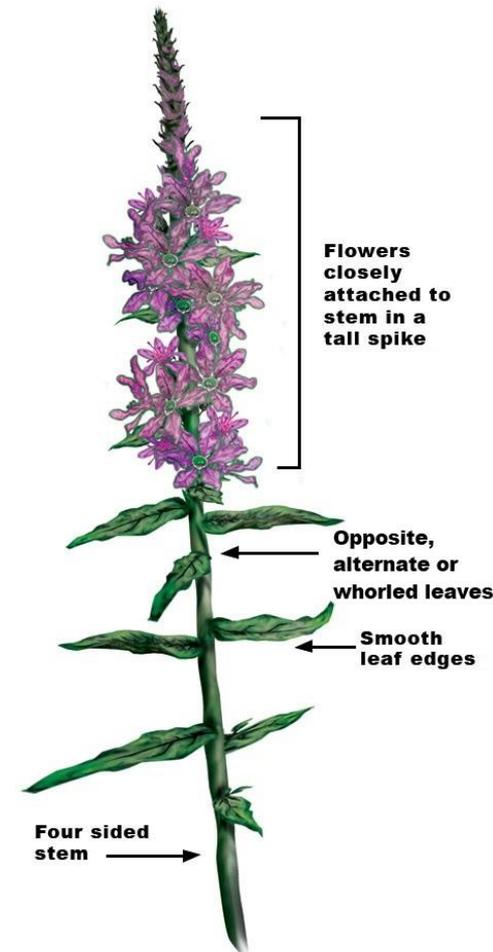
Lower Platte North NRD Lower Platte River Corridor Alliance

- * Partners - Lower Platte North, Lower Platte South, and Papio-Missouri NRD's, DNR, G&P, NEARNG, DHHS
- * Major Goals : Cooperative solutions in the Lower Platte River
- * Major Funding Source : Federal and State grants, local tax dollars

Lower Platte North NRD

Lower Platte Weed Management Association

- * Partners - LPNNRD, LPSNRD, PMRNRD, Cass, Saunders, Butler, Lancaster, Sarpy, Douglas, Dodge, Colfax, Platte Counties
- * Major Goals: Eradicate Invasive Species in the Lower Platte River
- * Major Funding Source: Local Tax dollars, Federal and State grants



Lower Platte North NRD Other Studies

- * Lower Platte River Groundwater Model - UNL, Environmental Trust
- * Sub-Area Delineation Study - Grant from the Nebraska Integrated Water Management Plan Program
- * Helicopter Electro-Magnetic Study - Environmental Trust, Local Tax dollars
- * Crop Sim - Local Tax Dollars

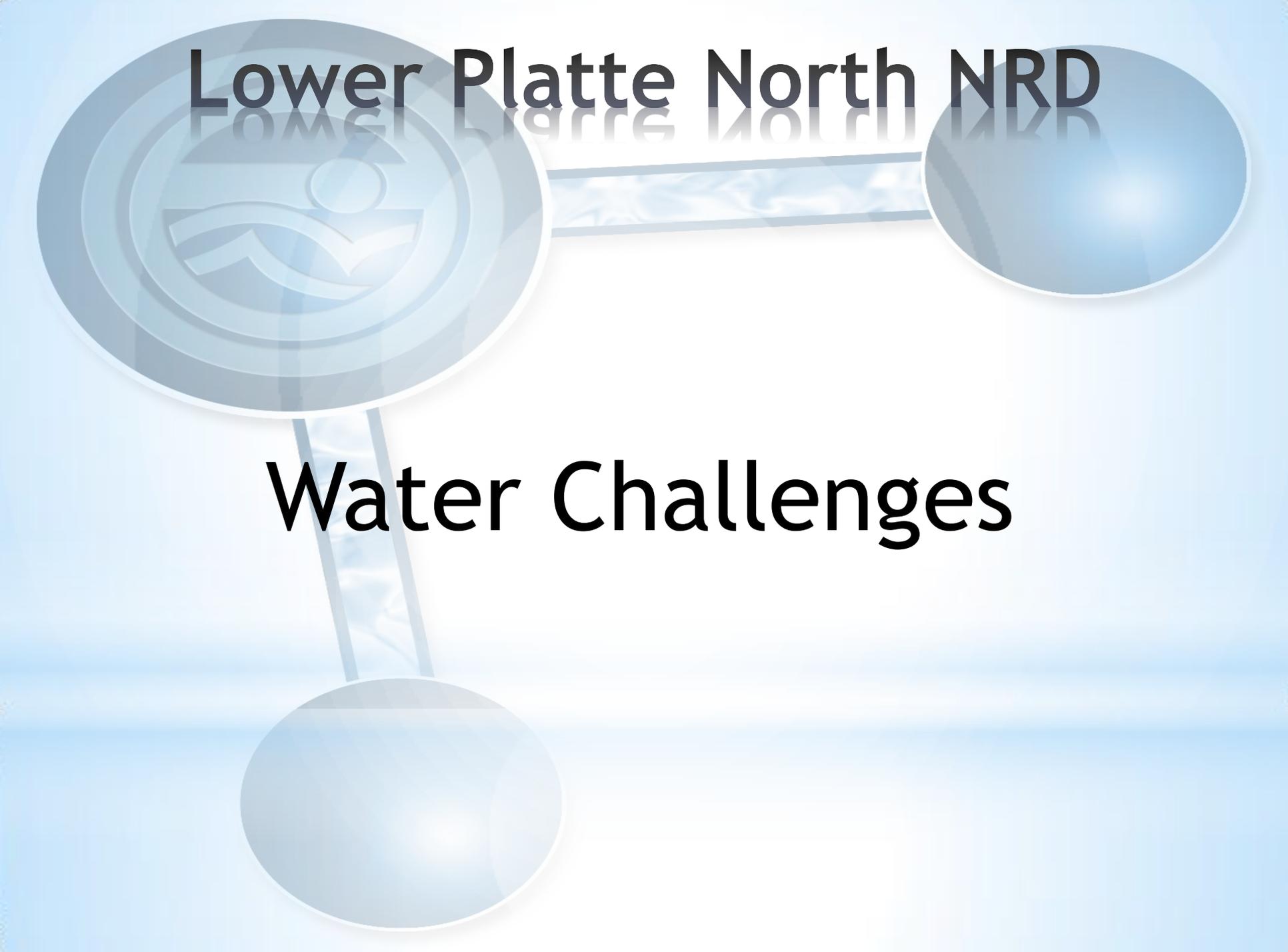
Lower Platte North NRD Future Studies

- * Recharge Study
- * Todd Valley Groundwater model
- * Shell Creek Groundwater model
- * Voluntary IMP
- * Shell Creek Uplands subarea
- * Prague Subarea
- * District Water Budget



If it was only this easy!

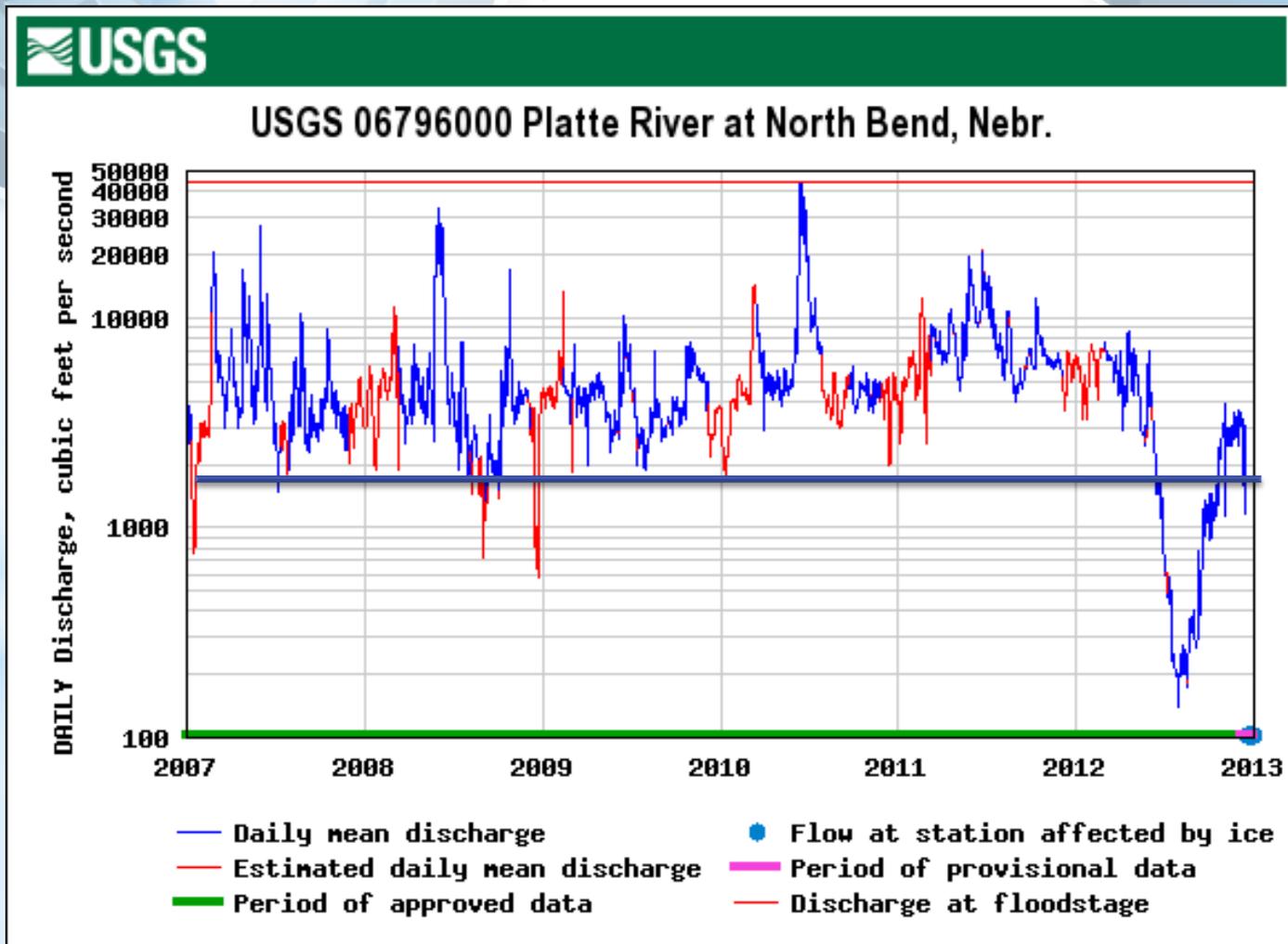
Lower Platte North NRD



Water Challenges

Lower Platte North NRD Game and Parks

* Instream Flow Right for Lower Platte - 1800 cfs



Lower Platte North NRD Endangered Species Act

* Pallid Sturgeon

* Interior Least Tern

* Piping Plover

Pallid Sturgeon

- inner barbels much shorter than outer barbels
- barbels attach about one-third of the way between mouth and tip of snout



© 2007 Cal Waterkeeper



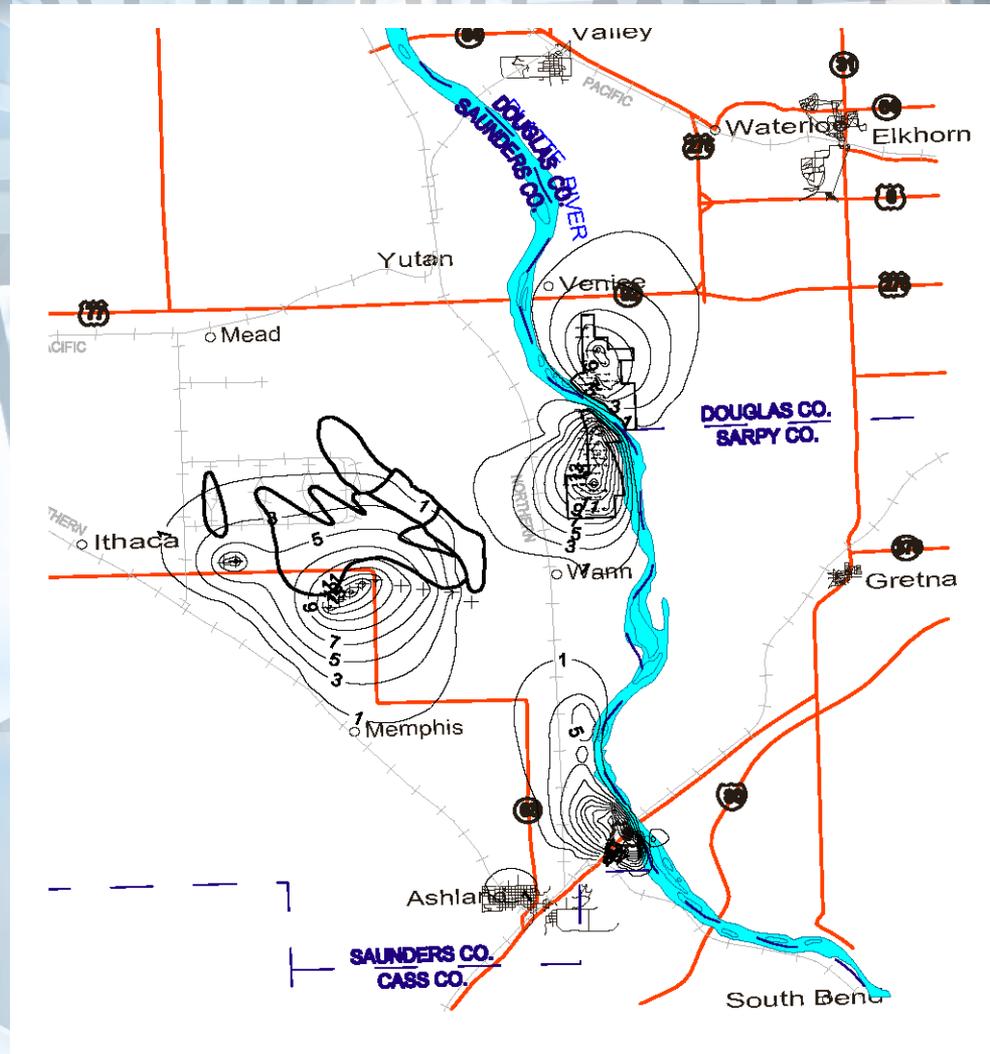
Lower Platte North NRD

U.S. Army Corps of Engineers

- * 404 Permitting
- * Example: Fremont HWY 77 Bridge

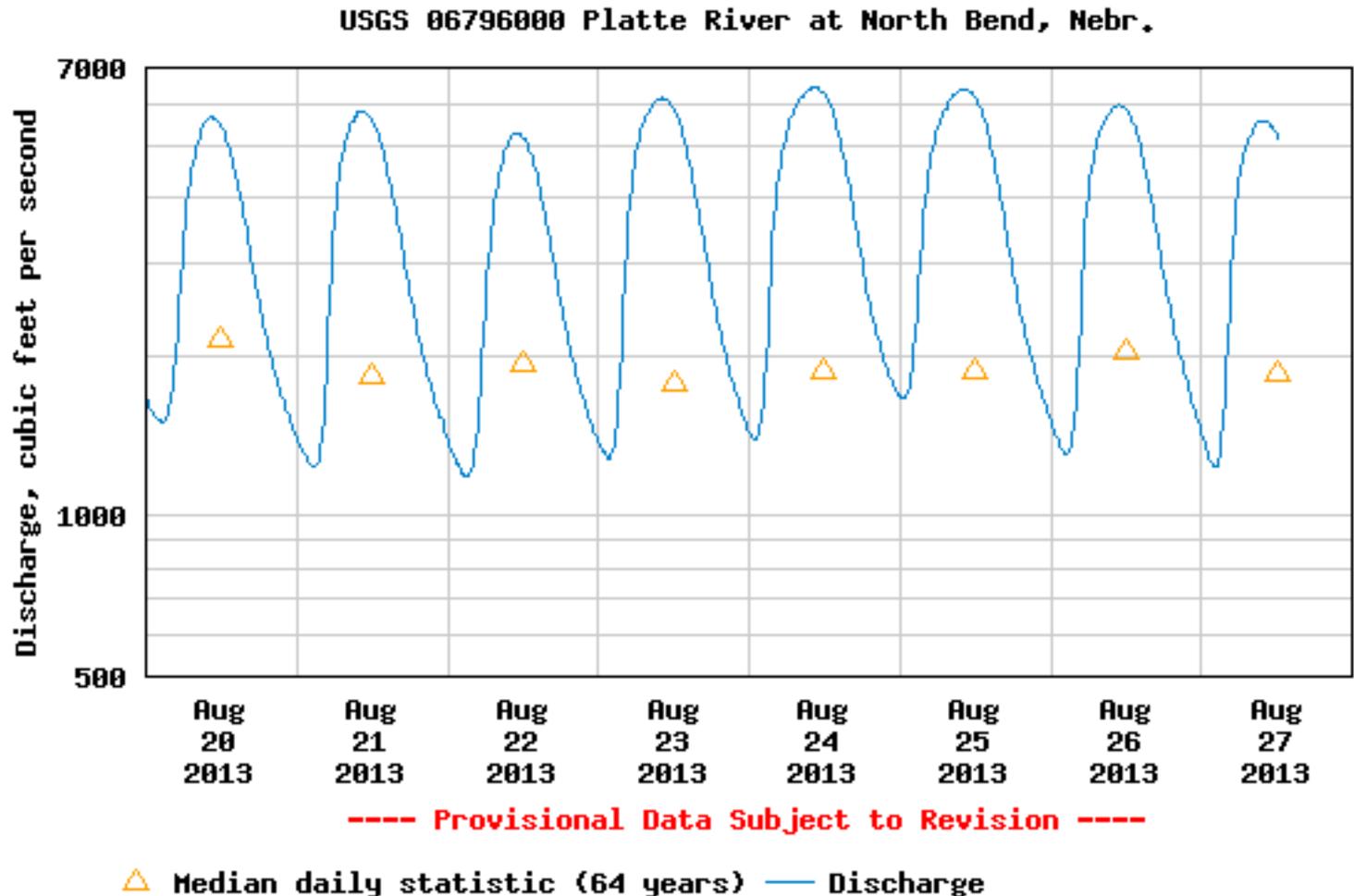


Lower Platte North NRD MUD/Lincoln Well Fields



Lower Platte North NRD Loup Public Power Canal

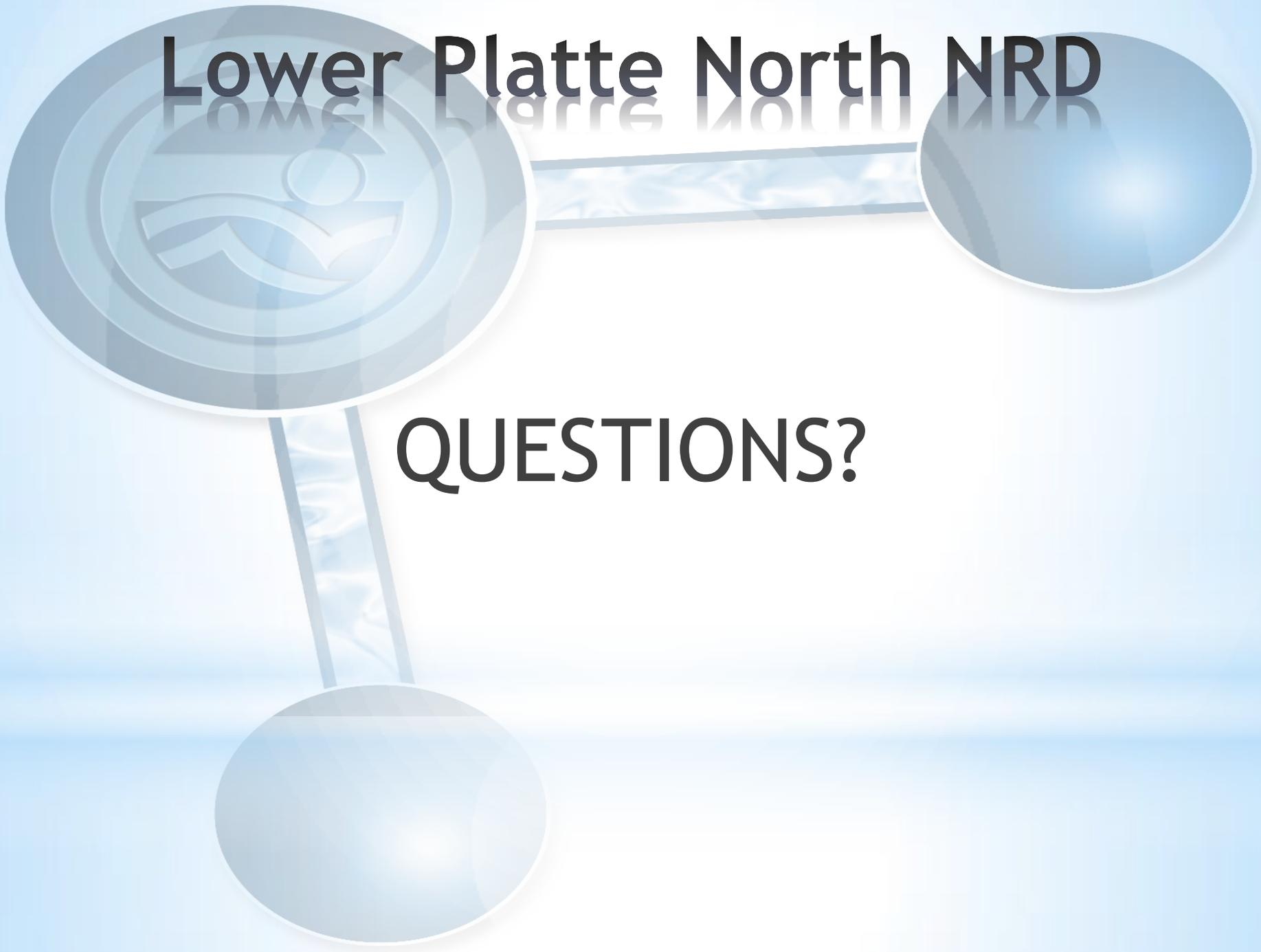
Daily Pulse



Lower Platte North NRD Rural Water

- * EPA continues to change the Maximum Contaminant Levels
- * Arsenic - changed from 50 ppm to 10 ppm in 2006
- * Uranium - standard set at 30 ppm in 2003
- * Disinfection rule coming soon

Lower Platte North NRD

A conceptual diagram with a central node containing a logo, connected by lines to three empty circular nodes. The central node is a large circle with a logo inside, and it is connected by lines to three other circles: one to the right, one below, and one further down and to the left. The background is a light blue gradient.

QUESTIONS?