



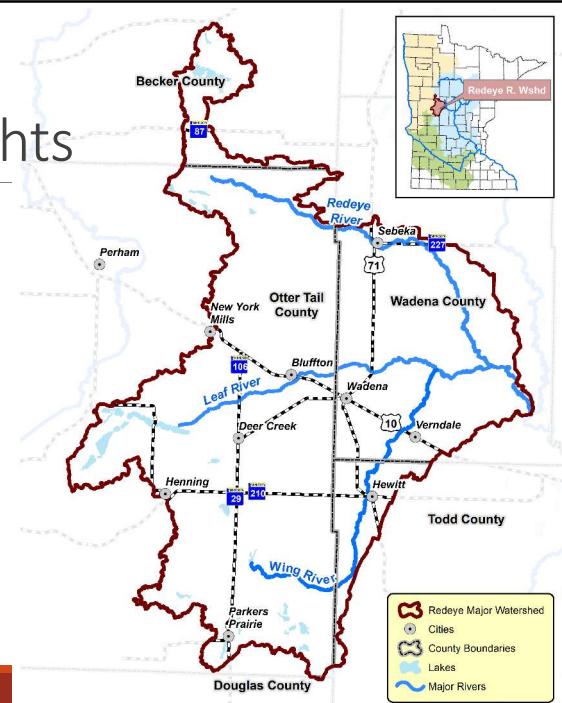
ONE WATERSHED ONE PLAN



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LWR Watershed Highlights

- Contains 3 main rivers: Leaf, Wing, Redeye
- Drains into the Crow Wing River near Staples and then the Mississippi
- Mosaic of streams, wetlands, forests, pastures, farms
- >80% remaining historical wetlands
- Shallow aquifer and sandy soils
- Four counties: Becker, Otter Tail, Wadena, Todd
- No current turbidity or phosphorus impairments – in overall good health



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LWR One Watershed One Plan

Memorandum of Agreement between 5 entities

- East Otter Tail SWCD
- Otter Tail County
- Wadena SWCD
- Wadena County
- Becker SWCD



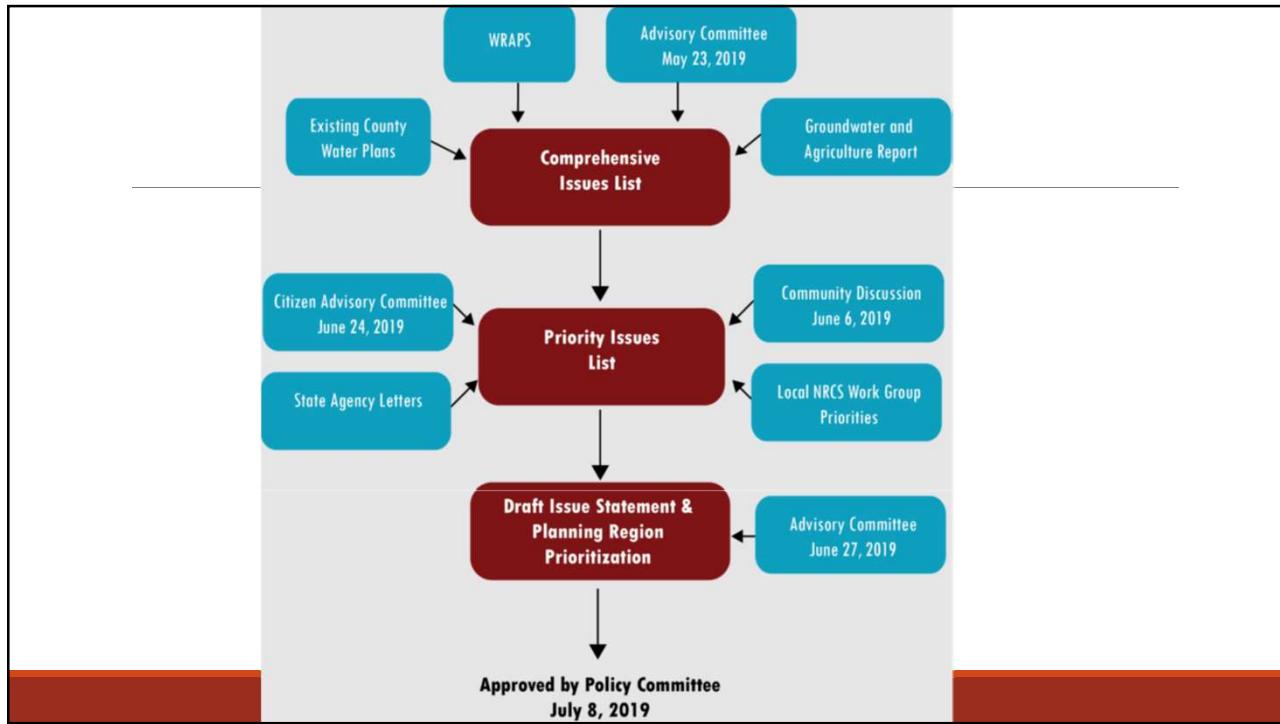
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Plan Highlights

- Includes a land management prioritization that gives credit for current BMPs on the landscape and prioritizes areas for additional management practices
- Contains three groundwater goals
- Incorporated both PTMApp for measuring source reduction; and
- Landscape Stewardship Plan for prioritizing forest management and land protection
- Draft completed within one year



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Category	Resource	Issue Statement
Tier 1 Issue Statements		
	Drinking water	Shallow groundwater is highly vulnerable to contamination from numerous sources.
	Streams, Lakes	Soil erosion and runoff can cause sediment and nutrient enrichment and low dissolved oxygen in lakes and streams.
	Streams	<i>E. coli</i> impairments in streams can make them unsafe for recreation.
	Lakes	Projected development pressure and conversion of seasonal properties to fulltime homes has the potential to negatively affect lake water quality and riparian habitat.
	Agricultural land	Soil health has the potential to impact agricultural productivity and water-holding capacity.
	Forests, Grasslands	Fragmentation and degradation of upland habitat by changes in land use can cause a loss of perennial vegetative cover and impact land resilience, habitat, surface, and ground water quality.
Tier 2 Issue Statements		
	Wetlands	Wetlands are in continued need of protection, which helps with precipitation storage, maintaining lake water levels, and habitat.
	Shallow lakes	Lakes with identified high phosphorus sensitivity, outstanding biological significance, wild rice, and shallow depths may not be sufficiently protected with standardized lake management practices, which affects fish and wildlife habitat quality.
	Streams	Connectivity barriers in streams (culverts & dams) are impacting fish habitat and stream geomorphology.
	Streams	Altered hydrology associated with a change in the water quantity, timing, and variability of flow in water courses can impact stream geomorphology, channel stability, and cause streambank erosion.
	Aquifer	Groundwater sustainability is vulnerable in the face of increased irrigation withdrawal.

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Plan Focus Areas


Groundwater


Surface Water


Habitat


Land Stewardship













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Groundwater

Goals

- Protecting drinking water
- Minimizing nitrates
- Increasing understanding of sustainable groundwater use

Examples of How

- Well Sealing
- Nutrient Management
- Irrigation Water Management





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Surface Water

Goals

- Maintaining current wetland cover
- Enhance water quality in Leaf Lake Chain
- Address *E.coli* impairments

Examples of How

- WCA Enforcement
- Septic System Maintenance
- Rain Gardens
- Livestock Exclusion and Watering Facilities



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Habitat

Goals

- Enhancing Riparian Vegetation
- Improving Stream Connectivity
- Enhancing Forests

Examples of How

- Shoreline/Riparian Restoration
- Fixing Culverts and Dams
- Forest Management



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Land Stewardship

Goals

- Increasing land best management practices on cultivated land, pasture, and forest

Examples of How

- Cover Crops
- Reduced Tillage
- Sustainable Grazing
- Forest Enhancement and Protection



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Planning Regions



Redeye

- Redeye River and tributaries
- City of Sebeka



Wing

- Wing River, Lower Leaf River, and pour point
- Parkers Prairie, Hewitt, and Verndale.



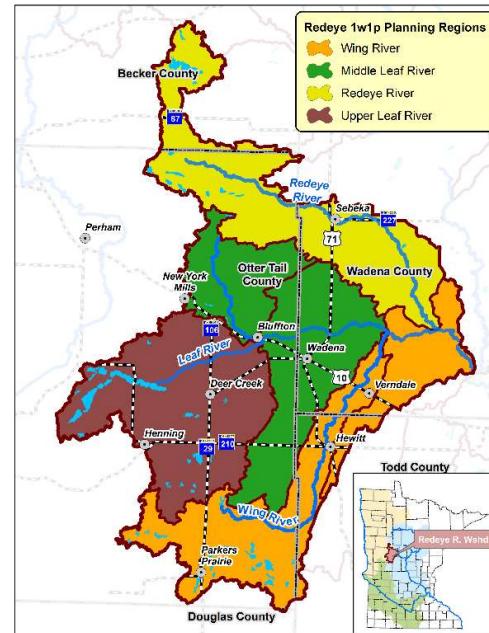
Middle Leaf

- Bluff Creek and Leaf River
- New York Mills, Bluffton, and Wadena.



Upper Leaf

- Leaf Lake Chain and the headwaters of Leaf River
- Henning and Deer Creek



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Land Prioritization

Where to target new land management practices

Acres of land within our watershed fall in these **4** categories:

Planning Region	Number of Acres
Bluff Creek - Middle Leaf	45,000
Redeye River	45,000
Upper Leaf	45,000
Wing - Lower Leaf	40,000

PROTECTED LAND
Protected land is simply land that is preserved from future development (Wetlands, Public Water, Public Land, Easements, SFIA, or Buffers)

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Land Prioritization

Where to target new land management practices

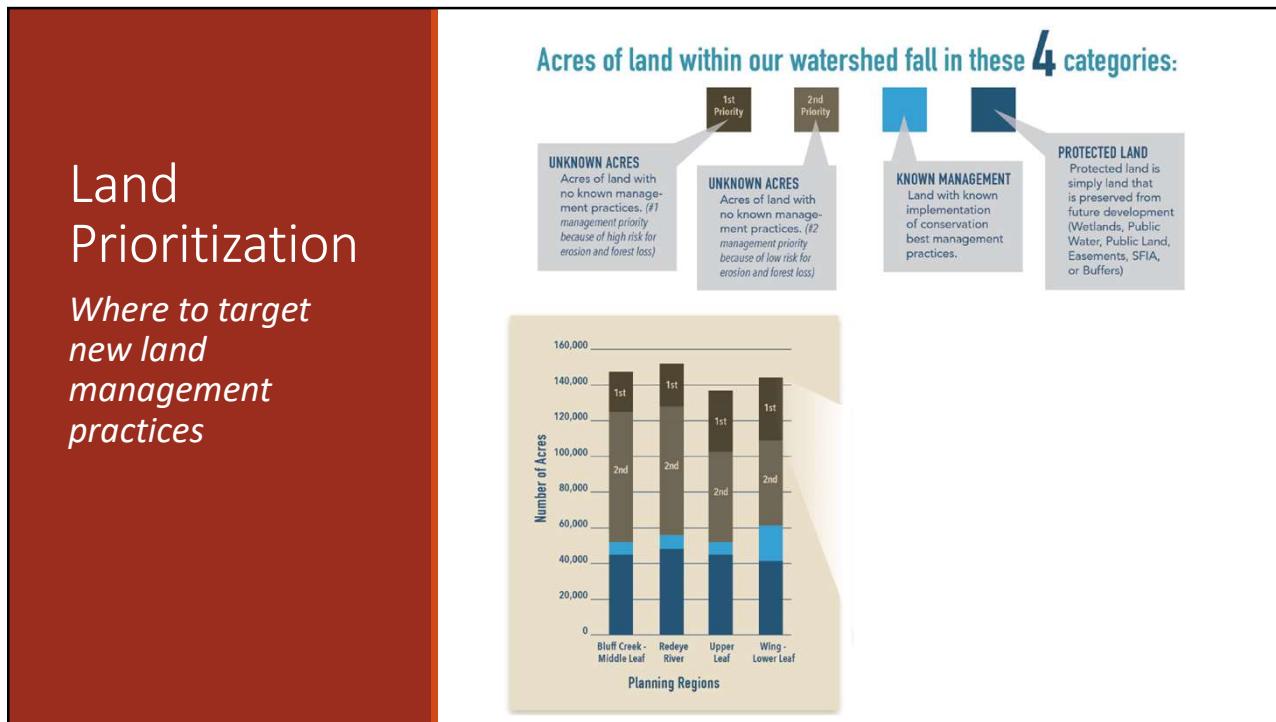
Acres of land within our watershed fall in these **4** categories:

Planning Region	Number of Acres
Bluff Creek - Middle Leaf	45,000
Redeye River	50,000
Upper Leaf	45,000
Wing - Lower Leaf	55,000

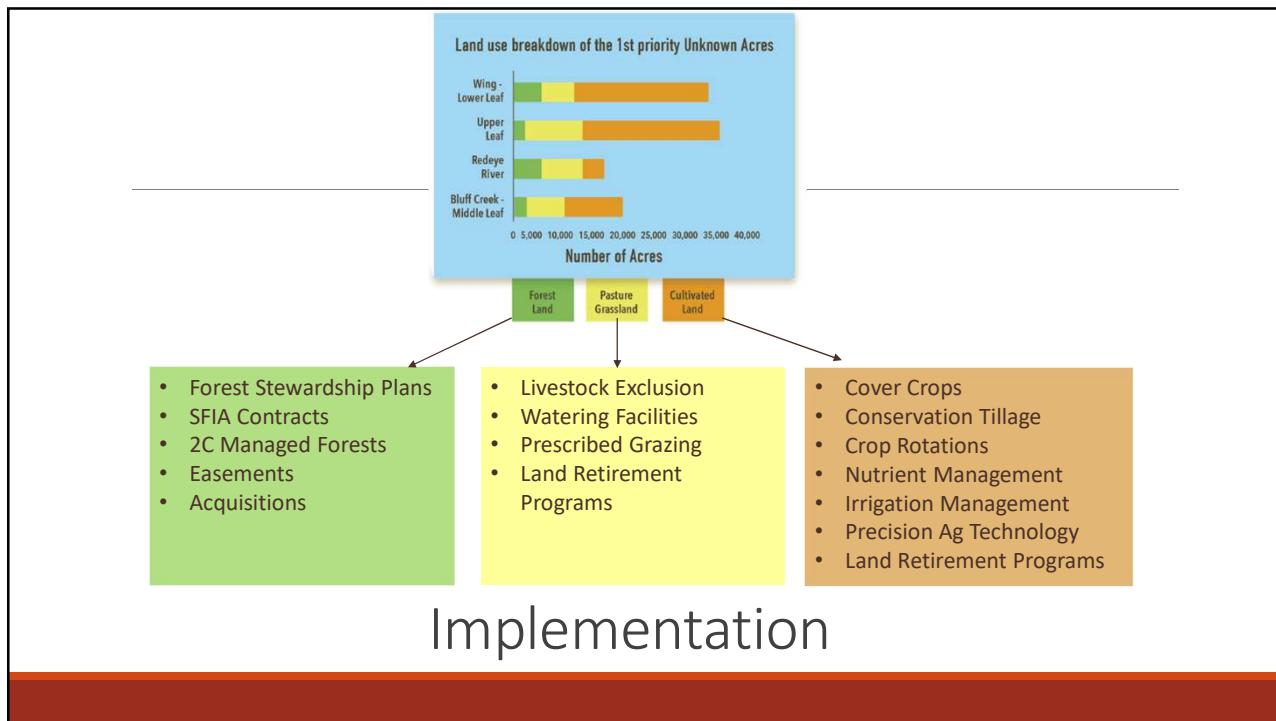
PROTECTED LAND
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KNOWN MANAGEMENT
Land with known implementation of conservation best management practices.

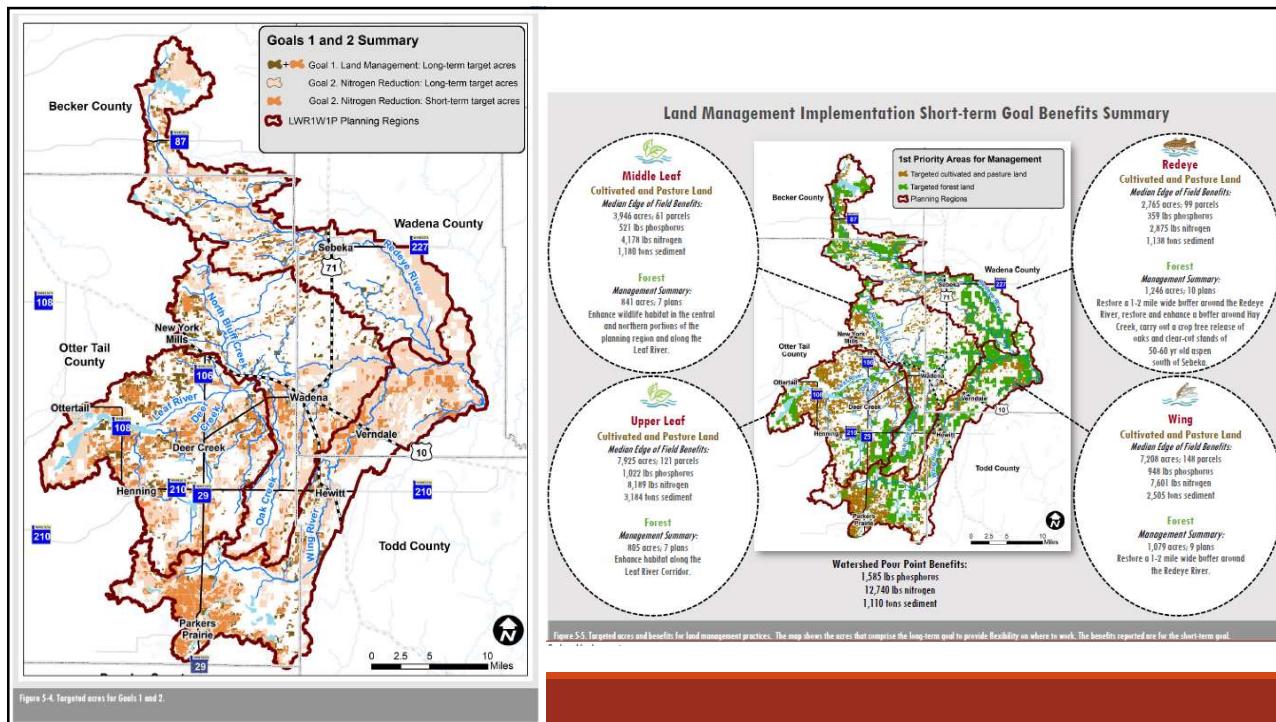
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Funding Levels

This plan will be implemented to the degree that funding is acquired, and at a locally determined pace of progress. Implementation of the actions in this plan is voluntary.

Funding Level	Description
1	Current Baseline Programs
2	Obtain additional grant and capacity funding
3	Partner Funding: CRP, DNR, TNC, SFIA, Lessard Sams...
Total	

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Funding

This plan will be implemented to the degree that funding is acquired, and at a locally determined pace of progress. Implementation of the actions in this plan is voluntary.

Funding Level	Description	Annual	10-Year Total
1	Current Baseline Programs	\$400,000	\$4,000,000
2	Obtain additional grant and capacity funding	\$490,000	\$4,900,000
3	Partner Funding: CRP, DNR, TNC, SFIA, Lessard Sams...	\$680,000	\$6,800,000
Total		\$1,570,000	\$15,700,000

~\$1 Million/year

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Implementation: A Balancing Act

Scale is Tipped Toward
“Manage It”



Planned Landscape Management



“Manage It”

- Soil health practices
- Nutrient Management
- Pasture Management
- Irrigation Management
- Other Ag BMPs
- Forest Stewardship Plans
- Ordinances

Protected Lands Maintenance



“Keep It”

- Easements
- Buffers
- Contracts (SFIA)
- Wetlands (WCA)
- Public Land Ownership

Constructed Environmental Enhancements



“Fix It”

- Septic upgrades
- Windbreaks
- Well sealing
- Waste storage facility
- Raingardens
- Shoreland stabilization
- Stormwater fixes

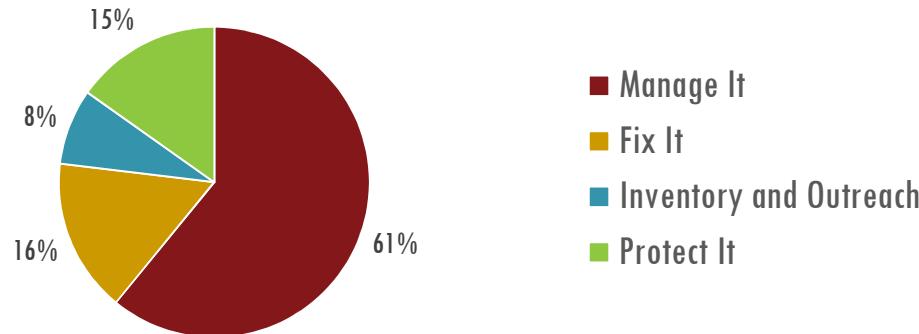


“Analysis & Information”

- Education
- Information
- Engagement
- Inquiry
- Organization

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Funding Summary per Program



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Plan Administration



This plan will be implemented through a Memorandum of Agreement between:

- East Otter Tail SWCD
- Otter Tail County
- Wadena SWCD
- Wadena County
- Becker SWCD
- Todd SWCD
- Becker County



BECKER COUNTY, MN



OTTER TAIL
COUNTY - MINNESOTA

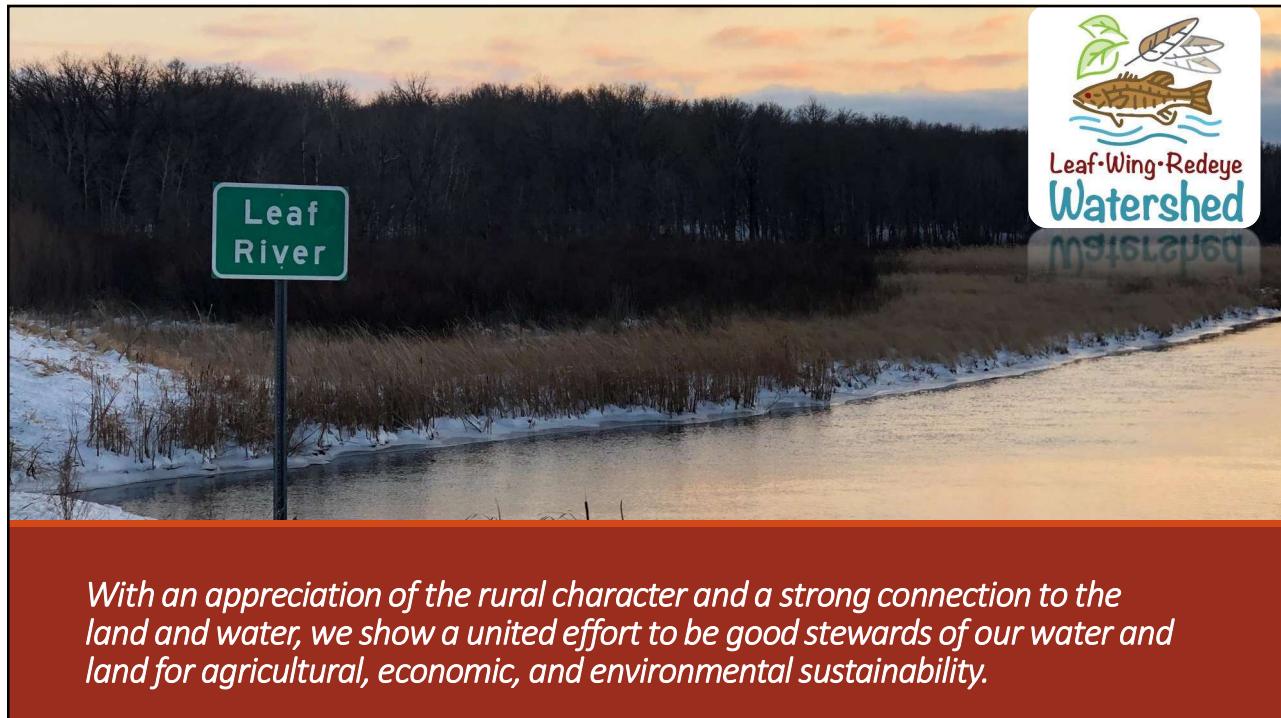


WADENA
Soil & Water
Conservation District



East Otter Tail
Soil & Water Conservation District

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With an appreciation of the rural character and a strong connection to the land and water, we show a united effort to be good stewards of our water and land for agricultural, economic, and environmental sustainability.

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Thank you for your time and attention!

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