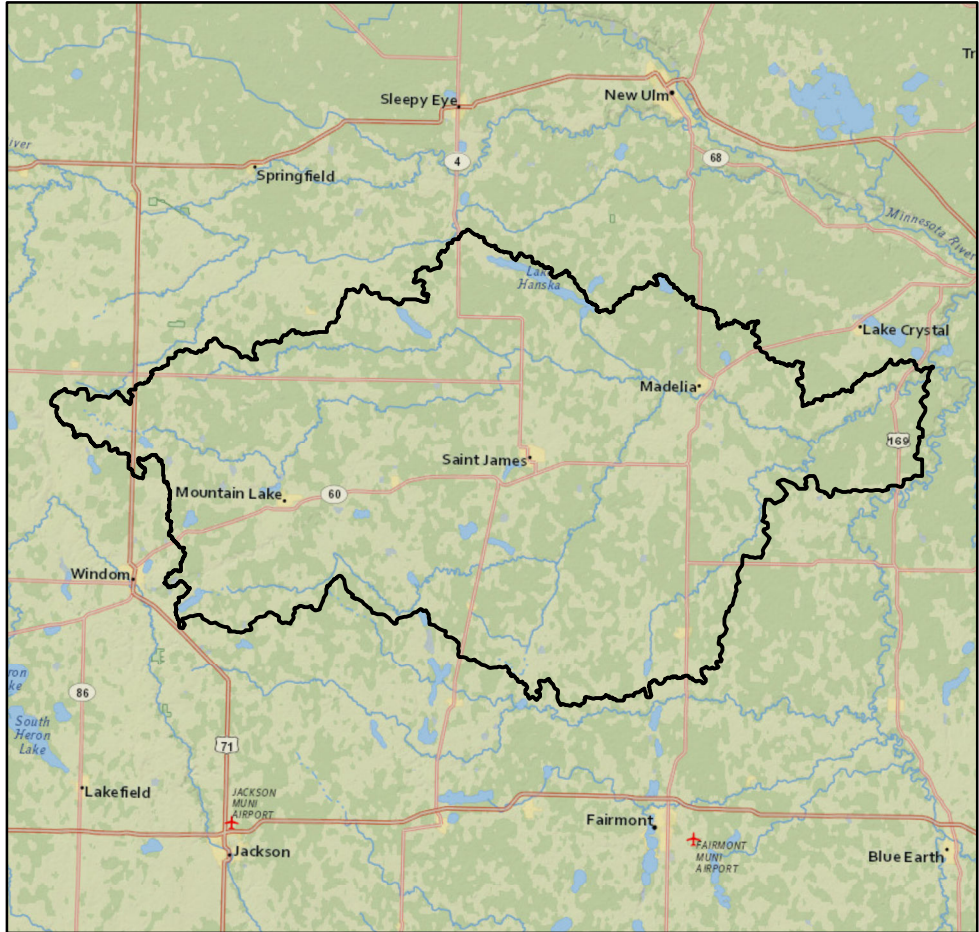




## Watershed Report Card: Watonwan River



### People and Places:

#### Watershed Population:

2000 census - 19,030  
 2010 census - 17,968

#### Largest Cities - Population:

Saint James - 4,605  
 Madelia - 2,308  
 Mountain Lake - 2,104  
 Truman - 1,115  
 Garden City - 689

#### Counties - % of watershed:

Watonwan - 50 %  
 Cottonwood - 23 %  
 Blue Earth - 11 %  
 Martin - 9 %  
 Brown - 6 %  
 Jackson - 1 %

### Watershed Area:

#### Watershed size:

558,964 acres  
 873 square miles

#### Watershed Surface Area:

Percent Land - 98 %  
 Percent Water - 2 %

#### HUC8 ID:

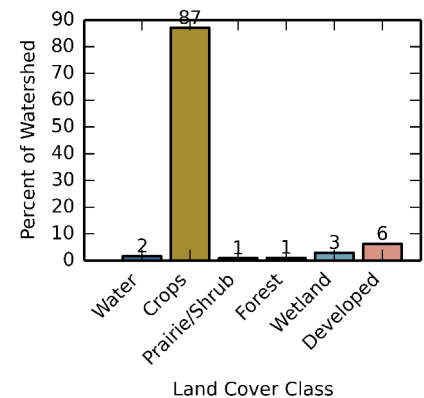
07020010

#### Basin Name:

Minnesota (0702)

### Land Use:

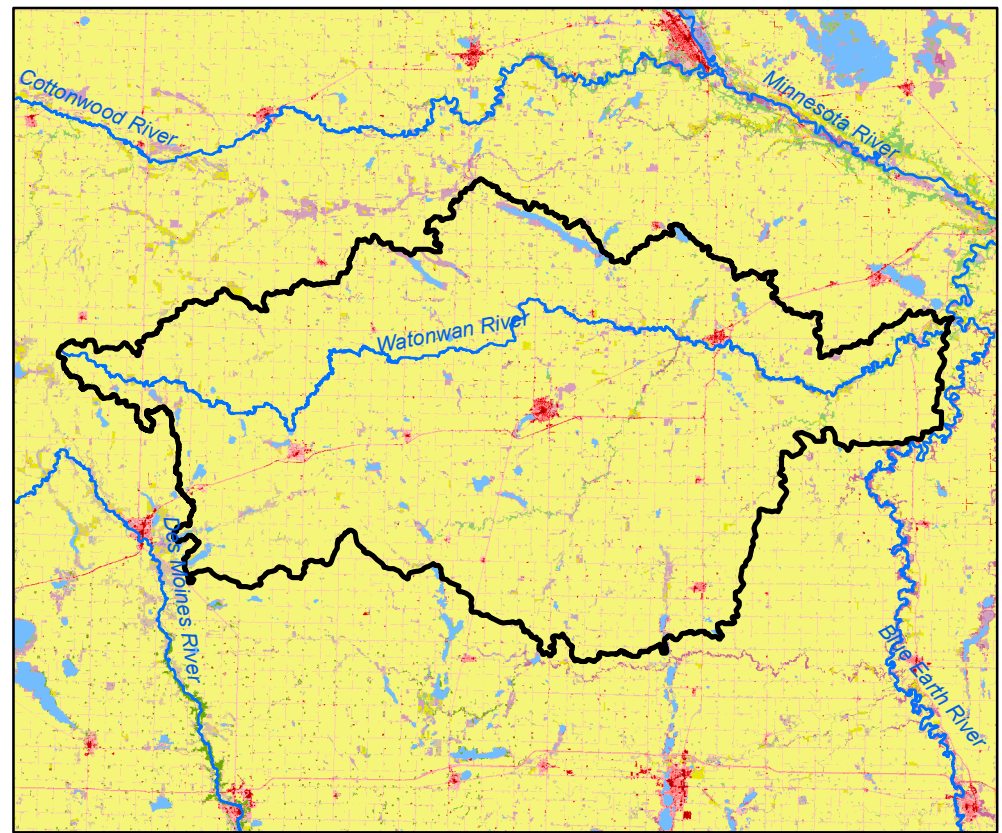
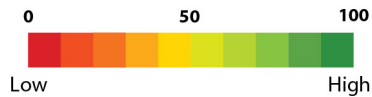
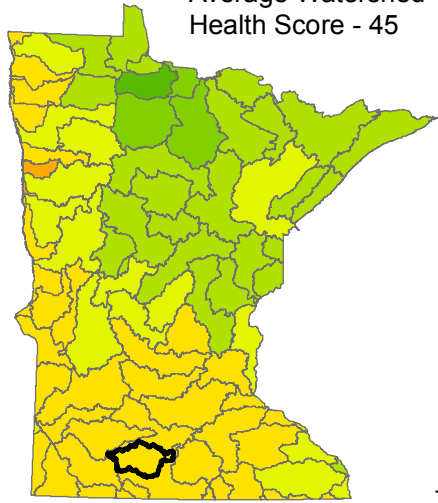
#### Percent of watershed area by land cover type:



# Watershed Health Report - Major Watershed

## Watowan River

Average Watershed Health Score - 45



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) 63

#### Index Scores

Perennial Cover*	6
Impervious Cover*	79
Water Withdrawal*	99
Flow Variability	66
Hydrologic Storage	48
<b>Sub-Scores</b>	
Altered Streams*	81
Surface Storage	15



### Geomorphology

Component Health Score (index average) 65

#### Index Scores

Soil Erosion Potential*	78
Groundwater Susceptibility	53
Climate Vulnerability	66



### Biology

Component Health Score (index average) 30

#### Index Scores

Terrestrial Habitat Quality*	1
Stream Species Quality*	53
Species Richness	49
At-Risk Species Richness	15



### Connectivity

Component Health Score (index average) 18

#### Index Scores

Terrestrial Habitat Connectivity	1
Aquatic Connectivity*	24
Riparian Connectivity*	39



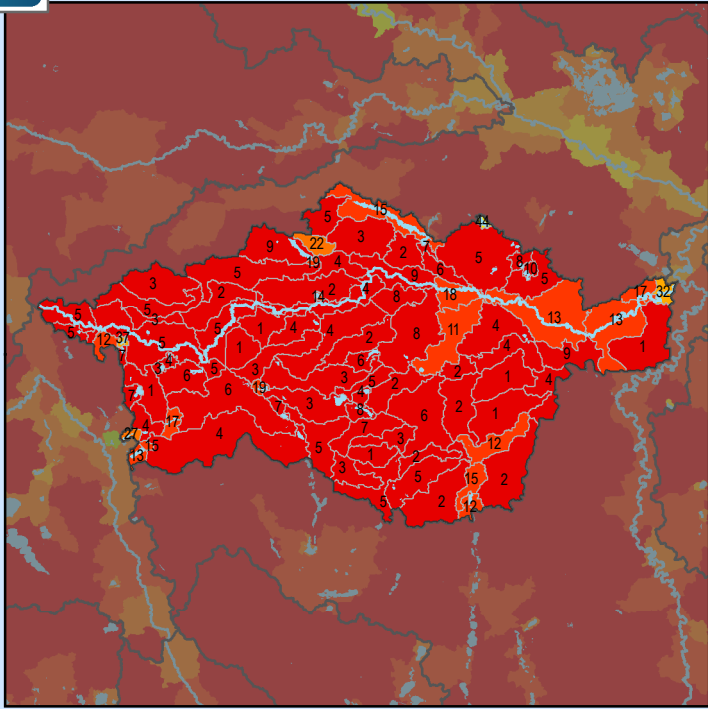
### Water Quality

Component Health Score (index average) 48

#### Index Scores

Non-Point Pollution Sources	19
<b>Sub-Score</b>	
Phosphorus Risk*	4
Localized Pollution Sources*	79
Assessments	37

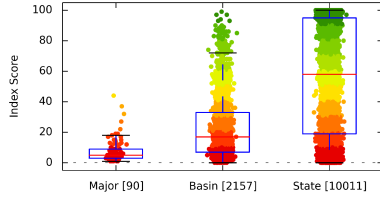
### Perennial Cover (2011)



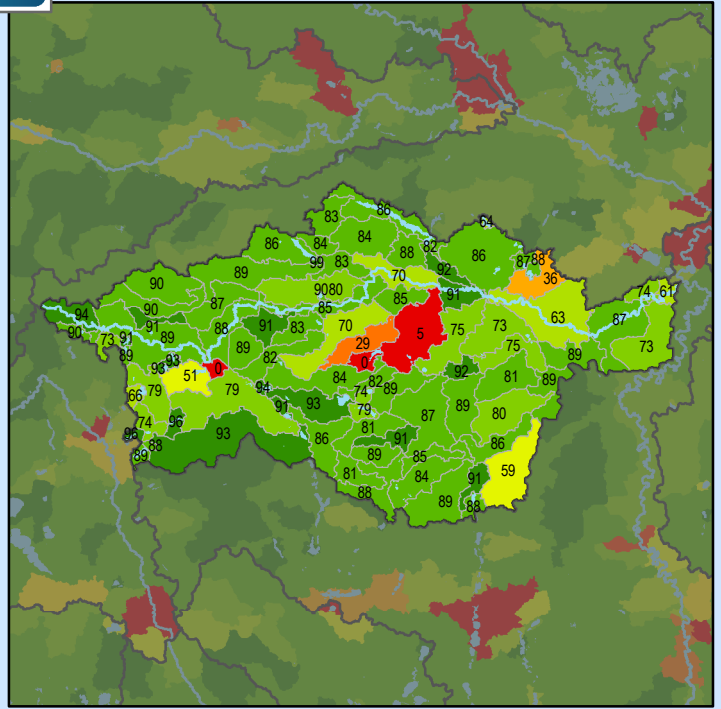
#### Health Score Distributions:

Watonwan River

Min: 1  
 Max: 44  
 Median: 5.0  
 Mean: 7.77  
 Standard Dev: 7.71



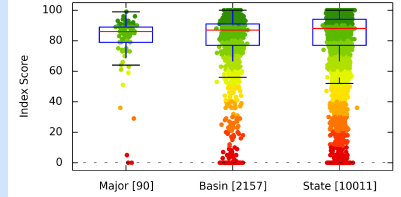
### Impervious Cover (2011)



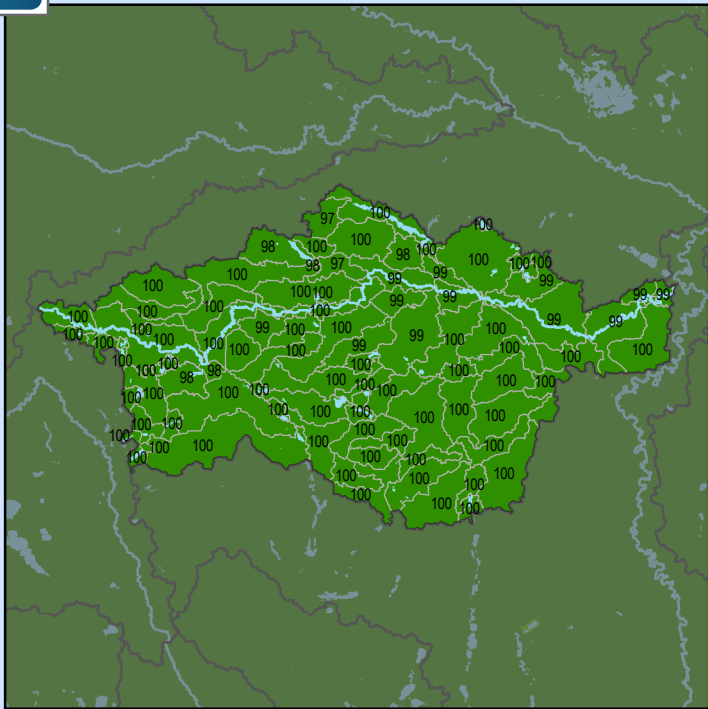
#### Health Score Distributions:

Watonwan River

Min: 0  
 Max: 99  
 Median: 86.0  
 Mean: 80.09  
 Standard Dev: 18.61



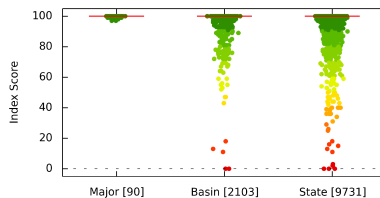
### Water Withdrawal Index



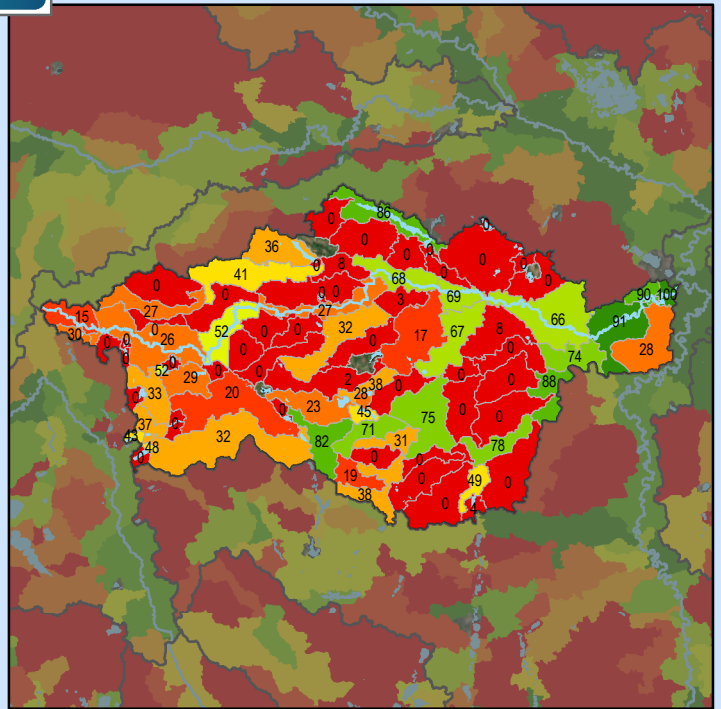
#### Health Score Distributions:

Watonwan River

Min: 97  
 Max: 100  
 Median: 100.0  
 Mean: 99.69  
 Standard Dev: 0.68



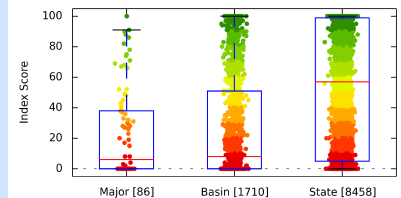
### Altered Streams



#### Health Score Distributions:

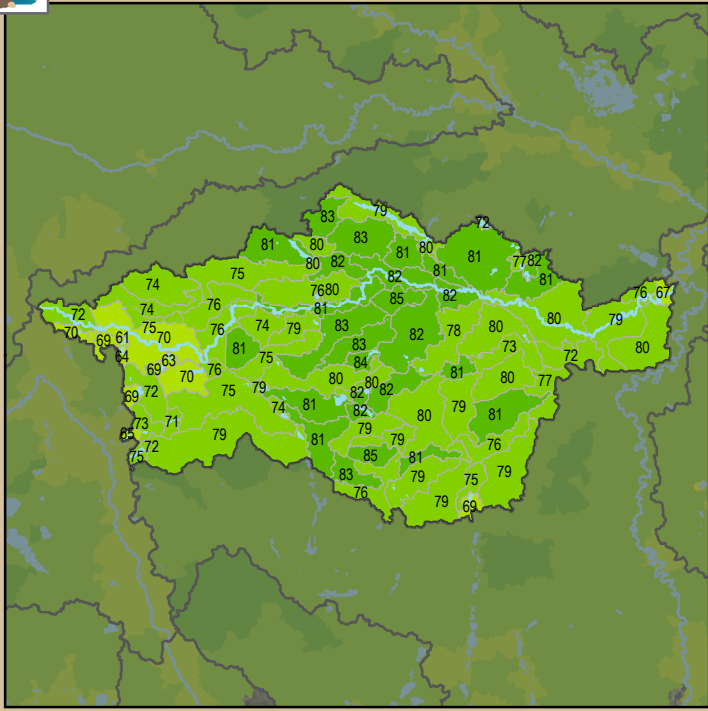
Watonwan River

Min: 0  
 Max: 100  
 Median: 6.0  
 Mean: 23.56  
 Standard Dev: 29.27





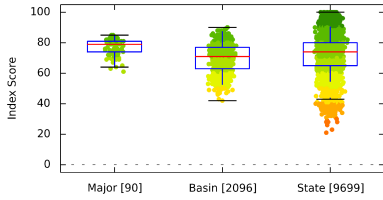
### Soil Erosion Potential



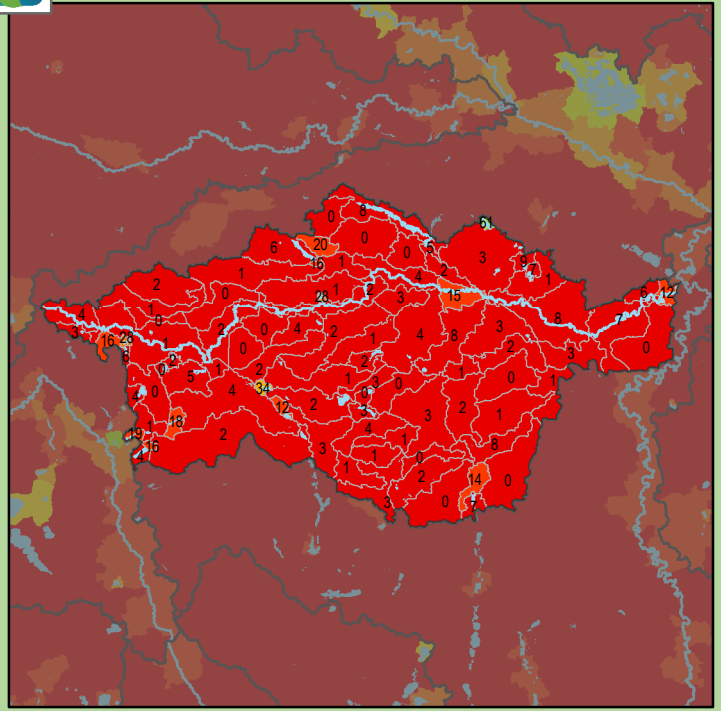
#### Health Score Distributions:

Watonwan River

Min: 61  
Max: 85  
Median: 79.0  
Mean: 77.1  
Standard Dev: 5.19



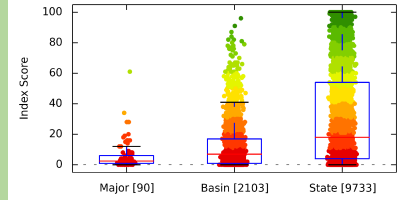
### Terrestrial Habitat Quality



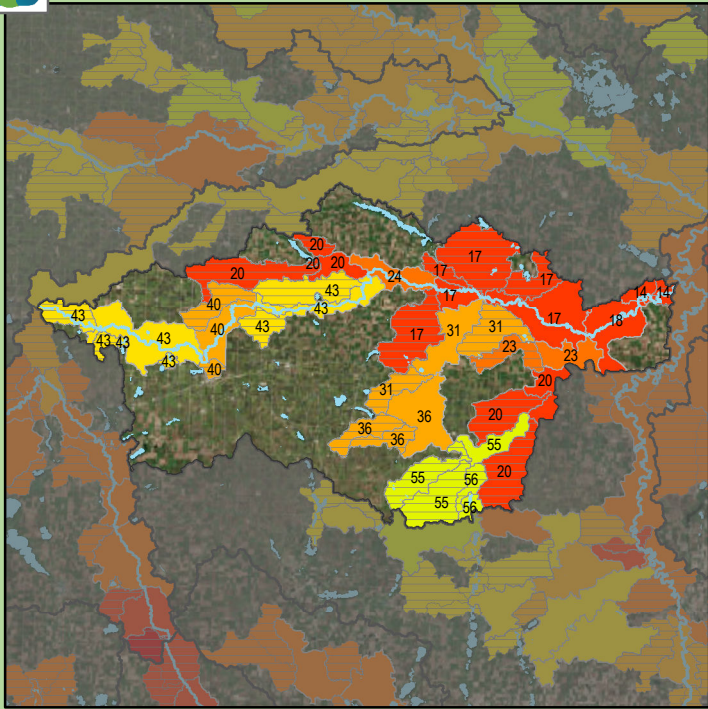
#### Health Score Distributions:

Watonwan River

Min: 0  
Max: 61  
Median: 2.5  
Mean: 5.59  
Standard Dev: 8.9



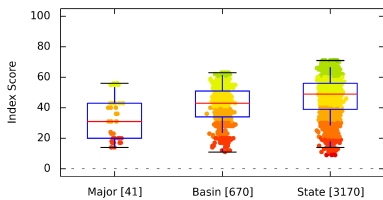
### Stream Species Quality - Mussel Score



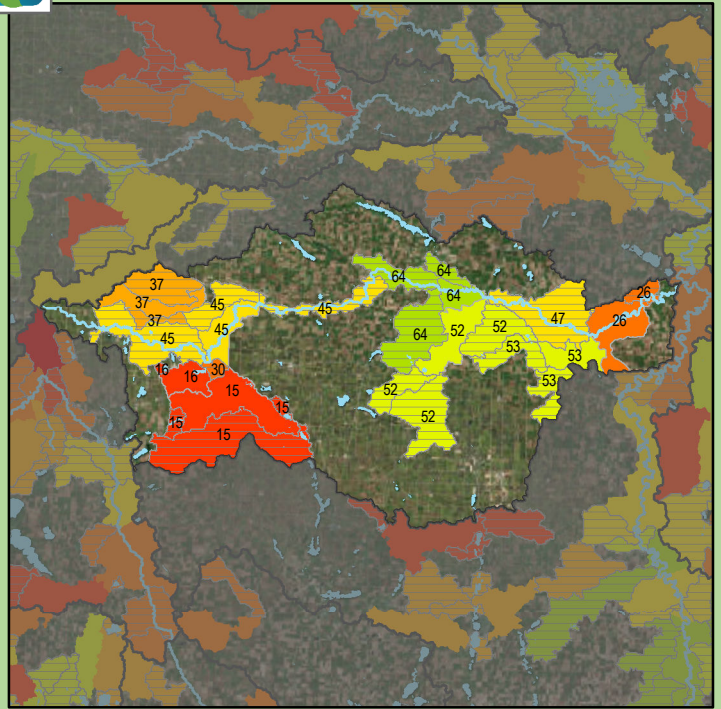
#### Health Score Distributions:

Watonwan River

Min: 14  
Max: 56  
Median: 31.0  
Mean: 31.71  
Standard Dev: 13.41



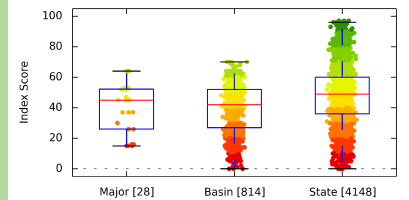
### Stream Species Quality - Aquatic Invertebrate IBI



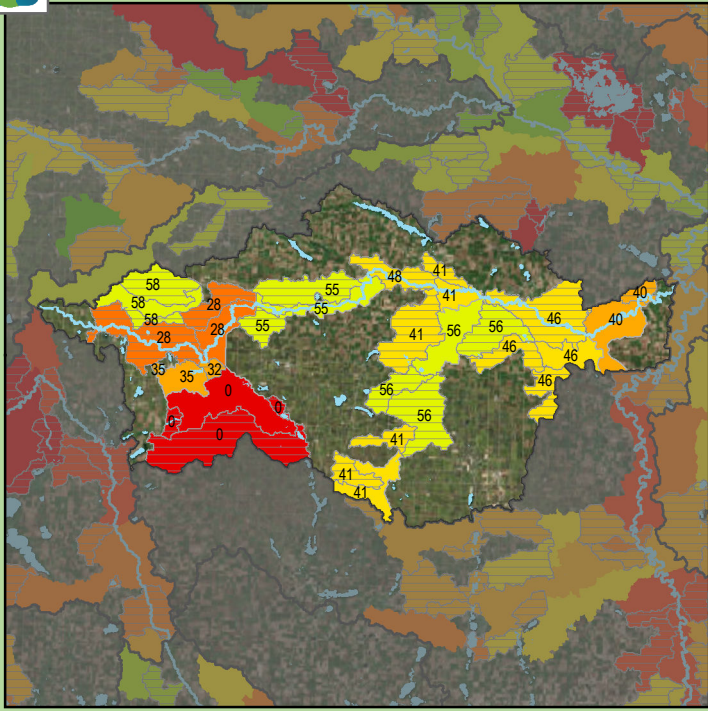
#### Health Score Distributions:

Watonwan River

Min: 15  
Max: 64  
Median: 45.0  
Mean: 40.54  
Standard Dev: 16.58

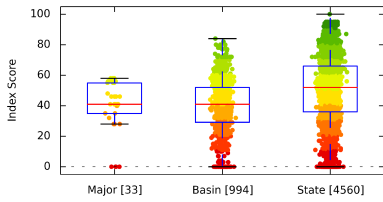


### Stream Species Quality - Fish IBI

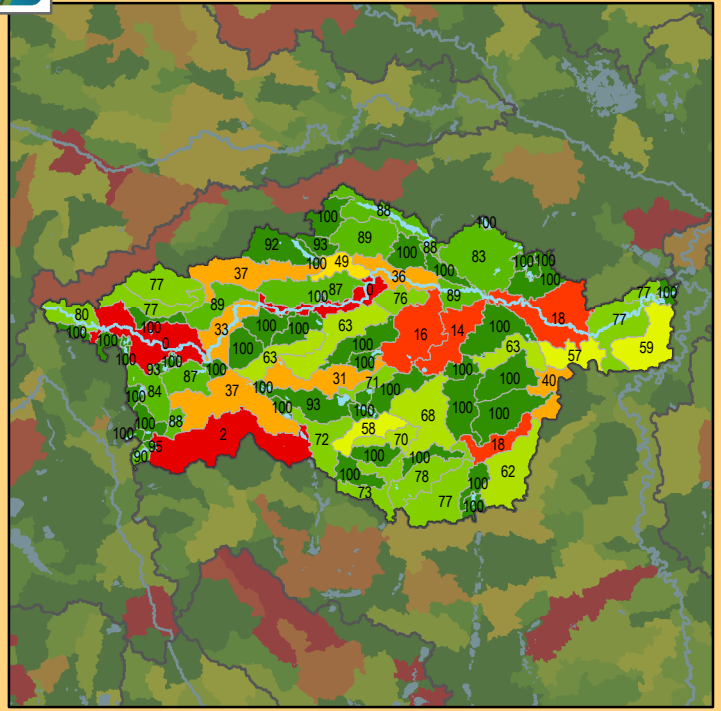


**Health Score Distributions:**

Watowan River  
 Min: 0  
 Max: 58  
 Median: 41.0  
 Mean: 39.61  
 Standard Dev: 17.26

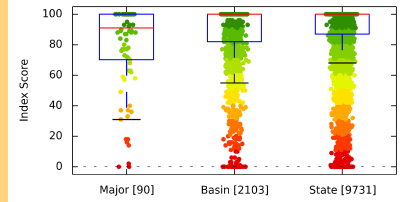


### Aquatic Connectivity

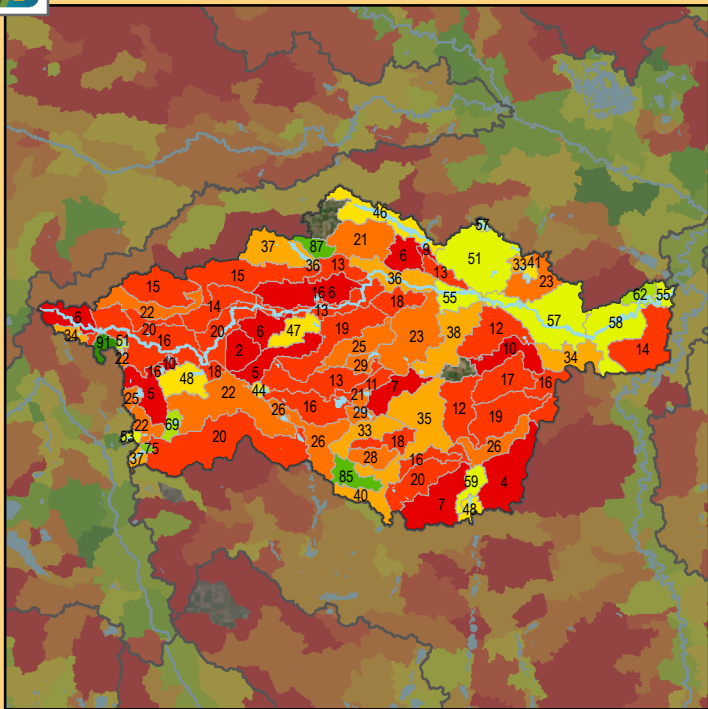


**Health Score Distributions:**

Watowan River  
 Min: 0  
 Max: 100  
 Median: 91.0  
 Mean: 79.52  
 Standard Dev: 27.59

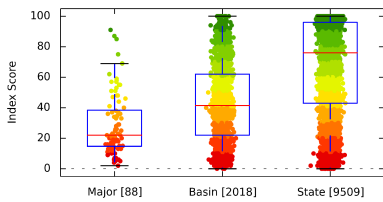


### Riparian Connectivity

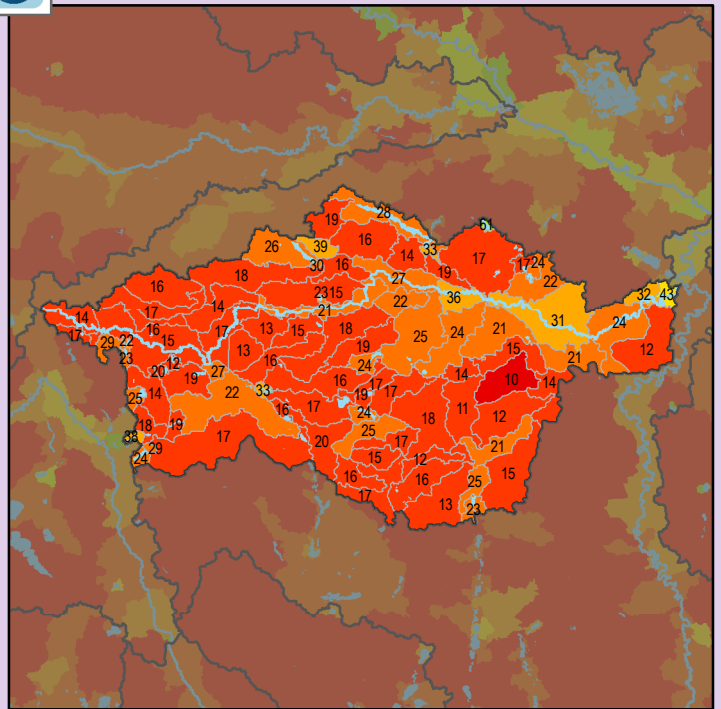


**Health Score Distributions:**

Watowan River  
 Min: 2  
 Max: 91  
 Median: 22.0  
 Mean: 28.81  
 Standard Dev: 20.11

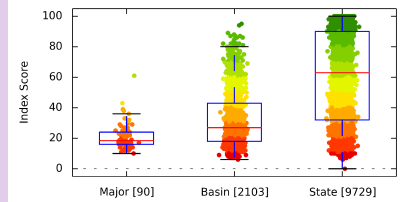


### Non-Point Source - Phosphorus Risk



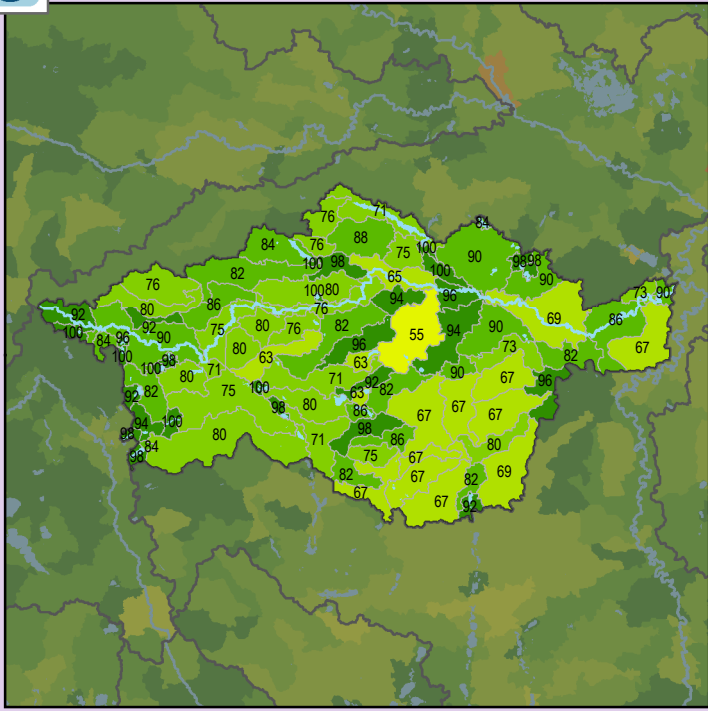
**Health Score Distributions:**

Watowan River  
 Min: 10  
 Max: 61  
 Median: 18.5  
 Mean: 20.73  
 Standard Dev: 7.9



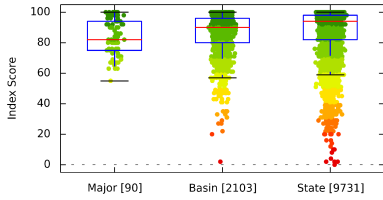


### Localized Pollution Sources

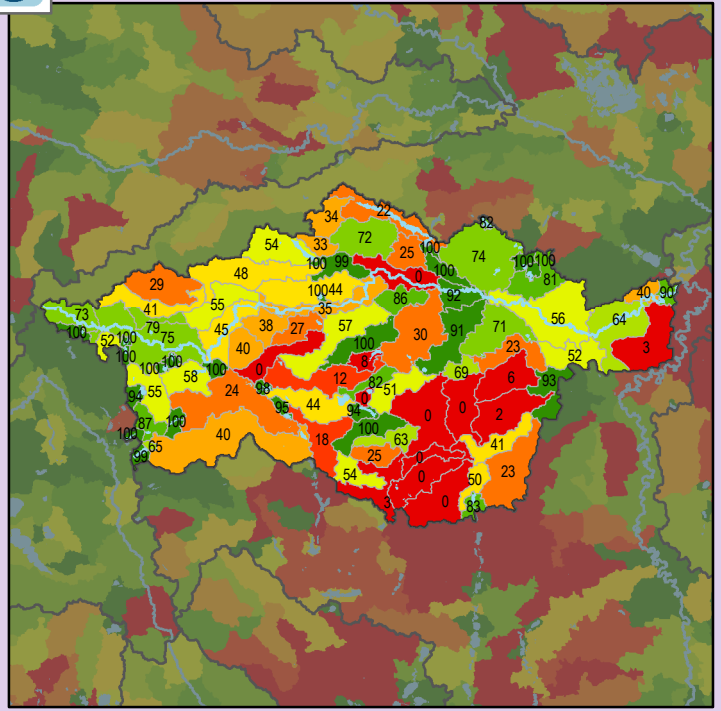


#### Health Score Distributions:

Watowan River  
 Min: 55  
 Max: 100  
 Median: 82.0  
 Mean: 83.24  
 Standard Dev: 11.81

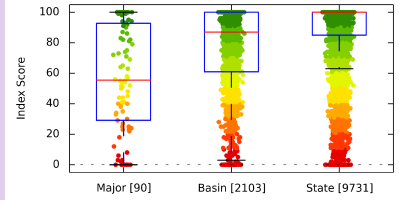


### Localized Pollution Sources - Animal Units

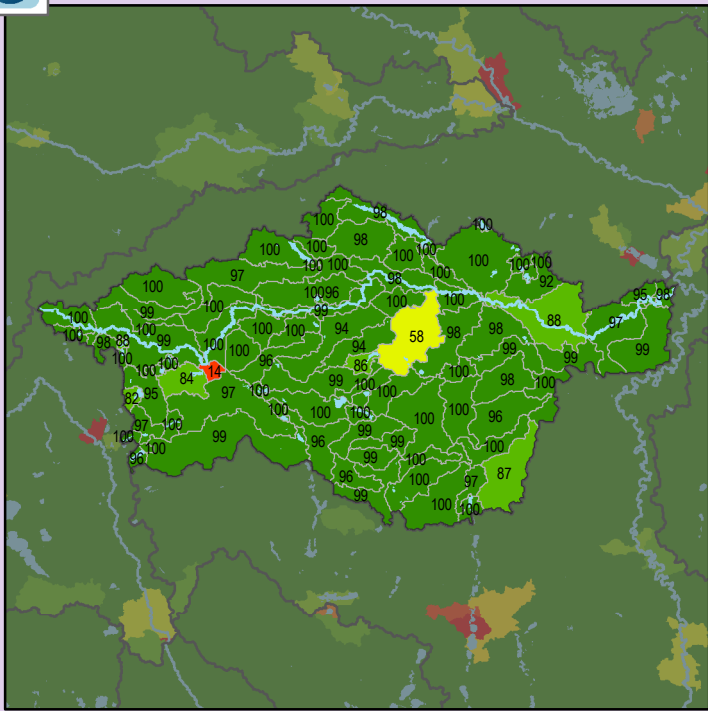


#### Health Score Distributions:

Watowan River  
 Min: 0  
 Max: 100  
 Median: 55.5  
 Mean: 57.2  
 Standard Dev: 34.41

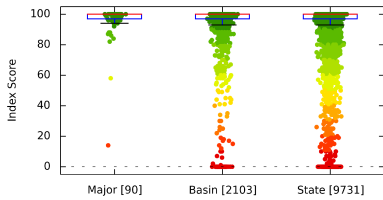


### Localized Pollution Sources - Potential Contaminants

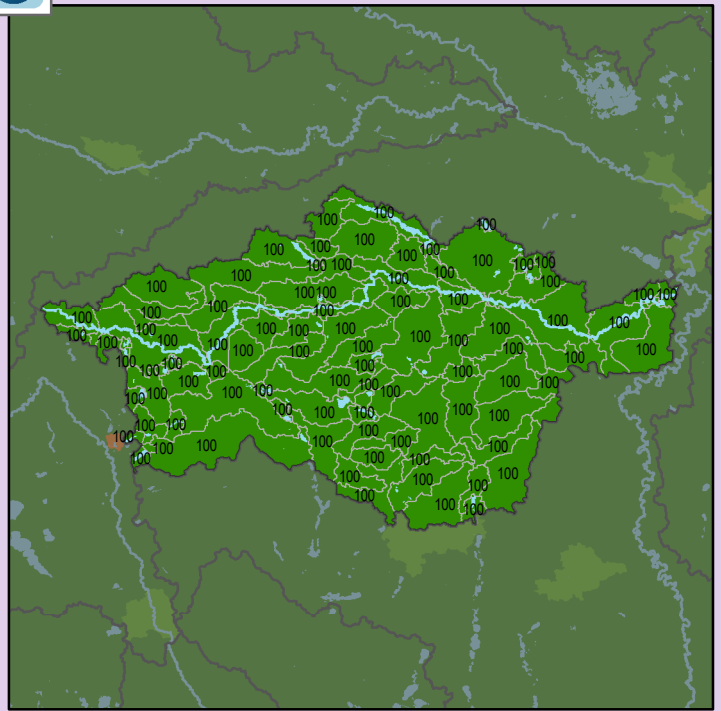


#### Health Score Distributions:

Watowan River  
 Min: 14  
 Max: 100  
 Median: 100.0  
 Mean: 96.56  
 Standard Dev: 10.38

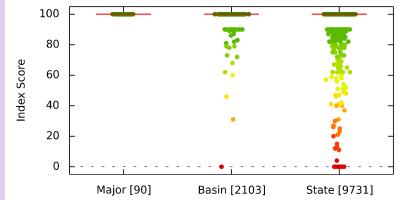


### Localized Pollution Sources - Superfund Sites



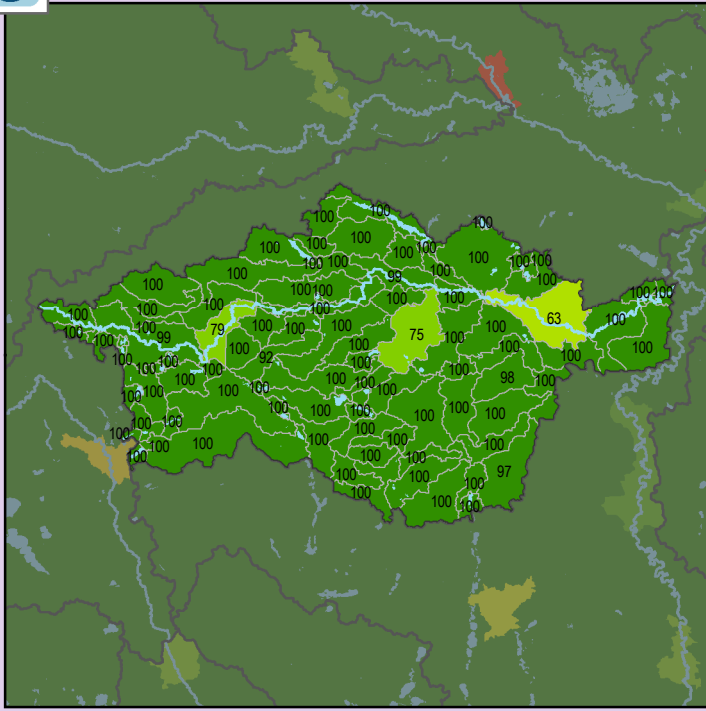
#### Health Score Distributions:

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



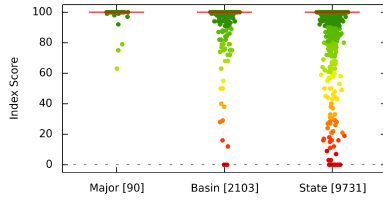


### Localized Pollution Sources - Wastewater Treatment

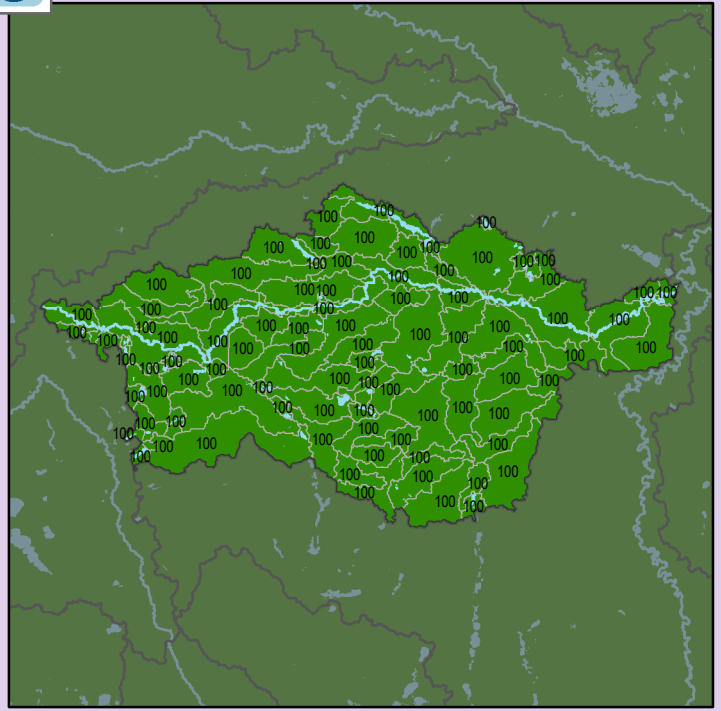


#### Health Score Distributions:

Watonwan River  
Min: 63  
Max: 100  
Median: 100.0  
Mean: 98.91  
Standard Dev: 5.17

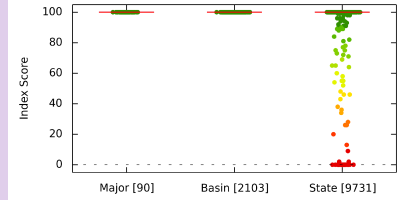


### Localized Pollution Sources - Open Pit Mines

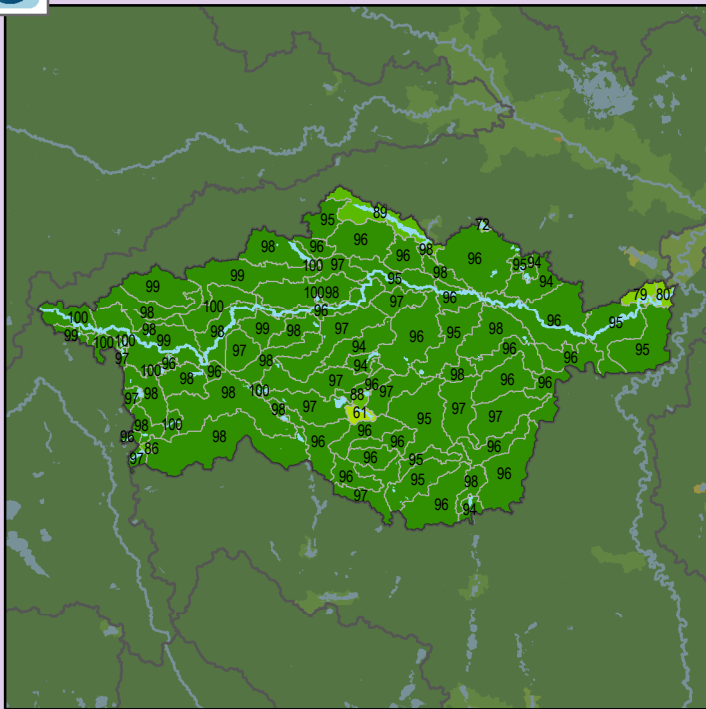


#### Health Score Distributions:

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



### Localized Pollution Sources - Septic Systems



#### Health Score Distributions:

Watonwan River  
Min: 61  
Max: 100  
Median: 96.5  
Mean: 95.6  
Standard Dev: 5.62

