



## TMDL Development for 8 Projects within the Cycle 2018 Illinois Vision Watersheds

### Background

Over the last 30 years, waters in Illinois have been monitored for chemical, biological and physical conditions. In some cases, the conditions of those rivers and lakes fall short of the need to support basic water quality use goals. These waters are deemed impaired since they cannot meet use expectations set for them under state and federal law. When this happens Total Maximum Daily Load (TMDL) reports are developed for impaired waters to determine the maximum amount of a pollutant a water body can receive and still meet water quality standards and support its designated uses. Designated uses include aquatic life, public water supply, swimming, recreation, fish consumption, and aesthetic quality.

TMDLs are done in stages to allow for public involvement and input. TMDL development in Illinois begins with the collection data—water quality, point source discharge, precipitation, soils, geology, topography, and land use—within the specific watershed. All impaired water body segments within the watershed are identified, along with potential pollutants causing the impairment. Illinois EPA determines the tools necessary to develop the TMDL. In most cases, computer models are used to simulate natural settings and calculate pollutant loads. Along with data analysis, model recommendations are made in the first stage of the TMDL. This information is presented at the first public meeting.

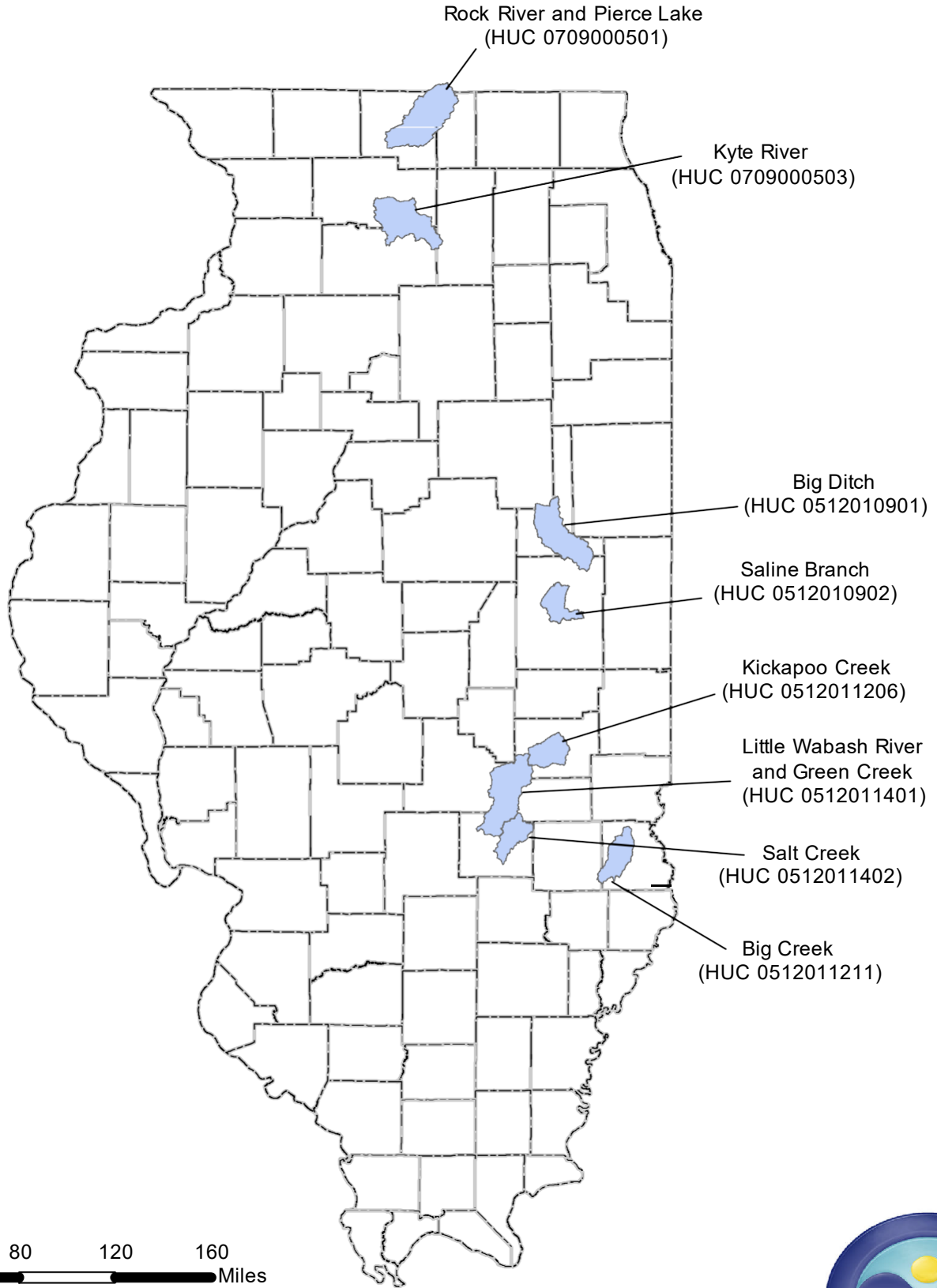
The appropriate model or models are selected based on the pollutants of concern, the amount of data available and the type of water body. In some cases, additional data needs to be collected before continuing. The model is used to determine how much a pollutant needs to be reduced in order for the water to be meeting its designated uses.

An implementation plan is developed for the watershed spelling out the actions necessary to achieve the goals. The plan can specify limits for point source dischargers and recommend best management practices (BMPs) for nonpoint sources. Another public meeting is held to discuss this plan and to involve the local community. Commitment to the implementation plan by the citizens who live and work in the watershed is essential to success in reducing the pollutant loads and improving water quality.



TMDL watershed projects within the Cycle 2018 Illinois Vision Watersheds include:

- Rock River/Pierce Lake Watershed
- Kyte River Watershed
- Big Ditch Watershed
- Saline Branch Watershed
- Kickapoo Creek Watershed
- Little Wabash River/Green Creek Watershed
- Salt Creek Watershed
- Big Creek Watershed

# Cycle 2018 TMDL Vision Watersheds Map



## Legend

-  HUC\_10 Vision Watersheds
-  Counties

\* For the locations of the impaired segments within each watershed, please refer to the Stage 1 reports.



Illinois Environmental  
Protection Agency  
BOW-Podlewski-5/6/21

## Rock River/Pierce Lake Watershed

### Waterbody Designated Uses and Impairments

| Waterbody                | Segment ID | Designated Use                           | Impairment(s)                     |
|--------------------------|------------|--|-----------------------------------|
| Keith Creek              | IL_PR-01   | Primary Contact Recreation               | Fecal Coliform                    |
| Keith Creek              | IL_PR-99   | Aquatic Life, Primary Contact Recreation | Arsenic, pH, Zinc, Fecal Coliform |
| South Fork Kent Creek    | IL_PSA     | Primary Contact Recreation               | Fecal Coliform                    |
| North Fork Kent Creek    | IL_PSB-01  | Primary Contact Recreation               | Fecal Coliform                    |
| South Kinnikinnick Creek | IL_PT      | Primary Contact Recreation               | Fecal Coliform                    |
| North Kinnikinnick Creek | IL_PU      | Primary Contact Recreation               | Fecal Coliform                    |
| Spring Creek-North       | IL_PZZG    | Primary Contact Recreation               | Fecal Coliform                    |
| Pierce Lake              | IL_RPC     | Aesthetic Quality                        | Total Phosphorus                  |

### Watershed Information

The Rock River/Pierce Lake watershed is located in north-central Illinois and drains approximately 149,300 acres, roughly 139,100 acres of which drain land within Illinois, and the remaining 10,200 acres draining areas within the state of Wisconsin. The watershed covers land within Boone and Winnebago Counties.

Agricultural activities make up about 39 percent of the total watershed area. Approximately 35 percent of the watershed area is developed, urbanized land. Forests and woodlands cover 11.7 percent of the watershed and grasslands or pastures cover 6.3 percent. The remaining watershed is wetland or open water.

The largest urban development in the watershed is the city of Rockford, which lies partially within the watershed and has an estimated population of approximately 147,651 people within the watershed.

### Potential Pollutant Sources

There are 22 point source discharges (municipal and industrial wastewater treatment plants) in this watershed. Potential nonpoint sources include: crop production, animal operations, septic systems, and internal phosphorus loading in lakes.

## Kyte River Watershed

### Waterbody Designated Uses and Impairments

| Waterbody   | Segment ID | Designated Use             | Impairment(s)    |
|-------------|------------|----------------------------|------------------|
| Kyte River  | IL_PL-03   | Primary Contact Recreation | Fecal Coliform   |
| Beach Creek | IL_PLB-C1  | Aquatic Life               | Dissolved Oxygen |

## Watershed Information

The Kyte River watershed is located in northern Illinois and drains approximately 125,600 acres. The watershed covers land within DeKalb, Lee and Ogle Counties.

Agricultural activities make up about 79 percent of the total watershed area. Developed areas cover 9.5 percent of the watershed. Approximately 6.3 percent of the watershed area is forested and 4.3 percent of the land area is grassland or pasture. The remaining watershed is wetland or open water.

The largest urban development in the watershed is the city of Rochelle, which lies partially within the watershed and has an estimated population of approximately 9,574 people.

## Potential Pollutant Sources

There are 6 point source discharges (municipal and industrial wastewater treatment facilities), in this watershed. Potential nonpoint sources include: crop production, animal operations, and septic systems.

## **Big Ditch Watershed**

### Waterbody Designated Uses and Impairments

| Waterbody      | Segment ID  | Designated Use | Impairment(s)    |
|----------------|-------------|----------------|------------------|
| Big Four Ditch | IL_BP KP-01 | Aquatic Life   | Dissolved Oxygen |
| Big Four Ditch | IL_BP KP-02 | Aquatic Life   | Dissolved Oxygen |

## Watershed Information

The Big Ditch watershed is located in east-central Illinois, flows in a south-easterly direction, and drains approximately 128,000 acres. The watershed covers land within Champaign, Ford, Iroquois and Livingston Counties.

The vast majority of watershed area is used for crop production (90 percent). Approximately 6.5 percent of the watershed area is developed or urbanized, and 2.3 percent of the watershed area is pasture. Just over one percent of the watershed area is forested while wetlands, marshes, and open water make up the remaining 0.2 percent of the watershed.

The major municipality in the watershed is the city of Paxton, with a population of approximately 4,470.

## Potential Pollutant Sources

There are two point source discharges (municipal and industrial wastewater treatment plants) in this watershed. Potential nonpoint sources include: crop production, animal operations, septic systems, and unknown sources.

## **Saline Branch Watershed**

### Waterbody Designated Uses and Impairments

| Waterbody                    | Segment ID  | Designated Use | Impairment(s)            |
|------------------------------|-------------|----------------|--------------------------|
| Saline Branch Drainage Ditch | IL_BP JC-08 | Aquatic Life   | pH                       |
| Boneyard Creek               | IL_BP JCA   | Aquatic Life   | Copper, Dissolved Oxygen |

## Watershed Information

The Saline Branch Watershed is located in east central Illinois, flows to the east, drains approximately 57,100 acres, and lies within Champaign County.

Over 71 percent of the total watershed area are devoted to agricultural activities. Approximately 25 percent of the watershed area is developed land. Grasslands and pasture account for 2.1 percent of the watershed while forest, grassland, and upland areas represent a total of 1.7 percent of the watershed. Wetlands, marshes, and open water make up the remaining 0.6 percent of the watershed.

The largest urban development is in the southern corner of the watershed and consists of portions of the city of Champaign (population of approximately 87,500) and Urbana (population of approximately 42,000).

## Potential Pollutant Sources

There are three point source discharges (municipal and industrial wastewater treatment plants) in this watershed. Potential nonpoint sources include: crop production, animal operations, and septic systems.

## Kickapoo Creek Watershed

### Waterbody Designated Uses and Impairments

| Waterbody   | Segment ID | Designated Use | Impairment(s)    |
|-------------|------------|----------------|------------------|
| Riley Creek | IL_BENA-01 | Aquatic Life   | Dissolved Oxygen |

## Watershed Information

The Kickapoo Creek watershed is located in east-central Illinois, flows in an easterly direction, and drains approximately 65,400 acres, all of which are within Coles County.

The largest percentage of watershed area is used for crop production (65 percent). Nearly 20 percent of the watershed area is developed or urban in nature. Approximately 9 percent of the watershed area is forest and 5.5 percent of the watershed area is pasture, while wetlands, marshes, and open water make up the remainder of the watershed.

The largest urban development in the watershed is the city of Charleston, with a population of approximately 21,800.

## Potential Pollutant Sources

There is one point source discharge (municipal and industrial wastewater treatment plant) in this watershed. Potential nonpoint sources include: crop production, animal operations, and septic systems.

## Little Wabash River/Green Creek Watershed

### Waterbody Designated Uses and Impairments

| Waterbody           | Segment ID | Designated Use | Impairment(s)    |
|---------------------|------------|----------------|------------------|
| Little Wabash River | IL_C-21    | Aquatic Life   | Dissolved Oxygen |
| Little Wabash River | IL_C-24    | Aquatic Life   | Dissolved Oxygen |
| Paradise (Coles)    | IL_RCG     | Aquatic Life   | Dissolved Oxygen |

## Watershed Information

The Little Wabash River/Green Creek watershed is located in east-central Illinois, flows in a southerly direction and drains approximately 154,000 acres. The watershed covers land within Coles, Cumberland, Effingham, and Shelby Counties.

Agricultural activities make up about 68 percent of the total watershed area. Approximately 14 percent of the watershed area is forest and 6.5 percent of the watershed area is pasture. Nearly 10 percent of the watershed area is developed or urban in nature while wetlands, marshes, and open water make up the remaining 2.1 percent of the watershed.

The largest urban development in the watershed is the city of Effingham with a population of approximately 12,627.

## Potential Pollutant Sources

There are seven point source discharges (municipal wastewater treatment plants) in this watershed. Potential nonpoint sources include: crop production, animal operations, and septic systems.

## Salt Creek Watershed

### Waterbody Designated Uses and Impairments

| Waterbody         | Segment ID | Designated Use | Impairment(s) |
|-------------------|------------|----------------|---------------|
| Second Salt Creek | IL_CPD-01  | Aquatic Life   | Manganese     |

## Watershed Information

The Salt Creek watershed is located in central Illinois and drains approximately 60,900 acres. The watershed covers land within Cumberland and Effingham Counties.

Agricultural activities make up about 55.4 percent of the total watershed area. Forests and woodlands cover 19.8 percent of the watershed. Approximately 15 percent of the watershed area is developed, urbanized land. Grasslands and pasture make up 9.2 percent of the area and the remainder (0.6 percent) of the watershed is wetland or open water.

The largest urban development in the watershed is the city of Effingham, approximately half of which lies outside of the watershed, with a population of approximately 12,600.

## Potential Pollutant Sources

There are two point source discharges (municipal and industrial wastewater treatment plants) in this watershed. Potential nonpoint sources include: crop production, animal operations, and septic systems.

## Big Creek Watershed

### Waterbody Designated Uses and Impairments

| Waterbody     | Segment ID | Designated Use | Impairment(s)               |
|---------------|------------|----------------|-----------------------------|
| Dogwood Creek | IL_BEDB-01 | Aquatic Life   | Dissolved Oxygen, Manganese |

## Watershed Information

The Big Creek watershed is located in southeast Illinois and drains approximately 72,100 acres. The watershed covers land within Crawford and Jasper Counties.

Agricultural activities make up about 68 percent of the total watershed area. Forests, woodland, grasslands, and shrubs cover 17 percent of the watershed. Approximately 8 percent of the watershed area is developed, urbanized land. The remaining watershed is wetland or open water.

The largest urban development in the vicinity is the city of Robinson, most of which lies just to the east of the watershed, with a population of approximately 7,700.

### **Potential Pollutant Sources**

There is one point source discharge (municipal and industrial wastewater treatment plant) in this watershed. Potential nonpoint sources include: crop production, animal operations, septic systems, and natural sources.

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For more information on a specific TMDL or the TMDL program, visit the Illinois EPA website at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/default.aspx>

For information on the assessment of Illinois waters, refer to the Integrated Report and 303(d) List at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/resource-assessments/Pages/default.aspx>

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**July 2021**