

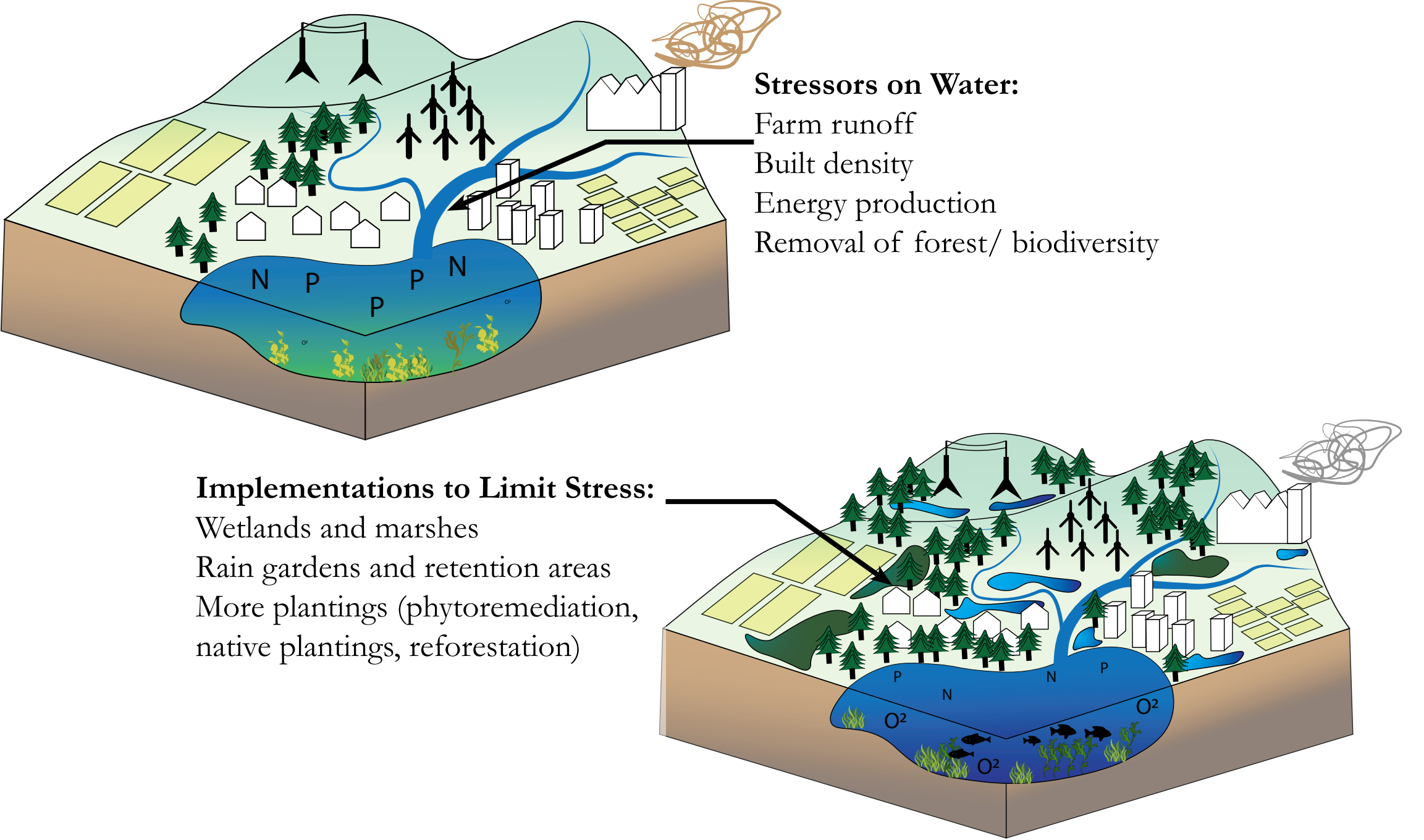
RIPPLES OF CHANGE: WATERSHED RESTORATION

Joey Bean

Due to increases in agriculture, development, and industry, our waterways used for drinking, recreation, and other life are becoming impaired to a level where they can no longer sustain themselves and those who rely on them. There are many organizations attempting to combat these effects and protect waterways. However, I believe there needs to be more understanding within the general public about the effects of poor water quality in order for there to be a demand for change in policy and law requiring more protections

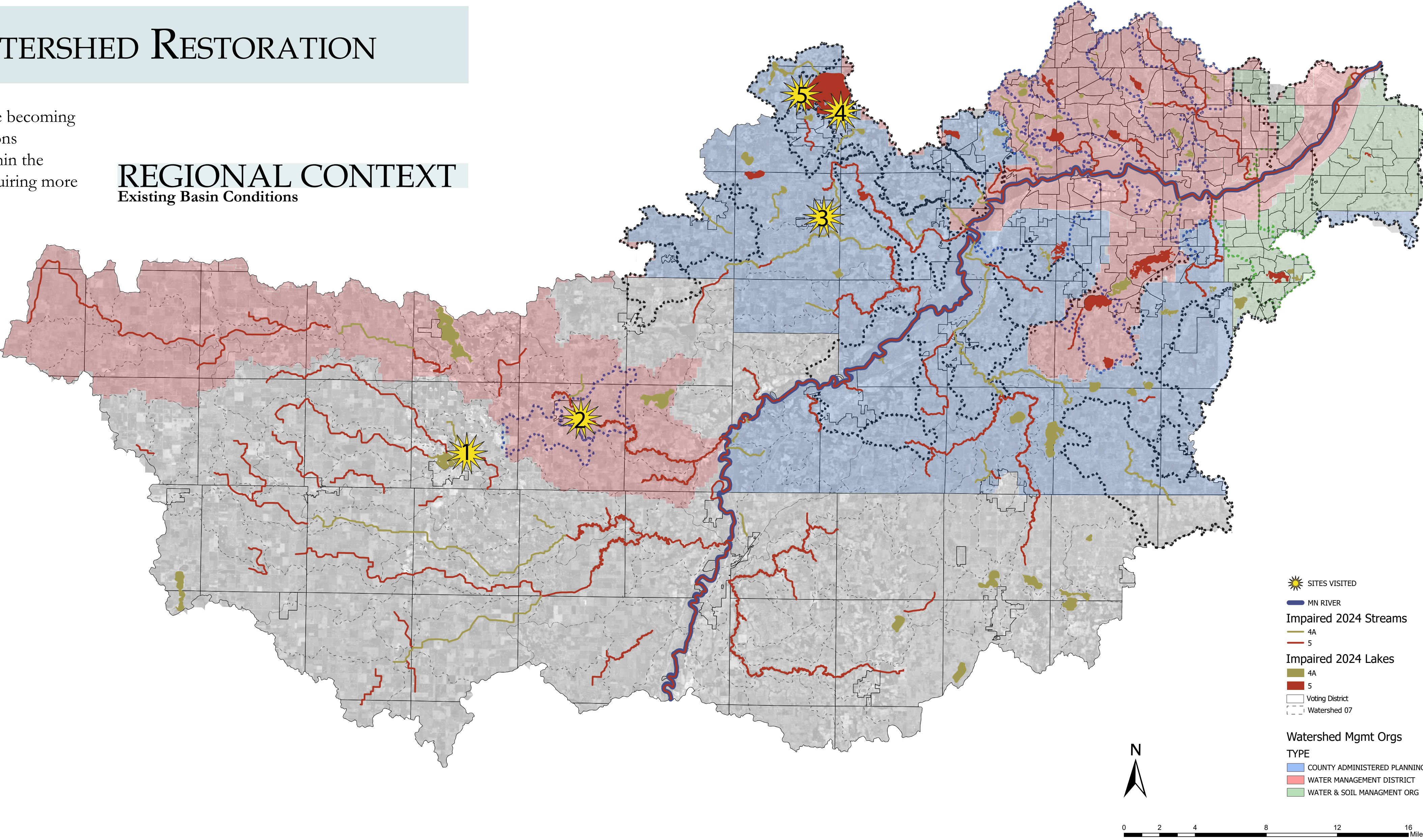


Arlington pH - 7.6 Total Alkalinity- 180 Total Hardness- 100 Zinc- 5 Sodium Chloride- 0 Bromine- 0 Iron- 0 Copper- .2 Lead- 0 Mercury- 0 Nitrate- 0 Nitrite- 10 Total Chlorine- 0 Manganese- 0 Sulfate- 0 Fluoride- 0	Gaylord pH - 7.8 Total Alkalinity- 80 Total Hardness- 100 Zinc- 5 Sodium Chloride- 0 Bromine- 0 Iron- 0 Copper- 0 Lead- 0 Mercury- 0 Nitrate- 0 Nitrite- 10 Total Chlorine- 0 Manganese- 0 Sulfate- 0 Fluoride- 0	Cologne pH - 6.8 Total Alkalinity- 40 Total Hardness- 50 Zinc- 0 Sodium Chloride- 0 Bromine- 0 Iron- 0 Copper- .2 Lead- 0 Mercury- 0 Nitrate- 0 Nitrite- 10 Total Chlorine- 0 Manganese- 0 Sulfate- 0 Fluoride- 0	Lake Wacaonia pH - 6.8 Total Alkalinity- 80 Total Hardness- 100 Zinc- 5 Sodium Chloride- 0 Bromine- 0 Iron- 0 Copper- 0 Lead- 0 Mercury- 0 Nitrate- 0 Nitrite- 10 Total Chlorine- 0 Manganese- 0 Sulfate- 0 Fluoride- 0	Wahibo Marsh pH - 7.8 Total Alkalinity- 180 Total Hardness- 100 Zinc- 5 Sodium Chloride- 0 Bromine- 0 Iron- 0 Copper- .2 Lead- 0 Mercury- 0 Nitrate- 0 Nitrite- 10 Total Chlorine- 0 Manganese- 0 Sulfate- 0 Fluoride- 0
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REGIONAL CONTEXT

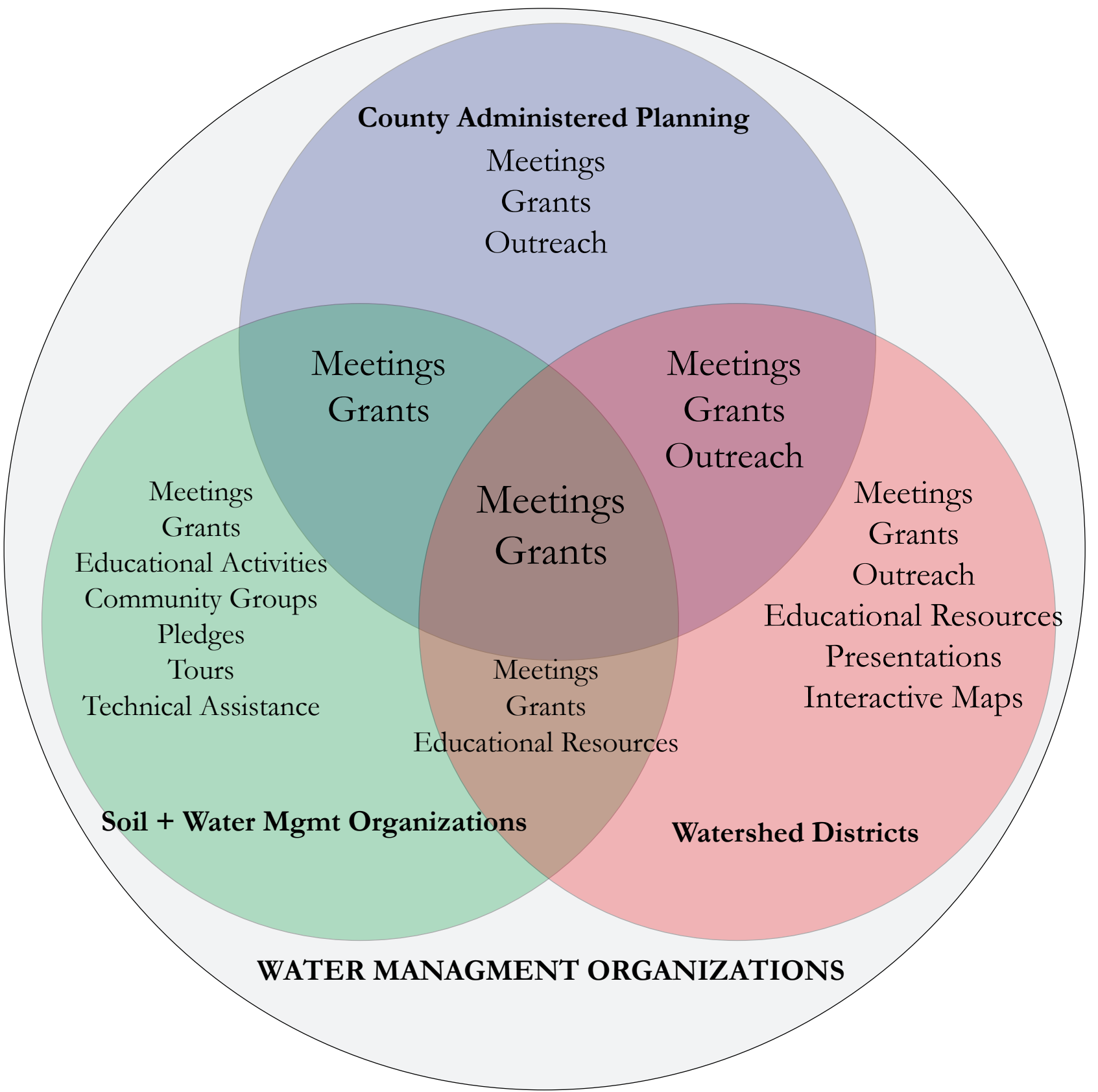
Existing Basin Conditions



PUBLIC ENGAGEMENT OF MANAGEMENT ORGS

Water Management Organizations
Black Dog
Carver County
Richfield Bloomington
Lower Mississippi River
Eagan-Inner Grove
Scott County

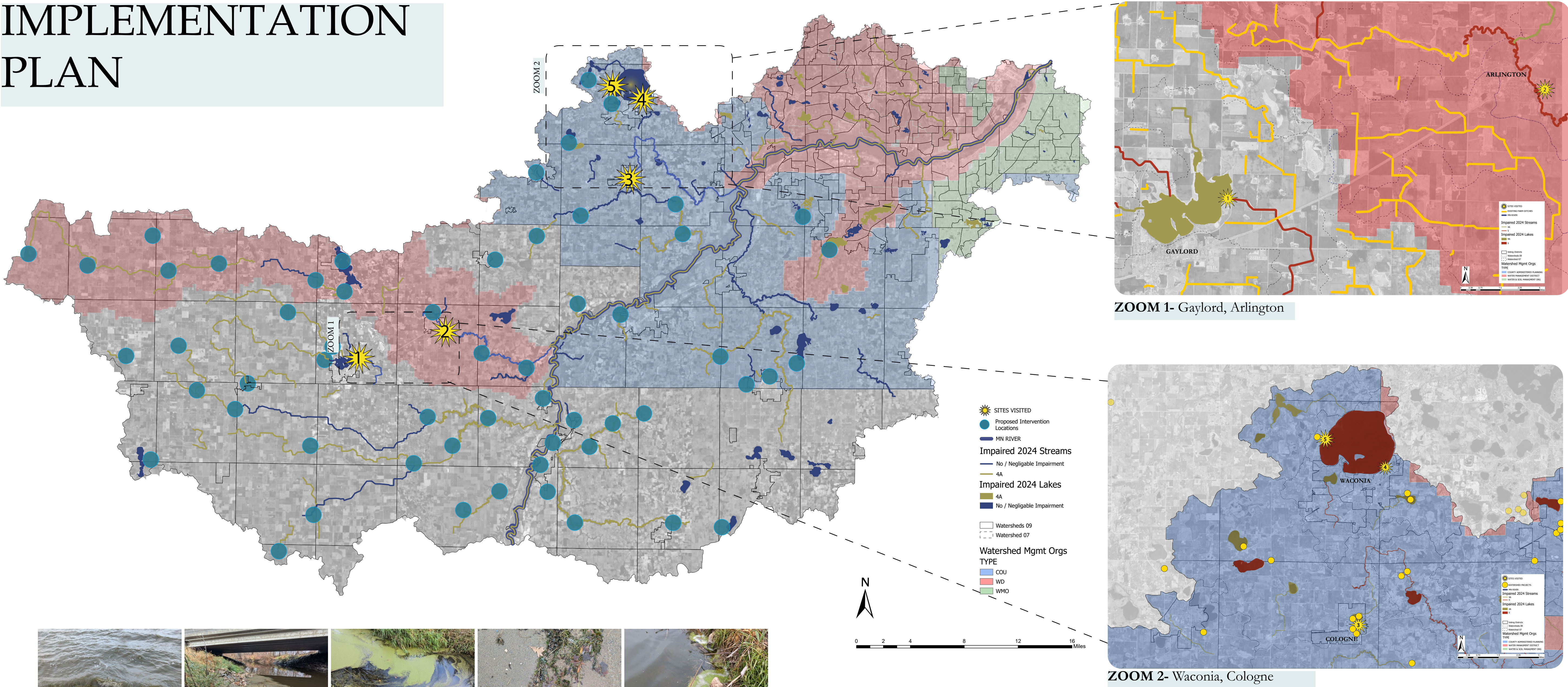
Soil & Water Management Organizations
Dakota County
Le Sueur County
Nicollet County
Renville County
Rice County
Scott County
Sibley County



County Administered Planning
Carver County
Scott County
Vermillion River/ Dakota County

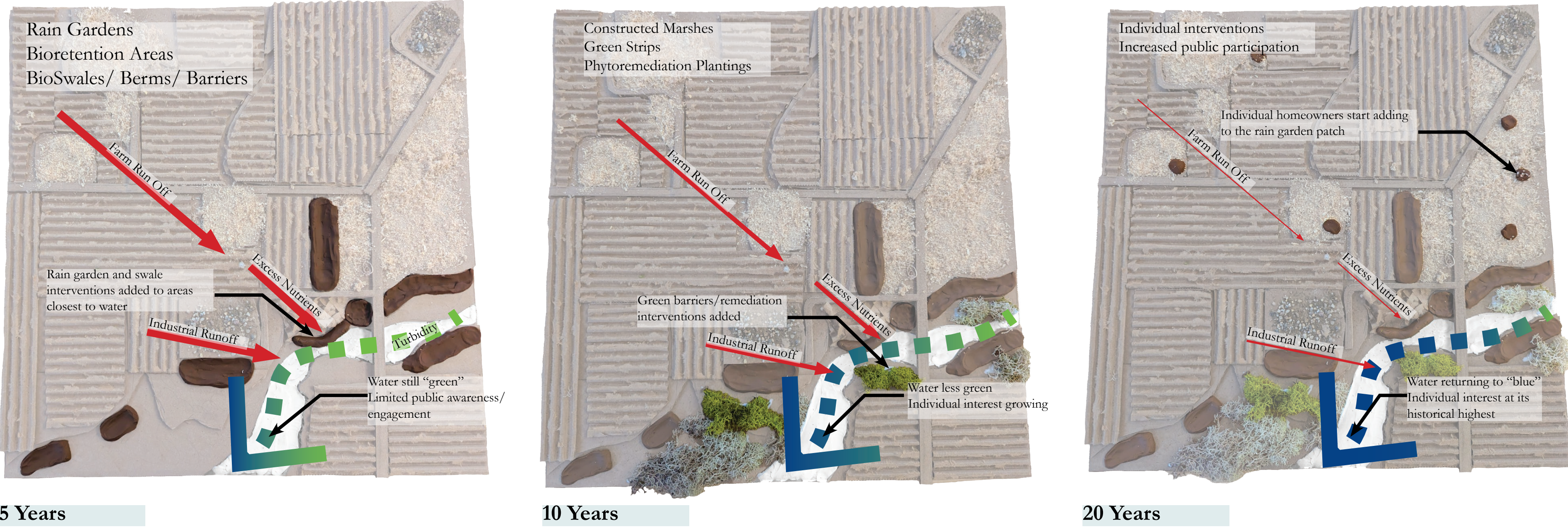
Watershed Districts
Buffalo Creek
Richfield Bloomington
High Island Creek
Riley - Purgatory- Bluff Creek
Prior Lake- Spring Lake
Nine Mile Creek
Minnehaha Creek
Lower Minnesota River

IMPLEMENTATION PLAN



Existing Water Conditions

Impairments:	Excess Nutrients	Road/ Salt Runoff	Chlorophyll/ Low Dissolved Oxygen
	Phosphorous Nitrogen Sulfates E. Coli	Chloride Arsenic	Turbidity Algae
	Rain Gardens	Marshes & Wetlands	Swales
Intervention Types:			
	Benefits: Filter Pollutants Recharge Groundwater Reduce Flooding	Benefits: Trap Sediments Absorb Excess Nutrients Filter Pollutants	Benefits: Filter Pollutants Reduce Erosion Reduce Flooding

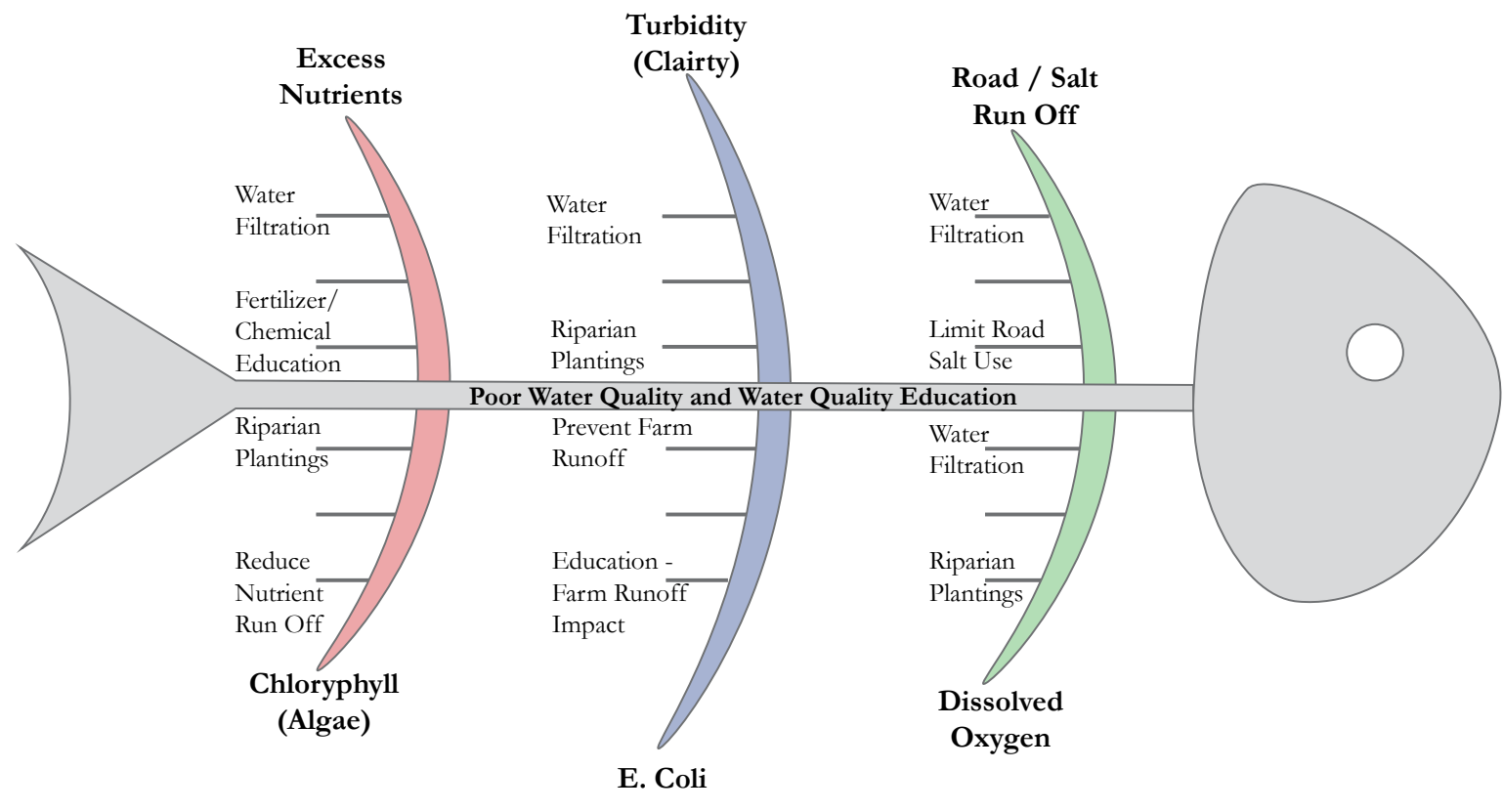
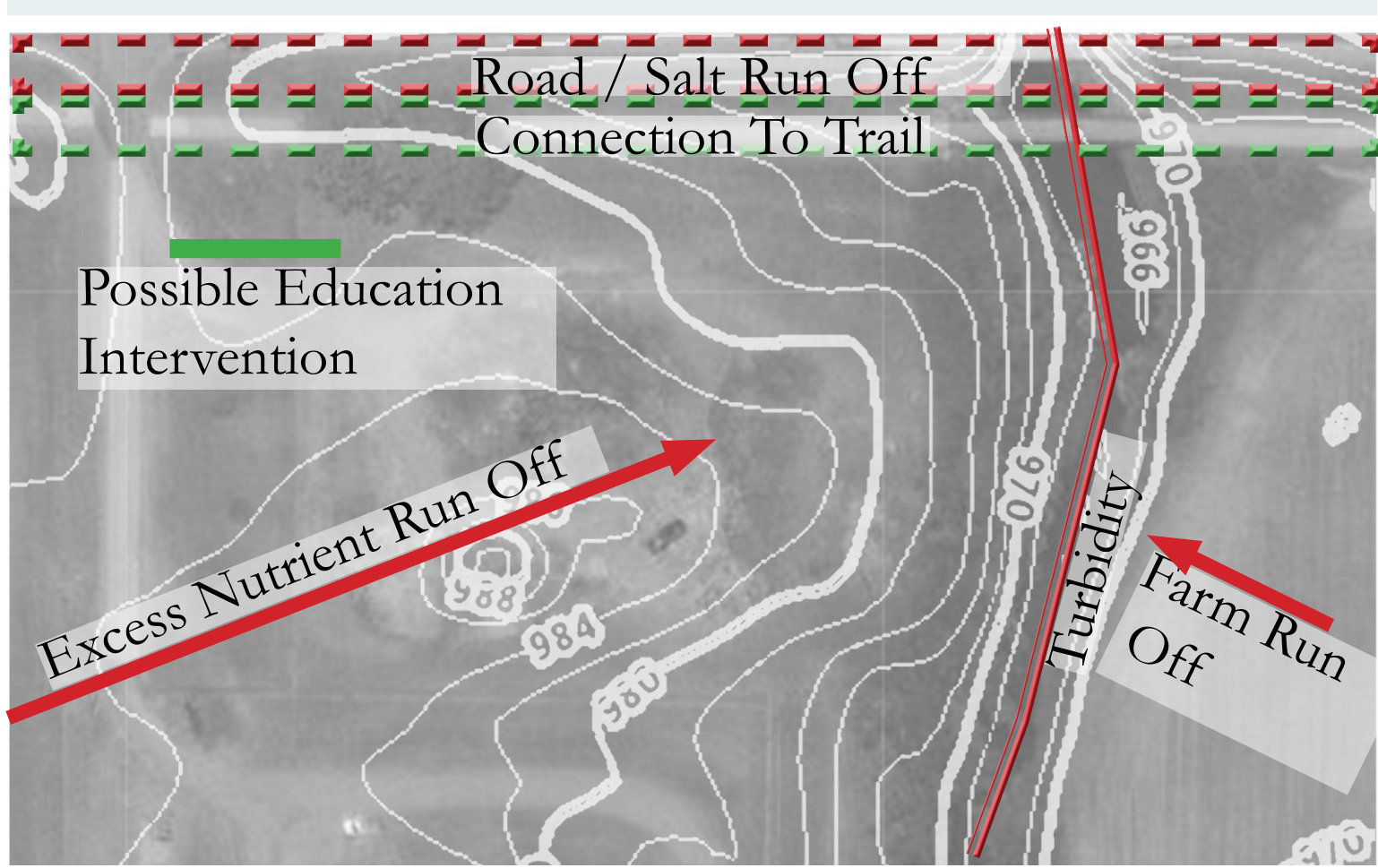


5 Years

10 Years

20 Years

SITE ANALYSIS: ISSUES AND OPPORTUNITIES



NATIVE & PHYTOREMEDIATION PLANTS

SITE PLAN

