



*Protecting, Maintaining and Improving the Health of All Minnesotans*

4/30/2019

Caitlin Brady & Skip Langer  
Olmsted County & Olmsted SWCD  
2122 Campus Drive SE, Suite 200  
Rochester, MN 55904

Dear Caitlin and Skip:

Subject: Initial Comment Letter – Zumbro River One Watershed, One Plan

Thank you for the opportunity to submit comments regarding water management issues for consideration in the One Watershed One Plan (1W1P) planning process for the Zumbro River Watershed Planning Area. Our agency looks forward to working closely with the local government units, stakeholders, and other agency partners on this watershed planning initiative.

The Minnesota Department of Health's (MDH) mission is to protect, maintain, and improve the health of all Minnesotans. An important aspect to protecting citizens health is the protection of drinking water sources. MDH is the agency responsible for implementing programs under the federal Safe Drinking Water Act (SDWA).

Source Water Protection (SWP) is the framework MDH uses to protect drinking water sources. The broad goal of SWP in Minnesota is to protect and prevent contamination of public and private sources of groundwater and surface water sources of drinking water using best management practices and local planning. Core MDH programs relevant to watershed planning are the State Well Code (MR 4725), Wellhead Protection (MR 4720) and surface water / intake protection planning resulting in a strong focus in groundwater management and protecting drinking water sources.

One of the three high level state priorities in Minnesota's Nonpoint Priority Funding Plan is to "Restore and protect water resources for public use and public health, including drinking water" which aligns with our agency's mission and recommendations to your planning process.

## **MDH Priority Concerns:**

### **Prioritize Drinking Water Supply Management Areas (DWSMA) in the Zumbro River Watershed 1W1P.**

DWSMA boundaries establish a protection area through an extensive evaluation that determines the contribution area of a public water supply well, aquifer vulnerability and provide an opportunity to prioritize specific geographic areas for drinking water protection purposes. DWSMA boundaries that extend beyond city jurisdictional limits or are established in Wellhead Protection (WHP) Action Plans for nonmunicipal public water supplies, like mobile home parks, can be a special focus for local partners prioritizing drinking water protection activities.

Aquifer vulnerability determines the level of management required to protect a drinking water supply and provides an opportunity to target implementation practices in accordance with the level of risk different land uses pose. The attached Public Water Supply Summary Spreadsheet highlights the primary drinking water protection activities for many DWSMAs in the watershed.

### **Prioritize Drinking Water Supply Management Areas impacted by nitrate.**

Prioritize these protection areas for working with landowners on nutrient management and other sources of nitrogen.

### **Prioritize Sealing Abandoned Wells**

Unused, unsealed wells can provide a conduit for contaminants from the land surface to reach the sources of drinking water. This activity is particularly important for abandoned wells that penetrate a confining layer above a source aquifer.

Sealing wells is a central practice in protecting groundwater quality, however when resource dollars are limited it is important to evaluate private well density to identify the populations most at risk from a contaminated aquifer.

### **Prioritize Protection of Private Wells**

Many residents of the Zumbro 1W1P area rely on a private well for the water they drink. However, no public entity is responsible for water testing or management of a private well after drilling is completed. Local governments are best equipped to assist private landowners through land use management and ordinance development, which can have the greatest impact on protecting private wells. Other suggested activities to protect private wells include: hosting well testing or screening clinics, providing water testing kits, working with landowners to better manage nutrient loss, promoting household hazardous waste collection, managing storm water runoff, managing septic systems, and providing best practices information to private well owners.

## **Prioritize Protecting Noncommunity Public Water Supplies**

Noncommunity public water supplies provide drinking water to people at their places of work or play (schools, offices, campgrounds, etc.). Land use and management activities (maintaining/upgrading SSTS, well sealing, etc.) should consider effects on these public water systems. Find information regarding noncommunity public water supplies in the watershed in reports titled Source Water Assessments (SWA) at:

<https://www.health.state.mn.us/communities/environment/water/swp/swa.html>

Source Water Assessments provide a concise description of the water source - such as a well, lake, or river - used by a public water system and discuss how susceptible that source may be to contamination.

## **Targeting Groundwater & Drinking Water Activities in the 1W1P Planning Process**

### **Limitation of Existing Tools –**

Watershed models used for prioritizing and targeting implementation scenarios in the 1W1P, whether PTMapp, HSPF-Scenario Application Manager (SAM) or others, leverage GIS information and/or digital terrain analysis to determine where concentrated flow reaches surface water features. While this is an effective approach for targeting surface water contaminants, it does not transfer to groundwater concerns because it only accounts for the movement of water on the land's surface. Unfortunately, targeting tools are not currently available to model the impact on groundwater resources. The Minnesota Department of Health suggests using methodologies applied by the agency to prioritize and target implementation activities in the Source Water Protection program.

### **Using the Groundwater Restoration and Protection Strategies (GRAPS) Report –**

The MDH, along with its state agency partners, are developing a Groundwater Restoration and Protection Strategies (GRAPS) report for the Zumbro 1W1P. GRAPS will provide information and strategies on groundwater and drinking water supplies to help inform the local decision making process of the 1W1P. Information in a GRAPS Report can be used to identify risks to drinking water from different land uses. Knowing the risks to drinking water in a specific area allows targeting of specific activities.

- Prioritize Actions Identified in the Groundwater Restoration and Protection Strategies (GRAPS) report.

### **Using Wellhead Protection Plans –**

- Identify Drinking Water Supply Management Areas (DWSMA) located in the watershed.
- Examine the vulnerability of the aquifer to contamination risk to determine the level of management required to protect groundwater quality. For example, a highly vulnerable setting requires many different types of land uses to be managed, whereas a low vulnerability setting focuses on a few land uses due to the long recharge time and protective geologic layer.
- Use the Management Strategies Table in a Wellhead Protection Plan to identify and prioritize action items for each DWSMA

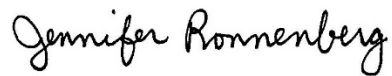
### **Using Guidance Documents to Manage Specific Potential Contaminant Sources –**

The MDH has developed several guidance documents to manage impacts to drinking water from specific potential contaminant sources. Topics include mining, stormwater, septic systems, feedlots, nitrates, and chemical and fuel storage tanks. This information is available at

<https://www.health.state.mn.us/communities/environment/water/swp/resources.html>

Attached you will find a listing of MDH data and information to help you in the planning process. Thank you for the opportunity to be involved in your watershed planning process. If you have any questions, please feel free to contact me at (507) 206-2734 or [jennifer.ronnenberg@state.mn.us](mailto:jennifer.ronnenberg@state.mn.us)

Sincerely,



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CC: Mark Wettlaufer , MDH Source Water Protection Unit  
Justin Blum, MDH Source Water Protection Unit  
Carrie Raber, MDH Source Water Protection Unit  
Derek Richter, MDH Source Water Protection Unit  
Chris Elvrum, MDH Well Management Section  
Adam Beilke, BWSR Board Conservationist  
Shaina Keseley, BWSR Clean Water Specialist  
Barbara Weisman/Jeff Weiss, DNR  
Justin Watkins/Emily Bartusek, MPCA  
Margaret Wagner/Aicam Laacouri, MDA

## **MDH Data and information:**

- A spreadsheet of the public water supply systems in the watershed, status in wellhead protection planning, and any drinking water protection concerns or issues that have been identified in protection areas. This information can help you understand the drinking water protection issues in the watershed, prioritize areas for implementation activities, and identify potential multiple benefits for implementation activities.
- Shape files of the Drinking Water Supply Management Areas (DWSMA) in the watershed are located at <https://www.health.state.mn.us/communities/environment/water/swp/maps/index.htm>. This information can help you prioritize and target implementation activities that protect drinking water sources for public water supplies.

### **MDH Figures:**

- A figure detailing “Pollution Sensitivity of Wells” in the Zumbro River Watershed. This information can help you understand which wells in the watershed are most geologically sensitive based on the vulnerability of the aquifer in which the well is completed. This information allows for targeting of implementation activities to the sources of water people are drinking.
- A figure detailing “DWSMA Vulnerability” in the Zumbro River Watershed. This information can help you understand which DWSMA is most vulnerable to contamination from the ground surface. This figure allows for targeting of implementation activities for public water suppliers.

**Zumbro River 1W1P Community Public Water Supplies -  
Drinking Water Protection Concerns for Quality**

Aquifer Risk	Name	County	Watershed	Subwatershed	System	WHP Plan	DWSMA Vulnerability	Drinking Water Protection Concerns
<b>Very high and high potential contaminant risk due to connection with surface water - Focus on impacts from land use practices and surface water runoff</b>								
	Goodhue	Goodhue	Zumbro	North Fork (04)	municipal	complete	High & Moderate	High nitrate concentration (max 6.2 ppm in 2018)
	Goodhue County Coop Electric	Goodhue	Rush-Vermillion	Wells Creek	non-municipal	not started		Undefined vulnerability. Low to no detect nitrates
	MN Correctional Facility - Red Wing	Goodhue	Rush-Vermillion	Hay Creek	non-municipal	not started		Vulnerability based on geologic sensitvity and well management. (max nitrate 1.6 ppm in 1999)
	Pine Island	Goodhue	Zumbro	Middle Fork (03)	municipal	completed	Moderate	Moderately vulnerable geologic setting
	Twin Fawn Mobile Home Park	Goodhue	Rush-Vermillion	Wells Creek	non-municipal	not started		Undefined vulnerability. Low to no nitrate concentrations
	Oronoco	Olmsted	Zumbro	Middle Fork (03)	municipal	in progress	High	High vulnerable geologic setting. Detectable but low nitrate concentrations
	Rochester	Olmsted	Zumbro	South Fork (01)	municipal	in progress	High, Moderate, Low	High vulnerable geologic setting. Detectable but low nitrate concentrations in some wells
	Clearwater Well Company	Olmsted	Zumbro	Middle Fork (03)	non-municipal	completed	High	Elevated nitrates (max. 3.9 ppm in 2009)
	Briarwood Subdivision	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		Vulnerability based on geologic sensitvity.
	Chester Heights	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		Undefined vulnerability
	Sunrise Mobile Home Park	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		High vulnerable geologic setting.
	Zumbro Ridge Estate	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		High vulnerable geologic setting.
	Lake City	Wabasha	Rush-Vermillion	Lake Pepin	municipal	completed	High	Vulnerable wellhead assessment with elevated nitrate concentrations
	Zumbro Falls	Wabasha	Zumbro	Zumbro (05)	municipal	completed	High	Vulnerable wellhead assessment with elevated nitrate concentrations
	Kellogg	Wabasha	Zumbro	Zumbro (05)	municipal	completed	High, Moderate	Vulnerable wellhead assessment with elevated nitrate concentrations
	Millville	Wabasha	Zumbro	Zumbro (05)	municipal	completed	Very High, High	Vulnerable wellhead assessment with elevated nitrate concentrations
	Plainview	Wabasha	Zumbro	Zumbro (05)	municipal	completed	Very High, High, Moderate	Vulnerable wellhead assessment with elevated nitrate concentrations
	Hiawatha Estates, Subds. I,II,III	Wabasha	Zumbro	Zumbro (05)	non-municipal	not started		Elevated nitrate concentrations (max 3.8 ppm in 2017)
<b>Low potential contaminant risk - Focus on sealing of unused wells and old public water supply wells (funding available from MDH)</b>								
	Claremont	Dodge	Zumbro	SB, MF (02)	municipal	completed	Low	
	Dodge Center	Dodge	Zumbro	SB, MF (02)	municipal	completed	Low	
	Kasson	Dodge	Zumbro	SB, MF (02)	municipal	completed	Low	
	Mantorville	Dodge	Zumbro	SB, MF (02)	municipal	completed	Low	
	West Concord	Dodge	Zumbro	Middle Fork (03)	municipal	completed	Low	
	Bellechester	Goodhue	Zumbro	Zumbro (05)	municipal	completed	Low	
	Kenyon	Goodhue	Zumbro	North Fork (04)	municipal	completed	Low	
	Red Wing	Goodhue	Rush-Vermillion	Hay Creek	municipal	completed	Low	
	Wanamingo	Goodhue	Zumbro	North Fork (04)	municipal	completed	Low	
	Zumbrota	Goodhue	Zumbro	North Fork (04)	municipal	completed	Moderate, Low	
	Byron	Olmsted	Zumbro	SB, MF (02)	municipal	completed	Low	
	Country Home Trailer Park	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		
	Hallmark Terrace Mobile Home Park	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		
	Kings Park - Hyland Addition	Olmsted	Zumbro	South Fork (01)	non-municipal	not started		
	Oronoco Estates MHC, LLC	Olmsted	Zumbro	Zumbro (05)	non-municipal	not started		
	Hammond	Wabasha	Zumbro	Zumbro (05)	municipal	completed	Low	
	Mazeppa	Wabasha	Zumbro	North Fork (04)	municipal	completed	Low	

Summary of Community, Municipal Public Water Supply Systems

9 vulnerable and 13 non-vulnerable

Summary of Community, Non-municipal Public Water Supply Systems

9 vulnerable and 4 non-vulnerable

Summary of Non-Community Public Water Supply Systems

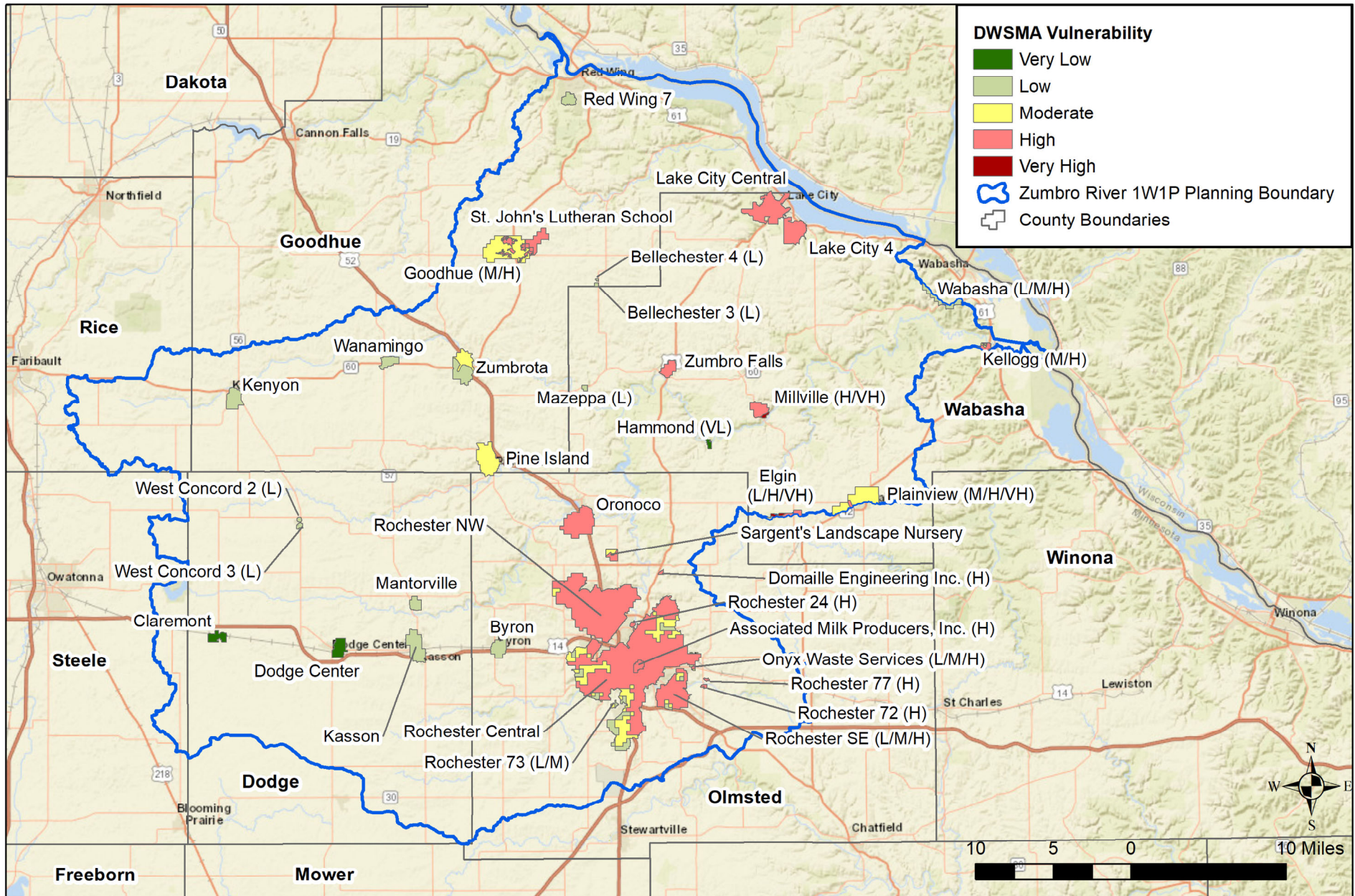
138 Non-Community Public Water Suppliers of unknown vulnerabilities

Acronyms:

DWSMA=Drinking Water Supply Management Area

WHP=Wellhead Protection Plan

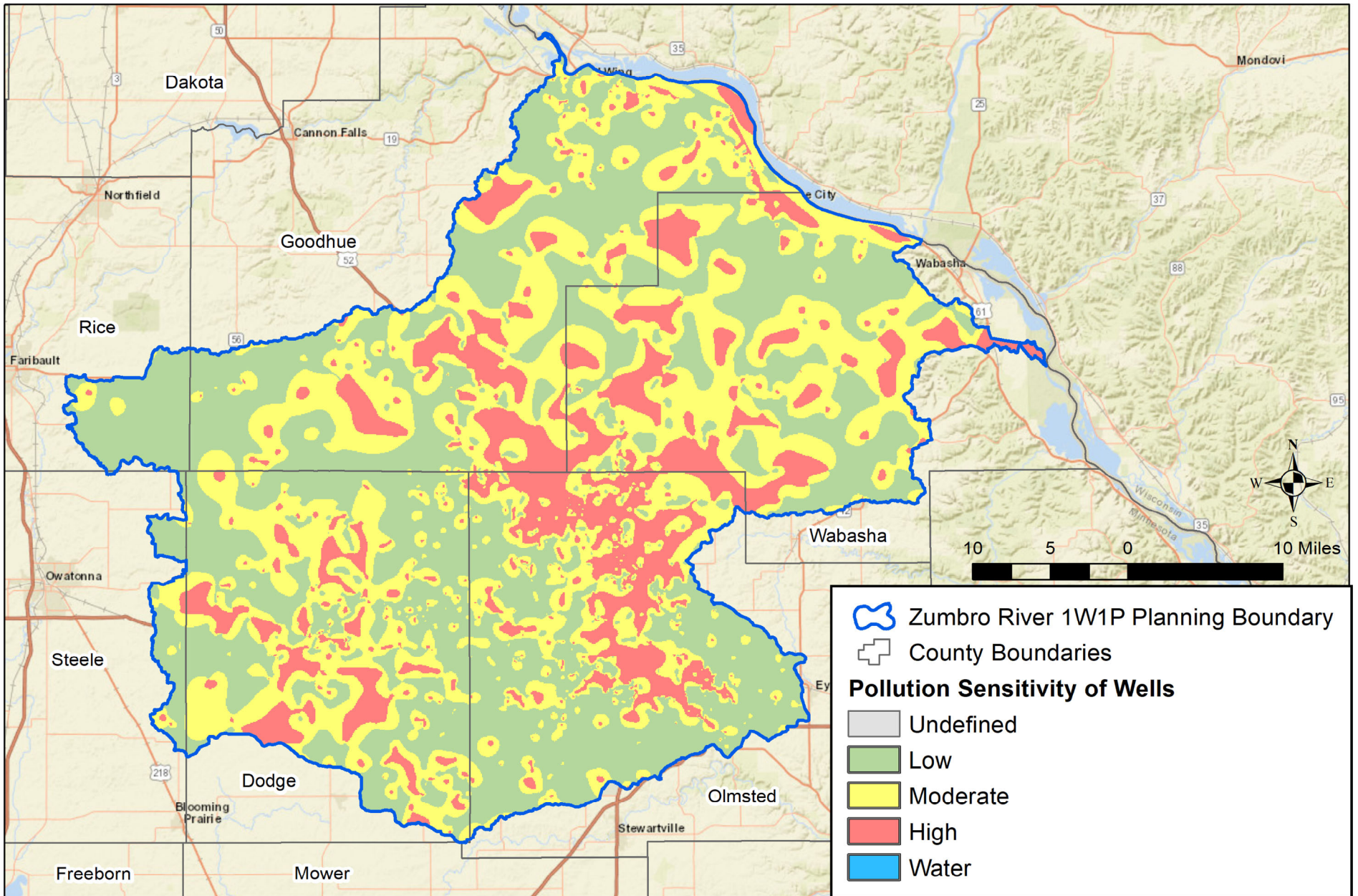
# Zumbro River Watershed - DWSMA Vulnerability



Data: Drinking Water Supply Management Area Vulnerability (Minnesota Department of Health)  
 Basemap: ESRI World Street Map



# Zumbro River Watershed - Pollution Sensitivity of Wells



Data: County Well Index  
Basemap: ESRI World Street Map