



Paul Zillig, General Manager



**Amy Zoller, MS, NeDNR Integrated Water
Management Coordinator**

VISION

“Water uses and water supplies are in a managed balance, supporting economic viability, environmental sustainability and safe living conditions.”

The plan will be instrumental in identifying available water supplies and managing water quantity to meet the future water needs in the District.

Water Inventory

Water Inventory includes the inflow, precipitation, and water storage available to the District along with the water use and outflows from the District.

Goal: Ensure the District has sufficient data to enable the achievement of a water supply that is in balance with current and future water demands in the District.

Water Supply Management

Water Supply Management is the management of water supply, both in and out of the District, through human efforts.

Goal: Ensure a sustainable water supply is available in the amounts and location of the demands through management actions to meet the District's short and long term needs.

Water Use Management

Water Use Management is the management of how water is used and consumed while meeting current and future demands.

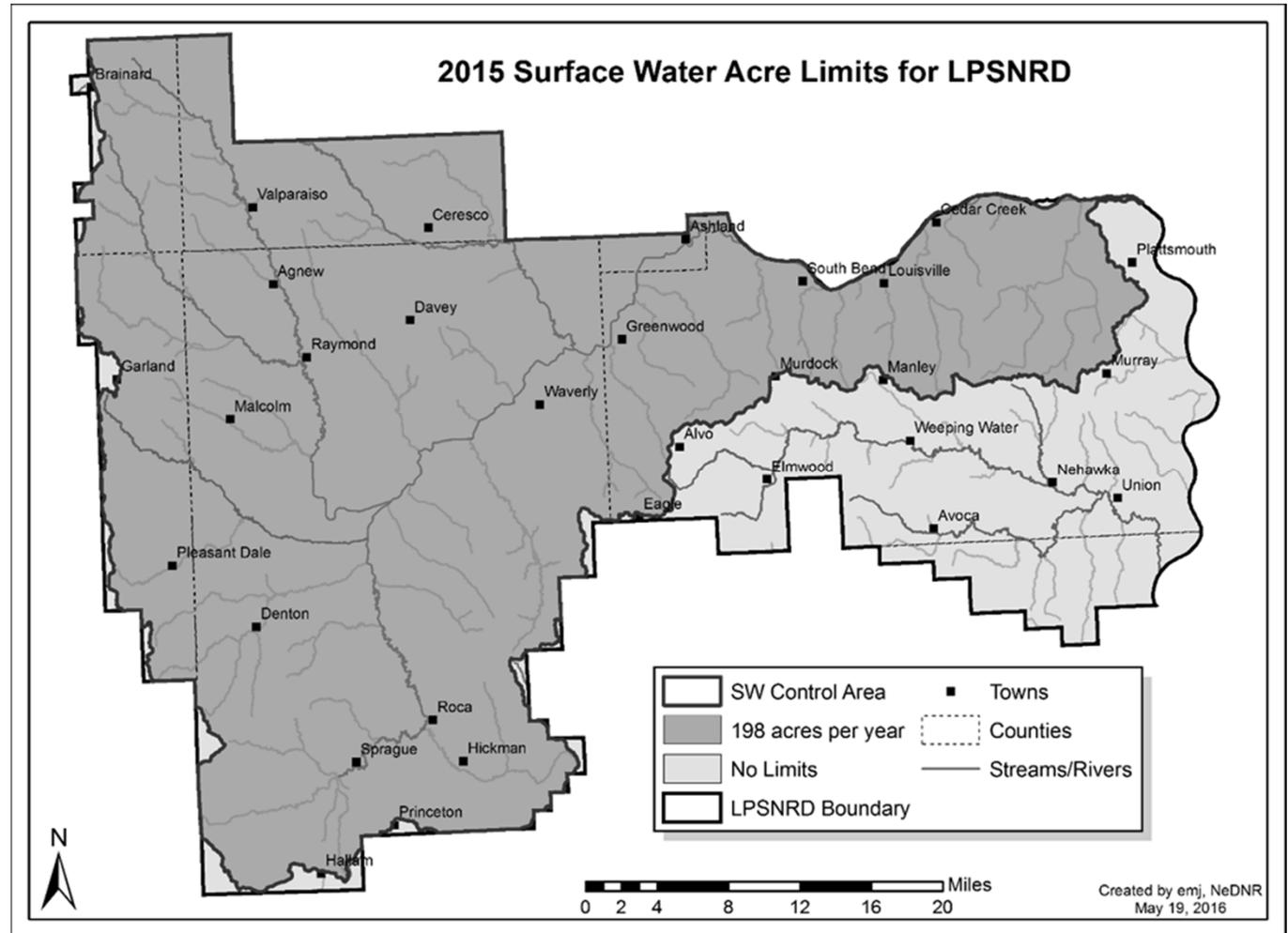
Goal: Encourage all water users to minimize water use while optimizing benefits.

Overview of NeDNR's Activities

- Regulatory actions
- Surface Water Permitting Actions
- Data Collection
- Studies and Planning
- Education and Outreach
- Collaboration Efforts

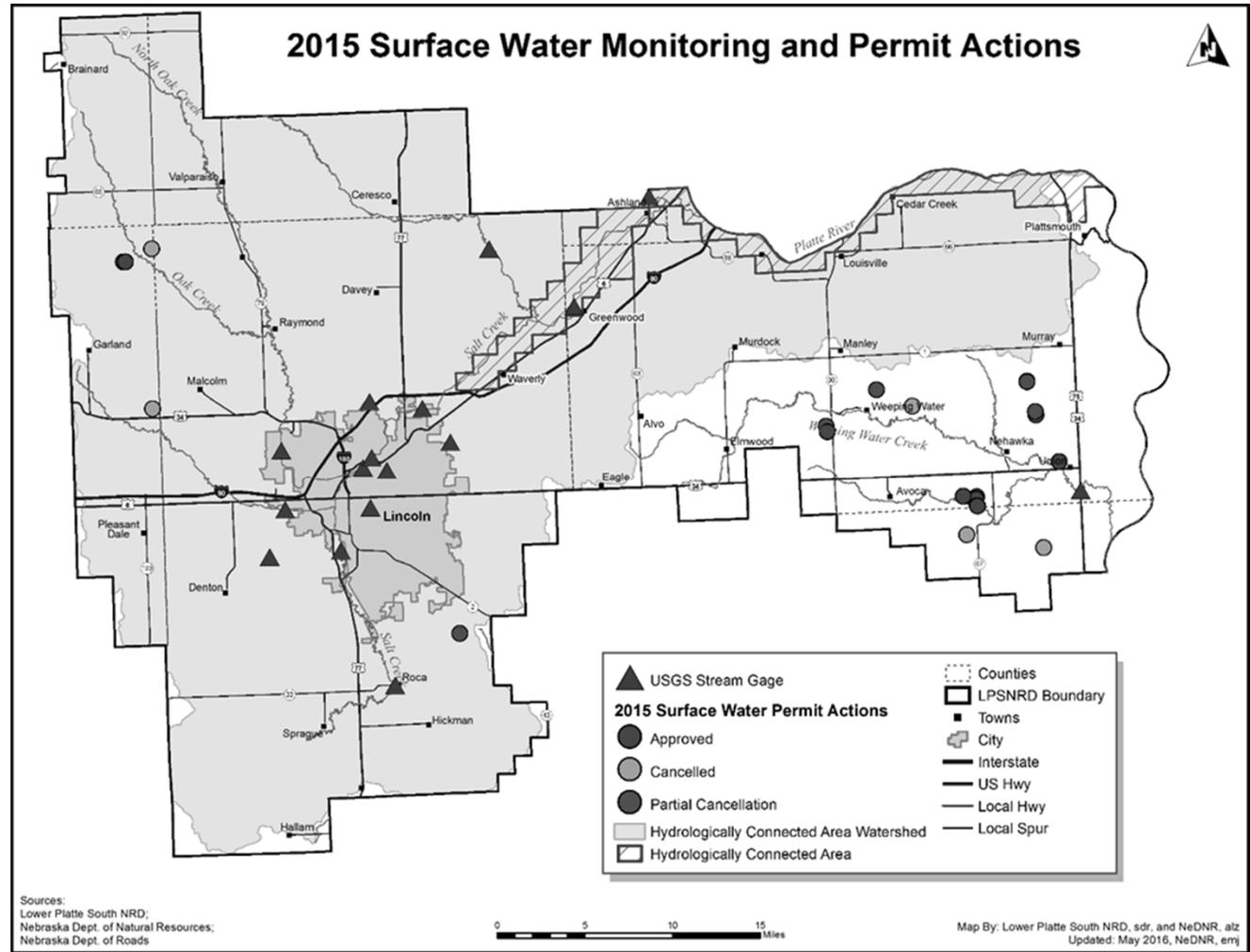
Regulatory Actions During 2015

- Restrictions on new acres = 198 new acres limit in HC area
- 1/3 of the 598 acres restriction in place as of Jan. 1, 2015 for LPSNRD groundwater irrigated acres



Surface Water Permitting Actions

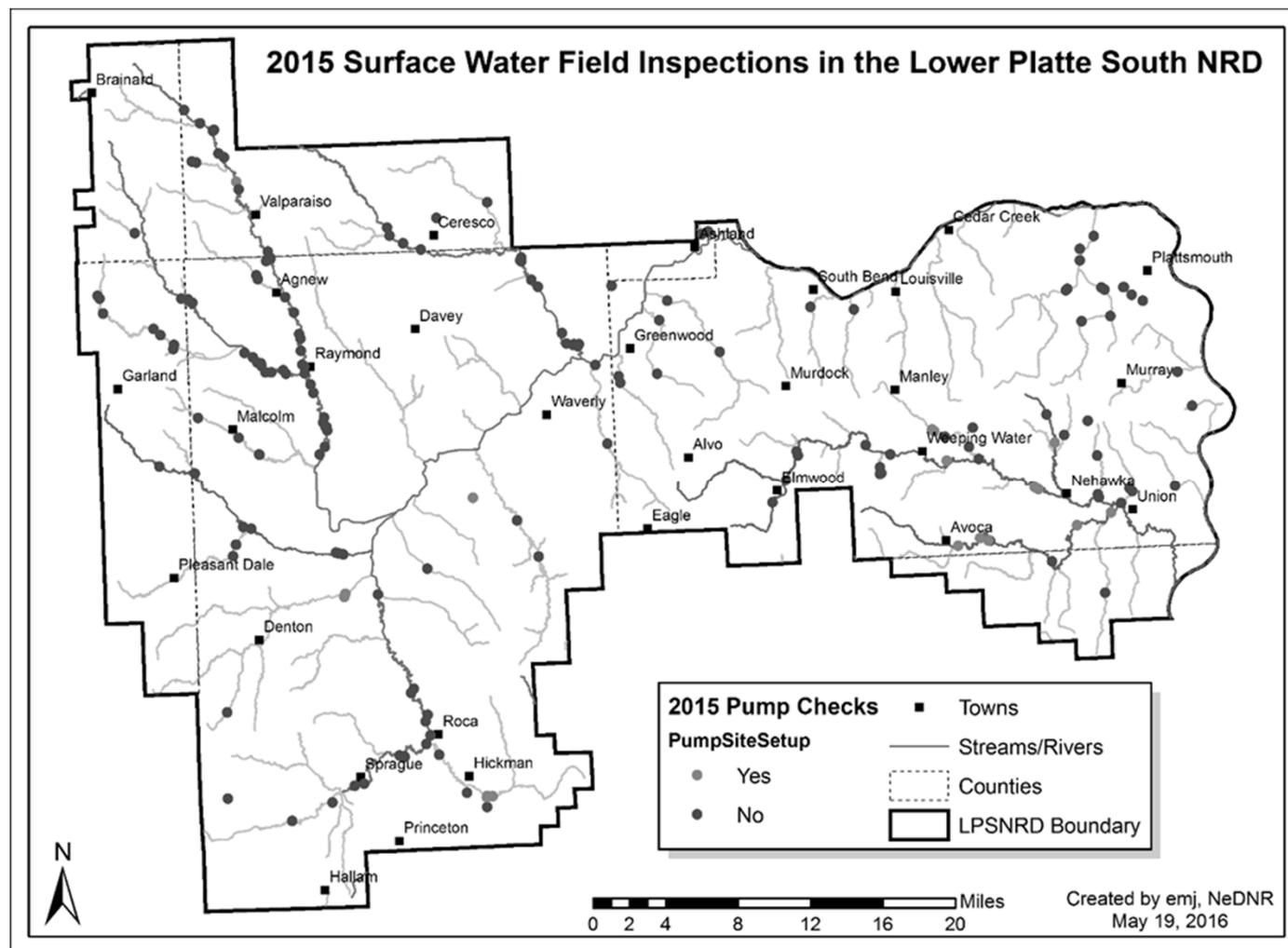
- Approved 11 surface water permits accounting for ~553 new irrigated acres (none in HC area)
- Cancelled 14 (5 in full, 9 partial) surface water irrigation permits accounting for ~1170 acres
- No Transfers



Surface Water Data Collection-Pump Visits

2015

- 183 pump sites were inspected
- 174 sites were irrigation from a natural flow (99% of all sites)
- 19 were set up to irrigate
- 4 were running at the time of visit



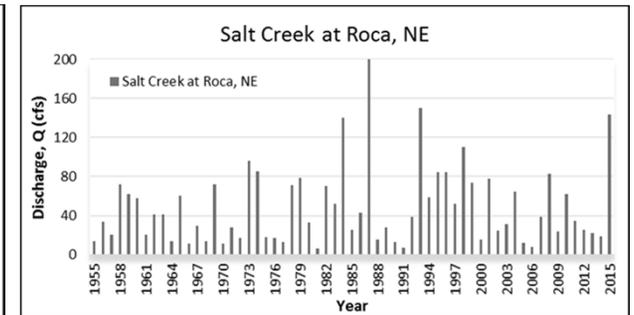
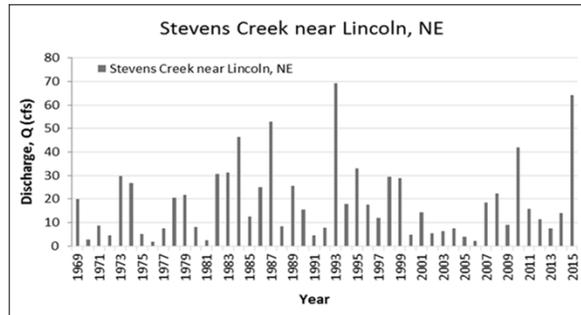
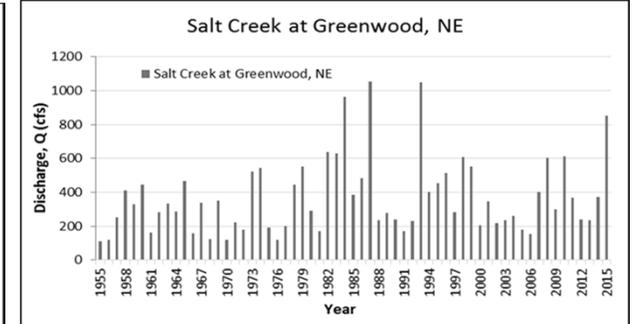
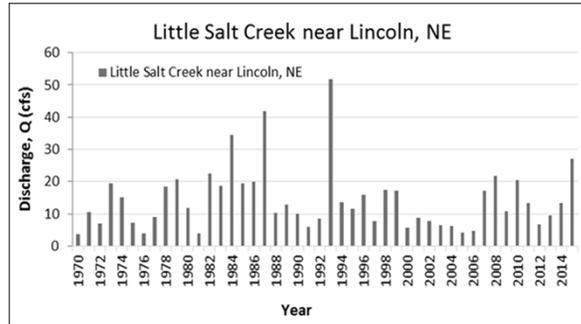
Surface Water Data Collection

Voluntary Water Use Reporting Program

- NeDNR's second year of program implementation
- Sent letters to 216 surface water diverters
 - 58 responses in 2015; 27% response rate
 - Accounted for 6,000 surface water acres
 - In 2014, 51 responses
 - A few more questions were added to the 2015 report

Surface Water Monitoring

- USGS compiled annual stream gage discharge data
- Two locations on Salt Creek main stem
 - Salt Creek at Greenwood, NE
 - Salt Creek at Roca, NE
- Two locations on tributaries to Salt Creek
 - Little Salt Creek near Lincoln, NE
 - Steven's Creek near Lincoln, NE
- Extremely high annual discharge in 2015



2015 ACTIONS & PROGRESS

- Monitoring and data collection

Surface Water

- 16 stream gages

Ground Water

- 16 well permits/5 completed
- water level monitoring in 139 wells, spring & fall, with average increases of 1.72 feet
- meters and water use reporting from 397 wells
- 4.5 billion gallons pumped



2015 ACTIONS & PROGRESS

- Monitoring and data collection (continued)

Certified irrigated acres

- Approved
 - HCA +15 to 3,187 acres
 - Remainder +325 to 23,382 acres)

Ground water rules variances 2
received; both approved)

Water Banking / Transfers (no activity)

2015 ACTIONS & PROGRESS

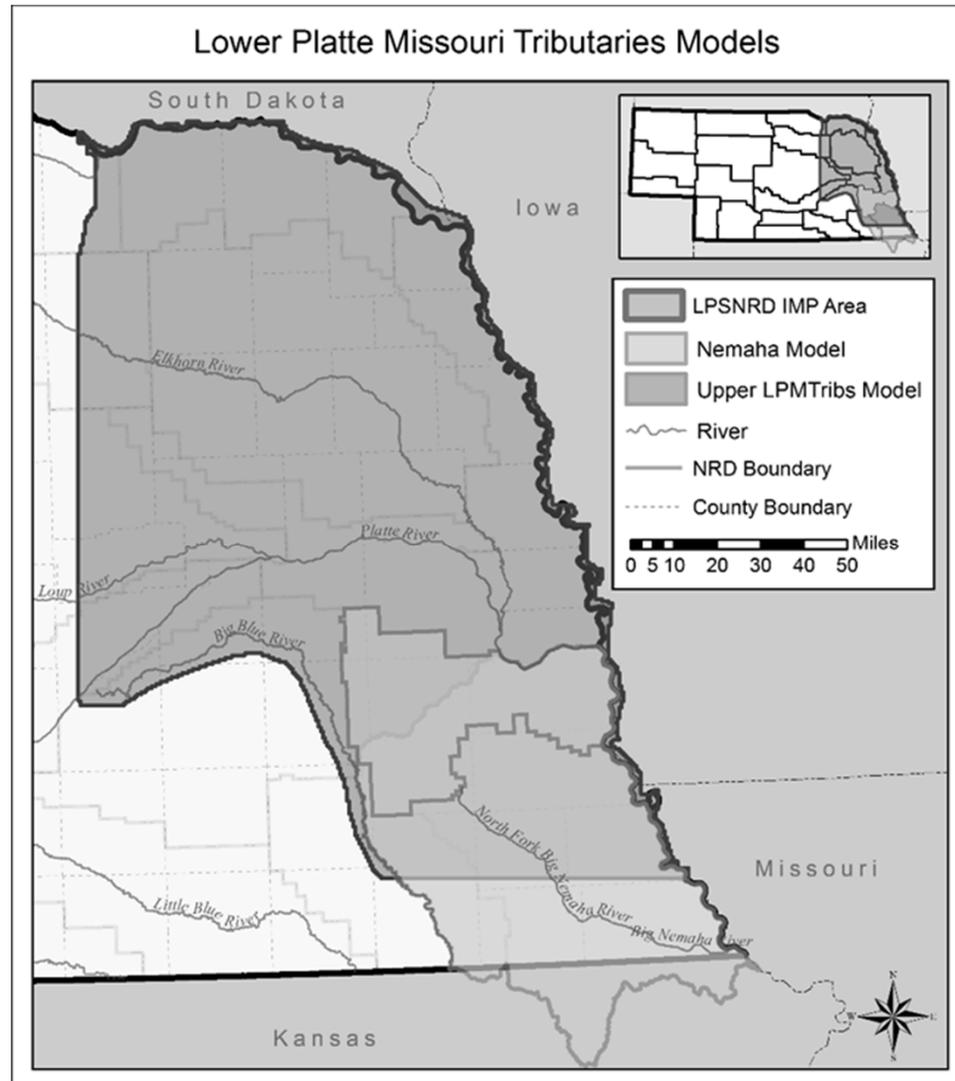
- **Moratoriums:**
 - **Ground Water**
 - HCA limitation on increasing irrigated acres
 - DVB Special Management Area
 - Allocations
 - Moratorium on increasing irrigated acres
 - **Surface Water**
 - HCA-NeDNR limitation on increasing irrigated acres
- **Ground Water Allocations**
 - **DVB SMA**
 - Sprinkler Irrigation
 - » 21 inches/3 years/acre, not to exceed 9 inches/year
 - Gravity Irrigation
 - » 30 inches/3 years/acre, not to exceed 12 inches/year

NeDNR Studies & Planning

Lower Platte Missouri Tributaries Model

Development

- Upper model is developed-undergoing QA's
- Lower model (Nemaha) development is starting



Education & Outreach

2015 Education and Outreach Activities

- Development of a T.V. documentary
- INSIGHT web portal
- NE State Fair
- Husker Harvest Days
- Nebraska Women in Agriculture Conference booth



Goal of participating with LPSNRD in one joint education outreach event/year

Collaboration with Other Entities

ENWRA

- Supported 2014-2015 AEM flights
- Researching whether AEM data can improve modeling of hydrologically connected areas

Lower Platte River Basin Coalition (LPRBC)

- Participates in management and technical meetings
- Current focus on accounting system to support local water management

IMP Annual Report

Highlights-Education/Outreach

LPSNRD Activities

- Ground Water Mgt Plan
- AEM data posted online
- 3 Test Your Well nights
- School activities
- Irrigation certification
- BMP promotion
- Media, Social Media, Web
- Publications



2016 & 2017 ACTIONS

- Expansion of INSIGHT tool
- Continued participation in ENWRA and LPRBC planning
- Continue public outreach
- Monitoring of surface water permits & water use
- Evaluate need for more streamgages
- Monitoring of ground water levels
- Meter wells & require water use reports

2016 & 2017 ACTIONS

- Continue to track changes in water use, land use, population and climate
- Admin. HDR contract for Drought Emerg. Response Plan, water conserv., analyze unmeasured water uses, and revise GIS database
- Continue voluntary water use reporting
- Start a Drought Contingency Study
- Recommendations for limited aquifer areas
- Discuss coordination of regional water systems and water shortage action plans
- Review, with the Advisory Committee, the need to update IMP Goals and Objectives



QUESTIONS OR COMMENTS?

Amy Zoller, MS, Integrated Water Management Coordinator
Nebraska Department of Natural Resources

Paul Zillig, General Manager
Lower Platte South Natural Resources District