ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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BRUCE RAUNER, GOVERNOR LISA BONNETT, DIRECTOR

217/782-3362

July 30, 2015

Ms. Tinka G. Hyde
Director, Water Division
USEPA Region V (W-15J)
77 West Jackson Blvd
Chicago, Illinois 60604

Re: Illinois EPA Long-Term Vision for Assessment, Restoration, and Protection under the CWA Section 303(d) Program (The Vision)

Dear Ms. Hyde:

The Illinois Environmental Protection Agency (Agency) has developed the Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program (The Vision) and is pleased to submit the attached report to you, fulfilling the "Vision - Agreement" between USEPA Region V and the Agency to address water quality issues in the watersheds discussed in the report.

The Agency has been working closely with Dave Werbach – USEPA - Region 5 TMDL Coordinator, to set the goals of the Vision that has three sections:

1) Short-Term Vision - Traditional TMDL Development (2015-2018),
2) TMDL Development - Alternative Approaches, and
3) Long-Term Vision – Nutrient Priority Watersheds (2016-2022).

As the Agency moves forward with the vision goals, there may be some changes in prioritizing TMDL development as circumstances may change and warrant adjustments to the vision goals. The Agency appreciates that USEPA is allowing the flexibility to reflect changes in the priorities as this has been discussed with Association of Clean Water Administrators (ACWA) during conference calls and the Environmental Law Institute (ELI) - 2015 National Training Workshop on CWA Listing & TMDLs.

The Agency appreciates your support in the development of the Illinois Vision goals.

Should you have any question or comments please contact Amy Walkenbach, Manger, Watershed Management Section by email at: Amy.Walkenbach@Illinois.gov or by phone at (217) 782-3362.

Sincerely,

Marcia T. Willhite
Chief
Bureau of Water

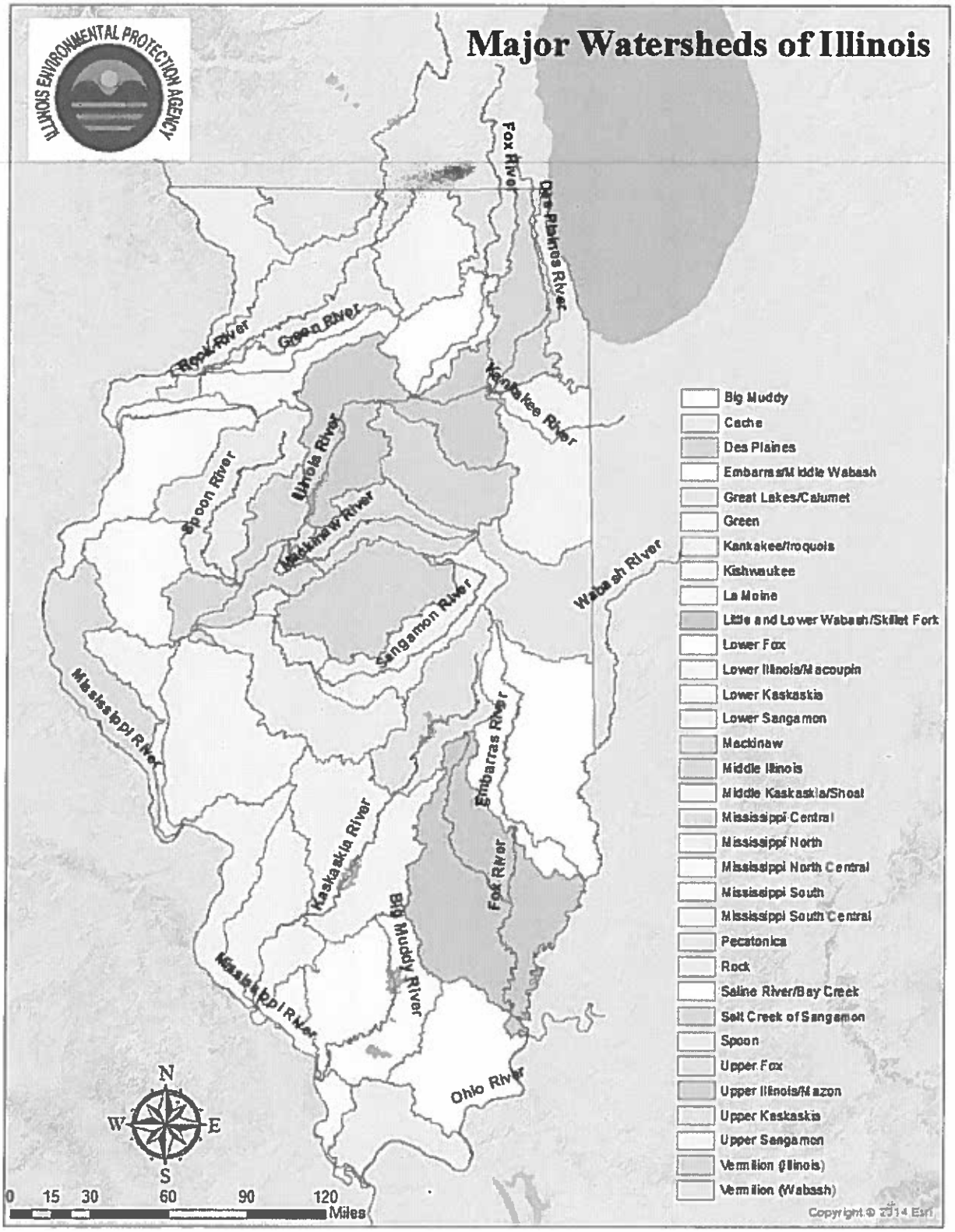
cc: Peter, Swenson, Matthew Gluckman, Dave Werbach, Amy Walkenbach, Abel Haile

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)

Amy Walkenbach
Manager, Watershed Management Section
IEPA - Bureau of Water

July 2015


Major Watersheds of Illinois
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Fox River
Des Plaines River
Rock River
Green River
Kankakee River
Illinois River
Spoon River
Mackinaw River
Sangamon River
Wabash River
Mississippi River
Embarras River
Kaskaskia River
Fox River
Big Muddy River
Ohio River
N
W
E
S
0 15 30 60 90 120
Miles
Big Muddy
Cache
Des Plaines
Embarras/Middle Wabash
Great Lakes/Calumet
Green
Kankakee/Iroquois
Kishwaukee
La Moine
Little and Lower Wabash/Skillet Fork
Lower Fox
Lower Illinois/Macoupin
Lower Kaskaskia
Lower Sangamon
Mackinaw
Middle Illinois
Middle Kaskaskia/Shoal
Mississippi Central
Mississippi North
Mississippi North Central
Mississippi South
Mississippi South Central
Pecatonica
Rock
Saline River/Bay Creek
Salt Creek of Sangamon
Spoon
Upper Fox
Upper Illinois/Mazon
Upper Kaskaskia
Upper Sangamon
Vermilion (Illinois)
Vermilion (Wabash)
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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 (see – Attachment) outlines 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 also 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 frame work 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, Protection, Integration
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 water body. 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 Goal (2015-2018)**
2) **TMDL Development - Alternative Approach**
3) **Nutrient Priority Watersheds - Long Term Vision Goal (2016-2022)**

TMDL development is a process that determines the maximum amount of a given pollutant that a water body 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 (LRS) 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 in order for the water body 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 subwatersheds 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 60 TMDL projects that address over 490 pollutants in individual segments in several watersheds throughout the state. The Agency is currently working on 25 more TMDL watershed projects that will be addressing over 300 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 (non-point 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 will be identified in the draft 2016 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 2014 ILLINOIS INTEGRATED WATER QUALITY REPORT AND SECTION 303(d) LIST: http://www.epa.state.il.us/water/tmdl/303-appendix/2014/iwq-report-surface-water.pdf.

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/Alternative Approach - Short-Term Vision Goal (2015 - 2018)

As part of the Short-Term Vision goal, the Agency will develop TMDL watershed projects to address impairments for Atrazine, Simazine, Chloride, 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'Lake, 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 looks at selecting 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)

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 of the watershed projects are in Stage 3
  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 TMDL projects:
  All the watershed projects are in Stage 3
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life
- 2012 RFP: 10 watershed projects -Watershed No.12-21 are in Stage 2 or 3 of TMDL development process
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life, Aesthetic Quality
- 2014 RFP: 10 watershed projects - Watershed No.22-31; five in Stage 3, and five to be started in FY16
  Designated Use Impairment - PWS, Primary Contact Recreation, and Aquatic Life, Aesthetic Quality

TABLE 1. Short -Term Vision Goals (2015-2018) - TMDL Watershed Projects

Wtrshd No.	HUC	Area (acres)	TMDL Watershed	Segment ID	Designated Use Impairment	Waterbody Name	TMDL Parameter	LRS Parameter
1	0713001201	15,481	Carlinville Lake	IL_RDG	PWS – 1 IEPA	Carlinville Lake	Atrazine	
2	0714020205	15,876	East Fork Kaskaskia/Farina Lake	IL_OK-03 IL_SOB	PWS – 1 IEPA	East Fork Kaskaskia/Farina Lake	Simazine	
3	0512011401	46,600	Lake Mattoon/ Lake Paradise	IL_RCF IL_RCG	PWS – 1 IEPA	Lake Mattoon/Lake Paradise	Simazine	
4	0714020207 0714010610	7,200	Nashville City Lake/Washington County Lake	IL_ROO IL_RNM	PWS – 1 IEPA	Nashville City Lake/Washington County Lake	Atrazine/Simazine	
5	0512010908	188,000	North Fork Vermillion River	IL_BPG-05	PWS – 1 IEPA	North Fork Vermillion River	Atrazine	
6	0714020208	2,582	Salem City Reservoir	IL_ROR	PWS – 1 IEPA	Salem City Reservoir	Simazine	
7	0714020306	477,000	Shoal Creek	IL_OI-08	PWS – 1 IEPA	Shoal Creek	Atrazine	
8	0512011503	387,000	Skillet Fork	IL_CA-05	PWS – 1 IEPA	Skillet Fork	Atrazine	
9	0713000203 0713000208	13,700	Vermilion River	IL_DS-06 IL_DS-10 IL_DS-14	PWS - 1 Primary Contact – 2 IEPA	Vermilion River	Nitrate, Nitrogen, Fecal Coliform	
10	0713000304	15,481	Canton Lake	RDD	PWS - 1 Other Impairments - 3 ISWS	Canton Lake	Manganese Phosphorus (Total)	
11	0713000310	15,876	Vermont Reservoir/Sugar Creek	RDM IL_DH-01	PWS - 1 Primary Contact - 2 Other Impairments - 3 ISWS	VERMONT CITY /Sugar Cr.	Atrazine, Fecal Coliform, Phosphorus (Total)	
12	0512011304	177,734	Bonpas Creek	IL_BC-02	PWS - 1 Primary Contact - 2 Other Impairments -3 2012 RFP	Bonpas Cr.	Atrazine, Manganese Fecal Coliform Dissolved Oxygen	
			Bonpas Creek	IL_BC-04	Other Impairments - 3 2012 RFP	Bonpas Cr.		Sedimentation/Siltation
			Bonpas Creek	IL_RBQ	Other Impairments - 3 2012 RFP	WEST SALEM NEW	Phosphorus (Total)	
			Bonpas Creek	IL_RBZN	Other Impairments - 3 2012 RFP	WEST SALEM OLD	Phosphorus (Total)	
13	0712000212	110,979	Prairie Langan	IL_FLEA-C1	PWS - 1 Other Impairments - 3 2012 RFP	Clifton N	Boron, Copper Ammonia (Total) Dissolved Oxygen	Sedimentation/Siltation Phosphorus (Total)
	0712000209		Prairie Langan	IL_FLG	PWS - 1 Other Impairments - 3 2012 RFP	Prairie Cr.	Fecal Coliform Dissolved Oxygen	
			Prairie Langan	IL_FLGB-C1	PWS - 1 2012 RFP	Ashkum Cr.	Boron, Ammonia (Total) Dissolved Oxygen	Phosphorus (Total)

			Prairie Langan	IL_FLGB-C4	PWS – 1 2012 RFP	Ashkum Cr.	Boron	Sedimentation/Siltation
	0712000212		Prairie Langan	IL_FLGZ-C1	Other Impairments - 3 2012 RFP	Clifton South Cr	Boron, Ammonia (Total) Dissolved Oxygen	Sedimentation/Siltation Phosphorus (Total)
14	0706000503	211,000	Galena/Sinsinawa Rivers	IL_MQ-01	Primary Contact - 2 Other Impairments -3 2012 RFP	Galena R.	Zinc, Fecal Coliform	Sedimentation/Siltation Total Suspended Solids (TSS)
			Galena/Sinsinawa Rivers	IL_MS	Other Impairments - 3 2012 RFP	Sinsinawa R.		Sedimentation/Siltation
			Galena/Sinsinawa Rivers	IL_RMA	Other Impairments - 3 2012 RFP	FRENTRESS	Phosphorus (Total) Dissolved Oxygen	Total Suspended Solids (TSS), Turbidity
15	0714010803	10,200	Horseshoe Lake (Alexander Co.)	IL_RIA	Other Impairments - 3 2012 RFP	HORSESHOE (ALEXANDER)	Phosphorus	Total Suspended Solids (TSS)
16	0713000707	184,000	Lake Springfield	IL_EOA-04	Other Impairments – 3 2012 RFP	Sugar Cr.		Phosphorus (Total)
			Lake Springfield	IL_EOAD-11	Other Impairments – 3 2012 RFP	Hoover Branch		Sedimentation/Siltation
			Lake Springfield	IL_REF	Other Impairments – 3 2012 RFP	SPRINGFIELD	Phosphorus (Total)	Total Suspended Solids (TSS)
17	0713000103		Little Vermilion River (LaSalle Co.)	IL_DR-01	Primary Contact - 2 Other Impairments -3 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 2012 RFP	Mendota Cr.	Dissolved Oxygen	Phosphorus (Total)
18	0713000607 0713000608		Middle Sangamon River	IL_E-05	Primary Contact - 2 2012 RFP	Sangamon R.	Fecal Coliform	
			Middle Sangamon River	IL_E-06	Primary Contact - 2 2012 RFP	Sangamon R.	Fecal Coliform	
			Middle Sangamon River	IL_E-09	Primary Contact - 2 2012 RFP	Sangamon R.	Fecal Coliform	
			Middle Sangamon River	IL_E-16	Primary Contact - 2 2012 RFP	Sangamon R.	Fecal Coliform	
			Middle Sangamon River	IL_ERA-01	Other Impairments – 3 2012 RFP	Long Point Slough		Sedimentation/Siltation
	0713000607		Middle Sangamon River	IL_EZM-02	Other Impairments – 3 2012 RFP	Buckhart Cr.	Dissolved Oxygen	Sedimentation/Siltation
19	0709000316	515,200	Pecatonica River	IL_PW-01	Primary Contact (2) Aquatic Life and Aesthetic Quality(3) 2012 RFP	Pecatonica R.	Fecal Coliform	Sedimentation/Siltation Total Suspended Solids (TSS)
	0709000312		Pecatonica River	IL_PW-04	Aquatic Life (3) Aesthetic Quality(4) 2012 RFP	Pecatonica R.		Sedimentation/Siltation Total Suspended Solids (TSS)
	0709000314		Pecatonica River	IL_PW-08	Primary Contact - 2 2012 RFP	Pecatonica R.	Fecal Coliform	Sedimentation/Siltation Total Suspended Solids (TSS)
	0709000316		Pecatonica River	IL_PW-13	Primary Contact - 2 2012 RFP	Pecatonica R.	Fecal Coliform	
	0709000315		Pecatonica River	IL_PWA-01	Primary Contact - 2	Raccoon Cr.	Fecal Coliform	
	0709000316		Pecatonica River	IL_PWF-W-C1	Other Impairments – 3 2012 RFP	Coolidge Cr.		Sedimentation/Siltation Phosphorus (Total)
	0709000314		Pecatonica River	IL_PWL-01	Other Impairments - 3	Winneshiek Cr.		Sedimentation/Siltation Total Suspended Solids (TSS), Phosphorus (Total)
	0709000313		Pecatonica River	IL_PWN-01	Primary Contact - 2 2012 RFP	Yellow Cr.	Fecal Coliform	
	0709000313		Pecatonica River	IL_PWNC	Other Impairments – 3 2012 RFP	Spring Branch	Ammonia (Total)	Phosphorus (Total)
	0709000312		Pecatonica River	IL_RPA	Other Impairments – 3 2012 RFP	LE-AQUA-NA	Phosphorus (Total)	Total Suspended Solids (TSS)

20	0714000603	311,000	Rend Lake	IL_N-08	PWS – 1 2012 RFP	Big Muddy R.	Manganese, Dissolved Oxygen, pH	Sedimentation/Siltation Phosphorus (Total)
			Rend Lake	IL_NI-01	PWS – 1 2012 RFP	Gun Cr.	Manganese Iron, , Dissolved Oxygen	
			Rend Lake	IL_NJ-07	Other Impairments -3 2012 RFP	Casey Fk.	Dissolved Oxygen, Fecal Coliform	Total Suspended Solids (TSS)
			Rend Lake	IL_NL-01	Other Impairments -3 2012 RFP	Snow Cr.	Dissolved Oxygen	Total Suspended Solids (TSS)
			Rend Lake	IL_RNB	Other Impairments -3 2012 RFP	REND	Phosphorus (Total) Manganese	Total Suspended Solids (TSS)
			Rend Lake	IL_RNO	Aquatic Life (3) 2012 RFP	BENTON	Phosphorus (Total)	
			Rend Lake	IL_RNU	Other Impairments -3 2012 RFP	JAYCEES	Phosphorus (Total)	Total Suspended Solids (TSS)
			Rend Lake	IL_RNZB	Other Impairments -3 2012 RFP	ASHLEY RESERVOIR	Phosphorus (Total) Dissolved Oxygen	Total Suspended Solids (TSS), Sedimentation/Siltation
21	0714010607	313,435	Upper Big Muddy	IL_N-06	Other Impairments -3 2012 RFP	Big Muddy R.		Sedimentation/Siltation
			Upper Big Muddy	IL_N-11	Primary Contact (2) Other Impairments - 3 2012 RFP	Big Muddy R.	Sulfates, Fecal Coliform	Sedimentation/Siltation Total suspended Solids (TSS)
			Upper Big Muddy	IL_N-17	Other Impairments - 3 2012 RFP	Big Muddy R.	Dissolved Oxygen	Sedimentation/Siltation Total Suspended Solids (TSS)
			Upper Big Muddy	IL_RNZD	Other Impairments - 3 2012 RFP	HERRIN OLD	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Big Muddy	IL_NZN-13	PWS - 1 Other Impairments -3 2012 RFP	Andy Cr.	Manganese, Iron, Dissolved Oxygen	
			Upper Big Muddy	IL_NZM-01	Other Impairments -3 2012 RFP	Prairie Cr.	Sulfates	
			Upper Big Muddy	IL_NH-06	PWS - 1 Primary Contact - 2 Other Impairments - 3 2012 RFP	M. Fk. Big Muddy	Manganese, Fecal Coliform Dissolved Oxygen	
			Upper Big Muddy	IL_NH-07	PWS – 1 Other Impairments – 3 2012 RFP	M. Fk. Big Muddy	Manganese Dissolved Oxygen	Sedimentation/Siltation
			Upper Big Muddy	IL_RNP	Other Impairments - 3 2012 RFP	West Frankfort Old	Phosphorus (Total)	Total Suspended Solids (TSS)
	0714010604		Upper Big Muddy	IL_RNQ	Other Impairments - 3 2012 RFP	West Frankfort New	Phosphorus (Total)	Total Suspended Solids (TSS)
	0714010605		Upper Big Muddy	IL_RNZE	Other Impairments - 3 2012 RFP	JOHNSTON CITY	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Big Muddy	IL_RNZX	Other Impairments - 3 2012 RFP	ARROWHEAD (WILLIAMSON)	Phosphorus (Total)	
22	0713001003	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	
	0713001001		Upper La Moine	IL_DGPC-01	PWS – 1 2014 RFP	Baptist Creek	Manganese	
	0713001007		Upper La Moine	IL_DGZN-01	Other Impairments - 3 2014 RFP	Prairie Creek	Dissolved Oxygen	Phosphorus (Total) Total Suspended Solids (TSS)
	0713001002		Upper La Moine	IL_DGZR	PWS (1) Other Impairments – 3 2014 RFP	South Branch La Moine River	Manganese Ammonia (Total) Dissolved Oxygen	Phosphorus (Total)
	0713001002		Upper La Moine	IL_RLE	Other Impairments -3 2014 RFP	CARTHAGE	Phosphorus (Total)	Total Suspended Solids (TSS)
23	0713001011	495,350	LaMoine/ Missouri Creek	IL_DG-01	Primary Contact - 2 2014 RFP	La Moine River	Fecal Coliform	
			La Moine/ Missouri Creek	IL_DG-04	Primary Contact - 2 2014 RFP	La Moine River	Fecal Coliform	
			La Moine/ Missouri Creek	IL_DGD-01	PWS – 1 2014 RFP	Missouri Creek	Manganese	
			La Moine/ Missouri Creek	IL_DGDA-01	PWS – 1 2014 RFP	Little Missouri Creek	Manganese Dissolved Oxygen	
24	0714020107	1,003,869	Upper Kaskaskia River/ Shelbyville Lake	IL_O-02	Primary Contact - 2 2014 RFP	Kaskaskia River	Fecal Coliform	
			Upper Kaskaskia River/ Shelbyville Lake	IL_O-15	Primary Contact - 2 2014 RFP	Kaskaskia River	Fecal Coliform	
			Upper Kaskaskia River/ Shelbyville Lake	IL_OQ-01	Primary Contact - 2 2014 RFP	Beck Creek	Fecal Coliform	
			Upper Kaskaskia River/ Shelbyville Lake	IL_OQCA-01	Other Impairments -3 2014 RFP	Coal Creek		Phosphorus (Total)
			Upper Kaskaskia River/ Shelbyville Lake	IL_OT-02	Primary Contact (2) 2014 RFP	West Okaw River	Fecal Coliform	
			Upper Kaskaskia River/ Shelbyville Lake	IL_OT-04	Other Impairments – 3 2014 RFP	West Okaw River	Dissolved Oxygen pH	Phosphorus (Total)
			Upper Kaskaskia River/ Shelbyville Lake	IL_OU-01	Primary Contact - 2 2014 RFP	Jonathon Creek	Fecal Coliform	
			Upper Kaskaskia River/ Shelbyville Lake	IL_OW-01	Other Impairments – 3 2014 RFP	Lake Fork		Sedimentation/Siltation
			Upper Kaskaskia River/ Shelbyville Lake	IL_OW-02	Other Impairments – 3 2014 RFP	Lake Fork		Sedimentation/Siltation
			Upper Kaskaskia River/ Shelbyville Lake	IL_OZZT-01	Other Impairments – 3 2014 RFP	Asa Creek	pH	Sedimentation/Siltation
25	0714020301	69,563	Lou Yaeger	IL_RON	PWS - 1 Other Impairments – 3 2014 RFP	LOU YAEGER LAKE	Atrazine, Phosphorus (Total)	Total Suspended Solids (TSS)
26	0708010418	1,119,868	Mississippi	IL_K-22	PWS -1 2014 - RFP	Mississippi River	Atrazine	
27	0712000610	167,816	Upper Fox/Chain O'Lake	IL_RTT	Other Impairments – 3 2014 RFP	ANTIOCH LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_VTJ	Other Impairments – 3 2014 RFP - 3	BLUFF LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RTD	Other Impairments – 3 2014 RFP	LAKE CATHERINE	Phosphorus (Total)	
			Upper Fox/Chain O'Lake	IL_RTI	Other Impairments – 3 2014 RFP	CHANNEL LAKE	Phosphorus (Total)	

			Upper Fox/Chain O'Lake	IL_STQ	Other Impairments – 3 2014 RFP	DAVIS LAKE	Phosphorus (Total)	
			Upper Fox/Chain O'Lake	IL_VTD	Primary Contact - 2 Other Impairments – 3 2014 RFP	DEEP LAKE	Fecal Coliform	
			Upper Fox/Chain O'Lake	IL_VTH	Other Impairments – 3 2014 RFP	DUNN'S LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RTZG	Other Impairments – 3 2014 RFP	DUCK LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_VTK	Other Impairments – 3 2014 RFP	FISH-DUNCAN LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_VTT	Other Impairments – 3 2014 RFP	FISCHER LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RTF	Other Impairments – 3 2014 RFP	FOX LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_DT-35	Other Impairments – 3 2014 RFP	Fox River		Sedimentation/Siltation
			Upper Fox/Chain O'Lake	IL_RTQ	Other Impairments – 3 2014 RFP	GRASS LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_UTM	Other Impairments – 3 2014 RFP	HIDDEN LAKE	Phosphorus (Total) Dissolved Oxygen pH	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RTJ	Other Impairments – 3 2014 RFP	LONG LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL RTR	Other Impairments – 3 2014 RFP	LAKE MARIE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_UTX	Other Impairments – 3 2014 RFP	MCGREAL LAKE	Phosphorus (Total)	
			Upper Fox/Chain O'Lake	IL_RTUA	Other Impairments – 3 2014 RFP	NIPPERSINK LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_STR	Other Impairments – 3 2014 RFP	NORTH CHURCHILL LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_VTW	Other Impairments – 3 2014 RFP	PETITE LAKE	Phosphorus (Total)	
			Upper Fox/Chain O'Lake	IL_RTU	Other Impairments – 3 2014 RFP	PISTAKEE LAKE	Phosphorus (Total) Ammonia (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RTH	Other Impairments – 3 2014 RFP	ROUND LAKE		Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_STS	Other Impairments – 3 2014 RFP	SOUTH CHURCHILL LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_RGZT	Other Impairments - 3	SPRING LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_WTA	Other Impairments – 3 2014 RFP	SUMMERHILL ESTATE	Phosphorus (Total)	Total Suspended Solids (TSS)

			Upper Fox/Chain O'Lake	IL_UTW	Other Impairments – 3 2014 RFP	LAKE TRANQUILITY	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_VTZA	Other Impairments – 3 2014 RFP	TURNER LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Chain O'Lake	IL_ RTZH	Other Impairments – 3 2014 RFP	WOOSTER LAKE	Phosphorus (Total)	
28	0712000302	66,520	Thorn Creek	IL_HBD-02	Primary Contact - 2 Other Impairments -3 2014 - RFP	Thorn Creek	Fecal Coliform, Dissolved Oxygen Silver, Zinc	Phosphorus (Total) Total Suspended Solids (TSS)
				IL_HBD-03	Other Impairments -3 2014 - RFP	Thorn Creek	Fecal Coliform Dissolved Oxygen	
				IL_HBD-04	Primary Contact - 2 2014 - RFP	Thorn Creek	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total)
				IL_HBD-05	Primary Contact – 2 2014 - RFP	Thorn Creek	Fecal Coliform	Phosphorus (Total)
				IL_HBD-06	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Thorn Creek	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total)
				IL_HBDA-01	Other Impairments – 3 2014 - RFP	North Creek	Dissolved Oxygen	Sedimentation/Siltation
				IL_HBDB-03	Primary Contact – 2 2014 - RFP	Butterfield Creek	Fecal Coliform	
				IL_ HBDC	Primary Contact – 2 2014 - RFP	Deer Creek	Fecal Coliform	Phosphorus (Total)
				IL_HBDC-02	Primary Contact – 2 2014 - RFP	Deer Creek	Fecal Coliform Dissolved Oxygen	Phosphorus (Total) Sedimentation/Siltation
				IL_RHI	Other Impairments - 3 2014 - RFP	SAUK TRAIL	Phosphorus (Total) Dissolved Oxygen	Sedimentation/Siltation Total Suspended Solids (TSS)
29	0712000301	86,400	Chicago River-North Branch	IL_HCC-07	Primary Contact - 2 Other Impairments - 3 2014 - RFP	North Branch	Dissolved Oxygen Fecal Coliform Chloride	Phosphorus (Total) Total Suspended Solids (TSS)
				IL_HCCB-05	Primary Contact - 2 Other Impairments - 3 2014 - RFP	West Fork	Dissolved Oxygen Fecal Coliform Chloride	Phosphorus (Total) Total Suspended Solids (TSS)
				IL_HCCC-02	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Middle Fork	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total), Sedimentation/Siltation Total Suspended Solids (TSS)
				IL_HCCC-04	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Middle Fork	Fecal Coliform, Dissolved Oxygen Chloride, Water Temperature	Phosphorus (Total) Sedimentation/Siltation Total Suspended Solids (TSS)
				IL_HCCD-01	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Skokie River	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total) Total Suspended Solids (TSS)
				IL_HCCD-09	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Skokie River	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total), Sedimentation/Siltation
				IL_RHJ	Other Impairments – 3 2014 - RFP	SKOKIE LAGOONS	Phosphorus (Total)	Total Suspended Solids (TSS)
				IL_RHJA	Other Impairments – 3 2014 - RFP	CHICAGO BOTANIC GARDEN	Phosphorus (Total)	
				IL_UHH	Other Impairments – 3 2014 - RFP	EAGLE LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
30	0712000611	108,156	Upper Fox/Flint Creek	IL_RTZT	Other Impairments – 3 2014 - RFP	LAKE BARRINGTON	Fecal Coliform Phosphorus (Total)	Total Suspended Solids (TSS)

			Upper Fox/Flint Creek	IL_UTI	Other Impairments – 3 2014 - RFP	DRUMMOND LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_RTZR	Other Impairments – 3 2014 - RFP	ECHO LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_DT-22	Primary Contact - 2 Other Impairments – 3 2014 - RFP	Fox River	Fecal Coliform, Chloride, Copper	Sedimentation/Siltation
			Upper Fox/Flint Creek	IL _VTI	Other Impairments – 3 2014 - RFP	GRASSY LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_RTZU	Primary Contact - 2 Other Impairments - 3 2014 - RFP	HONEY LAKE	Fecal Coliform Phosphorus (Total)	
			Upper Fox/Flint Creek	IL_RTZI	Other Impairments – 3 2014 - RFP	ISLAND LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_STK	Other Impairments – 3 2014 - RFP	LAKE FAIRVIEW	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_STO	Other Impairments – 3 2014 - RFP	LAKE NAPA SUWE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL _VTZJ	Other Impairments -3 2014 - RFP	LAKE LOUISE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_RTP	Other Impairments – 3 2014 - RFP	SLOCUM LAKE	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_RTZQ	Other Impairments – 3 2014 - RFP	TIMBER LAKE (SOUTH)	Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_RTZF	Primary Contact - 2 Other Impairments - 3 2014 - RFP	TOWER LAKE	Fecal Coliform Phosphorus (Total)	Total Suspended Solids (TSS)
			Upper Fox/Flint Creek	IL_STV	Other Impairments - 3 2014 - RFP	WOODLAND (HIGHLAND) LAKE	Phosphorus (Total) Dissolved Oxygen	Total Suspended Solids (TSS)
31	0712000408	332,600	DuPage River/Salt Creek	IL_GB-01	Other Impairments -3 2014 - RFP	DuPage River		Phosphorus (Total)
			DuPage River/Salt Creek	IL_GB-11	Primary Contact - 2 Other Impairments - 3 2014 - RFP	DuPage River	Fecal Coliform, Chloride	Phosphorus (Total) Sedimentation/Siltation
			DuPage River/Salt Creek	IL_GB-16	Primary Contact - 2 Other Impairments - 3 2014 - RFP	DuPage River	Fecal Coliform Dissolved Oxygen	Phosphorus (Total)
			DuPage River/Salt Creek	IL_GBK-05	Primary Contact - 2 Other Impairments - 3 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 Other Impairments - 3 2014 - RFP	West Branch DuPage River	Fecal Coliform	Phosphorus (Total) Sedimentation/Siltation
			DuPage River/Salt Creek	IL_GBK-14	Primary Contact - 2 Other Impairments - 3 2014 - RFP	West Branch DuPage River	Fecal Coliform, Dissolved Oxygen pH	
			DuPage River/Salt Creek	IL_GBL-08	Other Impairments - 3 2014 - RFP	East Branch DuPage River	pH	Phosphorus (Total) Sedimentation/Siltation Total Suspended Solids (TSS)
			DuPage River/Salt Creek	IL_GBL-10	Primary Contact - 2 Other Impairments - 3 2014 - RFP	East Branch DuPage River	Fecal Coliform, pH	Phosphorus (Total)
	0712000404		DuPage River/Salt Creek	IL_GBKA	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Spring Brook	Fecal Coliform, Dissolved Oxygen Chloride	Phosphorus (Total)
			DuPage River/Salt Creek	IL_GBKA-01	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Spring Brook	Fecal Coliform, Copper	Phosphorus (Total)
			DuPage River/Salt Creek	IL_GL	Other Impairments – 3 2014 - RFP	Salt Creek		Phosphorus (Total)
			DuPage River/Salt Creek	IL_GL-09	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Salt Creek	Fecal Coliform	Phosphorus (Total) Sedimentation/Siltation
			DuPage River/Salt Creek	IL_GL-10	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Salt Creek	Fecal Coliform, pH, Nickel	

			DuPage River/Salt Creek	IL_GL-19	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Salt Creek	Fecal Coliform	Phosphorus (Total)
			DuPage River/Salt Creek	IL_GLA-02	Primary Contact - 2 Other Impairments - 3 2014 - RFP	Addison Creek	Fecal Coliform, Nickel	Phosphorus (Total)

There will be 31 TMDL Watershed Projects as part of the Short-Term Vision Goal (2015-2018) – TMDL Development/Alternative Approach that will address about 135 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 draft 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 Reservoir/Sugar Creek); and the Vermilion River TMDL project is being developed by Agency staff. Table 4 (2012 -TMDL RFP) and Table 5 (2014 -TMDL RFP) 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 have received approval for 2 projects (Spring Lake Watershed TMDL and Lake Glenn Shoals Watershed TMDL) on September 29, 2014, and the remaining projects will be submitted once the revisions are made per USEPA guidance. The watershed numbers for Tables 2-5 coincides with the watershed numbers in Table 1.

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

Watershed No.	TMDL Watershed	Watershed Area (approximate in acres)	TMDL Development Stage	Final Draft Completion Date
1	Carlinville Lake	15,481	Stage 3	FFY*- 15/16
2	East Fork Kaskaskia/Farina Lake	15,876	Stage 3	FFY - 15/16
3	Lake Mattoon/Lake Paradise	46,600	Stage 3	FFY - 15/16
4	Nashville City Lake/Washington County Lake	7,200	Stage 3	FFY - 15/16
5	North Fork Vermillion River	188,000	Stage 3	FFY - 15/16
6	Salem City Reservoir	2,582	Stage 3	FFY - 15/16
7	Shoal Creek	477,000	Stage 3	FFY - 15/16
8	Skillet Fork	387,000	Stage 3	FFY - 15/16

*FFY – Federal Fiscal Year

The Agency entered into Phase II Intergovernmental Agreement with the Illinois State Water Survey (ISWS) for Stage 3 TMDL development and implementation plan for Canton Lake Watershed and Vermont City Reservoir/Sugar Creek Watershed. Vermont City Reservoir will have TMDLs developed for four pollutants, and Sugar Creek will have one TMDL developed. Canton Lake will have TMDLs developed for two pollutants. The TMDL final report submittal to USEPA for approval is expected to be completed by early 2016. The Vermilion River TMDL project is an in-house TMDL project developed by Agency staff and the project currently is in Stage 3. The watershed area, the TMDL development stage, and the project completion dates for these projects are shown in Table 3.

Table 3. TMDL Watershed Project (ISWS and IEPA)

Watershed No.	TMDL Watershed	Watershed Area (approximate in acres)	TMDL Development Stage	Final Draft Completion Timeline
9	Vermilion River	13,700	Stage 3	FFY-16
10	Canton Lake	15,481	Stage 3	FFY- 16
11	Vermont Reservoir/Sugar Creek	15,876	Stage 3	FFY-16

There are 10 TMDL projects that are being developed at part of the 2012 RFP as shown in Table 4 below.

Table 4. Ongoing draft TMDL Watershed Projects (2012 TMDL RFP)

Watershed No.	TMDL Watershed	Watershed Area (approximate in acres)	TMDL Development Stage	Final Draft Completion Timeline
12	Bonpas Creek	177,734	Stage 2	FFY-17/ FFY -18
13	Prairie /Langan Creeks	110,979	Stage 2	FFY-17/ FFY -18
14	Galena/Sinsinawa Rivers	211,000	Stage 3	FFY- 17
15	Horseshoe Lake (Alexander Co.)	10,200	Stage 3	FFY -16
16	Lake Springfield	184,000	Stage 3	FFY- 17
17	Little Vermilion River (LaSalle Co.)	80,054	Stage 2	FFY-17/ FFY -18
18	Middle Sangamon River	328,000	Stage 2	FFY-17/ FFY -18
19	Pecatonica River	515200	Stage 2	FFY-17/ FFY -18
20	Rend Lake	311,000	Stage 3	FFY-17/ FFY -18
21	Upper Big Muddy River	313,435	Stage 2	FFY-17/ FFY -18

The 2014 TMDL RFP (see Table 5) includes two groups of watershed projects:
Group - A (Watershed Projects No. 1-5), and Group - B (Watershed Projects No. 6-10) TMDL watershed projects. The Group-A projects are new TMDL watershed projects that will need Stage 1 and Stage 2 (optional) and Stage 3 reports, while Group-B watershed projects are from earlier TMDL contracts that were not completed on time. The Stage 1 and in some cases Stage 2 reports have been completed, and only Stage 3 will be developed for Group B projects.

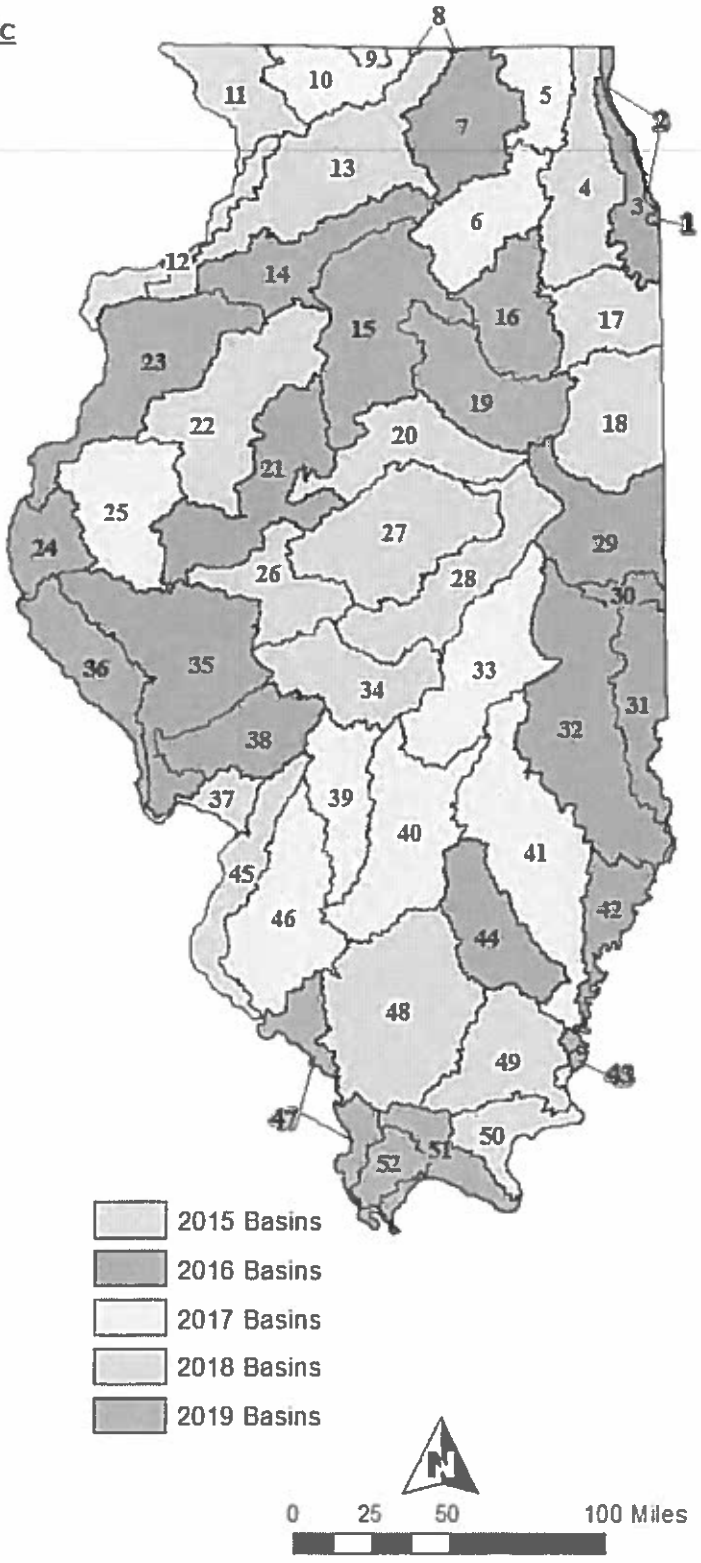
Table 5. The 2014 TMDL RFP – ongoing/upcoming TMDL Watershed Projects

Watershed No.	TMDL Watershed	Watershed Area (approximate-in acres)	TMDL Development Stage	Final Draft Completion Date
22	Upper La Moine	368,343	Stage 1	FFY -17/ FFY -18
23	La Moine/Missouri Creek	495,350	Stage 1	FFY -17/ FFY -18
24	Upper Kaskaskia River/Shelbyville Lake	1,003,869	Stage 1	FFY -17/ FFY -18
25	Lou Yeager	69,563	Stage 1	FFY -17/ FFY -18
26	Mississippi	1,119,868	Stage 1	FFY -17/ FFY -18
27	Upper Fox/Chain O'Lake	167,816	Stage 3	FFY -17
28	Upper Fox/Flint Creek	108,156	Stage 3	FFY -17
29	Thorn Creek	66,520	Stage 3	FFY -17
30	Chicago River-North Branch	86,400	Stage 3	FFY -17
31	DuPage River/Salt Creek	332,600	Stage 3	FFY -17

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 6). 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 NPDES permits – five year permit renewal cycle that will help permit engineers and staff from the Water Quality Standards (WQS) to include Waste Load Allocation (WLA) in NPDES permits where TMDLs have been developed and WLA are recommended to be included in NPDES permits.

Figure 1. Intensive Basin Surveys 2015-2020 Monitoring Schedule

ID	Basin Name	8-Digit HUC
1	Little Calumet-Galien	04040001
2	Pike-Root	04040002
3	Chicago	07120003
4	Des Plaines	07120004
5	Upper Fox	07120006
6	Lower Fox	07120007
7	Kishwaukee	07090006
8	Upper Rock	07090002
9	Sugar	07090004
10	Pecatonica	07090003
11	Apple-Plum	07060005
12	Copperas-Duck	07080101
13	Lower Rock	07090005
14	Green	07090007
15	Lower Illinois-Senachwine Lake	07130001
16	Upper Illinois	07120005
17	Kankakee	07120001
18	Iroquois	07120002
19	Vermilion	07130002
20	Mackinaw	07130004
21	Lower Illinois-Lake Chautauqua	07130003
22	Spoon	07130005
23	Flint-Henderson	07080104
24	Bear-Wyaconda	07110001
25	La Moine	07130010
26	Lower Sangamon	07130008
27	Salt	07130009
28	Upper Sangamon	07130006
29	Vermilion	05120109
30	Middle Wabash-Little Vermilion	05120108
31	Middle Wabash-Busseron	05120111
32	Embarras	05120112
33	Upper Kaskaskia	07140201
34	South Fork Sangamon	07130007
35	Lower Illinois	07130011
36	The Soy	07110004
37	Peruque-Piasa	07110009
38	Macoupin	07130012
39	Shoal	07140203
40	Middle Kaskaskia	07140202
41	Little Wabash	05120114
42	Lower Wabash	05120113
43	Highland-Pigeon	05140202
44	Skillet	05120115
45	Cahokia-Joachim	07140101
46	Lower Kaskaskia	07140204
47	Upper Mississippi-Cape Girardeau	07140105
48	Big Muddy	07140106
49	Saline	05140204
50	Lower Ohio-Bay	05140203
51	Lower Ohio	05140206
52	Cache	07140108



TMDL – Alternatives 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 is expected to be completed by December 2015 pursuant to NPDES Permit(s) - FRIP Special Condition language for those major facilities (primarily POTWs) that are included in the study area. In the event that 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 have 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 in an attempt 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 LRS as an alternative for TMDL development where possible. The Agency started developing LRS 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 in order for the water body to meet "Full Use Support" for its designated uses. The Agency will work with USEPA to determine the necessary elements of LRS for TMDL Alternative.

The vision frame work and long term goals for 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 in order to meet the DO water quality standards in impaired river segments.

- The Upper Des Plaines River Watershed Workgroup of Lake County (DRWW) has recently been created with a goal 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 issued an RFP to complete the task.

- The Hickory Creek Watershed Planning Group is developing a Watershed Based Plan and through follow up monitoring will determine whether they need to develop a "Third Party TMDL" to address water quality issues.

"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 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 this Special Condition:

SPECIAL CONDITION : The Permittee shall participate in the Fox River Study Group (FRSG). The Permittee shall work with other watershed members of the FRSG to determine the most cost effective means to remove dissolved oxygen (DO) and offensive condition impairments in the Fox River. This Permit may be modified to include additional conditions and effluent limitations to include implementation measures based on the Fox River Implementation Plan (Implementation Plan). The following tasks will be completed during the life of this permit:

1. *The Permittee shall prepare a phosphorus removal feasibility report specific to its plant(s) on the Method, time frame and costs for reducing its loading of phosphorus to levels equivalent to monthly average discharges of 1 mg/L and 0.5 mg/ on a seasonal basis and on a year round basis. The feasibility report shall be submitted to the Agency (12) months from the effective date of the Permit. The feasibility report shall also be shared with the FRSG,*

2. *The Permittee shall submit the Fox River Study Group Watershed Investigation Phase III Report, which Includes stream modeling, to the Agency within one month of the effective date of this Permit.*

3. *The FRSG will complete an Implementation Plan that identifies phosphorus input reductions by point source discharges, non-point source discharges and other measures necessary to remove DO and offensive condition impairments in the Fox River. The Implementation Plan shall be submitted to the IEPA by December 31, 2015. The Permittee shall initiate the recommendations of the Implementation Plan that is applicable to said Permittee during the remaining term of this Permit. This Permit may be modified to include additional pollutant reduction activities necessary to implement the Implementation Plan.*

4. *In application for renewal of this permit, the Permittee shall consider and incorporate recommended FRSG phosphorus input reduction implementation projects that the Permittee, will implement during the next permit term.*

5. *The Permittee shall operate the existing facilities to optimize the removal of phosphorus.*

The MS4 General permit for FRSG members will also include the Fox River Implementation Plan (FRIP) by reference to water quality studies in the watershed as language in the MS4 Permit.

In addition the Permittees are expected to meet a phosphorus limit of 1.0 mg/L (Annual Average) within 54 months. 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.

"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. At this time 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 Draft 2016 Integrated Report to inform the general public the Vision development process.

Once USEPA and the Agency agree on the proposed Long Term Vision for Assessment, Restoration, and Protection under the CWA Section 303(d) Program (The Vision) the information will be available on the Agency's TMDL website.

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 draft document was released for public comment in November 2014 with the final document addressing concerns was completed in July 2015. 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 (http://www.epa.state.il.us/water/nutrient/documents/illinois-nlrs-public-comment-11-20-14.pdf). 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 TP & 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 Illinois EPA's "Vision" watersheds.

- Lower Rock River Basin 0709000512 – Point Source Priority and Nitrogen NPS Priority
  - 0709000501 – Rock River/Pierce Lake Watershed
  - 0709000503 – Kyte River Watershed

- Vermilion River Basin 05120112 – Nitrogen NPS Priority
  - 0512010901 – Big Four Ditch Watershed
  - 0512010902 – Saline Branch Watershed

- Embarrass River Basin 05120112 – Total Phosphorus NPS Priority
  - 0512011206 – Kickapoo Creek Watershed
  - 0512011211 – Big Creek Watershed

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

<u>2015</u>
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

Monitoring initiated and completed for the watersheds strategized during 2015 (Embarrass Basin - Kickapoo Creek Watershed and Vermilion River – Wabash Basin).

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
  - 051201140 Little Wabash River/Green Creek Watershed
  - 0512011402 Salt Creek Watershed

2017

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

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 River Basin 0709000513
  - 0709000501 Rock River/Pierce Lake Watershed
  - 0709000503 Kyte River Watershed

Assess watersheds sampled in the previous year (Embarrass Basin -Kickapoo Creek Watershed and Vermilion River – Wabash Basin).

Begin TMDL and Watershed based Plan development for TP, TN, DO, and bacteria in the watersheds sampled in 2016.

2018

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

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

Begin TMDL and Watershed based Plan development for TP, TN, DO, and bacteria in the watersheds sampled in 2017.

2019

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

Begin TMDL and Watershed based Plan development TP, TN, DO, and bacteria in the watersheds sampled in 2018.

Complete TMDLs and Watershed based planning efforts begun in 2017.

2020
Complete TMDLs and Watershed based planning efforts begun in 2018.

2021
Complete TMDLs and Watershed based planning efforts begun in 2019.

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

Assess program success:

The 305(b) assessment of the following waters identified in Table 6 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 nonpollutants as part of 305(b), we would address those through the Watershed Based Implementation Plan as well.

Table 6. Basins, Watersheds, Segments and Pollutants to be addressed by the "Vision".

Basin/Watershed	HUC	Segment/Causes	Watershed	HUC	Segment/Causes
Embarrass	***05120112***	***Monitoring: 2015***			
Kickapoo Cr.	0512011206		**Big Creek**	0512011211	
	303(d)	BENA-01: DO		303(d)	BEDB-01: DO, Mn, TP
Vermilion-Wabash	***05120109***	***Monitoring: 2016***			
Big Ditch	0512010901		**Saline Branch**	0512010902	
	303(d)	BPKP-01: DO		303(d)	BPJC-08: pH
		BPKP-02: DO			BPJCA: Cu, DO, TP
Little Wabash	***05120114***	***Monitoring: 2017***			
Little Wabash R/Green Cr.	0512011401		**Salt Creek**	0512011402	
	303(d)	CSP-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, Uknw			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: DO

					CPC-TU-A1:NA
					CPA-01: NA
					CPD-03: DO
					CPD-01: DO
					CPD-04: DO
					CPB:NA
Lower Rock	***07090005***	***Monitoring: 2018***			
Rock R/Pierce Lake	0709000501		**Kyte River**	0709000503	
	303(d)	P-15: Hg*, PCBs*, fecal		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:

NA: Not Assessed	Alt.: Alteration	Strside: streamside
Lit.: littoral	TP: total phosphorus	DO: dissolved oxygen
Hg: mercury*	Uknw: unknown	TSS: total suspended solids
Aq: aquatic	Mn: manganese	Sed/Silt: sedimentation/siltation
Fecal: *Fecal coliform* bacteria	Chgs: changes	Cu: copper
Instrm: in-stream		

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

- Mercury (Hg)
- Polychlorinated biphenyl (PCB)
- Methoxychlor

Each and every TMD/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.