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GIS DATA SOURCES

Active Water Appropriation Permits	MNDNR Permitting and Reporting System
Aerial Imagery	USDA National Agriculture Imagery Program (NAIP) 2015
Basemap	ESRI
Central Region Regionally Significant Ecological Areas	MDNR
County Ditches	URRWMO
Existing Land Use	Metropolitan Council, Generalized Land Use 2010
Flood Zone Designations	FEMA (Anoka Co: 27003C 2015/12/15; Isanti Co: 27059C 2006/04/12; Sherburne Co: 27141C 2011/11/16)
Hydrologic Soil Groups	USDA-NRCS SSURGO Soils Database
Metro Conservation Corridors	MNDNR
Monitoring Locations	Annual Reports for the URRWMO
Municipal Boundaries	US Census (Topologically Integrated Geographic Encoding and Referencing, TIGER)
National Wetland Inventory	MNDNR
Native Plant Communities	MNDNR
Planned Land Use	Metropolitan Council, Regional Planned Land Use
Public Waters and Wetlands	MNDNR
Regionally Significant Ecological Areas	MNDNR
Roads	US Census (Topologically Integrated Geographic Encoding and Referencing, TIGER)
Site of Biodiversity Significance	Minnesota Biological Survey
Streams/Rivers	USGS National Hydrography Dataset (NHD)
Upper Rum River Boundary	MN Board of Water and Soil Resources (BWSR)
Waterbodies	USGS National Hydrography Dataset (NHD)
Watersheds (HUC 8 and 12)	USGS National Hydrography Dataset (NHD)

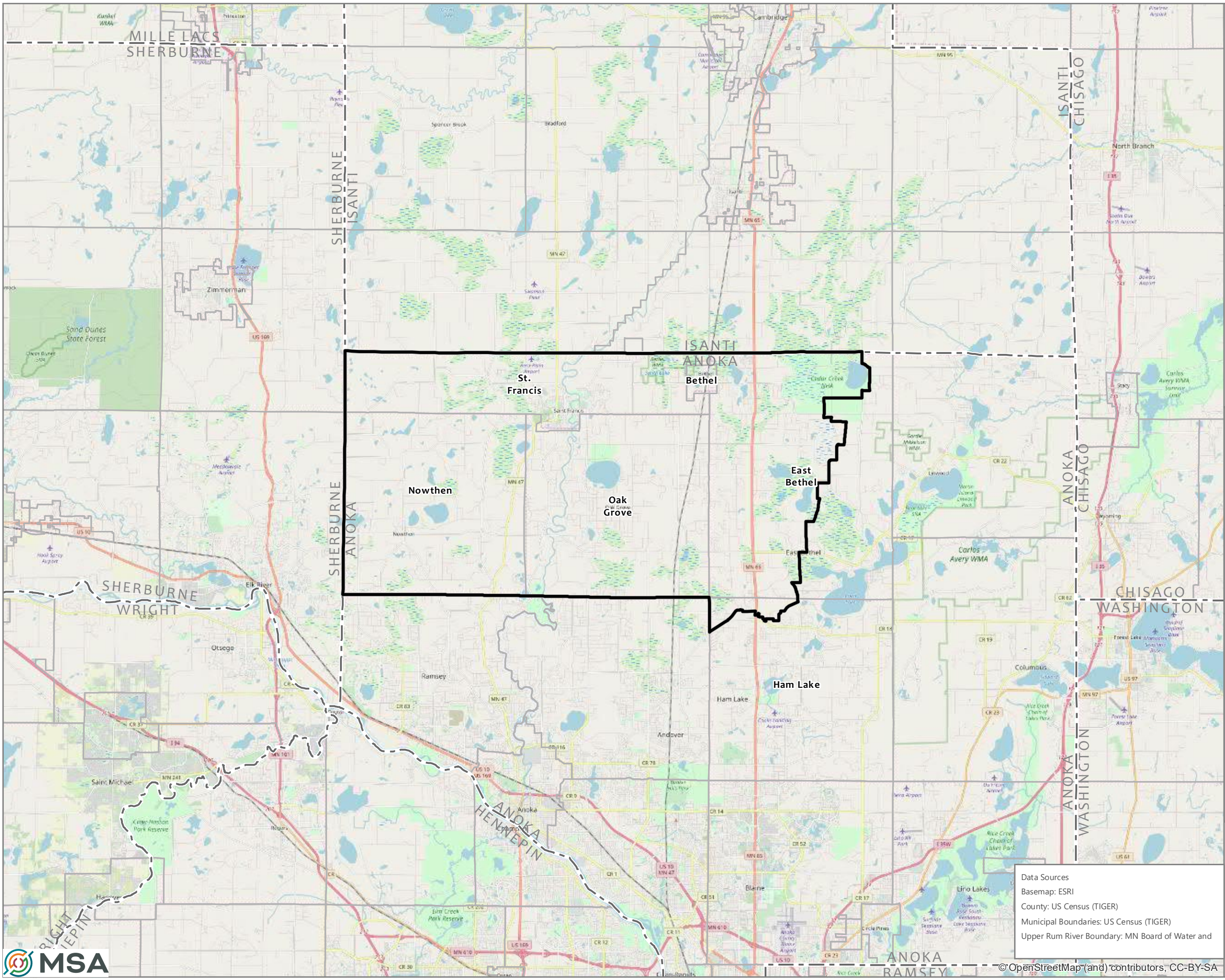
**FIGURE 2-1
LOCATION MAP**

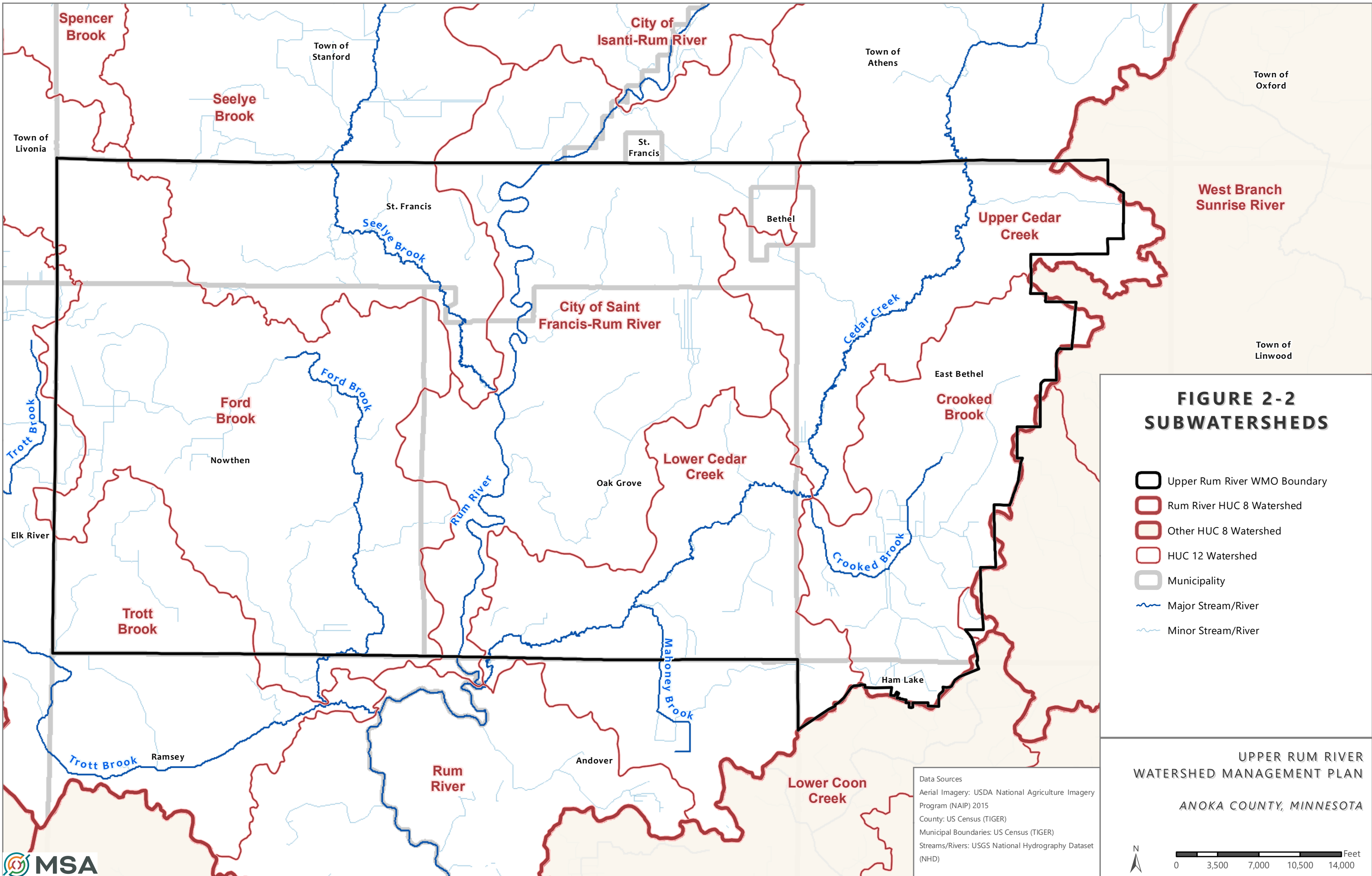
-  Upper Rum River WMO Boundary
-  County
-  Municipality



UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN
ANOKA COUNTY, MINNESOTA

Data Sources
 Basemap: ESRI
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Upper Rum River Boundary: MN Board of Water and



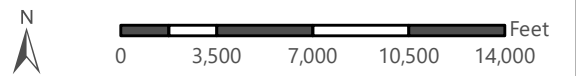


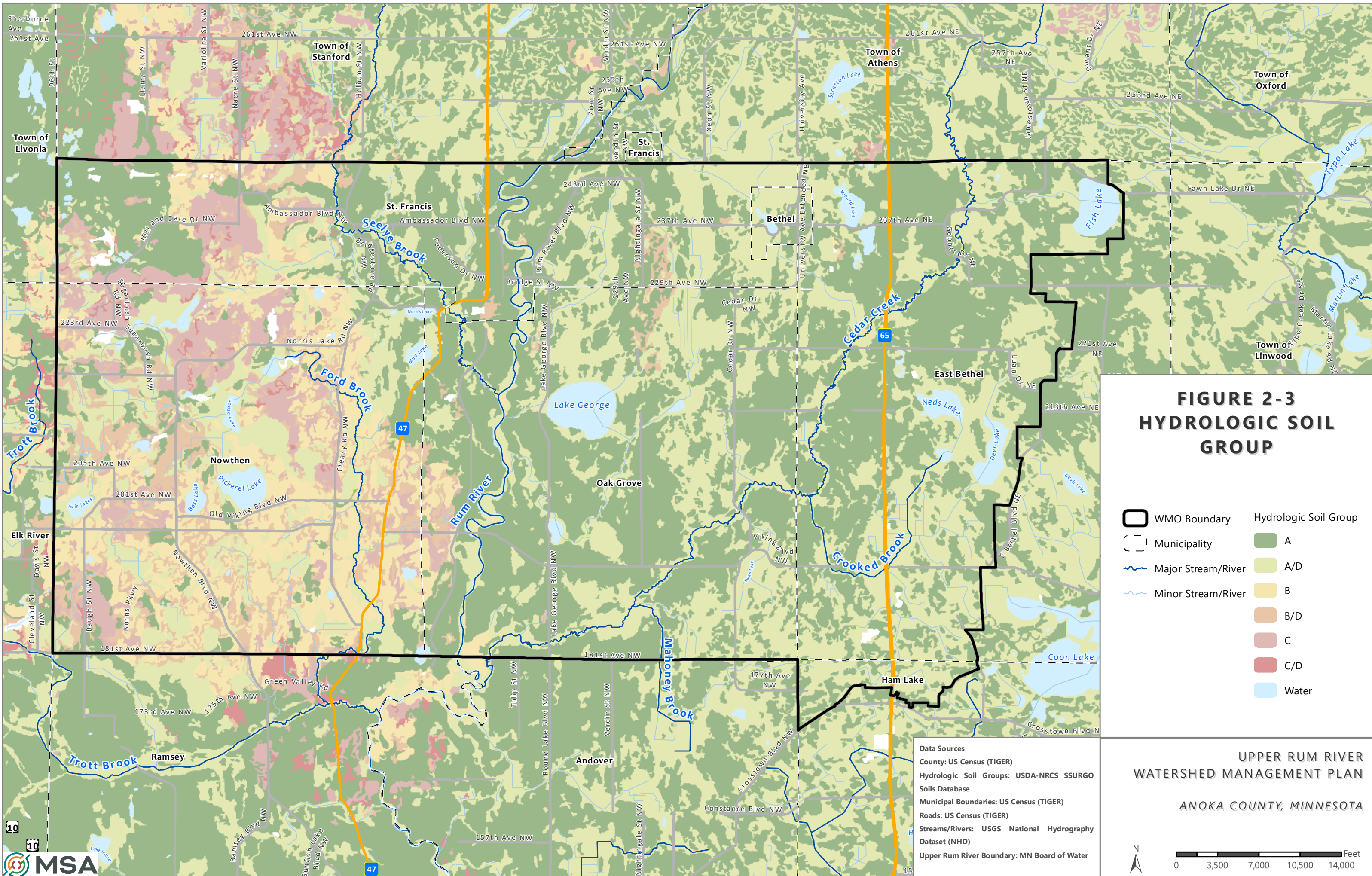
**FIGURE 2-2
SUBWATERSHEDS**

- Upper Rum River WMO Boundary
- Rum River HUC 8 Watershed
- Other HUC 8 Watershed
- HUC 12 Watershed
- Municipality
- Major Stream/River
- Minor Stream/River

UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN
ANOKA COUNTY, MINNESOTA

Data Sources
Aerial Imagery: USDA National Agriculture Imagery Program (NAIP) 2015
County: US Census (TIGER)
Municipal Boundaries: US Census (TIGER)
Streams/Rivers: USGS National Hydrography Dataset (NHD)



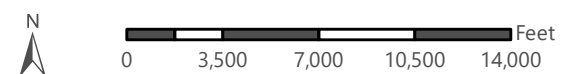


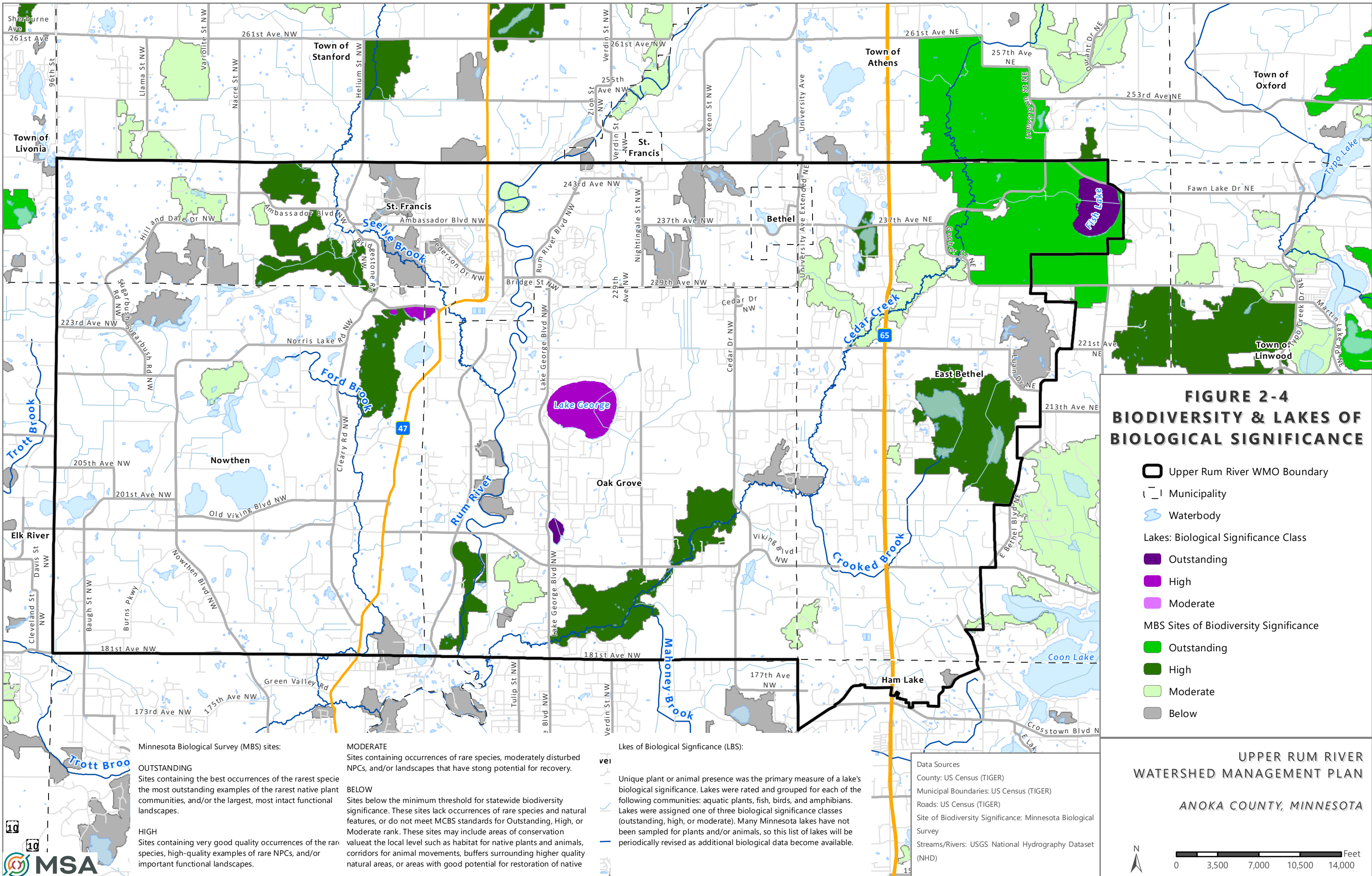
**FIGURE 2-3
HYDROLOGIC SOIL
GROUP**

- | | | | |
|--|--------------------|--|-----------------------|
| | WMO Boundary | | Hydrologic Soil Group |
| | Municipality | | A |
| | Major Stream/River | | A/D |
| | Minor Stream/River | | B |
| | | | B/D |
| | | | C |
| | | | C/D |
| | | | Water |

Data Sources
 County: US Census (TIGER)
 Hydrologic Soil Groups: USDA-NRCS SSURGO Soils Database
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA





**FIGURE 2-4
BIODIVERSITY & LAKES OF
BIOLOGICAL SIGNIFICANCE**

- Upper Rum River WMO Boundary
- Municipality
- Waterbody
- Lakes: Biological Significance Class**
- Outstanding
- High
- Moderate
- MBS Sites of Biodiversity Significance**
- Outstanding
- High
- Moderate
- Below

Minnesota Biological Survey (MBS) sites:

OUTSTANDING
Sites containing the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most intact functional landscapes.

HIGH
Sites containing very good quality occurrences of the rarest species, high-quality examples of rare NPCs, and/or important functional landscapes.

MODERATE
Sites containing occurrences of rare species, moderately disturbed NPCs, and/or landscapes that have strong potential for recovery.

BELOW
Sites below the minimum threshold for statewide biodiversity significance. These sites lack occurrences of rare species and natural features, or do not meet MBS standards for Outstanding, High, or Moderate rank. These sites may include areas of conservation value at the local level such as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or areas with good potential for restoration of native

Lakes of Biological Significance (LBS):

Unique plant or animal presence was the primary measure of a lake's biological significance. Lakes were rated and grouped for each of the following communities: aquatic plants, fish, birds, and amphibians. Lakes were assigned one of three biological significance classes (outstanding, high, or moderate). Many Minnesota lakes have not been sampled for plants and/or animals, so this list of lakes will be periodically revised as additional biological data become available.

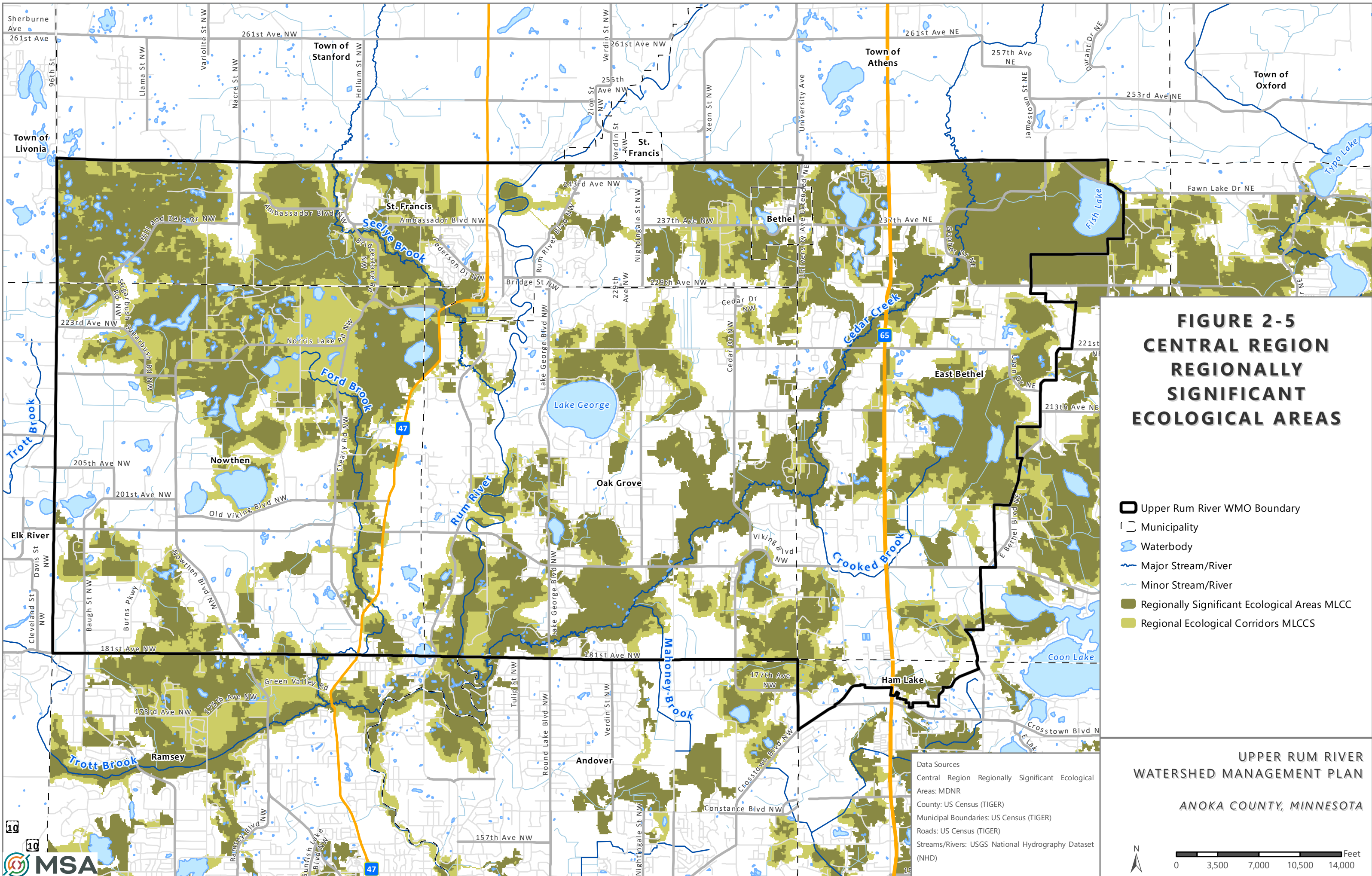
Data Sources
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Site of Biodiversity Significance: Minnesota Biological Survey
 Streams/Rivers: USGS National Hydrography Dataset (NHD)

**UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN**

ANOKA COUNTY, MINNESOTA

0 3,500 7,000 10,500 14,000 Feet



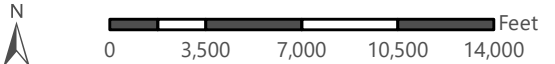


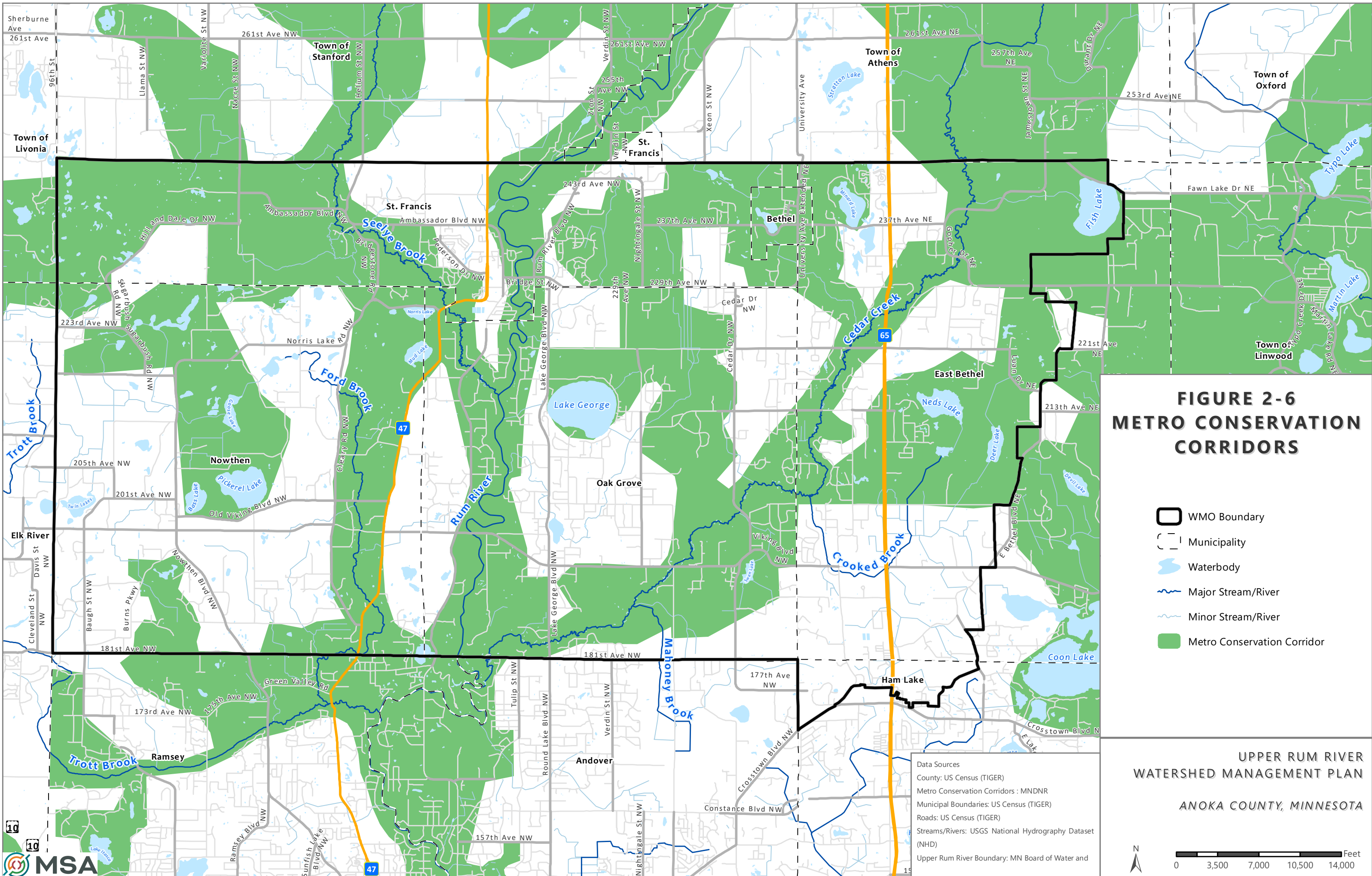
**FIGURE 2-5
CENTRAL REGION
REGIONALLY
SIGNIFICANT
ECOLOGICAL AREAS**

- Upper Rum River WMO Boundary
- Municipality
- Waterbody
- Major Stream/River
- Minor Stream/River
- Regionally Significant Ecological Areas MLCC
- Regional Ecological Corridors MLCCS

Data Sources
 Central Region Regionally Significant Ecological Areas: MDNR
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



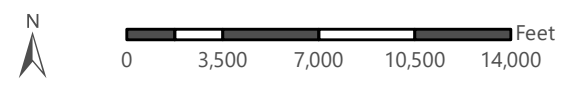


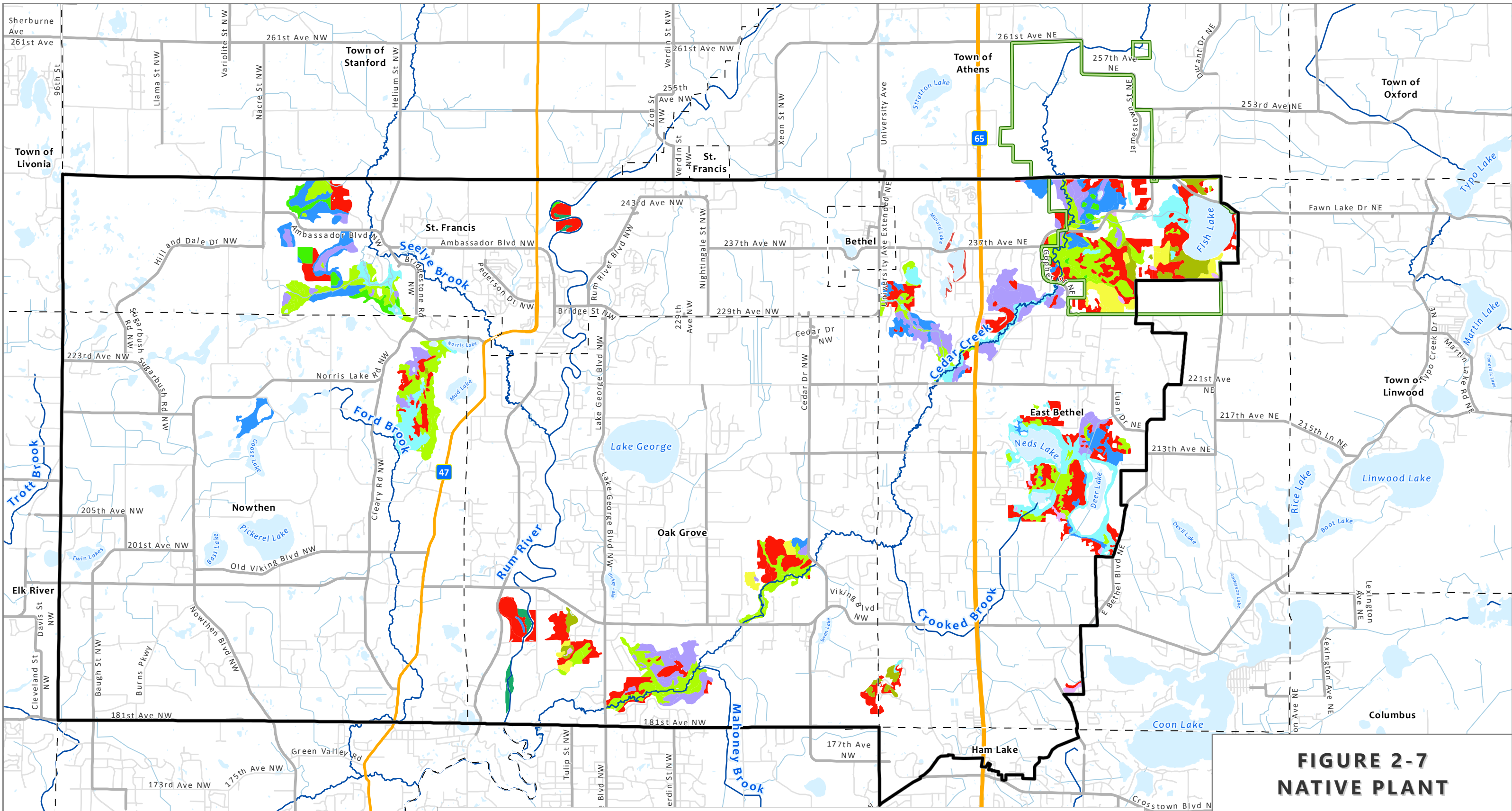
**FIGURE 2-6
METRO CONSERVATION
CORRIDORS**

- WMO Boundary
- Municipality
- Waterbody
- Major Stream/River
- Minor Stream/River
- Metro Conservation Corridor

Data Sources
 County: US Census (TIGER)
 Metro Conservation Corridors : MNDNR
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



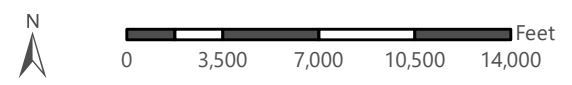


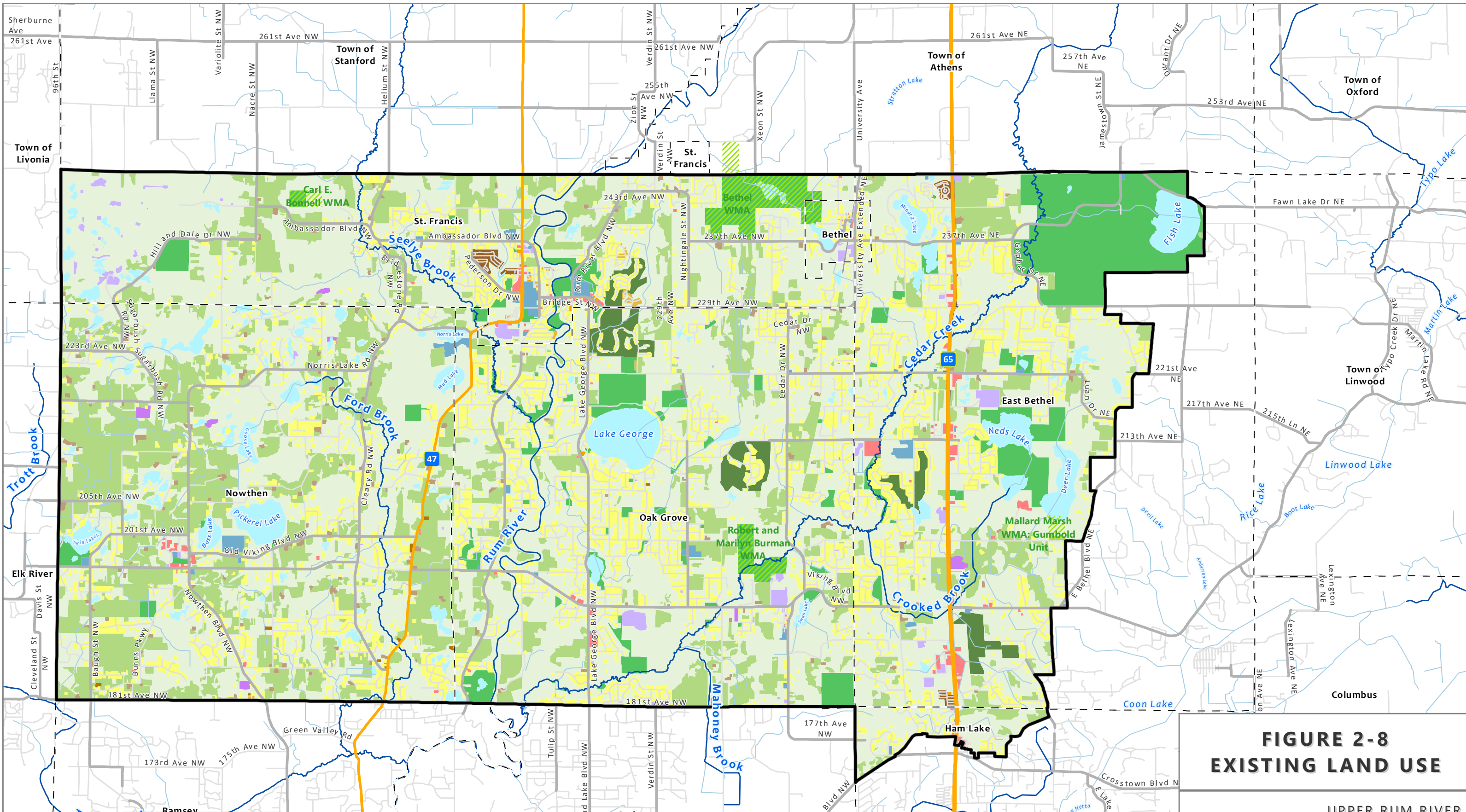
Data Sources
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Native Plant Communities: MNDNR
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and Soil Resources (BWSR)

- | | | | | | |
|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------|------------------------|--------------------|
| WMO Boundary | Municipality | Cedar Creek Ecosystem Science Reserve | Waterbody | Major Stream/River | Minor Stream/River |
| Native Plant Community System | | | | | |
| Acid Peatland System | Fire-Dependent Forest/Woodland System | Floodplain Forest System | Forested Rich Peatland System | Lakeshore System | Marsh System |
| Mesic Hardwood Forest System | Open Rich Peatland System | Upland Prairie System | Wet Forest System | Wet Meadow/Carr System | |

**FIGURE 2-7
 NATIVE PLANT**

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



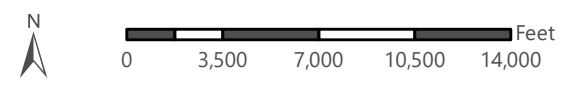


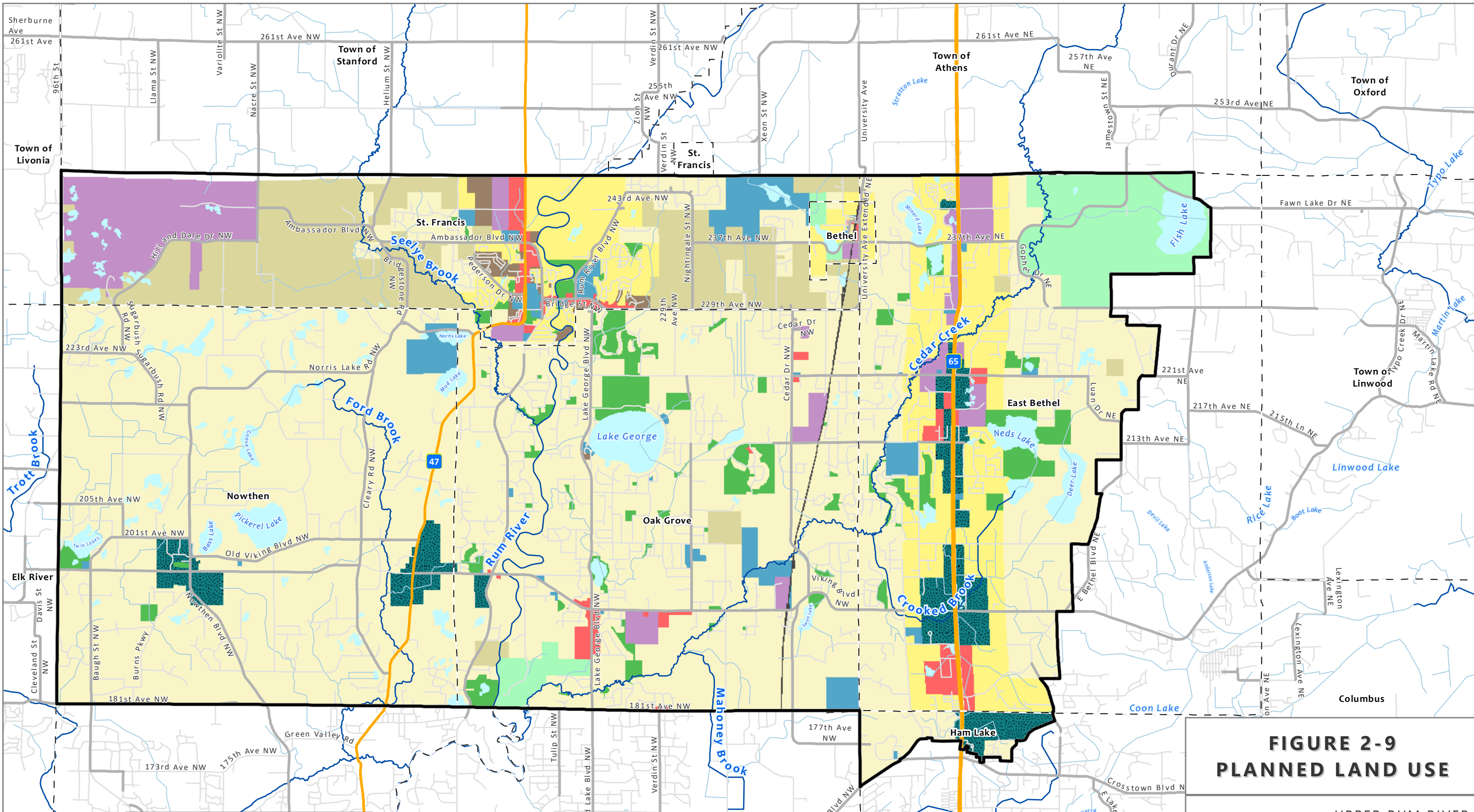
**FIGURE 2-8
EXISTING LAND USE**

UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN
ANOKA COUNTY, MINNESOTA

Data Sources
County: US Census (TIGER)
Existing Land Use: Metropolitan Council, Generalized Land Use 2010
Municipal Boundaries: US Census (TIGER)
Roads: US Census (TIGER)
Streams/Rivers: USGS National Hydrography Dataset (NHD)
Upper Rum River Boundary: MN Board of Water and Soil Resources (BWSR)
Waterbodies: USGS NHD

- | | | | | |
|--------------------------|---------------------------|-----------------------------|--------------------------------|--------------|
| WMO Boundary | Farmstead | Multifamily | Extractive | Railway |
| Municipality | Seasonal/Vacation | Office | Institutional | Agricultural |
| Major Stream/River | Single Family Detached | Retail and Other Commercial | Park, Recreational or Preserve | Undeveloped |
| Minor Stream/River | Manufactured Housing Park | Mixed Use Residential | Golf Course | Water |
| Wildlife Management Area | Single Family Attached | Industrial and Utility | Major Highway | |



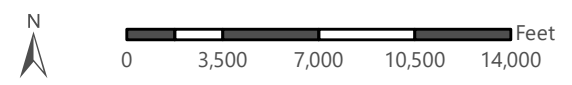


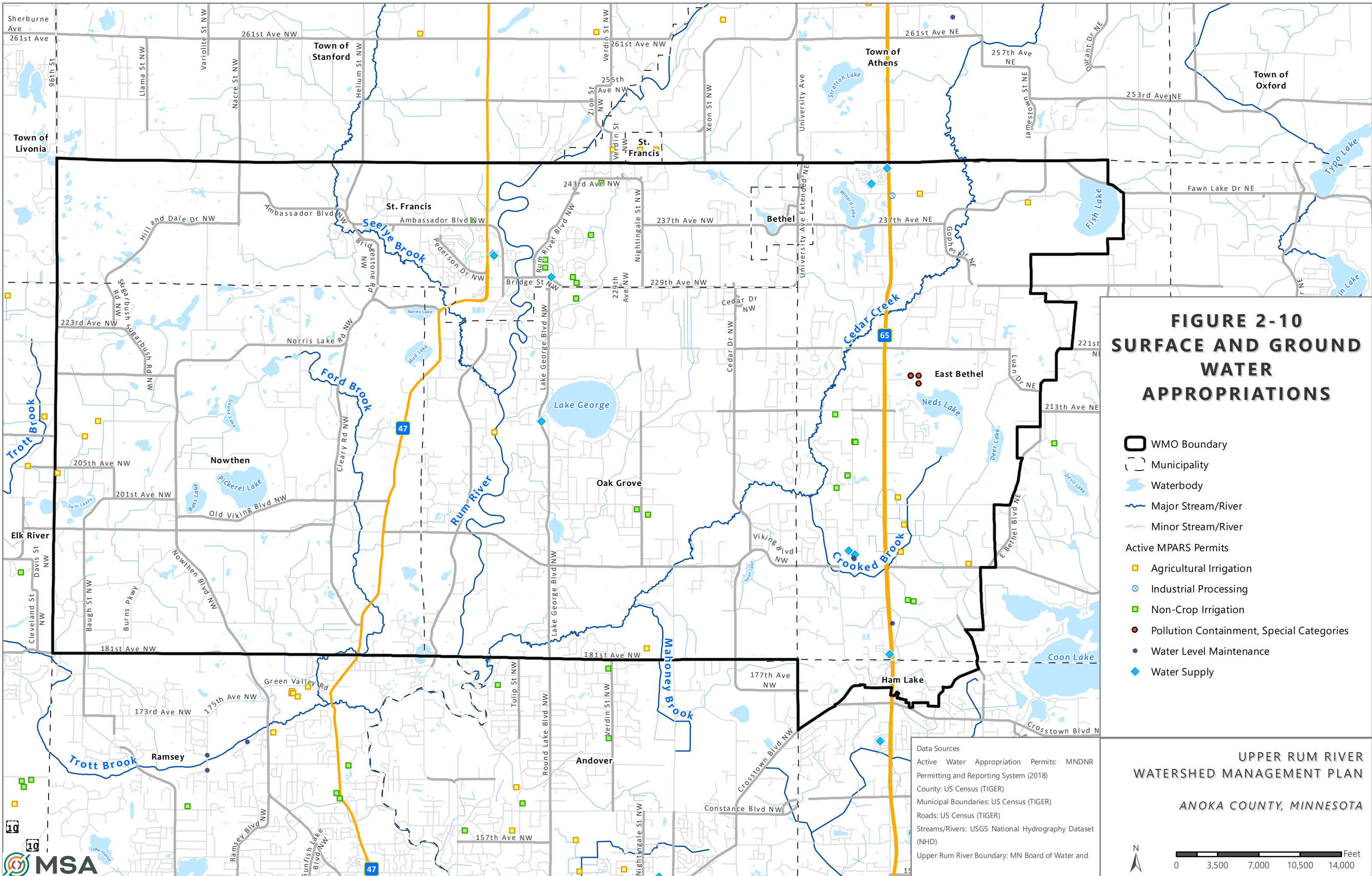
**FIGURE 2-9
PLANNED LAND USE**

UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN
ANOKA COUNTY, MINNESOTA

Data Sources
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Planned Land Use: Metropolitan Council, Regional Planned Land Use
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN BSWR
 Waterbodies: USGS National Hydrography Dataset (NHD)

- | | | | |
|--------------------|--------------------------------|----------------------------|-------------------------------|
| WMO Boundary | Agricultural | Commercial | Open Space or Restrictive Use |
| Municipality | Rural or Large-Lot Residential | Industrial | Railway (inc. LRT) |
| Major Stream/River | Single Family Residential | Institutional | Open Water |
| Minor Stream/River | Multifamily Residential | Multi-Optional Development | Park and Recreation |



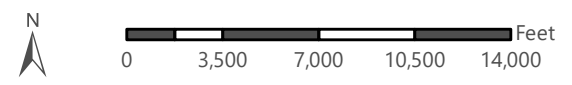


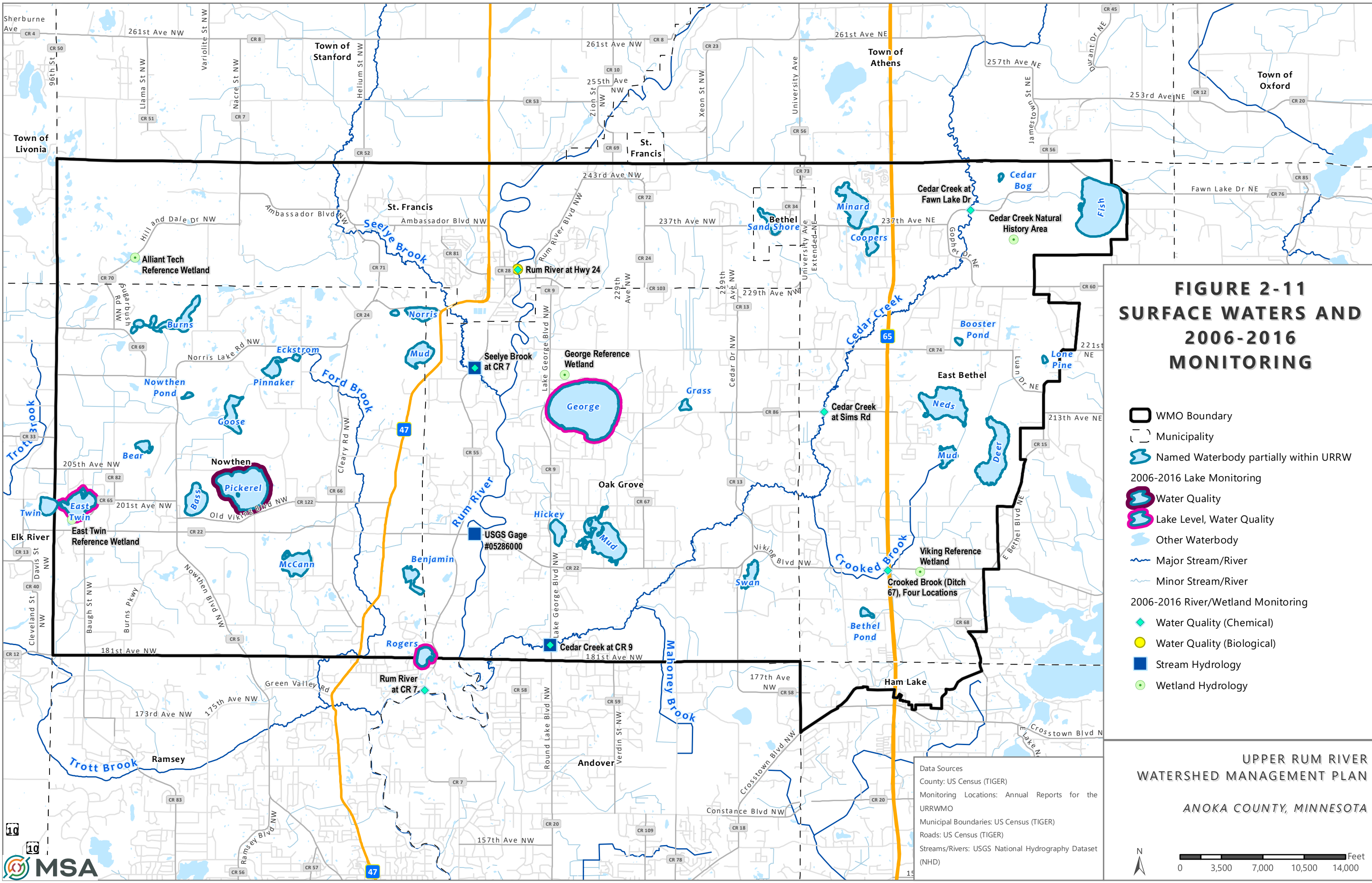
**FIGURE 2-10
SURFACE AND GROUND
WATER
APPROPRIATIONS**

- WMO Boundary
- Municipality
- Waterbody
- Major Stream/River
- Minor Stream/River
- Active MPARS Permits
 - Agricultural Irrigation
 - Industrial Processing
 - Non-Crop Irrigation
 - Pollution Containment, Special Categories
 - Water Level Maintenance
 - Water Supply

Data Sources
 Active Water Appropriation Permits: MNDNR
 Permitting and Reporting System (2018)
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset
 (NHD)
 Upper Rum River Boundary: MN Board of Water and

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



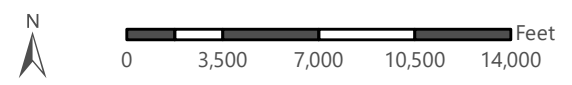


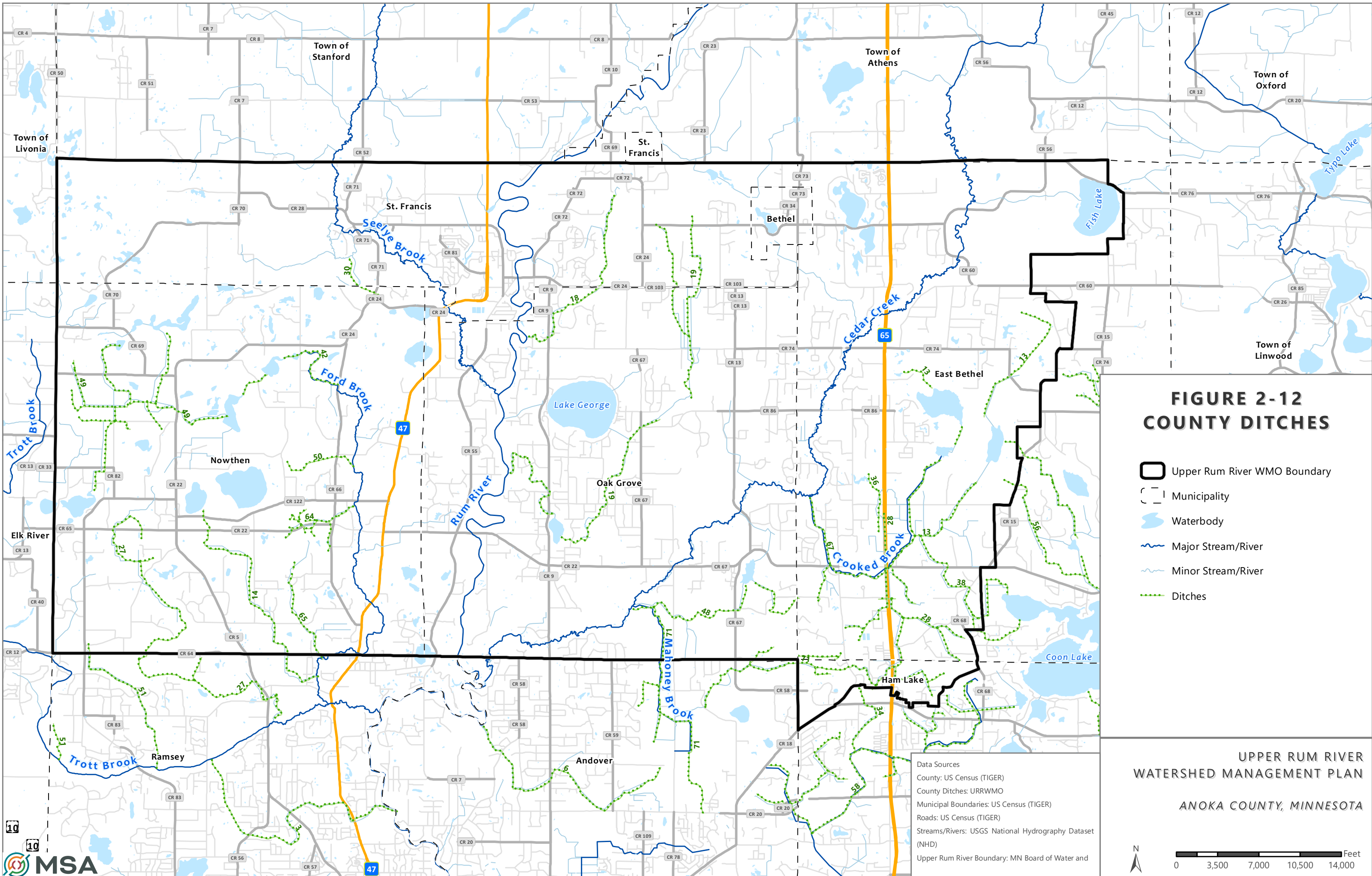
**FIGURE 2-11
SURFACE WATERS AND
2006-2016
MONITORING**

- WMO Boundary
- Municipality
- Named Waterbody partially within URRW
- 2006-2016 Lake Monitoring**
- Water Quality
- Lake Level, Water Quality
- Other Waterbody
- Major Stream/River
- Minor Stream/River
- 2006-2016 River/Wetland Monitoring**
- Water Quality (Chemical)
- Water Quality (Biological)
- Stream Hydrology
- Wetland Hydrology

Data Sources
 County: US Census (TIGER)
 Monitoring Locations: Annual Reports for the URRWMO
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)

**UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN**
ANOKA COUNTY, MINNESOTA



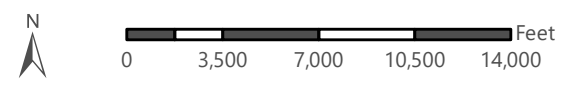


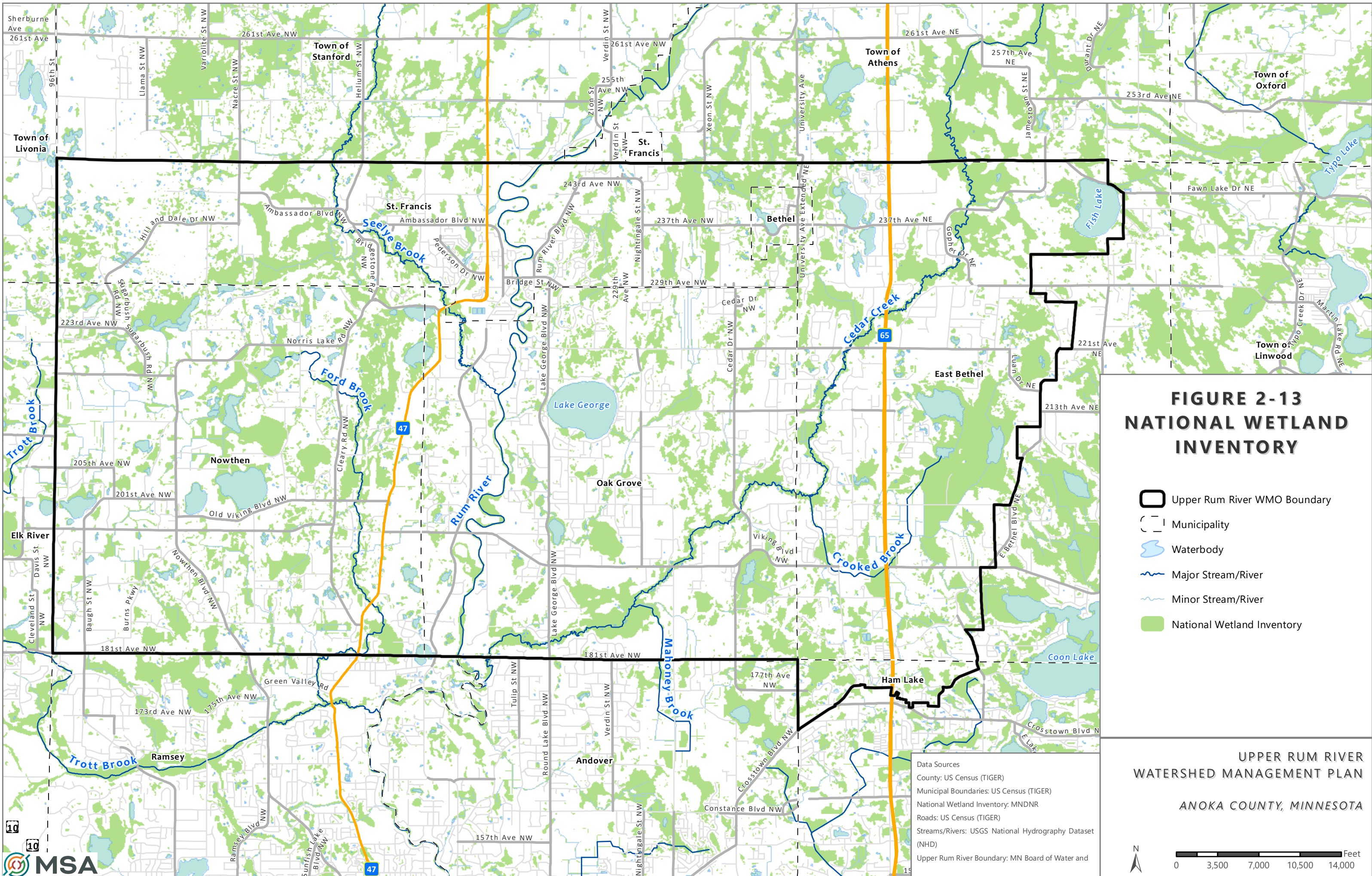
**FIGURE 2-12
COUNTY DITCHES**

- Upper Rum River WMO Boundary
- Municipality
- Waterbody
- Major Stream/River
- Minor Stream/River
- Ditches







Data Sources
 County: US Census (TIGER)
 County Ditches: URRWMO
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



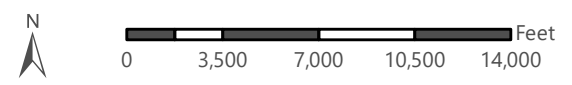


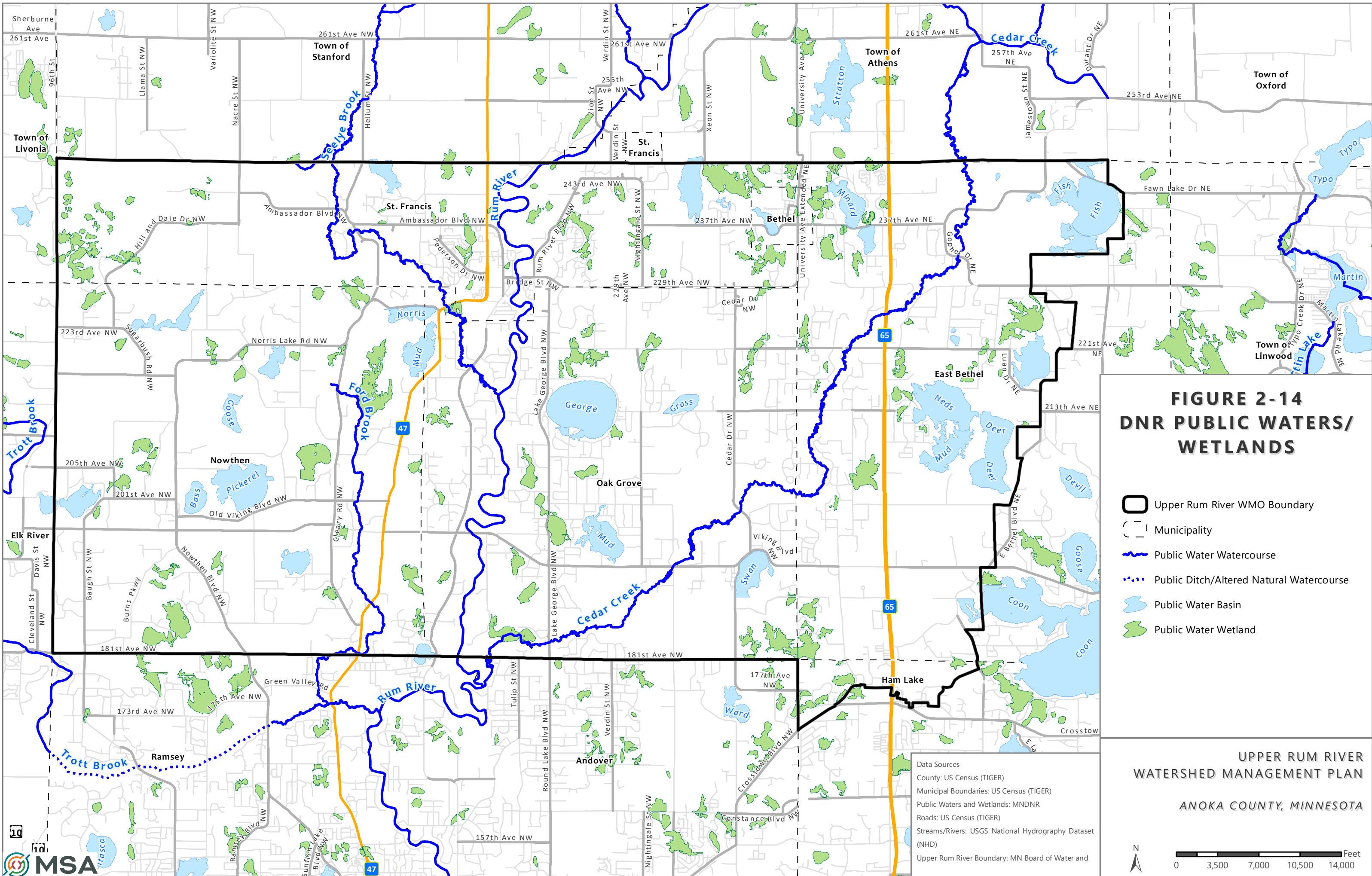
**FIGURE 2-13
NATIONAL WETLAND
INVENTORY**

-  Upper Rum River WMO Boundary
-  Municipality
-  Waterbody
-  Major Stream/River
-  Minor Stream/River
-  National Wetland Inventory

Data Sources
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 National Wetland Inventory: MNDNR
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



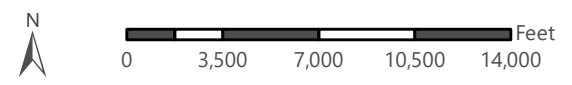


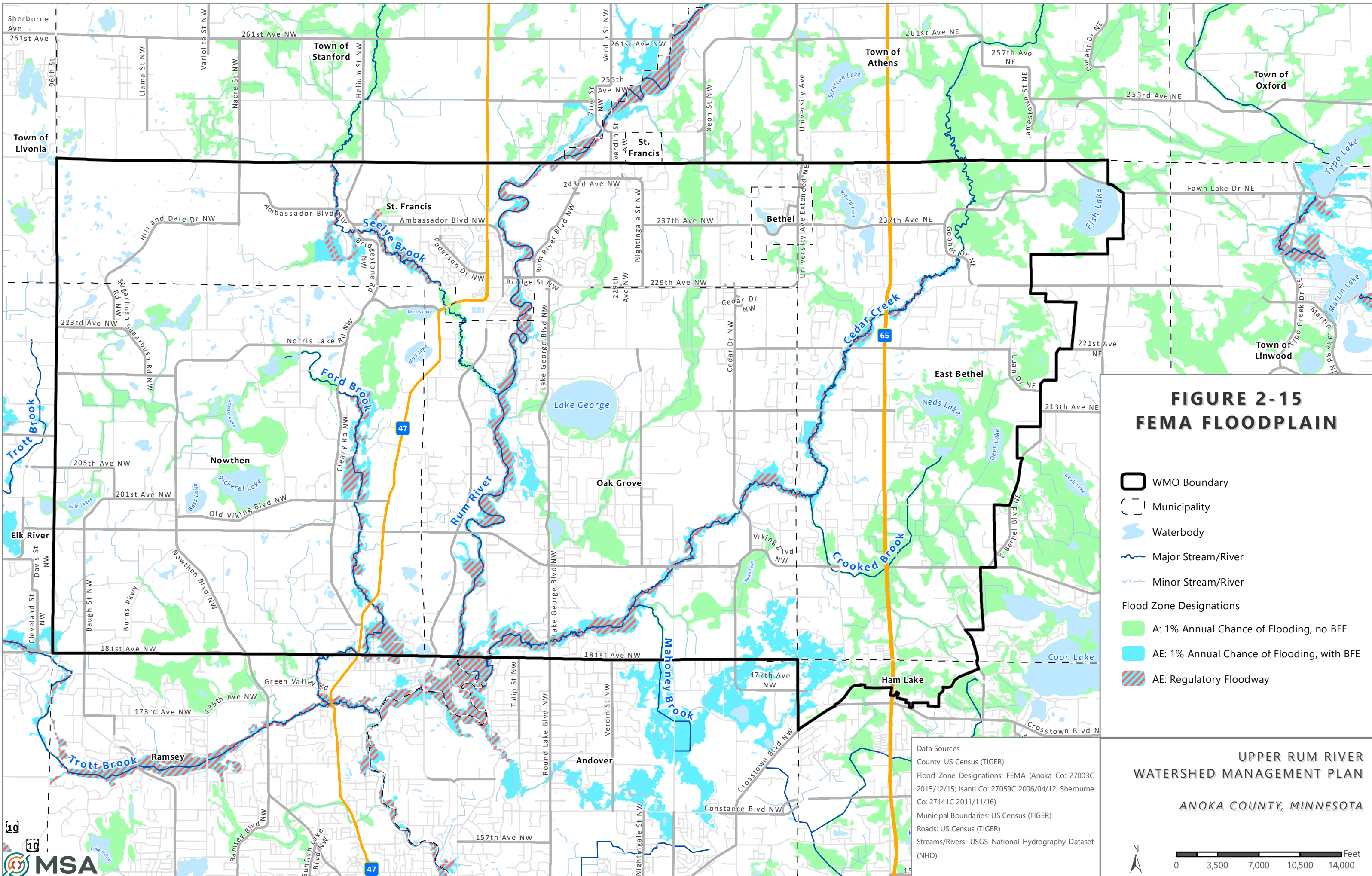
**FIGURE 2-14
DNR PUBLIC WATERS/
WETLANDS**

- Upper Rum River WMO Boundary
- Municipality
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Water Basin
- Public Water Wetland

Data Sources
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Public Waters and Wetlands: MNDNR
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and

UPPER RUM RIVER
 WATERSHED MANAGEMENT PLAN
 ANOKA COUNTY, MINNESOTA



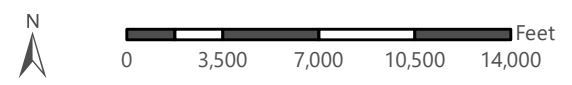


**FIGURE 2-15
FEMA FLOODPLAIN**

- WMO Boundary
- Municipality
- Waterbody
- Major Stream/River
- Minor Stream/River
- Flood Zone Designations**
- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BFE
- AE: Regulatory Floodway

Data Sources
 County: US Census (TIGER)
 Flood Zone Designations: FEMA (Anoka Co: 27003C 2015/12/15; Isanti Co: 27059C 2006/04/12; Sherburne Co: 27141C 2011/11/16)
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)

**UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN**
ANOKA COUNTY, MINNESOTA



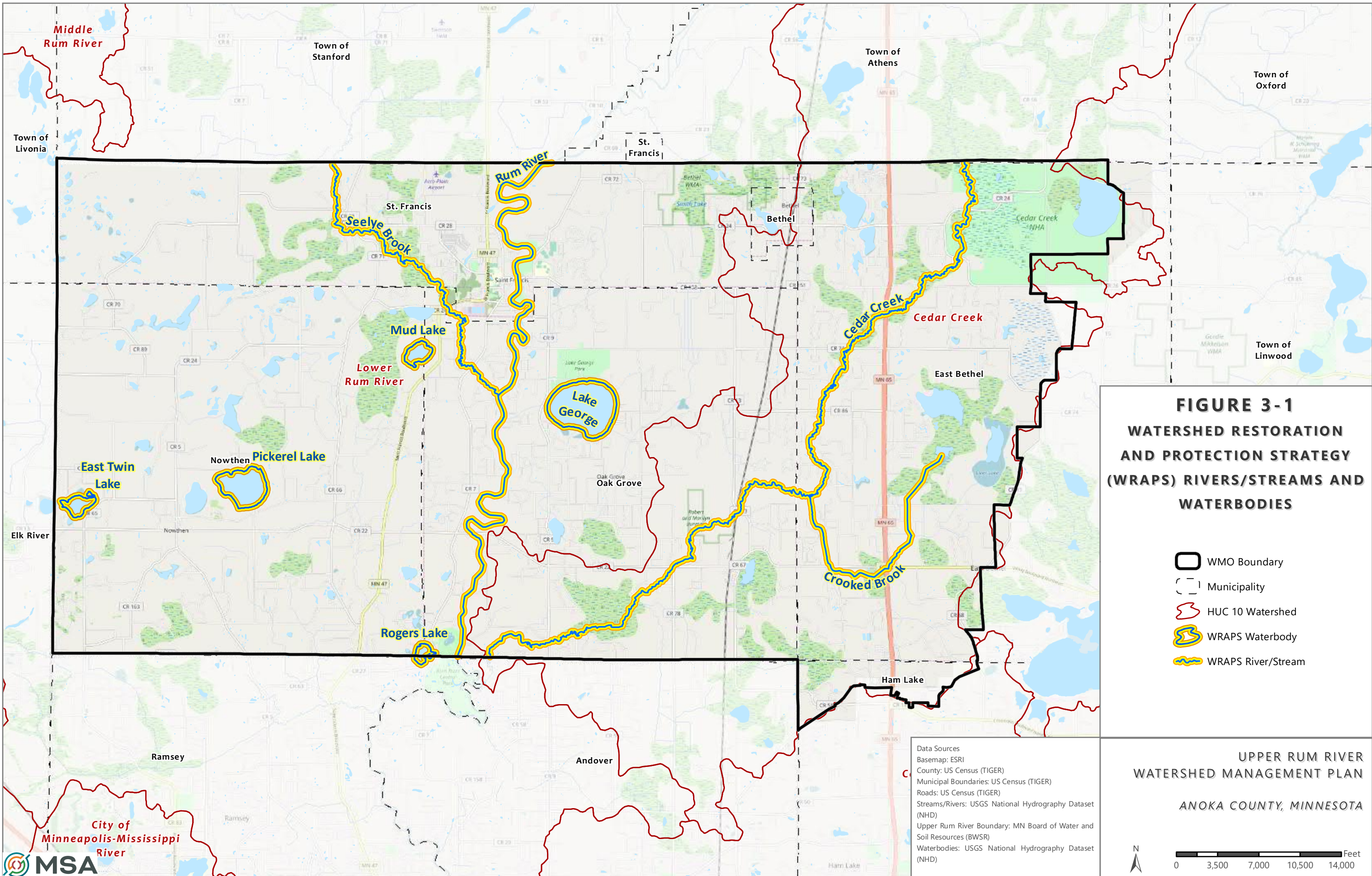







FIGURE 3-1
WATERSHED RESTORATION
AND PROTECTION STRATEGY
(WRAPS) RIVERS/STREAMS AND
WATERBODIES

-  WMO Boundary
-  Municipality
-  HUC 10 Watershed
-  WRAPS Waterbody
-  WRAPS River/Stream

Data Sources
 Basemap: ESRI
 County: US Census (TIGER)
 Municipal Boundaries: US Census (TIGER)
 Roads: US Census (TIGER)
 Streams/Rivers: USGS National Hydrography Dataset (NHD)
 Upper Rum River Boundary: MN Board of Water and Soil Resources (BWSR)
 Waterbodies: USGS National Hydrography Dataset (NHD)

UPPER RUM RIVER
WATERSHED MANAGEMENT PLAN
ANOKA COUNTY, MINNESOTA

0 3,500 7,000 10,500 14,000 Feet

