

Source Water Protection in the Twin Cities Metropolitan Area

Lanya Ross, Environmental Analyst
Metropolitan Council

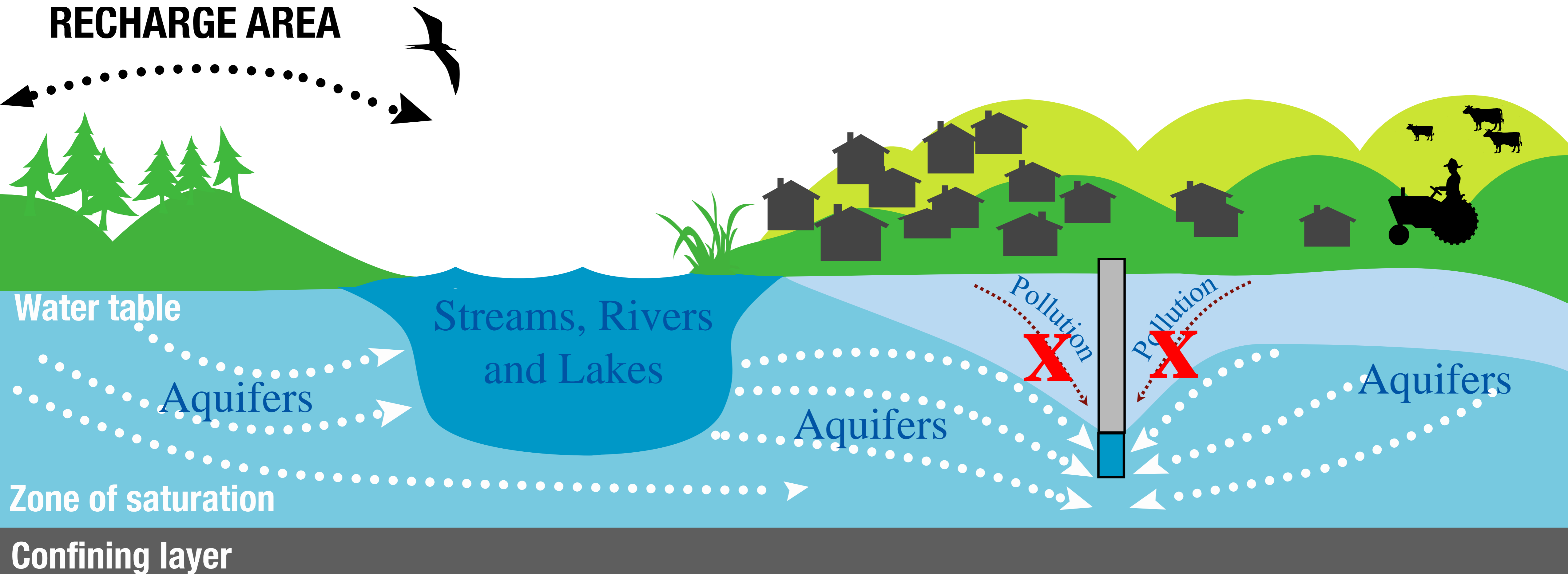
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Land Use Advisory Committee



Source water

Water from streams, rivers, lakes or underground aquifers used for drinking



Value of source water protection

- EPA estimates that every \$1 spent on source water protection saves an average of \$27 in water treatment costs
- Protecting sources of drinking water can also help:
 - Green space conservation
 - Stormwater planning
 - Nonpoint source pollution management
 - Brownfields redevelopment

Met Council Policies Related to Source Water

Land Use Policy Plan (Thrive MSP 2040)

POLICY OF WATER SUSTAINABILITY

Conserve, restore, and protect the quality and quantity of the region's water resources to ensure ongoing availability, support public health, and maintain a high quality of life.

Water Resources Policy Plan

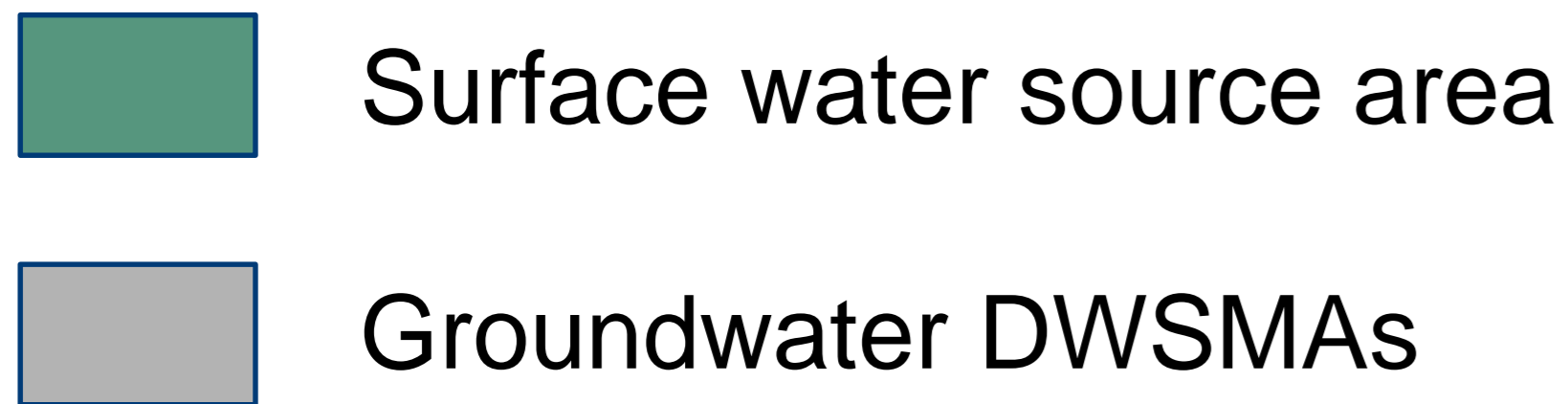
POLICY ON ASSESSING AND PROTECTING SOURCE WATER

Assess the condition of the region's lakes, rivers, streams, and aquifers to evaluate impacts on regional water resources and measure success in achieving regional water goals.

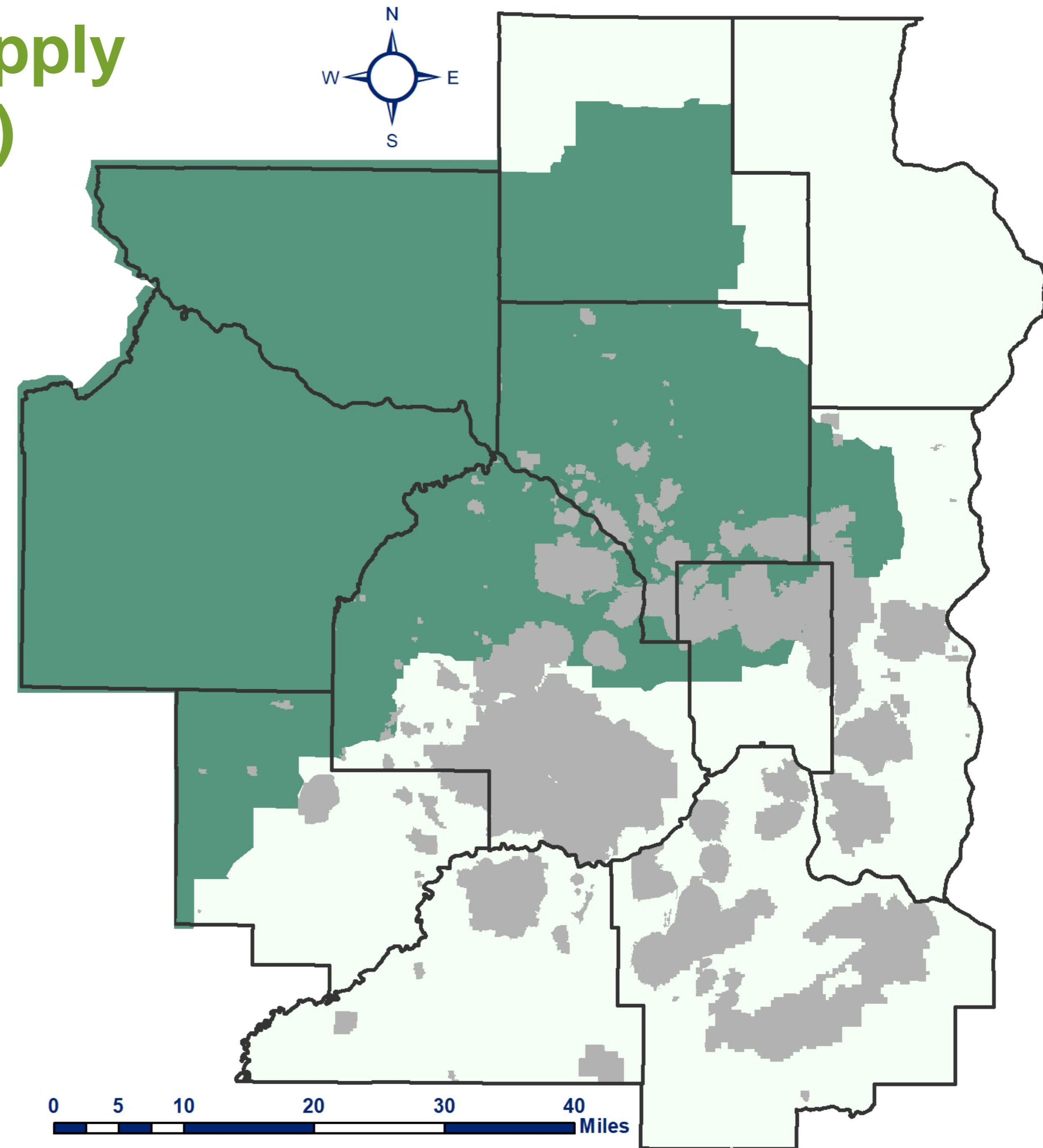
Master Water Supply Plan Outcome

Potential contaminant sources are reduced and/or restricted in areas identified as sources of public drinking water supplies.



Metro Area Drinking Water Supply Management Areas (DWSMAs)



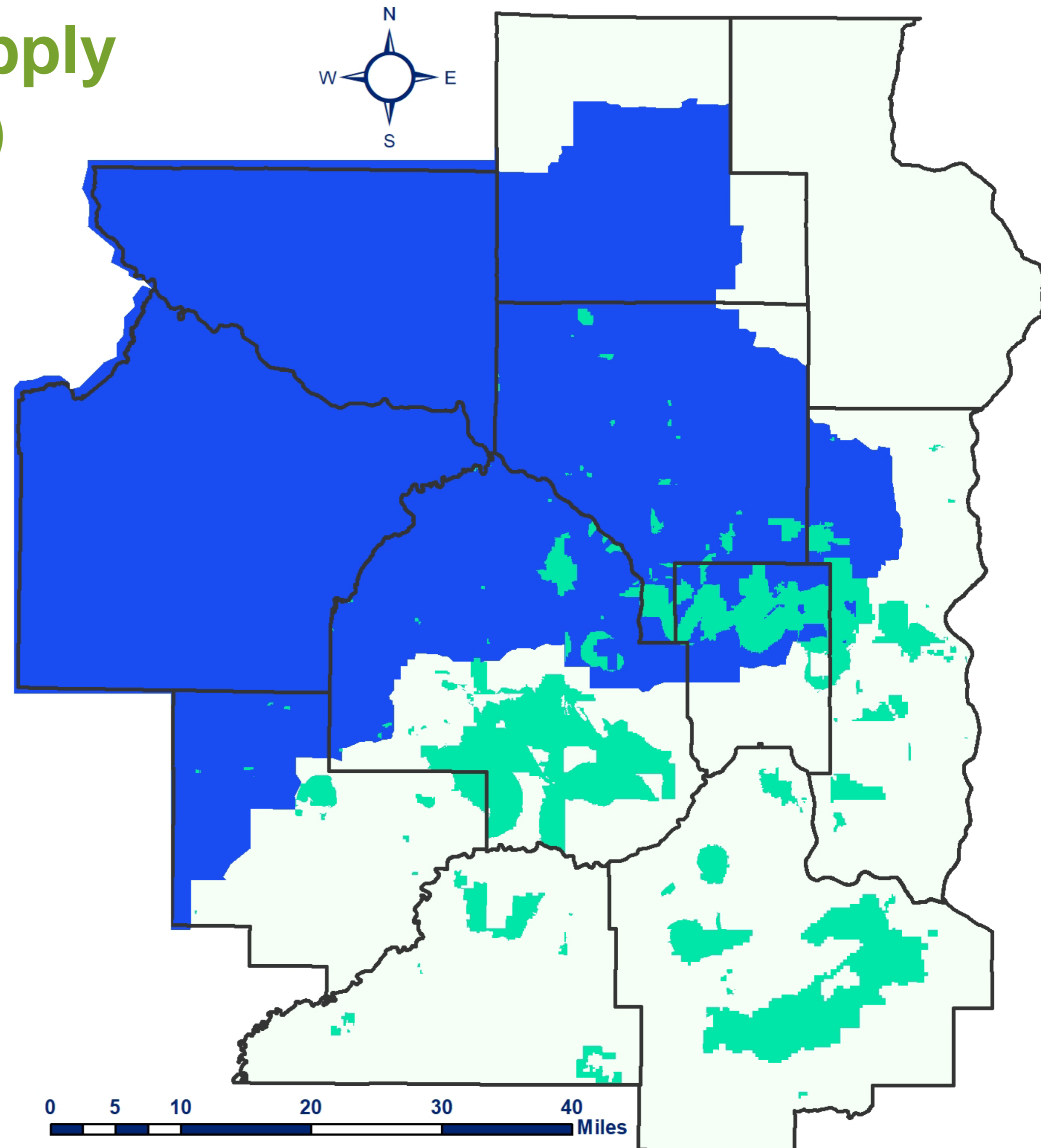
- Source for over 90% of the metro area population
- Over 1,500 square miles



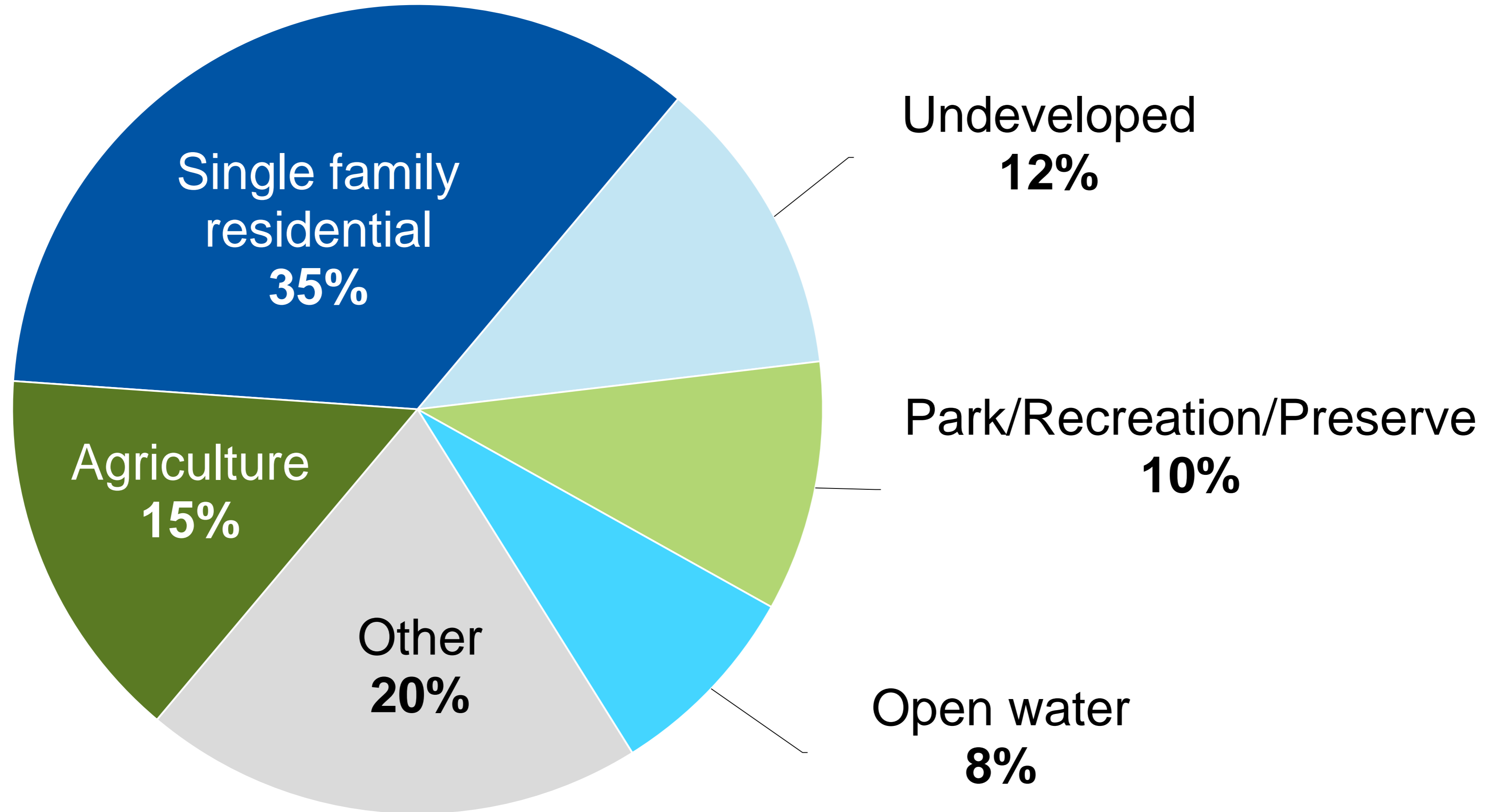
Metro Area Drinking Water Supply Management Areas (DWSMAs)

-  Surface water source area
-  Groundwater DWSMAs that extend beyond the source community's boundaries

- 1,000 square miles outside the jurisdiction of surface water providers
- 400 square miles outside the jurisdiction of groundwater providers
- 150 square miles of overlapping groundwater DWSMAs



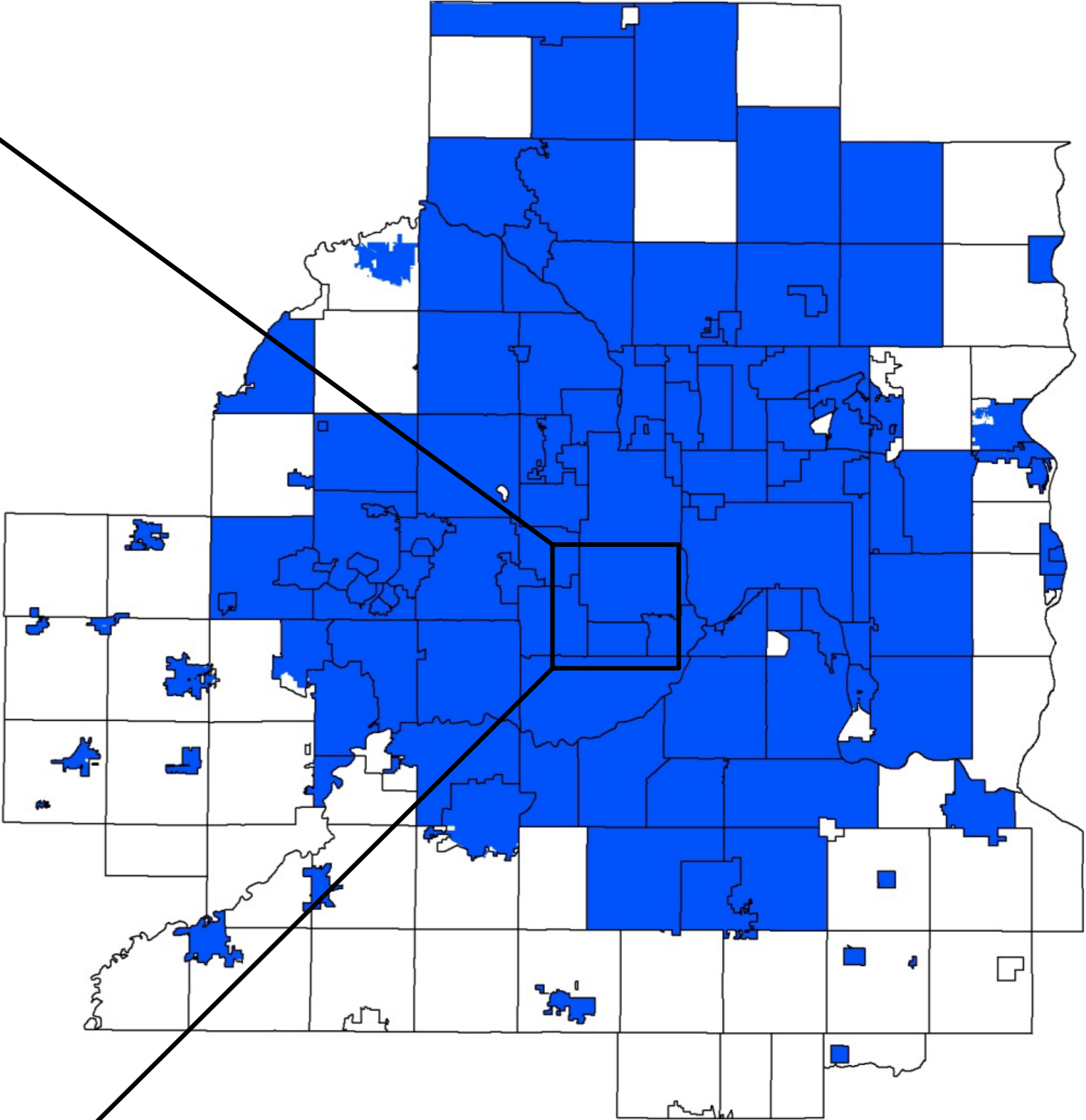
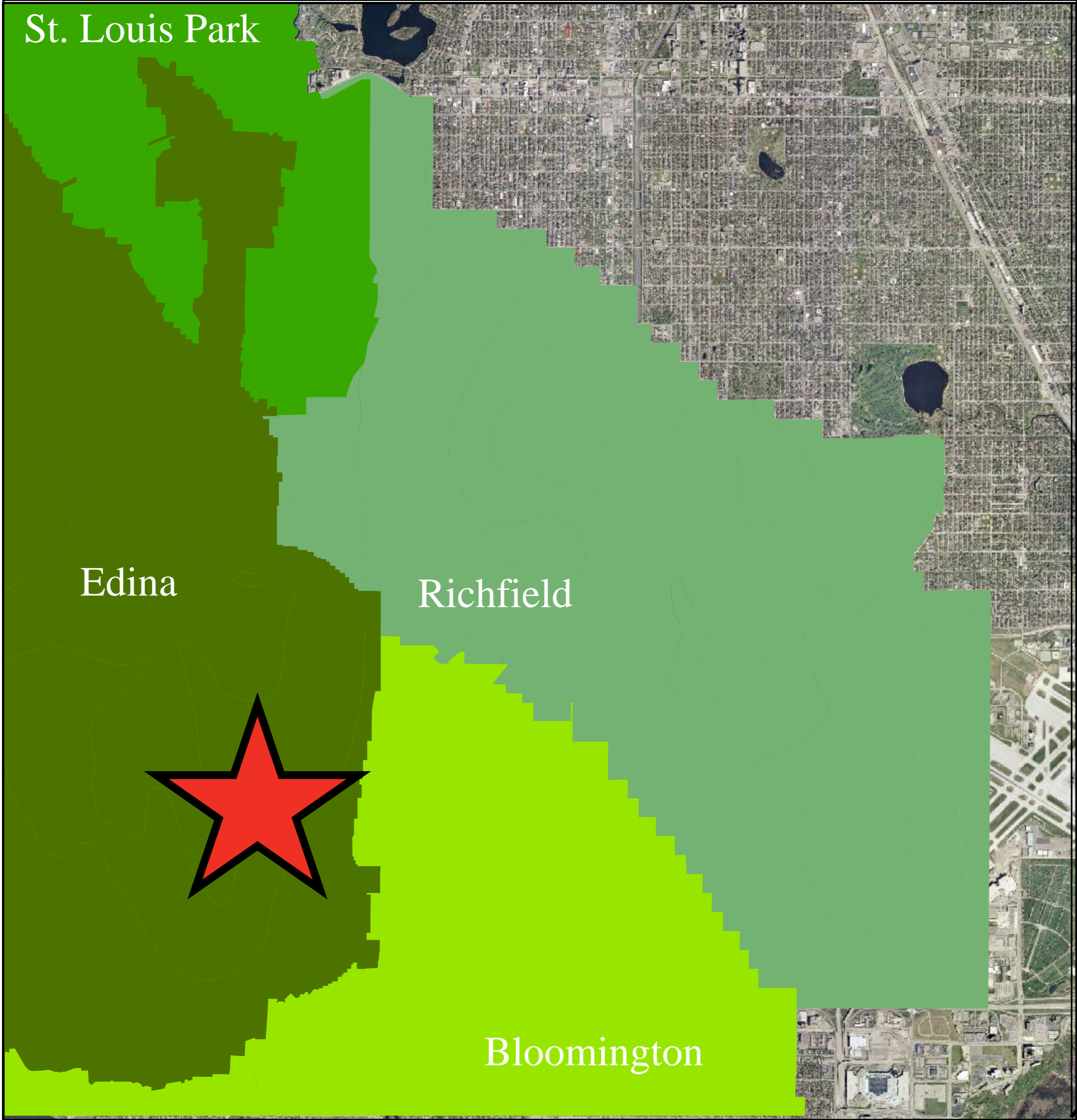
Top Five Land Uses in Metro DWSMAs



Potential contaminants to manage near wells

- Pollutant or contaminant
- Hazardous substance storage
- Petroleum storage tank
- LP tank
- Road de-icing chemicals
- Privy or portable toilet
- Sewage holding tank
- Buried sewer line
- Septic tank
- Sewage sump
- Sewage lift station
- Grave or mausoleum
- Surface Water
- Stormwater basin
- Operating well
- Monitoring well
- Unused, unsealed well or boring
- Gravel pocket/French Drain
- Drainfield
- Water treatment backwash basin/ Surge tank

Source water and land use





**Groundwater flows to
3 public water supplies.**

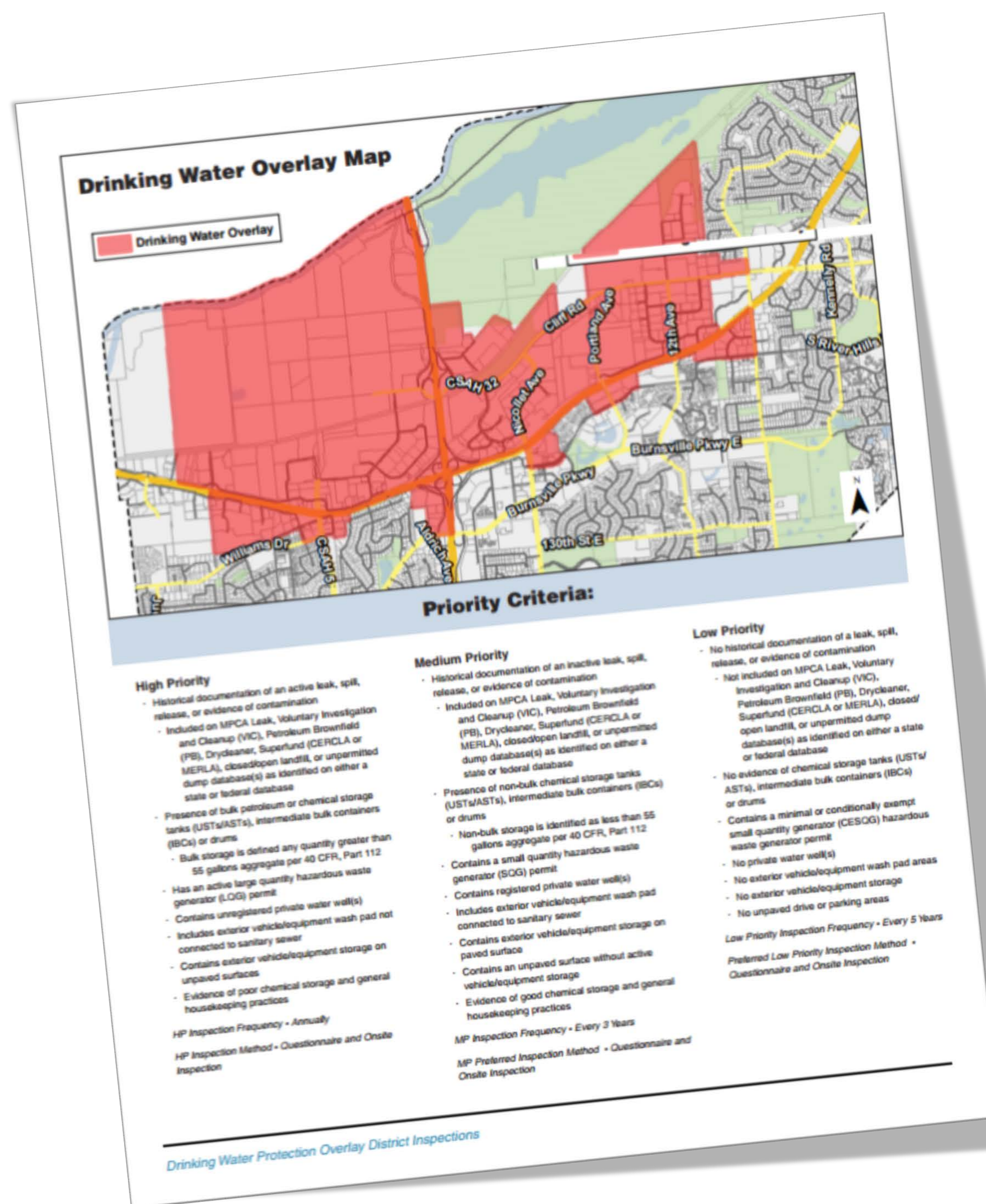
**What may impact 80,000
people?**

-  Multiple Programs
-  Hazardous Waste
-  Investigation & Cleanup
-  Pollution Prevention
-  Stormwater
-  Tanks
-  Water Quality



EXAMPLE

Burnsville Drinking Water Protection Overlay District

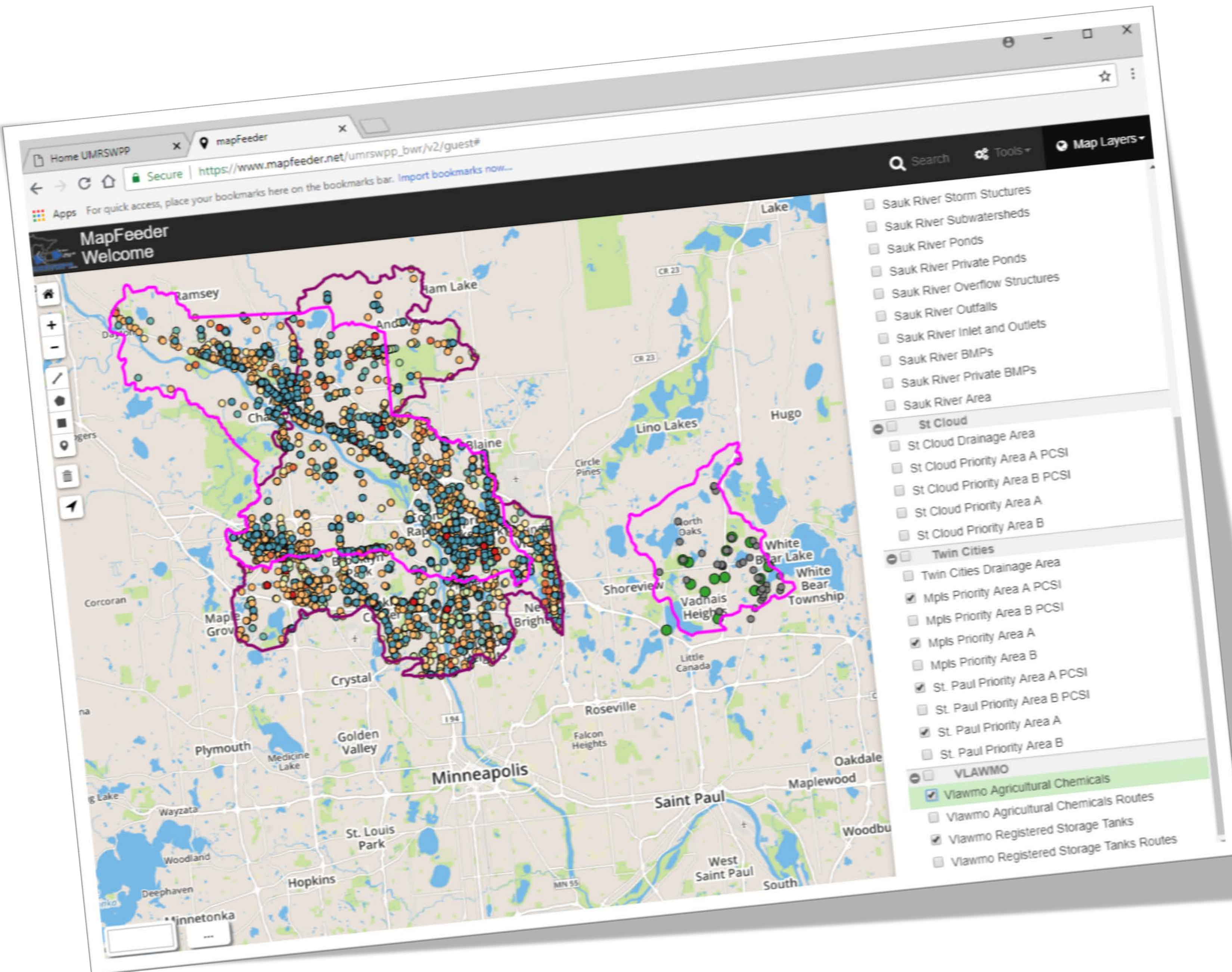


EXAMPLE

Upper Mississippi Source Water Protection Project



METROPOLITAN
COUNCIL



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Met Council Activities to Consider

Guidance to Communities

- Wellhead Protection Plan Review
- Local Planning Handbook

Potential Incentives

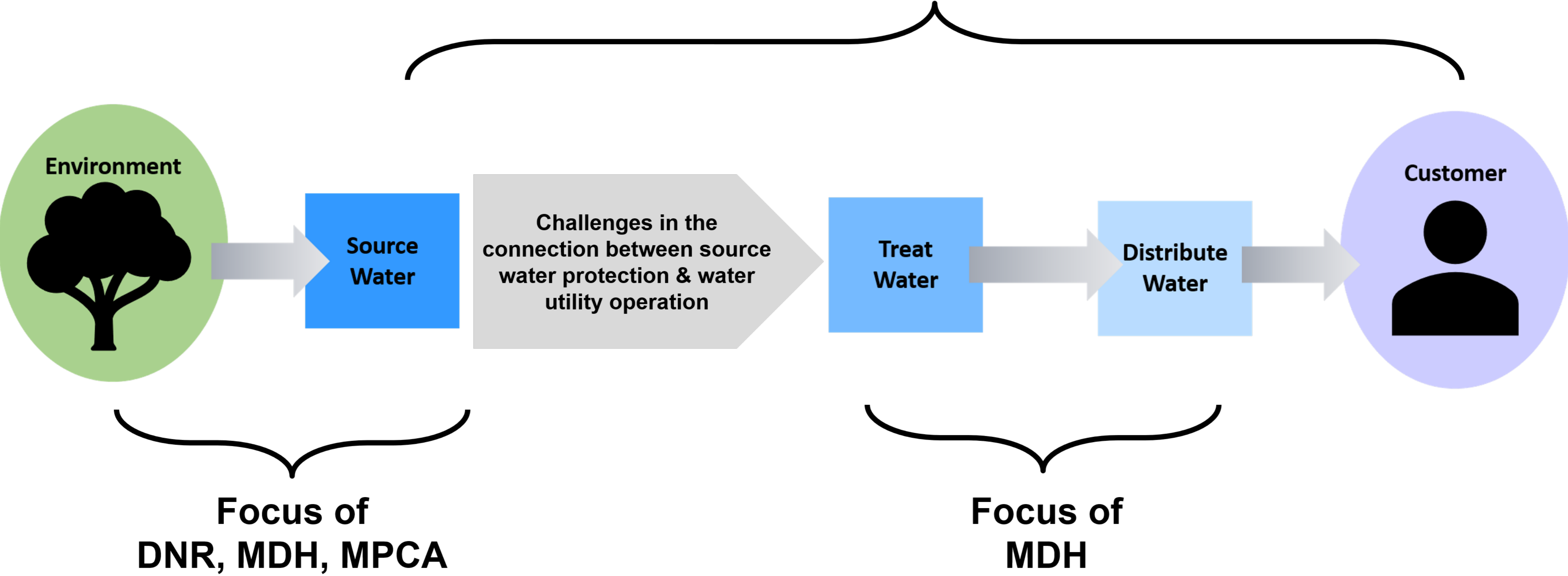
- Community Revitalization Grants
- Environmental Services Grants for Stormwater Projects

Technical Projects

- Groundwater Modeling
- Groundwater-Surface Water Interaction Analyses

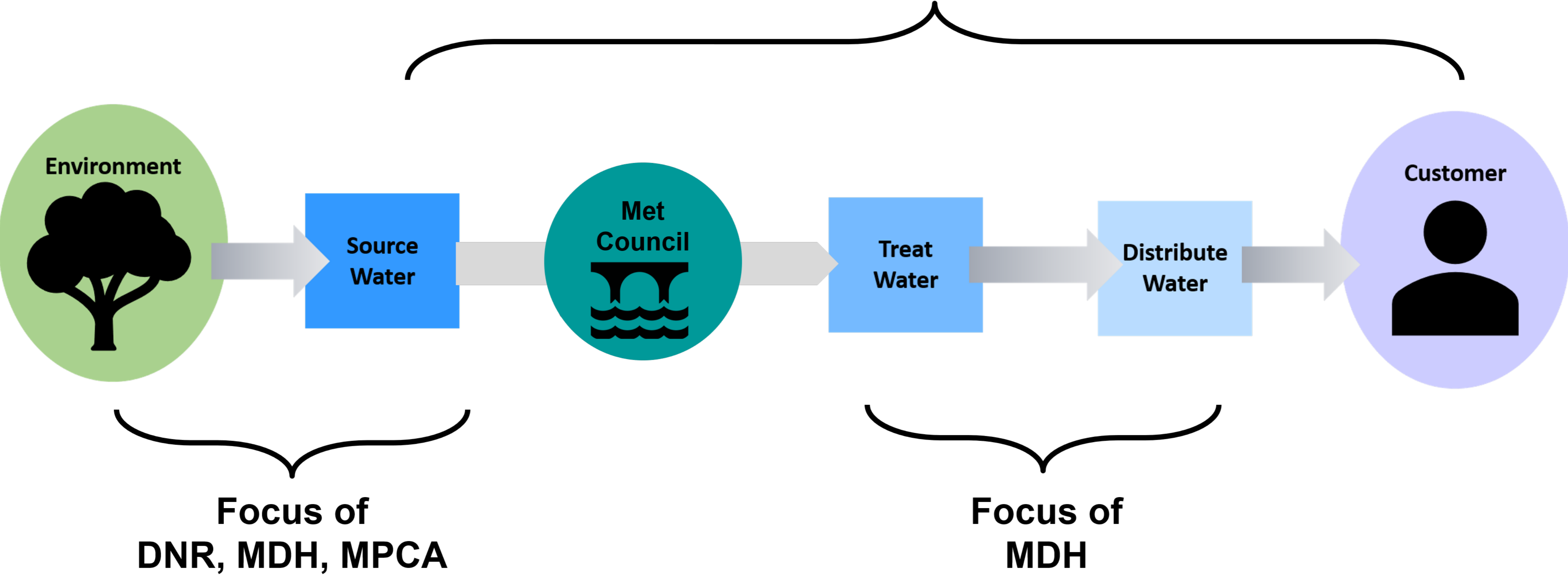
How can Metropolitan Council help?

Focus of Public Water Supply Utilities



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**Focus of
Public Water Supply Utilities**



For More Information:

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