WATERSHED MANAGEMENT IN MINNESOTA

GOVERNANCE, PLANNING, AND FUNDING

June 19, 2018 | Cedar Rapids, Iowa

GOVERNANCE - WD

- 1955 – Watershed Act (MN Statute 103D)
- Local petition to form VOLUNTARY watershed district
- Comes with rule making and taxing authorities
- Board members are appointed by elected county officials

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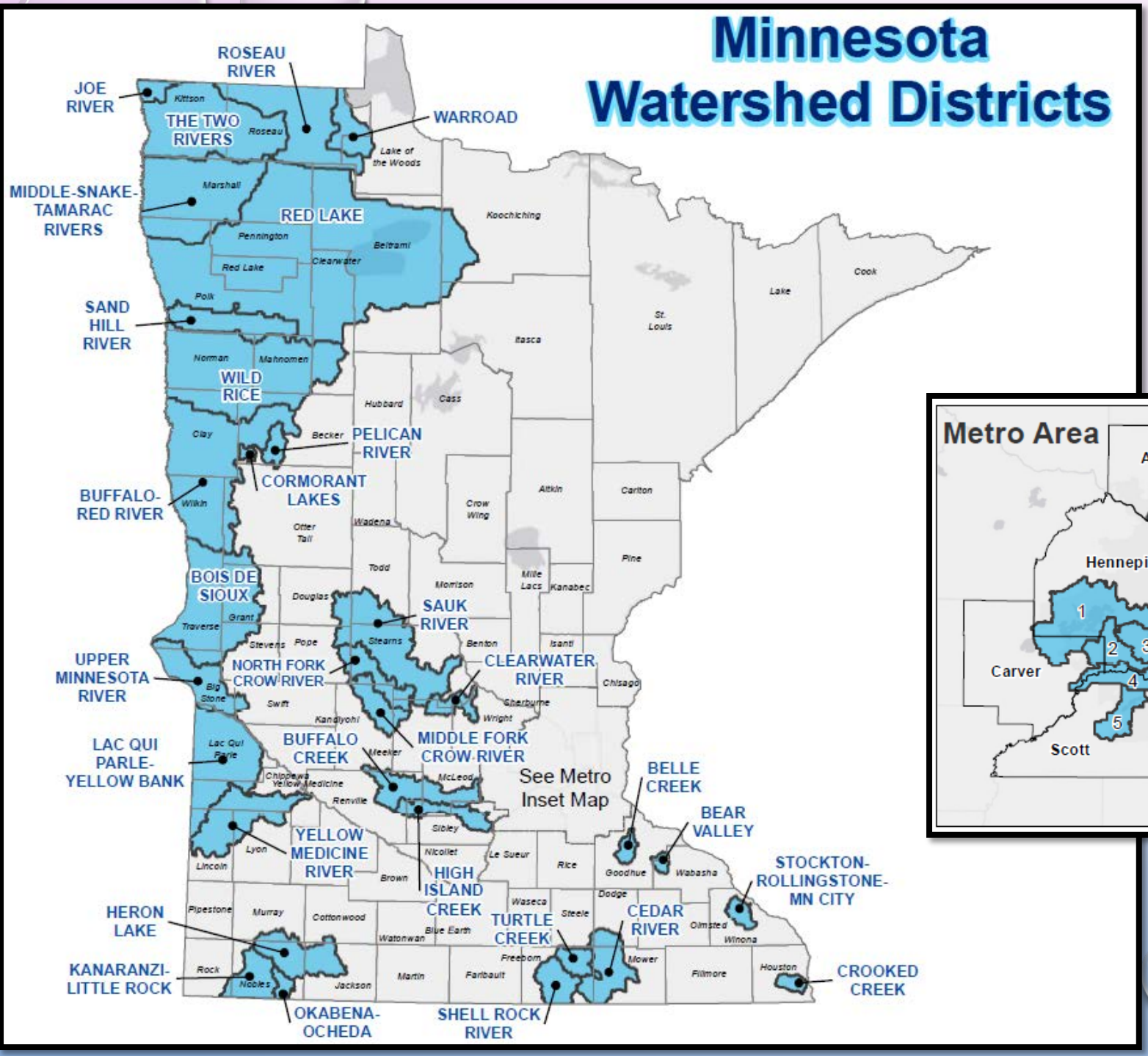
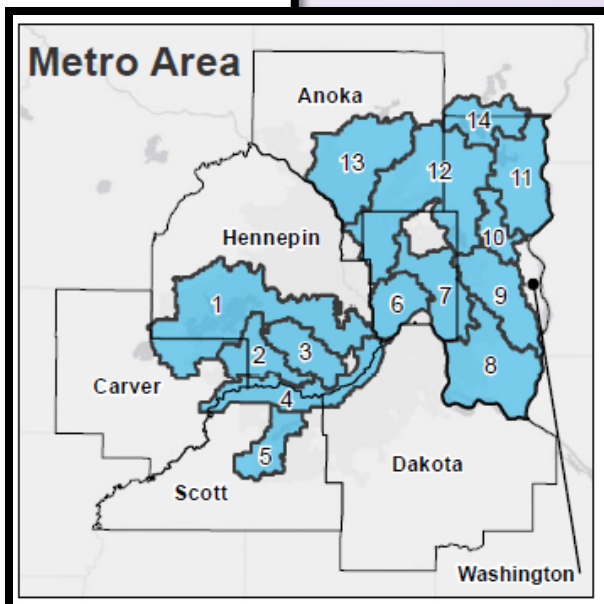
Minnesota Watershed Districts



Watershed Size

Smallest = 43 sq. mi.

Largest = 5990 sq. mi.



Metro Watershed Districts

1. MINNEHAHA CREEK
2. RILEY-PURGATORY-BLUFF CREEK
3. NINE MILE CREEK
4. LOWER MINNESOTA RIVER
5. PRIOR LAKE-SPRING LAKE
6. CAPITOL REGION
7. RAMSEY-WASHINGTON METRO
8. SOUTH WASHINGTON
9. VALLEY BRANCH
10. BROWNS CREEK
11. CARNELIAN-MARINE-ST. CROIX
12. RICE CREEK
13. COON CREEK
14. COMFORT LAKE FOREST LAKE

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GOVERNANCE - WMO

- 1982 – Metropolitan Surface Water Management Act
  - MN Statute 103B.201-255
- MANDATORY membership in a watershed management organization throughout 7-county metro area
- Board members are appointed by cities, townships

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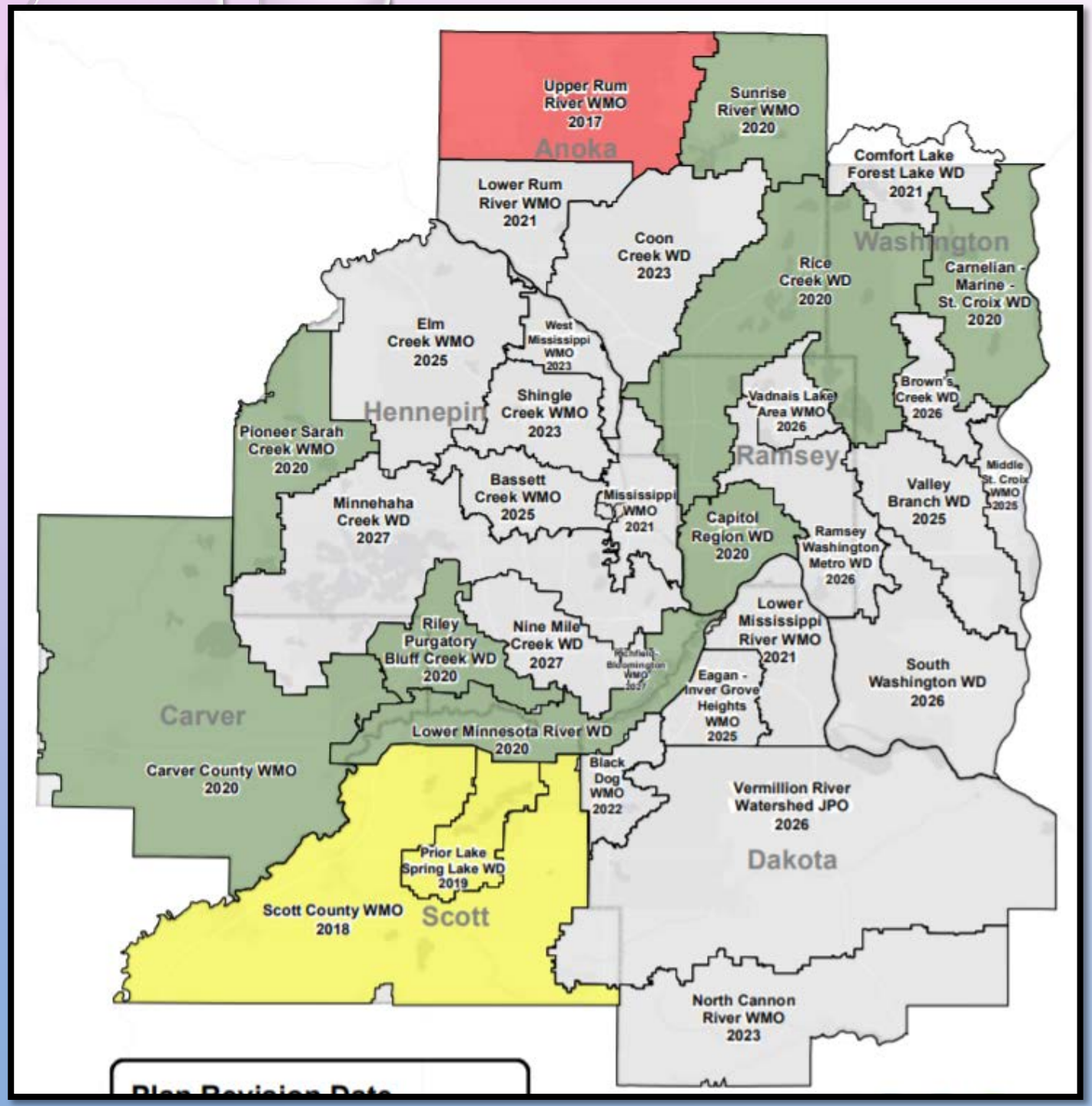

Metro Watershed Management

Option 1. Form a WD

Option 2. Joint Powers Agreement

Option 3. Manage through county government

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ACTIVITIES

RULES	Adopt rules to regulate the use of water resources
CONTRACTS	Contract with gov't & private/public corporations
STAFF	Hire staff and contract with consultants
LEVY / TAX	Assess properties for benefits received and levy taxes to finance district administration
CONSTRUCT	Acquire, construct, and operate drainage systems, dams, dikes, reservoirs, and water supply systems
GRANTS	Accept grant funds, encumber debt

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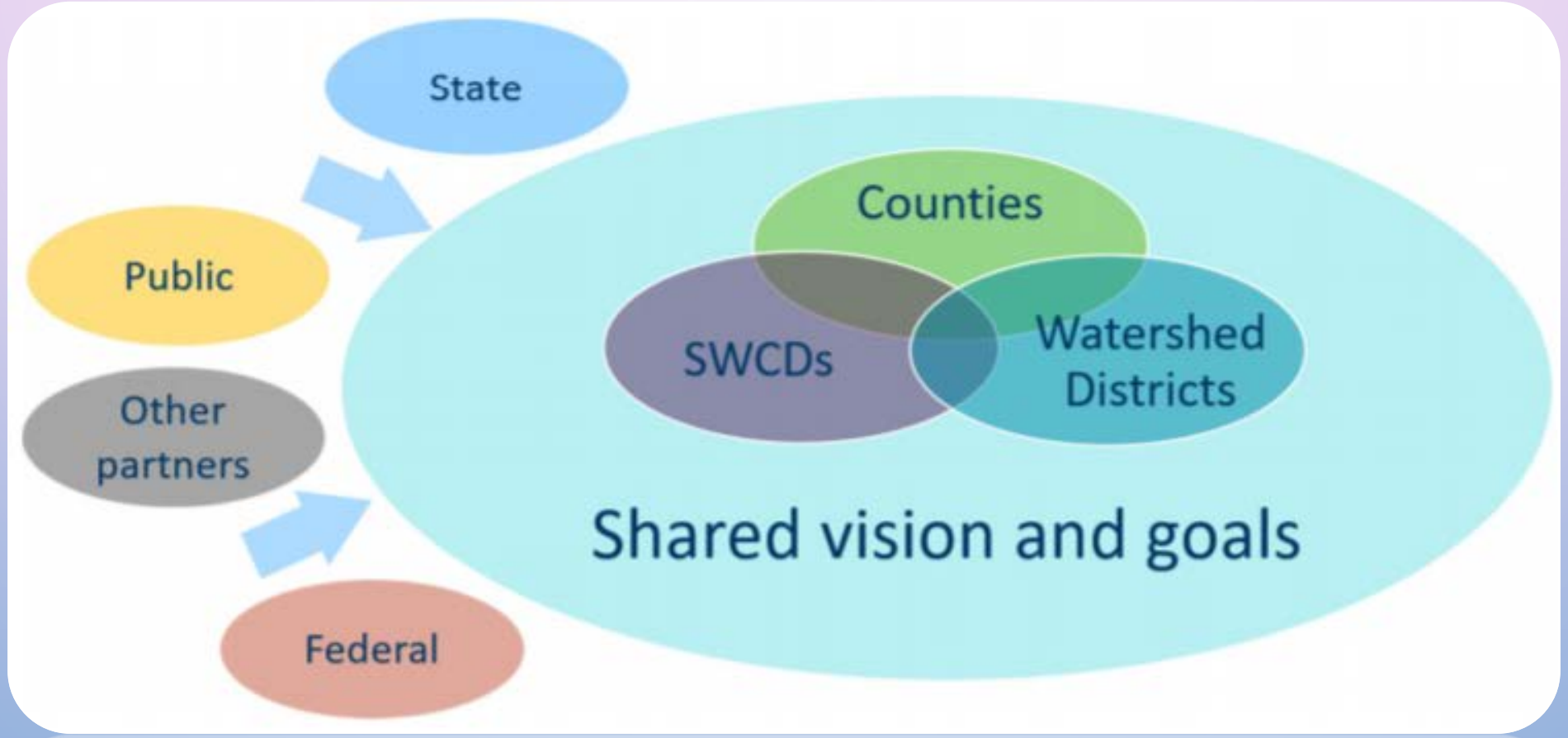
PLANNING

One Watershed One Plan



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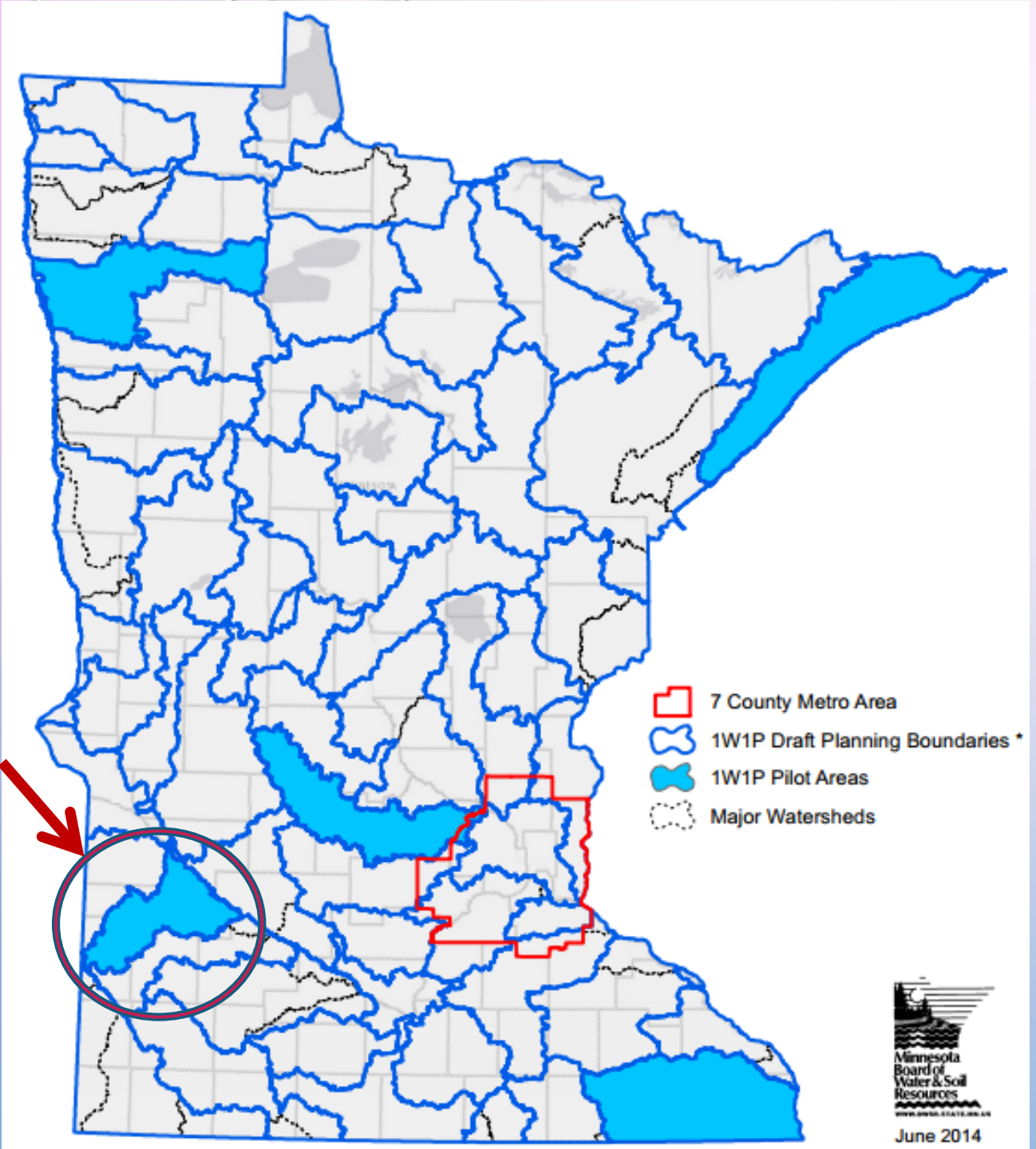

One Watershed One Plan

10 MOA PARTNERS

- Area II Minnesota River Basin Projects
- Lac qui Parle County
- Lac qui Parle SWCD
- Lincoln County
- Lincoln SWCD
- Lyon County
- Lyon SWCD
- Yellow Medicine County
- Yellow Medicine SWCD
- Yellow Medicine River Watershed District

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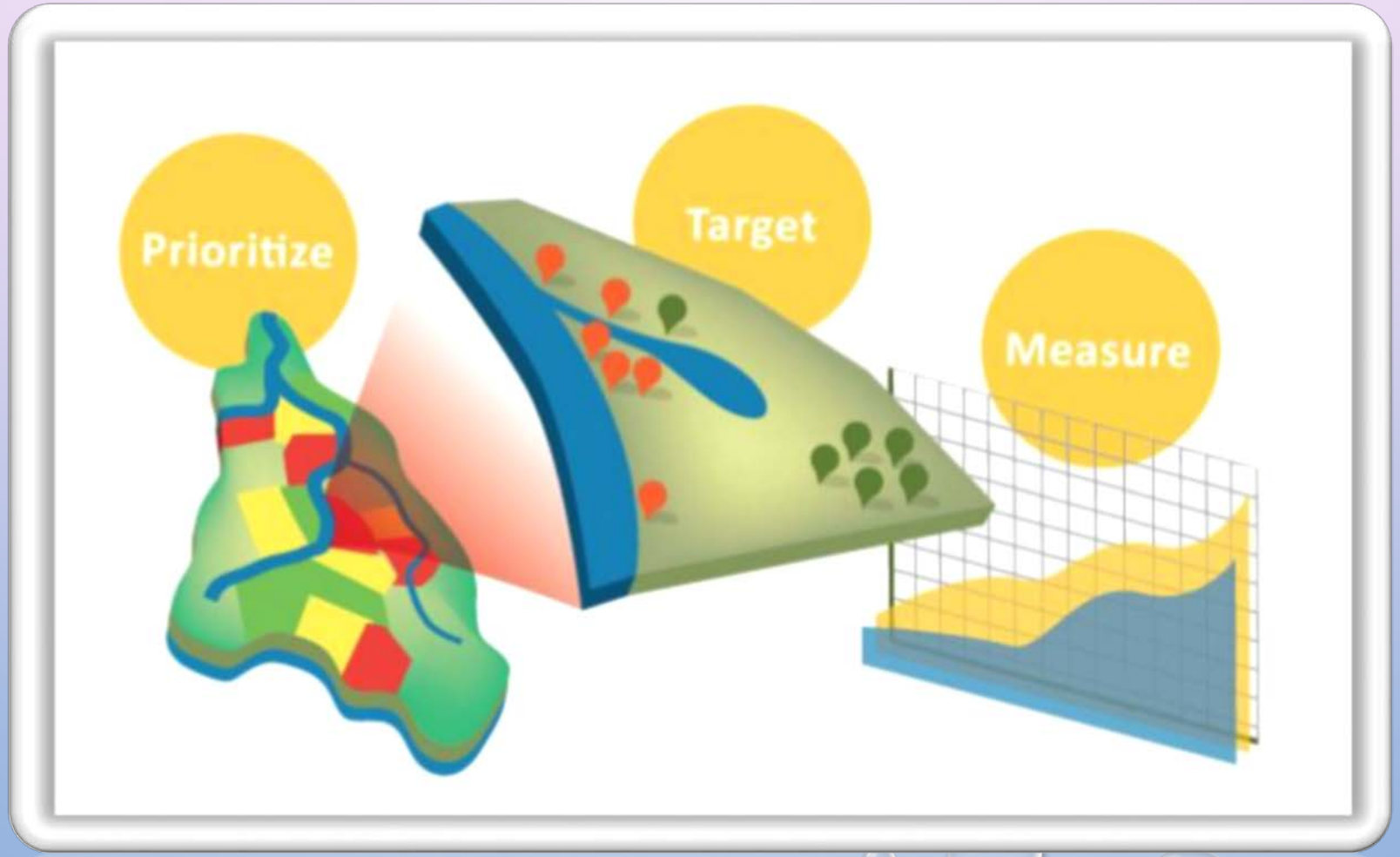
One Watershed One Plan



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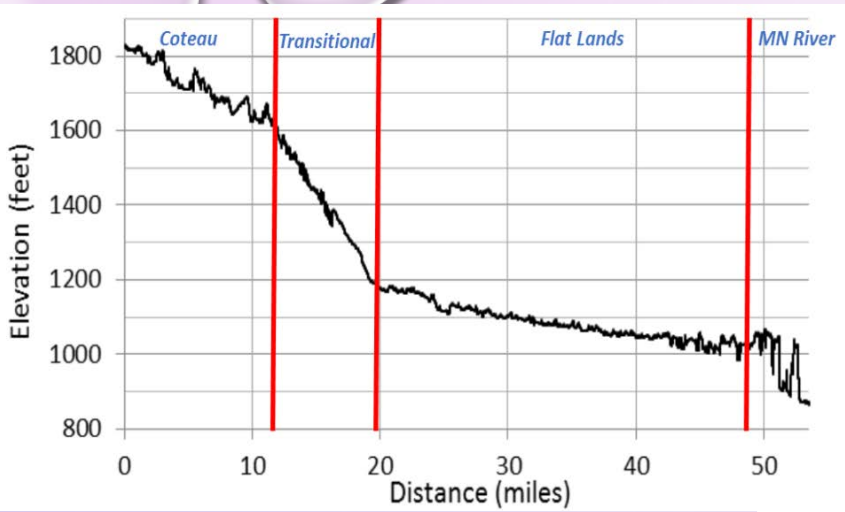
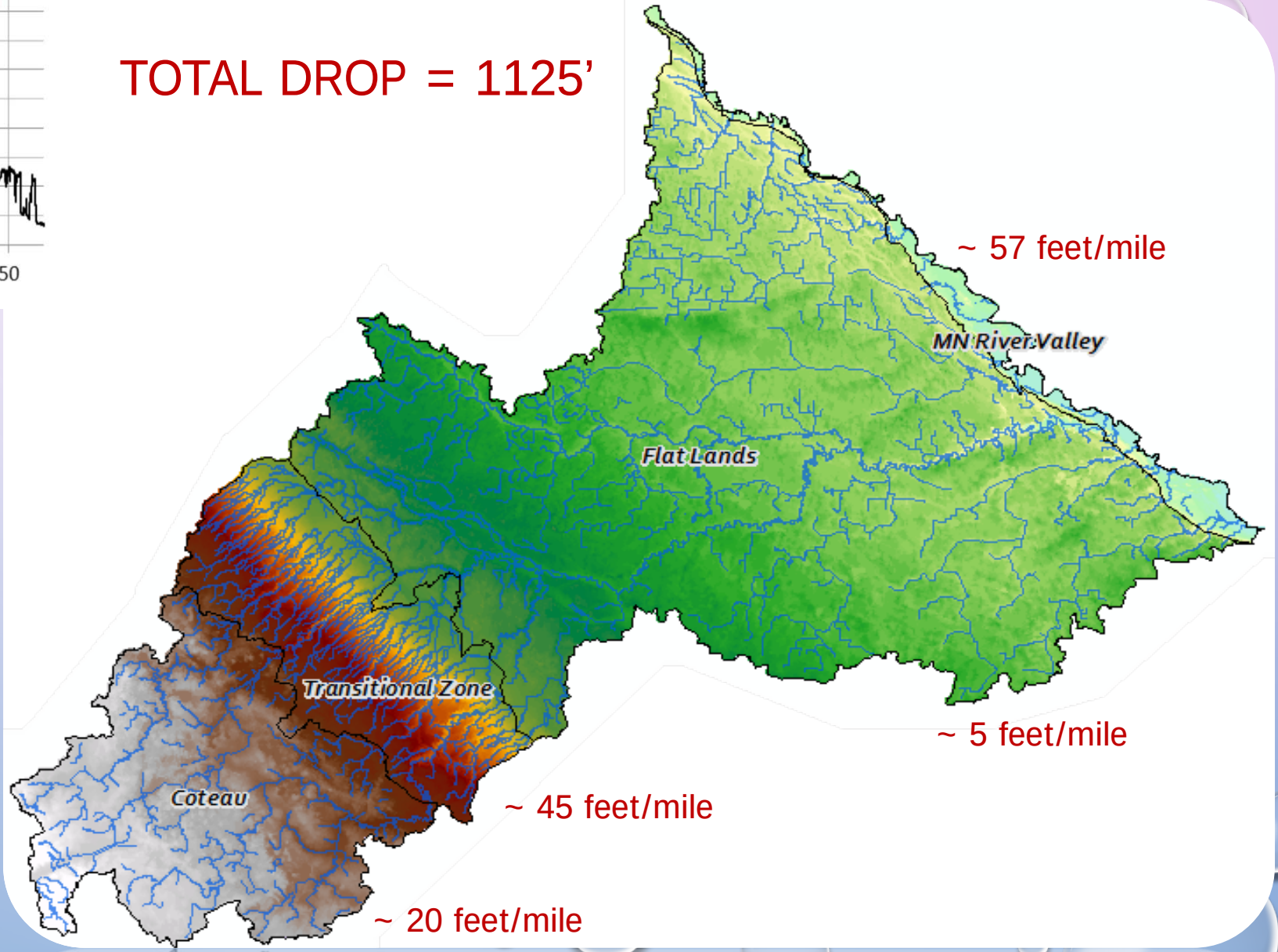
TOPOGRAPHY



TOTAL DROP = 1125'



665,073 acres (1,039 sq. mi.)
1,740 miles of streams/ditches
16,000 acres of shallow lakes
15,000 humans
150,000 feedlot animals units

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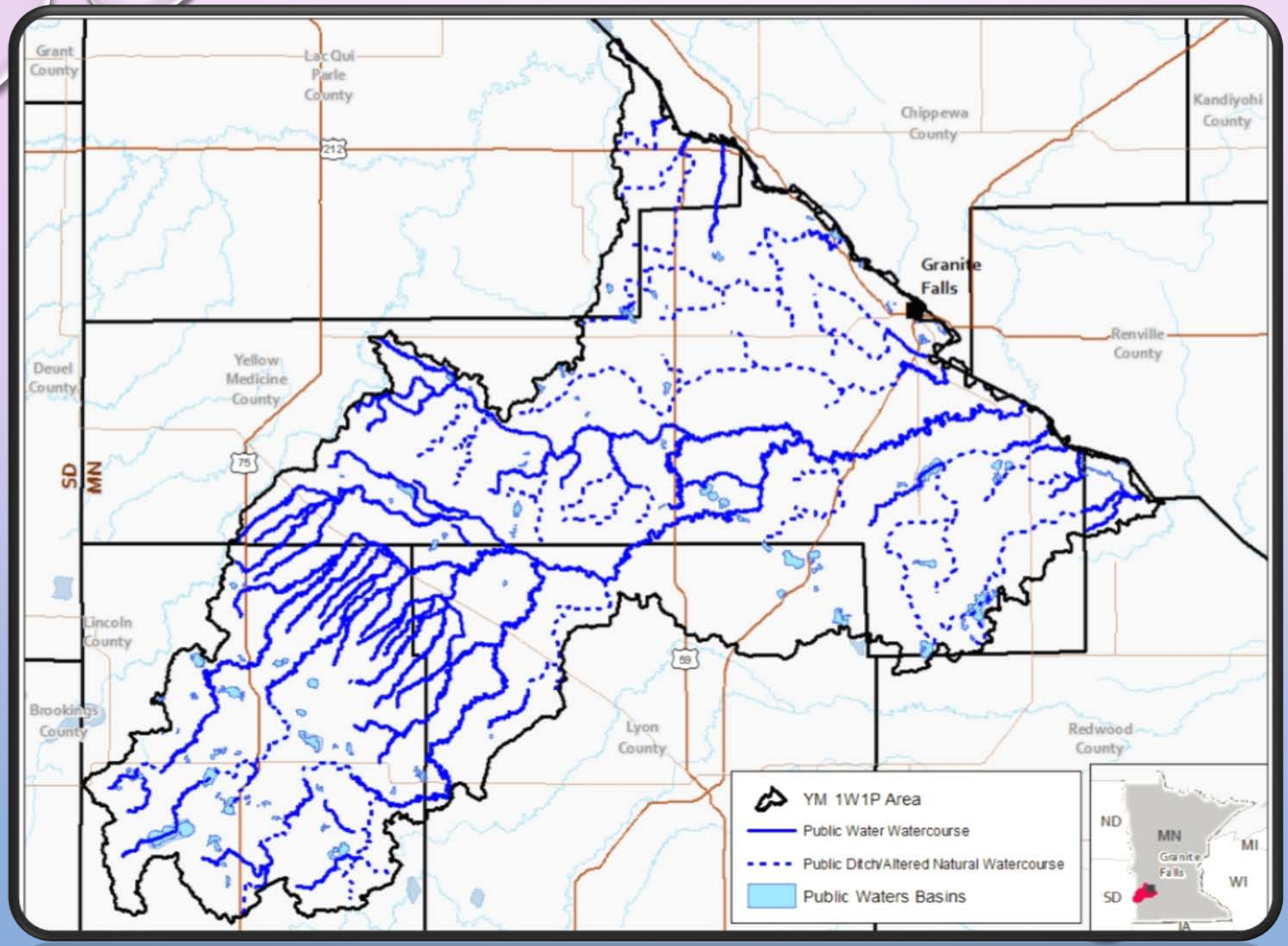

PUBLIC WATERS

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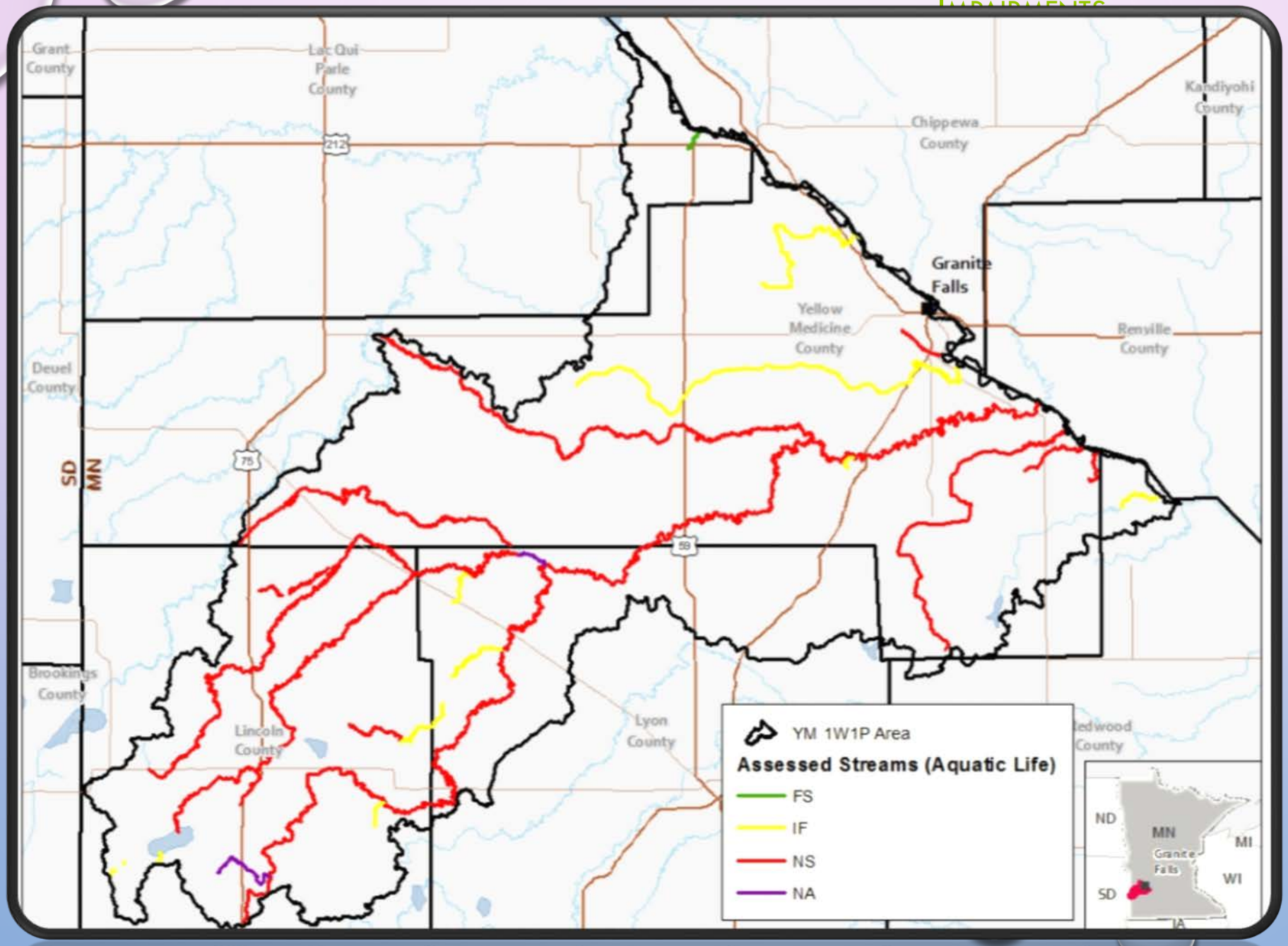

IMPAIRED WATERS

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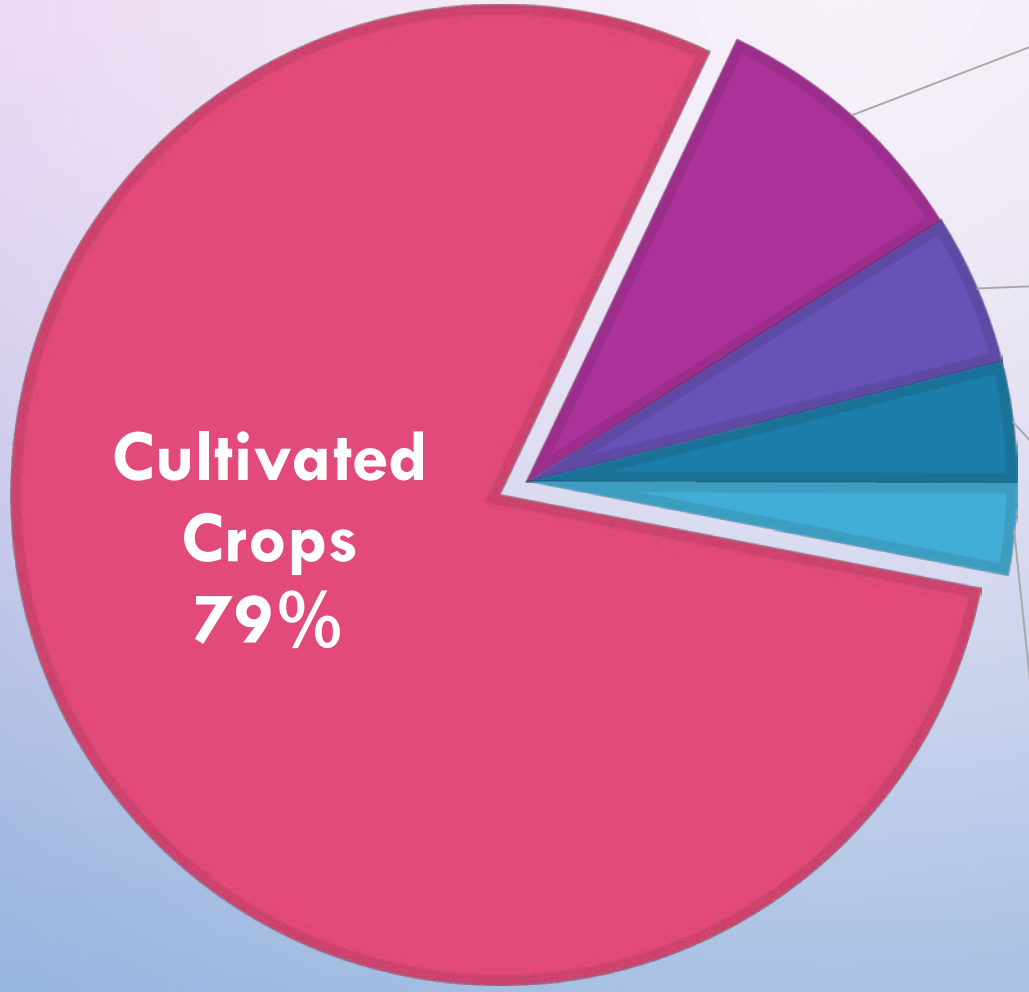
Wetland Loss = 76%

Watershed Stats



Pasture, Hay, Grassland 9%

Developed Open Space 5%

Wetlands 4%

Open Water / Deciduous Forest 3%

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Priority Concerns

Identify and Rank Issues

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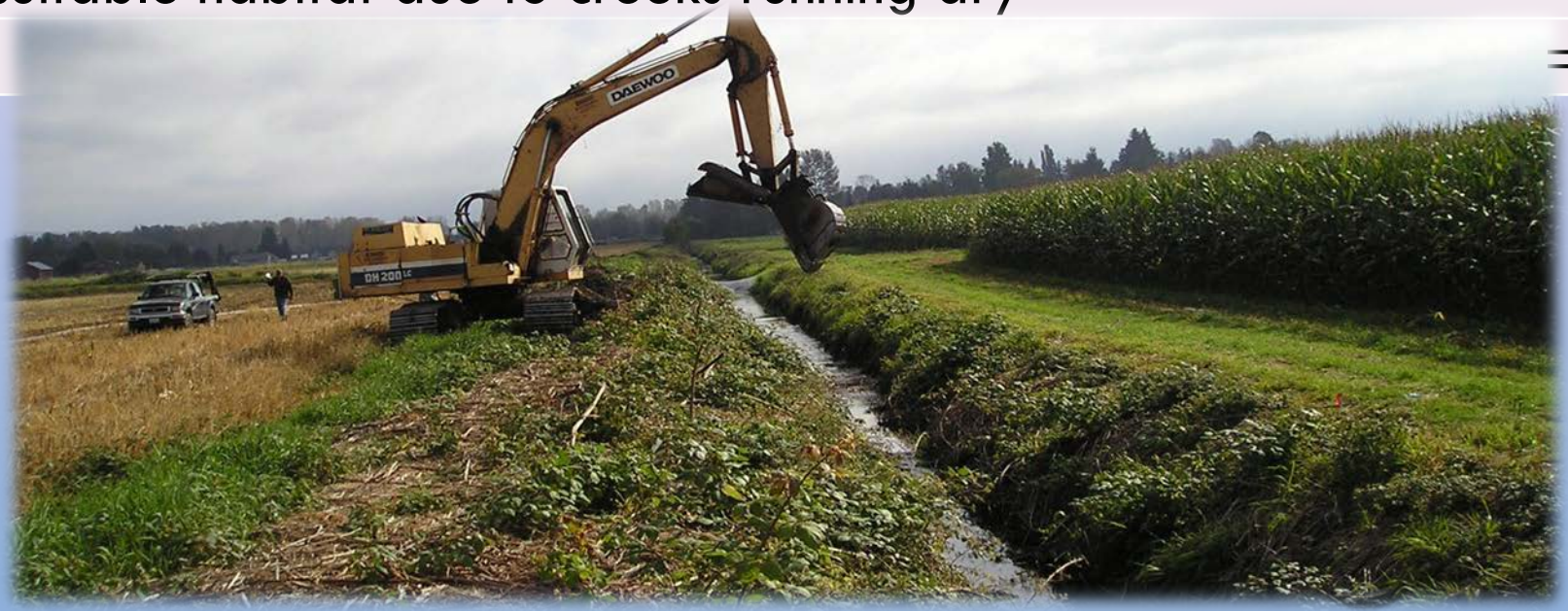
PRIORITY 1

Mitigate **ALTERED HYDROLOGY**, Reduce **FLOODING**	
Reduction in flood storage due to agricultural drainage	22.1
Reduced productivity due to declining **SOIL HEALTH**	11.6
Reduction in habitat areas due to loss of wetlands	5.0
Infrastructure losses due to flooding	4.6
Crop (and land) losses due to bank erosion (ditch and stream)	4.1
Insufficient capacity to efficiently carry runoff/flood volumes	2.9
Unsuitable habitat due to creeks running dry	1.8
	= 52.0



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PRIORITY 2

Reduce **POLLUTANT TRANSPORT**	
Reduced productivity due to **SOIL EROSION** by runoff and/or wind	16.2
Unsuitable habitat due to turbid water (muddy, nutrient rich)	4.6
Decreased recreational opportunities due to excess nutrients	3.2
Decreased recreation due to unsafe levels of bacteria, pesticides	2.9
TOTAL =	26.8

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PRIORITY 3

Preserve and protect **GROUNDWATER**	
Groundwater depletion due to overuse and altered hydrology	5.7
Groundwater contamination	4.8
TOTAL =	10.5

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MISCELLANEOUS CONCERNS

Declining high quality habitat areas for diverse wildlife	3.1
Excess vegetation in lakes	1.6
Crop losses related to blockages in drainage system	1.5
Losses of various type of terrain	1.2
Decreased habitat diversity due to invasive species	1.1
Overgrazing	0.8
Decreased recreational opportunities due to parasites in the water	0.5
Decreased fish consumption due to unsafe levels of mercury in fish	0.3
Lack of crop diversity	0.3
TOTAL =	10.4

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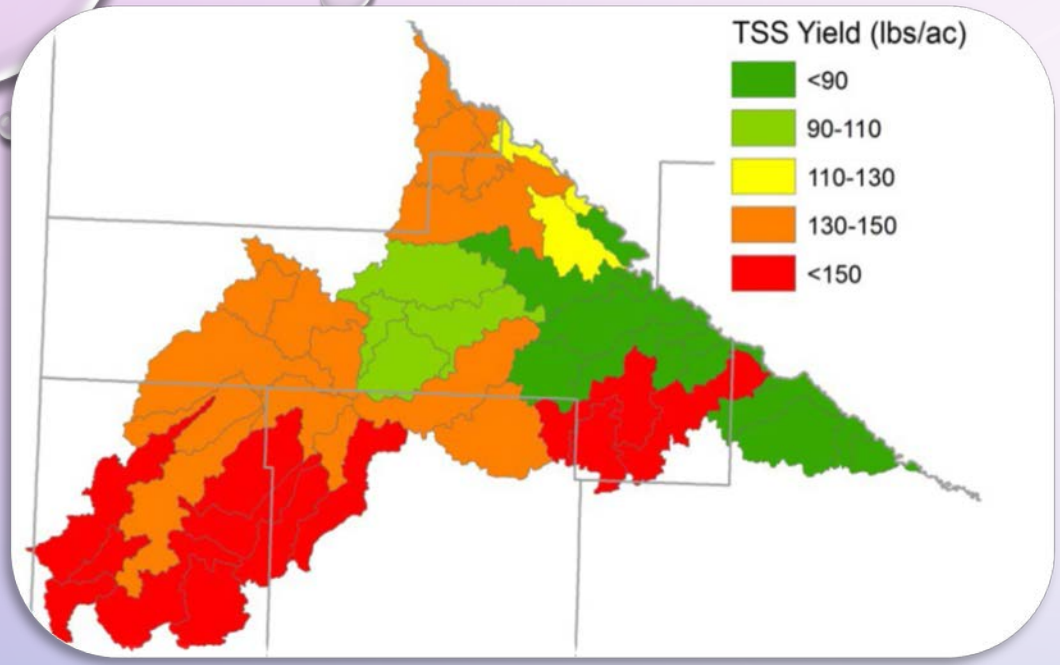
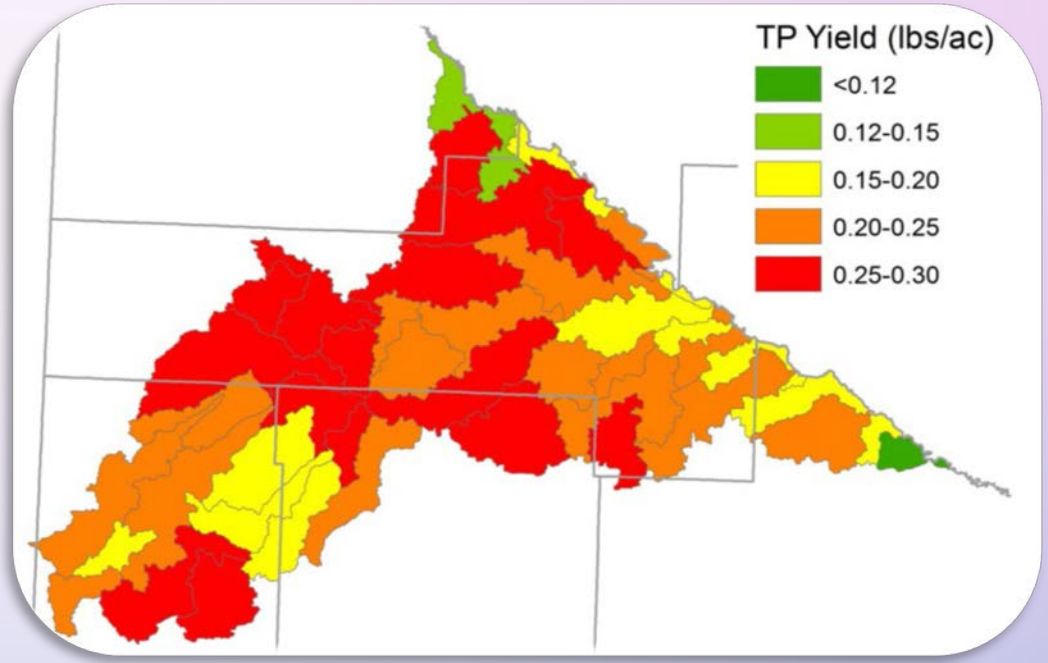
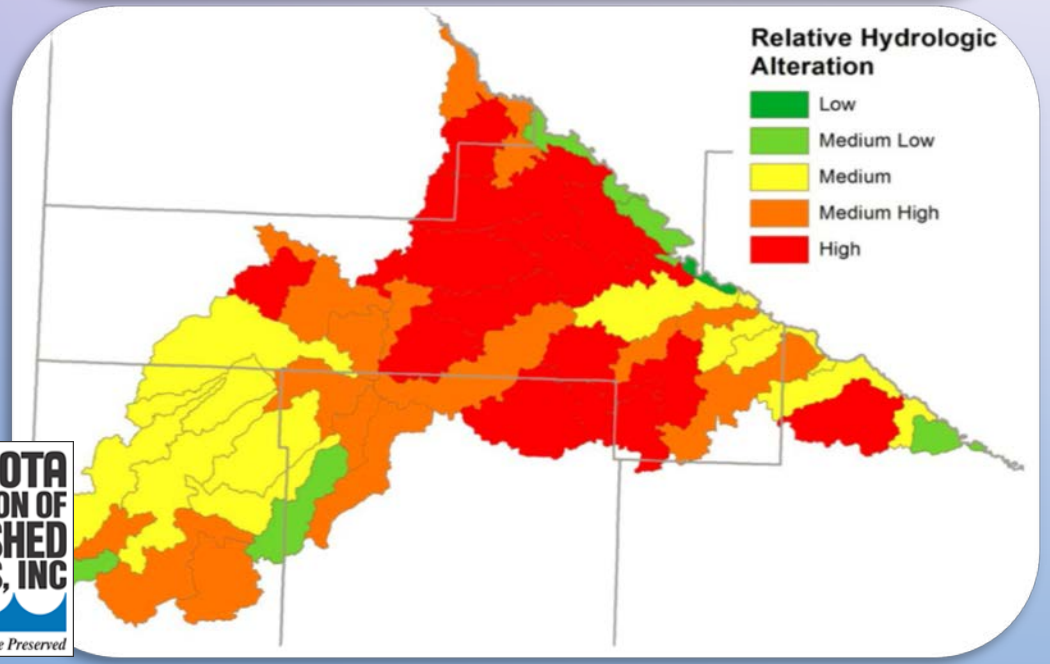
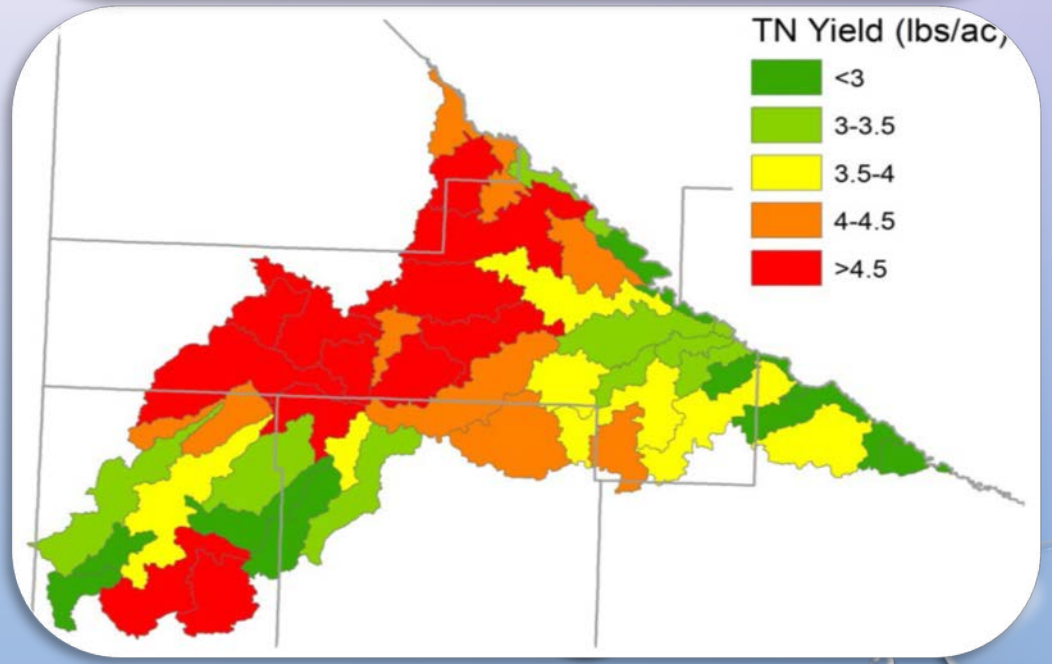
TARGETED AREAS – WHERE DO WE START?









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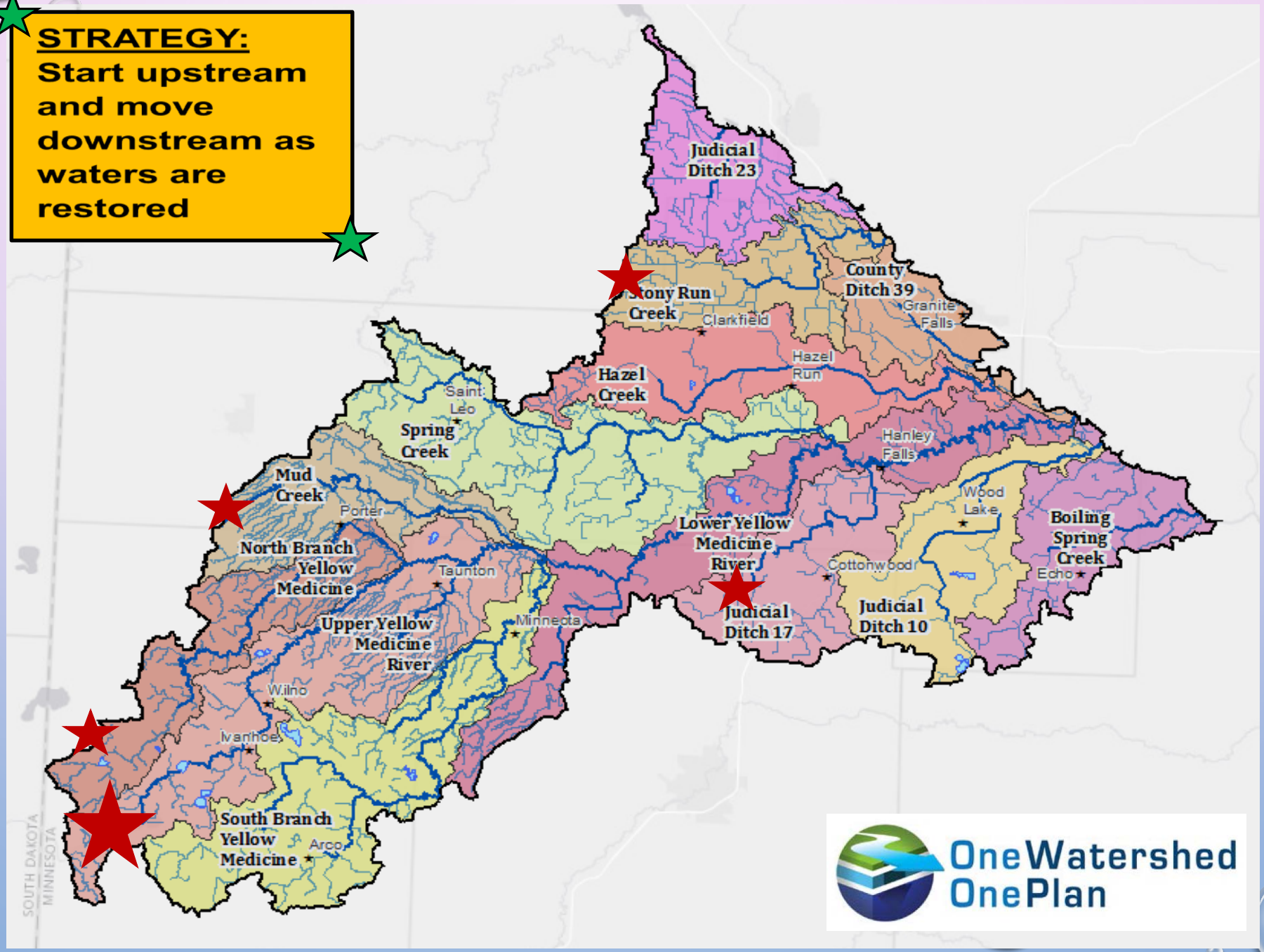
STRATEGY:
Start upstream and move downstream as waters are restored



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One Watershed One Plan

Measurable Goals

Stressor	WRAPS Fully Restored Watershed Goal	WRAPS 10-year Goal
Altered Hydrology	20% reduction in annual river flow volume	5% reduction
Excess Phosphorus	35% reduction in river loads	10% reduction
Excess Nitrogen	25% reduction in river loads	10% reduction
Excess Sediment	20% reduction in river loads	8% reduction

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One Watershed One Plan

Implementation Plan

Yellow Medicine One Watershed One Plan
Implementation Plan for Priority Areas – Pollutant Transport

Field Practice	Scale of Treatment
Wetland Restorations	Treats 2.0% of cropland
Water/Sediment Basins	Treats 2.5% of cropland
Controlled Drainage	Implemented on 1% of cropland
Cover Crops	Add to 20% of corn/soybean land
Reduced Tillage	30% residue on 10% of cropland
Nutrient Management	Adopt U of M standards on 35% of land
Buffers	Gain compliance with the buffer law
Row Crop → Grassland	Convert 2% of highly erodible land
Alternative Tile Intakes	Replace open inlets on 2% of land

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FUNDING

Taxing Authorities

Bonding
Administrative Levy
Project Levy
Technology Levy

Services/Fees

Permit Fees
Inspections

Grants

Federal Grants
State Cost Share
Clean Water Fund
1W1P Grants
SWCD Capacity Grants

Contributions

Landowners
Non-Profits

CLEAN WATER LAND & LEGACY AMENDMENT

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THANK YOU!

EMILY JAVENS, EXECUTIVE DIRECTOR

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