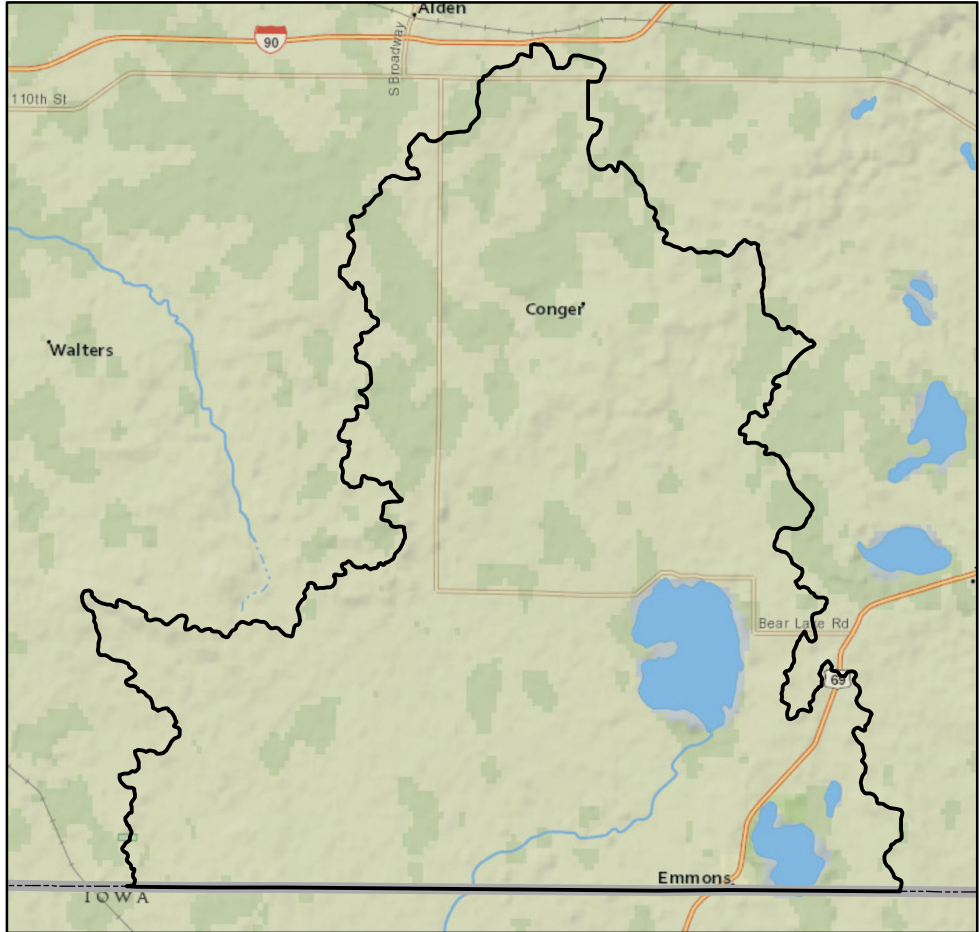




Watershed Report Card: **Winnebago River**



People and Places:

Watershed Population:

2000 census - 1,234
 2010 census - 1,143

Largest Cities - Population:

Emmons - 391
 Conger - 146
 Emmons Trailer Court - None

Counties - % of watershed:

Freeborn - 99 %
 Faribault - 1 %

Watershed Area:

Watershed size:

45,649 acres
 71 square miles

Watershed Surface Area:

Percent Land - 96 %
 Percent Water - 4 %

HUC8 ID:

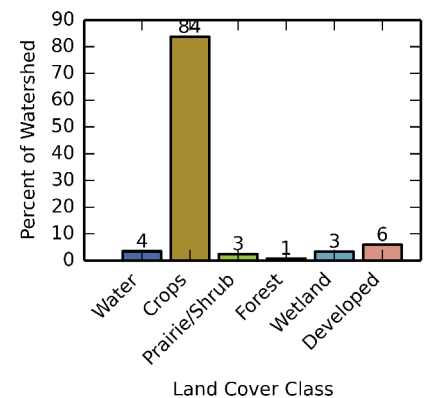
07080203

Basin Name:

Upper Mississippi -
 Iowa/Skunk/Wapsipinicon (0708)

Land Use:

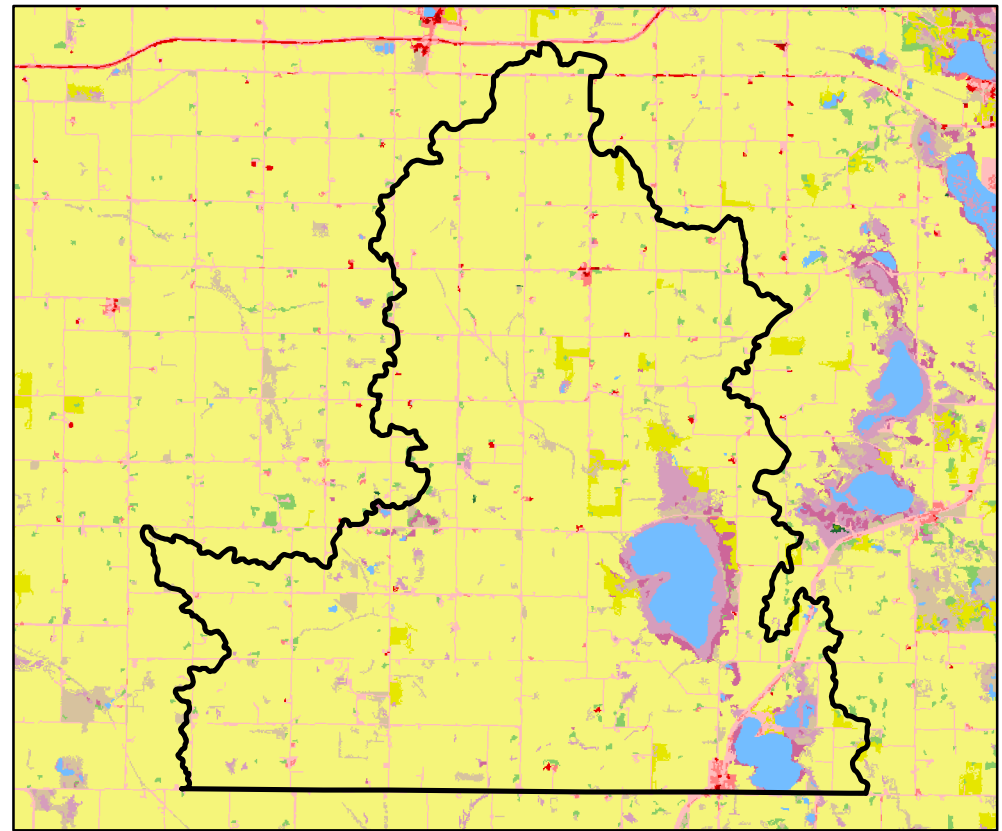
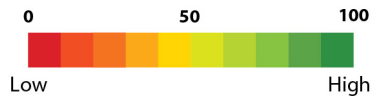
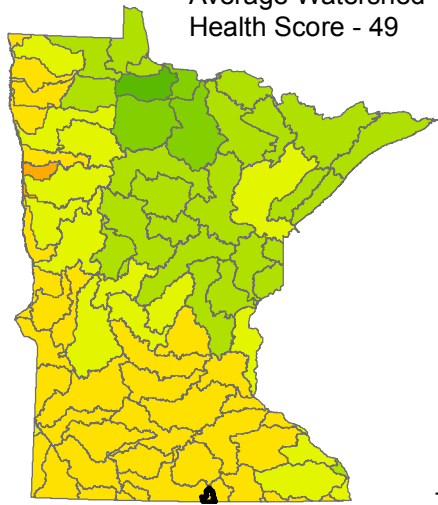
Percent of watershed area by land cover type:



Watershed Health Report - Major Watershed

Winnebago River

Average Watershed Health Score - 49



These health scores are calculated at the Major Watershed (HUC8) scale. Health score names followed by (*) are also calculated at the DNR Catchment scale (subdivided HUC12). Those results are reported on the following pages.



Hydrology

Component Health Score (index average) 58

Index Scores

Perennial Cover*	9
Impervious Cover*	85
Water Withdrawal*	99
Flow Variability	71
Hydrologic Storage	10
Sub-Scores	
Altered Streams*	0
Surface Storage	21



Geomorphology

Component Health Score (index average) 66

Index Scores

Soil Erosion Potential*	73
Groundwater Susceptibility	43
Climate Vulnerability	81



Biology

Component Health Score (index average) 44

Index Scores

Terrestrial Habitat Quality*	2
Stream Species Quality*	65
Species Richness	69
At-Risk Species Richness	42



Connectivity

Component Health Score (index average) 14

Index Scores

Terrestrial Habitat Connectivity	3
Aquatic Connectivity*	62
Riparian Connectivity*	27



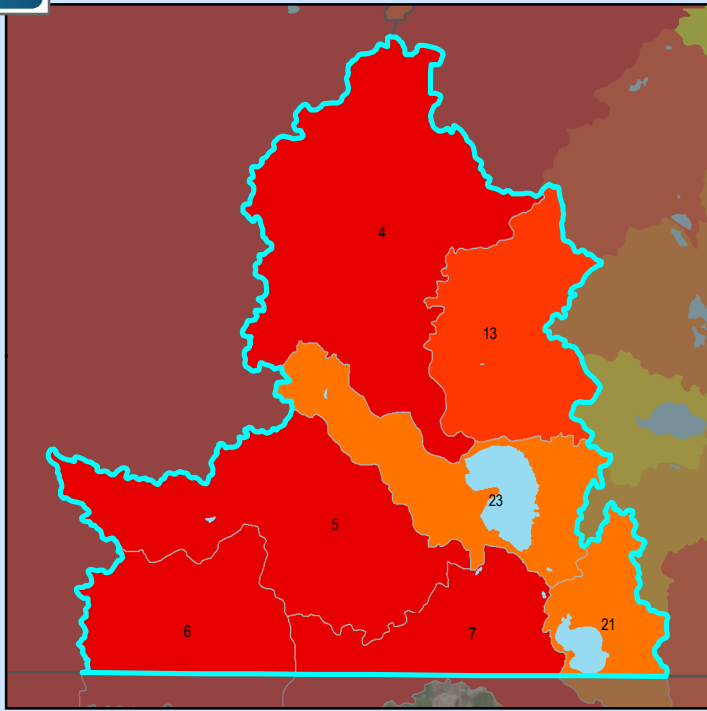
Water Quality

Component Health Score (index average) 62

Index Scores

Non-Point Pollution Sources	53
Sub-Score	
Phosphorus Risk*	2
Localized Pollution Sources*	83
Assessments	50

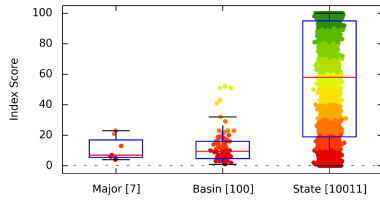
Perennial Cover (2011)



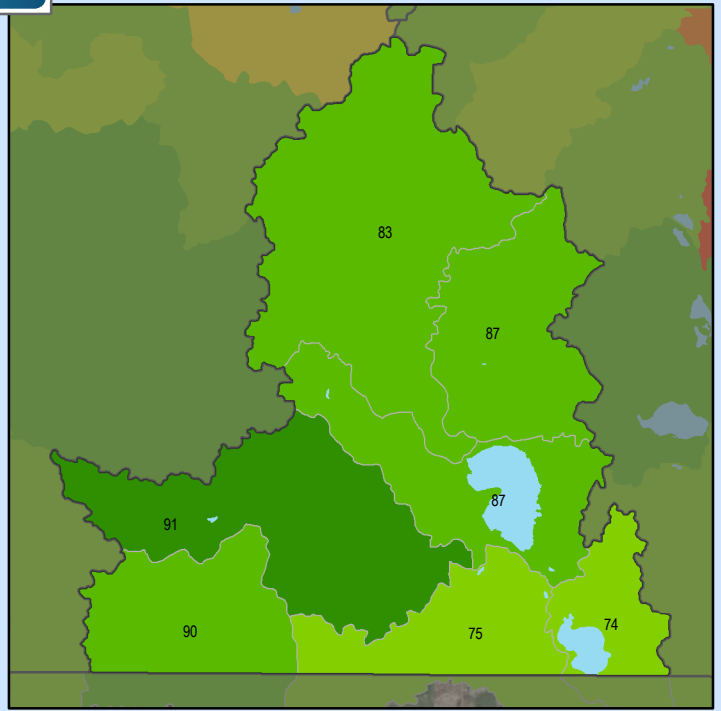
Health Score Distributions:

Winnebago River

Min: 4
 Max: 23
 Median: 7.0
 Mean: 11.29
 Standard Dev: 7.3



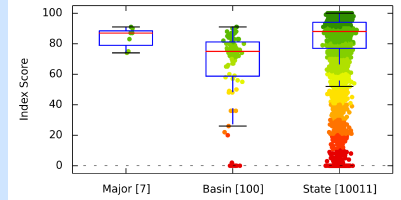
Impervious Cover (2011)



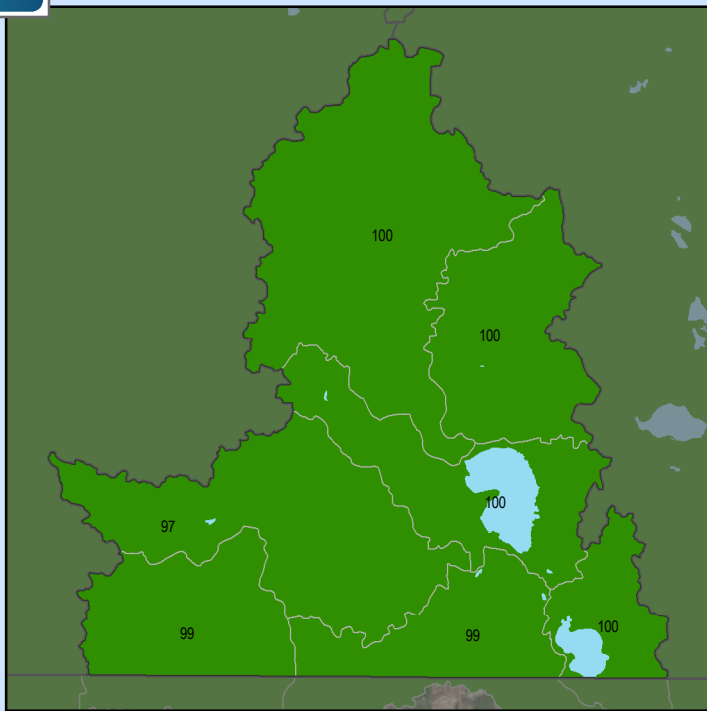
Health Score Distributions:

Winnebago River

Min: 74
 Max: 91
 Median: 87.0
 Mean: 83.86
 Standard Dev: 6.38



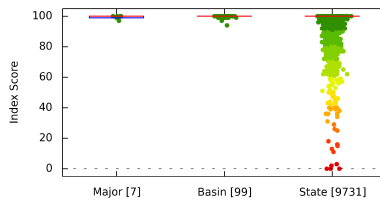
Water Withdrawal Index



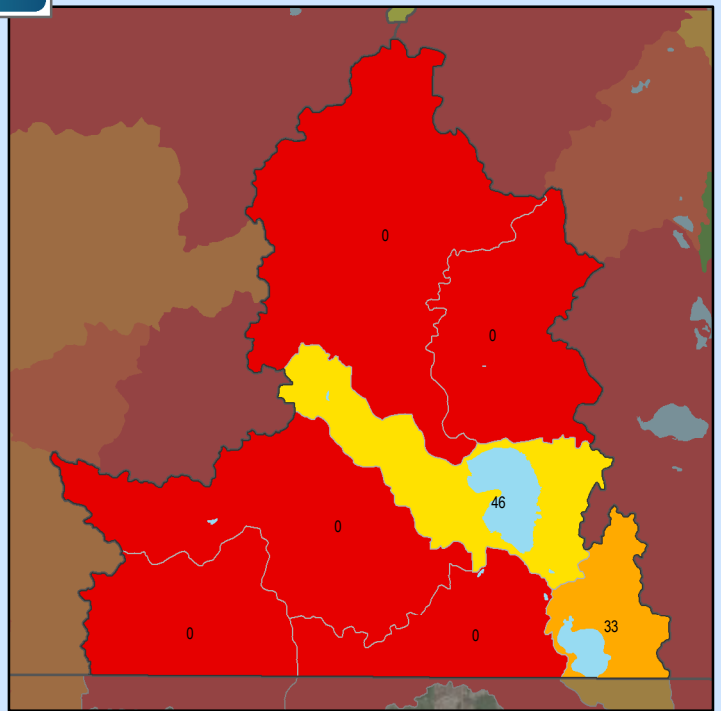
Health Score Distributions:

Winnebago River

Min: 97
 Max: 100
 Median: 100.0
 Mean: 99.29
 Standard Dev: 1.03



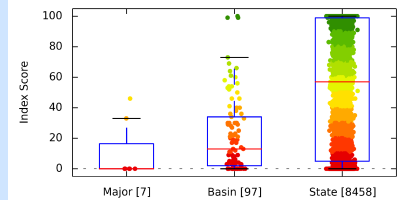
Altered Streams



Health Score Distributions:

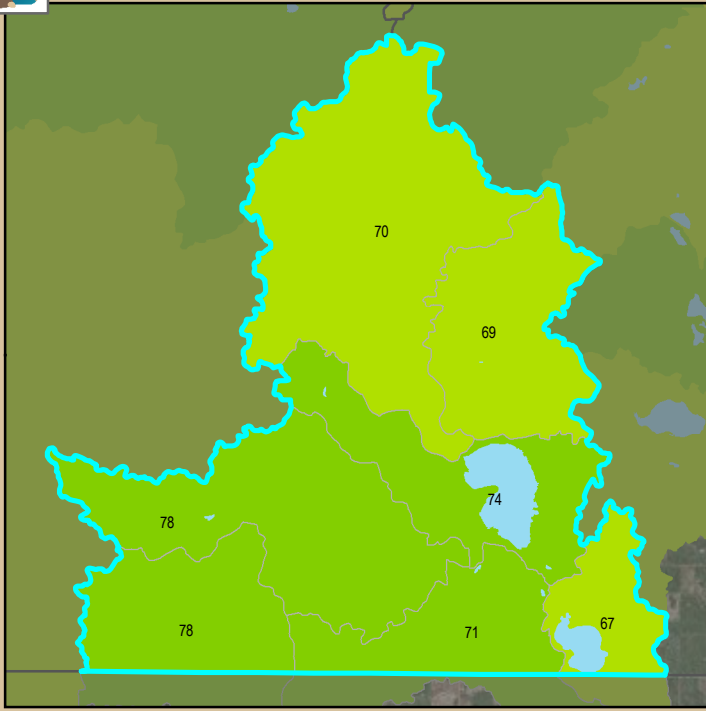
Winnebago River

Min: 0
 Max: 46
 Median: 0.0
 Mean: 11.29
 Standard Dev: 18.18



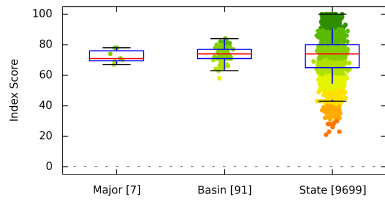


Soil Erosion Potential

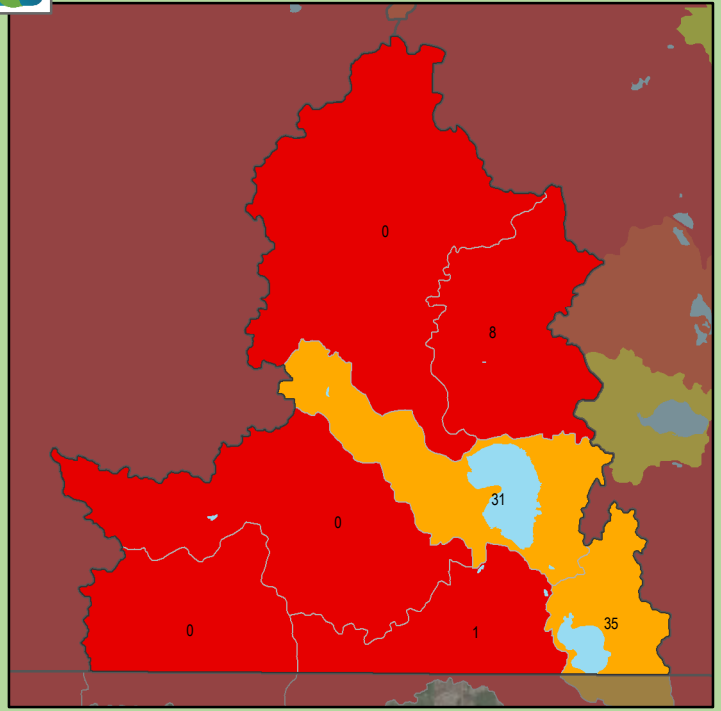


Health Score Distributions:

Winnebago River
Min: 67
Max: 78
Median: 71.0
Mean: 72.43
Standard Dev: 4.03

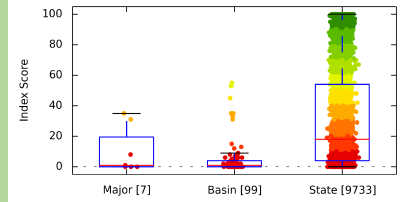


Terrestrial Habitat Quality

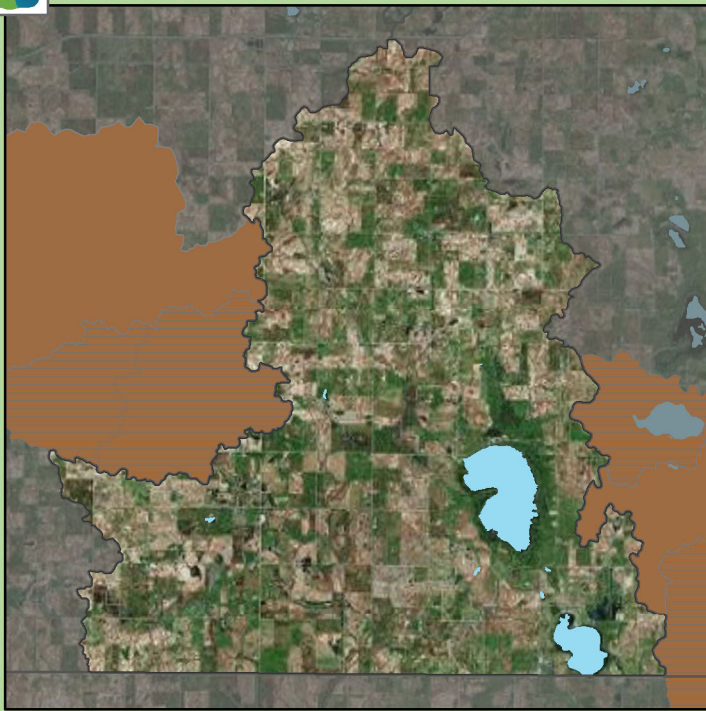


Health Score Distributions:

Winnebago River
Min: 0
Max: 35
Median: 1.0
Mean: 10.71
Standard Dev: 14.38

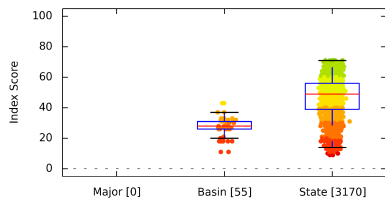


Stream Species Quality - Mussel Score

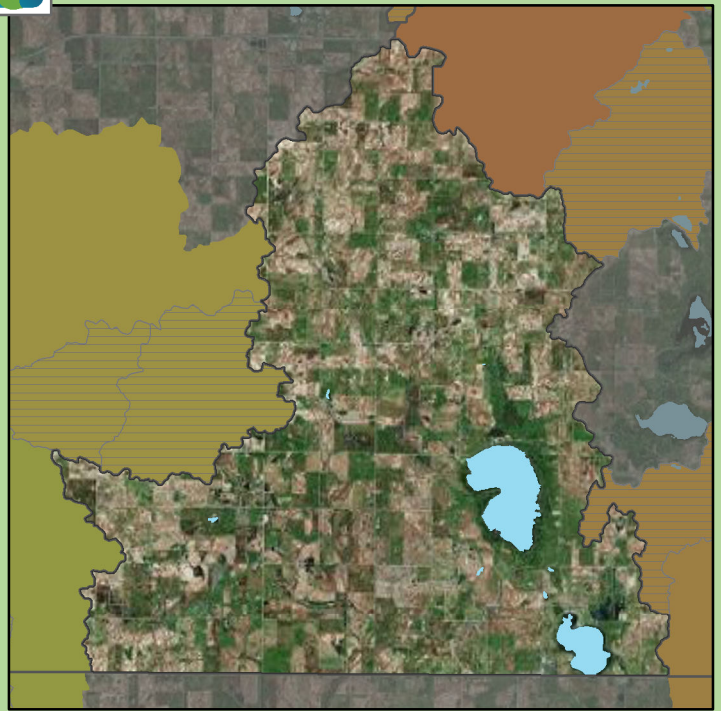


Health Score Distributions:

Winnebago River
Min: NA
Max: NA
Median: NA
Mean: NA
Standard Dev: NA

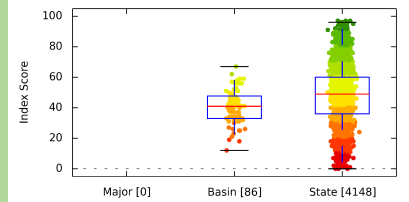


Stream Species Quality - Aquatic Invertebrate IBI

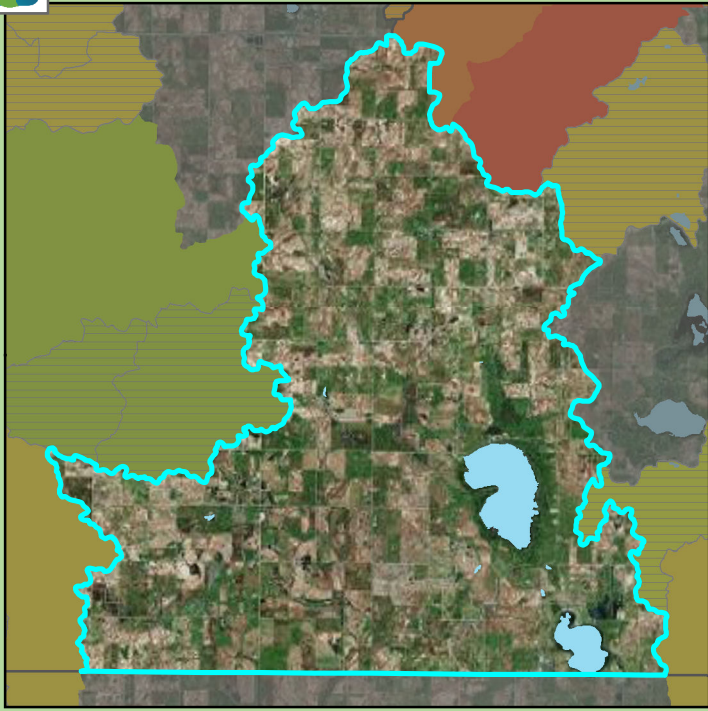


Health Score Distributions:

Winnebago River
Min: NA
Max: NA
Median: NA
Mean: NA
Standard Dev: NA

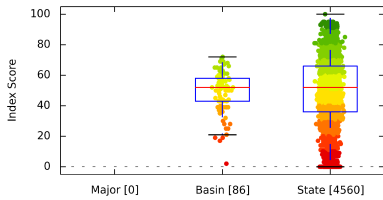


Stream Species Quality - Fish IBI

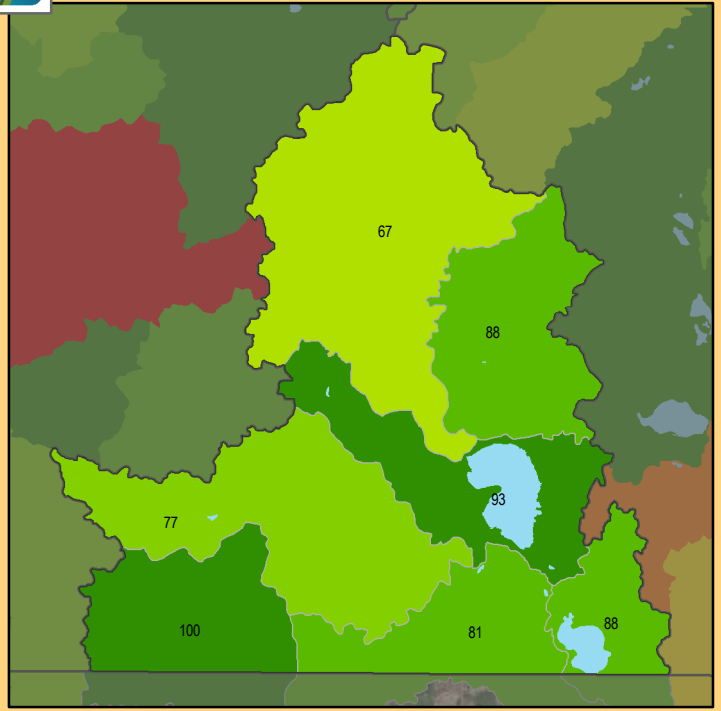


Health Score Distributions:

Winnebago River
 Min: NA
 Max: NA
 Median: NA
 Mean: NA
 Standard Dev: NA

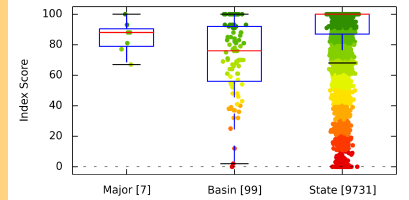


Aquatic Connectivity

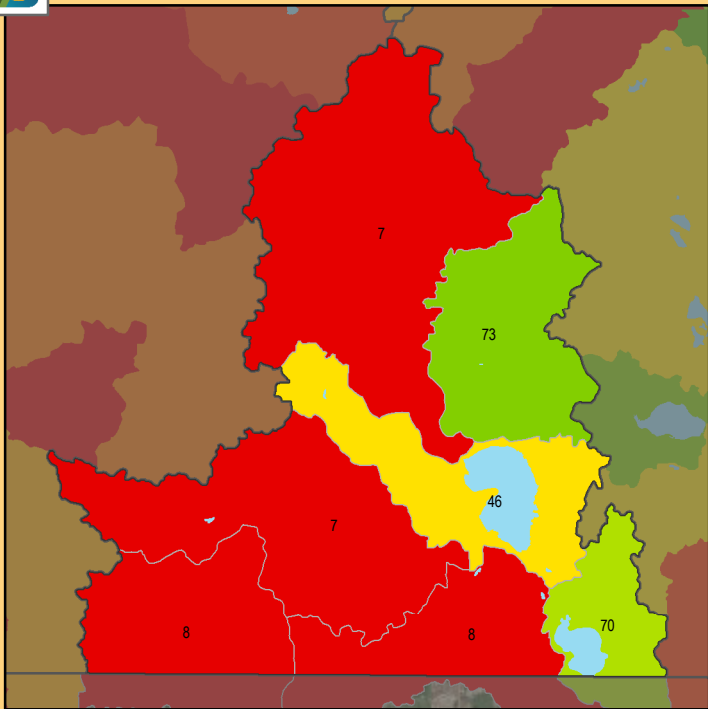


Health Score Distributions:

Winnebago River
 Min: 67
 Max: 100
 Median: 88.0
 Mean: 84.86
 Standard Dev: 10.08

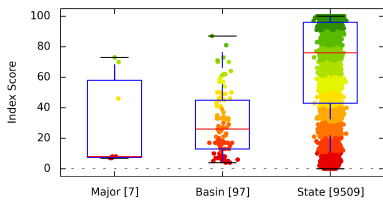


Riparian Connectivity

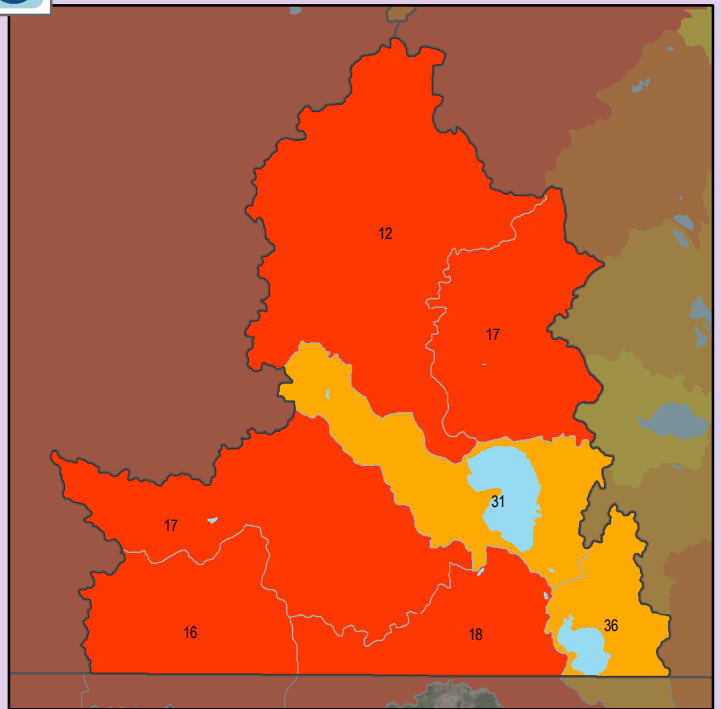


Health Score Distributions:

Winnebago River
 Min: 7
 Max: 73
 Median: 8.0
 Mean: 31.29
 Standard Dev: 28.58

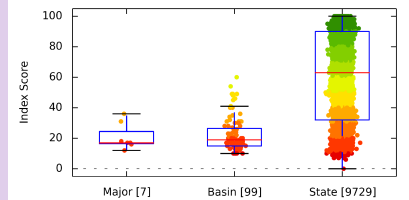


Non-Point Source - Phosphorus Risk



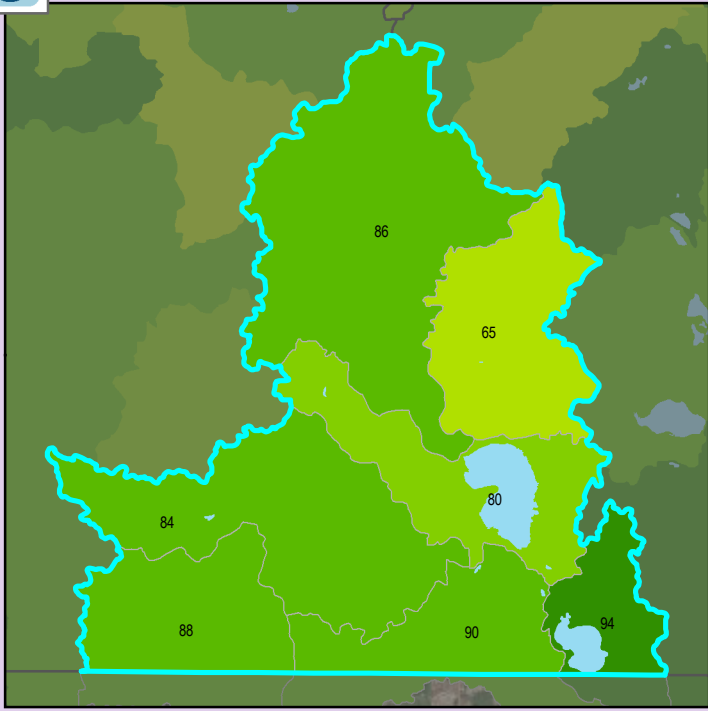
Health Score Distributions:

Winnebago River
 Min: 12
 Max: 36
 Median: 17.0
 Mean: 21.0
 Standard Dev: 8.21





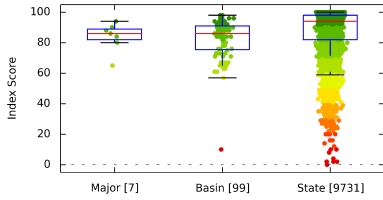
Localized Pollution Sources



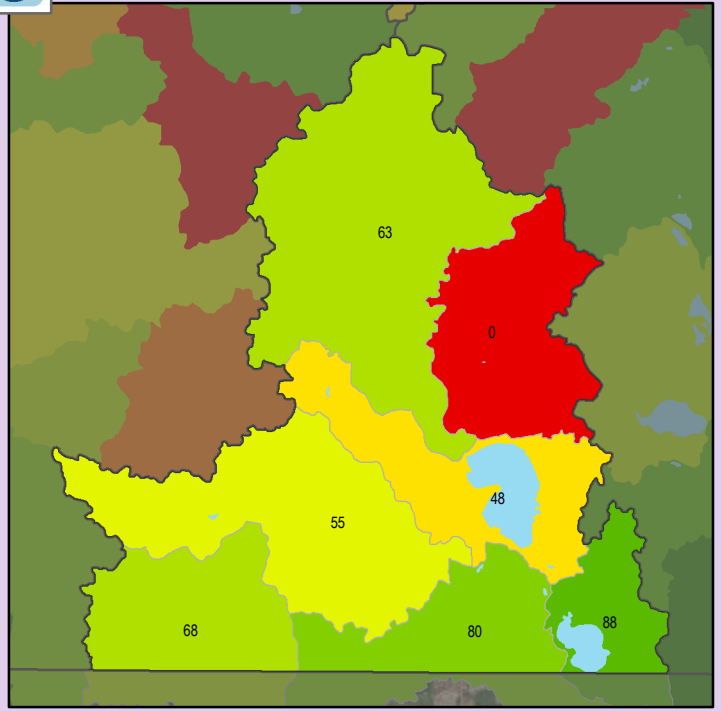
Health Score Distributions:

Winnebago River

Min: 65
Max: 94
Median: 86.0
Mean: 83.86
Standard Dev: 8.72



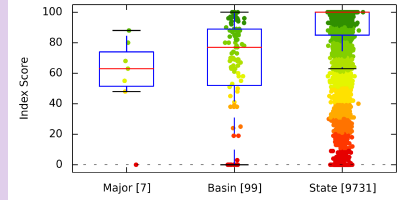
Localized Pollution Sources - Animal Units



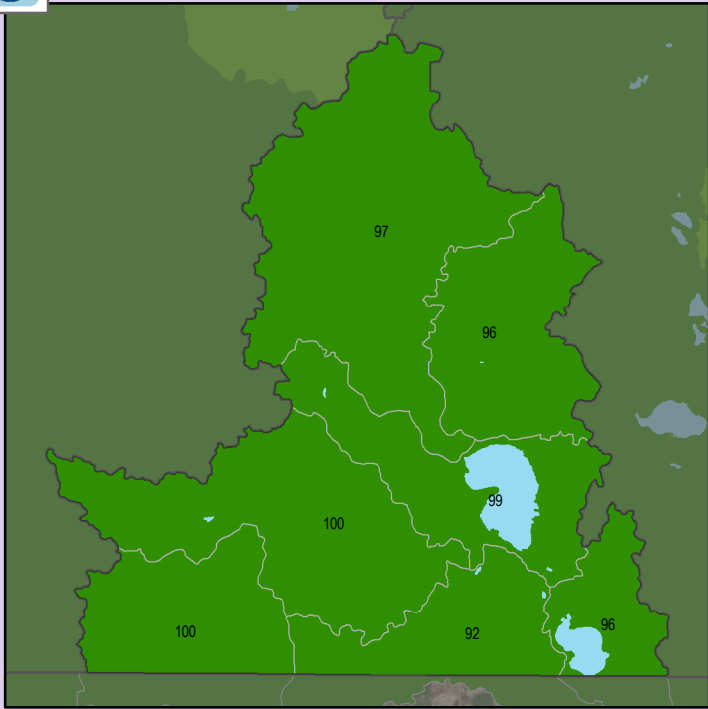
Health Score Distributions:

Winnebago River

Min: 0
Max: 88
Median: 63.0
Mean: 57.43
Standard Dev: 26.67



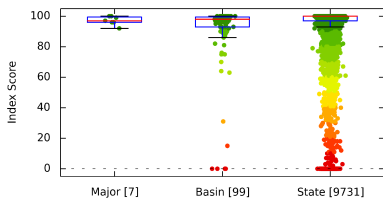
Localized Pollution Sources - Potential Contaminants



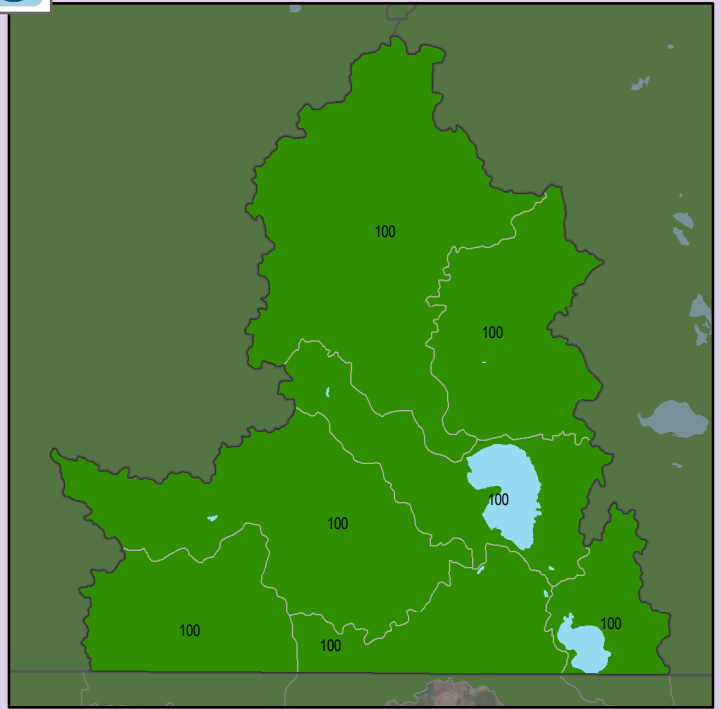
Health Score Distributions:

Winnebago River

Min: 92
Max: 100
Median: 97.0
Mean: 97.14
Standard Dev: 2.64



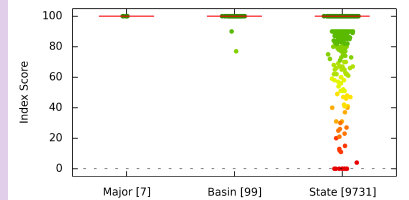
Localized Pollution Sources - Superfund Sites



Health Score Distributions:

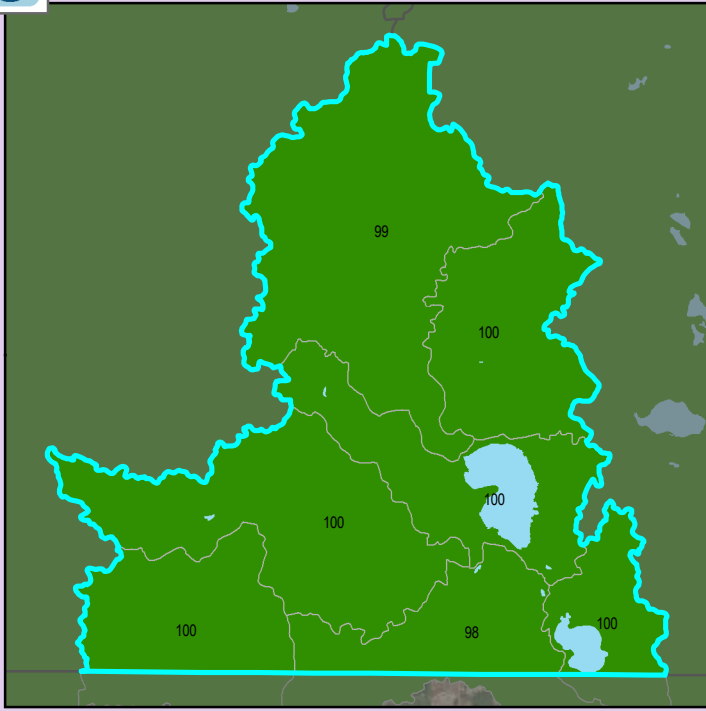
Winnebago River

Min: 100
Max: 100
Median: 100.0
Mean: 100.0
Standard Dev: 0.0



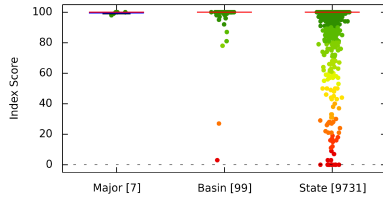


Localized Pollution Sources - Wastewater Treatment

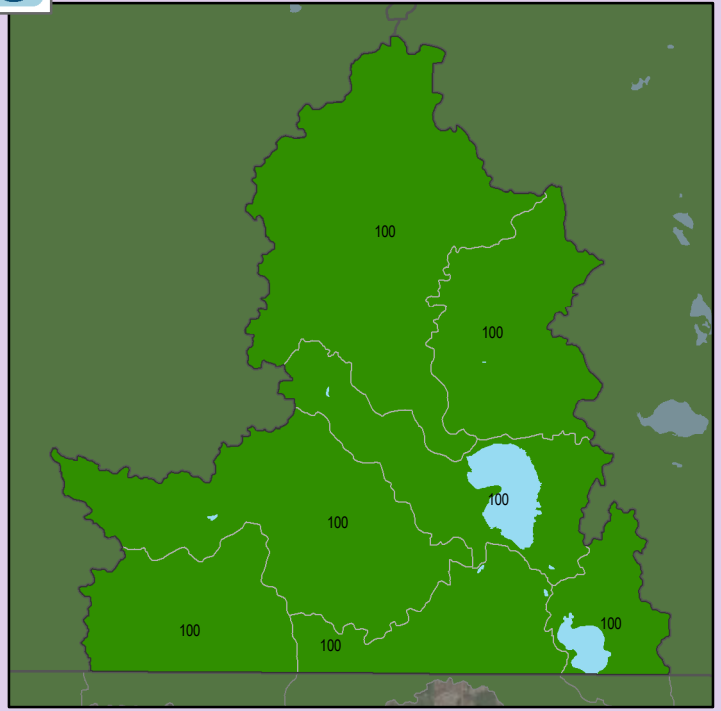


Health Score Distributions:

Winnebago River
 Min: 98
 Max: 100
 Median: 100.0
 Mean: 99.57
 Standard Dev: 0.73

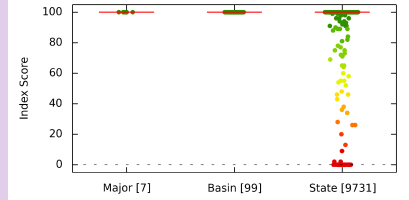


Localized Pollution Sources - Open Pit Mines

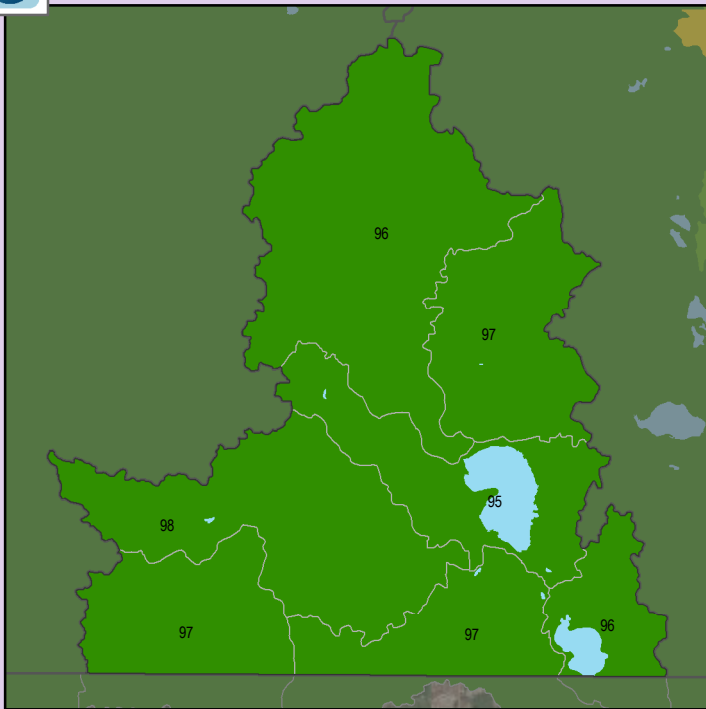


Health Score Distributions:

Winnebago River
 Min: 100
 Max: 100
 Median: 100.0
 Mean: 100.0
 Standard Dev: 0.0



Localized Pollution Sources - Septic Systems



Health Score Distributions:

Winnebago River
 Min: 95
 Max: 98
 Median: 97.0
 Mean: 96.57
 Standard Dev: 0.9

