

## **Chapter 6.0 Plan Implementation and Evaluation**

This chapter identifies a strategy for moving from planning to implementation of the action plan recommendations. How frequently this plan is used and implemented by watershed stakeholders is one indicator of its success. Improvement in water quality and watershed resources, the reduction of nonpoint source pollution, and the reduction of flooding is also important indicator. Successful plan implementation will require significant cooperation and coordination among watershed stakeholders to secure project funding and to efficiently and effectively move the action plan from paper to the watershed.

This chapter also relates some more technical details about the expected results of putting action recommendations in place. It also presents a plan for monitoring and evaluating plan implementation as a way to determine progress towards meeting the watershed goals and objectives.

### **6.1 Plan Implementation Roles Strategy**

Successful plan implementation is dependent on watershed stakeholders forming partnerships as a means of maximizing efforts to complete watershed projects. Key stakeholders that have potential to form watershed partnerships for the implementation of the watershed plan are listed in Chapter 5 Section 2. These and other stakeholders are encouraged to:

- Acquire funding through grants and other means;
- Implement educational programs;
- Sponsor and participate in water quality sampling;
- Provide technical and regulatory guidance;
- Maintain and monitor water quality improvement projects; and
- Update and amend the watershed plan as changes occur.

Throughout the planning process the DeKalb County Watershed Steering Committee (DCWSC) functioned as the stakeholder forum for the watershed. The implementation of East Branch South Branch Kishwaukee River Watershed-Based Action Plan will ultimately depend on the DCWSC continuing to serve as the lead organization focused on the implementation of the plan.

### **6.2 Pollutant Load Reductions and Targets**

In order to meet the requirements for a watershed-based plan, the plan must pay particular attention to water quality pollutants and impairments and measures for reducing the impairment. The high priority water quality pollutants for the East Branch South Branch Kishwaukee River Watershed include low dissolved oxygen indicated by high BOD and COD and nutrients (phosphorous). Additional impairments addressed by the plan include degraded watershed aquatic habitat, impacted or lack of stream buffers and riparian zones, and flood flows and damages. See Chapter 3 for additional details on the causes and sources of water quality impairments.

For each of these impairments, the intent of the action plan recommendations is to reduce the impairment to an acceptable level. The ‘acceptable level’ for some pollutants is set by the Illinois Pollution Control Board and Illinois Environmental Protection Agency.

Setting impairment reduction targets and estimating the improvement expected by implementing plan recommendations are important for assessing the effectiveness of watershed plan recommendations for determining whether watershed impairments are being addressed. Targets and reduction estimates also satisfy one of the nine required watershed-based plan elements established by the US Environmental Protection Agency.

Targets and reduction estimates can be based on water quality criteria, data analysis, reference conditions, literature values, and/or expert examination of water quality conditions that support “Designated Uses” and biological integrity. Progress towards meeting the targets and reduction estimates indicated whether implemented BMPs are effective at achieving the watershed plan’s goals. If the implemented BMPs are determined to not be making progress towards obtaining the goals, the Action Plan should be altered. Table 6-1 includes specific target values and indicators for meeting the water quality objectives developed for this watershed-based plan. Section 6.5 contains Report Cards that can be used to evaluate the effectiveness of the implemented Action Plan projects.

**Table 6-1 Targets and Indicators to meet water quality objectives**

Water Quality Objective	Target Value and Indicator
1) Stream shall meet state water quality standards to fully support designated uses.	<ul style="list-style-type: none"> <li>• Total Suspended Solids: Less than 750 ppm (Illinois EPA standard)</li> <li>• Dissolved Oxygen: No less than 5 mg/L (Illinois EPA standard)</li> <li>• Temperature: Less than 90 degree F (Illinois EPA standard)</li> <li>• pH: Between 6.5 and 9 (Illinois EPA standard)</li> <li>• Chemical water quality standards: See Illinois EPA standards in Table 3-32</li> <li>• Macroinvertebrate Biotic Index (MBI): Less than 5.7</li> <li>• Public Opinion: 50% of surveyed citizens feel water quality is improving.</li> </ul>
2) Reduce sediment and nutrient loading by protecting and restoring streambanks and stream channels using bioengineering techniques.	<ul style="list-style-type: none"> <li>• Acres of riparian buffer: Riparian buffers restored on 30 acres in years 1-5, 40 acres in years 5-10, and 45 acres in years 10-15.</li> <li>• Acres of wetland creation/restoration: Implement wetland creation/restoration on 200 acres in years 1-5, 300 acres in years 5-10, and 500 acres in years 10-15.</li> <li>• Linear feet of 2-stage channels: Implement 2-stage channels on 4,000 linear feet in years 1-5, 6,000 linear feet in years 5-10, and 9,000 linear feet in years 10-15.</li> <li>• Linear feet of stabilized streambanks: Implement stream stabilization improvement projects: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> <li>• Acres of bioinfiltration BMPs: Implement urban projects: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> <li>• Macroinvertebrate Biotic Index (MBI): Less than 5.7</li> <li>• Chemical water quality standards: See Illinois EPA standards in Table 3-32</li> </ul>

Water Quality Objectives	Target Value and Indicator
3) Retrofit existing stormwater management facilities and install new facilities within developed areas to reduce nutrient and sediment loading.	<ul style="list-style-type: none"> <li>• Acres of retrofits: Implement detention basin retrofits: one project in years 1-5 and two projects in years 5-10 and 10-15</li> <li>• Acres of bioinfiltration BMPs: Implement urban projects: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> <li>• Chemical water quality standards: Discharges from stormwater management facilities meet Illinois EPA standards</li> </ul>
4) Identify open space parcels for implementation of BMPs and designed for water quality improvement and wetland creation.	<ul style="list-style-type: none"> <li>• Acres of wetland creation/restoration: Implement wetland creation/restoration on 200 acres in years 1-5, 300 Acres of riparian buffer: Riparian buffers restored on 30 acres in years 1-5, 40 acres in years 5-10, and 45 acres in years 10-15.</li> <li>• Linear feet of stabilized streambanks: Implement stream stabilization improvement projects: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> <li>• Retrofits: Implement detention basin retrofits: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> </ul>
5) Implement stormwater management practices to stabilize stream flows and reduce stormwater runoff entering streams.	<ul style="list-style-type: none"> <li>• Flood problem areas: Implement at least two flood mitigation projects within each timeframe: 1-5 years, 5-10 years, and 10-15.</li> <li>• Linear feet of stabilized streambanks: Implement stream stabilization improvement projects: one project in years 1-5 and two projects in years 5-10 and 10-15.</li> <li>• Acres of wetland creation/restoration: Implement wetland creation/restoration on 200 acres in years 1-5, 300 Acres of riparian buffer: Riparian buffers restored on 30 acres in years 1-5, 40 acres in years 5-10, and 45 acres in years 10-15.</li> <li>• Retrofits: Implement detention basin retrofits: one project in years 1-5 and two projects in years 5-10 and 10-15</li> <li>• New Facilities: Construct new stormwater management facilities in developed areas: one project in years 1-5 and two projects in years 5-10 and 10+</li> </ul>
5) Educate the public about protecting and improving water quality	<ul style="list-style-type: none"> <li>• Public Opinion: 50% of surveyed citizens feel water quality is improving.</li> </ul>

### 6.2.1 Estimating Pollutant Load Reductions

Reducing pollutant loading in the watershed can be accomplished by the construction of new BMPs, improvements to existing pollutant control practices, and or a combination of the methods. Typically, improvements to existing practices can be implemented more quickly and at a lesser cost the construction of new BMPs. However, retrofitting existing practices alone is not efficient to reduce pollutant loads to meet the goals of the watershed-based plan. As such, new BMPs and the reduction of untreated runoff from impervious area need to be integrated into plans to reduce pollutant water in the watershed.

Pollutant load reductions are based on predicted pollutant load removal efficiencies developed by the Indiana Department Environmental Management (IDEM), Michigan Department of Environmental Quality (MDEQ), Illinois State Water Survey (ISWS), and Illinois Environmental Protection Agency (Illinois EPA). Table 6-2 includes a list of BMPs and predicted removal efficiencies. Pollutant load reductions were calculated through the use of workbook included in the “Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual” (Michigan Department of Environmental Quality, June 1999).

**Table 6-2** BMP percent pollutant removal efficiencies

<b>BMP</b>	<b>TSS</b>	<b>TDS</b>	<b>BOD</b>	<b>COD</b>	<b>TN</b>	<b>TKN</b>	<b>DP</b>	<b>TP</b>	<b>Cadmium</b>	<b>Lead</b>	<b>Copper</b>	<b>Zinc</b>
Vegetated Filter Strips	73%	*	50.5%	40%	40%	*	*	45%	*	45%	*	60%
Grass Swales	65%	*	30%	25%	10%	*	*	25%	50%	70%	50%	60%
Infiltration Devices	94%	*	83%	*	*	*	*	83%	*	*	*	*
Extended Wet Detention	86%	*	72%	*	55%	*	*	68.5%	*	40%	*	20%
Wetland Detention	77.5%	*	63%	50%	20%	*	*	44%	*	65%	*	35%
Dry Detention	57.5%	*	27%	20%	30%	*	*	26%	*	50%	*	20%
Settling Basin	81.5%	*	56%	*	*	*	*	51.5%	*	*	*	*
Sand Filters	82.5%	*	40%	*	*	*	*	37.5%	*	*	*	*
Water Quality Inlets	37%	*	13%	5%	20%	*	*	9%	*	15%	*	5%
Weekly Street Sweeping	16%	*	6%	*	*	*	*	6%	*	*	*	*
Infiltration Basin	75%	*	*	65%	60%	*	*	65%	*	65%	*	65%
Infiltration Trench	75%	*	*	65%	55%	*	*	60%	*	65%	*	65%
Porous Pavement	90%	*	*	80%	85%	*	*	65%	*	1%	*	1%
Concrete Grid Pavement	90%	*	*	90%	90%	*	*	90%	*	90%	*	90%
Sand Filter/Infiltration Basin	80%	*	*	55%	35%	*	*	50%	*	60%	*	65%
WQ Inlet with Sand Filter	80%	*	*	55%	35%	*	*	*	*	80%	*	65%
Oil/Grit Separator	15%	*	*	5%	5%	*	*	5%	*	15%	*	5%
Wet Pond	60%	*	*	40%	35%	*	*	45%	*	75%	*	60%
Agricultural Filter Strip	*	*	*	*	53%	*	*	61%	*	*	*	*
Streambank Stabilization	Streambank stabilization pollutant efficiencies vary depending on bank height and lateral recession rates. The USEPA only estimates the removal of sediment, phosphorus and nitrogen from streambank stabilization.											

### **Pollutant Load Reductions Following the Implementation of Recommended BMPs**

Table 6-3 summarizes the overall watershed load reductions associated with the implementation of the following BMPs: riparian buffers, urban BMPs (infiltration based BMPs), post treatment polishing wetlands, streambank stabilization, wetland detention basin retrofits, and creation/restoration of wetlands. Table 6-4 summarizes the overall watershed load reductions associated with the implementation of the BMPs types modeled.

Some water quality BMPs recommended in Chapter 5 were not included the load reduction calculations. These BMPs include stream corridor management programs, removal of structures in the 100-year flood plain, native vegetation, and street sweeping. Table 6-4 lists and compares additional BMPs that are designed to achieve water quality goals and standards. The table also includes a rating for each BMP that represents their effectiveness when applied to a particular land use. The ratings include High (H), Medium (M), and Low (L). Chapter 4 also includes additional information on BMPs that can be implemented in the watershed.

**Table 6-3** Pollutant Load Reductions for Site Specific BMPs

BMP ID#	BMP Type	Pollutant Load Reductions (lbs/year)											
		BOD	COD	TSS	LEAD	COPPER	ZINC	TDS	TN	TKN	DP	TP	CADMIUM
50	Riparian Buffers	40	204	809	0	U	2	U	9	U	U	1	U
51	Infiltration-based BMP	U	1017	5508	6	U	5	U	49	U	U	6	U
54	Infiltration-based BMP	U	8538	21368	14	U	54	U	344	U	U	48	U
56	Wetland Creation	161	1190	10079	0		2		41			7	161
58	Streambank Stabilization	U	U	610.4	U	U	U	U	1220.7	U	U	610.4	U
60	Extended wetland detention	1556	7910	27061	17	U	36	U	136	U	U	40	1556
61	Infiltration-based BMP	U	1575	4661	5	U	6	U	21	U	U	3	U
62	Infiltration-based BMP	U	1348	3373	2	U	9	U	54	U	U	9	U
63	Infiltration-based BMP	U	1943	4863	3	U	12	U	78	U	U	11	U
64	Infiltration-based BMP	U	1551	3381	3	U	10	U	62	U	U	9	U
66	Riparian Buffers	61	448	4468	0	U	2	U	38	U	U	3	61
N/A	Riparian Buffers	1045	7728	770066	1	U	29	U	662	U	U	56	1045
N/A	2-Stage Channels	U	U	1292	U	U	U	U	2584	U	U	1292	U
N/A	Wetland Creation	13230	98000	830025	9	U	169	U	3360	U	U	554	U

U= Removal efficiency for the particular BMP and constituent not available.

**Table 6-4** Watershed-wide Summary of BMPs

BMP Type	Unit of Measurement	Cumulative Size	Cumulative Cost	Pollutant Load Reductions (lbs/year)								
				TSS	BOD	COD	TN	TP	Cd	Pb	Cu	Zn
All BMPs	-	-		1,687,561	16,093	131,452	8,659	2,649	0	60	0	366
Riparian Buffers	Acres	122.6	\$3,678,000	775,373	1,146	8,380	709	60	U	1	U	33
Infiltration-based BMP	Acres	6.77	\$4,423,515	43,152	U	15,972	608	86	U	33	U	96
Wetland Creation	Acres	1,080	\$10,000,000	840,104	13,391	99,190	3,401	561	U	9	U	171
Streambank Stabilization	Linear feet	8,976	\$673,2000	610.4	U	U	1,221	610	U	U	U	U
Extended wetland detention	Acres	4.1	\$41,000	27,061	1,556	7,910	136	40	1,556	17	U	36
2-Stage Channels	Linear feet	19,000	\$4,750,000	1,292	U	U	2,584	1,292	U	U	U	U
<b>Existing Load</b>	-	-	-	36,181,153	583,242	2,047,671	82,616	21,472	203	732	379	3499

U= Removal efficiency for the particular BMP and constituent not available.



**Table 6-5** List of urban/transitional BMPs for reducing pollutant loading

Land Use	Contaminant Reduction							Runoff Reduction	
	TSS	BOD	Oil/Grease	Total N	Sediment	Total P	Metals	Rate	Volume
<b>Developed Areas</b>									
Native Landscaping	M	M	M	H	M	H	L		
Paved Area Sweeping	M	L	L	L	H	H	M		
Downspout Disconnection								L	L
Rain Gardens		L		L	L	L		M	M
<b>Construction Sites</b>									
Maintenance of Erosion Control	L				M		L		
Expedited Stabilization	L				H		L		
Use of Polymers	L				M	L	L		
<b>Retrofits and New Development</b>									
Sediment Basins	M	L	M	L	H	M	M	H	L
Swales	M	L	M	L	M	M	M	M	M
Wetland Treatment	M	M	H	H	H	M	M	H	M
Stormwater Treatment Train	H	H	H	H	H	H	H	H	M
Permeable Pavement	H	M	M	M	H	M	M	H	H
Infiltration Basins	H	H	H	H	H	H	H	H	H
Naturalized Detention	M	L	M	L	H	M	M	H	L

### 6.3 Plan Implementation Schedule

Watershed planning is an ongoing process that does not end with the completion of this plan. The implementation schedule acts as a guide for these future efforts by directing the priority given to the various Action Plan recommendations selected for the watershed. Higher priority or less expensive BMPs are often scheduled for implementation prior to very expensive or highly technical projects. The schedule also provides a framework for implementation by spreading out project implementation over time and allowing for reasonable timeframe for securing funding.

The Implementation Schedule for the East Branch South Branch Kishwaukee River Watershed-Based Plan is included in the Action Plan tables (Chapter 5). The Site Specific Action Plan tables include a column with a recommended implementation schedule based on short term (1-5 years), medium term (5-10 years) and long term (greater than 10 years) objectives. The tables also include a column denoting priority (low, medium, or high) of the implementation of the Action Item. In many cases implementation schedule and priority reflect higher priority items being implemented on a short term schedule and lower priority items being implemented on a long term scheduled. However, it should be noted that some high priority goals have been included as a long term goal due to the cost and technical resources required for the implementation of the project. Table 6-6 presents a summary of the plan implementation schedule. The number of short, medium, and long term actions is shown to give watershed plan implementers an idea of how many actions are recommended to be implemented in each of these time frames.

**Table 6-6** Plan Implementation Summary Schedule

<b>Implementation Term</b>	<b>Number of Action Items</b>
Short (1-5 years)	28
Medium (5-10 years)	24
Long (greater than 10 years)	17

## **6.4 Funding Sources**

Plan implementation is largely based on the availability of funding and technical assistance available in the watershed for the implementation of watershed wide and site specific action items. It is no secret that securing funding is one of the biggest challenges that watershed stakeholders will face during plan implementation.

A list of potential funding sources that may be used to move forward with plan implementation is included in Table 6-7.

## **6.5 Plan Monitoring and Evaluation**

### **6.5.1 Monitoring Plan Implementation**

Continued monitoring is essential for providing feedback on the progress of the implementation of this watershed-based plan. The implementation and effectiveness of the plan and its recommendations, and an assessment of whether the plan goals are being achieved its measured through this monitoring. Simply, monitoring is observing and tracking watershed conditions for both positive and negative changes that are a result of the implementation of the plan. These conditions can then be compared to water quality monitoring data to determine whether there is a correlation between them. If no correlation between water quality improvement and recommendation implementation can be determined and/or is progress is not being made towards reaching the goals of the plan, DCWSC, as the implementation team, should consider whether the recommended strategies are having the desired effect or if the plan should be updated and modified.

Recommendations that are physical or structural in nature such as streambank stabilization, the construction of infiltration BMPs, and restoring riparian buffers, can be assessed in terms of the reduction of pollutant loads discharged into the watershed, improved biological and habitat health, and the degree of change in stormwater runoff volume and flow. The effectiveness of non-structural recommendations such as the implementation of education/outreach programs, stream maintenance programs, and changes to policies and regulations are much more difficult to monitor. Changes in behavior following the implementation of non-structural recommendations, can be assessed by gathering feedback through meetings with watershed stakeholders and tools such as surveys and focus groups.

Evaluation is a critical part of watershed planning. It will tell you whether or not your efforts are successful and provide a feedback loop for improving project implementation. A well-planned milestone and evaluation process will provide a way to measure the effectiveness of the watershed-based plan. As projects are implementation and results are demonstrated, additional support from the community will be gained and the likelihood of project sustainability will be greatly increased

The goal of the East Branch South Branch Kishwaukee River Watershed-Based Plan’s evaluation process is to not turn evaluation and monitoring into an academic process. This monitoring

strategy is intended to help track and measure the implementation of recommendations made in this plan using a variety of indicators that are monitored regularly, typically on an annual basis or every three years. Progress on overall plan implementation should be reviewed using the milestones and indicators every 5 years and the plan should be updated as needed. As a means of facilitating plan evaluation, “Report Cards” were developed for each watershed goals (Chapter 2). The report cards are intended to provide a brief description of current conditions, suggest performance indicators that should be evaluated and monitored, milestone to be met, and remedial actions if milestones are not being met.

As water quality is one of the primary goals of this plan, stream and lake water quality impairments should be monitored by regularly collecting and testing water samples, either manually or using constant monitoring equipment. A recommended sampling program for the watershed was included in Chapter 5, Section 5.4.

Watershed issues, opportunities, and conditions will change over time. This watershed-based plan should be evaluated and updated every five years to account for these changes. At each evaluation and update, completed projects can be removed from the plan and new projects should be added. In addition to this 5-year update, plan implementation should be monitored annually by the DeKalb County Watershed Steering Committee (DCWSC). At the time of the annual evaluation, the committee should assess the list of priorities and identify the top priority actions for the following year.

As projects are implemented, they should be recorded using the Report Cards and the tables in Chapter 5 which track the implementation of actions against the watershed plan goals and objectives as a means of monitoring watershed plan implementation.

Table 6-7 Potential Funding Sources

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
Core Grants	Grand Victoria Foundation	Grant		Not-for-profit groups	Supports land use policies and practices that enhance economic vitality and promote land and water health; the development and implementation of conservation and stewardship plans to enhance ecosystem services; policies and practices that result in clean air.	<a href="http://www.grandvictoriafdn.org/grant-programs/guidelines/core-grants">http://www.grandvictoriafdn.org/grant-programs/guidelines/core-grants</a>
Kane County Riverboat Fund Program	Kane County	Grant		Not-for-profit groups, local governments	Programs and projects that address a broad spectrum of environmental issues.	<a href="http://www.countyofkane.org/Pages/kcci/rfp.aspx">http://www.countyofkane.org/Pages/kcci/rfp.aspx</a>
Water Quality Cooperative Agreement	USEPA	Grant (no match required but 5% match is encouraged)	\$30,000-\$400,000	State agencies, not-for profits, organizations, and individuals	Research, investigations, experiments, training, environmental technology demonstrations, surveys, and studies related to the causes, effects, extent, and prevention of pollution.	<a href="http://water.epa.gov/grants_funding/cwf/waterquality.cfm">http://water.epa.gov/grants_funding/cwf/waterquality.cfm</a>
Capitalization Grants for Clean Water State Revolving Funds	USEPA/Office of Wastewater Management	Loan revolving fund	No limit on wastewater funds. Drinking water up to 25% of available funds.	Local governments, individuals, citizen groups, not-for-profit groups	Wastewater treatment; NPS pollution control; watershed management; restoration & protection of groundwater; wetland/riparian zones; and habitat	<a href="http://www.epa.gov/owm/cwfinance/index.htm">www.epa.gov/owm/cwfinance/index.htm</a>
Non-point Source Management Program (Section 319)	IEPA	Matching grant (up to 60% funded)	No set limit on awards.	Local governments, businesses, individuals, citizen and environmental groups	Controlling or eliminating NPS; streambank restoration; BMPs; and watershed planning	<a href="http://www.epa.state.il.us/water/financial-assistance/non-point.html">www.epa.state.il.us/water/financial-assistance/non-point.html</a>
Illinois Green Infrastructure Grant Program for Stormwater Management	IEPA	Matching Grant (minimum local match for CSO projects - 15%, retention and infiltration projects and green infrastructure small projects- 25%)	Up to CSO \$3M or 85% of project costs; retention and infiltration: \$750,000 or 75% of project costs; green infrastructure small projects: \$75,000 or 75% of project costs	Local governments, individuals, citizen groups, not-for-profit groups	Green infrastructure BMPs for stormwater management to protect or improve water quality	<a href="http://www.epa.state.il.us/water/financial-assistance/igig.html">www.epa.state.il.us/water/financial-assistance/igig.html</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
Water Revolving Loan Fund: Wastewater and Drinking Water	IEPA	Loan revolving fund	\$25M for water pollution control loan program and \$15M for public water supply load program	Local governments	Construction of wastewater or community water supply facilities	<a href="http://www.epa.state.il.us/water/financial-assistance/state-revolving-fund.html">http://www.epa.state.il.us/water/financial-assistance/state-revolving-fund.html</a>
Illinois Clean Lakes Program	IEPA	Matching grant (minimum local match of 40% for Phase I and 50% for Phase II)	No set limit on awards.	Landowners, citizen groups, and lake owners	Lake Management Plans (Phase I) and project implementation (Phase II)	<a href="http://www.epa.state.il.us/water/conservation/iclp.html">http://www.epa.state.il.us/water/conservation/iclp.html</a>
Lake Education Assistance Program	IEPA	Grant	\$500	Educational institutions and not-for-profit groups	Lake and lake watershed educational programs including field trips and seminars	<a href="http://www.epa.state.il.us/water/conservation/leap.html">http://www.epa.state.il.us/water/conservation/leap.html</a>
Streambank Cleanup and Lakeshore Enhancement	IEPA	Grant	Up to \$3,500	Citizen groups, and not-for profit groups	Implementation of a streambank or lakeshore cleanup event	<a href="http://www.epa.state.il.us/water/watershed/scale.html">http://www.epa.state.il.us/water/watershed/scale.html</a>
Sustainable Agriculture Grant Program	Illinois Department of Agriculture (IDOA)	Matching grant (up to 60% funded)		Local governments, educational institutions, not-for-profit groups, individuals, organizations	Practices aimed at maintaining producers' profitability while conserving soil, protecting water resources and controlling pests through means that are not harmful to natural systems, farmers, or consumers	<a href="http://www.agr.state.il.us/C2000/index.html">www.agr.state.il.us/C2000/index.html</a>
Private Waters Program	IDNR	Technical Assistance		Local governments, educational institutions, not-for-profit groups, individuals, organizations	Field inspections and technical advice on fish habitat, fish population management, water quality, vegetation control, streambank stabilization, and habitat development.	<a href="http://www.dnr.state.il.us/orep/pfc/incentives.htm#PWP">http://www.dnr.state.il.us/orep/pfc/incentives.htm#PWP</a>
Streambank Stabilization and Restoration Program	IDOA	Matching grant		Landowners, citizen groups, and not-for profit groups	Naturalized streambank stabilization in rural and urban communities with SWCD	<a href="http://www.agr.state.il.us/C2000/index.html">www.agr.state.il.us/C2000/index.html</a>
Conservation Innovation Grants	NRCS	Matching grant (up to 50% funded)	Up to \$75,000	Landowners, organizations	Projects targeting innovative on-the ground conservation including pilot projects and field demonstrations	<a href="http://www.il.nrcs.usda.gov/program/cig">www.il.nrcs.usda.gov/program/cig</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
US EPA Green Infrastructure Technical Assistance Program	USEPA	Grant	\$400,000 total funds available. Grants typically \$60,000	Local governments	Technical assistance projects focused on green infrastructure implementation. These technical assistance projects are intended to address significant technical, regulatory, and institutional barriers to green infrastructure, and to build community capacity by sharing lessons learned.	<a href="http://water.epa.gov/infrastructure/greeninfrastructure/gi_support">http://water.epa.gov/infrastructure/greeninfrastructure/gi_support</a>
<b>Habitat</b>						
Continuing Authorities Program (Section 206 Water Resources Development Act)	US ACOE	Cost-share (35% non-federal funds required)	up to \$5M	Local governments	Feasibility studies, planning, engineering, construction, administration, and supervision	<a href="http://www.mvr.usace.army.mil/">http://www.mvr.usace.army.mil/</a>
Project Modifications for Improvement of the Environment (Section 1135)	US ACOE	Cost-share (25% non-federal funds required)	up to \$5M	Local governments	Feasibility studies, planning, engineering, construction and supervision	<a href="http://www.mvr.usace.army.mil/">http://www.mvr.usace.army.mil/</a>
Partners for Fish and Wildlife Habitat Restoration Program	US Fish and Wildlife Service	Cost-share (50% funded)	Up to \$25,000	Landowners	Restoration of native habitats for fish and wildlife, restoration of former wetlands, native prairie streams, and riparian areas	<a href="http://www.fws.gov/policy/640fw1.html">www.fws.gov/policy/640fw1.html</a>
Flexible Funds	US FWS	Grant, Matching grant (at least 50% funded is preferred)		Landowners	Projects on private lands aimed at restoring and/or protecting wildlife habitat.	<a href="http://www.fws.gov">www.fws.gov</a>
Wildlife Habitat Incentives Program	US DOA	Grant, Matching grant (at least 75% funded)		Landowners and not-for-profit groups	Establishment and improvement of fish and wildlife habitat on private land	<a href="http://www.nrcs.usda.gov/programs/whip">www.nrcs.usda.gov/programs/whip</a>
Conservation 2000-Ecosystem Program	IDNR	Matching grant		Partnerships of governments, not-for-profits, citizen groups, and private landowners	Provides funding for partnership projects that maintain and enhance ecological and economic conditions. Projects include resource economics, habitat, outreach, or capital.	<a href="http://dnr.state.il.us/orep/pfc/">http://dnr.state.il.us/orep/pfc/</a>
Bring Back the Natives Grant Program	National Fish and Wildlife Foundation	Matching grant (33% funded)	\$50,000-\$75,000	Local governments, educational institutions and not-for-profit groups	Restoration of damaged and degraded riverine habitat and native aquatic species through watershed restoration and land management	<a href="http://www.nfwf.org">www.nfwf.org</a>
Native Plant Conservation Initiative	National Fish and Wildlife Foundation	Matching grant (50% funded)	\$10,000-\$50,000	Local governments, conservation districts, educational institutions and not-for-profit groups	On-the-ground projects that involve local communities and citizen volunteers in the restoration of native plant communities	<a href="http://www.nfwf.org">www.nfwf.org</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
Matching Aid to Restore State Habitats (MARSH) Program	Ducks Unlimited	Matching grant (50% funded)		Local governments, individuals, citizen groups, not-for-profit groups	Restore and enhance wetland habitat for waterfowl conservation	<a href="http://www.ducks.org">www.ducks.org</a>
Watershed Assistance Grants Program	River Network	Grant	\$4,000-\$30,000	Local governments, individuals, citizen groups, not-for-profit groups	Community-based partnerships that conserve or restore watershed	<a href="http://www.rivernetwork.org/resource-library/watershed-assistance-grant-program-now-open">http://www.rivernetwork.org/resource-library/watershed-assistance-grant-program-now-open</a>
<b>Wildlife</b>						
Waterfowl Production Areas	US FWS	Grant		Local governments, citizen groups, not-for-profit groups	Acquisition of 100-acre or larger existing or restorable wetlands open to hunting, fishing, and trapping.	<a href="http://www.fws.gov">www.fws.gov</a>
Private Stewardship Grants Program	US FWS	Matching grant (90% funded)		Landowners	Provides for the implementation of conservation practices on private land that benefit federally listed, proposed, or candidate species.	<a href="http://www.fws.gov">www.fws.gov</a>
Division of Wildlife Resources Special Funds Application (Habitat, Furbearer, and Pheasant Funds)	IDNR	Cost-share preferred but not required		Local governments, individuals, citizen groups, not-for-profit groups	Habitat improvement or land acquisition funded by the Habitat Fund, Furbearer Fund, and Pheasant Fund. Projects must preserve, protect, acquire, or manage wildlife for future generations.	<a href="http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm">http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm</a>
Illinois Migratory Waterfowl Stamp Fund	IDNR	Cost-share preferred but not required		Local governments, individuals, citizen groups, not-for-profit groups	Provides for the acquisition of public lands and/or the development of habitat to attract and support waterfowl	<a href="http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm">http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm</a>
Illinois Wildlife Preservation Fund	IDNR	Cost-share preferred but not required	\$2,000	Local governments, individuals, citizen groups, not-for-profit groups	Management, site inventories and educational programs designed to preserve, protect, and enhance non-game wildlife and native plant species.	<a href="http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm">http://www.dnr.state.il.us/grants/special_funds/wildgrant.htm</a>
Illinois Acres for Wildlife	IDNR	Technical Assistance and Materials		Private Landowners	Provides technical assistance and materials (tree seed or seedling) for protection of 1 acre of land for a minimum of 1 year for wildlife.	<a href="http://dnr.state.il.us/orc/Wildliferesources/AFW/">http://dnr.state.il.us/orc/Wildliferesources/AFW/</a>
Private Land Wildlife Habitat Management Fund	IDNR	Technical Assistance		Landowners (0.25 acres in urban areas and 1 acre in rural areas)	Technical assistance program that provides landowners plans, field equipment, plant materials, and labor to develop, implement, and maintain wildlife habitat management practices	<a href="http://www.dnr.state.il.us/orep/pfc/incentives.htm">http://www.dnr.state.il.us/orep/pfc/incentives.htm</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
Trees, Shrubs, and Seedlings at No Cost Program	IDNR	Materials		Landowners with IDNR approved management plan	Provides seedlings at no cost as a means of increasing wildlife habitat and erosion control by reforesting land.	<a href="http://www.dnr.state.il.us/orep/pfc/incentives.htm">http://www.dnr.state.il.us/orep/pfc/incentives.htm</a>
Challenge Grants	National Fish and Wildlife Foundation	Matching grant (50% funded)		Partnerships of governments, not-for-profits, citizen groups, and private landowners	Natural resource conservation projects including wetland conservation, conservation education, fisheries, migratory bird conservation, conservation policy, and wildlife habitat	<a href="http://www.nfwf.org">www.nfwf.org</a>
Wildlife Links	National Fish and Wildlife Foundation	Grant	\$25,000	Golf courses	Funds cutting edge research, management and educational projects to help golf courses become a part of the conservation landscape.	<a href="http://www.nfwf.org">www.nfwf.org</a>
<b>Wetlands</b>						
Wetland Reserve Program	USDA NRCS	Direct contracts with landowner; Easement (100%); Cost-share and 30-year easement (75%)	No set limit on awards.	Individuals, citizen groups, and not-for-profits	Wetland restoration or protection through easement and restoration agreement	<a href="http://www.nrcs.usda.gov/programs/wrp/states/il.html">www.nrcs.usda.gov/programs/wrp/states/il.html</a>
Wetlands Program Development Grants	US EPA	Matching grant (75% funded)	No set limit on awards.	Local governments, not-for-profit groups	Development of a comprehensive monitoring and assessment program; refining the protection of vulnerable wetlands and aquatic resources	<a href="http://www.epa.gov/owow/wetlands/grantguidelines">www.epa.gov/owow/wetlands/grantguidelines</a>
North American Wetland Conservation Act	US FWS	Matching grant (50% funded)	\$50,000	Partnerships of governments, not-for-profits, citizen groups, and private landowners	Projects including acquisition, restoration, creation and/or enhancement of wetlands and wetland-associated uplands	<a href="http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm">http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm</a>
Small Grants Program	North American Wetlands Conservation Council	Matching grant	Up to \$75,000	Partnerships of governments, not-for-profits, citizen groups, and private landowners	Long-term acquisition, restoration, and enhancement of natural wetlands	<a href="http://www.fws.gov/birdhabitat.grants/NAWCA/index.shtm">www.fws.gov/birdhabitat.grants/NAWCA/index.shtm</a>
Five Star Restoration Program	National Fish and Wildlife Foundation	Matching grant (50% funded)	\$10,000-\$25,000 (one year projects); \$10,000-\$40,000 (two year projects)	Any entity that can receive grants	Seeks to develop a community capacity to sustain local resources for future generations by providing financial assistance to diverse partnerships for wetland and riparian habitat restoration	<a href="http://www.nfwf.org">www.nfwf.org</a>



Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
<b>Education</b>						
Environmental Education Grants	US EPA	Matching grant (75% funded)		Local governments, educational institutions and not-for-profit groups	Environmental educational activities such as curricula development, designing or demonstrating educational field methods, and training educators	<a href="http://www2.epa.gov/education/environmental-education-ee-grant">http://www2.epa.gov/education/environmental-education-ee-grant</a>
Urban and Community Forestry Grant Program	IDNR	Matching grant (50% funded)		Local governments or partnership between a local government and a not-for-profit group	To create or enhance a local forestry program in communities with a local forestry ordinance	<a href="http://www.dnr.state.il.us/orc/urbanforestry/financialasst.html">http://www.dnr.state.il.us/orc/urbanforestry/financialasst.html</a>
<b>Flood Control</b>						
Office of Water Resources Small Project Fund	IDNR	Grant	up to \$75,000	Smaller urban and rural communities	To reduce stormwater related damage by alleviating local significant drainage and flood problems.	<a href="http://www.dnr.illinois.gov/WaterResources/Pages/Programs.aspx">http://www.dnr.illinois.gov/WaterResources/Pages/Programs.aspx</a>
Hazard Mitigation Grant Program	IEMA/FEMA	Matching grant (75% funded)		State and local governments and not-for-profits in communities in good standing with the National Flood Insurance Program	Provides funds for long-term hazard mitigation measures after a major disaster declaration. Traditionally has funded acquisition or elevation of flood damaged buildings.	<a href="http://www.state.il.us/iema/planning/MitigationPrograms.asp">http://www.state.il.us/iema/planning/MitigationPrograms.asp</a>
Flood Mitigation Assistance Program	IEMA/FEMA	Matching grant (75% funded)		Communities in good standing with the National Flood Insurance Program and have an approved flood mitigation plan	Provides funds for cost-effective measures to reduce flood damage to structures with flood insurance.	<a href="http://www.state.il.us/iema/planning/MitigationPrograms.asp">http://www.state.il.us/iema/planning/MitigationPrograms.asp</a>
Pre-Disaster Mitigation Plan	IEMA/FEMA	Matching grant (75% funded)		Communities in good standing with the National Flood Insurance Program and have an approved flood mitigation plan	Funds the development of an all-hazards mitigation plan or for a cost-effective mitigation project.	<a href="http://www.state.il.us/iema/planning/MitigationPrograms.asp">http://www.state.il.us/iema/planning/MitigationPrograms.asp</a>
Severe Repetitive Loss Program	IEMA/FEMA	Matching grant (90% funded)		Owners of residential properties covered under NFIP insurance and is considered to be "SRL"	Funds the acquisition and relocation of at risk structures and the conversion of the land to open space. It may also fund minor localized flood reduction projects.	<a href="http://www.state.il.us/iema/planning/MitigationPrograms.asp">http://www.state.il.us/iema/planning/MitigationPrograms.asp</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
<b>Open Space Preservation/Management Acquisition</b>						
Vital Illinois Lands	Grand Victoria Foundation	Matching grant (30% funded)		Not-for-profit groups	Funds to ensure the permanent protection and long-term stewardship of Illinois' most vital lands and build support for projects and conservation among public, private, and nonprofit organizations, other potential donors, and the broader public.	<a href="http://www.grandvictoriafdn.org/grant-programs/guidelines/vital-lands-illinois">http://www.grandvictoriafdn.org/grant-programs/guidelines/vital-lands-illinois</a>
Forestry Development Program	IDNR	Cost-share (75% funded)		Landowners with 5 contiguous acres. Forest must be 100 ft wide	Provides funding for tree planting, site preparation, vegetation control, fire break, fencing, and thinning and pruning. Land must have a Forest Management Plan.	<a href="http://www.dnr.illinois.gov/Grants/Pages/default.aspx">http://www.dnr.illinois.gov/Grants/Pages/default.aspx</a>
Land and Water Conservation Fund (LWCF)	IDNR	Matching grant (50% funded)	\$750,000 for land acquisition and \$400,000 for development/renovation project	Local governments	Provides funding for the acquisition and development of public parks and open space.	<a href="http://www.dnr.state.il.us/ocd/newoslad1.htm">http://www.dnr.state.il.us/ocd/newoslad1.htm</a>
Open Space Acquisition and Development Program (OSLAD)	IDNR	Matching grant (50% funded)	\$750,000 for land acquisition and \$400,000 for development/renovation project	Local governments	Provides funding for the acquisition and development of public parks and open space.	<a href="http://www.dnr.state.il.us/ocd/newoslad1.htm">http://www.dnr.state.il.us/ocd/newoslad1.htm</a>
Open Land Trust Grant	IDNR	Program not funded since 2003		Local governments	Funds land acquisition for open space and resource based outdoor recreation.	<a href="http://www.dnr.state.il.us/ocd/newolt2.htm">http://www.dnr.state.il.us/ocd/newolt2.htm</a>
Urban and Community Forestry	US FS	Technical Assistance		Local governments and private sector	Provides technical assistance to improve natural resource management of forested lands and open spaces in urban settings.	<a href="http://www.fs.fed.us/ucf/">http://www.fs.fed.us/ucf/</a>
<b>Recreation</b>						
Illinois Bicycle Grant Program	IDNR	Matching grant (50% funded)		Local governments	Funds acquisition, construction and rehabilitation of bicycle paths.	<a href="http://www.dnr.state.il.us/ocd/newbike2.htm">http://www.dnr.state.il.us/ocd/newbike2.htm</a>
Illinois Trails Grant Program	IDNR	Matching grant (50% funded)			Funds acquisition, construction and maintenance of public recreation paths.	<a href="http://www.dnr.state.il.us/ocd/newtrail2.htm">http://www.dnr.state.il.us/ocd/newtrail2.htm</a>
Recreation Trails Program	Federal Government	Matching grant (80% funded (non-federal funds))		Federal, state, and local governments and not-for-profits	Funds acquisition, construction, rehabilitation and maintenance of public motorized and non-motorized recreational trails	<a href="http://www.dnr.state.il.us/ocd/newrtp2.htm">http://www.dnr.state.il.us/ocd/newrtp2.htm</a>
Snowmobile Grants	IDNR	Matching grant (50% for construction, 90% for acquisition)			Funds acquisition, development and rehabilitation of public snowmobile areas, trails, and facilities.	<a href="http://dnr.state.il.us/ocd/newsnow2.htm">http://dnr.state.il.us/ocd/newsnow2.htm</a>

Program	Funding Agency	Type	Funding Amount	Eligibility	Activities Funded	Website/Contact
<b>Water Quality</b>						
Off Highway Vehicle Recreation Trails	IDNR	Up to 100% funding			Funds acquisition, construction, rehabilitation, and design of OHV trails. Also provides funding for rider education and safety programs and facility security.	<a href="http://www.dnr.state.il.us/ocd/newohv2.htm">http://www.dnr.state.il.us/ocd/newohv2.htm</a>
Rivers, Trails, and Conservation Assistance Program	National Park Service			Local governments	Provides technical assistance to help communities achieve conservation objectives.	<a href="http://www.nps.gov/ncrc/programs/rtca/index.htm">http://www.nps.gov/ncrc/programs/rtca/index.htm</a>
TEA-21 Enhancement Program	IDOT	Matching grant (80% for construction, 50% for acquisition)		Transportation agencies	Provides funding for projects that support alternative modes of transportation, preservation of visual and cultural resources, and landscape beautification.	<a href="http://www.dot.state.il.us/opp/overview.html">http://www.dot.state.il.us/opp/overview.html</a>
<b>Agriculture</b>						
Sustainable Agriculture (C2000)	IDOA	Matching grant		Local governments, corporations, not-for-profits, and private landowners	Provides funding for the implementation of sustainable agricultural practices.	<a href="http://www.agr.state.il.us/C2000/index.html">http://www.agr.state.il.us/C2000/index.html</a>
Conservation Reserve Program (CRP)	USDA FSA	Rent payment		Private Landowners	Farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality.	<a href="http://www.fsa.usda.gov/FSA/il">http://www.fsa.usda.gov/FSA/il</a>
<b>Air Quality</b>						
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	FHWA	Grant		Transportation agencies in areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter.	Support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief with an emphasis on diesel engine retrofits and other efforts that underscore the priority on reducing fine particle pollution.	<a href="http://www.fhwa.dot.gov/environment/air_quality/cmaq/">http://www.fhwa.dot.gov/environment/air_quality/cmaq/</a>

<b>Goal A: Protect and enhance overall surface and groundwater quality in the East Branch South Branch Kishwaukee River Watershed</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• Water quality modeling indicates that predicted levels of total suspended solids, phosphorus, COD, and BOD are above state standards.</li> <li>• Low dissolved oxygen levels and elevated levels of nitrogen may also be potential water quality impairments.</li> <li>• Hydromodification and channelization are prevalent throughout the watershed.</li> <li>• Very limited water quality and habitat data is available for the watershed.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Chemical water quality parameters (nutrients, metals, etc) meet Illinois EPA standards for designated use of the waterbody.</li> <li>• All physical water quality parameters (DO, pH, TSS, etc) meet Illinois EPA standards.</li> <li>• Acres of riparian buffers.</li> <li>• Linear feet of 2-stage channels.</li> <li>• Linear feet of streambank stabilization.</li> <li>• Acres of urban BMPs to improve water quality.</li> <li>• Acres of wetland creation/restoration.</li> <li>• Percentage of surveyed citizens who feel water quality is improving, are able to identify where water pollution originates, and are able to identify methods of protecting and restoring water quality.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years:	
<ol style="list-style-type: none"> <li>1. Establish and fund a water quality monitoring program.</li> <li>2. Restore 30 acres of riparian buffers.</li> <li>3. Implement 2-stage channels on 4,000 linear feet of stream/ditch.</li> <li>4. Implement wetland creation/restoration on 200 acres.</li> <li>5. Develop stream restoration concept plans for at least one stream reach.</li> <li>6. Implement at least one urban BMP project.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. Implement the water quality monitoring program.</li> <li>2. Restore 40 acres of riparian buffers.</li> <li>3. Implement 2-stage channels on 6,000 linear feet of stream/ditch.</li> <li>4. Implement wetland creation/restoration on 300 acres.</li> <li>5. Implement at least one stream stabilization project.</li> <li>6. Implement at least two urban BMP project.</li> </ol>	

<p>10-15 Years</p> <ol style="list-style-type: none"> <li>1. Restore 45 acres of riparian buffers.</li> <li>2. Implement 2-stage channels on 9,000 linear feet of stream/ditch.</li> <li>3. Implement wetland creation/restoration on 500 acres.</li> <li>4. Implement at least two stream stabilization project.</li> <li>5. Implement at least two urban BMP project.</li> <li>6. Results of survey posted to the WSC or KREP website indicate that at least 50% of the watershed stakeholders feel that water quality is improving and is able to identify sources of pollution and methods to protect water quality.</li> </ol>	
<p><b>Monitoring Needs/Efforts:</b></p> <ul style="list-style-type: none"> <li>• Regular monitoring of physical, chemical, and biological water quality parameters.</li> <li>• Track the number of acres where riparian buffers are established. Periodically visit riparian buffer projects to assess for proper maintenance and management.</li> <li>• Track the acres of wetland creation/restoration. Periodically visit wetland creation/restoration projects to assess function and success.</li> <li>• Track the number (linear feet) of 2-stage channel projects in the watershed.</li> <li>• Track the number (linear feet) of stream stabilization projects in the watershed.</li> <li>• Track the number of retrofit stormwater BMPs constructed.</li> </ul>	
<p><b>Remedial Actions:</b></p> <ul style="list-style-type: none"> <li>• Assess the number of projects that have been implemented versus water quality changes to determine if projects are improving water and habitat quality. If not, conduct an assessment to find causes of pollution and address.</li> <li>• If riparian buffers, 2-stage channel installations, and stabilization projects do not improve instream and streamside habitat, determine if hydraulic problems upstream or downstream are damaging the project and/or conduct remedial work such as re-seeding or habitat installation.</li> </ul>	
<p><b>Notes:</b></p>	

Grade Evaluation:      A = Met or exceeded milestone(s)      B = Milestone(s) 75% achieved  
                                  C = Milestone(s) 50% achieved      D = Milestone(s) 25% achieved  
                                  F = Milestone(s) not achieved

<b>Goal B: Reduce existing flood damage in the watershed and prevent flooding from worsening</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• The installation of drain tiles and urbanization has drastically altered the historic hydrology in the watershed.</li> <li>• The changes in hydrology have lead to changes in stream function and decreased in infiltration.</li> <li>• Current flooding in the watershed includes: overbank flooding, local drainage problems, and depressional flooding.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Number of flood problem areas that are mitigated or reduced by BMP implementation.</li> <li>• Number of structures removed or protected from flooding within the floodplain boundaries.</li> <li>• Number of stream restoration projects that reconnect the stream channel to the floodplain.</li> <li>• Number of existing developments that implement flood reduction BMPs.</li> <li>• Number of stream corridor management programs.</li> <li>• Acres of urban BMPs</li> <li>• Acres of wetland creation/restoration.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years	
<ol style="list-style-type: none"> <li>1. Secure funding for and complete a Stormwater Management Plan including a detailed H&amp;H study of the watershed.</li> <li>2. Develop stream stabilization concept plans for at least one stream reach.</li> <li>3. Conduct a detention basin inventory.</li> <li>4. All new or re-development incorporate infiltration BMPs.</li> <li>5. Implement a stream corridor management program to clear streams channels of problematic debris jams in at least two stream reaches.</li> <li>6. Implement at least one stream project where the stream is reconnected to the floodplain.</li> <li>7. Implement wetland creation/restoration on 200 acres.</li> <li>8. Remove the Evergreen Mobile Home Park from the 100-year floodplain.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. Identify and protect at least two parcels located in the 100-year floodplain.</li> <li>2. Implement a stream corridor management program to clear streams channels of problematic debris jams in at least two stream reaches.</li> <li>3. Implement at least one streambank stabilization projects.</li> <li>4. Implement at least one stream project where the stream is reconnected to the floodplain.</li> <li>5. Retrofit at least one older developments with urban BMPs.</li> <li>6. Implement wetland creation/restoration on 300 acres.</li> </ol>	

<p>10-15 Years</p> <ol style="list-style-type: none"> <li>1. Identify and protect at least 2 parcels located in the 100-year floodplain.</li> <li>2. Implement a stream corridor management program to clear streams channels of problematic debris jams in at least two stream reaches.</li> <li>3. Implement at least one streambank stabilization project.</li> <li>4. Implement at least one stream project where the stream is reconnected to the floodplain.</li> <li>5. Retrofit at least two older developments with urban BMPs.</li> <li>6. Implement wetland creation/restoration on 500 acres.</li> </ol>	
<p><b>Monitoring Needs/Efforts:</b></p> <ul style="list-style-type: none"> <li>• Track the number of mitigated/reduced flood problem areas.</li> <li>• Track the linear feet of stream projects that reconnect the stream channel to the floodplain.</li> <li>• Track the number of stream reaches where problematic debris jams or culverts are repaired.</li> <li>• Track the acres of urban BMPs installed in older developments.</li> <li>• Track the acres of wetland creation/restoration. Periodically visit wetland creation/restoration projects to assess function and success.</li> </ul>	
<p><b>Remedial Actions:</b></p> <ul style="list-style-type: none"> <li>• Conduct follow-up visits to flood problem areas during flood events to determine if additional work is needed.</li> <li>• Conduct an inventory of detention basins to determine if retrofits are possible.</li> </ul>	
<p><b>Notes:</b></p>	

Grade Evaluation:      A = Met or exceeded milestone(s)      B = Milestone(s) 75% achieved  
                                  C = Milestone(s) 50% achieved      D = Milestone(s) 25% achieved  
                                  F = Milestone(s) not achieved

<b>Goal C: Improve aquatic and wildlife habitat in the East Branch South Branch Kishwaukee River watershed.</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• Vegetation along the creek channels is not diverse and is dominated agricultural fields.</li> <li>• There are very few natural stream features (pools, riffles, etc) present in the watershed's creeks.</li> <li>• Hydromodification including channelization and streambank erosion is present in the watershed.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Acres of riparian buffers.</li> <li>• Linear feet of 2-stage channels.</li> <li>• Linear feet of streambank stabilization.</li> <li>• Acres of wetland creation/restoration.</li> <li>• Percentage of surveyed citizens who feel water quality is improving, are able to identify where water pollution originates, and are able to identify methods of protecting and restoring water quality. Number of stakeholder landscapes that incorporate native vegetation.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years	
<ol style="list-style-type: none"> <li>1. Restore 30 acres of riparian buffers.</li> <li>2. Implement 2-stage channels on 4,000 linear feet of stream/ditch.</li> <li>3. Implement wetland creation/restoration on 200 acres.</li> <li>4. Develop stream restoration concept plans for at least one stream reach.</li> <li>5. At least ten watershed stakeholders (private residents, business owners, etc) incorporate native vegetation into existing landscapes.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. Restore 40 acres of riparian buffers.</li> <li>2. Implement 2-stage channels on 6,000 linear feet of stream/ditch.</li> <li>3. Implement wetland creation/restoration on 300 acres.</li> <li>4. Implement at least one stream stabilization project.</li> <li>5. Implement at least two stream restoration projects in the watershed.</li> <li>6. Conduct at least one detention basin retrofits where turf grass basins are converted into native vegetation.</li> <li>7. At least twenty watershed stakeholders (private residents, business owners, etc) incorporate native vegetation into existing landscapes.</li> </ol>	
10-15 Years	
<ol style="list-style-type: none"> <li>1. Restore 45 acres of riparian buffers.</li> <li>2. Implement 2-stage channels on 9,000 linear feet of stream/ditch.</li> <li>3. Implement wetland creation/restoration on 500 acres.</li> <li>4. Implement at least two stream stabilization project.</li> <li>5. Conduct at least one detention basin retrofits where turf grass basins are converted into native vegetation.</li> <li>6. At least 15% of watershed stakeholders (private residents, business owners, etc) incorporate native vegetation into existing landscapes.</li> </ol>	



**Monitoring Needs/Efforts:**

- Track the number of acres where riparian buffers are established. Periodically visit riparian buffer projects to assess for proper maintenance and management.
- Track the acres of wetland creation/restoration. Periodically visit wetland creation/restoration projects to assess function and success.
- Track the number (linear feet) of 2-stage channel projects in the watershed.
- Track the number (linear feet) of stream stabilization projects in the watershed.
- Track the number of stakeholders that incorporate native plants into landscapes each year.

**Remedial Actions:**

- If stream and wetland restoration projects are failing, conduct remedial work such as re-seeding and habitat installation.
- If the buffer and native grass installation milestones cannot be met, reduce the number to more feasible goals.

**Notes:**

Grade Evaluation:      A = Met or exceeded milestone(s)      B = Milestone(s) 75% achieved  
                                 C = Milestone(s) 50% achieved      D = Milestone(s) 25% achieved  
                                 F = Milestone(s) not achieved

<b>Goal D: Develop open space in the East Branch South Branch Kishwaukee River watershed and provide recreational opportunities</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• The pre-settlement landscape consisting mostly of savanna, marsh, and prairie communities has been significantly altered by agriculture and urbanization.</li> <li>• Very few parcels of protected open space are preserved in the watershed.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Acres of riparian buffers.</li> <li>• Acres of wetland creation/restoration.</li> <li>• Number of new development that is designed to include and protect open space.</li> <li>• Number of linear feet of new trail constructed in the watershed as part of the DeKalb County Greenway and Trails Plan and the Kane County 2040 Green Infrastructure Plan.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years	
<ol style="list-style-type: none"> <li>1. Restore 30 acres of riparian buffers.</li> <li>2. Implement wetland creation/restoration on 200 acres.</li> <li>3. Conduct at least one seminar for developments on methods to integrate open space into residential and commercial development.</li> <li>4. All municipalities incorporate the recommendations of the DeKalb County Greenway and Trails Plan and/or the Kane County 2040 Green Infrastructure Plan into their comprehensive plans.</li> <li>5. Construction of at least one segment of trail included on the DeKalb County Greenway and Trails Plan and/or the Kane County 2040 Green Infrastructure Plan.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. Restore 40 acres of riparian buffers.</li> <li>2. Implement wetland creation/restoration on 300 acres.</li> <li>3. Conduct at least one seminar for developments on methods to integrate open space into residential and commercial development.</li> <li>4. Construction of at least one segment of trail included on the DeKalb County Greenway and Trails Plan and/or the Kane County 2040 Green Infrastructure Plan.</li> </ol>	
10-15 Years	
<ol style="list-style-type: none"> <li>1. Restore 45 acres of riparian buffers.</li> <li>2. Implement wetland creation/restoration on 500 acres.</li> <li>3. At least one new development constructed designed to include and protect open space.</li> <li>4. Complete a Natural Areas Management Plan for all park and open space in the watershed.</li> <li>5. Completion of the trails included on the DeKalb County Greenway and Trails Plan and/or the Kane County 2040 Green Infrastructure Plan</li> </ol>	

<p><b>Monitoring Needs/Efforts:</b></p> <ul style="list-style-type: none"> <li>• Track the number of acres of riparian buffers established. Periodically visit riparian buffer projects to assess for proper maintenance and management.</li> <li>• Track the acres of wetland creation/restoration. Periodically visit wetland creation/restoration projects to assess function and success.</li> <li>• Track the linear feet of new trails constructed.</li> <li>• Track the number of developments that are designed to include and protect open space.</li> </ul>	
<p><b>Remedial Actions:</b></p> <ul style="list-style-type: none"> <li>• Reassess municipal budgets for open space protection efforts.</li> <li>• Apply for grant monies for the acquisition of additional open space.</li> <li>• Apply for grant monies for the preparation of a Natural Areas Management Plan.</li> </ul>	
<p><b>Notes:</b></p>	

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                                   F = Milestone(s) not achieved

<b>Goal E: Increase coordination between decision makers and other stakeholders in the watershed.</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• A limited number of stakeholders are currently working together to pursue grant funds to implement watershed improvement projects.</li> <li>• Municipal decisions-makers need to work together to develop beneficial multi-jurisdictional partnerships related to funding, technical assistance, grant proposals, and open space/greenway protection.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Number of municipalities in the watershed that adopt the watershed-based plan.</li> <li>• Number of municipalities and stakeholders that participate in WSC activities.</li> <li>• Number of municipalities that implement Action Items.</li> <li>• Number of municipalities that adopt comprehensive plan, codes, and ordinances that support the recommendations of the watershed-based plan.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years	
<ol style="list-style-type: none"> <li>1. WSC to hold a minimum of four meetings per year to discuss plan recommendations and track plan implementation.</li> <li>2. All municipalities adopt the watershed-based plan and implement changes to plans, codes, and ordinances that support plan recommendations.</li> <li>3. Representatives from all municipalities and other stakeholders attend the WSC meetings.</li> <li>4. At least two multi-jurisdictional and/or public-private Action Items are implemented.</li> <li>5. At least two municipalities adopted the Regulatory Recommendations outlined in the Watershed Plan.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. WSC to hold a minimum of four meetings per year to discuss plan recommendations and track plan implementation.</li> <li>2. Representatives from all municipalities and other stakeholders attend the WSC meetings.</li> <li>3. At least two multi-jurisdictional and/or public-private Action Items are implemented. One of the two projects should be a site specific Action Item.</li> <li>4. At least two municipalities adopted the Regulatory Recommendations outlined in the Watershed Plan.</li> </ol>	
10-15 Years	
<ol style="list-style-type: none"> <li>1. WSC to hold a minimum of four meetings per year to discuss plan recommendations and track plan implementation.</li> <li>2. Representatives from all municipalities and other stakeholders attend the WSC meetings.</li> <li>3. At least two multi-jurisdictional and/or public-private Action Items are implemented. One of the two projects should be a site specific Action Item.</li> <li>4. The remaining municipalities adopted the Regulatory Recommendations outlined in the Watershed Plan.</li> </ol>	

<b>Monitoring Needs/Efforts:</b> <ul style="list-style-type: none"> <li>Track number of WSC meetings and what was discussed.</li> <li>Track the number of municipalities in the watershed that adopt the watershed-based plan.</li> <li>Track the number of Action Items implemented by municipalities.</li> </ul>	
<b>Remedial Actions:</b> <ul style="list-style-type: none"> <li>WSC encourage government officials to adopt the watershed-based plan if not adopted in years 1-5.</li> <li>WSC to meet with government officials to discuss Action Items that have not been implemented.</li> </ul>	
<b>Notes:</b>	

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<b>Goal F: Raise stakeholder awareness (residents, public officials, etc) about the importance of best management practices of watershed stewardship</b>	
<b>Current Conditions and Problems:</b>	
<ul style="list-style-type: none"> <li>• DeKalb Community Foundation has done a wonderful job of leading the education process through plan development, however, education is an ongoing process.</li> <li>• Education on stream maintenance and water quality and habitat improvements is needed for residents living in the watershed.</li> </ul>	
<b>Indicators to Meet Objectives:</b>	
<ul style="list-style-type: none"> <li>• Number of members of KREP.</li> <li>• Number of seminars or workshops related to general water quality.</li> <li>• Number of seminars or workshops related to educating the public on riparian management including debris removals and streambank stabilization.</li> <li>• Number of seminars or workshops related to the native plants and natural area restoration.</li> <li>• Number of seminars or workshops on agricultural BMPs.</li> <li>• Attendance at seminars and workshops.</li> <li>• Number of publicized watershed improvement projects in the new media, newsletters, websites, etc.</li> <li>• Number of homeowners associations (HOA) programs related to water quality and stream maintenance.</li> </ul>	
<b>Milestones:</b>	Grade
1-5 Years	
<ol style="list-style-type: none"> <li>1. Maintain watershed website.</li> <li>2. Conduct at least 1 seminar related to benefits of native plants and natural area restoration and track attendance.</li> <li>3. Conduct at least 1 seminar related to agricultural BMPs and track attendance.</li> <li>4. Conduct at least 2 seminars related to water quality and riparian management and track attendance.</li> <li>5. Publicize all watershed improvement projects in the news media, newsletters, websites, etc.</li> <li>6. Identify at least 1 HOA interesting in hosting an educational program.</li> </ol>	
5-10 Years	
<ol style="list-style-type: none"> <li>1. Maintain watershed website.</li> <li>2. Conduct at least 1 seminar related to benefits of native plants and natural area restoration and track attendance.</li> <li>3. Conduct at least 1 seminar related to agricultural BMPs and track attendance.</li> <li>4. Conduct at least 2 seminars related to water quality and riparian management and track attendance.</li> <li>5. Publicize all watershed improvement projects in the news media, newsletters, websites, etc.</li> <li>6. Conduct at least 1 HOA interesting in hosting an educational program.</li> </ol>	
10-15 Years	
<ol style="list-style-type: none"> <li>1. Maintain watershed website.</li> <li>2. Conduct at least 1 seminar related to benefits of native plants and natural area restoration and track attendance.</li> <li>3. Conduct at least 1 seminar related to agricultural BMPs and track attendance.</li> <li>4. Conduct at least 2 seminars related to water quality and riparian management and track attendance.</li> </ol>	

<p>5. Publicize all watershed improvement projects in the news media, newsletters, websites, etc.</p> <p>6. Conduct at least 1 HOA interesting in hosting an educational program.</p>	
<p><b>Monitoring Needs/Efforts:</b></p> <ul style="list-style-type: none"> <li>• Track all watershed projects being implemented each year.</li> <li>• Track number and topic of workshops each year.</li> <li>• Track changes in attendance at workshops and seminars.</li> <li>• Track number of workshops hosted by HOAs.</li> </ul>	
<p><b>Remedial Actions:</b></p> <ul style="list-style-type: none"> <li>• Ask local, state, and federal agencies to host workshops.</li> <li>• If attendance at workshops is low, experiment with different types of events to see which draw larger participation.</li> <li>• Identify a volunteer or hire staff to lead the educational efforts.</li> </ul>	
<p><b>Notes:</b></p>	

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