Maps in Watershed Restoration and Protection Strategy (WRAPS) reports

This guidance document includes a list of maps for WRAPS reports. The intent of this guidance is to support the development of WRAPS reports and maps that are consistent and comparable for watersheds across Minnesota. The intent is not to limit the number or type of maps included in WRAPS reports, but rather to provide a list of basic maps that should be included in each WRAPS report. Maps from relevant monitoring and assessment reports, stressor ID reports, and Total Maximum Daily Load studies should be reused in WRAPS reports when possible.

Overview maps
1. Overview map: general reference map with cities, towns, major roads, rivers, and major landscape features
2. Land cover map: with seven land cover classes
3. Maps of AUIDs: one for stream AUIDs and one for lake AUIDs

Impaired waters maps
4. Monitoring locations (biology, chemistry, other)
5. Assessed waters showing full support, non-support, not assessed, and inconclusive
   - One map for aquatic life (AQL) and one map for aquatic recreation (AQR) impairments
   - If needed, maps for drinking water (DW) and aquatic consumption (AQC) impairments
6. Impaired waters by parameter
7. Biological stressors

Point source and non-point source maps
8. Wastewater from municipal and industrial sources, and stormwater from municipal, industrial, construction, and MS4 sources
9. Feedlots showing size, permit type, and shore land status
10. Additional options:
   - Modeling (HSPF – SAM, SWAT, SPARROW, others)
   - Monitoring data (Minnesota Watershed Pollutant Load Monitoring Network, others)
   - Agricultural conservation planning framework (ACPF)
   - Prioritize, target, measure application (PTM App)
   - Environmental benefits index (EBI)
   - Terrain analysis with lidar
   - Slope, soil, and riparian conditions, extent of tile drainage
   - Sites for wetland restoration
o Unsewered communities
o Nutrient reduction strategy

**Protection maps**

11. Protection strategies, some options include:

- Lake protection strategy
- Riparian, forest, and wetland areas
- Zonation
- Lakes and streams that are nearly or barely impaired (MPCA EAO data)
- Conservation planning datasets such as the Minnesota Prairie Conservation Plan, the Minnesota Statewide Conservation and Preservation Plan, others
- Professional judgement
1. Overview map
2. Land cover

Coon Creek Watershed Management Organization

![Map of Coon Creek Watershed with land cover types. The map shows different land cover types such as barren, crops, forest, grass/hay, developed, water, and wetlands. The map is based on the National Land Cover Database 2011.](image-url)
3. Map of AUIDs

Stream AUIDs

![Map of AUIDs](image-url)
4. Monitoring locations
5. Assessed waters

![Assessed waters map]

6. Impaired waters

![Impaired waters map]
7. Biological stressors
8. Point sources

![Map showing NPDES Discharge, Impaired, and Receiving NPDES Discharge areas.]

9. Feedlots

![Map showing Feedlots, Feedlot with LMSA, CAFO, and AUID Impaired for Bacteria.]

Animal Units per HUC12:
- 300 - 2000
- 2000 - 4000
- 4000 - 6000
- 6000 - 14,100

Legend:
- Feedlot
- Feedlot with LMSA
- CAFO
- AUID Impaired for Bacteria

Scale: 5 Miles
10. Point and non-point sources
11. Protection maps

Snake River Watershed - Zonation Analysis

Map created: 9/17/13