

2040 WATER RESOURCES POLICY PLAN

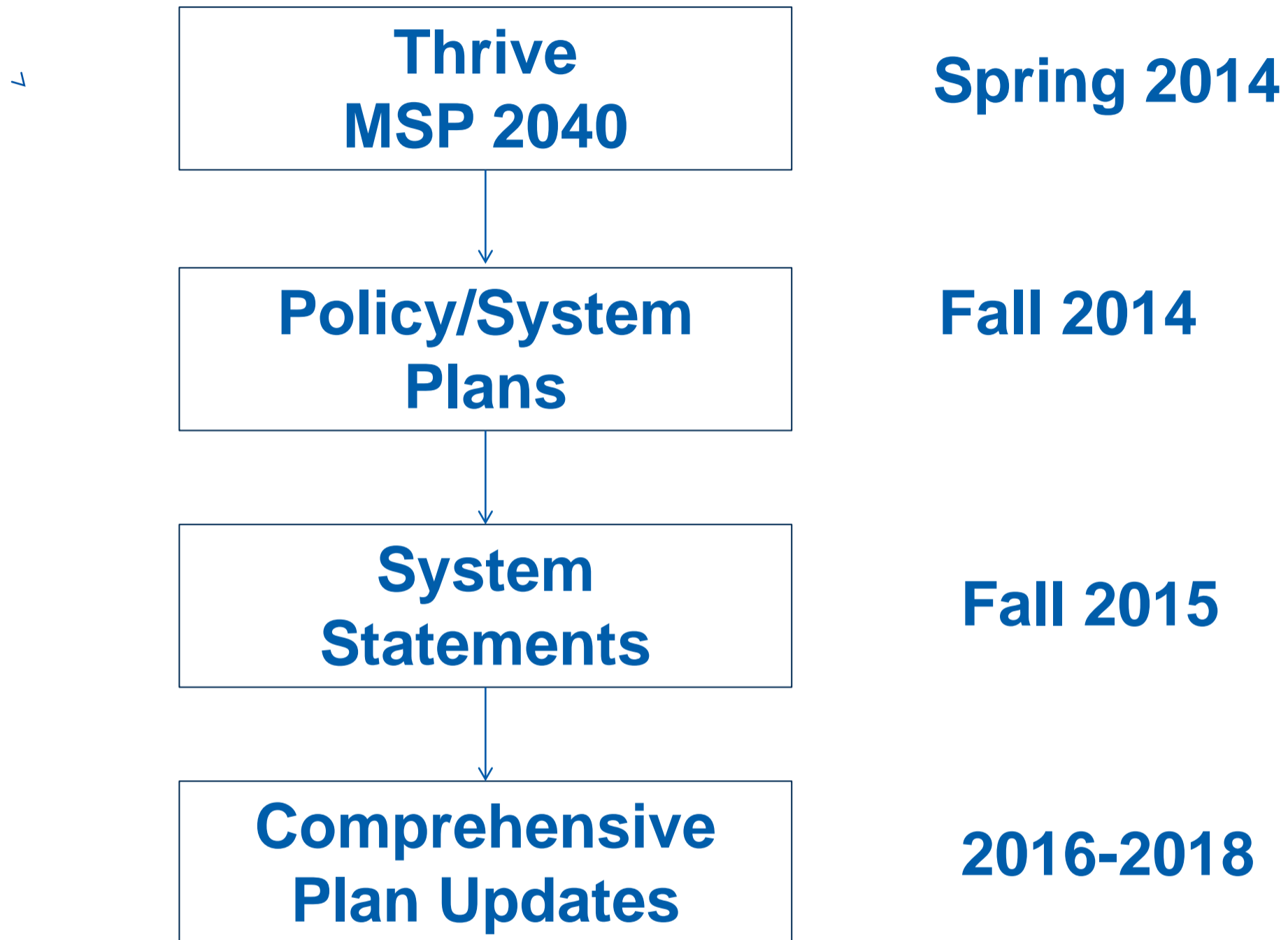
WASTEWATER SYSTEM PLAN

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PLANNING PROCESS



January 14, 2014

Policy Plans

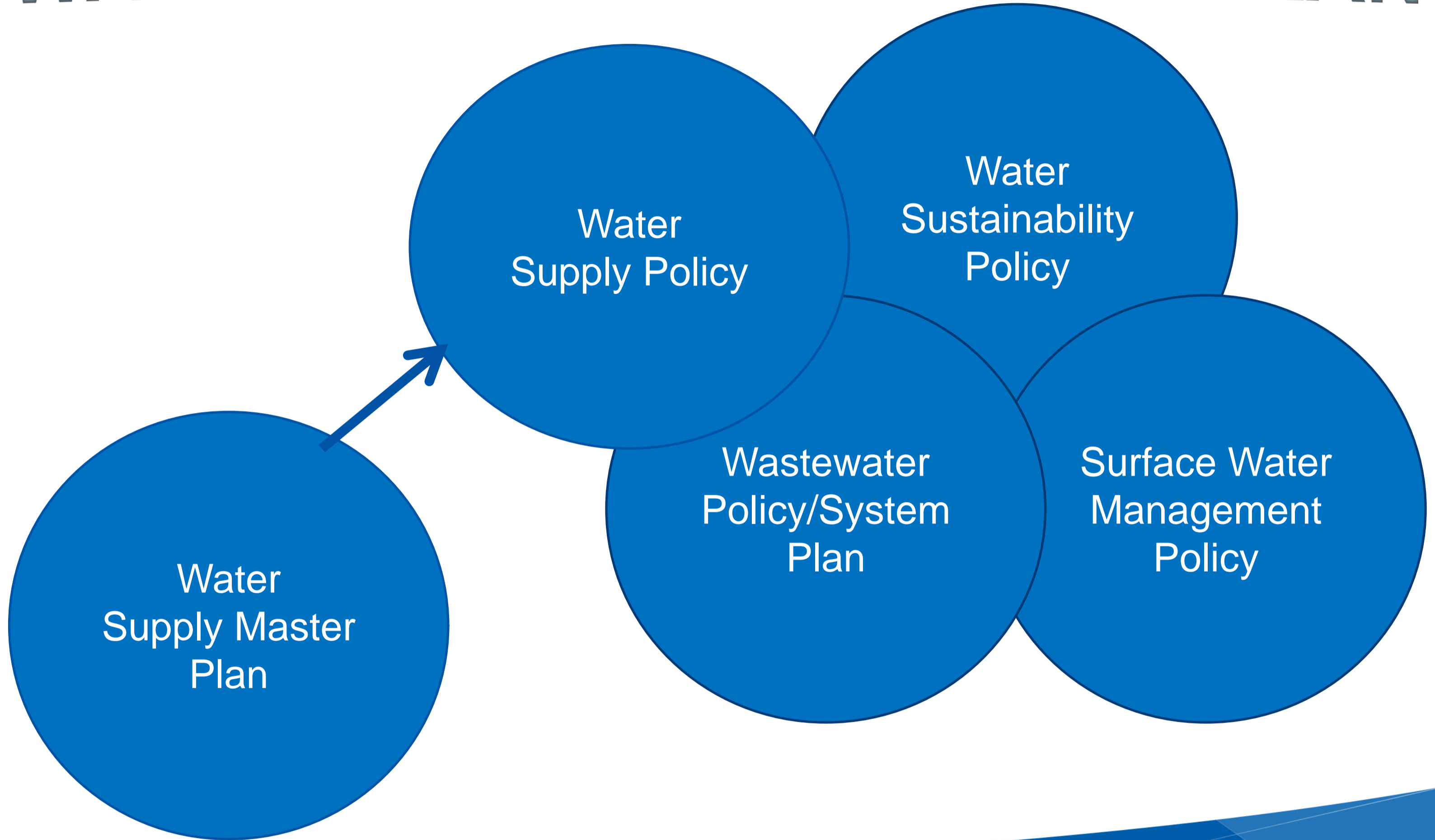
Thrive MSP 2040

**Transportation
Policy Plan
(includes
Aviation)**

**Water Resources
Policy Plan**

**Regional Parks
Policy Plan**

WATER RESOURCES POLICY PLAN



LOCAL COMPREHENSIVE PLANS



WASTEWATER POLICY FOCUS AREAS

- Water Sustainability
- Serving Growth
- System Operation
- System Finance

WATER SUSTAINABILITY: WASTEWATER

■ Policy

- Provide efficient and high quality infrastructure and services.
- Pursue wastewater reuse as means to sustain water resources.

■ Strategies

- Use investments efficiently.
- Preserve areas for future economical sewer development.
- Preserve rural areas for groundwater recharge, natural resources preservation, and agricultural use.
- Pursue wastewater reuse as supplemental water supply to support regional growth.

WATER SUSTAINABILITY: INVESTMENT

■ Policy

- Maximize regional benefits from regional investments.

■ Strategies

- Invest in wastewater reuse, i.e. additional treatment for a portion of the region's wastewater and a non-potable water distribution system, when justified by the benefits for supplementing groundwater and surface water as sources of water to support regional growth, and by the benefits for maintaining water quality.
- Invest in non-point source pollution control when the cost and long-term benefits are favorable compared to further upgrading wastewater treatment.

WASTEWATER SYSTEM PLAN

- Long-Term Wastewater Service Area Plan
 - Geographic Planning Areas
 - Land Use Planning Conformance
- Long-Term Capital Improvement Program
- Regulatory Scenarios and Wastewater Re-use

LONG-TERM SERVICE AREA DETERMINATION CRITERIA

- Existing and potential treatment plant sites' capacity to meet long-term water quality goals.
- Existing and potential developable land (exclude wetlands, steep slopes, natural resource areas).
- Existing and potential land uses and potential wastewater generation rates based on location, proximity to transit and major highways, and physical features of area.
- Water supply, groundwater recharge, and surface water management issues.
- Existing and potential wastewater conveyance capacity.

LONG-TERM SERVICE AREA OBSERVATIONS

- Large tracts of undeveloped land are most economical for new sewer development.
- Need to preserve land at certain densities to allow economical provision of service in the future
- Most of remaining large tracts of land are in Carver, Dakota and Scott Counties.
- Low density unsewered development allows for groundwater recharge
- Areas with high recharge potential and lower density development generally found in Anoka and Washington Counties.

LONG-TERM SERVICE AREA OBSERVATIONS (Continued)

- Individual subsurface sewage treatment systems and community systems located in suitable soils, installed, and maintained according to current MPCA rules have minimal impact on groundwater.

(Note: Lot size to support initial and replacement system varies with soil type and can range from two to ten acres.)

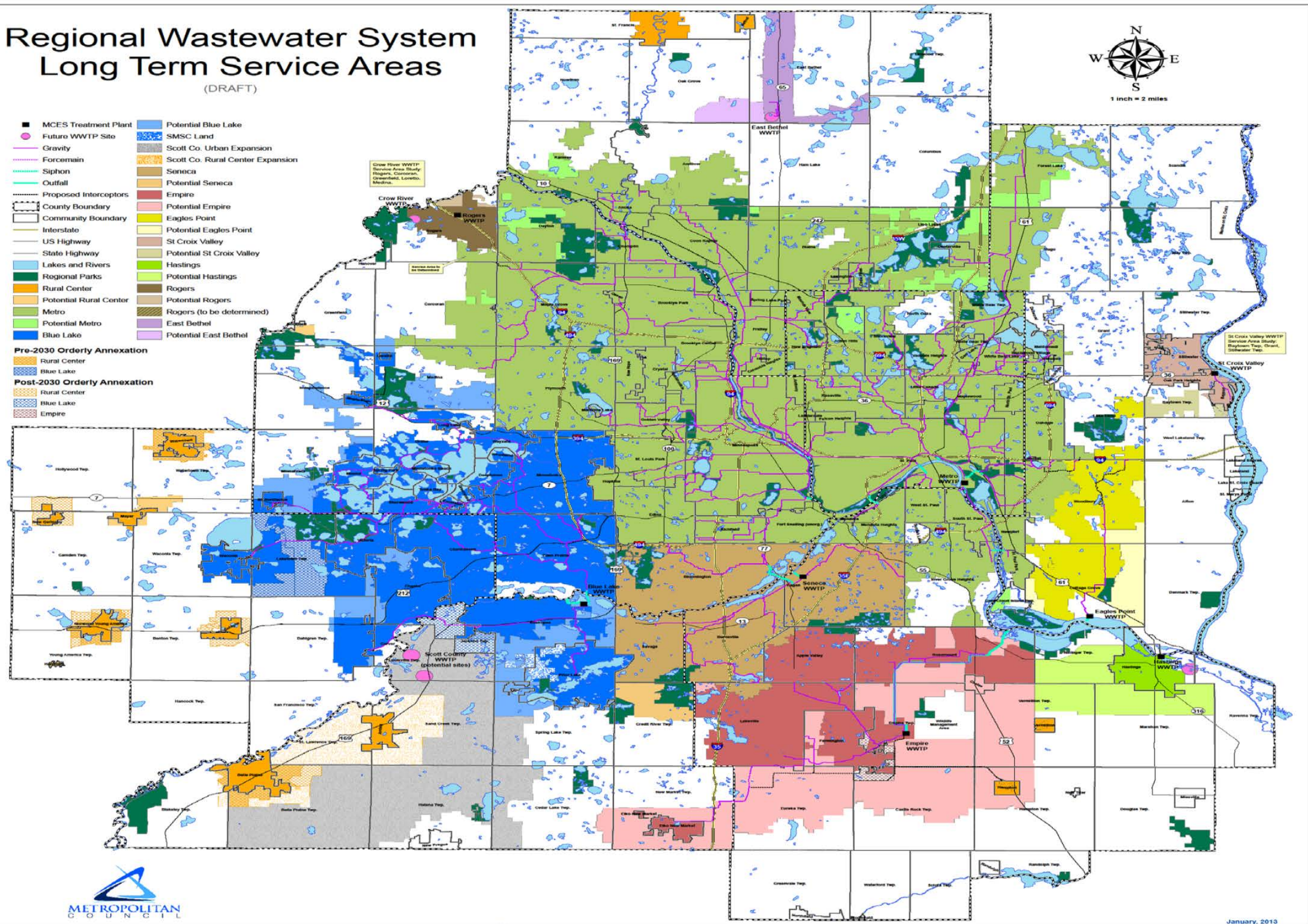
Regional Wastewater System Long Term Service Areas

(DRAFT)



- MCES Treatment Plant
- Future WWTP Site
- Gravity
- Forcemain
- Siphon
- Outfall
- Proposed Interceptors
- County Boundary
- Community Boundary
- Interstate
- US Highway
- State Highway
- Lakes and Rivers
- Regional Parks
- Rural Center
- Potential Rural Center
- Metro
- Potential Metro
- Blue Lake
- Potential Blue Lake
- SMSC Land
- Scott Co. Urban Expansion
- Scott Co. Rural Center Expansion
- Seneca
- Potential Seneca
- Empire
- Potential Empire
- Eagles Point
- Potential Eagles Point
- St Croix Valley
- Potential St Croix Valley
- Hastings
- Potential Hastings
- Rogers
- Potential Rogers
- Rogers (to be determined)
- East Bethel
- Potential East Bethel

- Pre-2030 Orderly Annexation**
- Rural Center
 - Blue Lake
- Post-2030 Orderly Annexation**
- Rural Center
 - Blue Lake
 - Empire



January, 2013



LONG-TERM WASTEWATER SYSTEM PLAN

	Current Service	Current Capacity	Planned Capacity
Flow	250 mgd	358 mgd	500 mgd
People Served	2,700,000	3,900,000	6,000,000

WASTEWATER TREATMENT PLANTS

■ MCES

- 8 Plants
- 358 mgd Capacity
- 250 mgd Current Flow
- Planned Expansions By 2040:
 - Blue Lake
 - Hastings (new)

■ Non-MCES

- 14 Plants
- New Germany
- Rogers
- Loretto

POTENTIAL WASTEWATER TREATMENT PLANTS

- Crow River (2020-2030)
- Carver County (post-2040)
- Scott County (post-2040)
- Northeast Area (2030-2040)

2016-2040 CAPITAL IMPROVEMENT PROGRAM

- Total Capital Investment (excluding regulatory upgrades) \$5.0 Billion
- By Component
 - Interceptors 64%
 - Treatment 36%
- By Objective
 - Asset Preservation 80%
 - Growth 10%
 - Quality/Reuse 10%

REGULATORY SCENARIOS

- Nutrient Removal
 - Phosphorus
 - Nitrogen
- Financial Impacts
 - Depends on Permit Limits
 - Up to \$2 Billion Capital Cost
 - Up to 100% Wastewater Rate Increase

WATER SUSTAINABILITY STRATEGIES

- Near-Term
 - Bubble Permit for Nutrients
 - Process Optimization
 - Water Conservation
 - I/I Mitigation
- Long-Term
 - Wastewater Reuse
 - Non-Point Source Control

WASTEWATER RE-USE OPTIONS

- Groundwater Recharge
 - East Bethel
 - Northeast Area
- Non-Potable Water Uses
 - Industrial Cooling Water
 - Irrigation (Seasonal)
 - Other Non-Potable Water Uses

WASTEWATER RE-USE WORK PLAN

- Market Analysis
 - Potential Users
 - Water Supply Needs
- Technical Analysis
- Financial Options
- Institutional Arrangements
- Regulatory Approaches
- Communications