

# Assessment of Public Benefits of Protecting Source Water

*Preliminary results – maps and visualization*

*February 28, 2019*

## Contents:

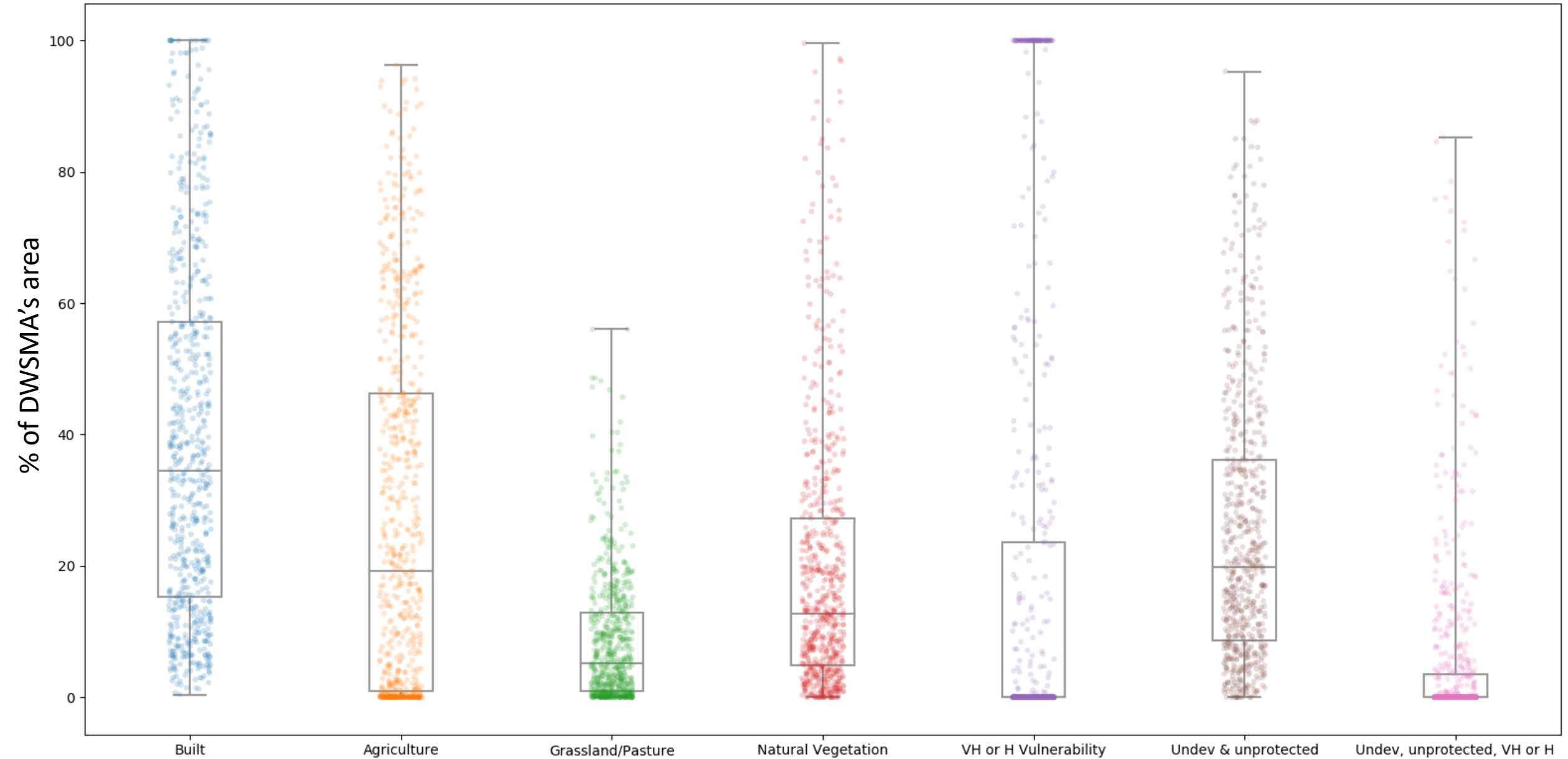
- Land use trends for DWSMAs
- Prioritization visualization with biophysical and socio-economic data
- Co-benefits visualization at the HUC8 level.
- Statewide resident survey



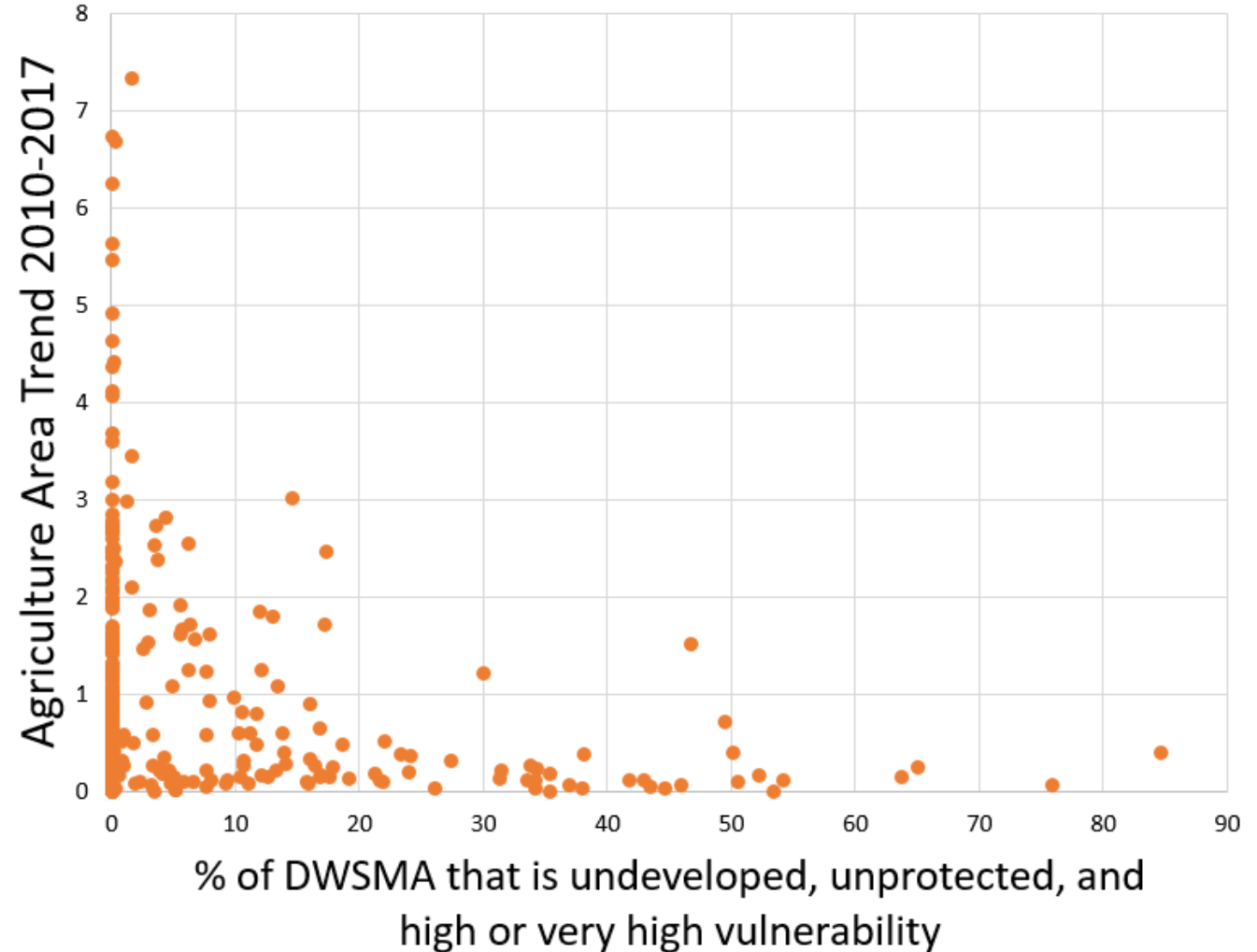
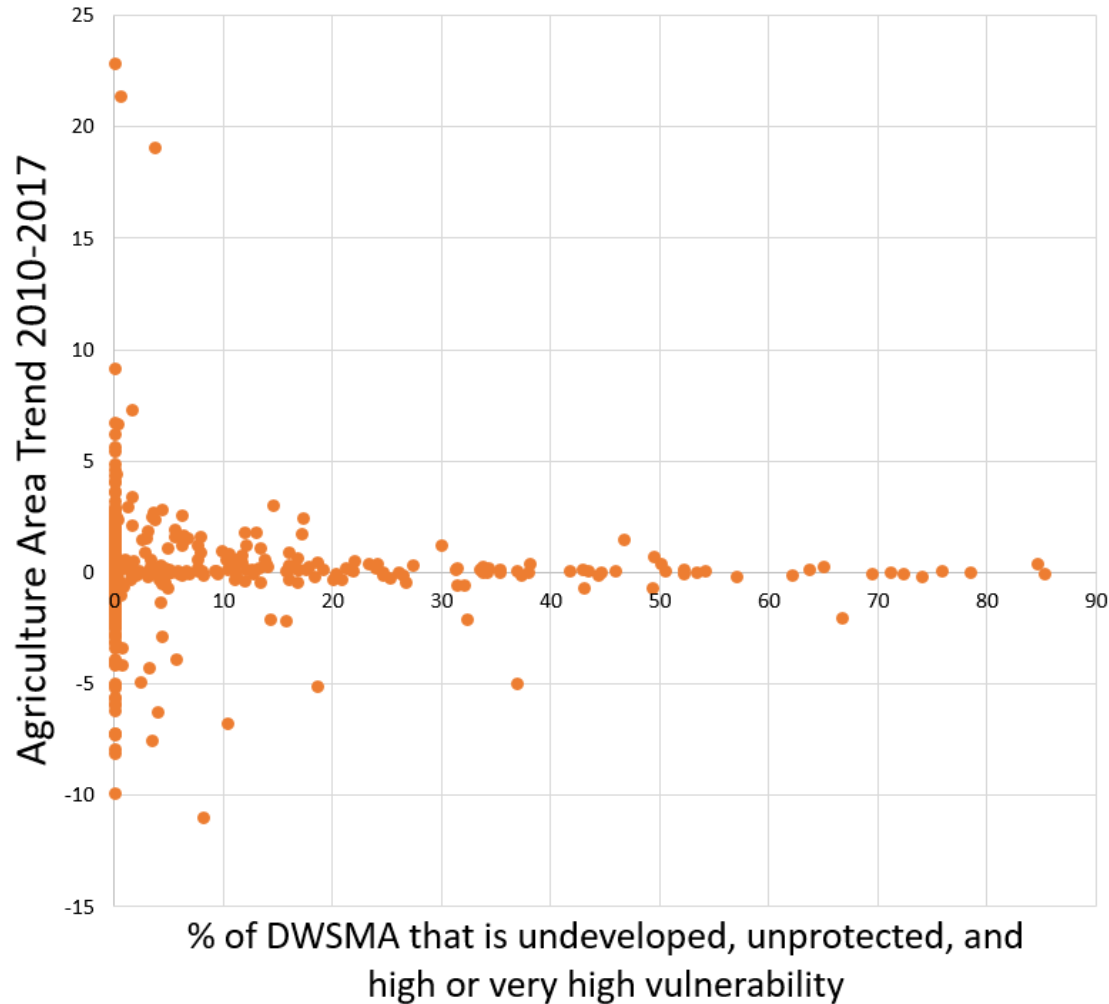
# Land use trends for DWSMAs

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# DWSMA Land Use



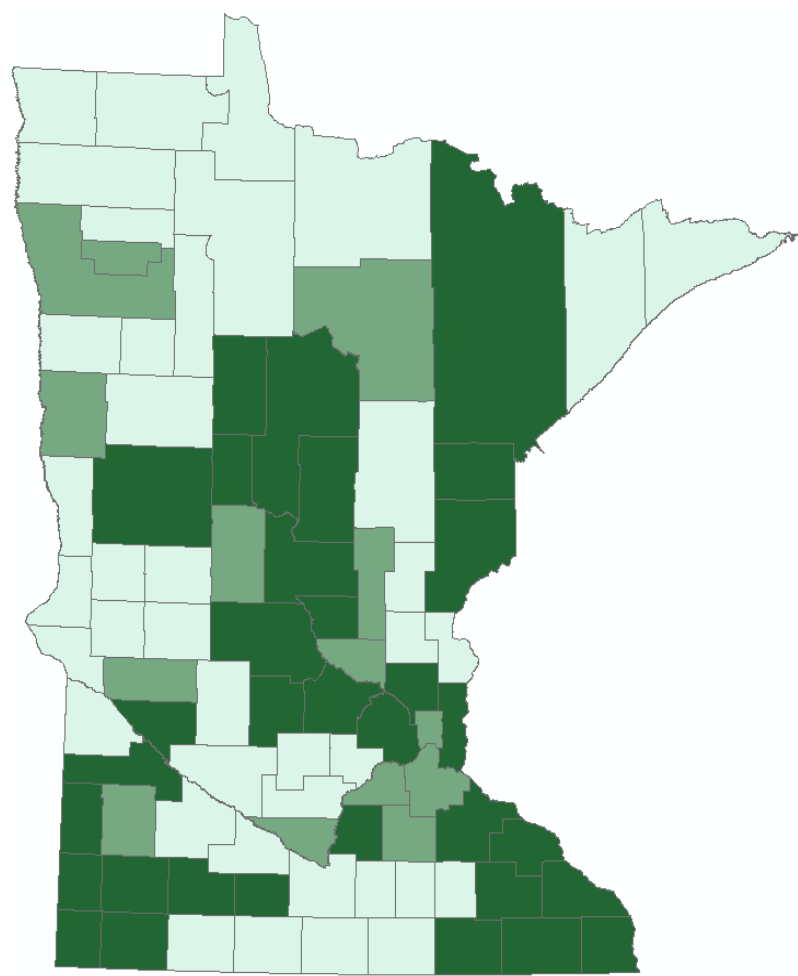
# Slope of trend line for % ag 2010-2017 and groundwater vulnerability



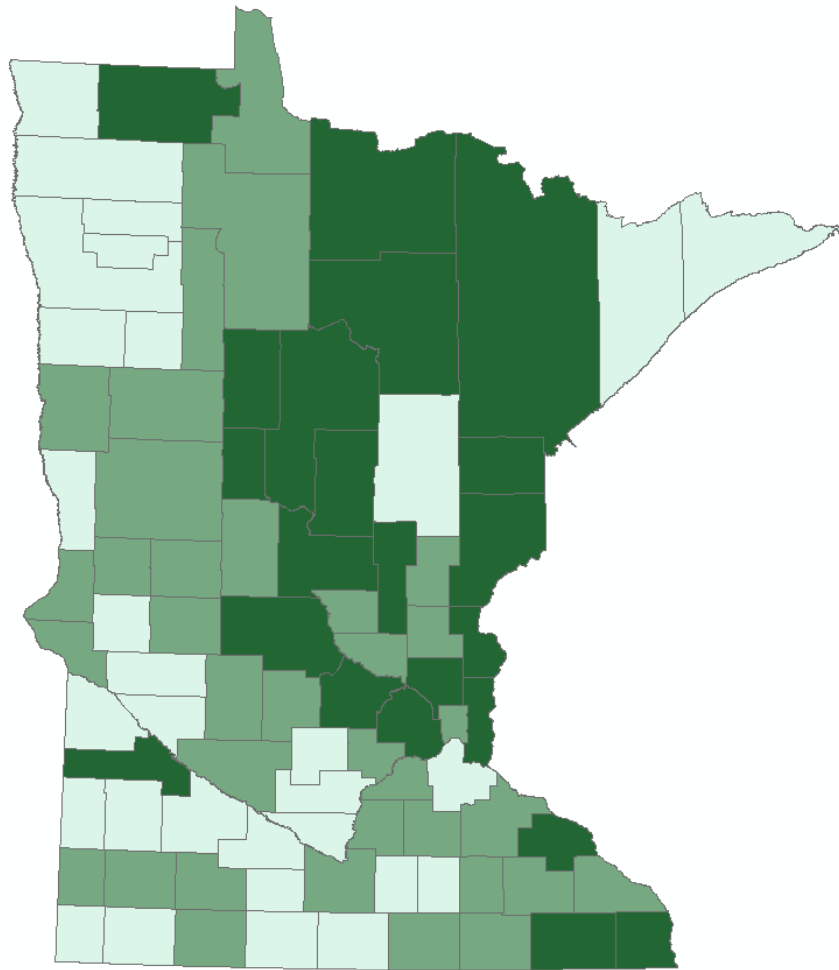
# **Prioritization visualization with biophysical and socio-economic data**



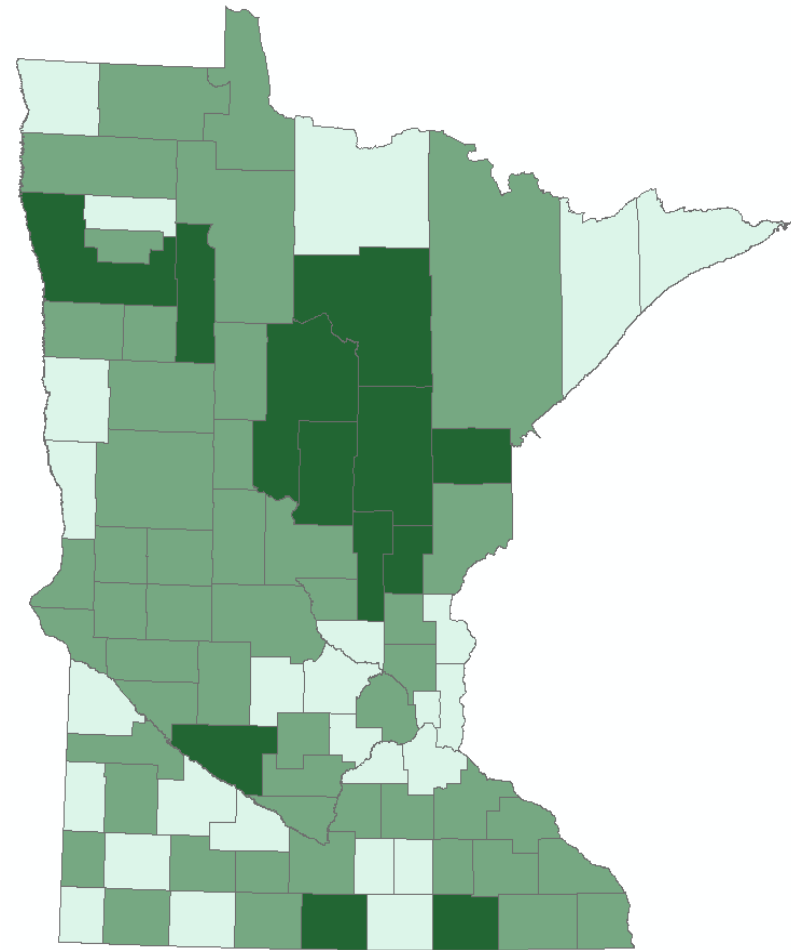
## Counties with sourcewater areas high in ...



Geologic Vulnerability



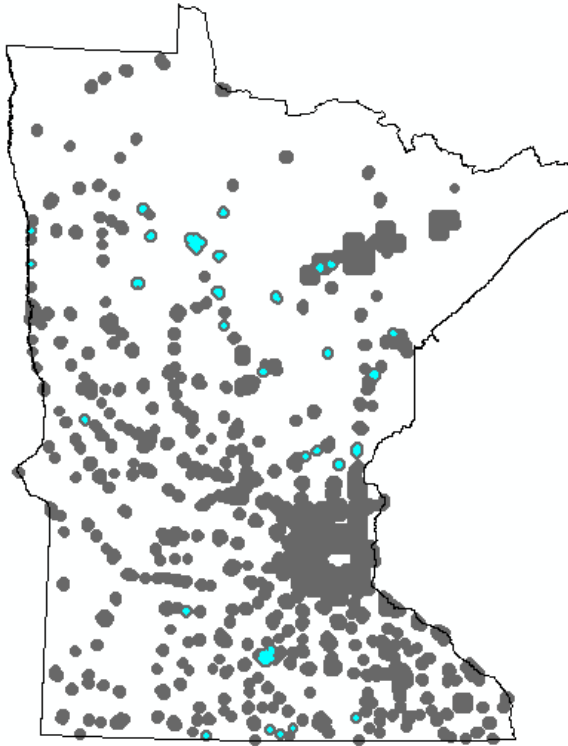
Unprotected &  
Undeveloped land



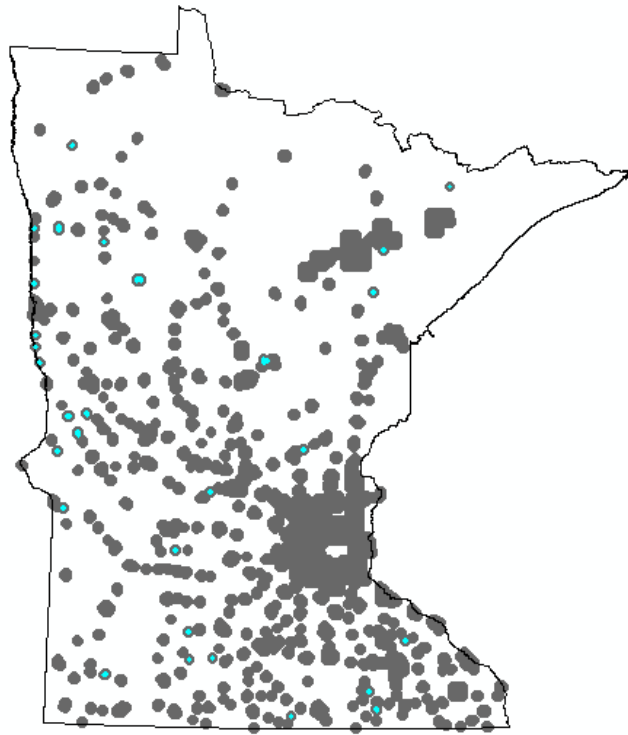
Poverty

# Top 10% of DWSMAs when sorted by ...

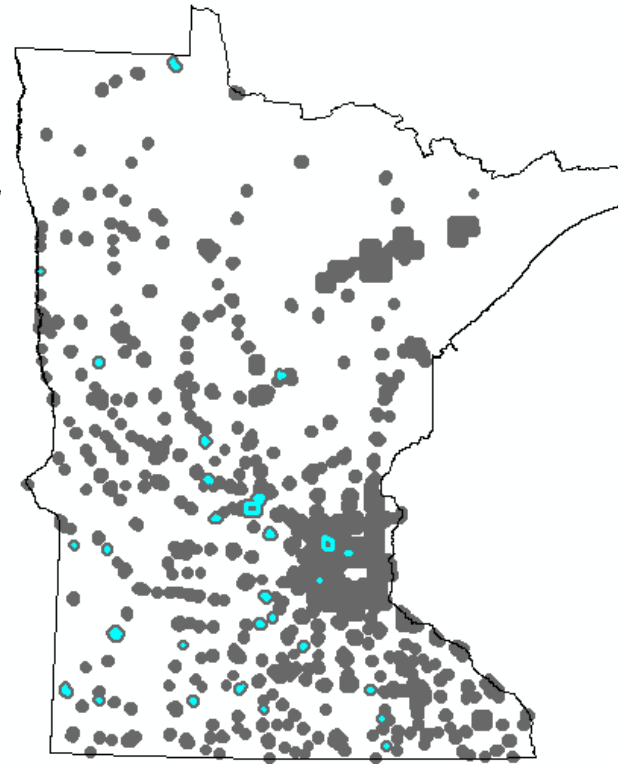
Below Poverty Line



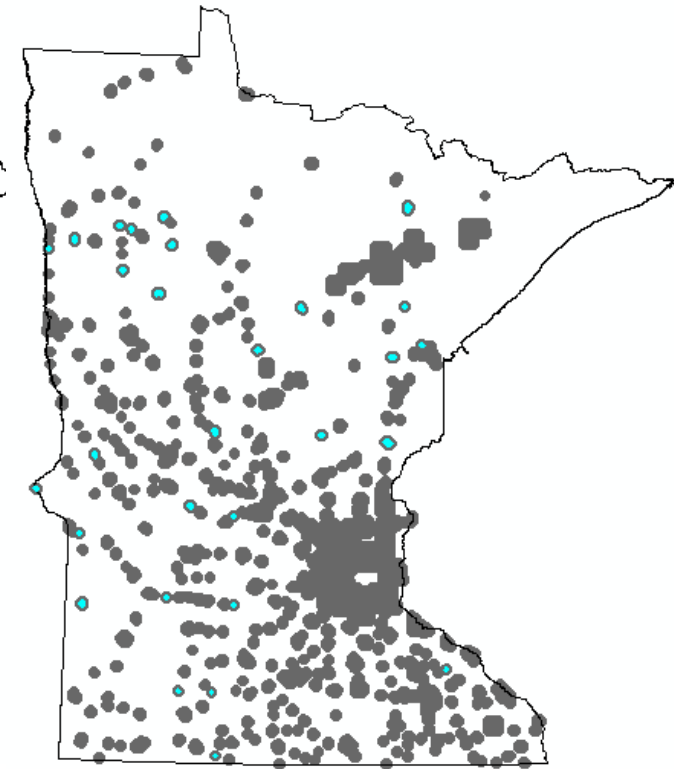
Low Population



English not spoken 'very well'



No Computer



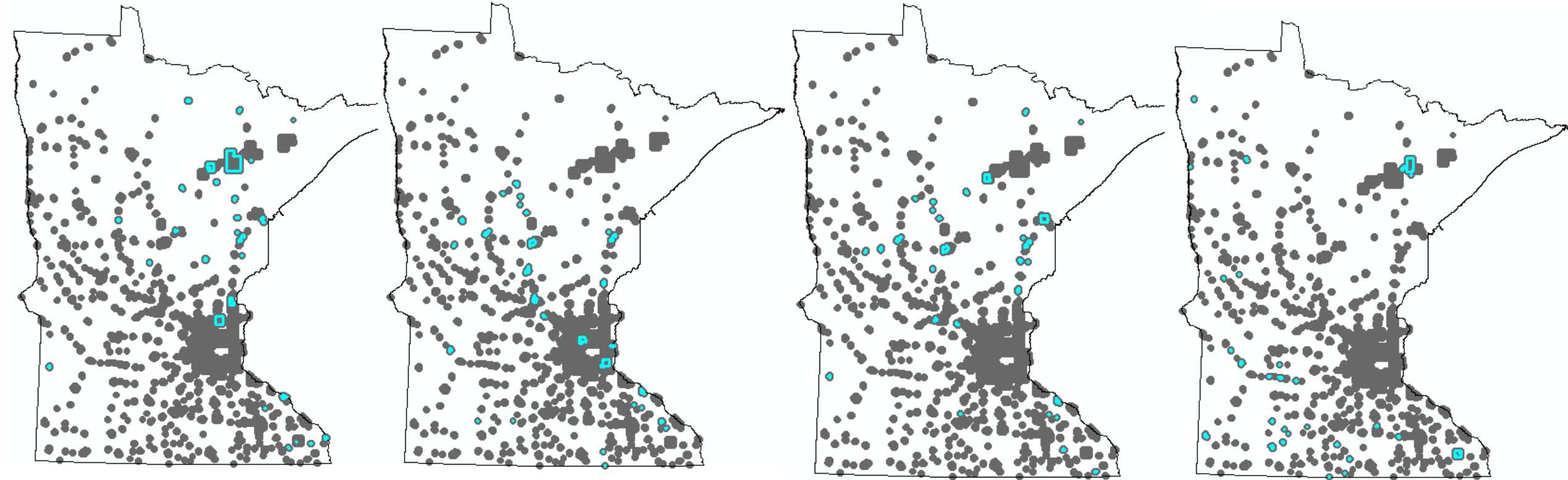
# Top 10% of DWSMAs when sorted by ...

% Undeveloped  
Unprotected

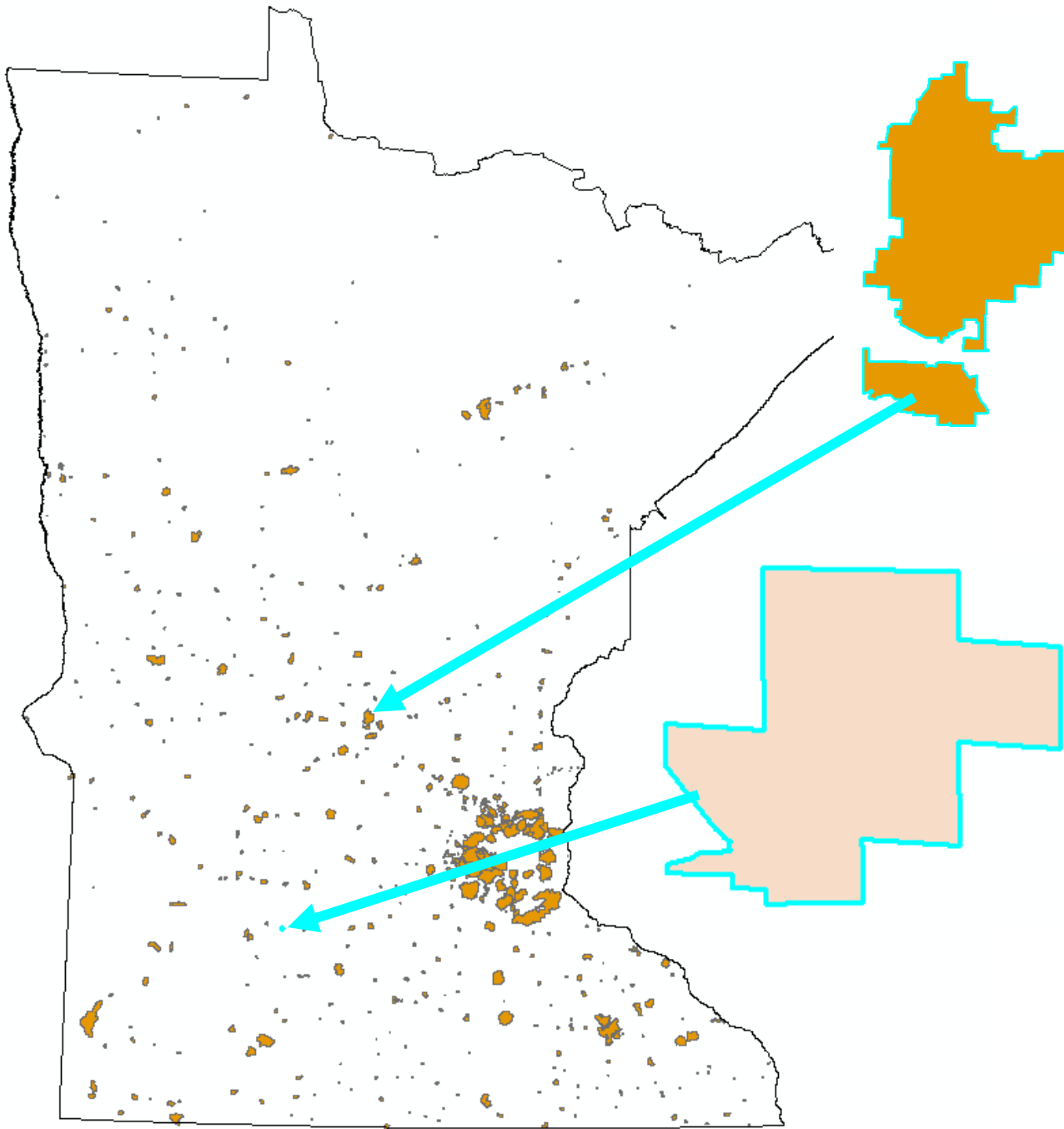
% Very high or High  
GW vulnerability

% Undeveloped and unprotected  
VH and H GW vulnerability

Ag % trend line





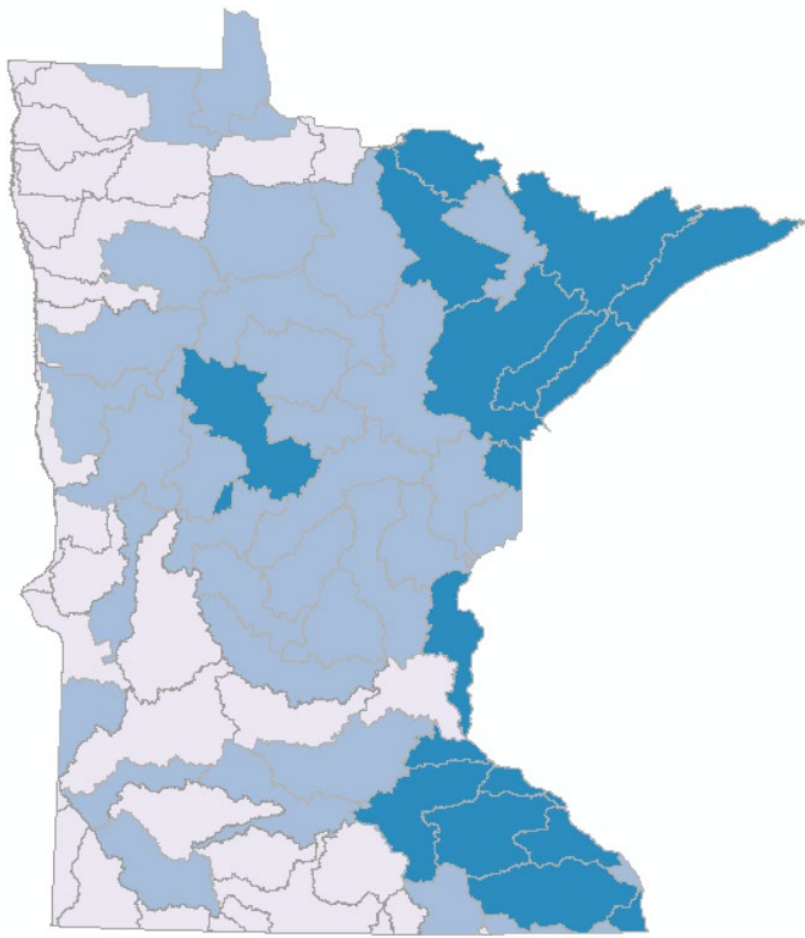


Sourcewater Area Name	Sartell
Total Population	16,442
% public/protected	0
% Undeveloped	54
% High geologic vulnerability	100
% Undeveloped & High geologic vulnerability	54

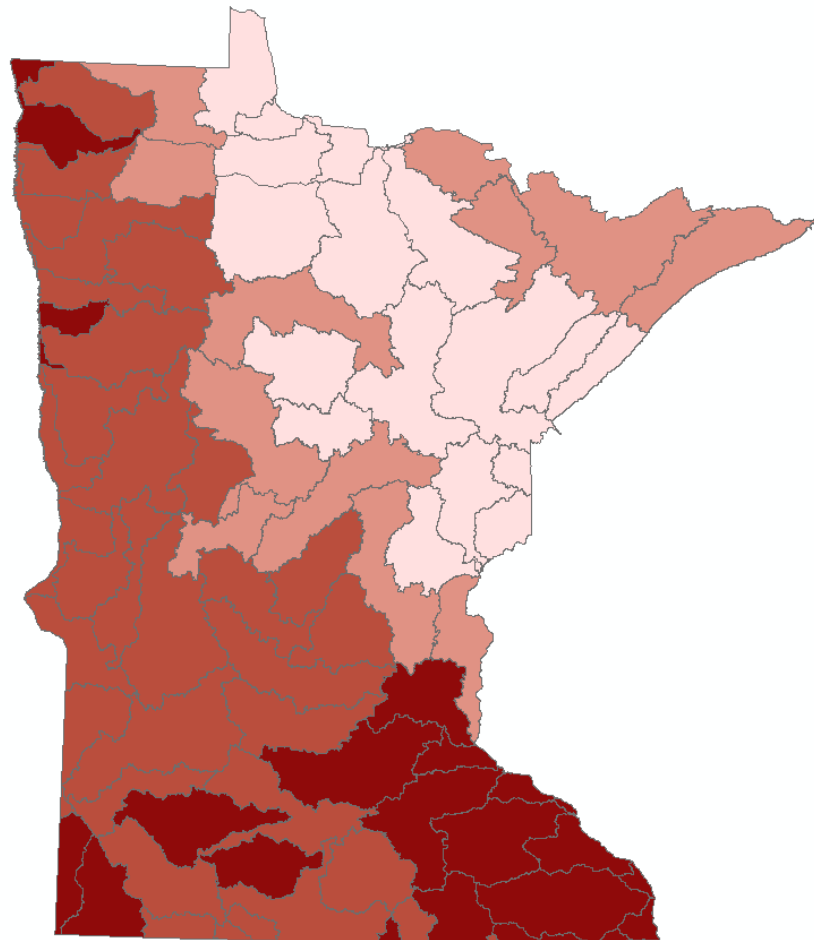
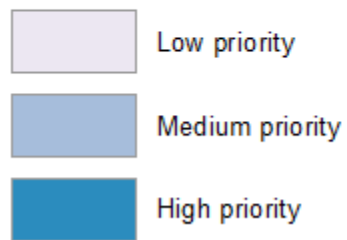
Sourcewater Area Name	Franklin
Total Population	529
% Poor	35.5
% Not Insured	17.4
% Language other than English	66.7
% Renter	32.1
% No Vehicle	7.7

# Co-benefits visualization at the HUC8 level

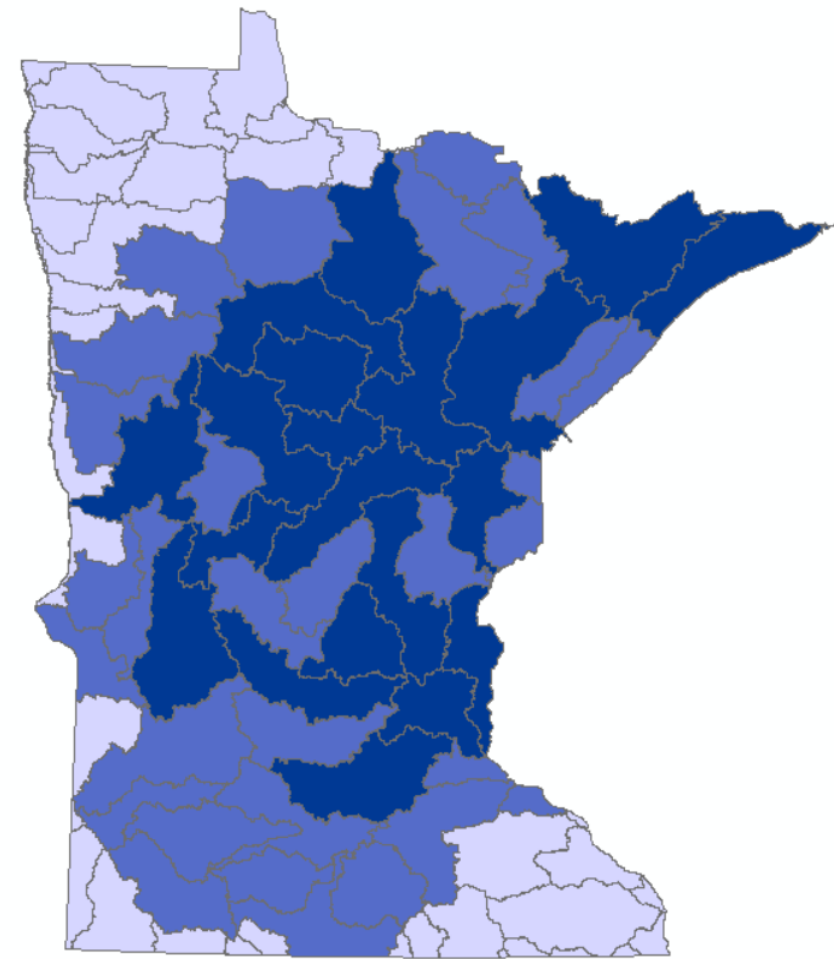
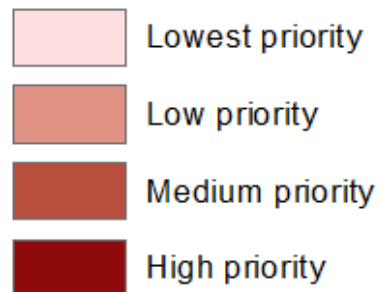
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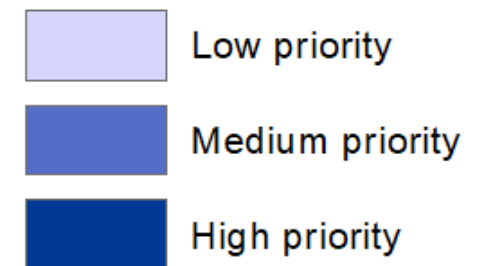
## Trout miles and visitation



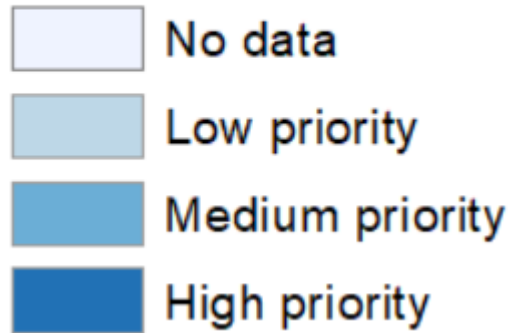
## People reliant on groundwater and contamination susceptibility



## Lake P sensitivity and visitation



## Winnipeg basin



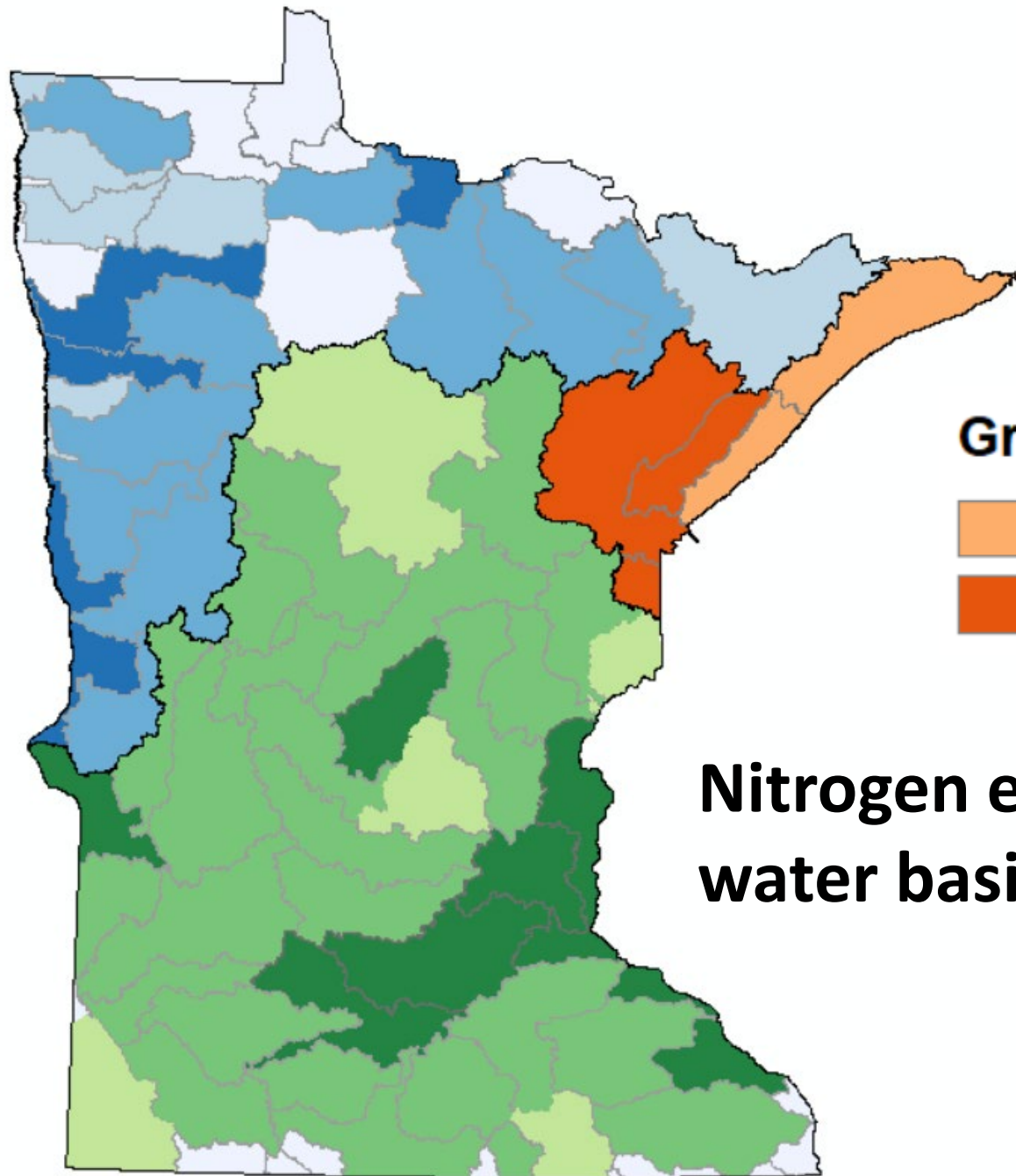
## Mississippi basin



## Great Lakes basin



**Nitrogen exports to  
water basins**





# Minnesota Water Values

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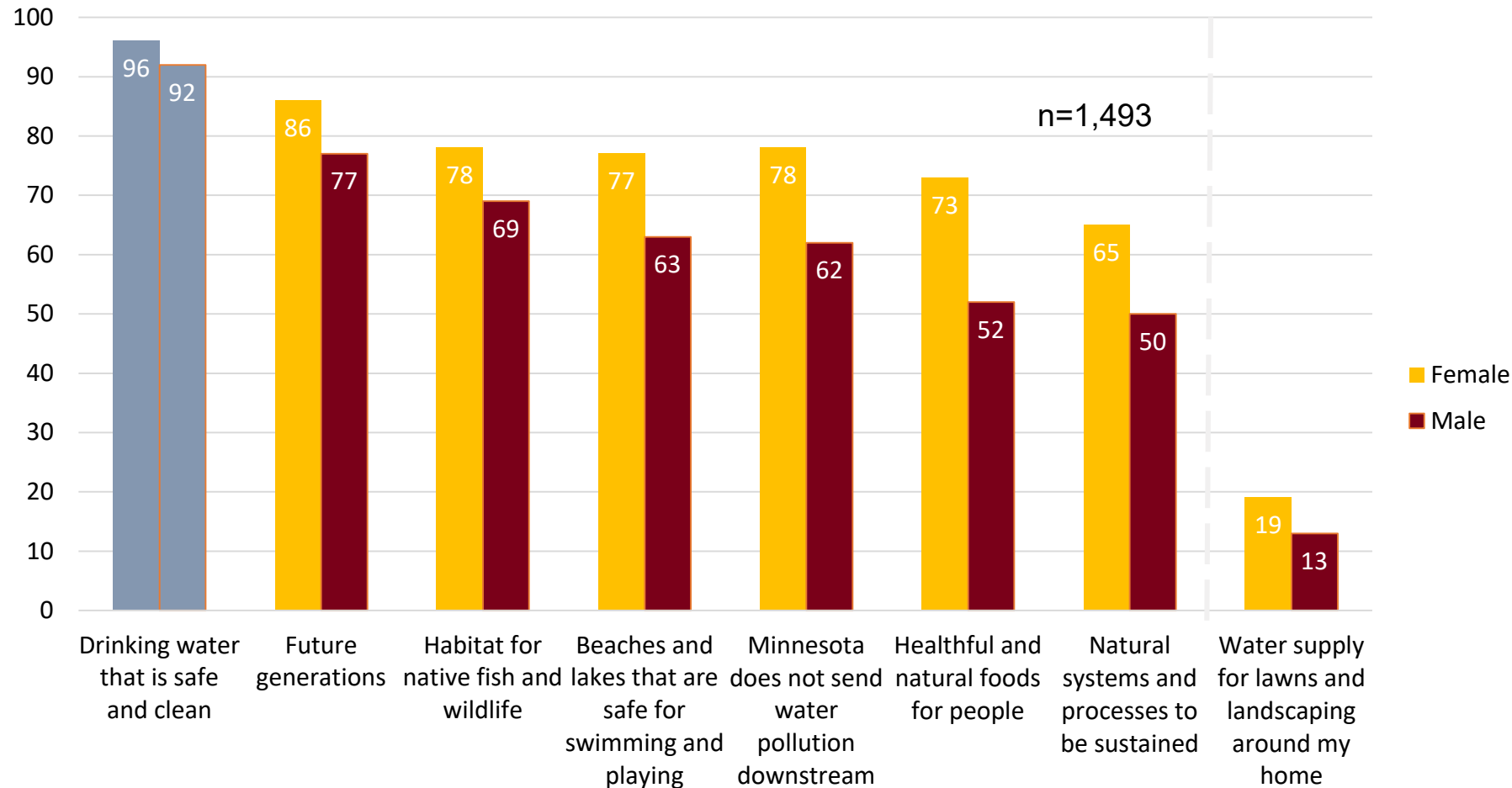
*A Statewide resident survey*



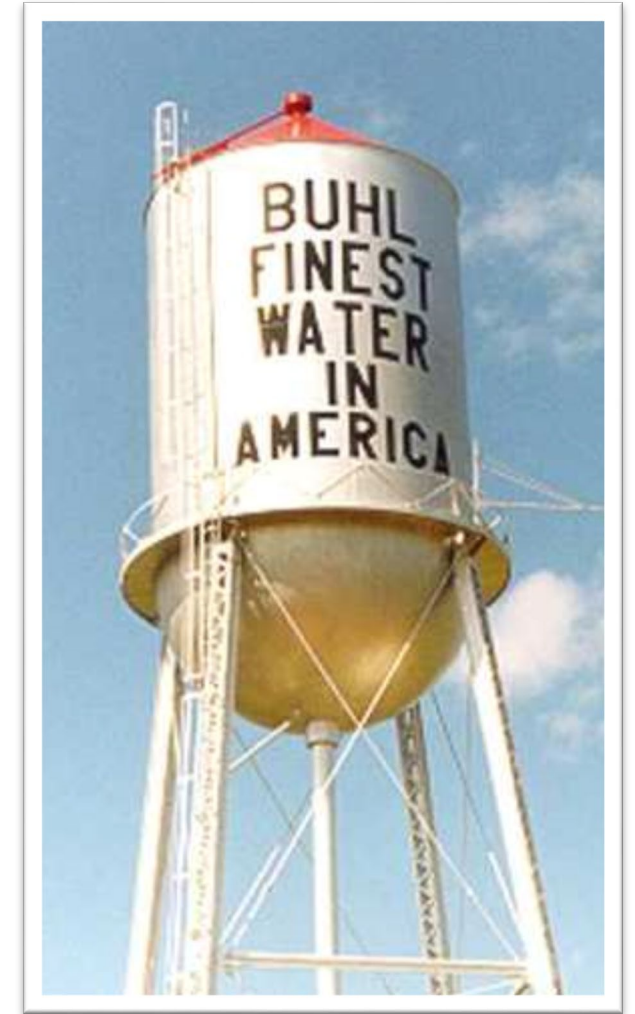
# Water Has Many Different Values

Extremely Important (%)

Extremely Important Water Values to Protect and Restore



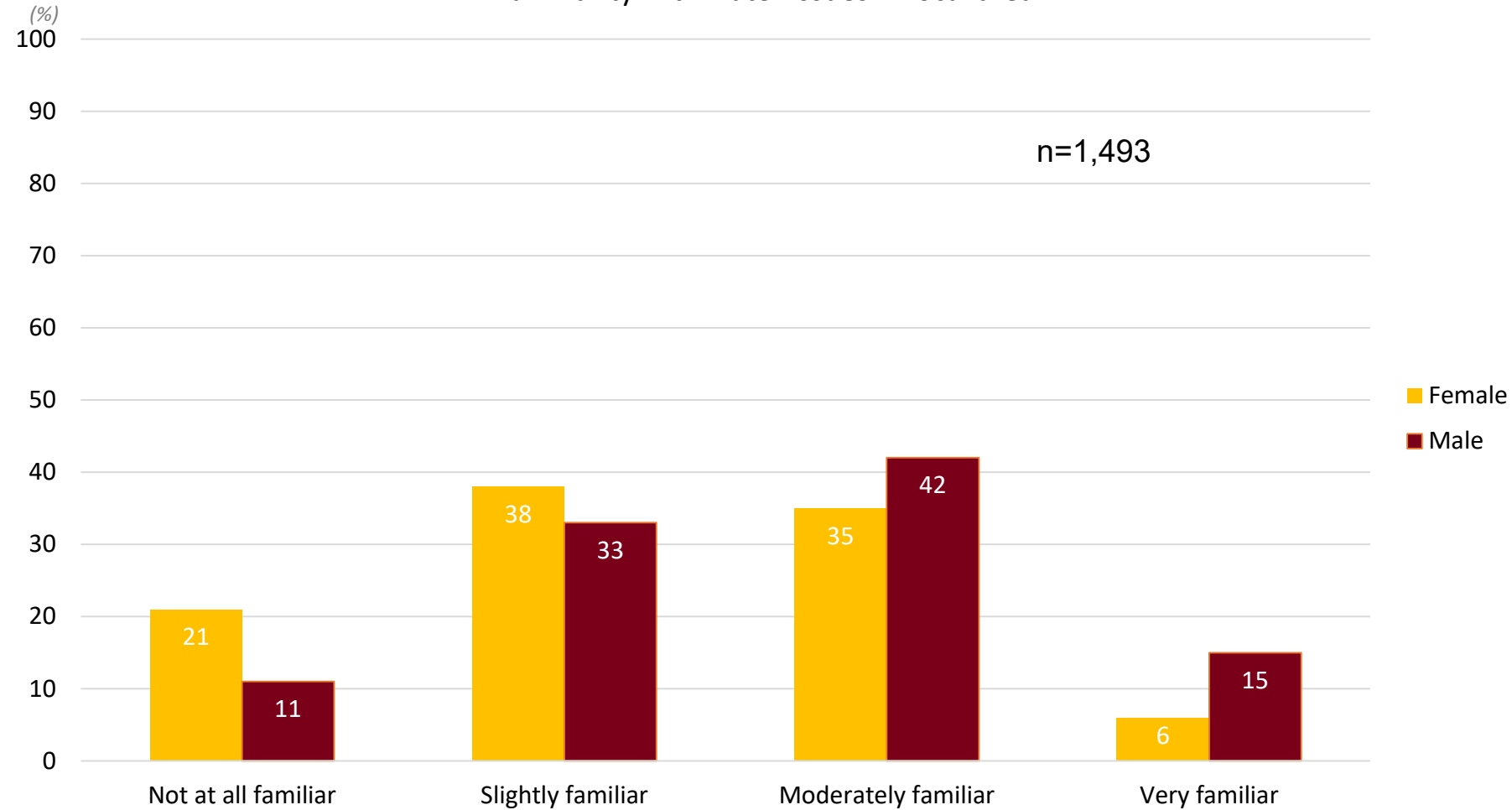
2018 Statewide Survey of Minnesota Water Values





# Few are very familiar with local water issues

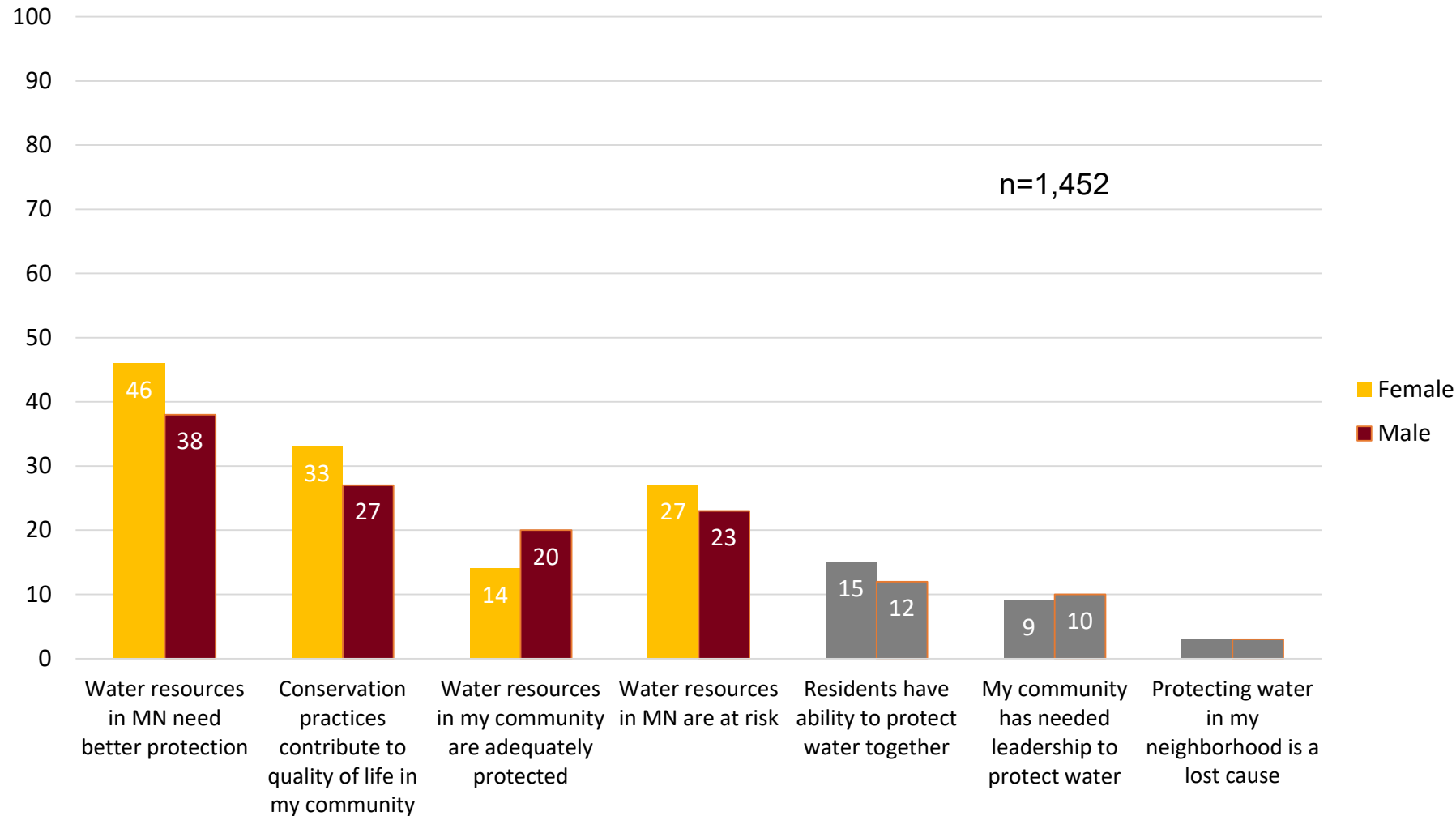
Familiarity with water issues in local area





# Capacity-building for water protection is needed

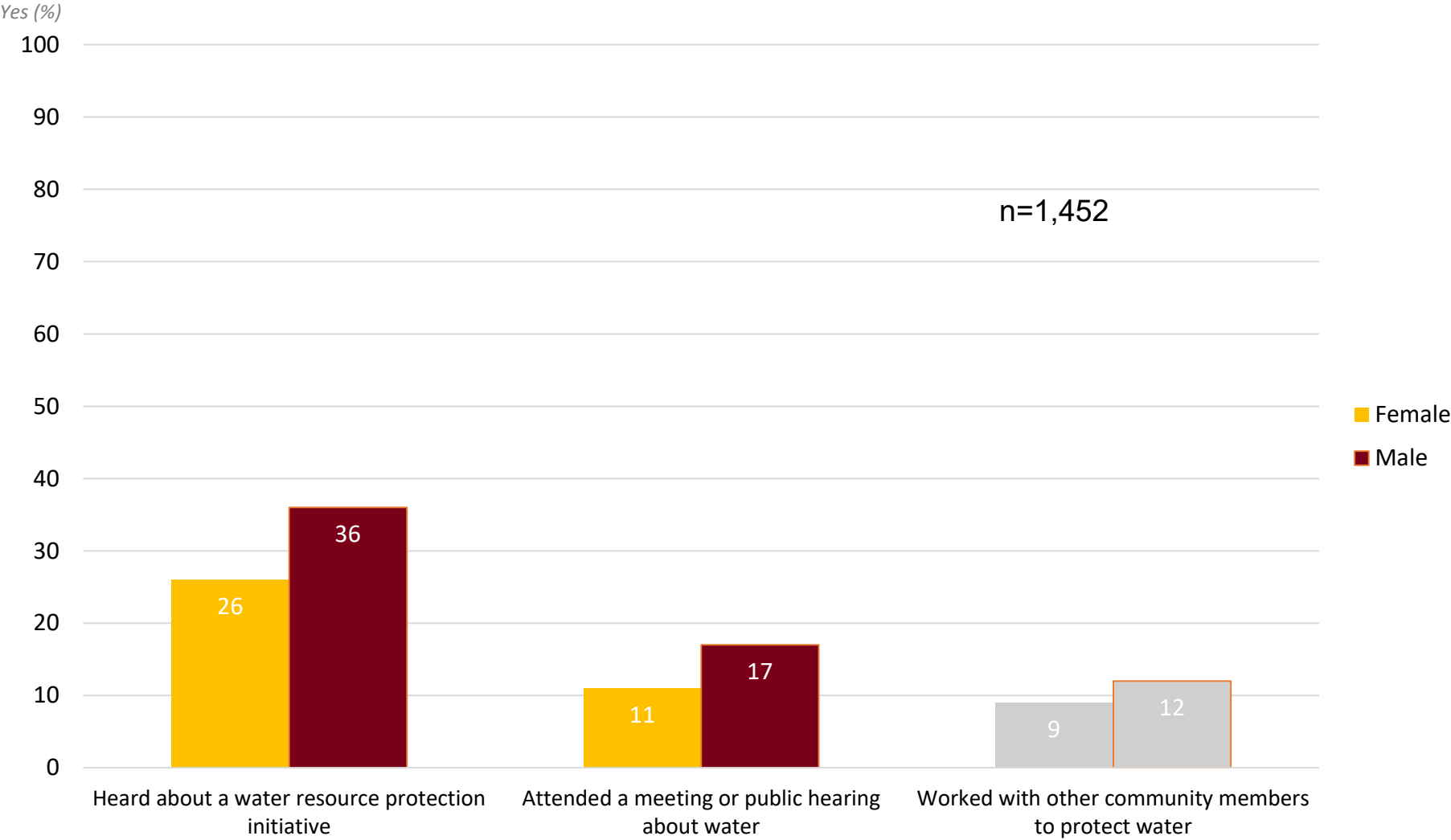
Strongly agree (%)







# Civic Water Action in the Past 12 Months

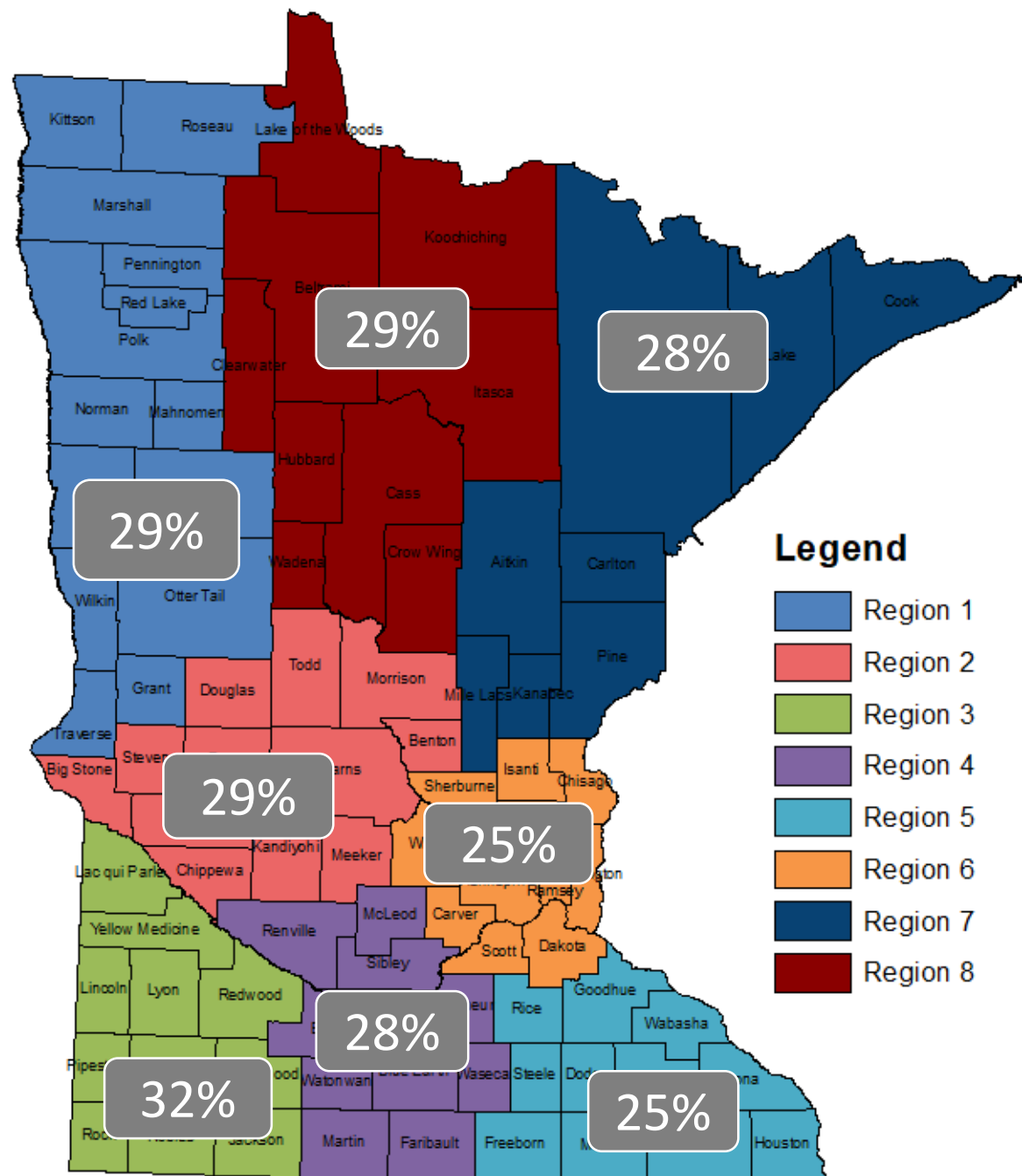


# Minnesota Water Values

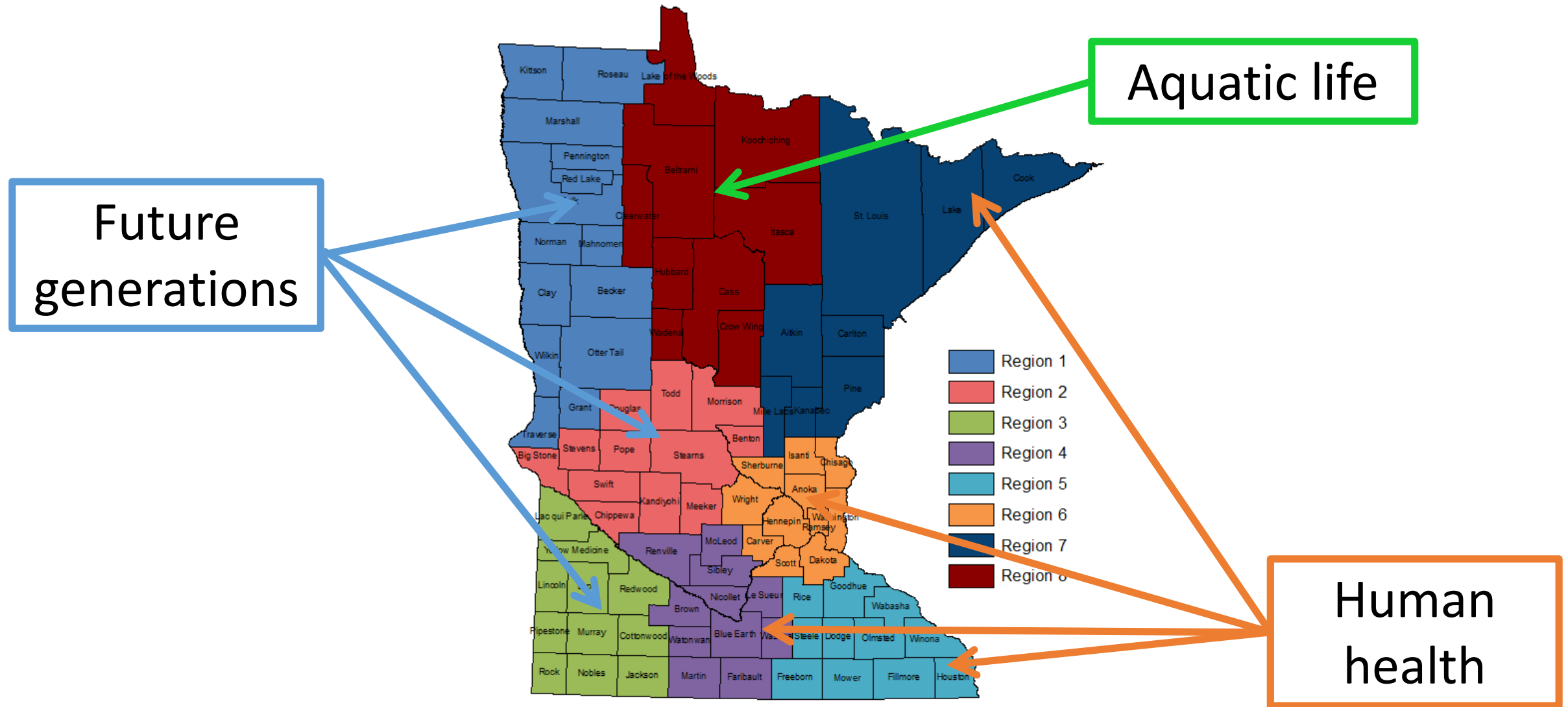
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*Regional profiles and comparisons*

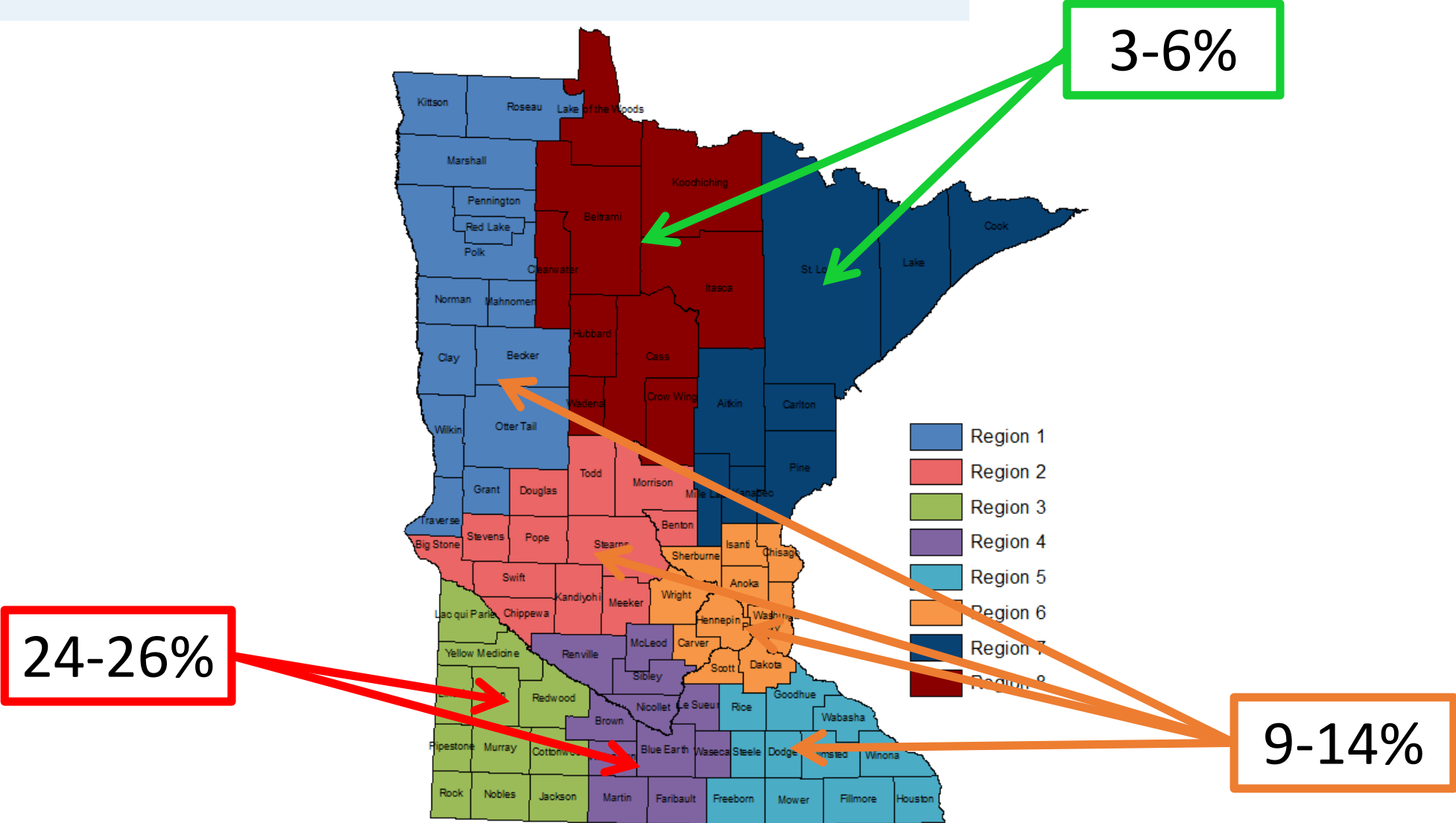
# Response rate by region



# Top three concerns about consequences of water problems



Rated local water quality as “poor” or “very poor”



# Rated Minnesota water quality as “very good”

