# Appendix C- 5

## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
## BUREAU OF WATER
## WATERSHED MANAGEMENT SECTION

### LONG-TERM VISION FOR ASSESSMENT, RESTORATION, AND PROTECTION UNDER THE CWA SECTION 303(d) PROGRAM
### (The Vision)

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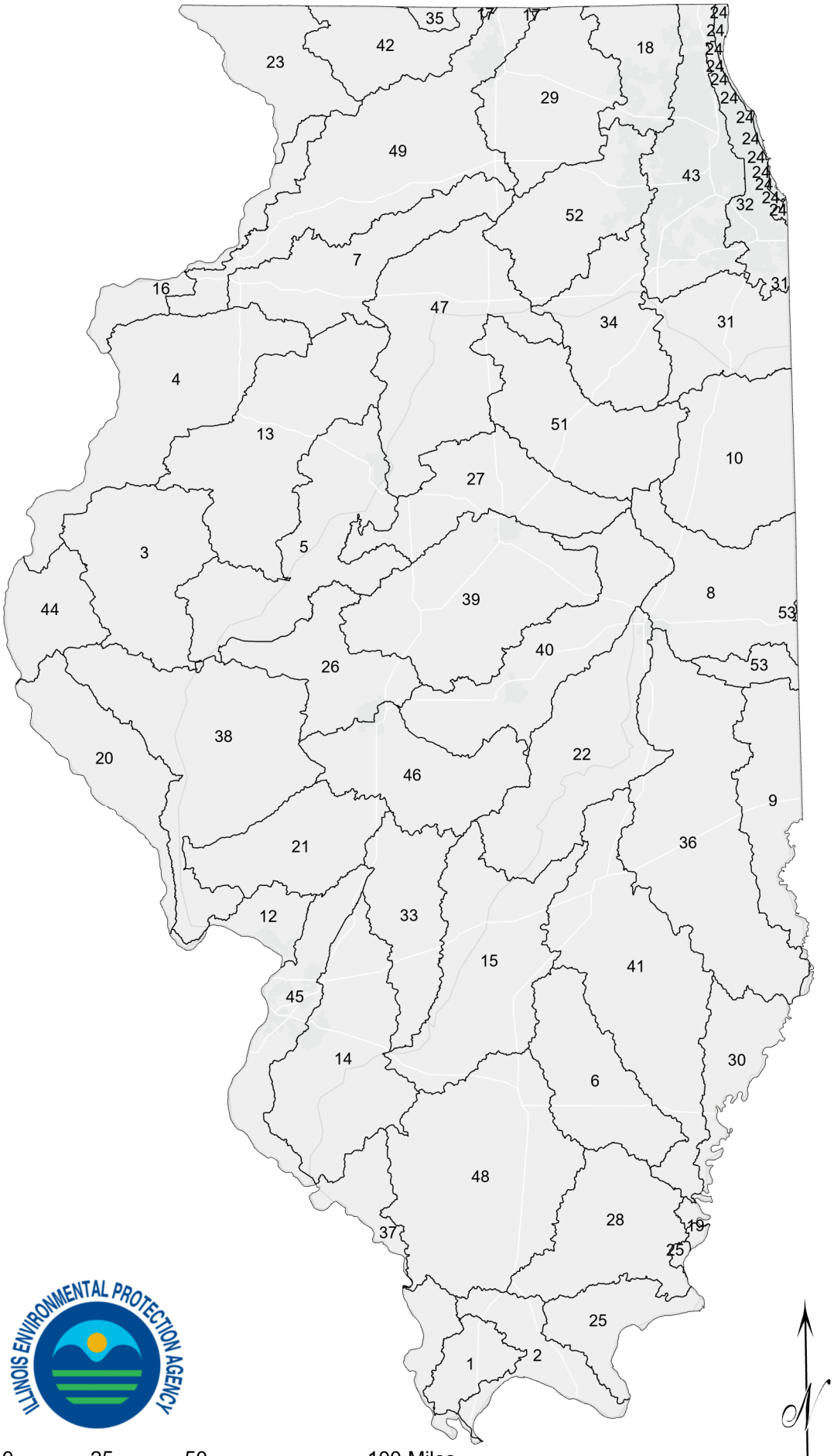
# Major Watersheds of Illinois




| Number | Name |
|---|---|
| 1 | Cache |
| 2 | Lower Ohio |
| 3 | La Moine |
| 4 | Flint-Henderson |
| 5 | Lower Illinois-Lake Chautauqua |
| 6 | Skillet |
| 7 | Green |
| 8 | Vermilion |
| 9 | Middle Wabash-Busseron |
| 10 | Iroquois |
| 11 | Pike-Root |
| 12 | Peruque-Piasa |
| 13 | Spoon |
| 14 | Lower Kaskaskia |
| 15 | Middle Kaskaskia |
| 16 | Copperas-Duck |
| 17 | Middle Rock |
| 18 | Upper Fox |
| 19 | Highland-Pigeon |
| 20 | The Sny |
| 21 | Macoupin |
| 22 | Upper Kaskaskia |
| 23 | Apple-Plum |
| 24 | Lake Michigan |
| 25 | Lower Ohio-Bay |
| 26 | Lower Sangamon |
| 27 | Mackinaw |
| 28 | Saline |
| 29 | Kishwaukee |
| 30 | Lower Wabash |
| 31 | Kankakee |
| 32 | Chicago |
| 33 | Shoal |
| 34 | Upper Illinois |
| 35 | Sugar |
| 36 | Embarras |
| 37 | Upper Mississippi-Cape Girardeau |
| 38 | Lower Illinois |
| 39 | Salt |
| 40 | Upper Sangamon |
| 41 | Little Wabash |
| 42 | Pecatonica |
| 43 | Des Plaines |
| 44 | Bear-Wyaconda |
| 45 | Cahokia-Joachim |
| 46 | South Fork Sangamon |
| 47 | Lower Illinois-Senachwine Lake |
| 48 | Big Muddy |
| 49 | Lower Rock |
| 50 | Little Calumet-Galien |
| 51 | Vermilion |
| 52 | Lower Fox |
| 53 | Middle Wabash-Little Vermilion |

# Acronyms and Abbreviations

| | |
|---|---|
| ACWA | Association of Clean Water Administrators |
| CWA | Clean Water Act |
| DO | dissolved oxygen |
| DRSCW | DuPage/Salt Creek Work Group |
| DRWW | Upper Des Plaines River Watershed Workgroup of Lake County |
| ELI | Environmental Law Institute |
| FRSG | Fox River Study Group |
| HUC | hydrologic unit code |
| IEPA | Illinois Environmental Protection Agency |
| IDNR | Illinois Department of Natural Resources |
| IDOA | Illinois Department of Agriculture |
| LA | load allocation |
| LRS | load reduction strategy |
| MOS | margin of safety |
| NBWW | North Branch Chicago River Watershed Workgroup |
| NLRS | Nutrient Loss Reduction Strategy |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| PWS | Public and Food Processing Water Supply |
| RC | reserve capacity |
| TMDL | total maximum daily load |
| TP | total phosphorus |
| USEPA | United States Environmental Protection Agency |
| USDA | United States Department of Agriculture |
| USGS | United States Geological Survey |
| WBP | watershed-based plan |
| WLA | wasteload allocation |
| WQS | water quality standards |

# Units of Measure

| | |
|---|---|
| MGD | million gallons per day |
| mg/L | milligram per liter |

## Introduction

The United States Environmental Protection Agency (USEPA) -Office of Water, in cooperation with the Association of Clean Water Administrators (ACWA) - the Nation's Water Program Directors, and the Environmental Law Institute (ELI) in August of 2011 started developing the framework for the Long-Term Vision for Assessment, Restoration, and Protection under the CWA Section 303(d) Program (Vision). The Vision will help states, tribes, and US territories prioritize impaired waterbodies for Total Maximum Daily Load (TMDL) development, or use alternative approaches, and adaptive implementation plans for waterbodies to meet their designated uses and meet applicable water quality standards.

In December 2013, USEPA, Acting Assistant Administrator, Nancy Stoner issued a "New Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program" memorandum to USEPA Regional Offices and subsequently to States. Ms. Stoner's memo outlined a new Program Vision that was developed by USEPA with state input, for TMDLs developed from 2016 - 2022. The impetus behind developing the Vision was USEPA's listening to State's and their concerns over using "bean counting" for measuring TMDL program success. The new Program Vision allows States to prioritize watersheds and to develop alternative approaches for addressing impaired waters and working to bring them to Full Use Support and off the 303(d) List of Impaired Waters. Along with providing an avenue for developing alternatives to TMDLs, USEPA wanted to increase the TMDL Program's ability to integrate with other programs, increase public involvement and provide an opportunity for developing TMDLs that protect healthy waters. Within the Vision, assessment of State waters and prioritization of TMDLs remain a priority for the Program.

The Long-Term Vision framework and the goals discussed above were formulated during the 2014 National Training Workshop on CWA 303(d) Listing and TMDLs and the timeline is as follows:

***The Clean Water Act Section 303(d) Program provides for effective integration of implementation efforts to restore and protect the nation's aquatic resources, where the nation's waters are assessed, restoration and protection objectives are systematically prioritized, and Total Maximum Daily Loads and alternative approaches are adaptively implemented to achieve water quality goals with the collaboration of States, Federal agencies, tribes, stakeholders, and the public***

**"**Engagement**"** By 2014, EPA and the States actively engage the public and other stakeholders to improve and protect water quality, as demonstrated by documented, inclusive, transparent, and consistent communication; requesting and sharing feedback on proposed approaches; and enhanced understanding of program objectives

**"**Prioritization**"** For the 2016 integrated reporting cycle and beyond, States review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports to facilitate State strategic planning for achieving water quality goals

**"**Integration**"** By 2016, EPA and the States identify and coordinate implementation of key point source and nonpoint source control actions that foster effective integration across CWA programs, other statutory programs (e.g., CERCLA, RCRA, SDWA, CAA), and the water quality efforts of other Federal departments and agencies (e.g., Agriculture, Interior, Commerce) to achieve the water quality goals of each state

**"**Protection**"** For the 2016 reporting cycle and beyond, in addition to the traditional TMDL development priorities and schedules for waters in need of restoration, States identify protection planning priorities and approaches along with schedules to help prevent impairments in healthy waters, in a manner consistent with each State's systematic prioritization

**"**Alternatives**"** By 2018, States use alternative approaches, in addition to TMDLs, that incorporate adaptive management and are tailored to specific circumstances where such approaches are better suited to implement priority watershed or water actions that achieve the water quality goals of each state, including identifying and reducing nonpoint sources of pollution

**"**Assessment**"** By 2020, States identify the extent of healthy and CWA Section 303(d) impaired waters in each State's priority watersheds or waters through site-specific assessments

"Evaluate accomplishments of the Vision and Goals "2022

Timeline for Goal Statements:

2014 – Engagement
2016 – Prioritization, Integration, Protection
2018 – Alternatives
2020 – Assessment (Site-specific)
2022 – Evaluate accomplishments of the Vision and Goals

States, tribes, and territories are required to submit a prioritized list of impaired waters, known as the 303(d) List, to USEPA for review and approval. The CWA also requires that a TMDL be developed for each pollutant for an impaired waterbody. The Illinois Environmental Protection Agency (Agency) is responsible for carrying out the mandates of the CWA for the state of Illinois.

The Agency is working with USEPA - Region 5 to develop the Vision prioritization goals for the TMDL development program in Illinois.

The Agency has developed a Vision for Assessment, Restoration and Protection under the CWA Section 303(d) Program that is three-fold. The logic behind each strategy and how each strategy will be implemented are discussed in detail below. The three strategies are referred as:

1) **TMDL Development - Short-Term Vision Goals (2015-2018)**
2) **TMDL Development - Alternative Approaches**
3) **Nutrient Priority Watersheds - Long Term Vision Goals (2016-2022)**

TMDL development is a process that determines the maximum amount of a given pollutant that a waterbody can receive without violating water quality standards and also meet designated uses. The Agency's Watershed Management Section and the Surface Water Section work together in the development of the Illinois Integrated Water Quality Report that has been the basis for TMDL development in Illinois.

The Agency began developing TMDLs in 1999. The Agency's first efforts were under partnership with USEPA and their chosen vendor. By 2001 the Agency began using their own federal funds to contract with consultants to develop TMDLs throughout the state and has developed a variety of TMDLs, both segment TMDLs and watershed TMDLs, as well as other alternatives to address pollutants. As discussed in Illinois Integrated Water Quality Reports the Agency continues to develop TMDLs for impaired waterbodies based on the priority ranking system of their designated uses and the severity of pollution and the number of pollutants in particular waterbody segments. One of the aspects of the TMDL development is establishing a priority based on the level of interest of watershed groups and stakeholders to address water quality issues in their respective watersheds.

The Agency started developing Load Reduction Strategies (LRSs) in 2012 for those pollutants that are listed on the Integrated Report-303(d) list that do not have numeric water quality standards. LRSs are not a substitute for TMDL development but are used as a planning tool by watershed groups until a TMDL is developed. As with a TMDL, this involves determining the loading capacity and load reduction necessary for the waterbody to meet "Full Use Support" for its designated uses.

The Agency looks for specific "Implementation Plans" that meet the nine-minimum elements of a Watershed Based Plan that may be utilized by local stakeholders to improve water quality at the local level. This approach has been successful in restoring waters impacted by nonpoint source pollution rather than point source pollution. The Agency expects the Implementation Plan to include watershed modeling to determine loads from sub watersheds for watershed planning activities. All TMDL projects that are developed after FFY-2013 are required to meet the nine-minimum elements of a Watershed Based Plan.

To date, USEPA has approved more than 89 TMDL projects that address over 500 pollutants in individual segments in several watersheds throughout the state. The Agency is currently working on 11 more TMDL watershed projects that will be addressing over 130 impairments in individual segments.

Here is the traditional approach for TMDL development in Illinois:

- TMDL projects set pollution reduction goals that are necessary to improve and ultimately meet water quality standards.
- A TMDL takes a watershed approach in determining the pollutant load that can be allowed in a given lake, stream, or river. By taking a watershed approach, a TMDL considers all potential sources of pollutants, both point and nonpoint sources. It also takes into account a margin of safety, which reflects scientific uncertainty and future growth. The effects of seasonal variation are also included in the study.
- In short, a TMDL is a load capacity calculation using the following equation:

TMDL= WLA + LA + MOS + [RC]

Where: WLA= Waste Load Allocation (point sources)
LA= Load Allocation (nonpoint sources)
MOS= Margin of Safety
RC= Reserve Capacity

Developing TMDLs in a watershed begins with the collection of vast amounts of data on factors including water quality, point source discharge, precipitation, soils, geology, topography, and land use (construction, agriculture, mining, etc.) within that specific watershed. All impaired waterbody segments within the watershed are identified, along with the potential pollutants causing the impairments.

The Agency will continue prioritization based on the current ranking as outlined below for identifying impaired waterbodies for TMDL development. In consultation with USEPA, the Agency has identified priority watersheds that are identified in the draft 2018 Illinois Water Quality Integrated Report. The Vision will be updated every two years to show progress of TMDL/LRS development or Alternative Approaches that have been developed for the Short-Term and Long-Term Vision goals.

- The current prioritization is based on the "Designated Uses" and Water Quality Standards, as outlined in the Combined-2020/2022 ILLINOIS INTEGRATED WATER QUALITY REPORT AND SECTION 303(d) LIST: https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx

Impairments for Public and Food Processing Water Supply are ranked as high priority for TMDL development followed by Primary Contact as medium priority. All other watersheds are ranked by number of impairments identified for all other uses in the watershed. The low priority watersheds will be ranked from highest to lowest looking at the number of impairments (more impairments, higher ranking) with a numeric water quality standard for TMDL development. The designated use for Fish Consumption is ranked as the lowest priority and the Agency hopes to develop statewide mercury and PCBs (Toxics) TMDLs at some point in the near future. In summary the TMDL development is as follows:

- Watersheds are ranked into High, Medium, and Low priority
- Public and Food Processing Water Supply Use is ranked as high priority
- High priority watersheds are scheduled for early TMDL development,
- Impairments related to Primary Contact Use are medium priority, and
- Total number of 303(d) impairments per watershed - the 10-Digit Hydrologic Unit Code (HUC) is used for prioritizing grouping watersheds without Public and Food Processing Water Supply or Primary contact impairment.

The Agency also takes into account the interest level of watershed groups, and stakeholders in selected watersheds to schedule TMDL development for impaired waterbodies.

## 1. TMDL Development - Short-Term Vision Goals (2015 - 2018) [a]

As part of the Short-Term Vision goals, the Agency will develop TMDL watershed projects to address impairments for Atrazine, Simazine, Chloride, Dissolved Oxygen (DO), Fecal Coliform, pH, Nitrate, Nitrogen, Ammonia, Phosphorus (in lakes), and metals (Copper, Iron, Manganese, Sulfates, Zinc) to meet applicable water quality standards in water segments of the Chicago River, DuPage River/Salt Creek, Thorn Creek, Upper Fox/Chain O'Lakes, Upper Fox/Flint Creek, Lou Yaeger (Lake), La Moine/Missouri Creek, Mississippi River, Upper Kaskaskia River/ Shelbyville Lake, and Upper La Moine River watersheds. Since the release of the Vision memo, Illinois EPA has worked closely with Region V in developing the draft Vision.

The Illinois Short-Term Vision identified waterbody segments with Public Water Supply Use impairments as the highest priority, followed by Primary Contact Recreation (swimming). The remaining impaired waterbody segments are prioritized by the number of impaired waters within each watershed. The designated uses that are selected for developing TMDL/LRS to address impaired waterbody segments are based on the ranking priority presented below:

- Public and Food Processing Water Supply (PWS -1)
- Primary Contact Recreation (2)
- All other uses prioritized by number of impairments (3)

**[a] The TMDL\LRS projects identified as part of the Short-Term Vision Goals (2015-2018) have been completed with the exception of Vermilion (Illinois Basin) TMDL project and is expected to be completed by mid-2022.**

The Short-Term Vision priority watersheds are presented in Table 1, and the project descriptions are as follows:

- Watershed No. 1-8 are atrazine/simazine TMDL projects developed by the Agency:
  All eight watershed projects have been completed and approved by USEPA
  Designated Use Impairment - PWS
- Watershed No. 9 is a TMDL project developed by the Agency that is in Stage 3.
  Designated Use Impairment PWS and Primary Contact Recreation
- Watershed No. 10-11 are Illinois State Water Survey (ISWS) TMDL projects:
  Both watershed projects have been completed and approved by USEPA
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life
- 2012 Request for Procurement (RFP): 10 watershed projects -Watershed No. 12-21; all ten watershed projects have been completed and nine approved by USEPA, and a Watershed Implementation Plan was developed for Prairie Langan Watershed project.
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life, Aesthetic Quality
- 2014 RFP: 10 watershed projects - Watershed No. 22-31; all the watershed projects have been completed and approved by USEPA, with the exception of Mississippi River project that has been converted to a Watershed Protection Plan.
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life, Aesthetic Quality

There are 31 TMDL Watershed Projects as part of the Short-Term Vision Goal (2015-2018) – TMDL Development/Alternative Approach that will address about 232 pollutants upon completion, and they are currently at different stages in the TMDL development process. The TMDL development stages are as follows:

Stage 1= watershed characterization and model selection, includes a public meeting
Stage 2= water quality monitoring if required for additional data
Stage 3= run the models and develop TMDL numbers, includes a public meeting

The Short-Term Vision TMDL projects are presented in Tables 2-5. Table 2 shows Atrazine /Simazine TMDLs developed by Agency staff and Table 3 shows two TMDL projects developed by Illinois State Water Survey (Canton Lake and Vermont City Reservoir/Sugar Creek); and the Vermilion River (Illinois Basin) TMDL project is being developed in cooperation with USEPA (5). Table 4 (2012 - RFP TMDL) and Table 5 (2014 - RFP TMDL) watershed projects are being developed by TMDL contractors.

The Agency developed 10 TMDL Watershed Projects (in-house) that addressed 15 Atrazine/Simazine TMDL pollutants during the 2014 - Federal Fiscal Year (FFY) to remove waterbody segments from the impaired waters 303(d) list. We received approval for 2 projects (Spring Lake Watershed TMDL and Lake Glenn Shoals Watershed TMDL) on September 29, 2014, and the remaining projects were approved September 28, 2016. The watershed numbers for Tables 2-5 coincides with the watershed numbers in Table 1.

The Agency entered into Phase II Intergovernmental Agreement with the Illinois State Water Survey (ISWS) for Stage 3 TMDL development and implementation plans for Canton Lake Watershed and Vermont City Reservoir/Sugar Creek Watershed. The Canton Lake Watershed project has been completed and was approved June 28, 2017. Canton Lake had a TMDL developed for one pollutant. The Vermont City Reservoir/Sugar Creek Watershed project has been completed and was approved April 30, 2019. Vermont City Reservoir had TMDLs developed for two pollutants and Sugar Creek had one TMDL developed. The Vermilion River (Illinois Basin) TMDL Stage 3 project currently is in progress with support from USEPA (R5), and the draft report is

expected to be completed by mid-2022. The watershed area, the TMDL development stage, and the project completion dates for these projects are shown in Table 3.

As part of the 2012 RFP TMDL; nine projects have been completed and approved by USEPA, and one draft TMDL report was replaced with a Watershed Implementation Plan (WIP) as shown in Table 4.

The 2014 RFP TMDL (see Table 5) includes two groups of watershed projects:
Group - A (Watershed Projects No. 22-26), and Group - B (Watershed Projects No. 27-31) TMDL watershed projects. The Group-A, and Group B projects been completed and approved by USEPA, except a TMDL was not developed for Mississippi project, instead a Watershed Protection Plan was developed.

The Watershed Management Section and the Surface Water Section work closely in the development of the Illinois Integrated Water Quality Report to list and identify impaired waterbody segments and develop TMDLs based on the priority ranking discussed earlier in this report (see page 67). The **ILLINOIS WATER MONITORING STRATEGY** (**2015-2020)** will be the guiding document for monitoring, and the Agency will be following the 5-year Intensive Basin Survey rotation strategy (Figure 1) to identify impaired waters based on the current prioritization methodology for TMDL development, or for Alternative Approaches to address the identified impaired waterbody segments that make up Category 5 and Alt. 5 of the 303(d) List. This approach will also coincide with the National Pollutant Discharge Elimination System (NPDES) permits – five-year permit renewal cycle that will help permit engineers and staff from the Water Quality Standards (WQS) to include a Waste Load Allocation (WLA) in NPDES permits where TMDLs have been developed and WLA is recommended to be included in NPDES permits.

## 2. TMDL Development – Alternative Approaches

Illinois Vision proposes three alternatives for developing TMDLs:

- ***The Fox River Study Group (FRSG)*** - has selected an Alternative Plan – the Fox River Implementation Plan (FRIP), to address dissolved oxygen and algae impairments in the Fox River Watershed. The consultants for the group are using watershed models such as QUAL2K on how to address load allocations among different entities. The draft report was completed on December 17, 2015 and submitted to USEPA for review/comment on December 2016, and additional DO modeling has been recommended and the study is in progress at this time. The NPDES Permit(s) - FRIP Special Condition language for those major facilities (primarily publicly owned treatment works (POTWs)) in the study area will be updated upon the permit renewal to meet the timeline of the modeling project. In the event the implementation of the FRIP does not eventually meet the water quality standards, the Agency will develop a TMDL to address the impairments.

- ***Watershed-Based Plan (WBP)*** **–** Watershed-based planning has increased stakeholder participation because of the local efforts and site-specific implementation planning that occurs through the watershed planning process. The WBP will be used as an "Alternative to TMDL" since the planning efforts increase the likelihood of implementation activities of best management practices. This approach is encouraged to get waters removed from the Impaired Waters 303 (d) list prior to TMDLs being developed and reduce the cost associated with TMDL development.

- ***Load Reduction Strategy (LRS)*** - The Agency is planning to use LRSs as an alternative for TMDL development where possible. The Agency started developing LRSs in 2012 for those pollutants that are listed on the Illinois Integrated Water Quality Report-303(d) list that do not have numeric water quality standards. LRSs are not a substitute for TMDL development but are used as planning tools until a TMDL is developed. As with a TMDL, this involves determining the loading capacity and load reduction necessary for the waterbody to meet "Full Use Support" for its designated uses. The Agency will work with USEPA to determine the necessary elements of LRSs for TMDL Alternatives.

The vision framework and long-term goals for the Illinois TMDL program are discussed below:

**"Engagement" By 2014**, EPA *and the States actively engage the public and other stakeholders to improve and protect water quality, as demonstrated by documented, inclusive, transparent, and consistent communication; requesting and sharing feedback on proposed approaches; and enhanced understanding of program objectives*

The Agency has been actively working with several Watershed Groups/Stakeholders, Water Quality Management Agencies, Illinois Department of Natural Resources (IDNR), Illinois Department of Agriculture (IDOA), United States Department of Agriculture (USDA) - Natural Resource Conservation Service (NRCS), United States Geological Survey (USGS), Illinois State Water Survey (ISWS), County Soil and Water Conservation Districts, Municipalities, Environmental Groups, landowners, etc., to address the water quality issues as part of the TMDL development process. In addition to the TMDL information available on the Agency's website and the public notice notification for the draft TMDL development, the Agency meets with stakeholders before the first public notice meeting (pre-public meeting) to address watershed issues that are relevant and of interest to watershed groups and stakeholders and incorporate those suggestions in the TMDL development process.

Some of the Agency engagements are listed below:

- The Agency continues to work with Fox River Study Group (FRSG), DuPage/Salt Creek Work Group (DRSCW), and other stakeholders in several watersheds and participates in their monthly/bimonthly stakeholder meetings to address phosphorus, dissolved oxygen (DO) and algal impairments that also include lake restoration projects that are tied to TMDLs. The removal of dams has taken the focal point of discussion among watershed workgroups to meet the DO water quality standards in impaired river segments.

- The Upper Des Plaines River Watershed Workgroup of Lake County (DRWW) continues to address water quality issues in the Upper Des Plaines watershed, because the main stem of the Des Plaines River has been placed on the 303(d) list for phosphorus, DO, chloride, and other impairments such as metals. The DRWW has developed a monitoring plan and work is in progress to complete the task.

- The Lower DuPage River Watershed Workgroup (formerly Hickory Creek Watershed Planning Group) has teamed up with DRSCW to address water quality issues in the watershed, and a "Third Party TMDL" is no longer in consideration for the watershed.

- The North Branch Chicago River Watershed Workgroup (NBWW) has recently been formed with a goal to address water quality issues in the North Branch – Chicago River Watershed. The Agency has developed a TMDL to address DO, Chloride, Fecal Coliform, and TP impairments in the watershed, and USEPA has approved the TMDL report on January 13, 2021.

**"Integration" By 2016**, EPA *and the States identify and coordinate implementation of key point source and nonpoint source control actions that foster effective integration across CWA programs, other statutory programs (e.g., CERCLA, RCRA, SDWA, CAA), and the water quality efforts of other Federal departments and agencies (e.g., Agriculture, Interior, Commerce) to achieve the water quality goals of each state*

The Watershed Management Section will continue to work with other Agency-Bureau of Water Programs (such as Permits, Water Quality Standards (WQS), Surface Water Section, Infrastructure Financial Assistance Section), including other Agency Programs (such as the Bureau of Land and Bureau of Air) during the Stage 3 TMDL development process to get input from all programs for developing WLA for NPDES permits, load allocation for nonpoint source urban and agricultural runoff, and also discuss implementation plans for best management practice to meet water quality standards.

The Fox River Study Group (FRSG) – TMDL/Alternative Plan – Fox River Implementation Plan (FRIP) is one of the examples where Agency Bureau of Water Programs (Permit Section and Watershed Management Section) have been working with FRSG to address dissolved oxygen and algal impairments in the Fox River Watershed. As a result of these efforts, the NPDES Permit for major dischargers (DAF =1.0 MGD and above) for members of the FRSG has been issued with the following Special Condition:

**SPECIAL CONDITION 16.** The Permittee shall participate in the Fox River Study Group (FRSG) throughout the duration of this permit cycle. The Permittee shall work with other watershed members of the FRSG to determine the most cost-effective means to remove dissolved oxygen (DO) impairment and offensive condition impairments in the Fox River to the extent feasible. The Permittee shall participate in the FRSG for the completion of the following tasks set out in the 2015 Fox River Implementation Plan (either by the permittee or through the FRSG) by the schedule dates set forth below:

A. The Permittee shall implement the recommendations of the 2015 Fox River Implementation Plan that are applicable to said Permittee during the term of this Permit.

B. The FRSG will conduct these activities during the term of the permit:

1. Work with the Army Corps of Engineers and Illinois Department of Natural Resources to restart the Fox River Habitat & Connectivity Study.
2. Collect continuous dissolved oxygen data and other water quality parameters at the Algonquin Bike Bridge from May through September 2018 to update the FRSG's water quality model.
3. Analyze Fox River and Major Tributary Water Quality Data and Trends, for the period 1998-2016 by December 31, 2018.
4. Update the Fox River DB database with newly collected data, by July 31, 2019.
5. Amend the modelling and use the modified model to reevaluate water quality improvement scenarios, by August 31, 2019.
6. Amend the Implementation Plan by December 31, 2022 based on the improved modelling and which will include proposed watershed improvement projects.

C. The Permittee shall submit an annual progress report on the activities identified in Item B above to the Agency by March 31 of each year. The Permittee may work cooperatively with the FRSG to prepare a single annual progress report that is common. c1mong FRSG permittees.

D. In its application for renewal of this permit, the Permittee shall consider and incorporate recommended FRSG activities listed in the Implementation Pia that the Permittee will implement during the next permit term.

The Municipal Separate Storm Sewer Systems (MS4) General Permit for FRSG members will also include the Fox River Implementation Plan (FRIP) by reference to meet water quality goals in the study area.

In addition, the Permittees are expected to meet a phosphorus limit of 1.0 mg/L (Annual Average), and it will be necessary to modify existing treatment facilities to include phosphorus removal, reduce phosphorus sources or explore other ways to prevent discharges that exceed the limit. At this point, permitting, design and construction of nutrient removal facilities are in progress. The timeline for completing the project(s) is specified in the NPDES permit.

**"Protection"** For *the 2016 reporting cycle and beyond, in addition to the traditional TMDL development priorities and schedules for waters in need of restoration, States identify protection planning priorities and approaches along with schedules to help prevent impairments in healthy waters, in a manner consistent with each State's systematic prioritization*

Healthy waters are low priority at this time. The primary focus remains addressing impaired waters. However, protection strategies will be developed as needed. Currently the Agency's Nutrient Criteria Development Workgroup has been discussing with several State/Federal Agencies to address this issue. The Vision will be updated every two years and once protection planning strategies are developed, they will be incorporated in the plan.

The Long-Term Vision for Assessment, Restoration, and Protection under the CWA Section 303(d) Program - (The Vision) will be referenced in the Illinois Draft 2018 Integrated Water Quality Report to inform the public of the Vision development process. The Illinois Vision is available on the Agency's TMDL website: https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/default.aspx

## 3. Nutrient Priority Watersheds – Long -Term Vision Goals (2016-2022)

The Long-Term Nutrient Priority Watersheds TMDL development process will focus on nutrient load capacities and will be similar to the Traditional TMDL development strategy (Short Term Vision Goals) discussed in Section 1 of this report.

Watershed Selection Process

The Illinois Nutrient Loss Reduction Strategy (NLRS) document was developed by a policy work group led by the Agency, and the Illinois Department of Agriculture. Group members included representatives from state and federal agencies, agriculture, non-profit organizations, scientists, and wastewater treatment professionals. Staff from the Illinois Water Resource Center facilitated the NLRS discussion among the workgroup and the public meetings. The final document addressing concerns was completed in July 2015, and the NLRS biennial report was completed in July 2017. The NLRS identified eleven - 8 HUC basins as priority watersheds for reducing nutrient losses. Chapter Four of the NLRS walks through the process of identifying the State's priorities https://www2.illinois.gov/epa/topics/water-quality/watershed-management/excess-nutrients/Pages/nutrient-loss-reduction-strategy.aspx. Nutrient loads export was the major prioritization criteria used.

Having priority watersheds in place gave the Agency a starting point for identifying a working Vision that would lead to restoration through the 303(d) program. To identify Vision watersheds the starting point were the 10 HUC watersheds within the 8 HUC basins. The next step was to begin eliminating 10 HUC watersheds; this was done for a variety of reasons:

- No/low nutrient impairments in a 10 HUC watershed
- TMDL already completed for nutrient impairments
- Significant implementation activity already occurring
- No 303(d) or 305(b) listings
    - No assessment information available
    - Full Use Support for all assessed waters

With many of the 10 HUC watersheds now eliminated from consideration, the watersheds were considered top priority by looking at different parameters:

- Number of nutrient impairments - 303(d) and 305(b)
- Number of impaired waterbodies
- The year each basin is scheduled to be monitored
- Number of point sources, for the point source priority watersheds
- Number of potential TMDLs
  (Fecal coliform will be used as indicator of potential total phosphorus (TP) and total nitrogen (TN) impairment and potential nutrient loading)
- Potential for stakeholder involvement and future participation

**NOTE:** Dissolved Oxygen is considered a nutrient impairment in that it can be the result of high phosphorus or nitrogen levels that lead to excessive algal blooms and increased macrophyte growth. Fecal coliform bacteria are considered a potential nutrient indicator as well for this process as it is an indicator of human and/or animal waste.

Ultimately eight -10 HUC watersheds within four 8 HUC basins have been selected as the Agency's "Vision" watersheds.

- Lower Rock River Basin 07090005 – Point Source Priority and Nitrogen Nonpoint Source Priority
  - 0709000501 – Rock River/Pierce Lake Watershed
  - 0709000503 – Kyte River Watershed

- Vermilion-Wabash River Basin 05120109 – Nitrogen Nonpoint Source Priority
  - 0512010901 – Big Four Ditch Watershed
  - 0512010902 – Saline Branch Watershed

- Embarrass River Basin 05120112 – Total Phosphorus Nonpoint Source Priority

  - 0512011206 – Kickapoo Creek Watershed
  - 0512011211 – Big Creek Watershed

- Little Wabash River Basin 05120114 – Total Phosphorus Nonpoint Source Priority
  - 0512011401 – Little Wabash River/Green Creek Watershed
  - 0512011402 – Salt Creek Watershed

**2015 (Refer to Figure 1. Intensive Basin Surveys 2015-2020 Monitoring Schedule)**

Develop monitoring strategy for watersheds to be monitored in 2016. This will include revisiting previously sampled stations and, as appropriate, adding additional sampling locations to characterize the watersheds. Monitoring protocol will follow the Agency's Intensive Basin Survey program.

- Embarrass Basin 05120112
  - 0512011206 Kickapoo Creek Watershed
  - 0512011211 Big Creek Watershed
- Vermilion-Wabash Basin 05120109
  - 0512010901 Big Four Ditch Watershed
  - 0512010902 Saline Branch Watershed

**2016 (Refer to Figure 1. Intensive Basin Surveys 2015-2020 Monitoring Schedule)**

Monitoring initiated and completed for the watersheds strategized during **2015** (Embarrass Basin - Kickapoo Creek/Big Creek Watersheds and Vermilion-Wabash Basin - Big Four Ditch/Saline Branch Watersheds).

Develop monitoring strategy for watersheds to be monitored in **2017**. This will include revisiting previously sampled stations and, as appropriate, adding additional sampling locations to characterize the watersheds. Monitoring protocol will follow the Agency's Intensive Basin Survey program.

- Little Wabash Basin 05120114
  - 0512011401 Little Wabash River/Green Creek Watershed
  - 0512011402 Salt Creek Watershed

**2017 (Refer to Figure 1. Intensive Basin Surveys 2015-2020 Monitoring Schedule)**

Monitoring initiated and completed for the watersheds strategized during **2016** (Little Wabash River/Green Creek, and Salt Creek Watersheds).

Develop monitoring strategy for watersheds to be monitored in **2018**. This will include revisiting previously sampled stations and, as appropriate, adding additional sampling locations to characterize the watersheds. Monitoring protocol will follow the Agency's Intensive Basin Survey program.

- Lower Rock Basin 07090005
  - 0709000501 Rock River/Pierce Lake Watershed
  - 0709000503 Kyte River Watershed

Assess watersheds sampled in the previous year (Embarrass Basin - Kickapoo Creek/Big Creek Watersheds and Vermilion-Wabash Basin - Big Four Ditch/Saline Branch Watersheds).

Begin TMDL and watershed-based plan (WBP) development for TP, TN, DO, and bacteria in the watersheds sampled in **2016**.

**2018 (Refer to Figure 1. Intensive Basin Surveys 2015-2020 Monitoring Schedule)**

Monitoring initiated and completed for the watersheds strategized during **2017** (Rock River/Pierce Lake, and Kyte River Watersheds).

Assess watersheds sampled in the previous year (Little Wabash River/Green Creek, and Salt Creek Watersheds).

Begin TMDL and WBP development process for TP, TN, DO, and bacteria in the watersheds sampled in **2017**. Request For Proposal (RFP) to develop the 2018 Vision TMDL\WBP Projects was completed in 2018.

**2019**

Assess watersheds sampled in the previous year (Rock River/Pierce Lake, and Kyte River Watersheds).

Begin TMDL and WBP development TP, TN, DO, and bacteria in the watersheds sampled in **2017-2018.**

**2020**
Complete TMDLs and watershed-based planning efforts begun in **2018**.
Contract Agreement with a TMDL Vendor is in place for TMDL\WBP Development in **2019.**
(Refer to Table 6)

**2021**
Complete TMDLs and watershed-based planning efforts begun in **2019**.
The Stage 1 TMDL Development has been completed in the Fall of **2021**, and the Draft Stage 3 is currently in progress.

**2022**
Evaluate accomplishments of the Vision – Short and Long-Term objectives.

## Assess program success:

The 305(b) assessments of the following waters identified in Table 7 in 2022 and thereafter will be used as three indicators: 1) potential problems with unassessed waters 2) further actions are needed to get implementation kick started, and 3) in some cases there are non-pollutants as part of 305(b), we would address these through the watershed-based implementation plan as well.

Every TMDL/LRS watershed project will include a USEPA nine-minimum element watershed plan that includes an implementation plan for best management practices to address agricultural and urban stormwater runoff to meet water quality standards and achieve the goals of the Vision as part of the TMDL development process.

# Tables

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 1 | 713001201 | 15,481 | Carlinville Lake | IL_RDG | PWS - 1<br>IEPA | Carlinville Lake | Atrazine | |
| 2 | 714020205 | 15,876 | East Fork Kaskaskia/Farina Lake | IL_OK-03<br>IL_SOB | PWS - 1<br>IEPA | East Fork Kaskaskia/Farina Lake | Simazine | |
| 3 | 512011401 | 46,600 | Lake Mattoon/ Lake Paradise | IL_RCF<br>IL_RCG | PWS - 1<br>IEPA | Lake Mattoon/Lake Paradise | Simazine | |
| 4 | 0714020207<br>0714010610 | 7,200 | Nashville City Lake/Washington County Lake | IL_ROO<br>IL_RNM | PWS - 1<br>IEPA | Nashville City Lake/Washington County Lake | Atrazine, Simazine | |
| 5 | 512010908 | 188,000 | North Fork Vermillion River | IL_BPG-05 | PWS - 1<br>IEPA | North Fork Vermillion River | Atrazine | |
| 6 | 714020208 | 2,582 | Salem City Reservoir | IL_ROR | PWS - 1<br>IEPA | Salem City Reservoir | Simazine | |
| 7 | 714020306 | 477,000 | Shoal Creek | IL_OI-08 | PWS - 1<br>IEPA | Shoal Creek | Atrazine | |
| 8 | 512011503 | 387,000 | Skillet Fork | IL_CA-05 | PWS - 1<br>IEPA | Skillet Fork | Atrazine | |
| 9 | 0713000203<br>0713000208 | 13,700 | Vermilion River | IL_DS-06<br>IL_DS-10<br>IL_DS-14 | PWS - 1<br>Primary Contact - 2<br>IEPA | Vermilion River | Nitrate, Nitrogen,<br>Fecal Coliform | |
| 10 | 713000304 | 15,481 | Canton Lake | IL_RDD | PWS - 1<br>Other Impairments - 3<br>ISWS | Canton Lake | Manganese, [a]<br>Phosphorus (Total) | |
| 11 | 713000310 | 15,876 | Vermont City Reservoir/Sugar Creek | IL_RDM<br>IL_DH-01 | PWS - 1<br>Primary Contact - 2<br>Other Impairments - 3<br>ISWS | VERMONT CITY RESERVOIR/Sugar Cr. | Atrazine,<br>Fecal Coliform, Phosphorus (Total) | |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 12 | 512011304 | 177,734 | Bonpas Creek | IL_BC-02 | PWS - 1<br>Primary Contact - 2<br>Other Impairments - 3<br>2012 RFP | Bonpas Cr. | Atrazine,<br>Manganese, [a]<br>Fecal Coliform,<br>Dissolved Oxygen [b] | Sedimentation/Siltation |
| | | | Bonpas Creek | IL_BC-04 | Other Impairments - 3<br>2012 RFP | Bonpas Cr. | | |
| | | | Bonpas Creek | IL_RBQ | Other Impairments - 3<br>2012 RFP | WEST SALEM NEW | Phosphorus (Total) | |
| | | | Bonpas Creek | IL_RBZN | Other Impairments - 3<br>2012 RFP | WEST SALEM OLD | Phosphorus (Total) [e] | |
| 13 | 712000212 | 110,979 | Prairie Langan [f] | IL_FLEA-C1 | PWS - 1<br>Other Impairments - 3<br>2012 RFP | Clifton N | Boron, Copper, Ammonia (Total), Dissolved Oxygen | Sedimentation/Siltation, Phosphorus (Total) |
| | 712000209 | | Prairie Langan [f] | IL_FLG | PWS - 1<br>Other Impairments - 3<br>2012 RFP | Prairie Cr. | Fecal Coliform, Dissolved Oxygen | |
| | | | Prairie Langan [f] | IL_FLGB-C1 | PWS - 1<br>2012 RFP | Ashkum Cr. | Boron,<br>Ammonia (Total), Dissolved Oxygen | Phosphorus (Total) |
| 14 | 706000503 | 211,000 | Prairie Langan [f] | IL_FLGB-C4 | PWS - 1<br>2012 RFP | Ashkum Cr. | Boron | Sedimentation/Siltation |
| | 712000212 | | Prairie Langan [f] | IL_FLGZ-C1 | Other Impairments - 3<br>2012 RFP | Clifton South Cr | Boron, Ammonia (Total), Dissolved Oxygen | Sedimentation/Siltation, Phosphorus (Total) |
| | | | Galena/ Sinsinawa Rivers | IL_MQ-01 | Primary Contact - 2<br>Other Impairments -3<br>2012 RFP | Galena R. | Zinc, Fecal Coliform | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Galena/ Sinsinawa Rivers | IL_MS | Other Impairments - 3<br>2012 RFP | Sinsinawa R. | | Sedimentation/Siltation |
| | | | Galena/ Sinsinawa Rivers | IL_RMA | Other Impairments - 3<br>2012 RFP | FRENTRESS | Phosphorus (Total), Dissolved Oxygen | Total Suspended Solids (TSS), Turbidity |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 15 | 714010803 | 10,200 | Horseshoe Lake (Alexander Co.) | IL_RIA | Other Impairments - 3<br>2012 RFP | HORSESHOE (ALEXANDER) | Phosphorus | Total Suspended Solids (TSS) |
| 16 | 713000707 | 184,000 | Lake Springfield | IL_EOA-04 | Other Impairments - 3<br>2012 RFP | Sugar Cr. | | Phosphorus (Total) |
| | | | Lake Springfield | IL_EOAD-11 | Other Impairments - 3<br>2012 RFP | Hoover Branch | | Sedimentation/Siltation |
| | | | Lake Springfield | IL_REF | Other Impairments - 3<br>2012 RFP | SPRINGFIELD | Phosphorus (Total) | Total Suspended Solids (TSS) |
| 17 | 713000103 | 80,416 | Little Vermilion River (LaSalle Co.) | IL_DR-01 | Primary Contact - 2<br>Other Impairments - 3<br>2012 RFP | Little Vermilion R. | Chloride, Zinc, pH, Fecal Coliform | Total Suspended Solids (TSS), Phosphorus (Total) |
| | | | Little Vermilion River (LaSalle Co.) | IL_DRD | Other Impairments - 3<br>2012 RFP | Mendota Cr. | Dissolved Oxygen | Phosphorus (Total) |
| 18 | 0713000607<br>0713000608 | 328,310 | Middle Sangamon River | IL_E-05 | Primary Contact - 2<br>2012 RFP | Sangamon R. | Fecal Coliform | |
| | | | Middle Sangamon River | IL_E-06 | Primary Contact - 2<br>2012 RFP | Sangamon R. | Fecal Coliform | |
| | | | Middle Sangamon River | IL_E-09 | Primary Contact - 2<br>2012 RFP | Sangamon R. | Fecal Coliform | |
| | | | Middle Sangamon River | IL_E-16 | Primary Contact - 2<br>2012 RFP | Sangamon R. | Fecal Coliform | |
| | | | Middle Sangamon River | IL_ERA-01 | Other Impairments - 3<br>2012 RFP | Long Point Slough | | Sedimentation/Siltation |
| | 713000607 | | Middle Sangamon River | IL_EZM-02 | Other Impairments - 3<br>2012 RFP | Buckhart Cr. | Dissolved Oxygen [b] | Sedimentation/Siltation |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| | 709000316 | | Pecatonica River | IL_PW-01 | Primary Contact - 2<br>Other Impairments - 3<br>2012 RFP | Pecatonica R. | Fecal Coliform | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | 709000312 | | Pecatonica River | IL_PW-04 | Other Impairments - 3<br>2012 RFP | Pecatonica R. | | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | 709000314 | | Pecatonica River | IL_PW-08 | Primary Contact - 2<br>2012 RFP | Pecatonica R. | Fecal Coliform | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| 19 | 709000316 | 515,200 | Pecatonica River | IL_PW-13 | Primary Contact - 2<br>2012 RFP | Pecatonica R. | Fecal Coliform | |
| | 709000315 | | Pecatonica River | IL_PWA-01 | Primary Contact - 2 | Raccoon Cr. | Fecal Coliform | |
| | 709000316 | | Pecatonica River | IL_PWF-W-C1 | Other Impairments - 3<br>2012 RFP | Coolidge Cr. | | Sedimentation/Siltation, Phosphorus (Total) |
| | 709000314 | | Pecatonica River | IL_PWL-01 | Other Impairments - 3 | Winneshiek Cr. | | Sedimentation/Siltation, Total Suspended Solids (TSS), Phosphorus (Total) |
| | 709000313 | | Pecatonica River | IL_PWN-01 | Primary Contact - 2<br>2012 RFP | Yellow Cr. | Fecal Coliform | |
| | 709000313 | | Pecatonica River | IL_PWNC | Other Impairments - 3<br>2012 RFP | Spring Branch | Ammonia (Total)[c] | Phosphorus (Total) |
| | 709000312 | | Pecatonica River | IL_RPA | Other Impairments - 3<br>2012 RFP | LE-AQUA-NA | Phosphorus (Total) | Total Suspended Solids (TSS) |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 20 | 714000603 | 311,000 | Rend Lake | IL_N-08 | PWS - 1<br>2012 RFP | Big Muddy R. | Manganese [a], Dissolved Oxygen [b], pH [d] | Sedimentation/Siltation, Phosphorus (Total) |
| | | | Rend Lake | IL_NI-01 | PWS - 1<br>2012 RFP | Gun Cr. | Manganese [a], Iron, Dissolved Oxygen [b], | |
| | | | Rend Lake | IL_NJ-07 | Other Impairments - 3<br>2012 RFP | Casey Fk. | Dissolved Oxygen [b], Fecal Coliform | Total Suspended Solids (TSS) |
| | | | Rend Lake | IL_NL-01 | Other Impairments - 3<br>2012 RFP | Snow Cr. | Dissolved Oxygen [b] | Total Suspended Solids (TSS) |
| | | | Rend Lake | IL_RNB | Other Impairments - 3<br>2012 RFP | REND | Phosphorus (Total), Manganese [a] | Total Suspended Solids (TSS) |
| | | | Rend Lake | IL_RNO | Aquatic Life - 3<br>2012 RFP | BENTON | Phosphorus (Total) | |
| | | | Rend Lake | IL_RNU | Other Impairments - 3<br>2012 RFP | JAYCEES | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Rend Lake | IL_RNZB | Other Impairments - 3<br>2012 RFP | ASHLEY RESERVOIR | Phosphorus (Total), Dissolved Oxygen | Total Suspended Solids (TSS), Sedimentation/Siltation |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 21 | 714010607 | 313,435 | Upper Big Muddy | IL_N-06 | Other Impairments - 3<br>2012 RFP | Big Muddy R. | | Sedimentation/Siltation |
| | | | Upper Big Muddy | IL_N-11 | Primary Contact - 2<br>Other Impairments - 3<br>2012 RFP | Big Muddy R. | Sulfates [d], Fecal Coliform | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Upper Big Muddy | IL_N-17 | Other Impairments - 3<br>2012 RFP | Big Muddy R. | Dissolved Oxygen | Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Upper Big Muddy | IL_RNZD | Other Impairments - 3<br>2012 RFP | HERRIN OLD | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Big Muddy | IL_NZN-13 | PWS - 1<br>Other Impairments - 3<br>2012 RFP | Andy Cr. | Manganese [a], Iron, Dissolved Oxygen | |
| | | | Upper Big Muddy | IL_NZM-01 | Other Impairments - 3<br>2012 RFP | Prairie Cr. | Sulfates [d] | |
| | 714010604 | | Upper Big Muddy | IL_NH-06 | PWS - 1<br>Primary Contact - 2<br>Other Impairments - 3<br>2012 RFP | M. Fk. Big Muddy | Manganese [a], Fecal Coliform, Dissolved Oxygen | |
| | | | Upper Big Muddy | IL_NH-07 | PWS - 1<br>Other Impairments - 3<br>2012 RFP | M. Fk. Big Muddy | Manganese [a], Dissolved Oxygen | Sedimentation/Siltation |
| | | | Upper Big Muddy | IL_RNP | Other Impairments - 3<br>2012 RFP | West Frankfort Old | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Big Muddy | IL_RNQ | Other Impairments - 3<br>2012 RFP | West Frankfort New | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | 714010605 | | Upper Big Muddy | IL_RNZE | Other Impairments - 3<br>2012 RFP | JOHNSTON CITY | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Big Muddy | IL_RNZX | Other Impairments - 3<br>2012 RFP | ARROWHEAD (WILLIAMSON) | Phosphorus (Total) | |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 22 | 713001003 | 368.343 | Upper La Moine | IL_DGLC-01 | Other Impairments - 3 2014 RFP | Drowning Fork | Chloride | Phosphorus (Total), Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Upper La Moine | IL_DGO-01 | Other Impairments - 3 2014 RFP | Rock Creek | Dissolved Oxygen | |
| | | | Upper La Moine | IL_DGP | PWS - 1 2014 RFP | La Harpe River | Manganese, Dissolved Oxygen | |
| | | | Upper La Moine | IL_DGP-01 | PWS - 1 2014 RFP | La Harpe River | Manganese, Dissolved Oxygen | |
| | 713001001 | | Upper La Moine | IL_DGPC-01 | PWS - 1 2014 RFP | Baptist Creek | Manganese | |
| | 713001007 | | Upper La Moine | IL_DGZN-01 | Other Impairments - 3 2014 RFP | Prairie Creek | Dissolved Oxygen | Phosphorus (Total), Total Suspended Solids (TSS) |
| | 713001002 | | Upper La Moine | IL_DGZR | PWS (1) Other Impairments - 3 2014 RFP | South Branch La Moine River | Manganese, Ammonia (Total), Dissolved Oxygen | Phosphorus (Total) |
| | 713001002 | | Upper La Moine | IL_RLE | Other Impairments - 3 2014 RFP | CARTHAGE | Phosphorus (Total) | Total Suspended Solids (TSS) |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 23 | 713001011 | 495,350 | La Moine/ Missouri Creek | IL_DG-01 | Primary Contact - 2<br>2014 RFP | La Moine River | Fecal Coliform | |
| | | | La Moine/ Missouri Creek | IL_DG-04 | Primary Contact - 2<br>2014 RFP | La Moine River | Fecal Coliform | |
| | | | La Moine/ Missouri Creek | IL_DGD-01 | PWS - 1<br>2014 RFP | Missouri Creek | Manganese | |
| | | | La Moine/ Missouri Creek | IL_DGDA-01 | PWS - 1<br>2014 RFP | Little Missouri Creek | Manganese, Dissolved Oxygen | |
| 24 | 714020107 | 1,003,869 | Upper Kaskaskia River/Shelbyville Lake | IL_O-02 | Primary Contact - 2<br>2014 RFP | Kaskaskia River | Fecal Coliform | |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_O-15 | Primary Contact - 2<br>2014 RFP | Kaskaskia River | Fecal Coliform | |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OQ-01 | Primary Contact - 2<br>2014 RFP | Beck Creek | Fecal Coliform | |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OQCA-01 | Other Impairments - 3<br>2014 RFP | Coal Creek | | Phosphorus (Total) |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OT-02 | Primary Contact - 2<br>2014 RFP | West Okaw River | Fecal Coliform | |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OT-04 | Other Impairments - 3<br>2014 RFP | West Okaw River | Dissolved Oxygen [b], pH [d] | Phosphorus (Total) |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OU-01 | Primary Contact - 2<br>2014 RFP | Jonathon Creek | Fecal Coliform | |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OW-01 | Other Impairments - 3<br>2014 RFP | Lake Fork | | Sedimentation/Siltation |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OW-02 | Other Impairments - 3<br>2014 RFP | Lake Fork | | Sedimentation/Siltation |
| | | | Upper Kaskaskia River/Shelbyville Lake | IL_OZZT-01 | Other Impairments - 3<br>2014 RFP | Asa Creek | pH [d] | Sedimentation/Siltation |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 25 | 714020301 | 69,563 | Lou Yaeger | IL_RON | PWS - 1<br>Other Impairments - 3<br>2014 RFP | LOU YAEGER LAKE | Atrazine,<br>Phosphorus (Total) | Total Suspended Solids (TSS) |
| 26 | 708010418 | 1,119,868 | Mississippi | IL_K-22 | PWS - 1<br>2014 - RFP | Mississippi River | Atrazine[g] | |
| 27 | 712000610 | 167,816 | Upper Fox/Chain O'Lakes | IL_RTT | Other Impairments - 3<br>2014 RFP | ANTIOCH LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_VTJ | Other Impairments - 3<br>2014 RFP - 3 | BLUFF LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_RTD | Other Impairments - 3<br>2014 RFP | LAKE CATHERINE | Phosphorus (Total) | |
| | | | Upper Fox/Chain O'Lakes | IL_RTI | Other Impairments - 3<br>2014 RFP | CHANNEL LAKE | Phosphorus (Total) | |
| | | | Upper Fox/Chain O'Lakes | IL_STQ | Other Impairments - 3<br>2014 RFP | DAVIS LAKE | Phosphorus (Total) | |
| | | | Upper Fox/Chain O'Lakes | IL_VTD | Primary Contact - 2<br>Other Impairments - 3<br>2014 RFP | DEEP LAKE | Fecal Coliform | |
| | | | Upper Fox/Chain O'Lakes | IL_VTH | Other Impairments - 3<br>2014 RFP | DUNN'S LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_RTZG | Other Impairments - 3<br>2014 RFP | DUCK LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_VTK | Other Impairments - 3<br>2014 RFP | FISH-DUNCAN LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_VTT | Other Impairments - 3<br>2014 RFP | FISCHER LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL _RTF | Other Impairments - 3<br>2014 RFP | FOX LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_DT-35 | Other Impairments - 3<br>2014 RFP | Fox River | | Sedimentation/Siltation |
| | | | Upper Fox/Chain O'Lakes | IL_RTQ | Other Impairments - 3<br>2014 RFP | GRASS LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_UTM | Other Impairments - 3<br>2014 RFP | HIDDEN LAKE | Phosphorus (Total),<br>Dissolved Oxygen,<br>pH[d] | Total Suspended Solids (TSS) |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| | | | Upper Fox/Chain O'Lakes | IL_RTJ | Other Impairments - 3<br>2014 RFP | LONG LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL RTR | Other Impairments - 3<br>2014 RFP | LAKE MARIE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_UTX | Other Impairments - 3<br>2014 RFP | MCGREAL LAKE | Phosphorus (Total) | |
| | | | Upper Fox/Chain O'Lakes | IL_RTUA | Other Impairments - 3<br>2014 RFP | NIPPERSINK LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_STR | Other Impairments - 3<br>2014 RFP | NORTH CHURCHILL LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_VTW | Other Impairments - 3<br>2014 RFP | PETITE LAKE | Phosphorus (Total) | |
| | | | Upper Fox/Chain O'Lakes | IL_RTU | Other Impairments - 3<br>2014 RFP | PISTAKEE LAKE | Phosphorus (Total),<br>Ammonia (Total) [c] | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_RTH | Other Impairments - 3<br>2014 RFP | ROUND LAKE | | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_STS | Other Impairments - 3<br>2014 RFP | SOUTH CHURCHILL LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_RGZT | Other Impairments - 3 | SPRING LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_WTA | Other Impairments - 3<br>2014 RFP | SUMMERHILL ESTATE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_UTW | Other Impairments - 3<br>2014 RFP | LAKE TRANQUILITY | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_VTZA | Other Impairments - 3<br>2014 RFP | TURNER LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Chain O'Lakes | IL_ RTZH | Other Impairments - 3<br>2014 RFP | WOOSTER LAKE | Phosphorus (Total) | |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 28 | 712000302 | 66,520 | Thorn Creek | IL_HBD-02 | Primary Contact - 2<br>Other Impairments -3<br>2014 - RFP | Thorn Creek | Fecal Coliform, Dissolved Oxygen,<br>Silver, Zinc | Phosphorus (Total), Total Suspended Solids (TSS) |
| | | | Thorn Creek | IL_HBD-03 | Other Impairments - 3<br>2014 - RFP | Thorn Creek | Fecal Coliform, Dissolved Oxygen | |
| | | | Thorn Creek | IL_HBD-04 | Primary Contact - 2<br>2014 - RFP | Thorn Creek | Fecal Coliform, Dissolved Oxygen<br>Chloride | Phosphorus (Total) |
| | | | Thorn Creek | IL_HBD-05 | Primary Contact - 2<br>2014 - RFP | Thorn Creek | Fecal Coliform | Phosphorus (Total) |
| | | | Thorn Creek | IL_HBD-06 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Thorn Creek | Fecal Coliform, Dissolved Oxygen,<br>Chloride | Phosphorus (Total) |
| | | | Thorn Creek | IL_HBDA-01 | Other Impairments - 3<br>2014 - RFP | North Creek | Dissolved Oxygen | Sedimentation/Siltation |
| | | | Thorn Creek | IL_HBDB-03 | Primary Contact - 2<br>2014 - RFP | Butterfield Creek | Fecal Coliform | |
| | | | Thorn Creek | IL_ HBDC | Primary Contact - 2<br>2014 - RFP | Deer Creek | Fecal Coliform | Phosphorus (Total) |
| | | | Thorn Creek | IL_HBDC-02 | Primary Contact - 2<br>2014 - RFP | Deer Creek | Fecal Coliform, Dissolved Oxygen | Phosphorus (Total), Sedimentation/Siltation |
| | | | Thorn Creek | IL_RHI | Other Impairments - 3<br>2014 - RFP | SAUK TRAIL | Phosphorus (Total),<br>Dissolved Oxygen | Sedimentation/Siltation, Total Suspended Solids (TSS) |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 29 | 712000301 | 86,400 | Chicago River-North Branch | IL_HCC-07 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | North Branch | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total), Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_HCCB-05 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | West Fork | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total), Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_HCCC-02 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Middle Fork | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total), Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_HCCC-04 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Middle Fork | Fecal Coliform, Dissolved Oxygen, Chloride, Water Temperature | Phosphorus (Total), Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_HCCD-01 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Skokie River | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total), Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_HCCD-09 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Skokie River | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total), Sedimentation/Siltation |
| 30 | 712000611 | 108,156 | Chicago River-North Branch | IL_RHJ | Other Impairments - 3<br>2014 - RFP | SKOKIE LAGOONS | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Chicago River-North Branch | IL_RHJA | Other Impairments - 3<br>2014 - RFP | CHICAGO BOTANIC GARDEN | Phosphorus (Total) | |
| | | | Chicago River-North Branch | IL_UHH | Other Impairments - 3<br>2014 - RFP | EAGLE LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTZT | Other Impairments - 3<br>2014 - RFP | LAKE BARRINGTON | Fecal Coliform, Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_UTI | Other Impairments - 3<br>2014 - RFP | DRUMMOND LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTZR | Other Impairments - 3<br>2014 - RFP | ECHO LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_DT-22 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Fox River | Fecal Coliform, Chloride, Copper | Sedimentation/Siltation |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| | | | Upper Fox/Flint Creek | IL _VTI | Other Impairments - 3<br>2014 - RFP | GRASSY LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTZU | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | HONEY LAKE | Fecal Coliform, Phosphorus (Total) | |
| | | | Upper Fox/Flint Creek | IL_RTZI | Other Impairments - 3<br>2014 - RFP | ISLAND LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_STK | Other Impairments - 3<br>2014 - RFP | LAKE FAIRVIEW | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_STO | Other Impairments - 3<br>2014 - RFP | LAKE NAPA SUWE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL _VTZJ | Other Impairments -3<br>2014 - RFP | LAKE LOUISE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTP | Other Impairments - 3<br>2014 - RFP | SLOCUM LAKE | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTZQ | Other Impairments - 3<br>2014 - RFP | TIMBER LAKE (SOUTH) | Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_RTZF | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | TOWER LAKE | Fecal Coliform, Phosphorus (Total) | Total Suspended Solids (TSS) |
| | | | Upper Fox/Flint Creek | IL_STV | Other Impairments - 3<br>2014 - RFP | WOODLAND (HIGHLAND) LAKE | Dissolved Oxygen, Phosphorus (Total) | Total Suspended Solids (TSS) |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| 31 | 712000408 | 332,600 | DuPage River/Salt Creek | IL_GB-01 | Other Impairments - 3<br>2014 - RFP | DuPage River | | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GB-11 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | DuPage River | Fecal Coliform, Chloride | Phosphorus (Total), Sedimentation/Siltation |
| | | | DuPage River/Salt Creek | IL_GB-16 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | DuPage River | Fecal Coliform, Dissolved Oxygen | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GBK-05 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | West Branch DuPage River | Fecal Coliform | Phosphorus (Total), Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | DuPage River/Salt Creek | IL_GBK-09 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | West Branch DuPage River | Fecal Coliform | Phosphorus (Total), Sedimentation/Siltation |
| | | | DuPage River/Salt Creek | IL_GBK-14 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | West Branch DuPage River | Fecal Coliform, Dissolved Oxygen, pH [d] | |
| | | | DuPage River/Salt Creek | IL_GBL-08 | Other Impairments - 3<br>2014 - RFP | East Branch DuPage River | pH [d] | Phosphorus (Total), Sedimentation/Siltation, Total Suspended Solids (TSS) |
| | | | DuPage River/Salt Creek | IL_GBL-10 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | East Branch DuPage River | Fecal Coliform, pH [d] | Phosphorus (Total) |
| | 712000404 | | DuPage River/Salt Creek | IL_GBKA | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Spring Brook | Fecal Coliform, Dissolved Oxygen, Chloride | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GBKA-01 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Spring Brook | Fecal Coliform, Copper [d] | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GL | Other Impairments - 3<br>2014 - RFP | Salt Creek | | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GL-09 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Salt Creek | Fecal Coliform | Phosphorus (Total), Sedimentation/Siltation |

Table1. Short-Term Vision Goals (2015-2018) – TMDL Watershed Projects Continued

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use<br>Impairment | Waterbody Name | TMDL Parameter | LRS Parameter |
|---|---|---|---|---|---|---|---|---|
| | | | DuPage River/Salt Creek | IL_GL-10 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Salt Creek | Fecal Coliform, pH [d], Nickel [d] | |
| | | | DuPage River/Salt Creek | IL_GL-19 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Salt Creek | Fecal Coliform | Phosphorus (Total) |
| | | | DuPage River/Salt Creek | IL_GLA-02 | Primary Contact - 2<br>Other Impairments - 3<br>2014 - RFP | Addison Creek | Fecal Coliform, Nickel [d] | Phosphorus (Total) |

[a] ***Manganese - TMDL was not developed due to water quality standard (WQS) changes and the parameter was delisted from the 303(d) list***

[b] ***Dissolved Oxygen (DO) – TMDL was not developed, based on the TMDL study either it was determined that the cause of DO impairment was low flow stream conditions or Aquatic Life Use was Full Support and DO was delisted***

[c] ***Ammonia (Total), – TMDL was not developed based on additional Stage 2 Monitoring and the parameter were delisted from the 303(d) list***

[d] ***Boron, Copper, Nickel, pH, Sulfate - TMDLs were not developed for these parameters - delisted from the 303(d) list***

[e] ***Phosphorus (Total) – TMDL was not developed for West Salem Old Lake/Reservoir, as the surface area is less than 20 acres, instead LRS was developed***

[f] ***Prairie Langan Watershed –TMDL was not developed for this watershed based on the Stage 2 Monitoring results and the TMDL parameters were delisted. The project was converted to a Watershed Implementation Plan to address LRS parameters.***

[g] ***Atrazine - TMDL was not developed based on additional Stage 2 Monitoring and the parameter was delisted from the 303(d) list. However, a draft "TMDL - Alternative Protection plan" has been developed.***

Table 2. Atrazine/Simazine TMDL Watershed Projects (developed by Agency staff)

| Watershed No. | TMDL Watershed | Watershed Area (approximate in acres) | TMDL Development Stage | Final TMDL Approval Date |
|---|---|---|---|---|
| 1 | Carlinville Lake | 15,481 | Approved | September 28, 2016 |
| 2 | East Fork Kaskaskia/Farina Lake | 15,876 | Approved | September 28, 2016 |
| 3 | Lake Mattoon/Lake Paradise | 46,600 | Approved | September 28, 2016 |
| 4 | Nashville City Lake/Washington County Lake | 7,200 | Approved | September 28, 2016 |
| 5 | North Fork Vermillion River | 188,000 | Approved | September 28, 2016 |
| 6 | Salem City Reservoir | 2,582 | Approved | September 28, 2016 |
| 7 | Shoal Creek | 477,000 | Approved | September 28, 2016 |
| 8 | Skillet Fork | 387,000 | Approved | September 28, 2016 |

Table 3. TMDL Watershed Projects (ISWS and IEPA)

| Watershed No. | TMDL Watershed | Watershed Area (approximate in acres) | TMDL Development Stage | Final TMDL Completion/Approval Date |
|---|---|---|---|---|
| 9 | Vermilion River | 13,700 | Stage 3 | FFY- 22 |
| 10 | Canton Lake | 15,481 | Approved | 28-Jun-17 |
| 11 | Vermont City Reservoir/Sugar Creek | 15,876 | Approved | 30-Apr-19 |

Table 4. 2012 RFP TDML Watershed Projects

| Watershed No. | TMDL Watershed | Watershed Area (approximate in acres) | TMDL Development Stage | Final TMDL Completion/Approval Date |
|---|---|---|---|---|
| 12 | Bonpas Creek | 177,734 | Approved | 13-Mar-19 |
| 13 | Prairie /Langan Creeks | 110,979 | WIP** | 7-Feb-18 |
| 14 | Galena/Sinsinawa Rivers | 211,000 | Approved | 4-Jun-18 |
| 15 | Horseshoe Lake (Alexander Co.) | 10,200 | Approved | 22-Aug-16 |
| 16 | Lake Springfield & Sugar Creek | 184,000 | Approved | 29-Sep-17 |
| 17 | Little Vermilion River (LaSalle Co.) | 80,416 | Approved | 4-May-18 |
| 18 | Middle Sangamon River | 328,310 | Approved | 11-Jul-18 |
| 19 | Pecatonica River | 515200 | Approved | 25-Jul-18 |
| 20 | Rend Lake | 311,000 | Approved | 29-Sep-17 |
| 21 | Upper Big Muddy River | 313,435 | Approved | 15-May-19 |

*FFY – Federal Fiscal Year

** Converted to Watershed Implementation Plan (WIP)

Table 5. 2014 RFP TDML Watershed Projects

| Watershed No. | TMDL Watershed | Watershed Area (approximate-in acres) | TMDL Development Stage | Final Draft Completion/Approval Timeline |
|---|---|---|---|---|
| 22 | Upper La Moine | 368.343 | Approved | 23-Mar-21 |
| 23 | La Moine/Missouri Creek | 495,350 | Approved | 12-Sep-19 |
| 24 | Upper Kaskaskia River | 1,003,869 | Approved | 24-Sep-18 |
| 25 | Lou Yeager | 69,563 | Approved | 11-Feb-21 |
| 26 | Mississippi | 1,119,868 | WPP* | Mar-21 |
| 27 | Upper Fox/Chain O'Lakes | 167,816 | Approved | 4-Jun-20 |
| 28 | Thorn Creek | 66,520 | Approved | 13-Jan-21 |
| 29 | North Branch -Chicago River | 86,400 | Approved | 13-Apr-20 |
| 30 | Upper Fox/Flint Creek | 108,156 | Approved | 2-Jun-20 |
| 31 | DuPage River/Salt Creek | 332,600 | Approved | 5-Sep-19 |

*Watershed Protection Plan

Table 6. Long -Term Vision Goals (2018-2022) – Draft TMDL Watershed Projects

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | WBP Parameter |
|---|---|---|---|---|---|---|---|---|
| 1 | 512011206 | 65,491 | Kickapoo Creek | IL_BENA-01 | Aquatic Life | Riley Creek | Dissolved Oxygen | |
| 2 | 512011211 | 72,174 | Big Creek | IL_BEDB-01 | Aquatic Life | Dogwood Creek | Dissolved Oxygen, Manganese, | Phosphorus (Total) |
| 3 | 512010901 | 128,088 | Big Ditch | IL_BPKP-01 | Aquatic Life | Big Four Ditch | Dissolved Oxygen | |
| 3 | 512010901 | 128,088 | Big Ditch | IL_BPKP-02 | Aquatic Life | Big Four Ditch | Dissolved Oxygen | |
| 4 | 512010902 | 57,064 | Saline Branch | IL_BPJC-08 | Aquatic Life | Saline Branch Drainage Ditch | pH | |
| 4 | 512010902 | 57,064 | Saline Branch | IL_BPJCA | Aquatic Life | Boneyard Creek | Dissolved Oxygen, Copper, | Phosphorus (Total) |
| 5 | 512011401 | 153,734 | Little Wabash River/Green Creek | IL_C-21 | Aquatic Life | Little Wabash River | Dissolved Oxygen | |
| 5 | 512011401 | 153,734 | Little Wabash River/Green Creek | IL_C-24 | Aquatic Life | Little Wabash River | Dissolved Oxygen | |
| 5 | 512011401 | 153,734 | Little Wabash River/Green Creek | IL_RCG | Aquatic Life | Paradise (Coles) | Dissolved Oxygen | |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CPD-01 | Aquatic Life | Second Salt Creek | Manganese, | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CPD-03 | Aquatic Life | Second Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CPD-04 | Aquatic Life | Second Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CPC-TU-C1 | Aquatic Life | First Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CP-04 | Aquatic Life | Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CP-EF-C2 | Aquatic Life | Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CP-EF-C4 | Aquatic Life | Salt Creek | | Phosphorus (Total) |
| 6 | 512011402 | 60,973 | Salt Creek | IL_CP-TU-C3 | Aquatic Life | Salt Creek | | Phosphorus (Total) |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PR-01 | Primary Contact Recreation | Keith Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PR-99 | Primary Contact Recreation | Keith Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PR-99 | Aquatic Life | Keith Creek | pH, Zinc | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PSA | Primary Contact Recreation | South Fork Kent Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PSB-01 | Primary Contact Recreation | North Fork Kent Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PT | Primary Contact Recreation | South Kinnikinnick Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PU | Primary Contact Recreation | North Kinnikinnick Creek | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_PZZG | Primary Contact Recreation | Spring Creek-North | Fecal Coliform | |
| 7 | 709000501 | 149,313 | Rock River/Pierce Lake | IL_RPC | Primary Contact Recreation | Pierce Lake | Phosphorus (Total) | |
| 8 | 709000503 | 125,649 | Kyte River | IL_PL-03 | Primary Contact Recreation | Kyte River | Fecal Coliform | |

Table 6. Long -Term Vision Goals (2018-2022) – Draft TMDL Watershed Projects

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | WBP Parameter |
|---|---|---|---|---|---|---|---|---|
| 8 | 709000503 | 125,649 | Kyte River | IL_PLB-C1 | Aquatic Life | Beach Creek | Dissolved Oxygen | Phosphorus (Total) |
| 9 | 512010905 | 159,721 | Middle Fork Vermilion River | IL_BPK-07 | Primary Contact Recreation | Middle Fork Vermilion River | Fecal Coliform | |
| 9 | 512010905 | 159,721 | Middle Fork Vermilion River | IL_RBN | Aesthetic Quality | MINGO | Phosphorus (Total) | |
| 10 | 512011406 | 125,586 | Fox River/ Vernor Lake | IL_CH-02 | Aquatic Life, Primary Contact Recreation | Fox River | Iron, Fecal Coliform | |
| 10 | 512011406 | 125,586 | Fox River/ Vernor Lake | IL_CH-03 | Aquatic Life, Public and Food Processing Water Supplies | Fox River | Dissolved Oxygen, Fecal Coliform, | |
| 10 | 512011406 | 125,586 | Fox River/ Vernor Lake | IL_CHEA-11 | Aquatic Life | Big Creek | Iron (dissolved) | |
| 10 | 512011406 | 125,586 | Fox River/ Vernor Lake | IL_RCA | Aesthetic Quality | VERNOR | Copper | |
| 11 | 512011409 | 146,426 | Little Wabash River/Old Fairfield Reservoir | IL_C-33 | Public and Food Processing Water Supplies | Little Wabash River | Phosphorus (Total) | |
| 11 | 512011409 | 146,426 | Little Wabash River/Old Fairfield Reservoir | IL_RCZJ | Aesthetic Quality, Public and Food Processing Water Supplies | FAIRFIELD | Iron (dissolved), Simazine | |
| 12 | 708010410 | 162,905 | Henderson Creek /Lake Storey | IL_LD-02 | Primary Contact Recreation | Henderson Creek | Phosphorus (Total), Atrazine, Total Dissolved Solids | |
| 12 | 708010410 | 162,905 | Henderson Creek /Lake Storey | IL_LDBA | Aquatic Life | Jinks Hollow | Fecal Coliform | |
| 12 | 708010410 | 162,905 | Henderson Creek /Lake Storey | IL_RLB | Aesthetic Quality | STOREY | Iron | |
| 13 | 712000612 | 119,090 | Poplar Creek/ Woods Creek Lake | IL_DTG-02 | Aquatic Life, Primary Contact Recreation | Poplar Creek | Phosphorus (Total) | |
| 13 | 712000612 | 119,090 | Poplar Creek/ Woods Creek Lake | IL_DTZP-02 | Primary Contact Recreation | Tyler Creek | Chloride, Fecal Coliform | |
| 13 | 712000612 | 119,090 | Poplar Creek/ Woods Creek Lake | IL_DTZR-01 | Primary Contact Recreation | Crystal Lake Outlet | Fecal Coliform | |
| 13 | 712000612 | 119,090 | Poplar Creek/ Woods Creek Lake | IL_RTZZ | Aesthetic Quality | WOODS CREEK | Fecal Coliform | |
| 14 | 713000507 | 107,136 | Spoon River | IL_DJ-02 | Primary Contact Recreation | Spoon River | Phosphorus (Total) | |
| 14 | 713000507 | 107,136 | Spoon River | IL_DJ-06 | Primary Contact Recreation | Spoon River | Fecal Coliform | |
| 15 | 713001201 | 193,176 | Loveless Lake (Carlinville Il) | IL_WDW | Aesthetic Quality, Public and Food Processing Water Supplies | LOVELESS (Carlinville II) | Fecal Coliform | |
| 16 | 713001203 | 38,938 | Taylor Creek/ Greenfield Lake | IL_DAF-01 | Aquatic Life | Taylor Creek | Phosphorus (Total), Simazine | |
| 16 | 713001203 | 38,938 | Taylor Creek/ Greenfield Lake | IL_RDZF | Aesthetic Quality, Public and Food Processing Water Supplies | GREENFIELD | Manganese | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NE-04 | Aquatic Life | Little Muddy River | Phosphorus (Total), Simazine | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NE-05 | Aquatic Life, Primary Contact Recreation | Little Muddy River | Dissolved Oxygen | |

Table 6. Long -Term Vision Goals (2018-2022) – Draft TMDL Watershed Projects

| Wtrshd No. | HUC | Area (acres) | TMDL Watershed | Segment ID | Designated Use Impairment | Waterbody Name | TMDL Parameter | WBP Parameter |
|---|---|---|---|---|---|---|---|---|
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NE-06 | Aquatic Life | Little Muddy River | Iron, Fecal Coliform | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NEB-02 | Aquatic Life | Reese Creek | Dissolved Oxygen | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NEBB-DQ-C1A | Aquatic Life | Phil Creek | Dissolved Oxygen | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NEB-DQ-A2 | Aquatic Life | Reese Creek | Dissolved Oxygen | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NEE-01 | Aquatic Life | Little Indian Creek | Manganese | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_NEI-01 | Aquatic Life | Puncheon Creek | Dissolved Oxygen, pH | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_RNG | Aesthetic Quality | DUQUOIN | Dissolved Oxygen, pH | |
| 17 | 714010606 | 183,332 | Du Quoin Lake/ Elkville Reservoir | IL_RNT | Aesthetic Quality Aquatic Life | ELKVILLE | Phosphorus (Total) | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NC-07 | Aquatic Life, Primary Contact Recreation | Beaucoup Creek | Phosphorus (Total), Dissolved Oxygen, pH | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NC-09 | Aquatic Life | Beaucoup Creek | Iron, Dissolved Oxygen, pH, Fecal Coliform | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NCC-01 | Aquatic Life | Walkers Creek | Dissolved Oxygen | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NCH | Aquatic Life | White Walnut Creek | Dissolved Oxygen | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NCN | Aquatic Life | Locust Creek | Dissolved Oxygen | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_NCS | Aquatic Life | Glenn Creek | Dissolved Oxygen | |
| 18 | 714010610 | 260,256 | Beaucoup Creek/ Pinckneyville Reservoir | IL_RNH | Aesthetic Quality | PINCKNEYVILLE | Dissolved Oxygen | |

Table 7. Basins, Watersheds, Segments and Pollutants to be addressed by the "Vision"

| Basin/Watershed | HUC | Segment/Causes | Watershed | HUC | Segment/Causes |
|---|---|---|---|---|---|
| *Embarrass* | *5120112* | *Monitoring: 2016* | | | |
| Kickapoo Creek | 512011206 | | Big Creek | 512011211 | |
| | 303(d) | BENA-01: DO | | 303(d) | BEDB-01: DO, Mn, TP |
| *Vermilion-Wabash* | *5120109* | *Monitoring: 2016* | | | |
| Big Four Ditch | 512010901 | | Saline Branch | 512010902 | |
| | 303(d) | BPKP-01: DO | | 303(d) | BPJC-08: pH |
| | | BPKP-02: DO | | | BPJCA: Cu, DO, TP |
| *Little Wabash* | *5120114* | *Monitoring: 2017* | | | |
| Little Wabash River/Green | 512011401 | | Salt Creek | 512011402 | |
| | 303(d) | CSB-07: TP | | 303(d) | CPC-TU-C1: TP |
| | | CSB-08: TP | | | CP-04: TP, Sed/Silt, TSS |
| | | C-21: DO, Hg* | | | CP-EF-C2: TP |
| | | C-24: Hg*, DO | | | CP-EF-C4: TP |
| | | RCF: Hg*, Simazine | | | CP-TU-C3:TP |
| | | RCG: TSS, DO Turb., Hg*, Simazine | | | CPD-01: Mn, TP |
| | | RCE: Hg* | | | CPD-03: TP, Sed/Silt, TSS |
| | | | | | CP-05: NA |
| | | | | | CPC-TU-C1: TP |
| | | | | | CPC-TU-A1:NA |
| | | | | | CPA-01: NA |
| | | | | | CPD-03: TP, TSS, Sed/Silt |
| | | | | | CPD-01: Mn, TP |
| | | | | | CPD-04: TP, TSS, DO |
| | | | | | CPB:NA |

Table 7. Basins, Watersheds, Segments and Pollutants to be addressed by the "Vision" Continued

| Basin/Watershed | HUC | Segment/Causes | Watershed | HUC | Segment/Causes |
|---|---|---|---|---|---|
| *Lower Rock* | *7090005* | *Monitoring: 2018* | | | |
| Rock River/ Pierce Lake | 709000501 | | Kyte River | 709000503 | |
| | 303(d) | P-15: Hg*, PCBs* | | 303(d) | PL-03: fecal |
| | | PR-01: fecal | | | PLBA: Uknw |
| | | PR-99: Arsenic, Methoxychlor*, ph., zinc, fecal | | | PLB-C1: DO, TP, Sed/Silt |
| | | PSA: fecal | | | PLB-C3: Uknw |
| | | PSB-01: fecal | | 305(b) | PLC-01: NA |
| | | PT: fecal | | | PLB-03: NA |
| | | PU: fecal | | | PLD: NA |
| | | PV-01: Uknw | | | PL-18: NA |
| | | PZZG: fecal | | | PL-99: NA |
| | | RPC: TP, Hg* | | | |

Cause abbreviations:

| | | |
|---|---|---|
| Cu: copper | Mn: manganese | TP: total phosphorus |
| DO: dissolved oxygen | NA: not assessed | TSS: total suspended solids |
| Fecal: Fecal coliform bacteria | PCB: polychlorinated biphenyl* | Uknw: unknown |
| Hg: mercury* | Sed/Silt: sedimentation/siltation | |

* Due to the source of some pollutants (atmospheric and legacy) they will not be addressed during the phases following monitoring of the watersheds. These pollutants currently are:

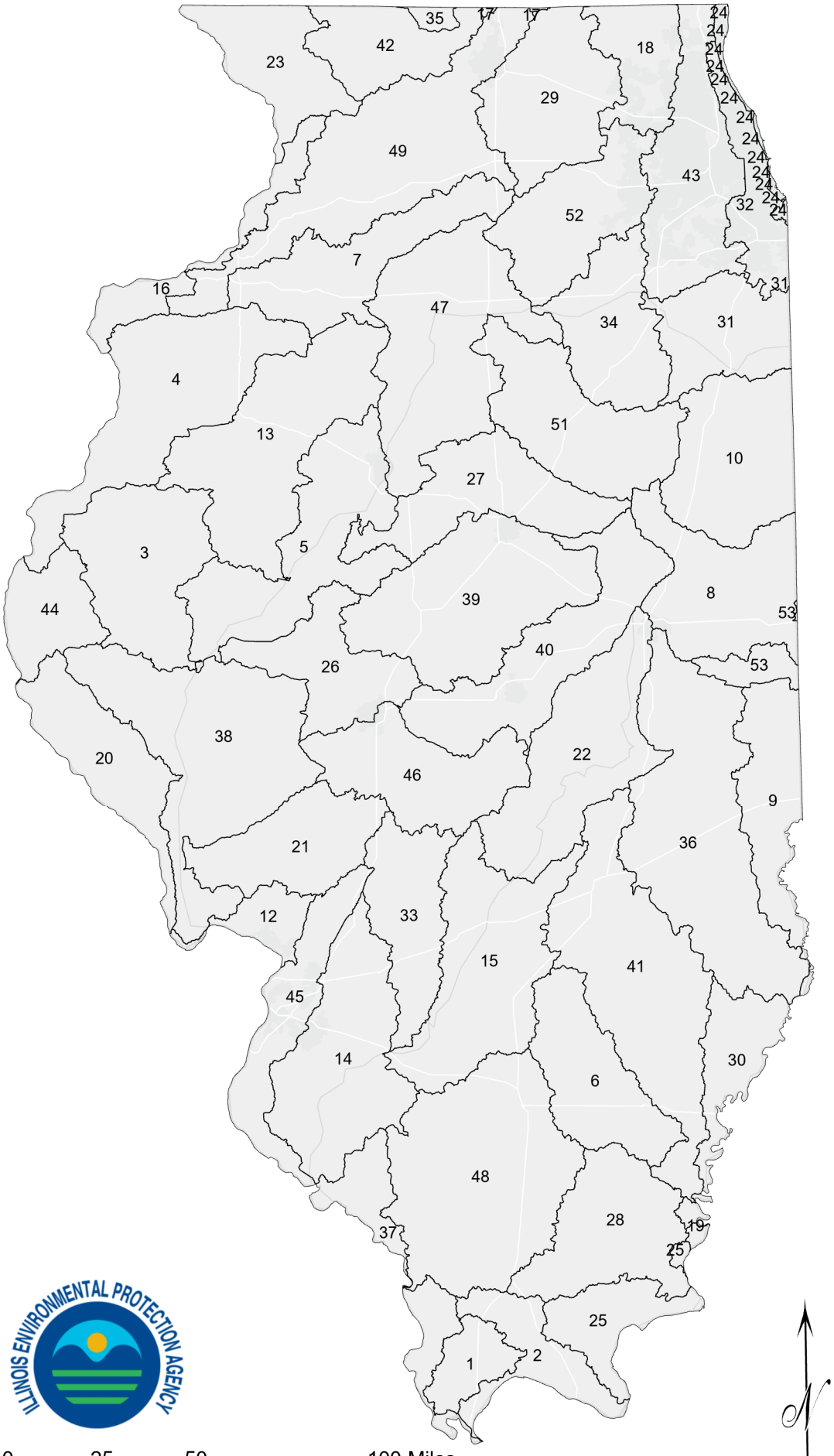
Mercury (Hg)

Polychlorinated biphenyl (PCB)

Methoxychlor

# Figures

# Major Watersheds of Illinois




| Number | Name |
|---|---|
| 1 | Cache |
| 2 | Lower Ohio |
| 3 | La Moine |
| 4 | Flint-Henderson |
| 5 | Lower Illinois-Lake Chautauqua |
| 6 | Skillet |
| 7 | Green |
| 8 | Vermilion |
| 9 | Middle Wabash-Busseron |
| 10 | Iroquois |
| 11 | Pike-Root |
| 12 | Peruque-Piasa |
| 13 | Spoon |
| 14 | Lower Kaskaskia |
| 15 | Middle Kaskaskia |
| 16 | Copperas-Duck |
| 17 | Middle Rock |
| 18 | Upper Fox |
| 19 | Highland-Pigeon |
| 20 | The Sny |
| 21 | Macoupin |
| 22 | Upper Kaskaskia |
| 23 | Apple-Plum |
| 24 | Lake Michigan |
| 25 | Lower Ohio-Bay |
| 26 | Lower Sangamon |
| 27 | Mackinaw |
| 28 | Saline |
| 29 | Kishwaukee |
| 30 | Lower Wabash |
| 31 | Kankakee |
| 32 | Chicago |
| 33 | Shoal |
| 34 | Upper Illinois |
| 35 | Sugar |
| 36 | Embarras |
| 37 | Upper Mississippi-Cape Girardeau |
| 38 | Lower Illinois |
| 39 | Salt |
| 40 | Upper Sangamon |
| 41 | Little Wabash |
| 42 | Pecatonica |
| 43 | Des Plaines |
| 44 | Bear-Wyaconda |
| 45 | Cahokia-Joachim |
| 46 | South Fork Sangamon |
| 47 | Lower Illinois-Senachwine Lake |
| 48 | Big Muddy |
| 49 | Lower Rock |
| 50 | Little Calumet-Galien |
| 51 | Vermilion |
| 52 | Lower Fox |
| 53 | Middle Wabash-Little Vermilion |