

Project Kick-Off Meeting



**Long Pine Creek Watershed
Improvement Project**

June 2, 2016



Welcome!



Introductions

- Name
- Affiliation/Role

Please Sign In

Tonight's Objective

1. *Update you on progress*
2. *Learn about your interests in participation*



Tonight's Agenda



- Project Background & Updates
- Phase 1 Project Overview
- Other Partners
- Schedule
- Questions





Project Background

- Key Watershed Issues
 - Sand Draw Erosion
 - Highway 7 Culvert Threatened
 - *E. coli* Bacteria
- Started watershed planning process in 2012
- Comprehensive Assessment



Project Background



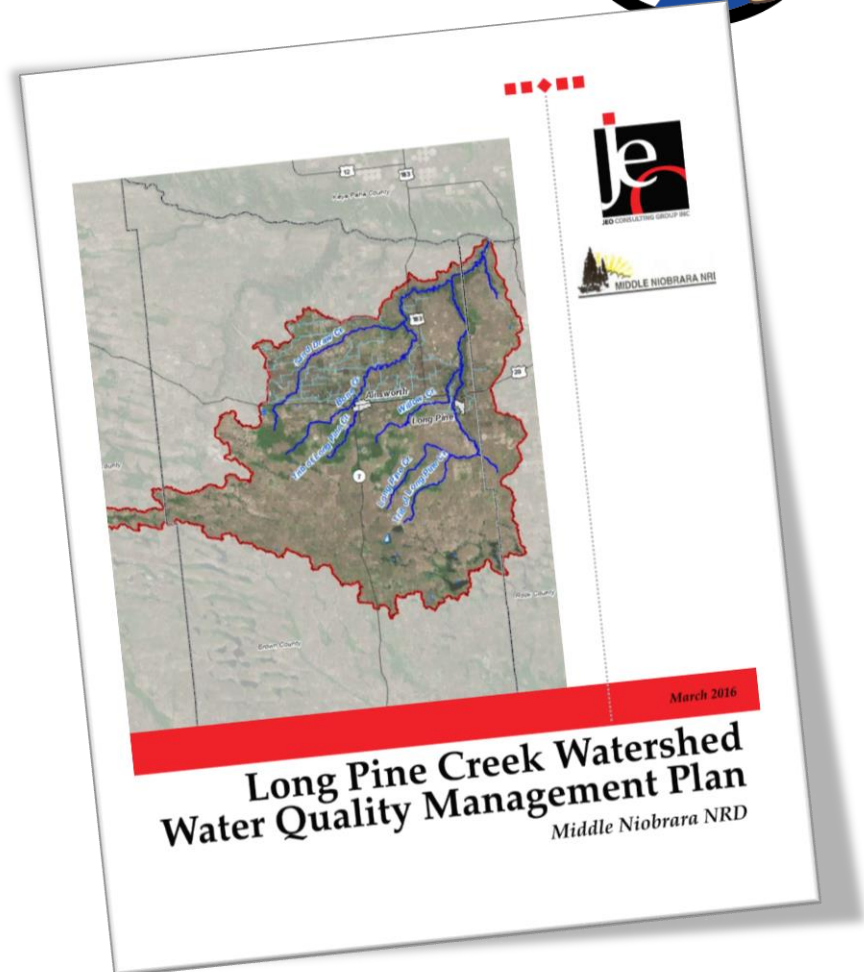
- Plan allows for a comprehensive approach to addressing issues
- Plan increases eligibility for outside funding sources
- Designed to build off work completed in Rural Clean Water Project (1980s)
- Also developed a restoration plan for Sand Draw Creek
- Effort led by local stakeholders
 - Public Survey Conducted
 - 4 meetings and Open House
 - Last Meeting in October 2014



Project Background



- NRD applied for funding in Fall of 2014
 - Contingent on final plan approval
- Plan officially approved March 2016!
- 100% Voluntary
- Recommendations:
 - Stream restoration
 - BMPs/Land Treatment
 - Education and Outreach
 - Phased Implementation
- Phase 1 beginning now!



Phase I of Implementation



- Grant applications approved
- Multiple Partners
 - Middle Niobrara NRD
 - NRCS
 - NE Environmental Trust
 - NDEQ 319 Program
 - Ainsworth Irrigation District
- Total = \$820,000

Goals

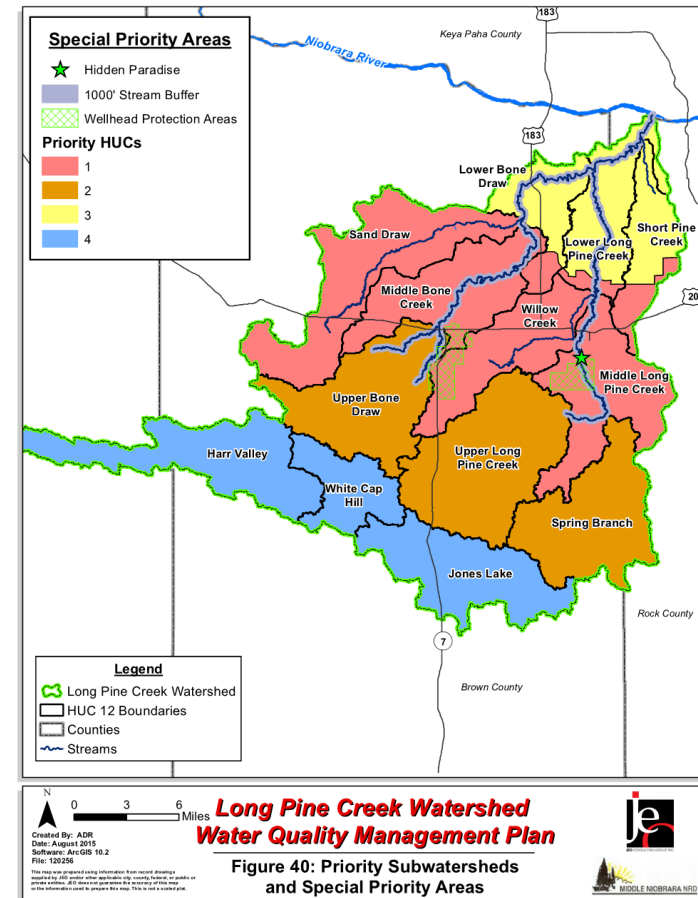
1. Design of stream restoration for 2 sites on Sand Draw
2. Hiring a Watershed Coordinator
3. Funding for Land Treatment Cost Share (BMPs)



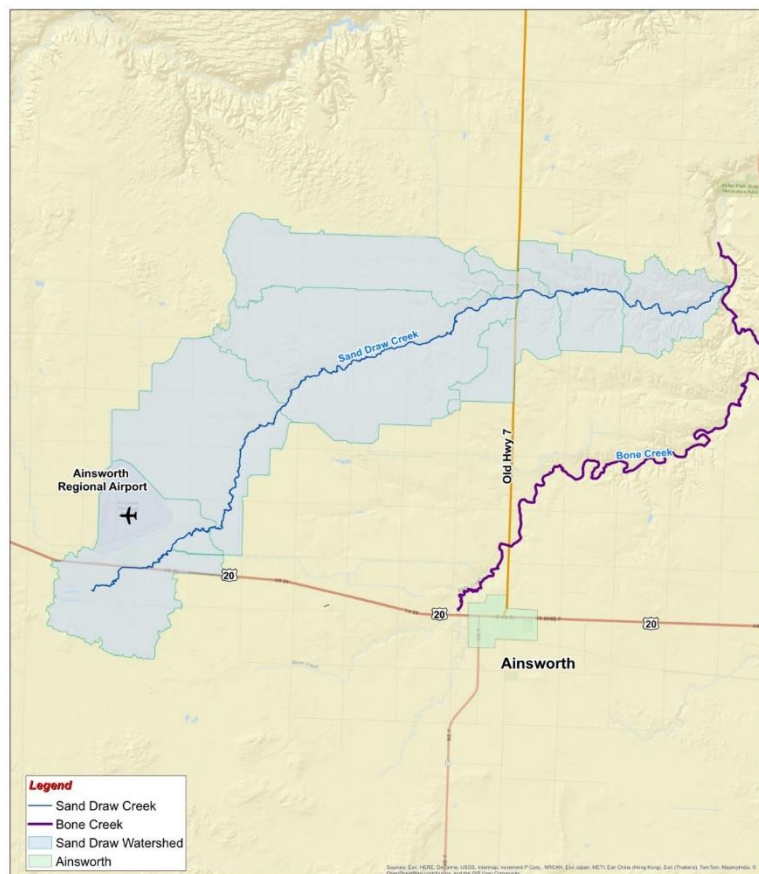
Phase I Priority Areas



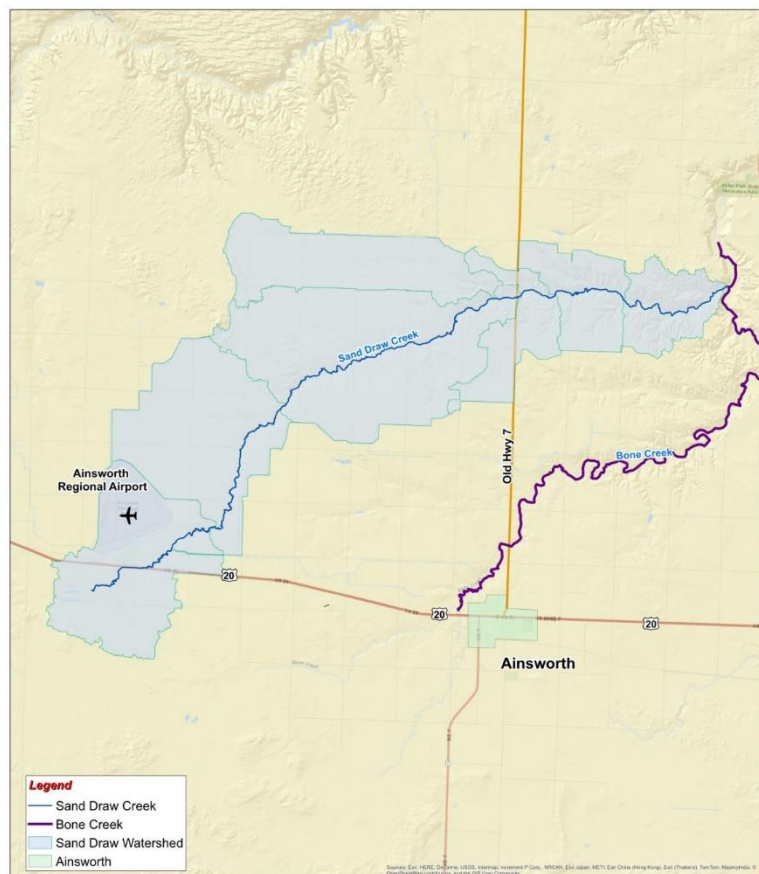
- Red portion of map
 - Sand Draw
 - Middle Bone Creek
 - Willow Creek
 - Middle Long Pine Creek
 - AID area
- Stream Corridors
- Hidden Paradise area
- Wellhead Protection Areas



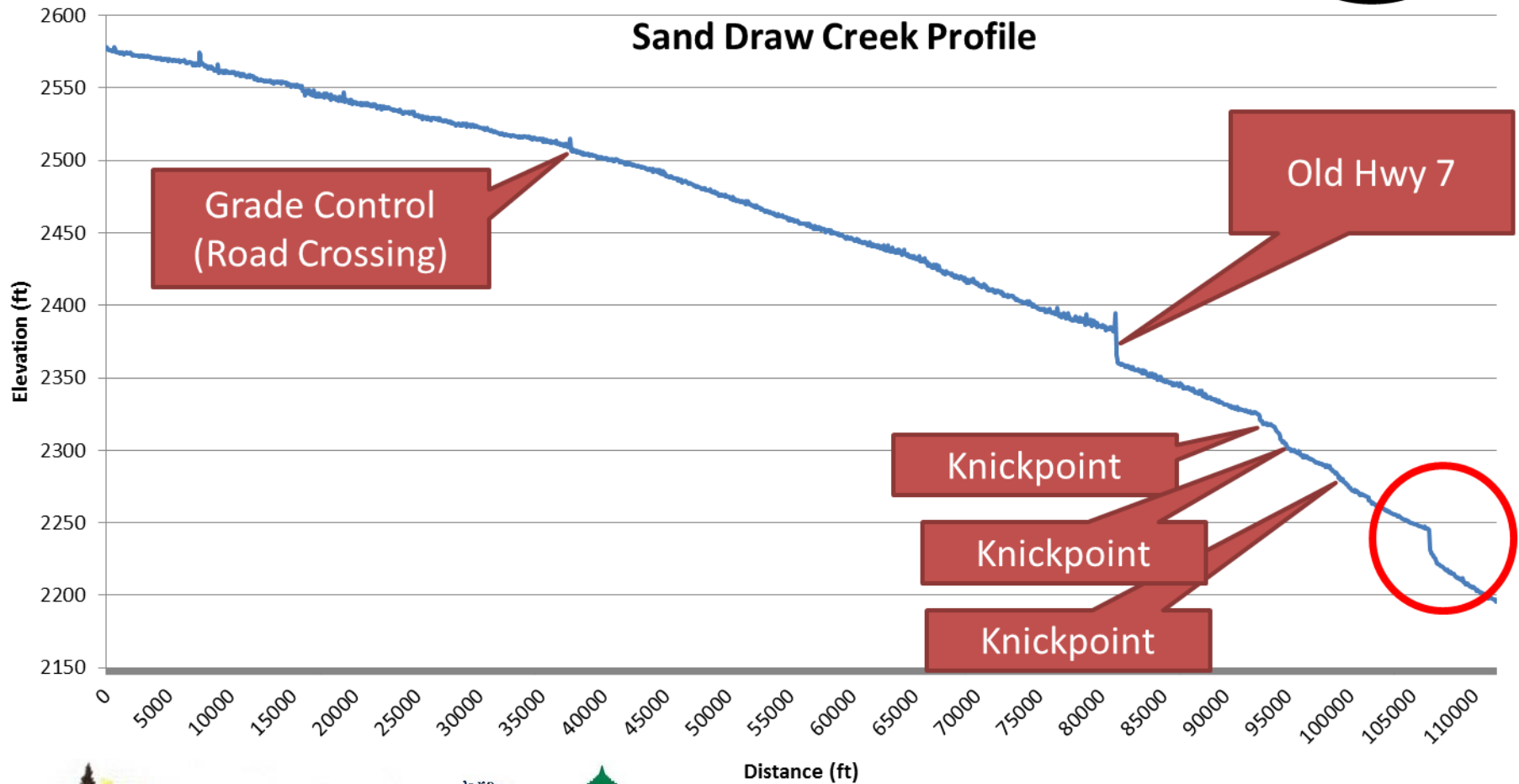
Sand Draw Creek



Sand Draw/Old Hwy 7



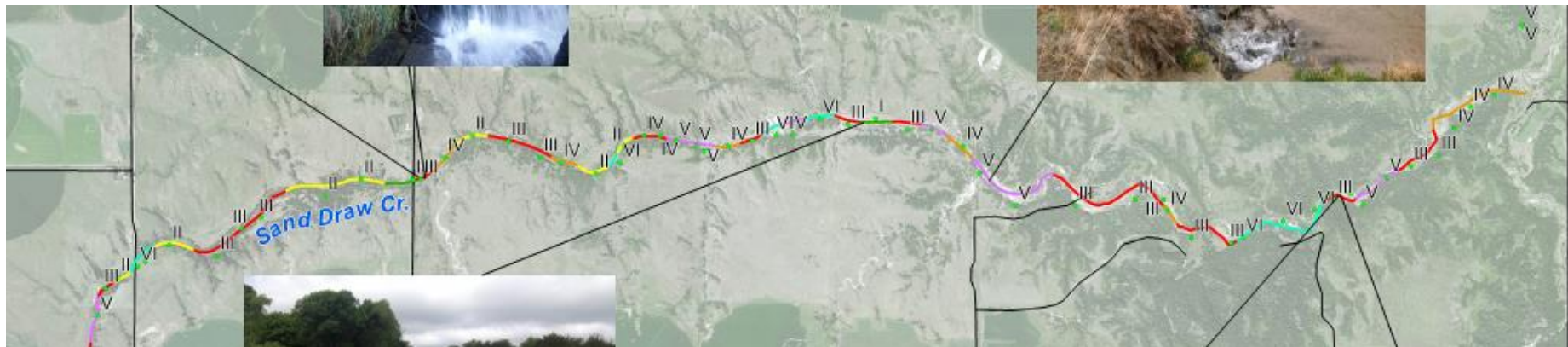
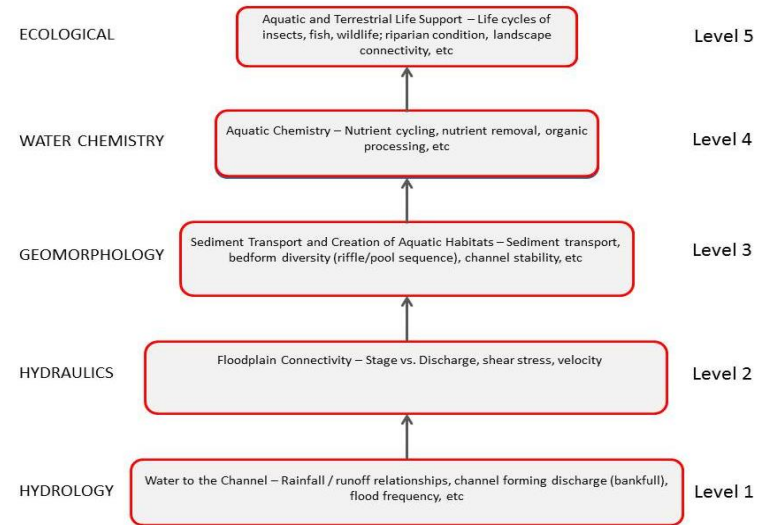
Sand Draw Restoration Assessment



Sand Draw Watershed Ranking Priorities



- Functional Restoration Pyramid
 - Priority Ranking:
 - Hazard to Public
 - Systemic (Level 1&2)
 - Supporting (Level 3)
 - Enhancements (Level 4&5)



Sand Draw Watershed Ranking Priorities

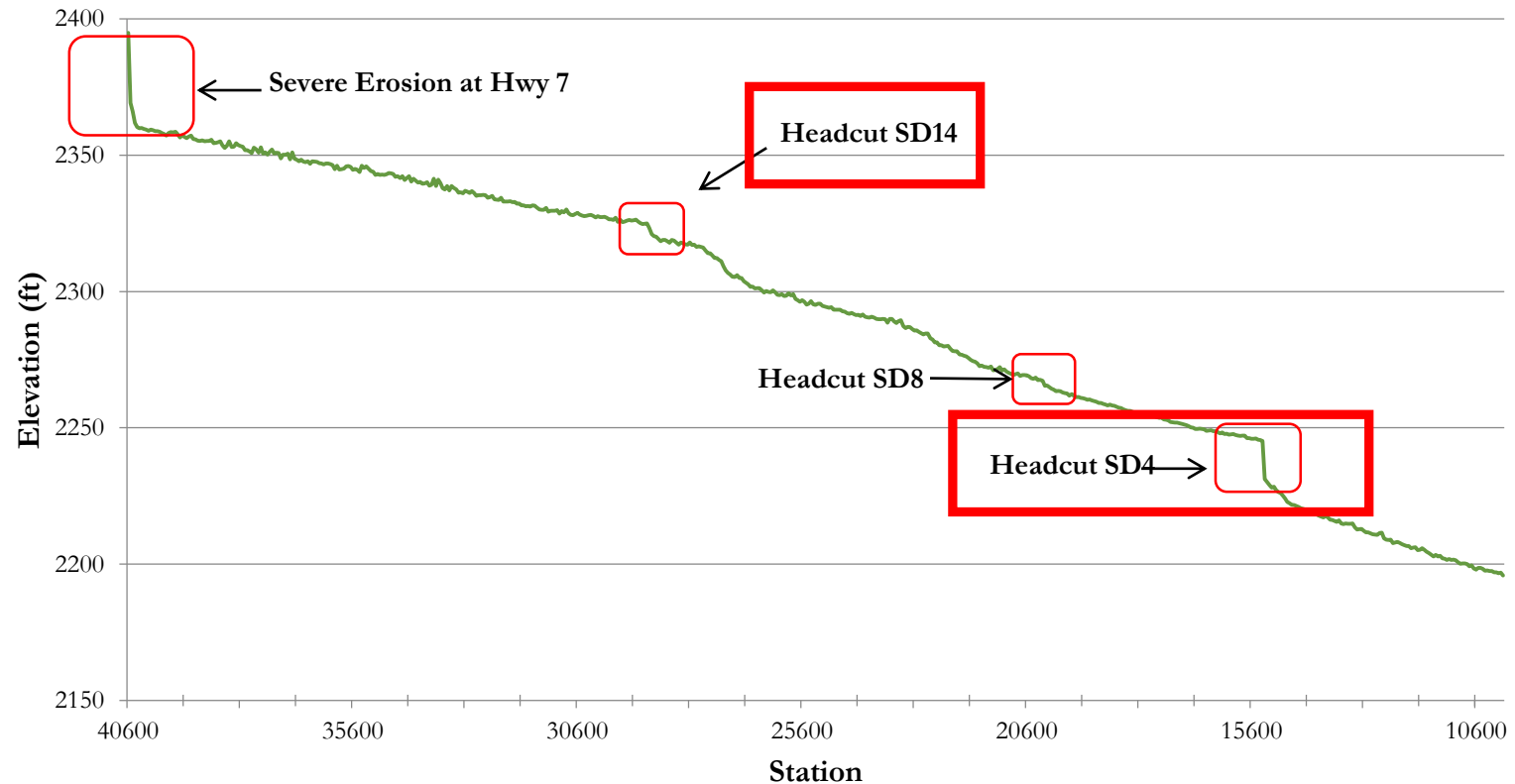


- 11 “Systemic” Sites Identified
 - Active Headcut Locations
 - Previously Incised Channels

Reach ID	Recommended Project	Station	
		From	To
SD2	Grade Control Structures	127+00	131+00
SD4	Waterfall and Head cut Repair	144+00	151+50
SD6	Grade Control Structures	175+00	181+00
SD8	Grade Control Structures	195+00	201+50
SD9	Grade Control Structures	227+00	235+00
SD12	Grade Control Structures	264+50	269+00
SD14	Grade Control Structures	276+00	281+00
SD18	Grade Control Structures	305+00	307+00
SD21	Grade Control Structures	332+00	337+00
SD26	Grade Control Structures	361+50	367+50
SD28	Grade Control Structures	381+00	386+00



Sand Draw Watershed Assessment



Sand Draw Restoration

Site: SD 4



Sand Draw Restoration

Site: SD 14



Stream Restoration Sites for Phase I



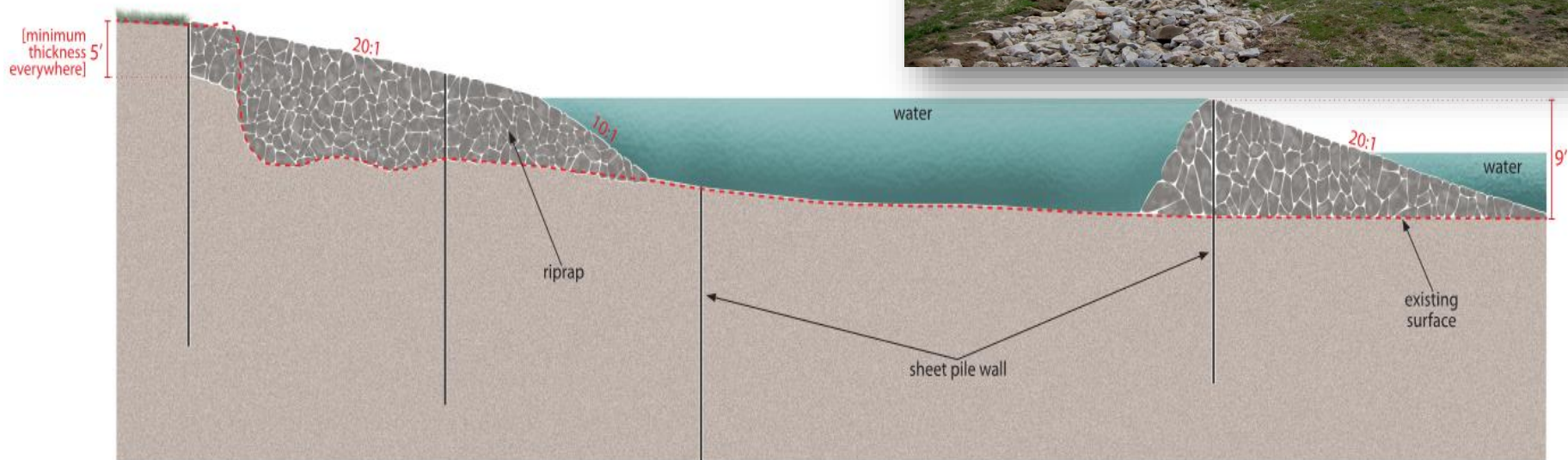
- 2 sites picked for first round of work (SD 4, SD 14)
- Need to start in bottom of watershed and work our way up
- Conceptual restoration design already developed
- Now starting full design



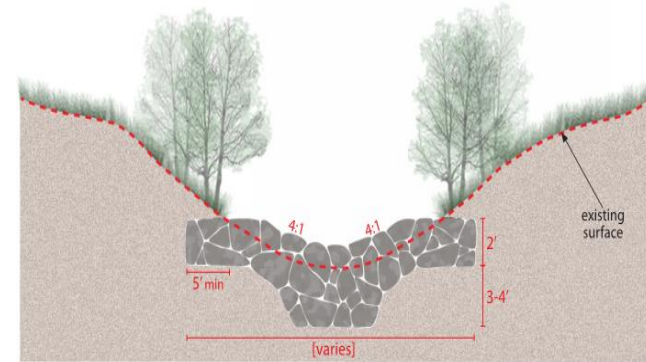
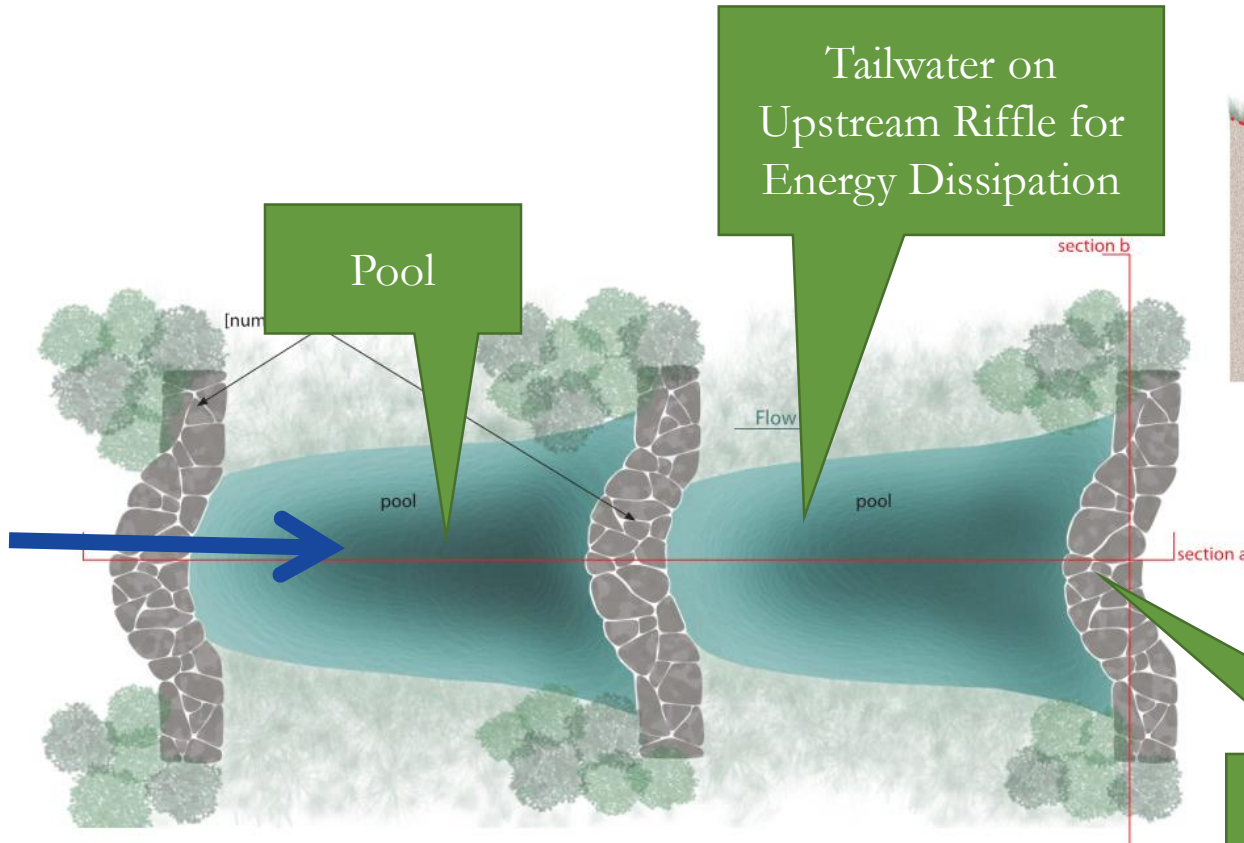
Conceptual Level Restoration



- Systemic Repairs
- Grade Control is Critical!
 - Engineered Rock Riffles
 - Fish Passage
 - Self-Adjusting



Conceptual Level Restoration



Downstream Riffle
Protects from Future
Headcuts



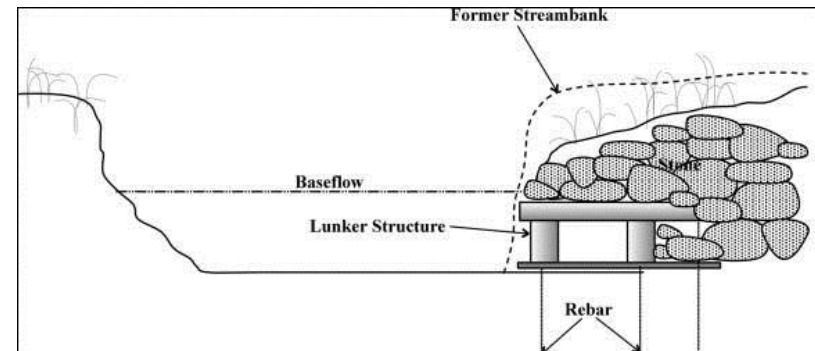
Conceptual Level Restoration



Conceptual Level Restoration



- Environmental Enhancements
 - Bank Shaping
 - Stable slopes that allow vegetation to establish
 - Vegetation/Plantings
 - Establish riparian corridor
 - Establish in-stream and bank habitat
 - Lunkers
 - Man-made fish habitat structures



Design and Construction Process



- We will be working with the affected landowners to address their concerns and meet project goals
- Will need to obtain access and easements
- Construction Anticipated to be funded with additional grant funds
- Construction to begin Spring/Summer of 2017 (Anticipated)



Sand Draw Restoration Design and Construction



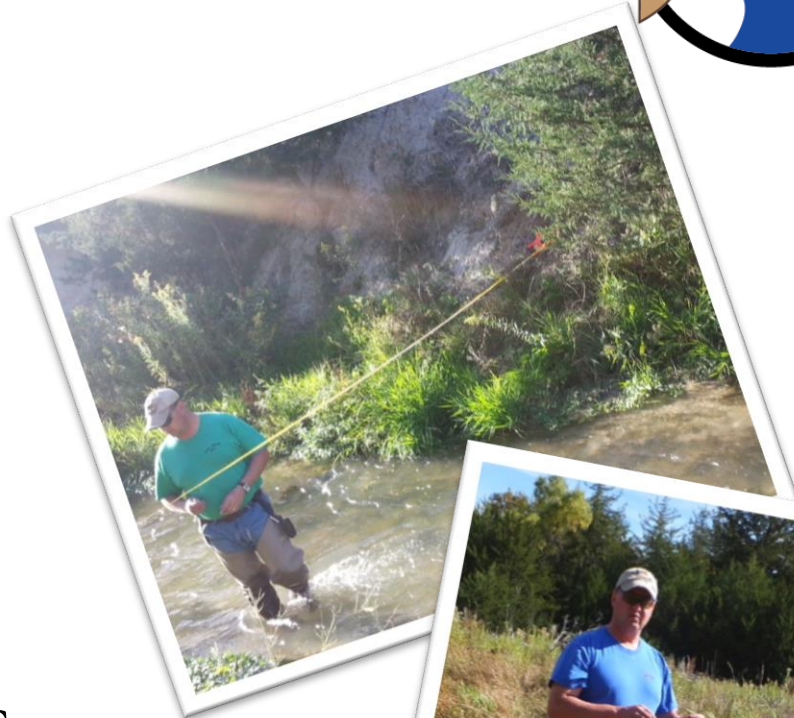
- Next Steps
 - Meet with landowners to verify sites
 - Topographic Survey
 - Geotechnical Testing
 - Preliminary design plans & meeting on site
 - Wetland Delineation and preliminary 404 permitting
 - (Fall 2016) Submit grant applications for construction
 - Draft final plans & meeting on site
 - Submittal of 404 permit applications
 - Finalize designs and specifications
 - Construction to begin Spring/Summer of 2017 (Anticipated)



Watershed Coordinator



- NRD plans to hire a Watershed Coordinator
 - Work with landowners
 - Handle day to day workload
 - Assist in outreach and education
- Keep the improvements moving!



BMP/Cost Share Opportunities



- Working with **willing landowners**
- Improve efficiency and profitability of operations
- Improve water quality and habitat
- Funding Sources
 - EQIP
 - NRCS
 - NRD programs
 - 319 funding
 - Other Programs

Management Practices
Stream Bank Stabilization
Cover Crops
Stream Fencing and Water Sources
Grassed Waterways
Irrigation Water Management
No till
Water Sediment Control Basin
Rain Gardens/Swale/Urban Other
Septic System Upgrade
Well Decommissioning
Composting/Chips/Manure
Mulching
Other BMPs to be Determined



Other Partners

State Water Quality Initiative

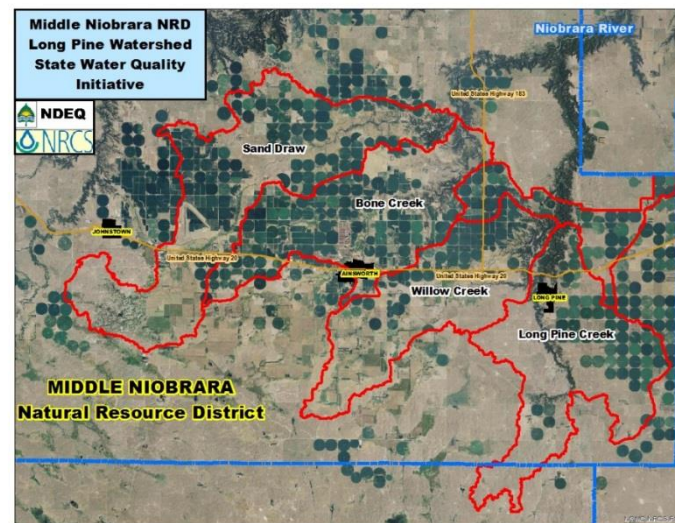
- NDEQ/NRCS
- Began Spring 2015

NE Game and Parks

- Cool Water Stream Initiative
 - Riparian Zone improvements
 - In-stream habitat for native fish and trout

Sandhills Task Force

US Fish and Wildlife Service



BMP/Cost Share Opportunities



- Indicate on sheet if you are interested in learning more or participating
- No obligation at this time!
- Working with **willing landowners**

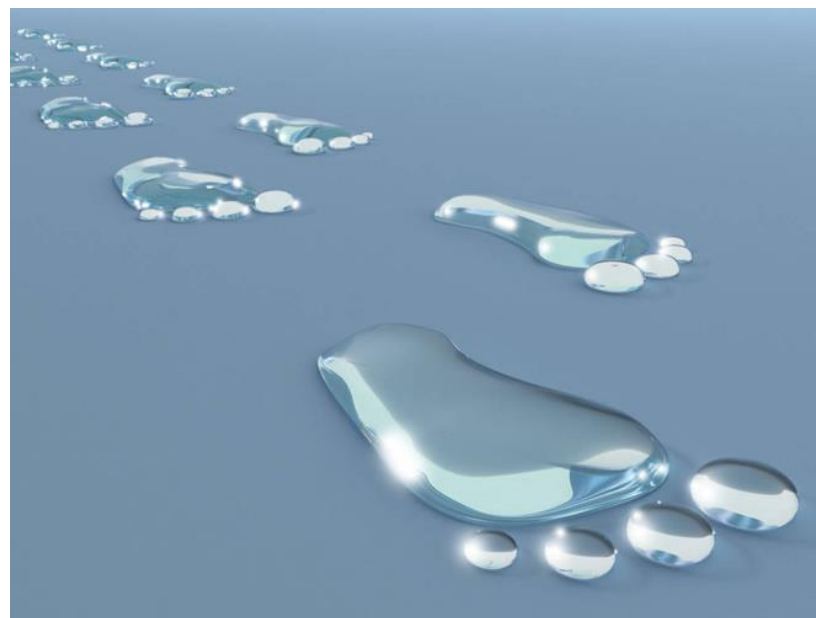
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Other BMPs to be Determined
Cool Water Streams Initiative



Next Steps



- Begin meeting with landowners
- Finish set-up of cost share program
- Design work
- Install BMPs with willing landowners (ongoing)
- Apply for construction funding (fall)



Questions?



**Long Pine Creek Watershed
Improvement Project**

<http://www.mnnrd.org/longpinecreekwatershed.html>



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