



ASDWA CWA-SDWA Webinar:

Leveraging CWA 319 and SDWA Programs for Surface and Ground Water Quality Planning

Deirdre Mason

Association of State Drinking Water Administrators

November 7, 2017

ASDWA Members

- Drinking Water Program
Administrators: 50 states,
territories, the Navajo Nation, and
the District of Columbia
 - Public Water Systems
 - Regulate
 - Technical assistance
 - Funding – DWSRF, set-
asides
 - Multiple Partners
 - Coordinate to prioritize and
support source water
protection

Purpose of Webinar

- To build on the efforts of ASDWA, ACWA, GWPC, and EPA to share and promote Clean Water Act and Safe Drinking Water Act (CWA-SDWA) coordination activities across state and EPA water programs.
- To share state examples where these programs are working together to protect watersheds and drinking water sources.

CWA-SDWA Efforts to Date

- CWA-SDWA Toolkit (2014)
- Toolkit Webinar Series (2015)
- Source Water Collaborative Activities (ongoing)
- Case Studies (2016 and one new!)
- Workshop (March 2017)
- ASDWA Webinars (August 29 and today)
- ASDWA Website



Today's Presenters

- Nevada SWP and NPS
 - Kim Borgzinner
 - Birgit Henson
- Nebraska and EPA Region 7
 - Ryan Chapman
 - Heather Duncan



After the Webinar

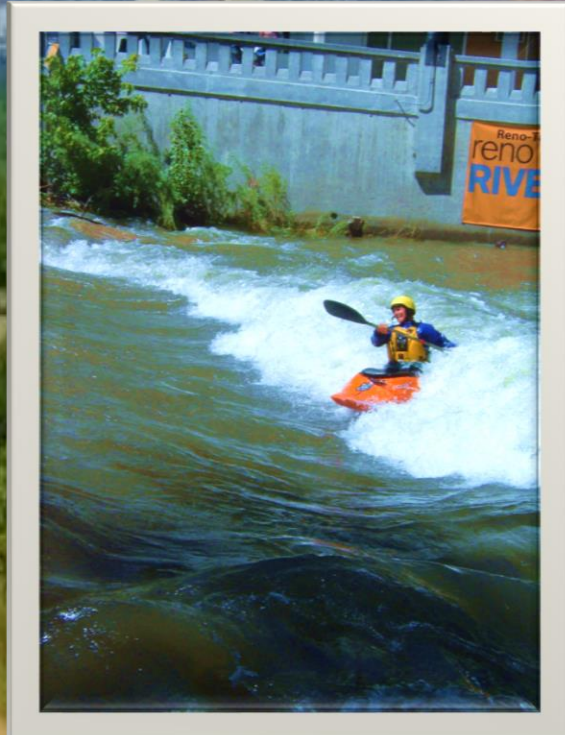
Please note that a video recording of today's webinar will be made available for viewing on ASDWA's web site within the next few days at

www.asdwa.org/cwa-sdwa-coordination/

Please
Type
In Your
Questions!

- Please type your questions into the box on your webinar control panel.
- We will not be taking verbal questions.
- You may type in your questions at any time during the webinar.
- We will answer questions after all of the presenters are finished speaking.

Source Water and Watershed Protection in Washoe County, Truckee River Watershed Nevada



Supported by:

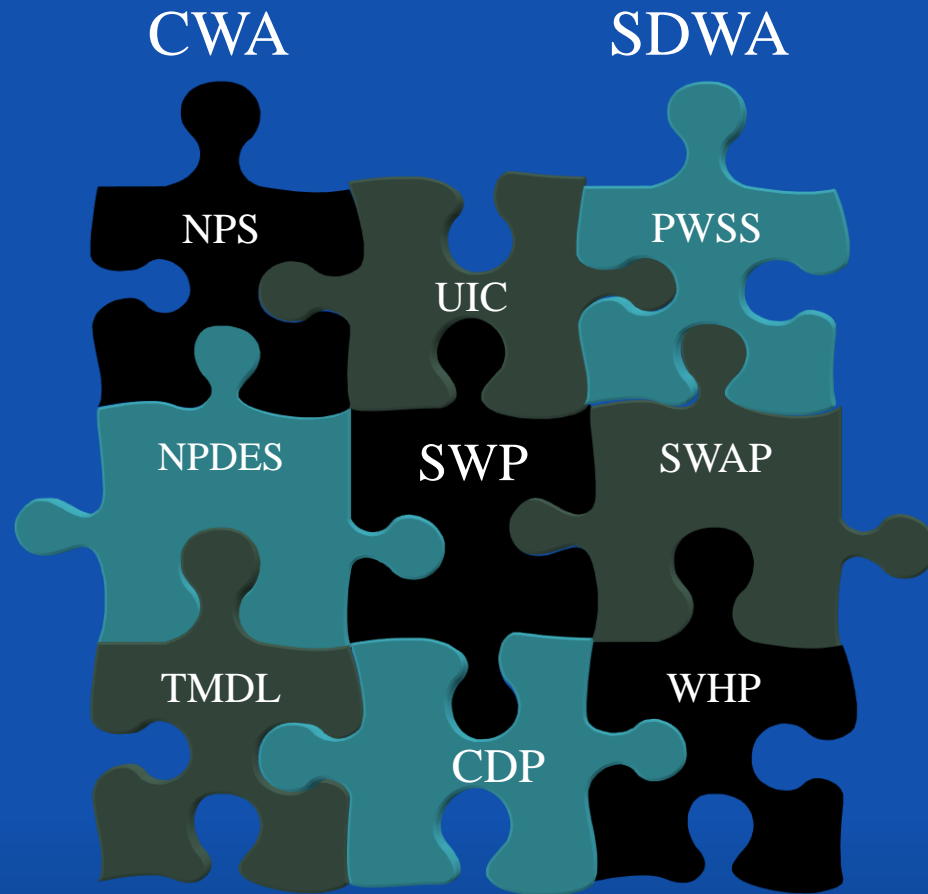


Kim Borgzinner,
Bureau of Safe Drinking Water

Nevada Nonpoint Source Management Program

Birgit Henson,
Bureau of Water Quality Planning





CWA – Clean Water Act

NPDES – National Pollutant Discharge Elimination System

NPS – Nonpoint Source Program

TMDL – Total Maximum Daily Load

SDWA – Safe Drinking Water Act

CDP – Capacity Development Program

PWSS – Public Water System Supervision Program

SWAP – Source Water Assessment Program

SWP – Source Water Protection

UIC – Underground Injection Control

WHP – Wellhead Protection

What is Integrated Source Water Protection?

Nevada's Nonpoint Source Management Program

- Non-regulatory
- Surface Water quality issues not mandated by National Pollution Discharge Elimination System (NPDES)
- Pass-through money from EPA annually for subgrants
- Focus is on measurable load reduction in waterways and development of Watershed Management Plans

Putting our Heads Together!

CWA and SDWA Grant Programs



ISWPP Grant Program

Assist communities to Institutionalize the protection of drinking water resources through local planning processes, education and outreach, and development/implementation of Source Water Protection Plans.

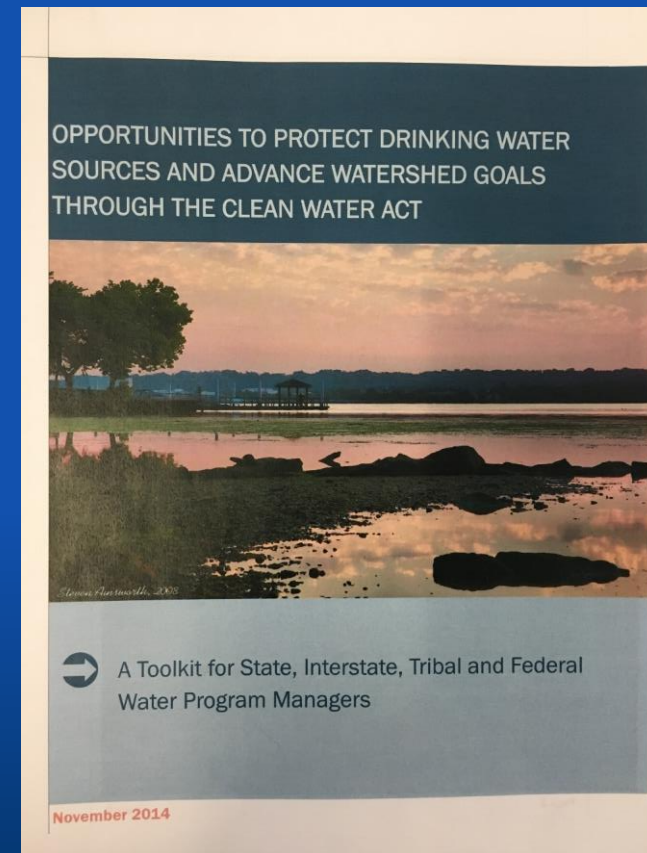
NPS Program

Reduce NPS pollution through water quality improvement projects, education and outreach, and development and implementation of watershed based plans.

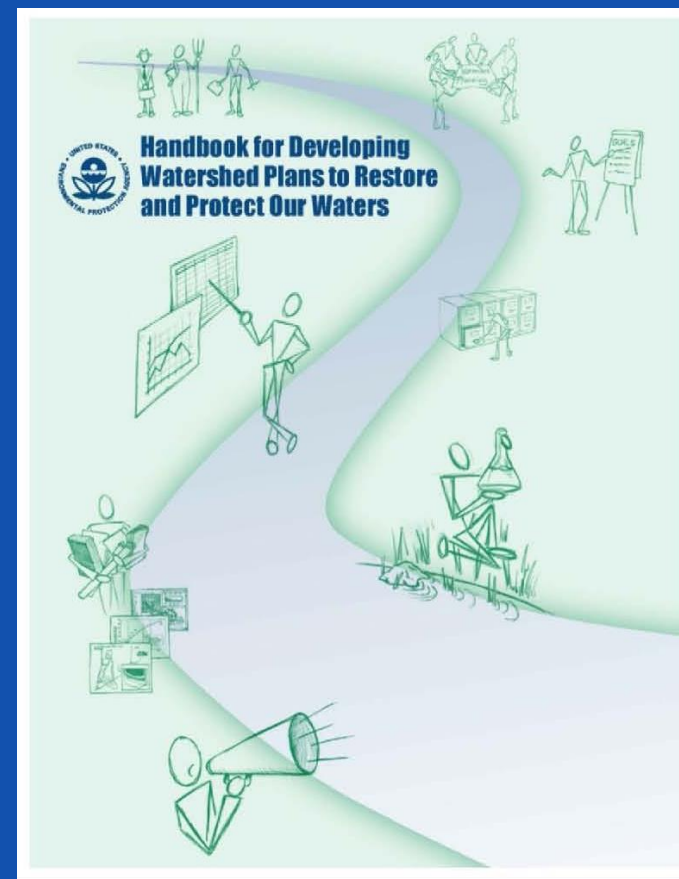
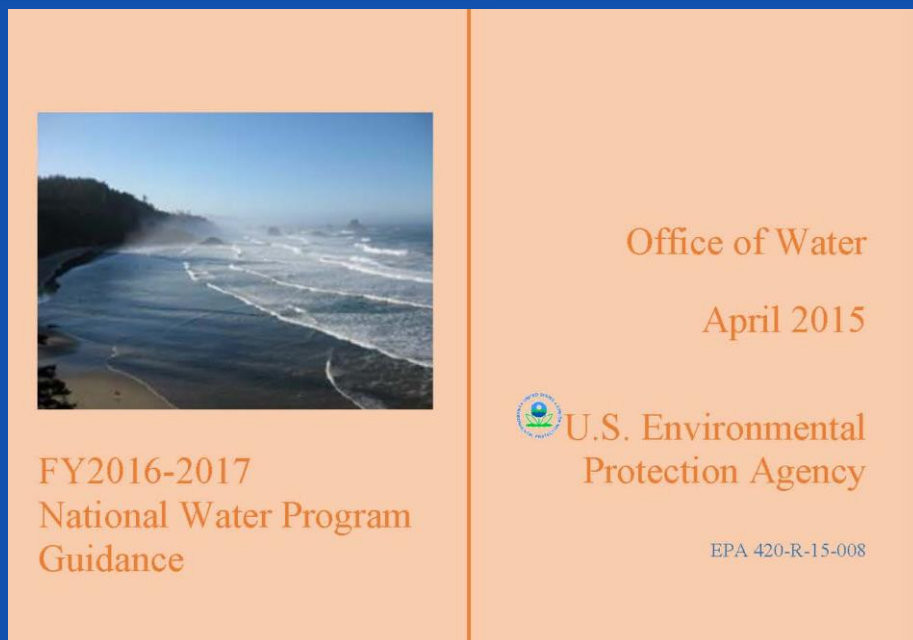
Strategy to integrate CWA/SWDA Programs

- Research other programs (including the 2014 State-EPA collaborative Toolkit)
- Strategize how to integrate programs while meeting requirements for both

Desired end product: Comprehensive Source Water and Watershed Plan



Guidance Documents



Nevada Nonpoint Source Management Plan

2015-2019

Nevada CWA and SDWA Program Grants Working Together

Comprehensive water quality planning (SW & GW)

Prioritized and fundable projects

More invested and influential stakeholder group

Regional collaborative planning approach

Efficient and focused use of funding

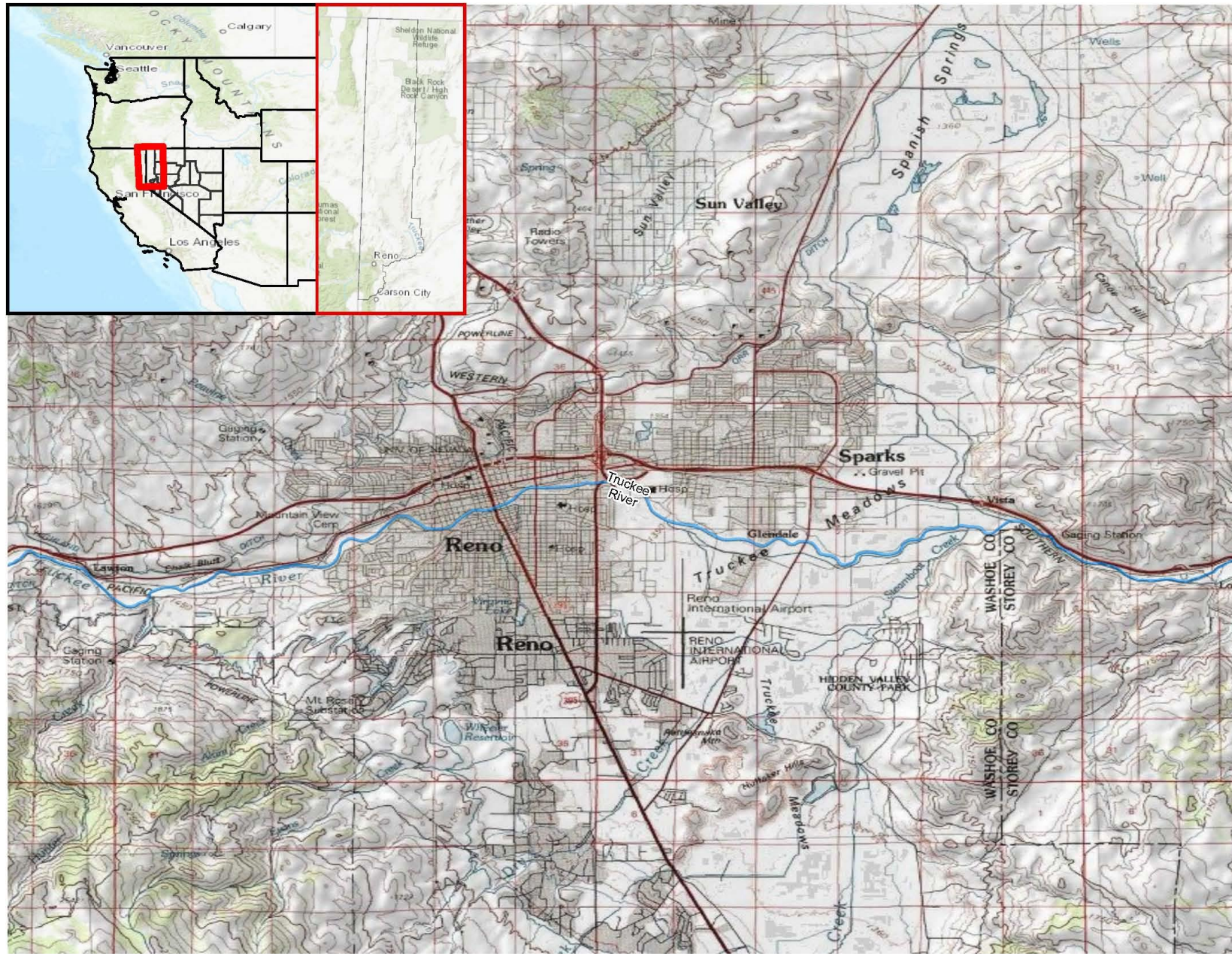
**Many
benefits**

Where to start?

Truckee Meadows (Reno, Sparks, Washoe County)

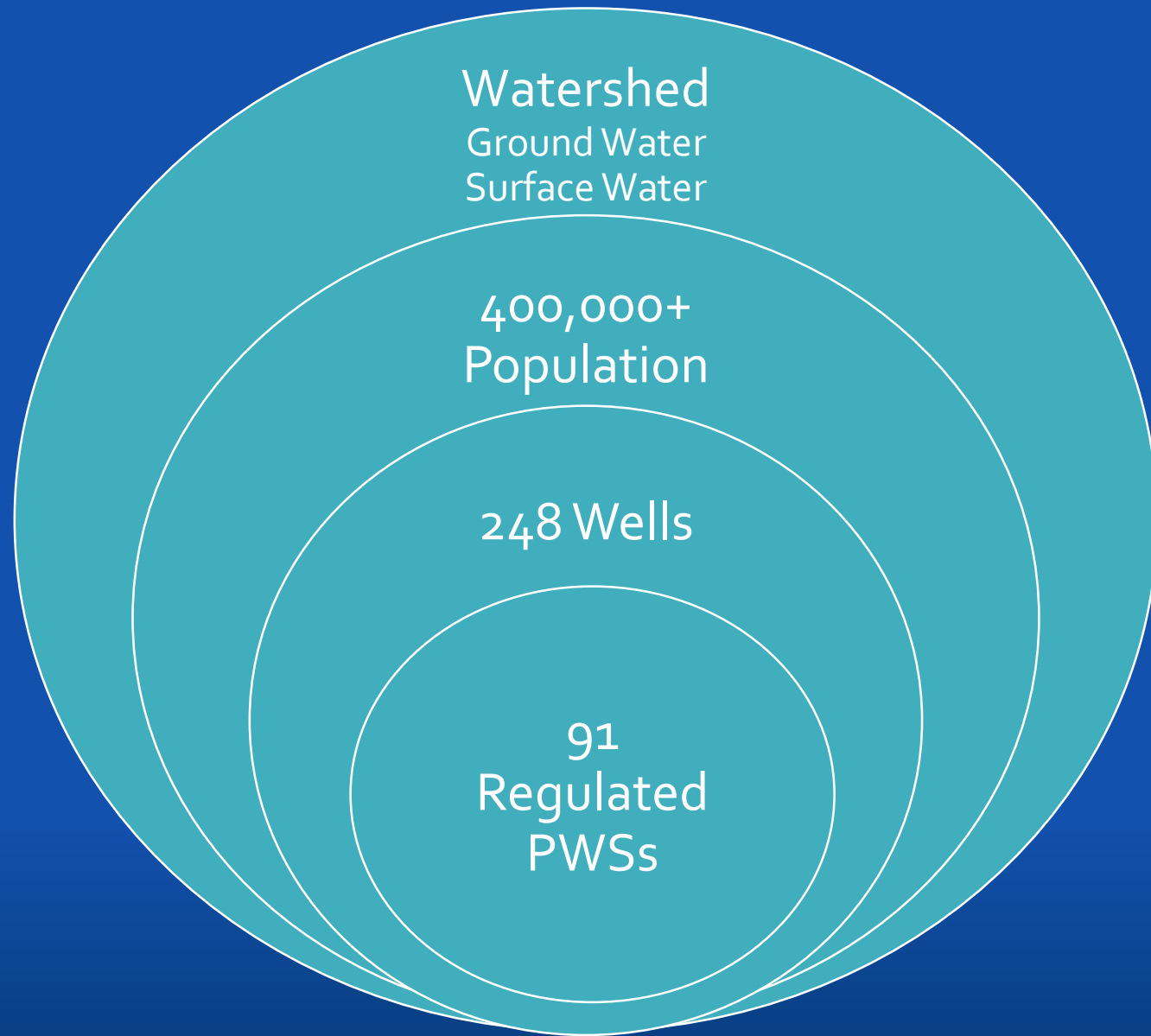
***Instant opportunity to leverage
resources and ensure collaboration***





Truckee
River
Watershed

Washoe
County



Washoe County

Truckee River through Downtown Reno, NV



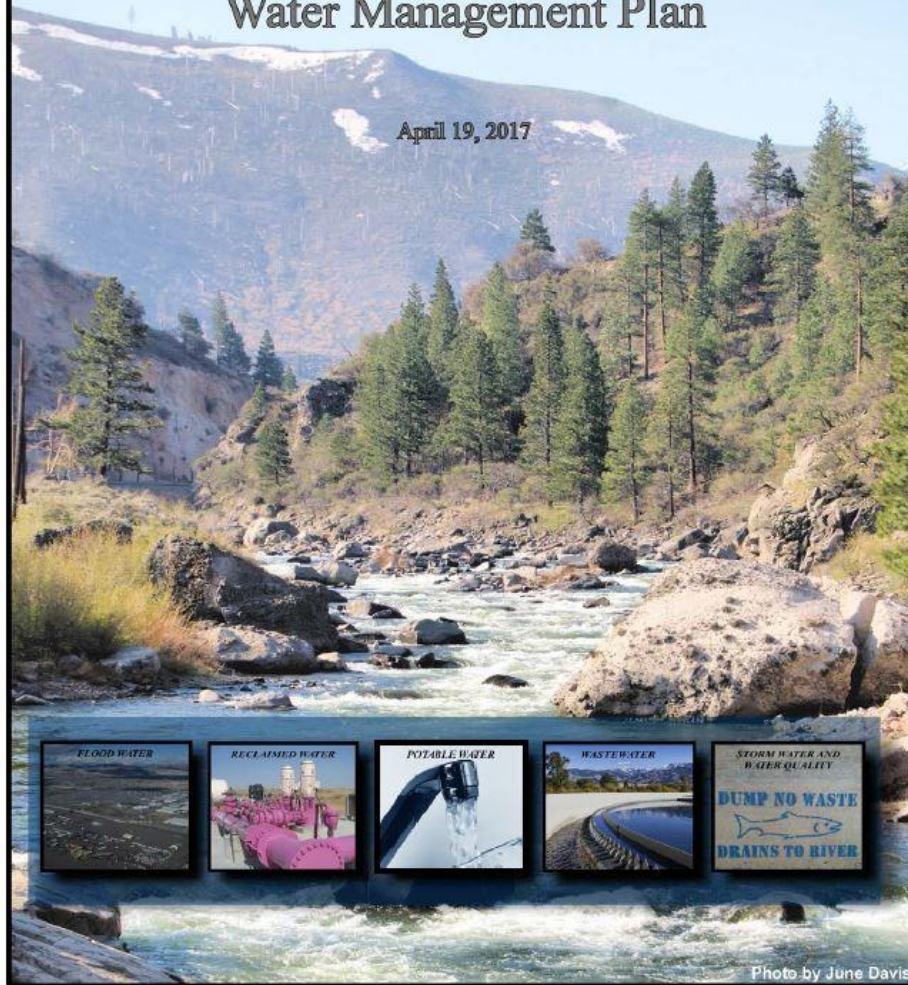
Key Planning Structure



WESTERN REGIONAL WATER COMMISSION
Northern Nevada Water Planning Commission

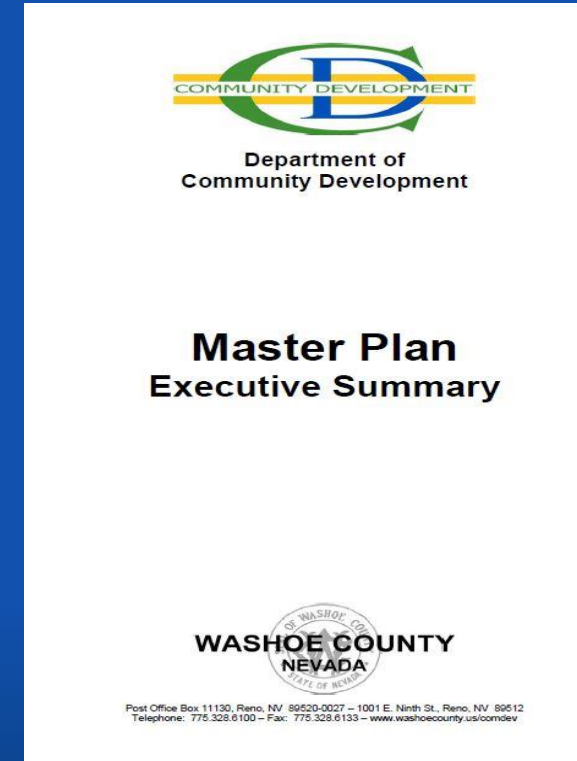
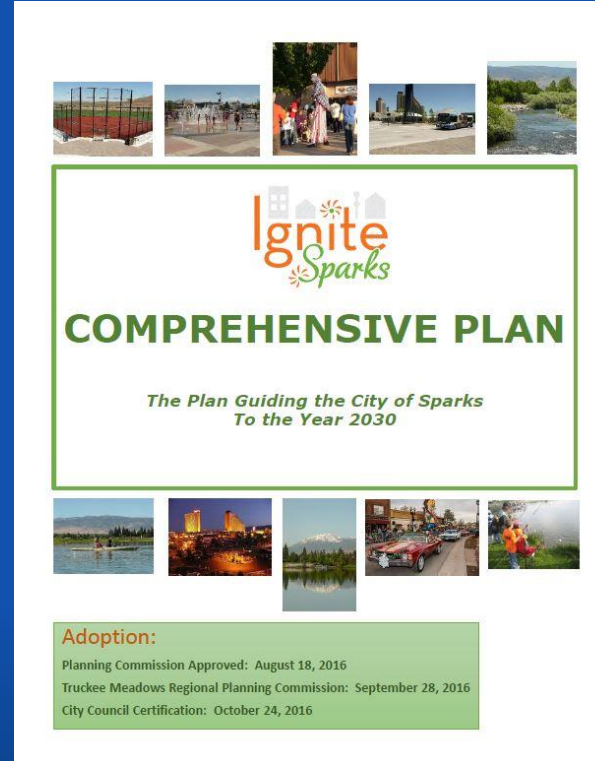
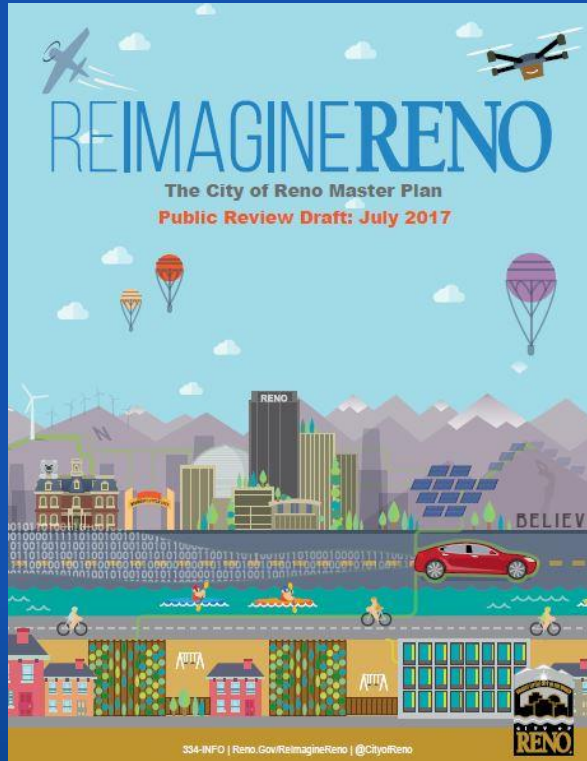
**2016-2035 Comprehensive Regional
Water Management Plan**

April 19, 2017

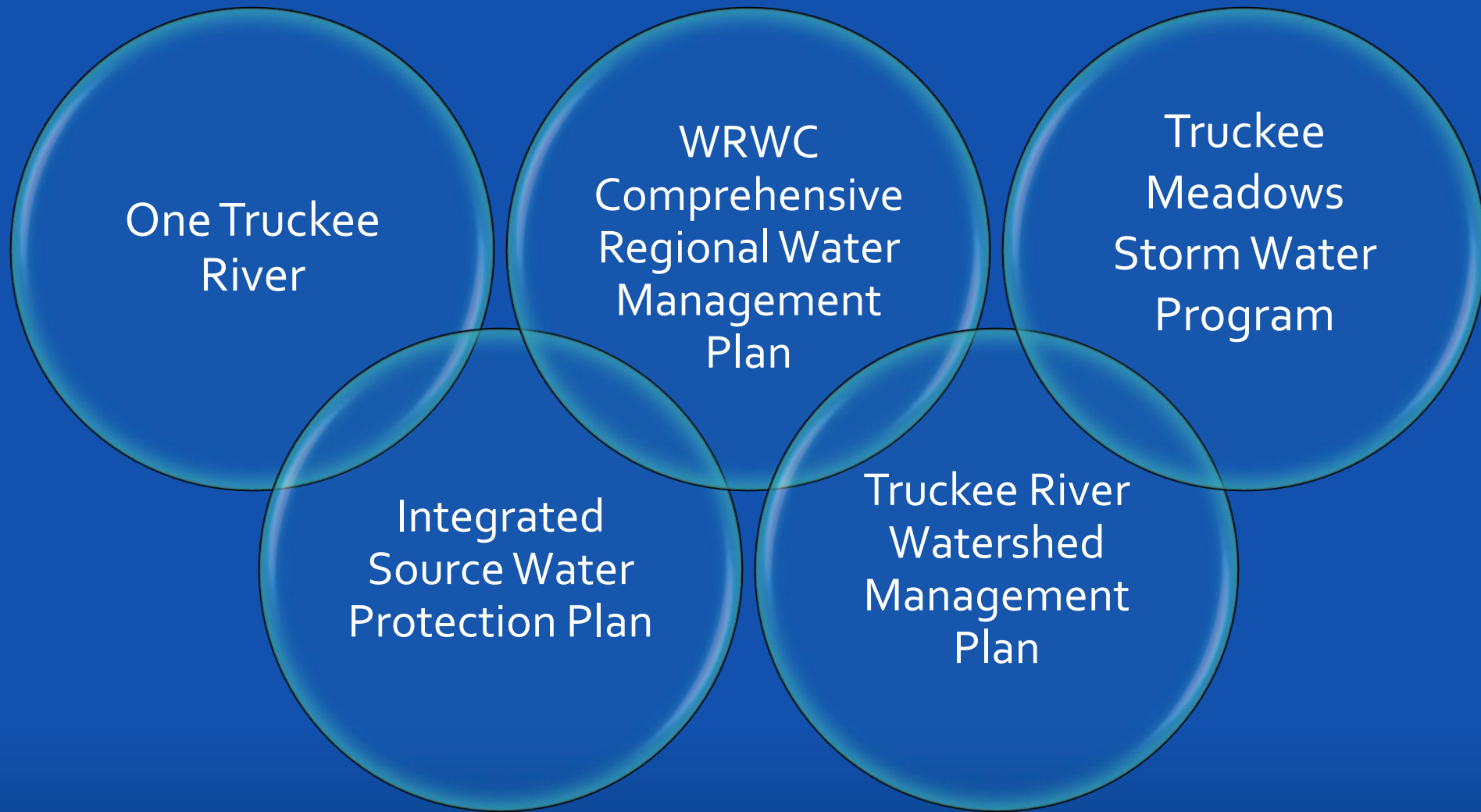


Planning Update

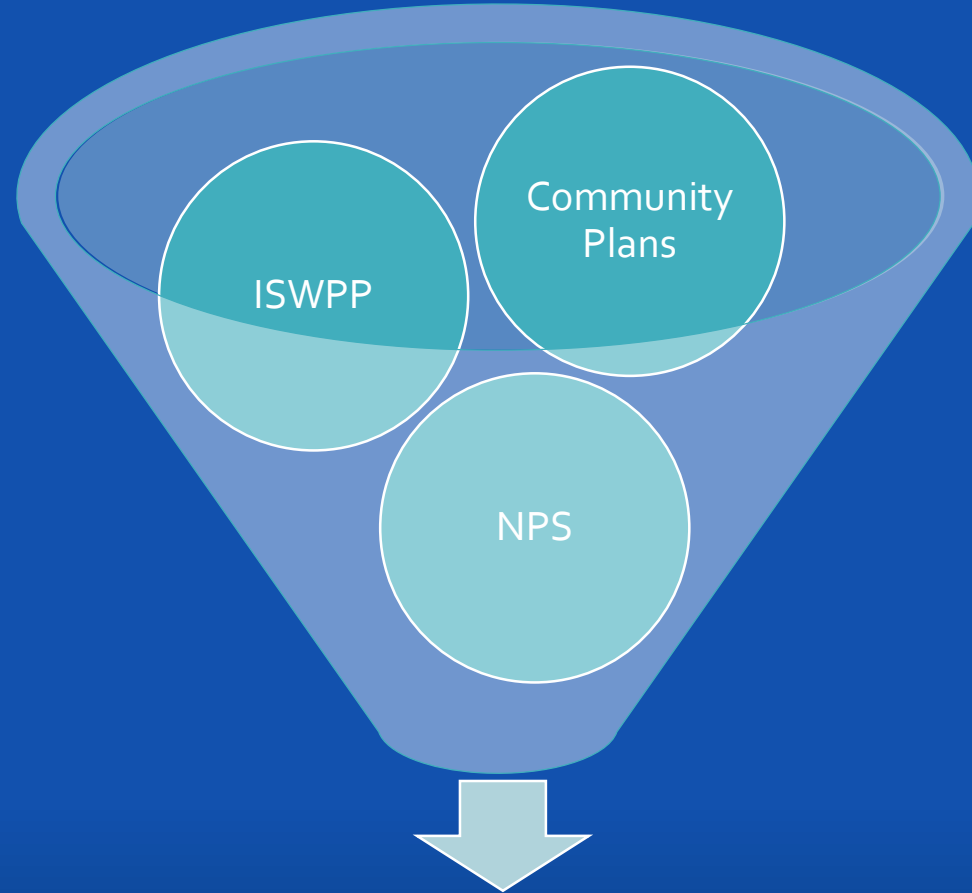
Master Plans



Planning Update



**Existing Framework &
Washoe County Local Planning Momentum**



**WATER QUALITY
PROTECTION**

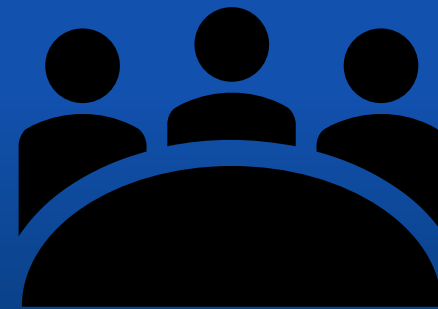
Can multiple programs work together to achieve what they can't do alone?

Water Quality Programs Working Together – YES!





What do we want
from this planning
effort?





Success!

Program Integration

Brainstorming the Process

- Funding & technical assistance
- Stakeholder/team development
- Local participation
- Stakeholder driven process
- Framework for one plan to meet both program requirements
- Realistic and implementable
- Integrated and sustainable
- Prioritized fundable projects



ISWPP Contractor
Technical Assistance

Team Building

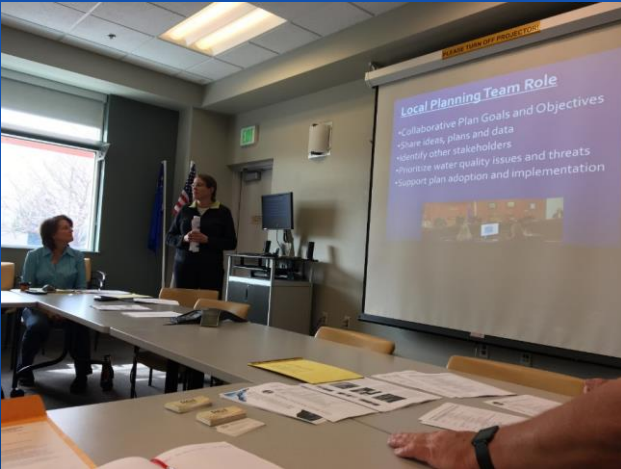
- Stakeholder Support
- Meeting Facilitation
- Presentations
- Coordination

Plan Development

- Technical Expertise
- Author Plan
- Coordinate Plan Acceptance/Approval

Implementation

- Action Plan (Prioritized Project List)
- Investigate Funding Opportunities
- Technical Assistance
- Education/Outreach



http://www.rci-nv.com/source_water_protection/

Technical Assistance/Funding How does this work?

Task / Outcomes	Timeline
Team Formation <ul style="list-style-type: none"> Stakeholder and Committee List Letters requesting participation and or support for program Stakeholder and partner outreach materials Letters of introduction to PWSs Project web page Project newsletter / outreach Data sharing Meeting Notes 	2016 Q4 to 2017 Q1 Stakeholder Meetings March 9 Program Overview April 11 Existing Planning documents Water quality concerns Plan needs/requirements
Data Gathering <ul style="list-style-type: none"> Plan goals, objectives and indicators Scope physical extent & Jurisdictions Summary of relevant plans and Master Plan approach Meeting Notes 	2017 Q2 Q3 Stakeholder Meetings June 15 Desired outcomes & steps to achieve them Aug 3 Plan purpose, goals and steps to achieve them: Education, Funding, Collaboration, Communication
Ground and Surface Water Characterization and Contaminant Evaluation <ul style="list-style-type: none"> Engagement with other stakeholders (small PWSs, USFS, Ditch Cos, TM Flood, etc) Preliminary Public Water System Well Inventory Draft Potential Contaminant Sources Report – County Wide Draft Capture Zone Report Draft Watershed maps Draft Watershed Profile framework Preliminary Source Water Protection Area and other special areas boundary development criteria Draft Table of Actions / Projects Draft watershed inventory and data gap analysis – <ul style="list-style-type: none"> Stormwater group tributaries (Stantec) Intervening areas (RCI) 	2017 Q4 Stakeholder Meetings: Oct 12 Watershed and Groundwater issues Nov 16 Gap Analysis and Source Water Protection Areas
Management Strategies <ul style="list-style-type: none"> Additional Stakeholder Outreach (NABs, CABs, GBI, SNJ, KTMB, NNBA, APA, etc) Source Water Protection Area and other special areas refinement Management Strategy development Causes of Impairment and pollutant sources with Draft Pollutant Load Estimates (CWA Element 1) Load reductions anticipated / needed for TR with indicators/targets (CWA Element 2) 	2018 Q1 Stakeholder Meetings: Jan 11, Source Water Protection Areas Feb 22 Management Strategies for aquifers and watersheds
Action Plan and Public Education <ul style="list-style-type: none"> Action Plan and Critical Project Profiles (CWA Element 3) including: <ul style="list-style-type: none"> Technical and financial assistance needed to implement plan (CWA Element 4). Implementation lead, schedule, (CWA Element 6). Interim milestones to track implementation of mgmnt measures (CWA Element 7). Criteria to measure progress toward meeting watershed goals (CWA Element 8). Monitoring component and evaluation process (CWA Element 9). Public Outreach Plans for County and Truckee River Watershed (CWA Element 5) 	2018 Q2, Q3, Q4 Stakeholder Meetings: Apr 12 Public Education and Action Plans TBD Continued Critical Action Plan with prioritization Note Elections Q4
Public Review and Final Approval <ul style="list-style-type: none"> Adoption of the CWPP for Master Plan relevance – agendas, minutes, resolutions 	2019 Q1, Q2, Q3, Q4 March Final plan review June Final Plan Complete Nov. Dec Plan Approval Process Note: Legislative session 2019 Q1, Q2

Combining Program Elements:

Regional Water Quality Protection

Partners Collaborating

City of Reno	City of Sparks	Washoe County	Washoe County Health District
Remediation District	Flood Management	Regional Planning	Stormwater Committee
Conservation District	TMWA	Other PWS	Nevada Land Trust

Core Planning Team

Engineering

Planning

Public Works

Emergency
Management

Community
Development

Flood
Management

Federal Land
Management

Public Water
Systems

Local Planning Team Role

- Collaborative Plan Goals and Objectives
- Share ideas, plans and data
- Identify other stakeholders
- Prioritize water quality issues and threats
- Support plan adoption and implementation



Team Identified “Must Haves”

Regional support and approval

Coordinated, consistent with and complementary to other plans

Useful to funding and regulatory agencies

Identify water quality problems and solutions

List of prioritized implementable projects

Process for implementation, with roles and responsibilities

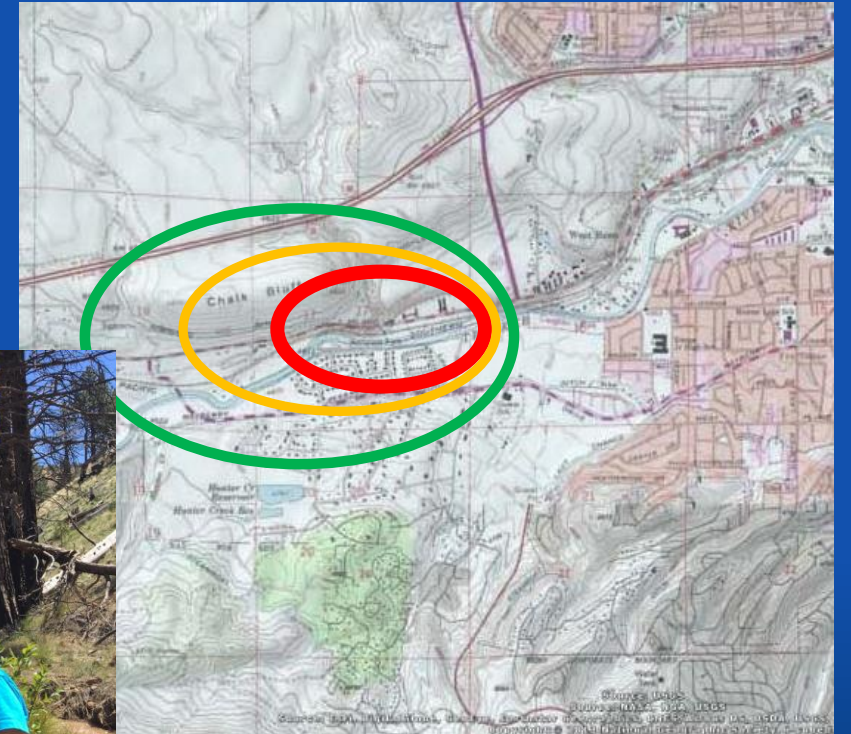
Process to show benefits and accomplishments

Dates	Team Meeting Topics and Milestones
2017	
March 9	Program Overview
April 11	Existing planning documents; water quality concerns; plan needs
June 15	Desired outcomes and steps to achieve them
August 3	Plan purpose, goals understanding: Education, Funding, Collaboration, Communication
October 12	Understanding our water resources and tools
Nov / Dec	Understanding our aquifers and watersheds
2018	
January	Source Water Protection Areas
Jan.-Feb.	Additional Stakeholder Outreach
March	Management Strategies for Aquifers and Watersheds
March to Dec.	Critical Project Profile Development and Prioritization
2019	
March	Plan Review
June	Final Plan Complete
May to Dec.	Public Review and Local Approval Process

Gather information

Characterize groundwater and watershed

- Truckee River Information Gateway
- Data gap analysis
- Existing WHPPs
- Watershed Maps



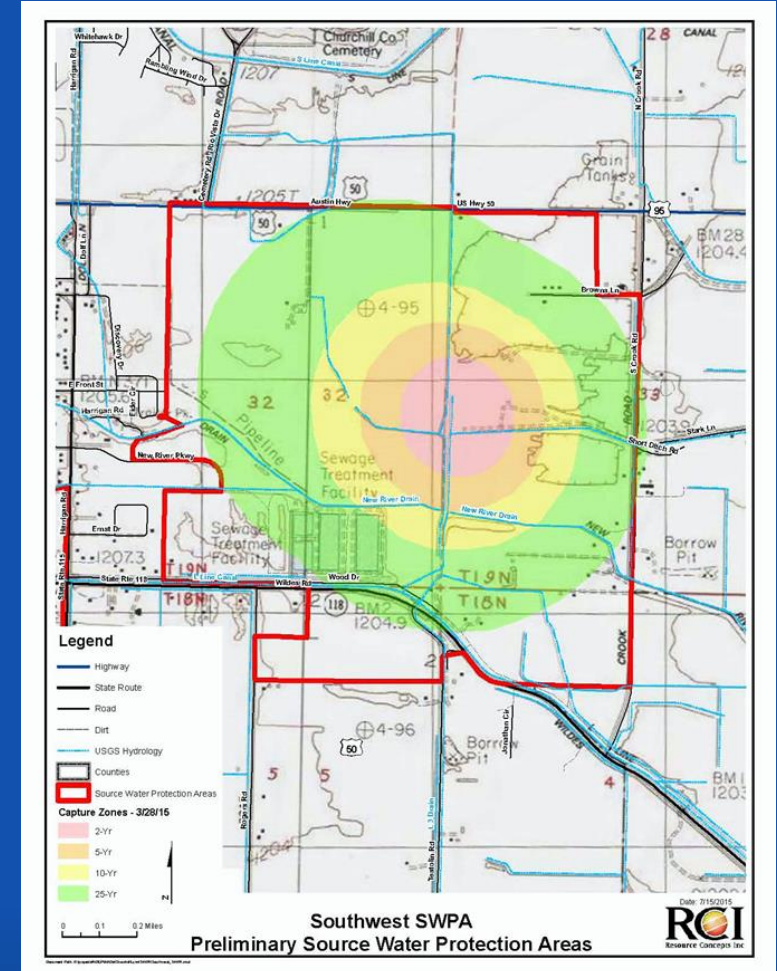
Contaminant evaluation

- Chemical spills
- Underground tanks
- Urban slobber
- Soil erosion



Strategy Development

- Coordinated planning
- Education
- Projects
- What works for your community?



Action Plan & Project “Profiles”

- Funding
- Schedule
- Milestones
- Load reductions
- Implementation
- Monitoring

PROJECT PROFILE #10 – GULLY EROSION

County: St. Clair

Subwatershed: 15

Site: S15-06

Watercourse: Cox-Doty Drain

Location: west of Miller Rd, south of Dunn Road

Lat/Long: 42.96870200, -82.8688430

Problem: 3 gully erosion areas

Estimated Sediment Load Rate: 3.78 cyd/yr (37.78 cyd/10yrs)

Causes: agricultural runoff

General Recommendations: erosion control (106 syd)

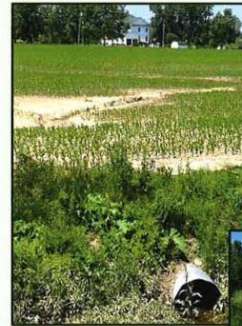
Flow diversion and riparian buffers may also be necessary

Preliminary Cost Estimate Range: \$4,240-\$6,360 (erosion control only)

Pollutant Load Reduction: 3.78 cyd/yr

Cost per LB Sediment Removed: \$0.35

Photos:



Project Examples

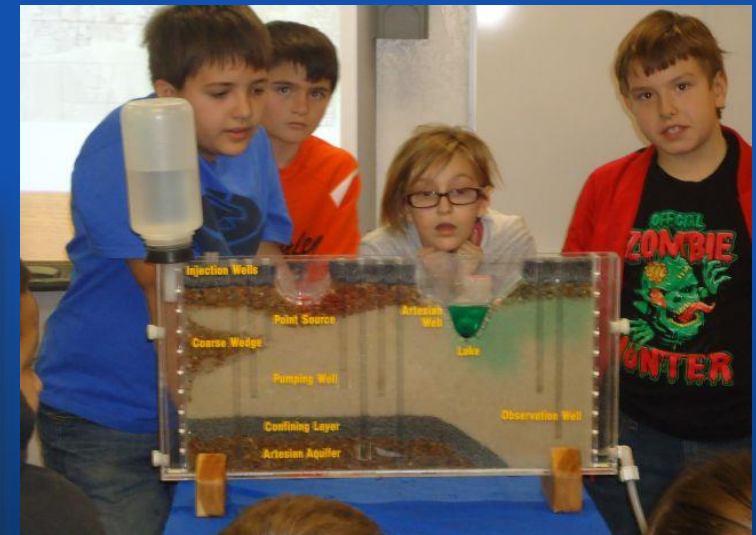
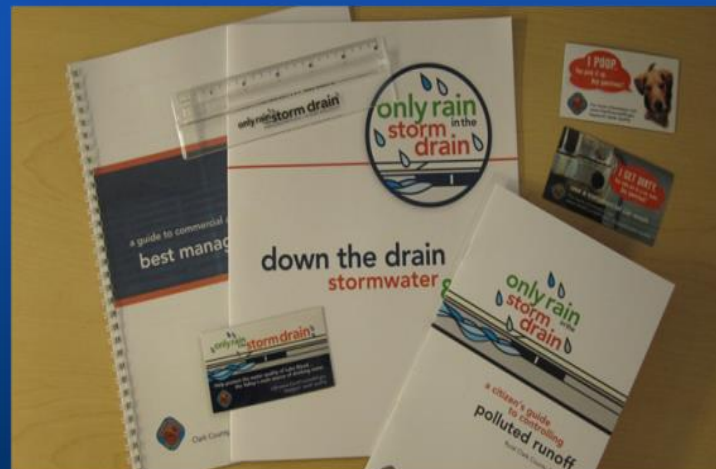
- Close unused wells
- Wellhead security improvements
- Stream restoration
- Stormwater BMPs
- Upland erosion control



Education and Outreach

Examples:

- K-12 School Education
- Community Leaders
- Outreach to Businesses
- Training for Emergency Responders



Public Review and Support



Please type in your questions!





CWA 319 Money for Groundwater Protection

Ryan Chapman Nebraska Department of Environmental Quality

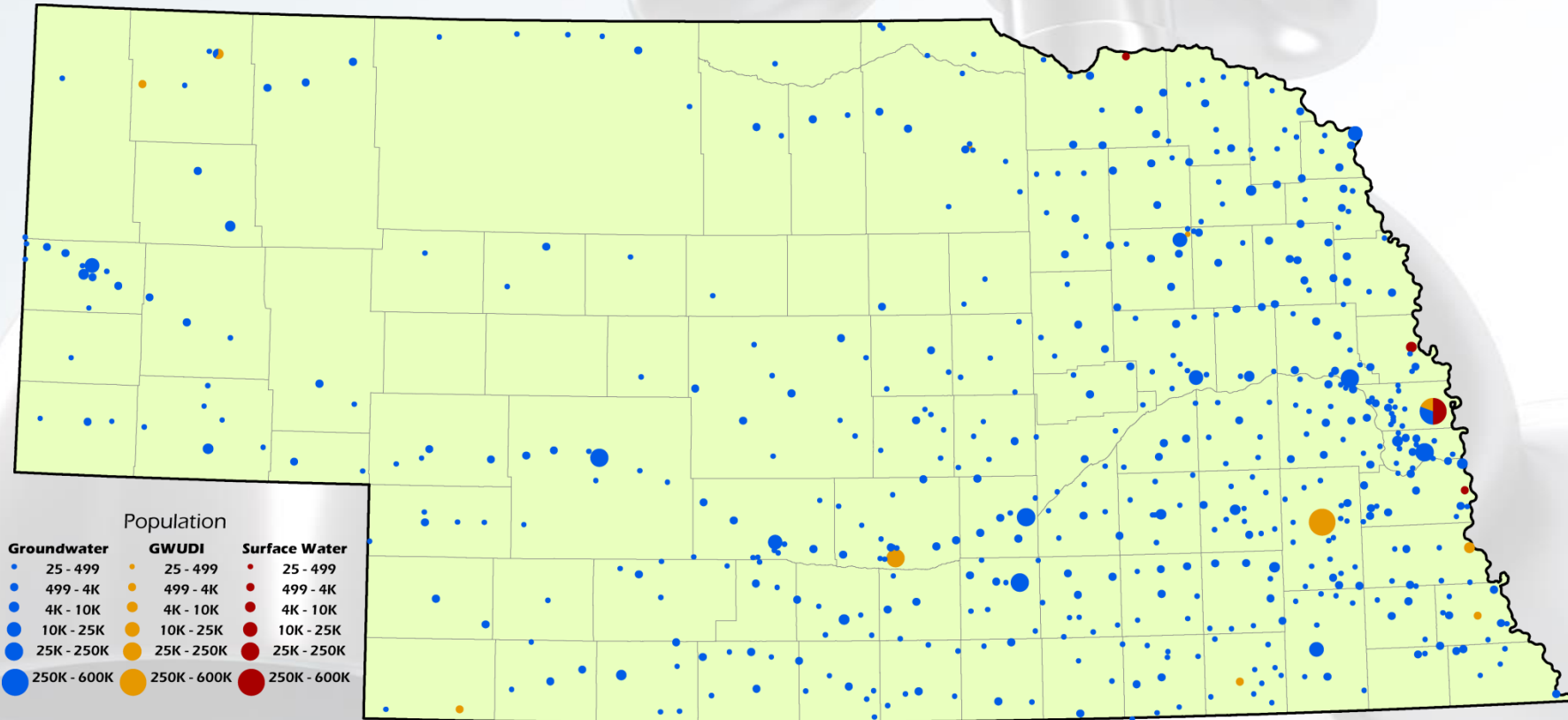
Heather Duncan Environmental Protection Agency – Region 7

NEBRASKA

DEPT. OF ENVIRONMENTAL QUALITY

SDWA

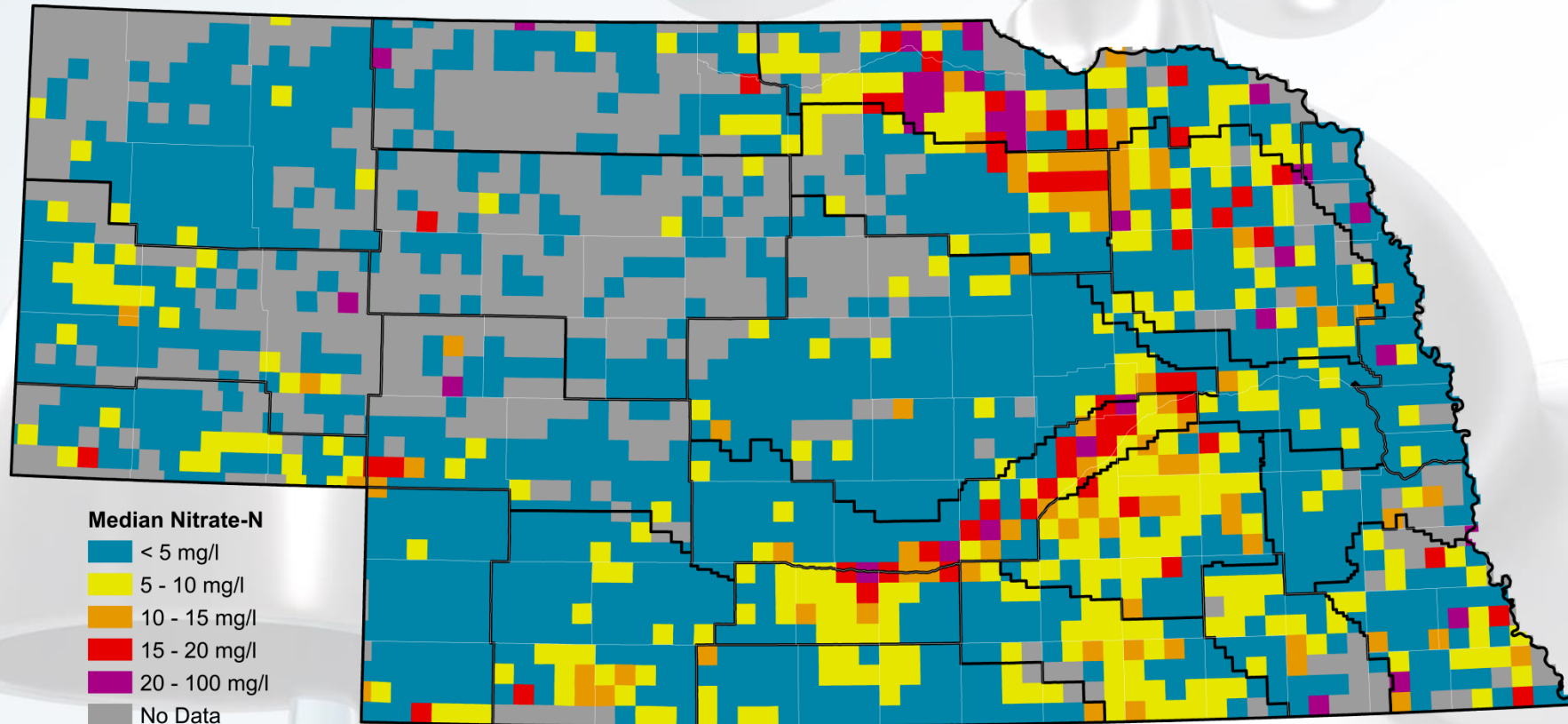
Community Public Water Systems



88% of Nebraskans drink Groundwater

SDWA & CWA

Common Problem = Nitrate from NPS

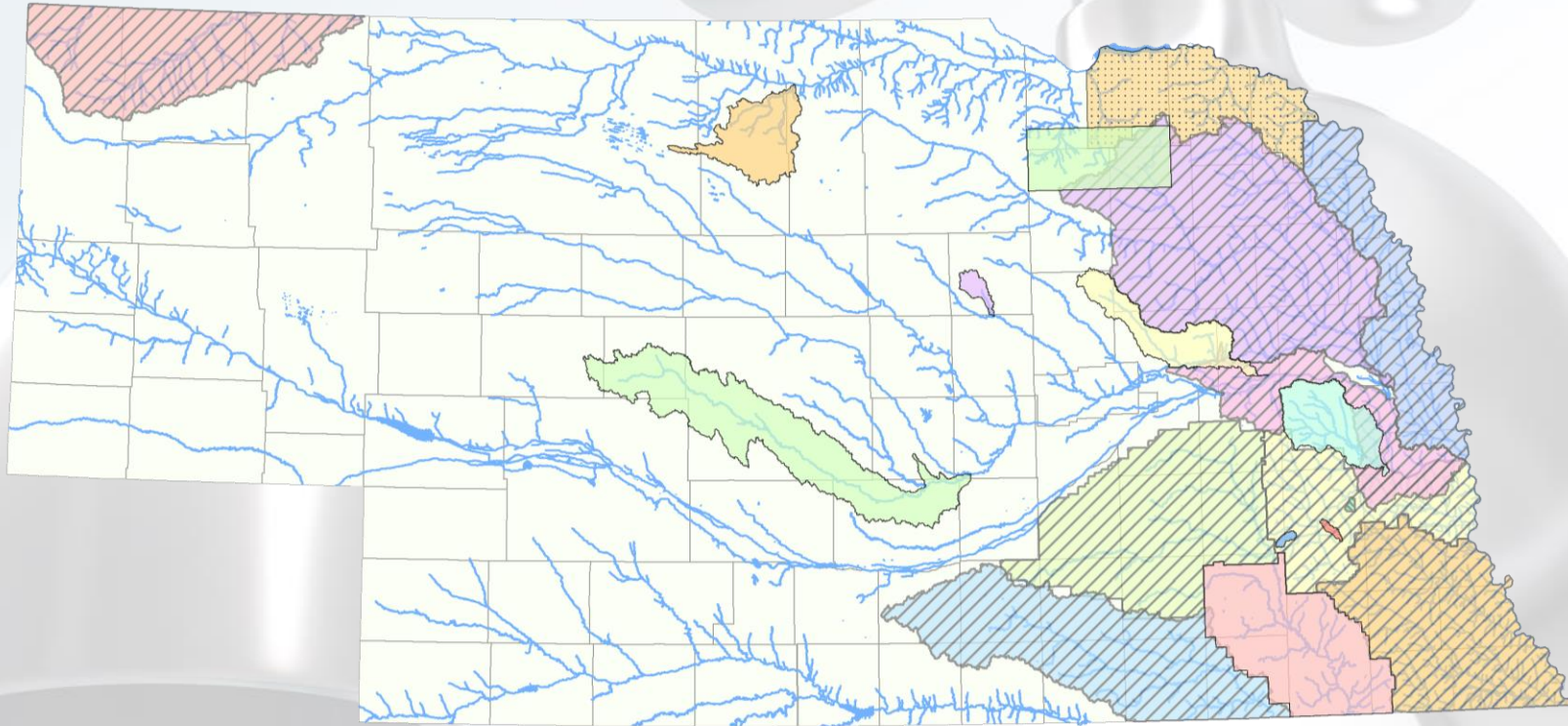


Median of the most recent Nitrate-N concentration by township of 19,743 wells from 1995-2015.

Gray areas indicate no data reported, not the absence of nitrate in groundwater.

Source. Quality Assessed Agrichemical Database for Nebraska Groundwater, 2016.

Nonpoint Source Management Plans



Active Plans

Antelope Creek	Long Pine Creek
Bazile Groundwater Management Area	LBBNRD
Clear Creek/Pibel Lake	Shell Creek
Conestoga Lake	South Loup River
	Wahoo Creek

Planning in Progress

LBNRD	Nemaha River Basin
LENRD	PMRNRD
LPRCA	UBBNRD
LPSNRD	White River/Hat Creek
	Waverly DWPM

Potential Plans

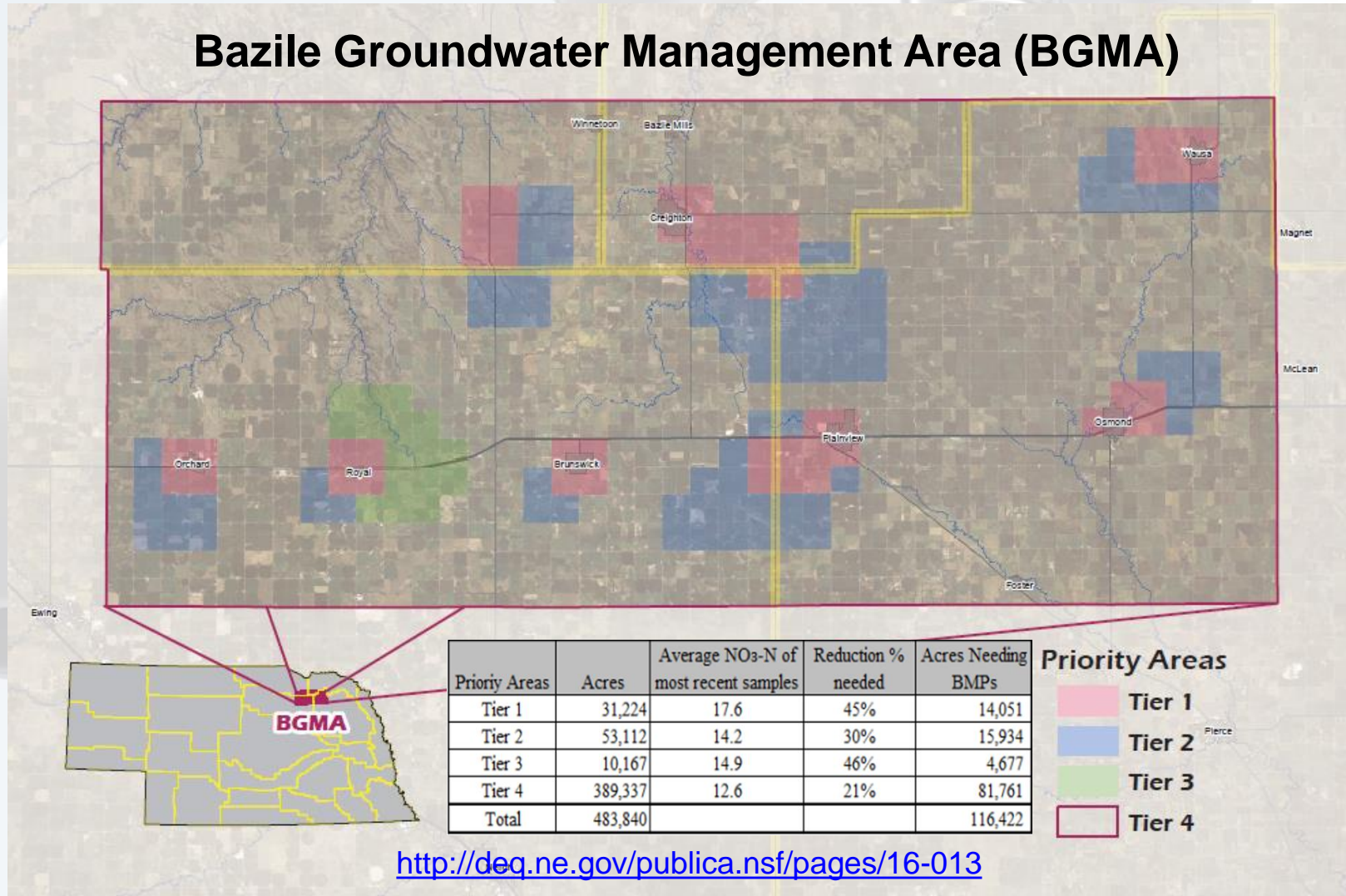
L&CNRD

CWA



Alternative to a 9-Element Watershed Management Plan

Bazile Groundwater Management Area (BGMA)



<http://deq.ne.gov/publica.nsf/pages/16-013>



Targeted Agricultural BMPs

- Soil Sampling
- Irrigation Water Well Sampling
- Water Well Flow Meters
- Soil Moisture Sensors and Irrigation Scheduling
- Fall Fertilizer Application Restrictions
- Winter Application Restriction
- Annual Crop Reports
- Manure Application Restrictions
- Crop Tissue Analysis
- Split Fertilizer Application
- Fertigation
- Nitrogen Inhibitors
- Cover Corps
- Variable Rate Applications and Precision Farming
- No Till/Reduced Tillage



Drinking Water Protection Management Plan



- **Plans** **SDWA** 
 - DWSRF 15% set-a-side
 - Eligible activity in NE Source Water grant
- **Implementation** **CWA** 
 - Section 319 non-point source
 - Alternative to a nine-element watershed management plan
 - Reviewed & accepted by EPA Region 319 staff

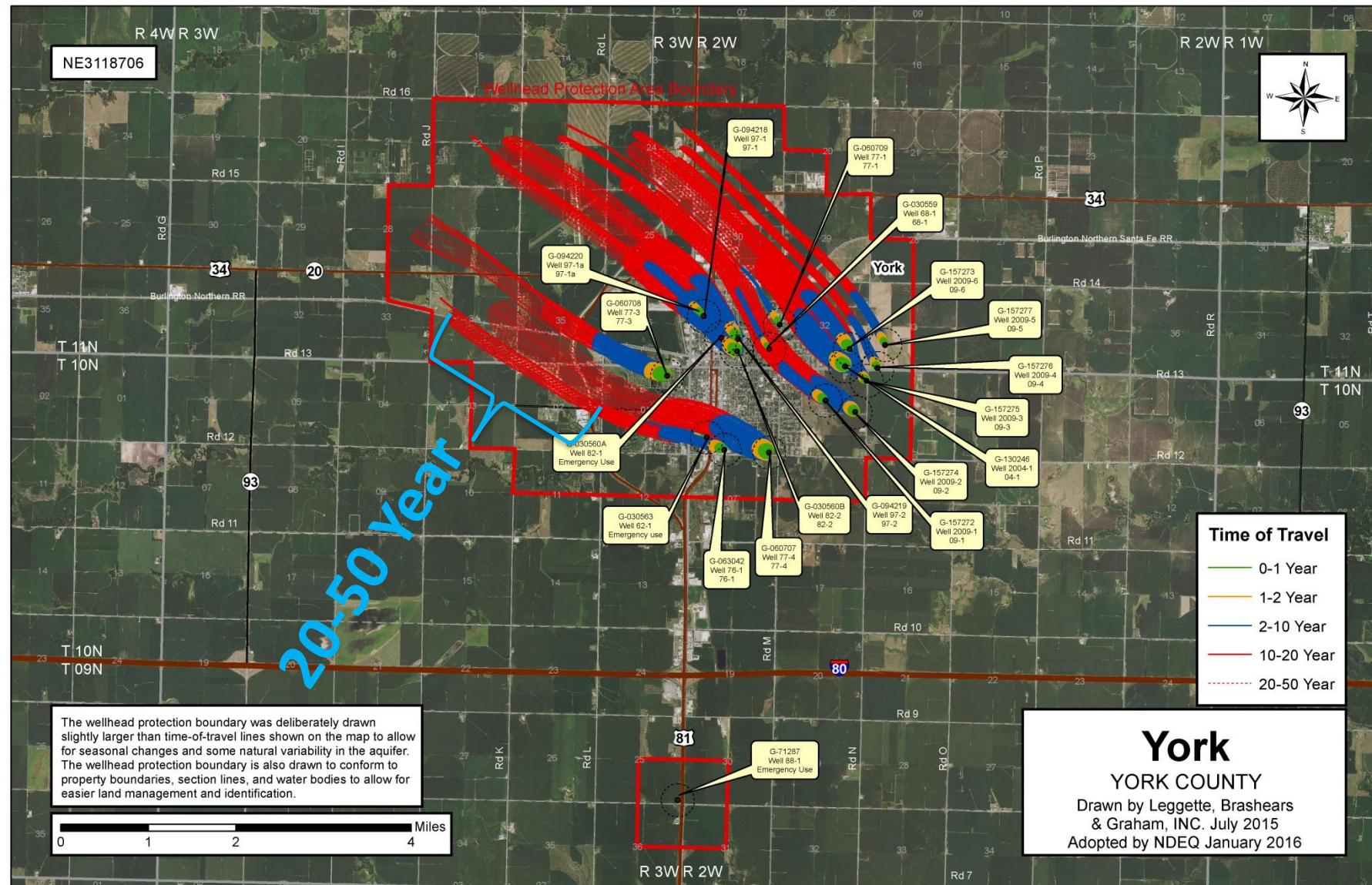
Drinking Water Protection Management Plan

- **Expectations**

- Meet EPA's alternative to a 9-element watershed management plan (319 requirement)
- 50-year TOT based on 3D model
- Community based planning process
- Strong implementable I&E program
- Draft plan with one round of edits

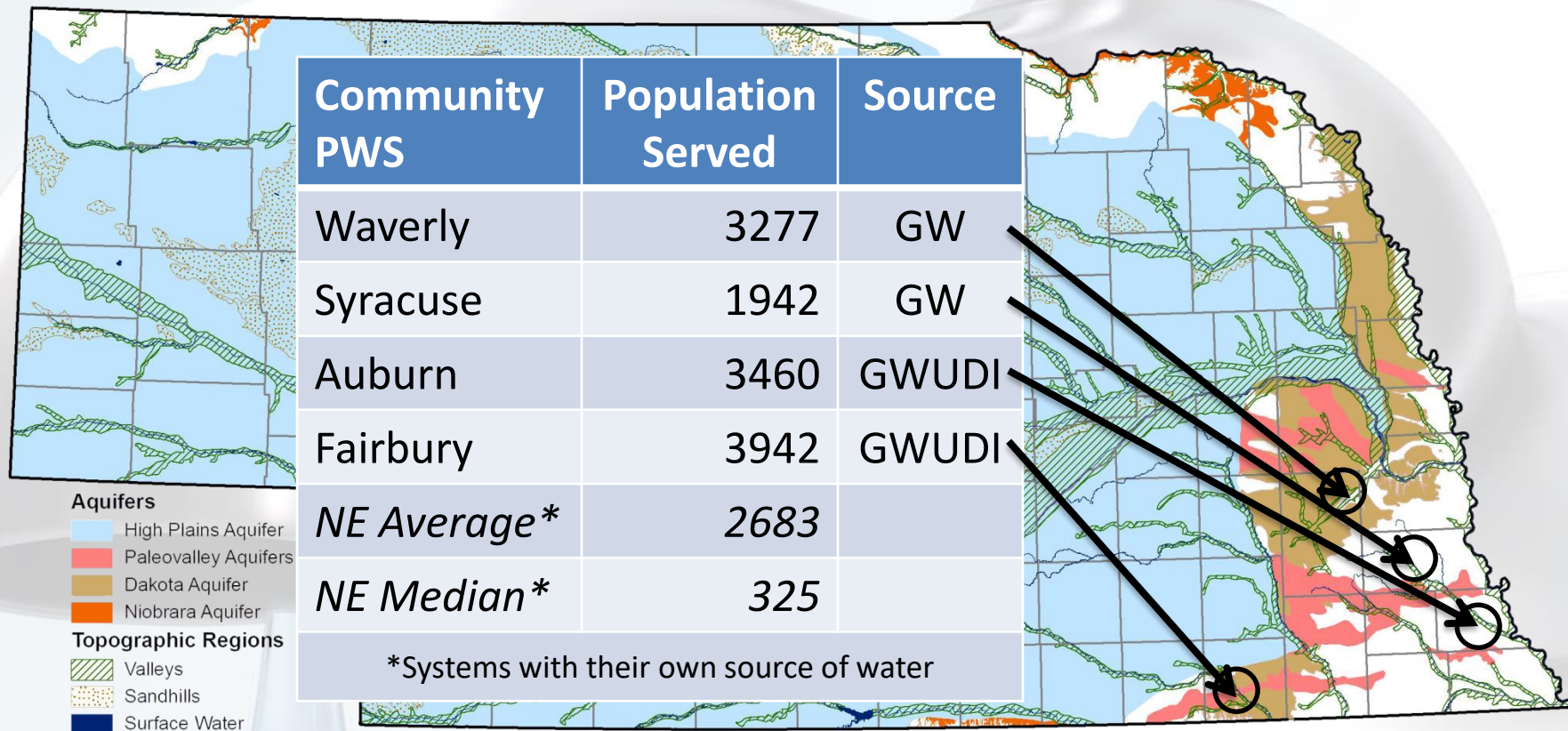


Example 50 year time-of-travel



Drinking Water Protection Management Plan


- Pilot on 4 communities



Outreach & Targeted BMPs



Other Endeavors

- **Risk Communication Workshops - Nitrate** 
 - Science based approach for effective communication
 - High concern, low trust situations
 - Sensitive or controversial situations
 - Improve participation in voluntary projects/BMPs
- **Statewide Outreach Campaign - Nitrate**
 - Plan to: educate, inform, and coordinate local contacts
 - Improve participation in voluntary projects/BMPs



Section 319 of the Clean Water Act

- 319(b) - State Management Programs (NPS Management Programs)



- 319(h)- Grant Program

- States follow grant guidelines when spending 319 funds: <http://www2.epa.gov/polluted-runoff-nonpoint-source-pollution/319-grant-current-guidance>

Step 1: NPS Management Program Plan



State NPS contacts: <https://www.epa.gov/nps/state-contacts-nps-programs>

Step 2: Watershed Planning

Option 1: Surface Water Restoration



Step 2: Watershed Planning

Option 2: GW Sourcewater Restoration



* One or more is occurring:

- Degradation is occurring (data trends!)
- High loads (concentrations) in “upstream” water

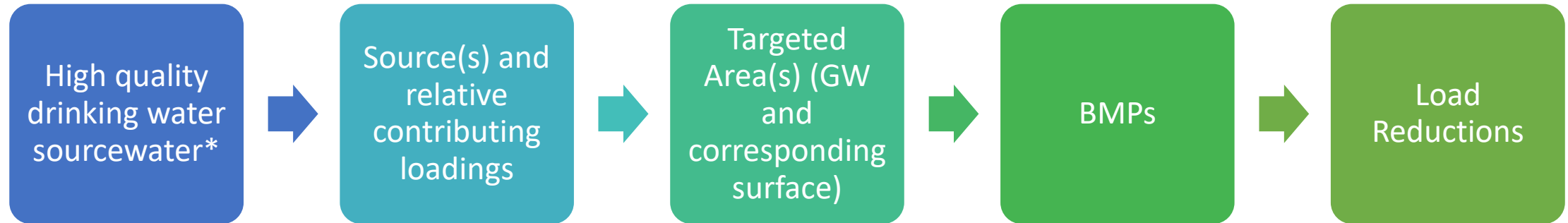
...and the I&E to make it happen!

Apply this logic for following milestones:

- Decrease loading to vadose zone
- Halt trend of increasing concentrations in GW
- Decrease concentrations in GW below MCL

Step 2: Watershed Planning

Option 3: GW Sourcewater Protection



* One or more is occurring:

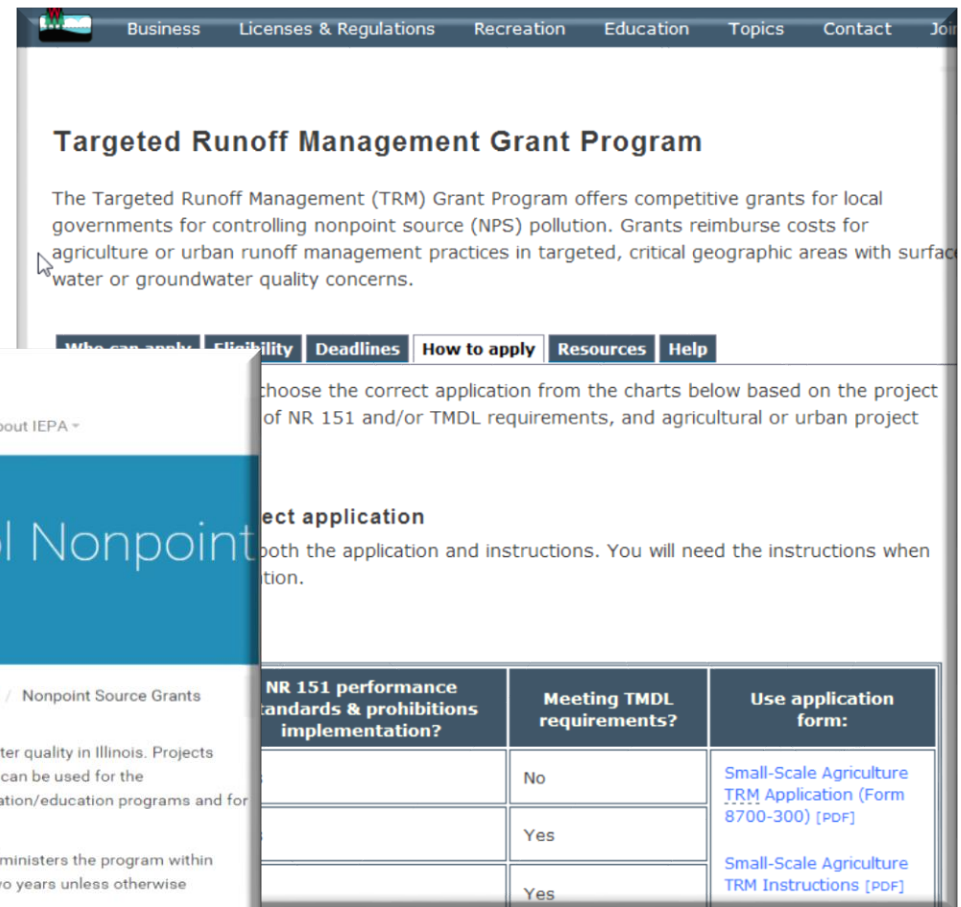
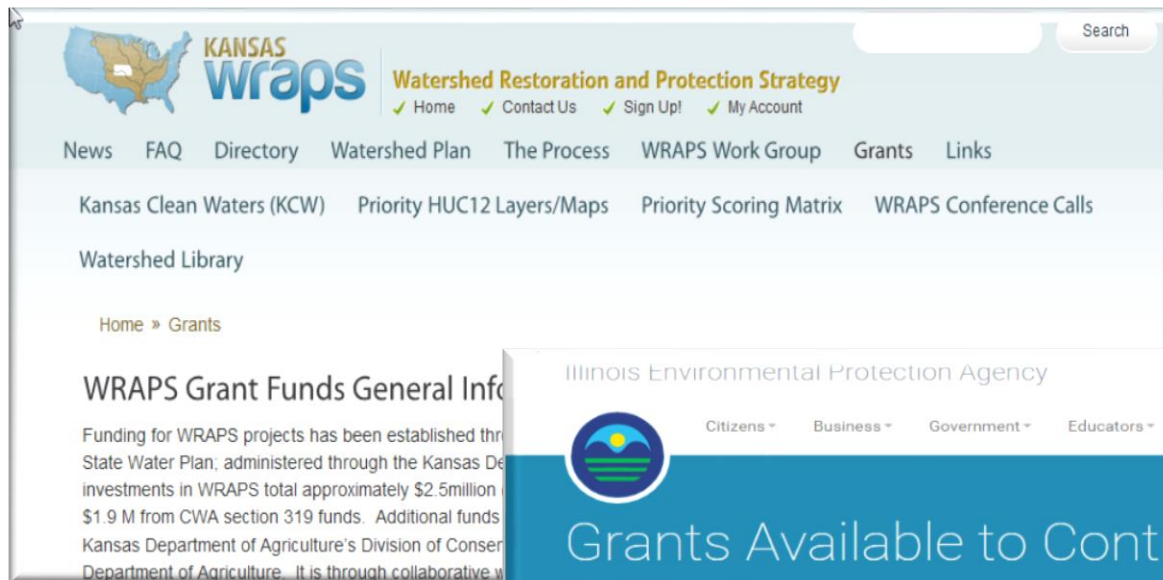
- No [additional] treatment of DW needed
- No [additional] sources of DW needed
- Stable or improving water quality

...and the I&E to make it happen!

- Apply this logic for following milestones:
- Continue to decrease concentrations in GW
 - Avoid PWS treatment for sourcewater N concentrations

Step 3: Watershed projects

Check your state's NPS website



Contact

Deirdre Mason dmason@asdwa.org

Kim Borgzinner kborgzinner@ndep.nv.gov

Birgit Henson bhenson@ndep.nv.gov

Ryan Chapman ryan.chapman@nebraska.gov

Heather Duncan duncan.heather@epa.gov

ASDWA website

VIEW THE WEBINAR RECORDING & more

www.asdwa.org/cwa-sdwa-coordination/

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your questions!