

# Coordinated Water Quality and Water Quantity Planning for the Upper Big Blue NRD

Carla McCullough, MS  
Planning Unit  
NDEQ

Amy Zoller, MS  
Water Planning Division  
NeDNR

Technical Advisory Committee Meeting #1  
Upper Big Blue NRD, York, NE  
December 4, 2017

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Presentation outline

- Introduction
- Joint water quality plans
- Joint water quantity plans
- Challenges and opportunities in coordinating water quality and quantity plans
- The UBBNRD approach

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Introduction

- Several types of joint water management plans are developed between:
  - NRDs and NeDNR
  - NRDs and NDEQ
- Various plans serve specific purposes and have different requirements.
- Unique opportunity to coordinate planning efforts in the Upper Big Blue NRD
  - Timing, geographic area
  - First of its kind in Nebraska

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Introduction

## Upper Big Blue NRD Planning Initiatives

Plan Name	Water Quality Management Plan (WQMP)	Voluntary Integrated Management Plan (V-IMP)
Partners	NRD, NDEQ	NRD, NeDNR
Focus	Surface Water and Groundwater Quality	Surface Water and Groundwater Quantity & Hydrologic Connectivity
Authority	Federal Clean Water Act (319 Nonpoint Source Pollution)	Nebraska State Statutes (LB962, 2004; LB764, 2010)

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



---

# Coordinated Water Quality and Quantity Planning: Joint Water Quality Plans

NEBRASKA

Good Life. Great Environment.

---

DEPT. OF ENVIRONMENTAL QUALITY

---



# NDEQ - Nonpoint Source Pollution

- From landscapes, not pipes
- Runoff transports pollutants
- Affects lakes, rivers, wetlands and groundwater
- Common pollutants are sediment, nitrogen, phosphorus and bacteria



NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# NDEQ - Nonpoint Source Pollution Program

- Nonpoint Source Program funded via EPA through the Federal Clear Water Act, Section 319(h).
- Nebraska receives annual '319' grant and has 5 years to spend the grant funds.
- ~\$1.2 million has gone out annually to project sponsors (e.g. NRDs) for on-the-ground projects.



NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# NDEQ - Nonpoint Source Pollution Program

- Requirements to qualify for 319 funds for project funds:
  - 9-Element or Alternative Plan.
  - Plan must be accepted by NDEQ and EPA R7.
  - Plan must be no more than five years old.
  - Projects require a 40% non-federal match.

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY





# NDEQ Nonpoint Source Plans

9-Element Plans	Alternative (to a 9-Element Plan)
Watershed	Groundwater Protection
Basin (NRD)	Drinking Water Protection

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

# NDEQ Nonpoint Source Plans

9-Element Plans	Alternative (to a 9-Element)
Watershed	Groundwater Protection
South Loup Watershed	Bazile Groundwater Management Plan
Long Pine Creek Watershed	
Basin (NRD)	Drinking Water Protection
Papio-Missouri Basin Plan	Auburn
Lower Elkhorn Basin Plan	Waverly

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

# 9-Element Watershed Management Plans



- What are 9 Element WMPs?
  - Roadmap for water quality improvement
  - Voluntary plans
  
- Why do a 9 Element WMP?
  - Community Based Planning
  - Funding for Nonpoint Source Projects

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

# 9-Element Watershed Management Plans

1. Identification of Pollutant Sources
2. Estimation of Pollutant Loads
3. ID Best Management Practices
4. Communication & Outreach
5. Implementation Schedule
6. Milestones to Measure Progress
7. Evaluation Criteria
8. Monitoring
9. Technical & Financial Assistance



From Papio-Missouri NRD Draft Plan, Fyra.

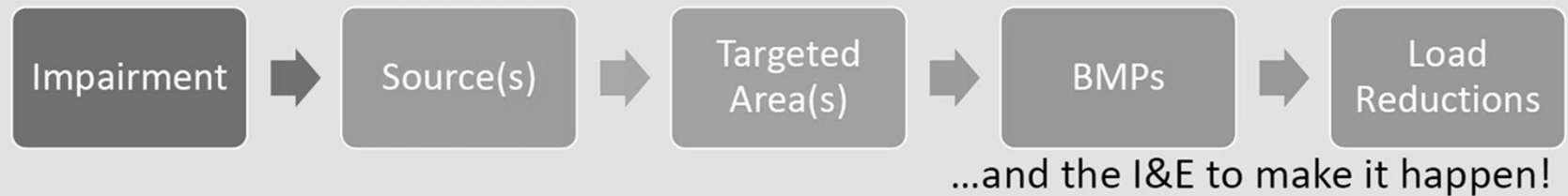
NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

# NDEQ – Writing Acceptable Plans

## The Path of Least Resistance

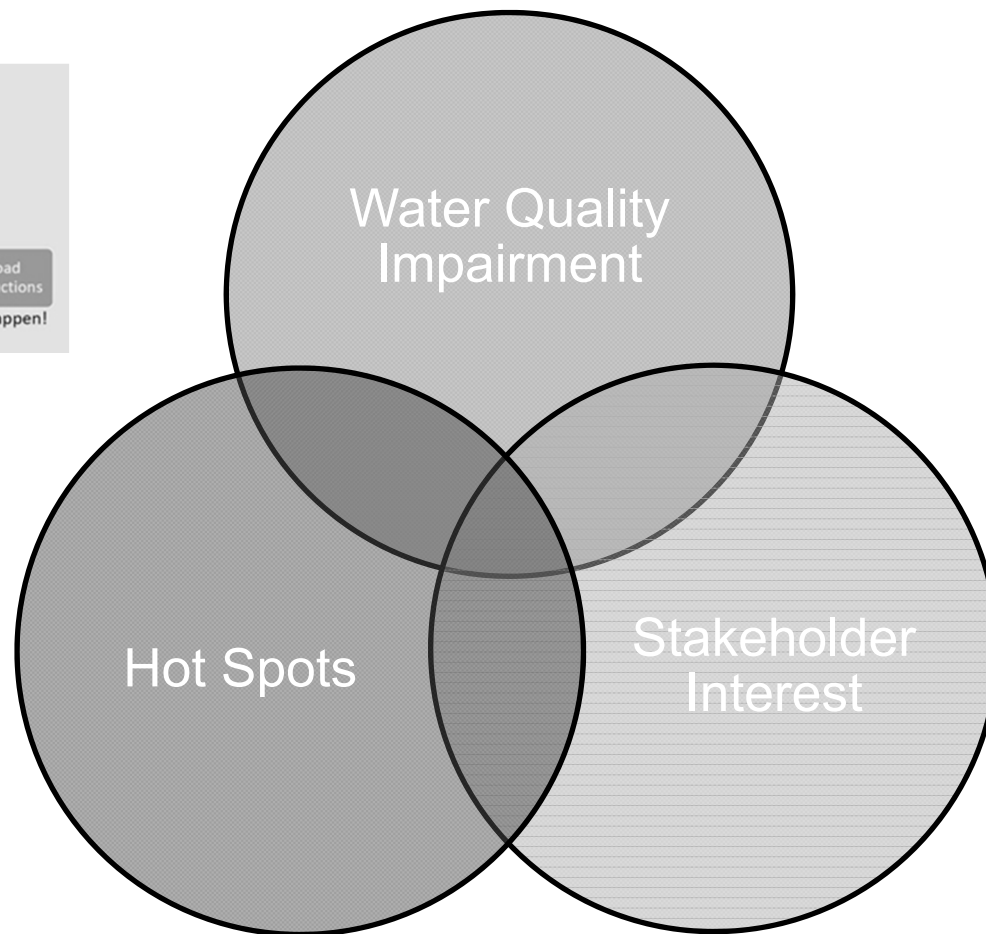


**NEBRASKA**

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

# NDEQ –Targeted Areas

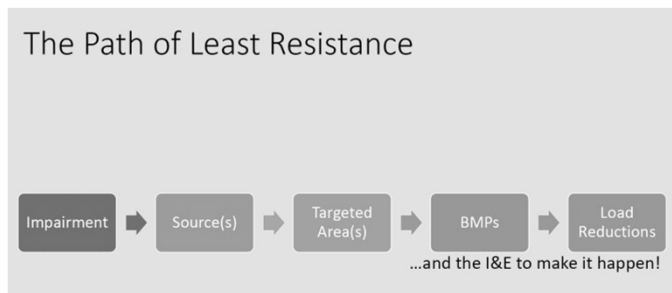


**NEBRASKA**

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

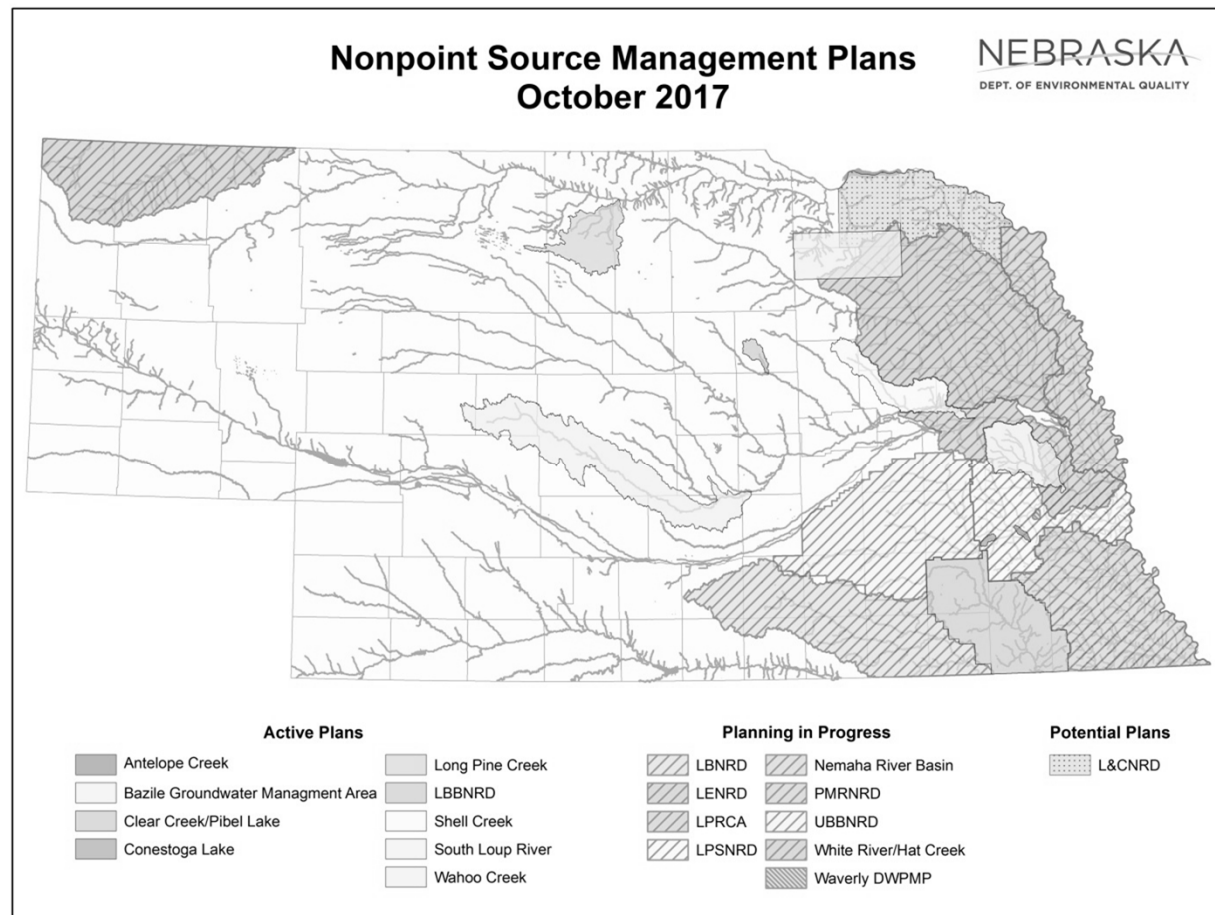
# NDEQ - Implementing Plan with Projects



- Project Implementation Plan (PIP)
- Contract signed between NDEQ and Sponsor
- Project starts
  - Cost-share for BMPs
  - Watershed Coordinator
  - Evaluate results



# NDEQ – Where are we planning?



**NEBRASKA**

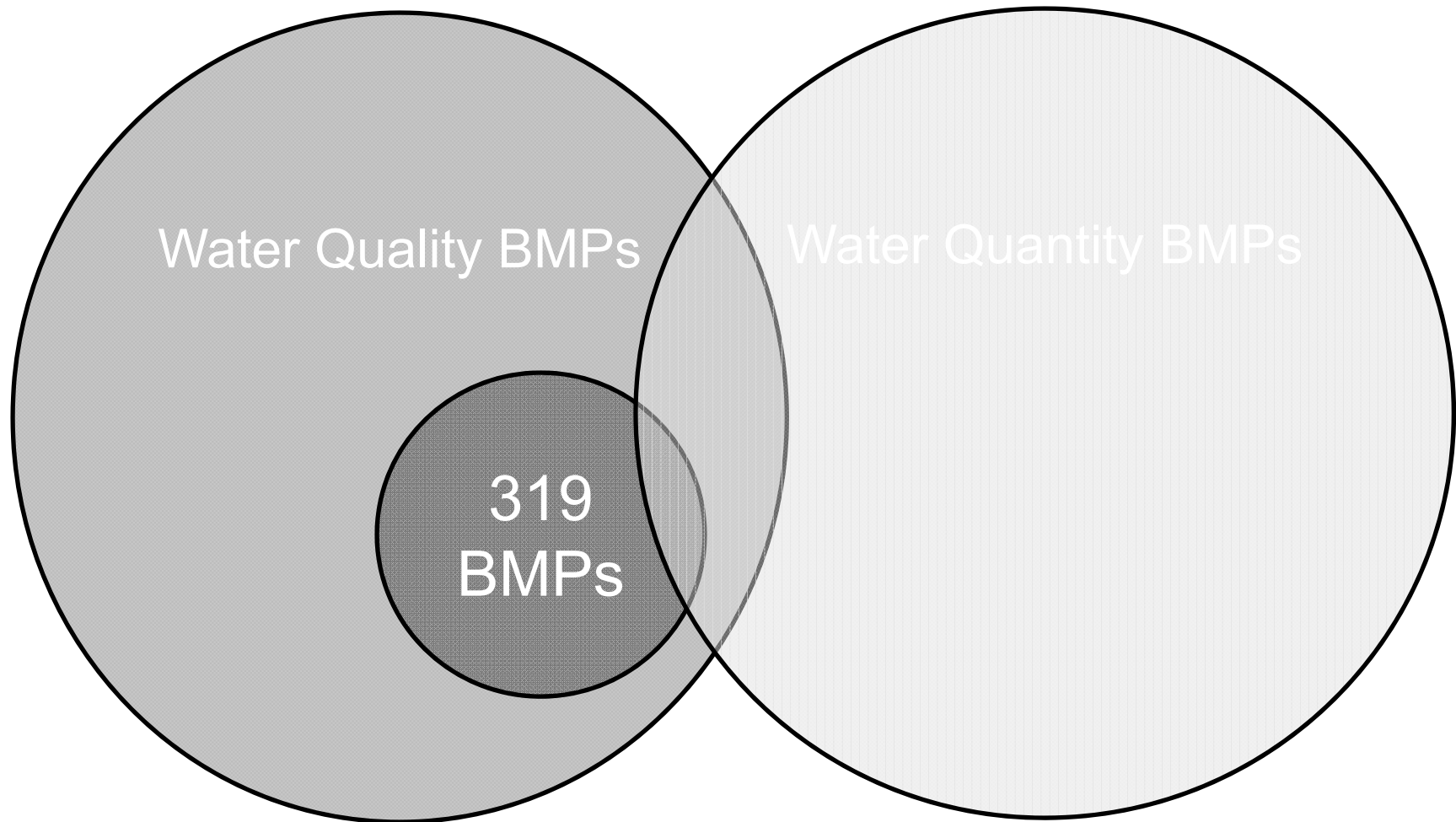
Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



---

## NDEQ – Plan Implementation



---

---

# Coordinated Water Quality and Quantity Planning: Joint Water Quantity Plans

NEBRASKA

Good Life. Great Environment.

---

DEPT. OF ENVIRONMENTAL QUALITY

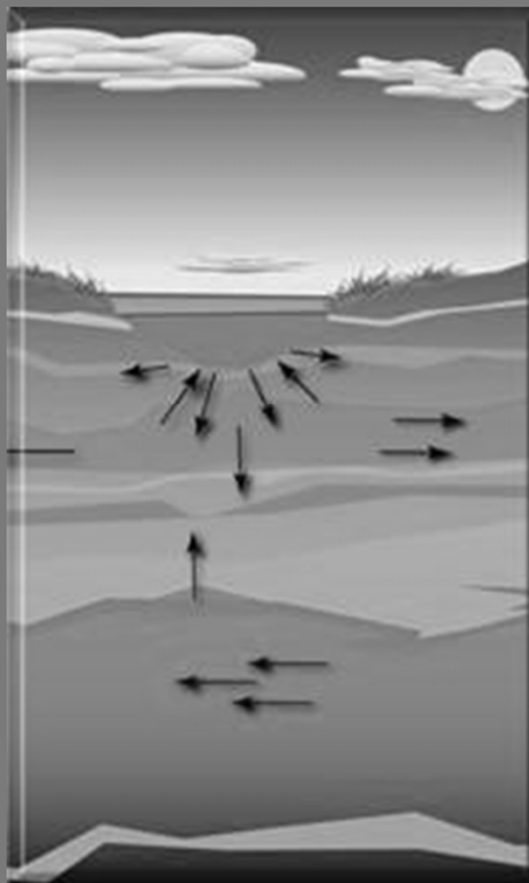
---



# Integrated Water Management

- Jointly managed ground and surface water uses/supplies
- Recognizes hydrologic connection between ground and surface water

## EFFECTIVE MANAGEMENT OF HYDROLOGICALLY CONNECTED WATERS



Surface Water Quantity

- Regulated by NeDNR
- Prior appropriations system

Integrated  
Water  
Management

Groundwater Quantity

- Regulated by NRDs
- Correlative rights system

# Integrated Water Management

- LB962, 2004
  - Required joint NRD and NeDNR planning for fully-appropriated basins
- LB764, 2010
  - Inclusion of voluntary integrated management planning
- LB1098, 2014
  - Water sustainability fund
    - Improved ranking for NRDs with IMPs



Governor Johanns  
signed LB962 into law  
on April 15, 2004

# Integrated Management Plans

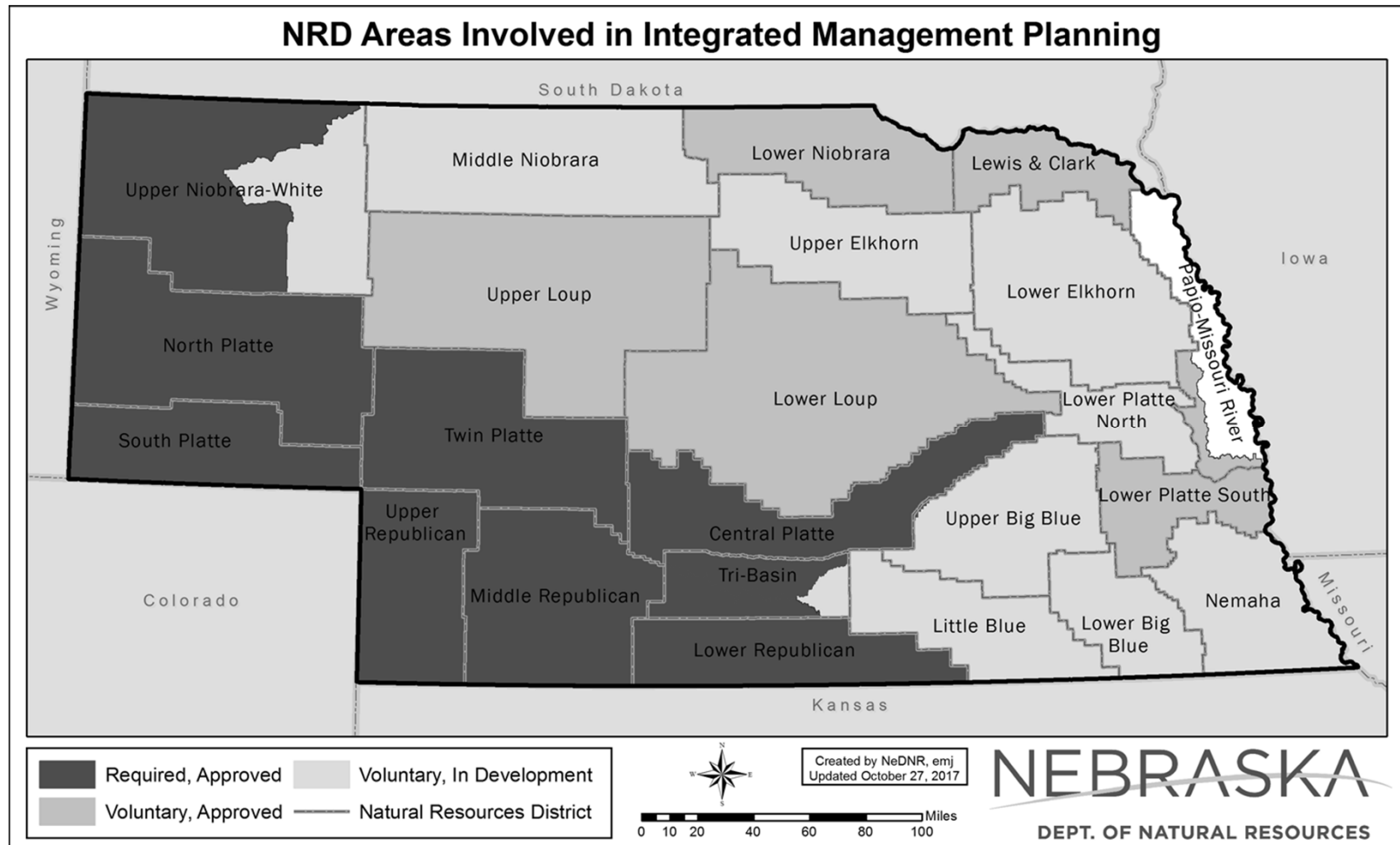
- IMPs address hydrologically connected ground and surface water
- Joint plan between an NRD and NeDNR
  - Tailored to local issues and opportunities
- IMP primary components
  - Goals and objectives
  - Action items
    - Non-regulatory
    - Regulatory (at least one SW and one GW control)
  - Monitoring plan
- Voluntary or mandatory IMPs



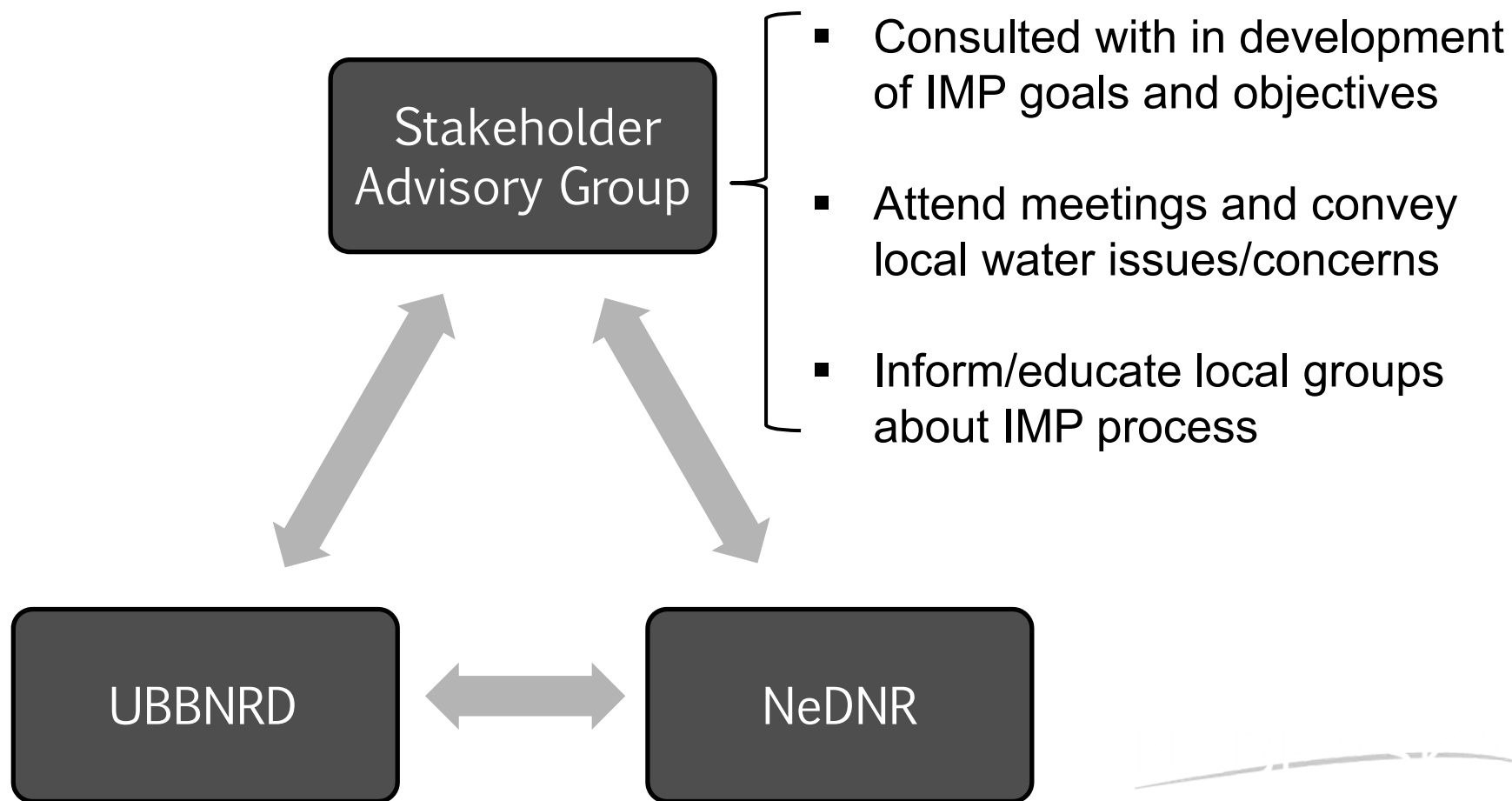
# Integrated Management Plans

Mandated IMP	Voluntary IMP
Overarching purpose: Achieve and sustain a balance between water uses and water supplies for the long term, protect existing water uses	
Statutory framework: Neb. Rev. Stat. §46-715 to §46-718	
Fully appropriated basins, sub-basins	Non-fully appropriated basins, sub-basins
<u>May</u> have more stringent controls	<u>May</u> have more “encouraging “ controls
Moratorium (GW, SW) initiated	No moratorium initiated

# Integrated Management Plans



# Integrated Management Plans





---

---

# Coordinated Water Quality and Quantity Planning: Challenges and Opportunities

NEBRASKA

Good Life. Great Environment.

---

DEPT. OF ENVIRONMENTAL QUALITY

---



# Coordinated water quality and quantity planning: Challenges

- Statutory framework
  - Nebraska State Statutes for water quantity
  - Federal Clean Water Act for water quality
- Timelines
  - WQMP has less than 2 years to write/accept plan
    - NDEQ and EPA reviews for acceptance
  - V-IMPs may take 3 to 5 years
    - NeDNR and NRD agree to adopt

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Coordinated water quality and quantity planning: Challenges

- Differing Funding Mechanisms
  - EPA funding for NDEQ plans
    - Plan development and project implementation
    - 40% non-federal match
  - NeDNR plans
    - NRD and NeDNR share cost of development & implementation
    - Various grants available for implementation (WRCF, WSF, NET, etc.)

NEBRASKA

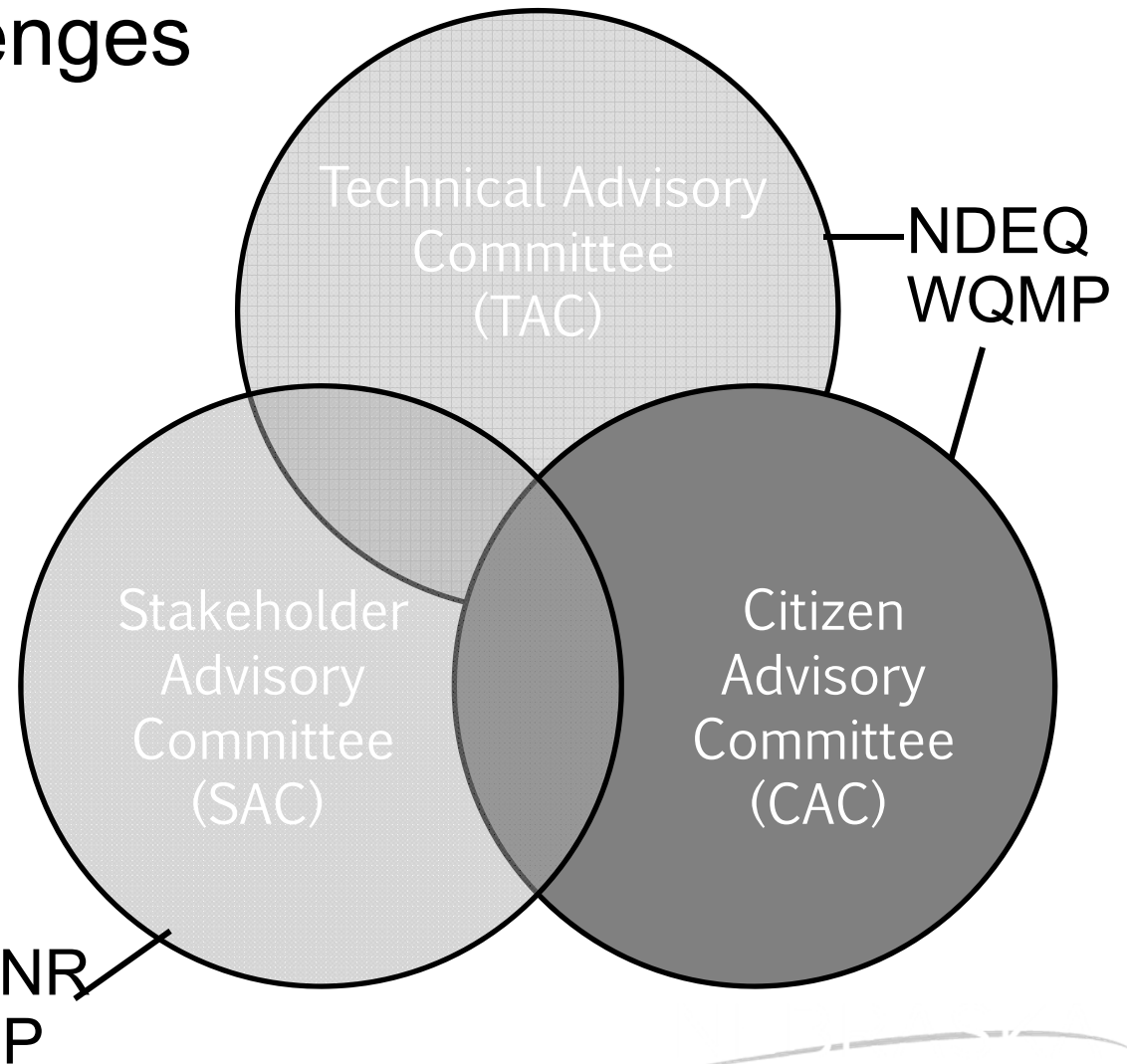
Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Coordinated water quality and quantity planning: Challenges

- Stakeholder groups
  - WQMP has two committees
    - TAC
    - CAC
  - V-IMP has one committee
    - SAC



NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY

NeDNR  
V-IMP

DEPT. OF NATURAL RESOURCES

# Water Quality Management Plans Committees

- Technical Advisory Committee (TAC)
  - Generally, agency representatives
  - Input on WQMP, advise CAC
- Citizen Advisory Committee (CAC)
  - Town residents, land owners, producers
  - Input on WQMP, advocate plan in community

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Voluntary Integrated Management Plan Committee

- Stakeholder Advisory Group (SAC)
  - Required interests listed in Neb. Rev. Stat. §46-717
    - Surface water irrigators
    - Municipalities
    - Other interests as deemed appropriate by the NRD and NeDNR, such as
      - Groundwater irrigators
      - Agricultural business
      - Wildlife interests

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Coordinated water quality and quantity planning: Opportunities

- Improved communication with public and between agencies about multiple water plans
- Minimized redundancy in planning efforts
- Time/cost savings for NRD
- Complimentary goals and objectives between plans
- More holistic approach to water management
- Great learning opportunity for agencies/NRD

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



---

---

# Coordinated Water Quality and Quantity Planning: The Upper Big Blue NRD Approach

NEBRASKA

Good Life. Great Environment.

---

DEPT. OF ENVIRONMENTAL QUALITY





# Upper Big Blue WQMP and V-IMP- Coordination Approach

- Two separate plans (WQMP, V-IMP)
- Separate contracts for consultation services
- Potential common advisors (stakeholders) between plans
- NDEQ representative at V-IMP meetings, NeDNR representative at WQMP meetings
- Joint NRD, NDEQ, NeDNR coordination meetings throughout process

NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



The logo for the Nebraska Department of Environmental Quality. It features the word "NEBRASKA" in a large, bold, sans-serif font. A thin, curved line arches over the letters "BRASKA".

# NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



## Questions?

Carla McCullough, MS

1200 N St., Suite 400

P.O. Box 98922

Lincoln, NE 68509

402-471-3382

[carla.mccullough@nebraska.gov](mailto:carla.mccullough@nebraska.gov)

Amy Zoller, MS

301 Centennial Mall South, 4<sup>th</sup> Floor

PO Box 94676

Lincoln, NE 68509-4676

402-471-0625

[amy.zoller@nebraska.gov](mailto:amy.zoller@nebraska.gov)

The logo for the Nebraska Department of Environmental Quality. It features the word "NEBRASKA" in a large, bold, sans-serif font. A thin, curved line arches over the letters "BRASKA".

# NEBRASKA

Good Life. Great Environment.

DEPT. OF ENVIRONMENTAL QUALITY



# Thank You

Carla McCullough, MS

1200 N St., Suite 400

P.O. Box 98922

Lincoln, NE 68509

402-471-3382

[carla.mccullough@nebraska.gov](mailto:carla.mccullough@nebraska.gov)

Amy Zoller, MS

301 Centennial Mall South, 4<sup>th</sup> Floor

PO Box 94676

Lincoln, NE 68509-4676

402-471-0625

[amy.zoller@nebraska.gov](mailto:amy.zoller@nebraska.gov)