

5.0 MANAGEMENT MEASURES ACTION PLAN

Earlier sections of this plan summarized Spring Creek watershed’s characteristics and identified causes and sources of watershed impairment. This section includes an “Action Plan” developed to provide stakeholders with recommended “Management Measures” (Best Management Practices) to specifically address objectives related to each plan goal at general and site specific scales. The Action Plan is divided into the following subsections:

- *Programmatic Measures:* general remedial, preventive, and regulatory watershed-wide action measures that can be applied across the watershed by various stakeholders.
- *Site Specific Measures:* actual locations where projects can be implemented to improve surface and groundwater quality, open space protection, and aquatic and terrestrial habitat.

The recommended programmatic and site specific management measures provide a solid foundation for protecting and improving watershed conditions but should be updated as projects are completed or other opportunities arise. Lead parties for recommendations are encouraged to organize partnerships with key stakeholders and develop various funding arrangements to help delegate and implement the recommended actions. The key stakeholders in the watershed are listed in Table 35. Detailed descriptions of each stakeholder can be found in Appendix E.

Table 35. Key Spring Creek Watershed Stakeholders/Partners.

Watershed Stakeholder/Partner	Acronym/Abbreviation
Audubon-Chicago Region	Audubon
Barrington Area Council of Governments	BACOG
Barrington Hills Conservation Trust	BACT
Chicago Metropolitan Agency for Planning	CMAP
Citizens for Conservation	CFC
County	County
Ecological Consultants	Consultant
Forest Preserve District of Cook & Kane County	FPDCC & FPDKC
Fox River Ecosystem Partnership	FREP
Friends of Spring Creek Forest Preserves	Friends of Spring Creek
Illinois, Kane, Lake, McHenry, and Cook County Dept. of Transportation	DOTs
Illinois Environmental Protection Agency	Illinois EPA
Illinois Nature Preserves Commission	INPC
Metropolitan Water Reclamation District of Greater Chicago	MWRD
Municipalities	Munic
Natural Resource Conservation Service (Kane, Lake, McHenry, and Cook County)	SWCD/NRCS
Residents or Owner	Residents/ Owner
Riding Club of Barrington Hills	RCBH
Spring Creek Watershed partnership	SCW
Townships	Twp
US Army Corps of Engineers	USACE
US Fish & Wildlife Service	USFWS

5.1 Programmatic Measures Action Plan

Numerous types of programmatic management measures are recommended to address watershed objectives for each plan goal. Table 36 includes recommended measures that are applicable throughout the watershed and information needed to facilitate implementation of specific actions. For each action item, the table provides the Priority, Objective Addressed, Responsible Entity/Supporting Partners, and the recommended Technical Support that will likely be responsible for issuing appropriate permits or providing technical, regulatory, or funding assistance. *Note: estimated costs and pollutant load reductions are not included for programmatic measures due to the general nature of the recommendations.*

Priority is assigned to each action item and classified as High, Medium, or Low based on several factors such as importance, ownership type, potential cost, technical and financial needs, and potential shortcomings. High priority recommendations deserve immediate attention and are generally expected to be addressed in the short term (1-5 years) whereas medium and low priority recommendations are not as urgent and should be addressed in the long term (5-10+ years). Medium and low priority recommendations should not be written off as less important. In many cases, funding availability, technical assistance, or shortcomings may be responsible for a project being designated as medium or low priority.

Noteworthy- Programmatic Management Measure Categories

Non-Structural: Broad group of practices that prevent impairment through maintenance and management of Management Measures or performance of stewardship tasks that are of an ongoing nature and designed to control pollutants at their source.

Educational: Outreach to educate the public related to environmental impacts of daily activities and to build support for watershed planning and projects. Topics typically addressed include land management, waste management, pesticide and fertilizer use, good housekeeping, etc.

Policy: Local government can help prevent watershed impairments in various ways through policy but specifically related to controlling pollutants and reducing stormwater runoff from new developments and protecting floodplain and natural resources.

Project Coordination: Successful watershed plan implementation depends on coordination and cooperation between the Spring Creek Watershed Partnership and all other pertinent stakeholders.

Comprehensive Planning: Watershed impairments and pollutant load reduction targets may not be met with recommended site specific management measures and therefore will require a more comprehensive use of smaller measures such as buffers, vegetated swales, and rain gardens.

Table 36: Programmatic Actions to Address Objectives for Plan Goals A-F.

Goal A: Protect, enhance, and monitor surface water quality and groundwater resources to meet Illinois EPA water quality standards.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Supplement existing road salt programs with known alternatives.	High	A3	Munic; Twp, DOT	SCW; CFC; Illinois EPA	1-5 Years
2	Identify “Champions” and have local Plan Commissions use plan as a guidance document for development.	High	A1	SCW	CFC	1-5 Years
3	Update development ordinances to require stormwater management system designs that support native vegetation, improve water quality, and provide wildlife habitat.	High	A2	Municipalities; Twp	Consultant	1-5 Years
4	Barrington Hills work with equestrian community to maintain and update equestrian guidelines if needed.	Medium	A6	RCBH	Friends of Spring Creek	5-10+ Years
5	Reduce fertilizer use on commercial and large residential lawns.	High	A4	Residents; businesses	SCW	Ongoing
6	Inspect septic systems in older residential developments.	Medium	A7	Residents; businesses	n/a	Ongoing
7	Implement a watershed wide water quality monitoring program included in Section 8.1 to assess water quality standards and success of projects.	High	A8	VLMP; CFC; IEPA; RiverWatch; MCCD IDNR; FPD; FOFR	Consultants	1-5 Years
8	Develop watershed-specific buffer requirements between developments and aquatic natural resources.	High	A1	MWRD; USACE	SCW; Munic; Twp	5-10+ Years
9	Review & update landscaping ordinances to allow native plants.	Medium	A1	Munic; Twp	SCW	5-10+ Years
10	Identify shallow aquifer monitoring sites and implement monitoring plan.	Medium	A9	BACOG	n/a	5-10+ Years
11	Maintain open space in important groundwater recharge areas.	High	A9	Munic; Twp	CFC; SCW	Ongoing
12	Implement Management Measures affecting Goose Lake and Tributary E such as easements, native landscaping, reduced fertilizer, other stormwater BMPs.	High	A1	Various Stakeholders	Varies	Ongoing
13	Implement Management Measures west of Bateman Rd. along Tributary F feeding runoff into Nature Preserve.	High	A1	Various Stakeholders	Varies	Ongoing
14	FPDCC recommends better stormwater practices and landscape maintenance on corporate properties and IDOT at headwaters of Trib. B.	High (Critical)	A1	Various Stakeholders	Varies	Ongoing

Goal B: Identify and protect important natural areas/open space and provide appropriate passive recreational benefits.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Identify and designate a lead person from each governing community and other major stakeholder groups to serve as open space plan “coordinators” and meet to implement the Green Infrastructure Network Plan in Section 3.10).	High	B3	SCW	All Stakeholders	1-5 Years
2	Form multi-jurisdictional partnerships to develop funding packages and grant proposals to implement the Green Infrastructure Network Plan in Section 3.10.	Medium	B3	SCW; CFC	FPDCC; FPDKC	Ongoing
3	Include all green infrastructure parcels in community comprehensive plans and development review maps (See Section 3.10).	High	B3	Munic; Twp	Consultant	1-5 Years
4	Create zoning overlay and update development ordinances to require conservation and/or low impact development design on all green infrastructure parcels (See Section 3.10).	High	B4	Munic; Twp	CMAF	1-5 Years
5	Use results of Green Infrastructure Network Plan (See Section 3.10) to identify and create new trails and trail connections.	Medium	B3	SCW; RCBH	Friends of Spring Creek	Ongoing
6	Protect high quality natural areas or T&E species that are not currently protected.	High	B1	SCW; CFC	n/a	1-5 Years
7	Identify buffer parcels to existing forest and nature preserves and other sites with high quality natural areas using the Green Infrastructure Network Plan (See Section 3.10) then protect and implement long term management.	High	B2	FPDCC; FPDKC	SCW; CFC; Friends of Spring Creek	5-10+ Years
8	Develop watershed-specific buffer requirements between developments and important natural areas/open space.	High	B4	SCW; Munc; Twp	MWRD; USACE; USFWS	5-10+ Years
9	Identify opportunities for agencies to provide economic incentives that encourage the preservation of natural resources.	High	B1	SCW	Munic; Twp	5-10+ Years
10	Sears Center: manage prairie, renovate outlets & vegetation of naturalized detentions, and use permeable pavement.	High	B2	Sears Center	Consultant	Ongoing
11	IDOT implement better median/swale management strategies along Route 72 and other areas were roads are widened.	High	B2	IDOT	n/a	Ongoing

Goal C: Reduce existing structural flood damage and ameliorate potential flooding where flooding threatens structures and infrastructure.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Protect all undeveloped floodplain parcels included in the Green Infrastructure Network Plan (See Section 3.10).	High	C1	Munic; Twp; Owner	FEMA; MWRD	1-5 Years
2	Restore historical floodplain function by removing spoil piles along channelized stream reaches.	Medium	C2	Owner	FEMA; MWRD; USACE; Counties	5-10+ Years
3	Mitigate for all identified structural flood problem areas identified in Section 3.12.4.	Medium	C6	Munic; Twp; Owner	FEMA; MWRD; USACE	5-10 Years
4	Require in-watershed wetland mitigation.	Medium	C3	Munic; Twp; MWRD	USACE	Ongoing
5	Encourage watershed-wide stream maintenance program to remove debris loads/jams.	Low	C3	Munic; Twp	USACE; MWRD	Ongoing
6	Modify streets, parking lots, lawns (i.e. rain gardens and natural swales), parks, and other open space within existing and new development for stormwater storage and infiltration.	Medium	C3	Munic; Owner; Twp	MWRD; SCW; CFC	Ongoing
7	Perform flood audits for structures known to flood (See Section 3.12.4)	Medium	C6	Owner	MWRD; County	5-10 Years
8	Assess condition & function of existing constructed stormwater management systems and manage (See Section 3.12.2).	Medium	C4	Condition & function already assessed; Owner implement	Consultant	Ongoing
9	Assess condition & function of existing wetland storage areas and manage.	Low	C5	Condition & function already assessed; Owner implement	Consultant	Ongoing
10	Assess all dams, weirs, and online impoundments for potential increased stormwater storage.	Low	C4	MWRD, County	Consultant	5-10+ Years
11	Assess each new development plan for proper design of stormwater management systems to reduce runoff volumes.	High	C4	Munic; Twp	County; SCW	Ongoing

Goal D: Improve aquatic and terrestrial habitat to encourage balanced ecosystems.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Include natural pool/riffle habitat and bank stabilization designs for stream restoration projects where this type of treatment is needed.	High	D1	Munic; Twp; USACE; FPDCC; FPDKC	Consultant	Ongoing
2	Control existing populations and prevent the spread of non-native/invasive species; replace with native vegetation if needed.	High	D3	FPDCC; FPDKC; Owner; Sears Center	Friends of Spring Creek; SCW; CFC	Ongoing
3	Restore stream reaches and natural communities as an aesthetic value to all new development.	Medium	D6	Developer	USACE; Consultant; CFC; SCW	Ongoing
4	Require developers to donate natural areas to a public agency or conservation organization for long term management with dedicated funding.	High	D6	Developer; USACE; Munic; Twp	SCW	Ongoing
5	Restore potential wetland restoration sites (See Section 3.12.3)	Medium	D7	USACE; FPDCC	Consultant	Ongoing
6	Restore stream and terrestrial habitat in conjunction with construction of roads, bridges, culverts, etc. to minimize negative impacts.	Medium	D6	DOT	USACE; County	Ongoing
7	Reintroduce fire into natural areas via controlled burns.	Medium	D3	FPDCC; FPDKC; Twp; Munic	Consultant	Ongoing
8	Promote native landscaping as an alternative to standard landscaping practices at residential, industrial, commercial, and roadside properties.	High	D5	SCW; CFC	Consultant	Ongoing
9	Review local ordinances to insure that current codes do not prohibit use of native vegetation in projects and other residential and commercial landscaping.	High	D5	Munic; County; Twp	SCW; CFC	5-10+ Years
10	Develop and implement long term (5+ years) maintenance and monitoring plans for created natural areas in new developments.	High	D4	MWRD; County; USACE	Consultant	5-10+ Years
11	Develop and encourage management plans on private parcels identified in the Green Infrastructure Plan (See Section 3.10)	Medium	D4	Resident; Owner	Consultant; SCW; CFC	Ongoing
12	Develop and implement management plans for all Ecologically Significant Areas (See Section 3.11).	High	D4	FPDCC; FPDKC; Owner	Consultant; USFWS; NRCS	5-10+ Years

Goal E: Increase communication and coordination among municipal decision-makers and other stakeholders within the watershed.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Meet with each applicable entity to encourage adoption of the Spring Creek Watershed-Based Plan.	High	E1	SCW	Munic; Twp; CFC; MWRD; County; Illinois EPA	1-5 Years
2	Recruit “Champions” within each municipality and other stakeholder groups to assemble and form a Watershed Council (Plan Implementation Committee) that actively implements the Watershed-Based Plan and conducts progress evaluations.	High	E2	SCW	All Stakeholders	1-5 Years
3	Hire or assign a volunteer a Watershed Implementation Coordinator to follow through on plan implementation and evaluation.	High	E2	SCW	n/a	1-5 Years
4	Provide training and watershed education opportunities for local government planners and engineers related to implementing the Watershed-Based Plan.	Medium	E2	SCW	n/a	5-10+ Years
5	Form a multijurisdictional partnership to develop funding packages and grant proposals to implement watershed plan recommendations.	Medium	E5	SCW	Munic; County; MWRD; FPDCC; FPDKC; CMAP; USACE; Illinois EPA	Ongoing
6	Incorporate watershed plan goals, objectives, and recommended actions into local comprehensive plans, codes, and ordinances.	High	E3	Munic; Twp; County	SCW	1-5 Years
7	Jurisdictional bodies in the watershed prepare annual budgets for implementing recommendations in the Watershed-Based Plan.	High	E5	All relevant stakeholders	SCW	Annually
8	Develop a model or template for an intergovernmental agreement for participation in cooperative watershed projects.	Medium	E5	SCW	Munic; Twp; FPDCC	5-10+ Years
9	Invite local professionals to lead workshops and/or make presentations to watershed stakeholders.	Low	E5	SCW	Consultant; Munic; Twp; CFC	Ongoing
10	Review local policy that protects groundwater supply and quality.	Medium	E4	Munic; Twp	BACOG	5-10+ Years

Goal F: Foster appreciation and stewardship of the watershed through education.

	Management Measure	Priority	Primary Objective	Responsible Entity/ Supporting Partners	Technical Assistance	Time Frame
1	Implement the Education Plan portion of this Watershed-Based Plan (See Section 6.0).	High	F2	SCW	All Stakeholders	Ongoing
2	Provide schools with resource information applicable to creating outdoor curriculum on adjacent or nearby natural areas.	Low	F3	SCW; CFC	IDNR; FPDCC; FPDKC; NRCS	Ongoing
3	Continue to recruit volunteers interested in natural area restoration.	Medium	F3	Friends of Spring Creek	IDNR; FPDCC; FPDKC; CFC	Annually
4	Offer workshops that help homeowners identify and choose the appropriate native plants, trees, and shrubs for landscaping.	Medium	F3	SCW; CFC	Consultants; IDNR; FPDCC; FPDKC; NRCS	Every Five Years
5	Offer workshops that provide recommendations and education related to alternatives to phosphorus use.	High	F6	SCW, CFC	Munic; Illinois EPA	Every Five Years
6	Offer workshops that provide education and alternatives to road & other pavement salt use.	Medium	F7	SCW, CFC, BACOG	Munic; DOT	Ongoing
7	Offer workshops that provide information to homeowners about how to best maintain septic systems.	Medium	F8	SCW	County; Consultant	Every Five Years
8	Offer workshops that educate the equestrian community about water quality protection.	Medium	F9	RCBH, Fox River Valley Pony Club	SCW; Friends of Spring Creek	Every Five Years
9	Install environmental interpretation/education signage at access points throughout public open space.	Low	F5	FPDCC; FPDKC; IDNR;	Friends of Spring Creek; CFC	1-5 Years
10	Offer workshops that provide education about the importance of groundwater recharge and quality and link between how property owners manage the land.	Medium	F1	BACOG	SCW, FCWP	Every Five Years
11	Provide educational information on flood proofing to owners with structural flood problems (See Section 3.12.4).	Low	F1	FEMA	Munic; Twp	Every Five Years
12	Conduct garden and restoration walks in areas currently planted with native vegetation for stakeholders interested in using natives.	Medium	F3	Owner; CFC; SCW	n/a	Annually
13	Educate municipalities, businesses, and homeowner's associations on how to maintain naturalized detention basins.	Medium	F3	SCW	CFC, Consultant	Every Two Years
14	Educate riparian landowners on how to use environmentally friendly lawn maintenance practices, protect/restore buffers, and remove problematic debris jams.	High	F3	SCW	IDNR; NRCS; Consultant	Annually

5.2 Site Specific Measures Action Plan

Site specific Management Measure (Best Management Practices) recommendations made in this section of the report are backed by findings from the watershed field inventory, overall watershed characteristics assessment, and input from watershed stakeholders. In general, the recommendations address sites where watershed problems and opportunities can best be addressed to achieve watershed goals and objectives. The Site Specific Measures Action Plan is organized by jurisdiction in which recommendations are located making it easy for users to identify project sites and corresponding details. Site specific Management Measures were identified within the following jurisdictions and are included in the Action Plan:

- *Algonquin Township*
- *Barrington Hills*
- *Barrington Township*
- *Carpentersville*
- *East Dundee*
- *Forest Preserve District of Cook County*
- *Forest Preserve District of Kane County*
- *Fox River Grove*
- *Hoffman Estates*
- *South Barrington*

The following Management Measure categories are part of the Site Specific Measures Action Plan:

- *Detention Basin Retrofits & Maintenance*
- *Pond, Lake, & Wetland Retrofits & Maintenance*
- *Wetland Restoration*
- *Priority Protection Areas*
- *Stream & Riparian Area Restoration & Maintenance*
- *Other Measures*

Descriptions and location maps (Figures 47-52) for each Management Measure category follow. Table 39 includes useful project details such as ID#, Location, Units (size/length), Owner, Existing Condition, Management Measure Recommendation, Pollutant Load Reduction Efficiency, Priority, Responsible Entity, Sources of Technical Assistance, Cost Estimate, and Implementation Schedule.

Many facets such as importance, technical and financial needs, cost, feasibility, and ownership type were taken into consideration when prioritizing and scheduling Management Measure implementation. High, Medium, or Low priority was assigned to each recommendation. Critical Areas discussed in Section 4.2 are all High priority and highlighted (in orange) on project category maps and the Action Plan table. Implementation schedule is based on short term (1-5 years), medium term (5-10 years) long term (10+ years), and ongoing objectives.

The Site Specific Action Plan is designed to be used in one of two ways.

Method 1: The user should find their respective jurisdiction (listed alphabetically in Table 39) then identify the Management Measure category of interest. An ID# can be found in the first column under each recommendation that corresponds to the ID# on a map (Figures 47-52) associated with each category.

Method 2: The user should go to the page(s) summarizing the appropriate Management Measure category of interest then locate the corresponding map and ID# of the site specific recommendations for that category (Figures 47-52-X). Next, the user should go to Table 39 and locate the jurisdiction and ID# for details about the project of interest.

Pollutant Load Estimates

Where applicable, pollutant load reductions for Sediment (TSS), Nitrogen (TN), and Phosphorus (TP) were evaluated for each recommended Management Measure based on efficiency calculations developed for the USEPA’s Region 5 Model. This model uses “Pollutants Controlled Calculation and Documentation for Section 319 Watersheds Training Manual” (MDEQ, 1999) to provide estimate of sediment and nutrient load reductions from the implementation of *agricultural* Management Measures. Estimate of sediment and nutrient load reduction from implementation of *urban* Management Measures is based on efficiency calculations developed by Illinois EPA.

Estimates of pollutant load reduction using the Region 5 Model are measured in weight/year (tons/yr for sediment and lbs/yr for Nitrogen and Phosphorus). The Model was used to calculate weight of pollutant reductions for Critical Area detention basin retrofit projects and wetland restorations, all Priority Protection Areas; all stream & riparian area restoration & maintenance projects, and for all projects included under Other Measures. The majority of the data that was input into the model was derived from the watershed characteristics inventory.

Estimated *percent* removal of Sediment, Nitrogen, and Phosphorus is included in the Action Plan table for lower priority projects and those projects where calculation of weight reduction is beyond the scope of this project. The percent removal efficiencies were based off the Region 5 Model as shown in Table 37.

Table 37. Region 5 Model percent pollutant removal efficiencies for various Management Measures.

Management Measure	TSS	TN	TP
Vegetated Filter Strips	73%	40%	45%
Grass Swales	65%	10%	25%
Extended Wet Detention	86%	55%	68.5%
Wetland Detention	77.5%	20%	44%
Agriculture Filter Strip	70%	53%	61%
Streambank Stabilization	90%	90%	90%
Lake/Pond Shoreline Stabilization	90%	90%	90%
Gully Stabilization	90%	90%	90%

Note: Streambank, lake/pond shoreline, and gully stabilization pollutant removal is based on bank height and lateral recession rates.

Summary of Watershed-Wide Action Recommendations

All Site Specific Action Plan and Education Plan recommendation information is condensed by Management Measure Category in Table 38. This information provides a watershed-wide summary of the Total Units (size/length), Total Cost, and Total Estimate of Pollutant Load Reduction if all the recommendations in the Site Specific Action Plan and Education Plan are implemented. To summarize:

- 3,628 acres of land restoration recommendations with a total cost of \$8,552,250.
- 269 acres of land require yearly maintenance at a cost of \$312,325/year.
- 145,310 linear feet of stream/corridor, gullies, and swales require work costing \$5,352,500.
- 1,767 tons/year of Total Suspended Sediment (TSS) would potentially be reduced each year. This exceeds the 784 tons/year Reduction Target identified in Section 4.0.
- 11,734 pounds/year of Nitrogen (TN) would potentially be reduced each year. This exceeds the 10,203 pounds/year Reduction Target identified in Section 4.0.
- 2,750 pounds/year of Phosphorus (TP) would potentially be reduced each year. This exceeds the 2,138 pounds/year Reduction Target identified in Section 4.0.
- Education programs will cost \$52,000 to meet objectives (see Section 6.0).

Table 38. Watershed-wide summary of Management Measures recommended for implementation.

Management Measure Category	Total Units (size/length)	Total Cost	Estimated Load Reduction		
			TSS (t/yr)	TN (lbs/yr)	TP (lbs/yr)
Detention Basin Retrofits & Maintenance*					
<i>Retrofits (prairie buffers, plantings, etc.)</i>	89 acres	\$1,338,250	88	1,506	150
<i>Maintenance (burning, invasive control, brushing, etc.)</i>	135 acres	\$114,075/yr	n/a	n/a	n/a
Pond, Lake, & Wetland Retrofits/Maintenance*					
<i>Retrofits (prairie buffers, plantings, etc.)</i>	78 acres	\$1,030,000	43	414	115
<i>Maintenance (burning, invasive control, mowing, etc.)</i>	134 acres	\$190,750/yr	n/a	n/a	n/a
Wetland Restoration*	918 acres	\$4,133,000	203	2,538	451
Priority Protection Areas	1,602 acres	n/a	442	5,135	1,046
Stream & Riparian Area Restoration/Maintenance					
<i>Streambank and Channel Stabilization</i>	20,286 lf	\$30,715,500	527	1,028	532
<i>Riparian Area (burning, brushing, seeding, etc.)</i>	123,024 lf	\$17,090,000	168	469	149
Other Measures					
<i>Gully Restoration</i>	1,700 lf	\$220,000	280	560	280
<i>Residential Swale Stabilization</i>	300 lf	\$3,000	2	6	1
<i>Wetland Detention Storage Area</i>	0.7 acre	\$55,000	14	72	21
<i>Prairie & Savanna Restoration</i>	940 acres	\$2,116,000	0.5	5	4
Education	n/a	\$52,000	n/a	n/a	n/a
TOTALS	3,628 acres	\$8,542,250**	1,767 tons/yr	11,734 lbs/yr	2,750 lbs/yr
	269 acres maintenance	\$312,325/yr			
	145,310 lf	\$5,352,500			
	Education	\$52,000			

* Pollutant load reduction calculated for "Critical Areas" only.

** Does not include costs for acquiring & restoring or implementing conservation design for Priority Protection Areas.

5.2.1 Detention Basin Retrofits & Maintenance

The Project Team conducted a detention basin inventory within Spring Creek watershed in spring of 2011. Eighty two (82) basins were identified and inventoried. The results of the detention basin inventory can be found in Appendix B. The benefits of storing stormwater runoff in detention basins and releasing water slowly over time are well documented. More recently, the benefits of proper slope and depth design and introducing native vegetation to improve water quality and provide wildlife habitat is becoming the new standard.

The overall condition of detention basins in the watershed varies. Many older wet bottom detentions are heavily rip-rapped along the shoreline while others have manicured turf grass slopes. Detentions constructed more recently are generally planted with native vegetation. The majority of basins planted with native vegetation are located in the southeast portion of the watershed between Bartlett Road and New Sutton Road in “The Woods of South Barrington” residential subdivision. Most are currently being managed so there are relatively few problems. The majority of the dry bottom basins in the watershed are manicured turf grass associated with large lot residential development in the northern and eastern portions of the watershed.

The detention basin inventory primarily provides information related to potential retrofits and maintenance needs that would improve water quality and wildlife habitat by establishing and maintaining native vegetation. All detention basin retrofit and maintenance recommendations are derived directly from recommendations made during the watershed inventory.

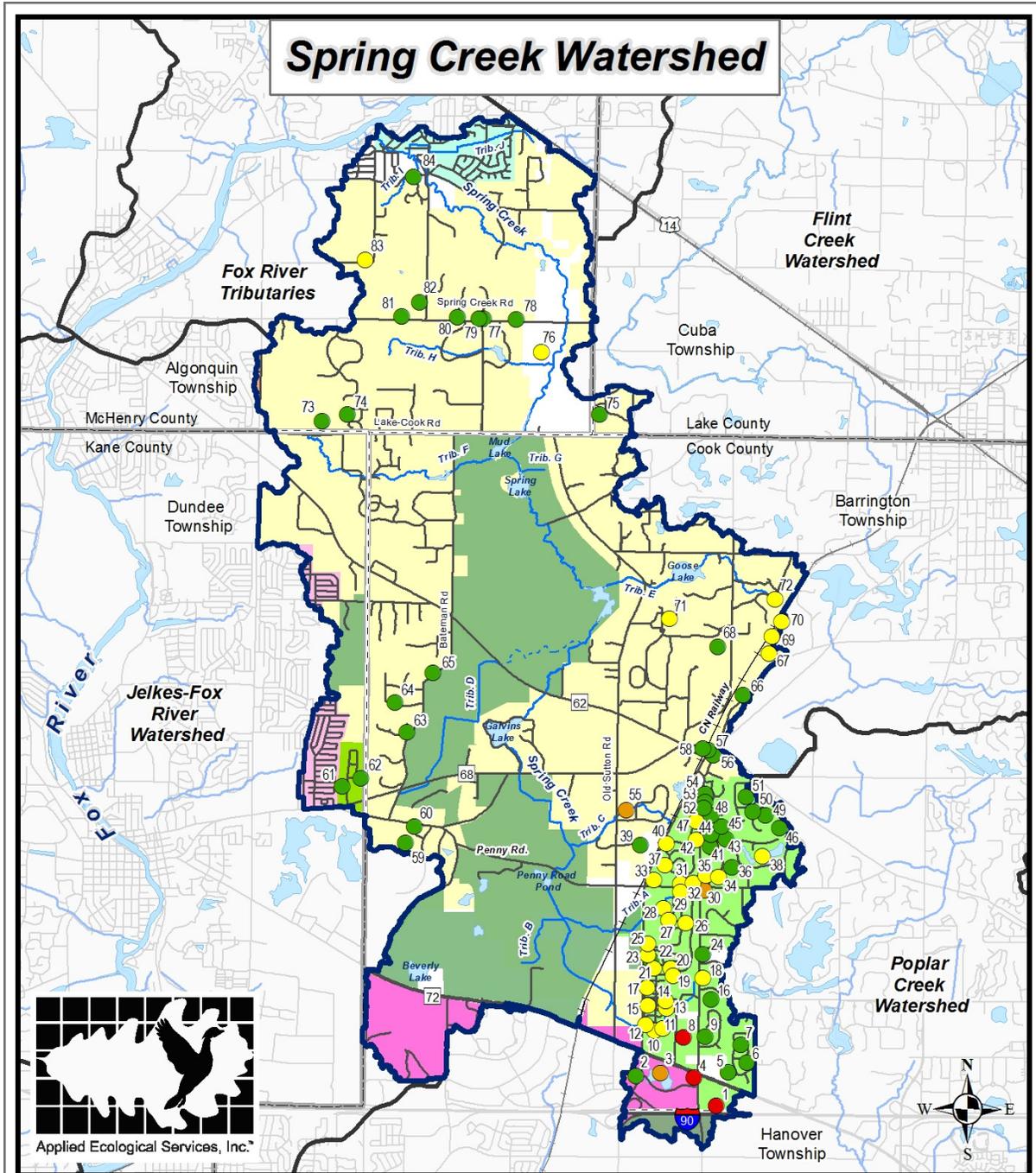
All basins receiving Management Measure recommendations are shown by ID# and priority on Figure 47. Details about each recommendation can be found in Table 39 within the appropriate jurisdiction. Critical Area basins, most publicly owned basins with problems, and others with significant problems are assigned High or Medium priority for retrofits because funding and implementation are usually easier on public land and where major problems exist. In some cases, basins are assigned higher priority based on location and/or ability to treat stormwater runoff. Medium priority is given to all basins where native vegetation has been established but requires ongoing maintenance to sustain the restored conditions. Low priority is assigned to small private basins and those exhibiting few problems.



Potential detention basin retrofit project at Barbara Rose Elementary School.

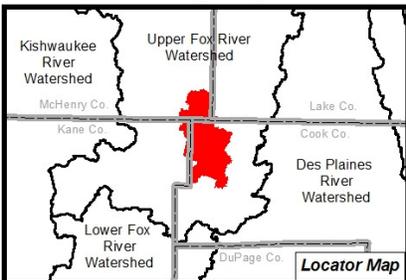


Potential detention basin retrofit project at future Sutton Crossing development site.



DATA SOURCES Barrington Area Council of Governments Illinois Department of Revenue
Metropolitan Water Reclamation District Illinois State Geological Survey
U.S. Census Bureau U.S. Geological Survey

Fig. 47: Detention Basin Retrofits and Maintenance



Legend		Jurisdiction		Detention Basin Recommendations	
— Railroad	— Roads	Algonquin	Fox River Grove	● Critical Area	● High Priority
— Rivers & Streams	— Open Water	Barrington Hills	Hoffman Estates	● Medium Priority	● Low Priority
— County Boundary	— Adjacent Watershed	Carpentersville	South Barrington		
— Spring Creek Watershed	— Township Boundary	East Dundee	County Forest Preserve		

0 3,500 7,000 14,000 Feet

5.2.2 Pond, Lake, and Wetland Retrofits & Maintenance

In spring 2011 the Project Team conducted an inventory of many ponds and lakes and wetlands in Spring Creek watershed in an attempt to identify areas that would benefit from retrofits or maintenance to improve water quality and habitat conditions. The results of this inventory can be found in Appendix B. All retrofit and maintenance recommendations are derived directly from recommendations made during the inventory.

The condition of ponds, lakes, and wetlands varies. Of the 7 major lakes in watershed only Goose Lake has remained in its natural state over time. The other 6 lakes were either excavated or created by placing dams online with stream reaches. Lake buffers are generally natural but dominated by invasive species. Most ponds inventoried are small, human-made, and generally constructed in areas that were once wetland on private property. Many of the horse farms have ponds with mowed lawn down to the shoreline and little to no buffer zones. Many ponds in highly visible areas near homes exhibit manicured shorelines. Ponds in parks or residential lots have areas of mowed lawn and other more natural shorelines dominated by invasive species. Almost all wetlands included in the inventory are dominated by invasive species and surrounding buffers are typically narrow and not beneficial. Nearly all of the ponds, lakes, and wetlands would benefit from larger and better quality buffers, maintenance of existing buffers, and invasive species management in order to improve water quality and habitat. On equestrian lots, education on plants that filter nutrients and are safe for horses is recommended.



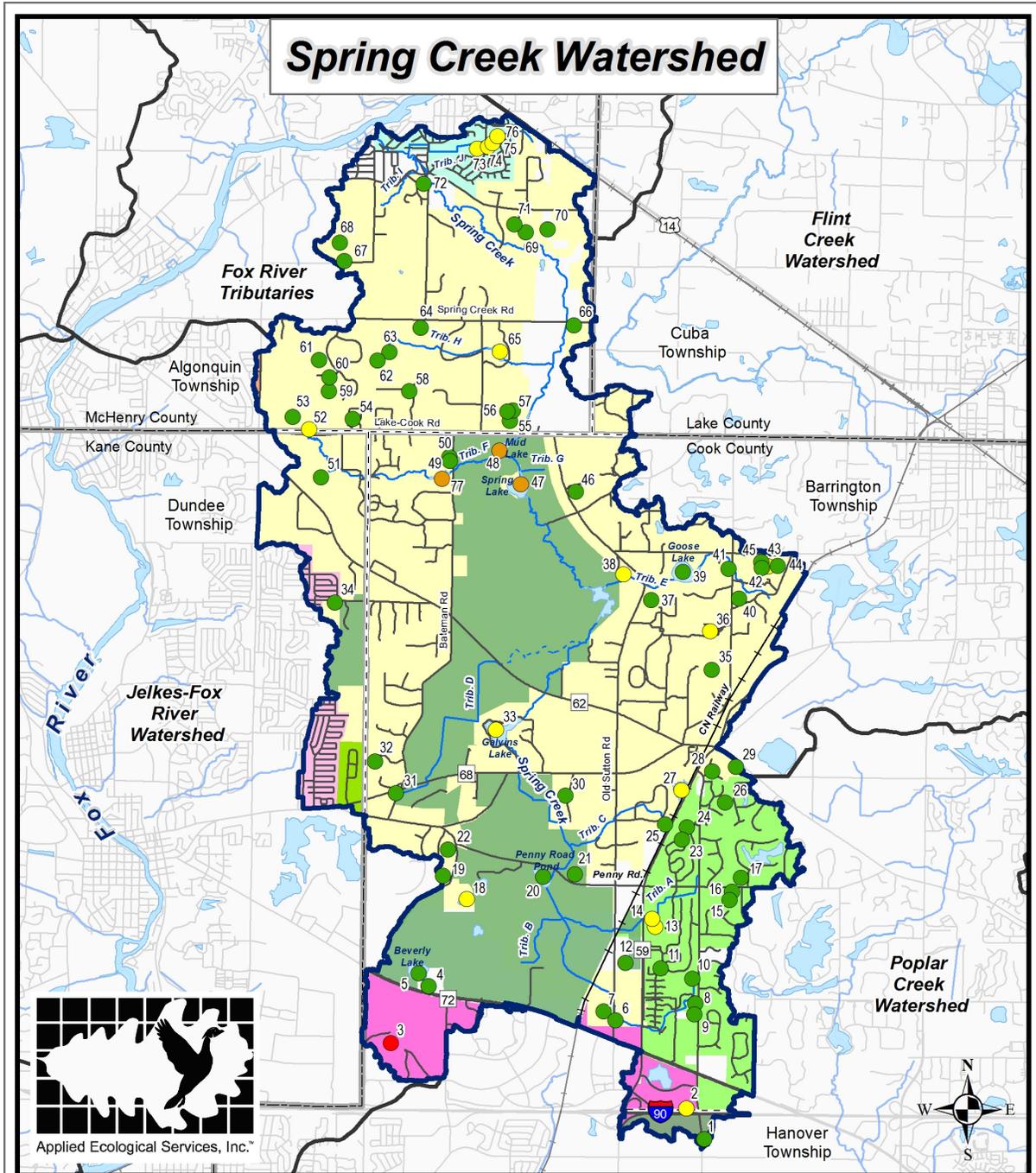
Potential buffer retrofit around pond in horse pasture

All ponds, lakes, and wetlands receiving Management Measure recommendations are shown by ID# and priority on Figure 48. Details about each recommendation can be found in Table 39 within the



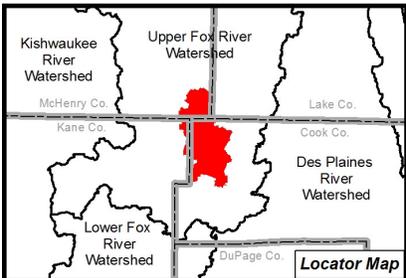
Wetland dominated by invasive reed canary grass

appropriate jurisdiction. Critical Areas, publicly owned areas with problems, and others with significant problems are assigned High or Medium priority for retrofits. Some areas are assigned higher priority based on location and/or ability to treat stormwater runoff or provide large scale wildlife habitat. Medium priority is assigned to all areas where native vegetation has been established but requires ongoing maintenance to sustain the restored conditions. Low priority is generally assigned to small, privately owned areas exhibiting few problems.

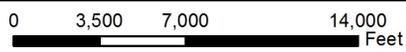


DATA SOURCES Barrington Area Council of Governments Illinois Department of Revenue
Metropolitan Water Reclamation District Illinois State Geological Survey
U.S. Census Bureau U.S. Geological Survey

Fig. 48: Ponds, Lakes, and Wetlands Retrofits & Maintenance



Legend		Jurisdiction		Pond, Lake, and Wetland Recommendations	
—+—	Railroad	Algonquin	Fox River Grove	Orange dot	Critical Area
—	Roads	Barrington Hills	Hoffman Estates	Red dot	High Priority
—	Rivers & Streams	Carpentersville	South Barrington	Yellow dot	Medium Priority
—	Open Water	East Dundee	County Forest Preserve	Green dot	Low Priority
—	County Boundary				
—	Adjacent Watershed				
—	Spring Creek Watershed				



5.2.3 Wetland Restoration

Wetland restoration can be important for mitigation purposes or done simply to benefit basic environmental functions that historic wetlands once served. Improvement in water quality is the greatest benefit provided by wetland restoration. Other benefits include reducing flood volumes and rates and improved habitat to increase plant and wildlife biodiversity. The wetland restoration process is generally the same for all sites. First a study must be completed to determine if restoration at the site is actually feasible. If it is, a design plan is developed, permits obtained, then the project is implemented. Implementation usually involves breaking existing drain tiles and/or regrading soils to attain proper hydrology to support wetland vegetation. Seeding and plugging with native species is the next step followed by both short and long term maintenance and monitoring.

Wetland restoration sites were identified using GIS data and specific criteria determined to be essential for restoration of a functional and beneficial wetland (see Section 3.12). The initial analysis resulted in 59 sites meeting criteria. However, only 29 of these sites were determined to be “potentially feasible” or have at least “limited feasibility” based on careful review of 2010 aerial photography and what is known about the existing land use at each location.

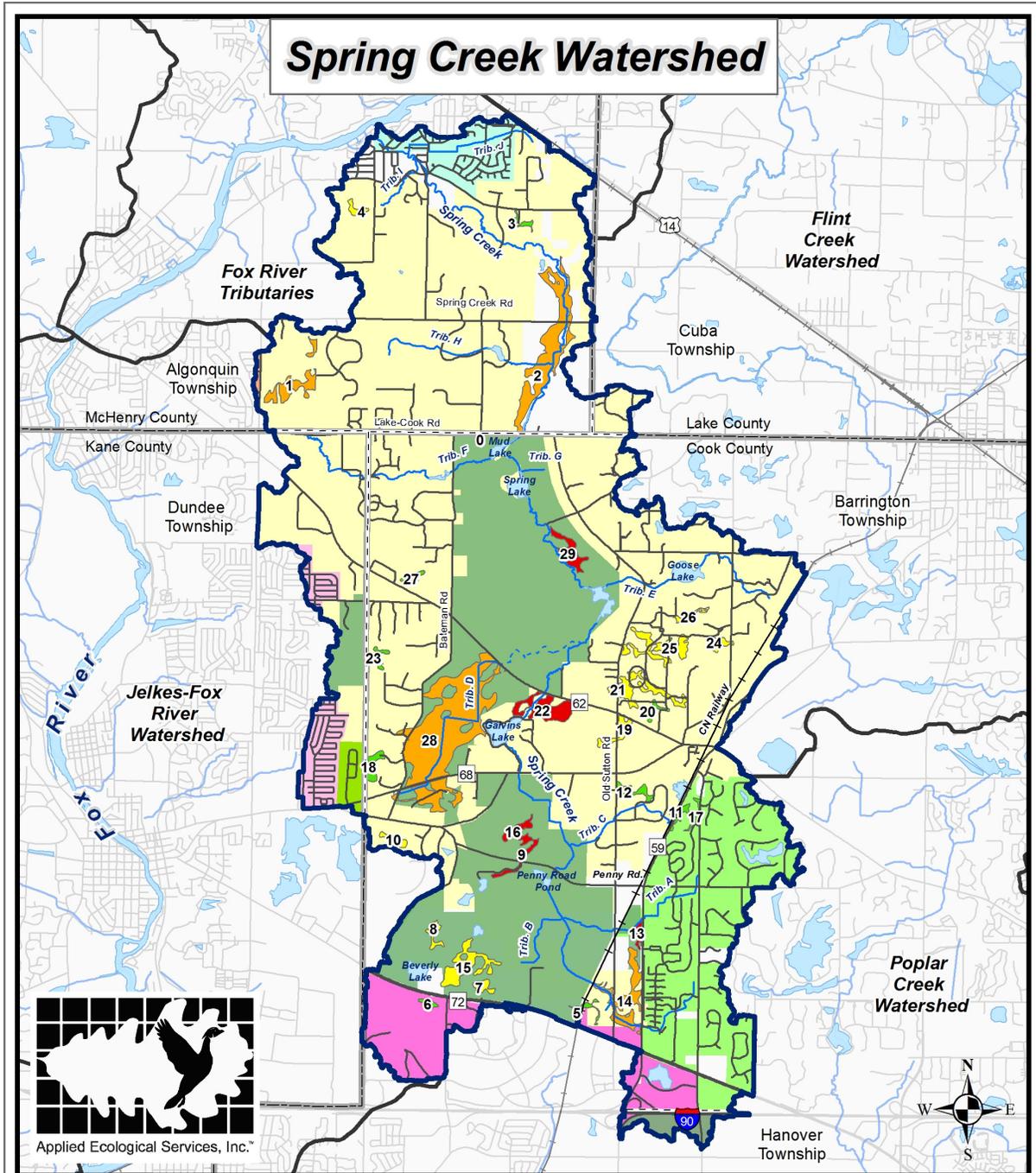
Figure 49 shows the location of all potential wetland restoration sites by ID# and priority while Table 39 includes action related information for each recommendation within the appropriate jurisdiction. Critical Areas, large sites on agricultural land, and sites within public forest preserves are assigned High or Medium priority for implementation. Smaller sites and those on private land are assigned medium or low priority for implementation.



“Critical Area” wetland restoration ID# 1

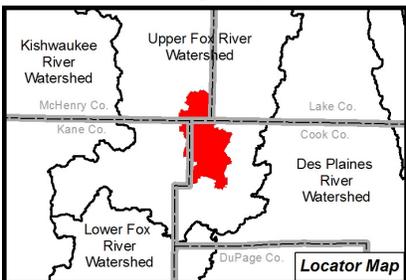


“Critical Area” wetland restoration ID#28



DATA SOURCES Barrington Area Council of Governments Illinois Department of Revenue
Metropolitan Water Reclamation District Illinois State Geological Survey
U.S. Census Bureau U.S. Geological Survey

Fig. 49: Wetland Restoration



Legend		Jurisdiction		Wetland Restoration Recommendations	
	Railroad		Algonquin		Critical Area
	Roads		Barrington Hills		High Priority
	Rivers & Streams		Carpentersville		Medium Priority
	Open Water		East Dundee		Low Priority
	County Boundary		Fox River Grove		
	Adjacent Watershed		Hoffman Estates		
	Spring Creek Watershed		South Barrington		
			Township Boundary		
			County Forest Preserve		

0 3,500 7,000 14,000 Feet

5.2.4 Priority Protection Areas

Six Priority Protection Areas were identified in the watershed after careful review of existing and future land use, open space, pollutant loading, and green infrastructure components of this plan. These areas are best described as large parcels of land that are currently undeveloped, are likely to be developed in the future, and are situated in environmentally sensitive or green infrastructure areas where acquiring, protecting, and restoring or developing using conservation and/or low density design would best benefit watershed conditions.



Aerial view of Priority Protection Area #4

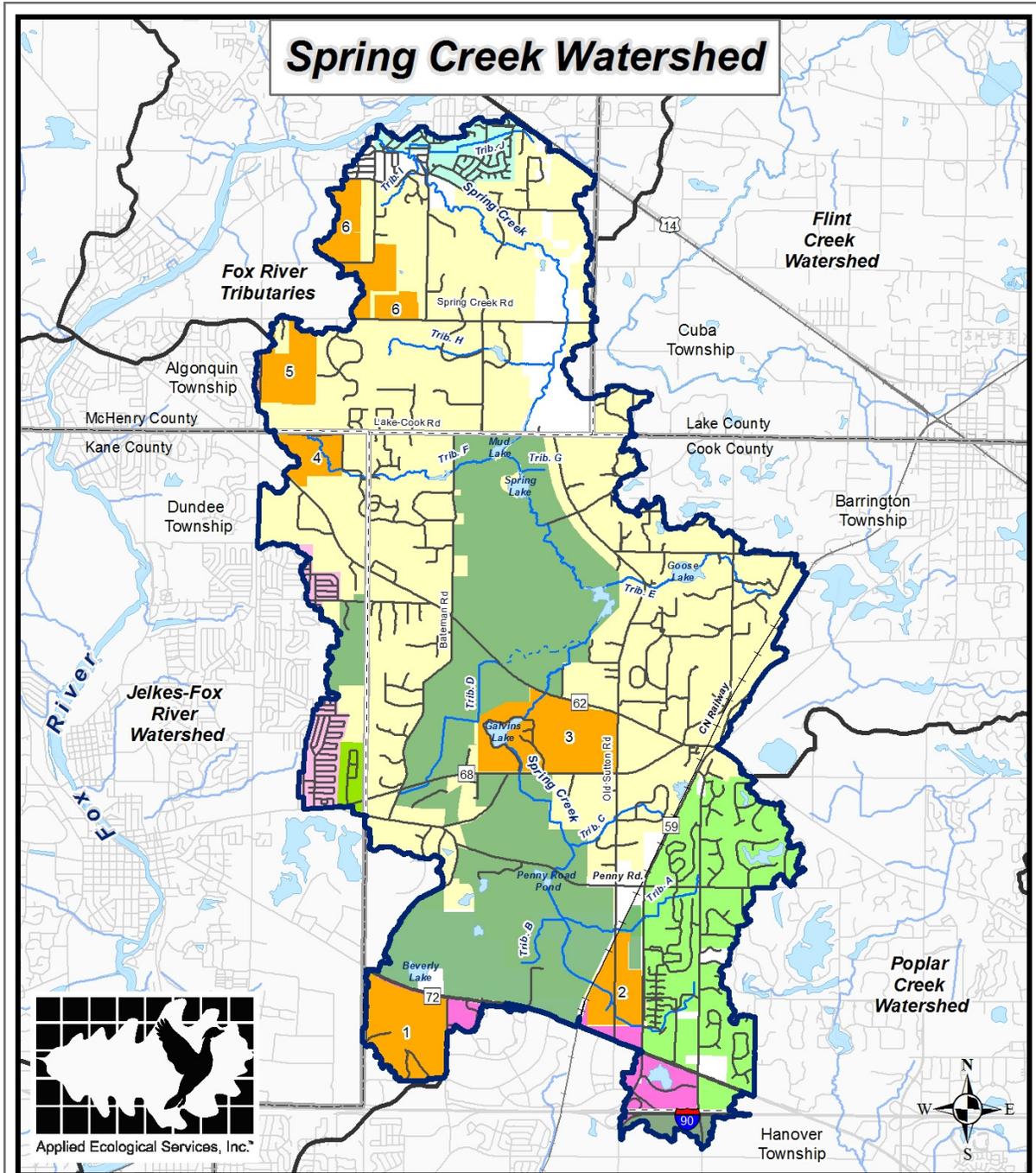


Aerial view of Priority Protection Area 5

Figure 50 shows the location of all six Priority Protection Areas by site ID#. Table 39 includes specific action recommendations for each. All six sites are considered High Priority “Critical Areas”. Cost estimates and schedules for implementing these projects is not included because of the difficulty in determining how or if each site will be acquired or developed. Pollutant reduction estimates were determined through the STEPL Model by assuming that the existing land use (agricultural in most cases) would change to either prairie/forest or natural open space at part of conservation or low density residential development.

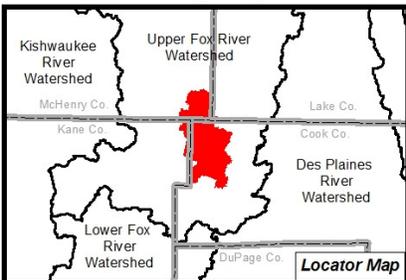


Aerial view of Priority Protection Area #3



DATA SOURCES Barrington Area Council of Governments Illinois Department of Revenue
Metropolitan Water Reclamation District Illinois State Geological Survey
U.S. Census Bureau U.S. Geological Survey

Fig. 50: Priority Protection Areas



Legend

- Railroad
- Roads
- Rivers & Streams
- Open Water
- County Boundary
- Adjacent Watershed
- Spring Creek Watershed

Jurisdiction

- Priority Protection Areas
- Algonquin
- Barrington Hills
- Carpentersville
- East Dundee
- Fox River Grove
- Hoffman Estates
- South Barrington
- Township Boundary
- County Forest Preserve

0 3,500 7,000 14,000 Feet

5.2.5 Stream & Riparian Area Restoration/Maintenance

The Project Team completed a general inventory of Spring Creek and its tributaries located outside Spring Creek Valley Forest Preserve boundaries in spring 2011. Information about stream reaches located within the Preserve was obtained via personal communication with the Army Corps of Engineers: Chicago District. Detailed notes were recorded related to potential Management Measure recommendations for improving channel and streambank conditions as well as improving the general condition of the riparian corridor. The results of this inventory can be found in Appendix B.



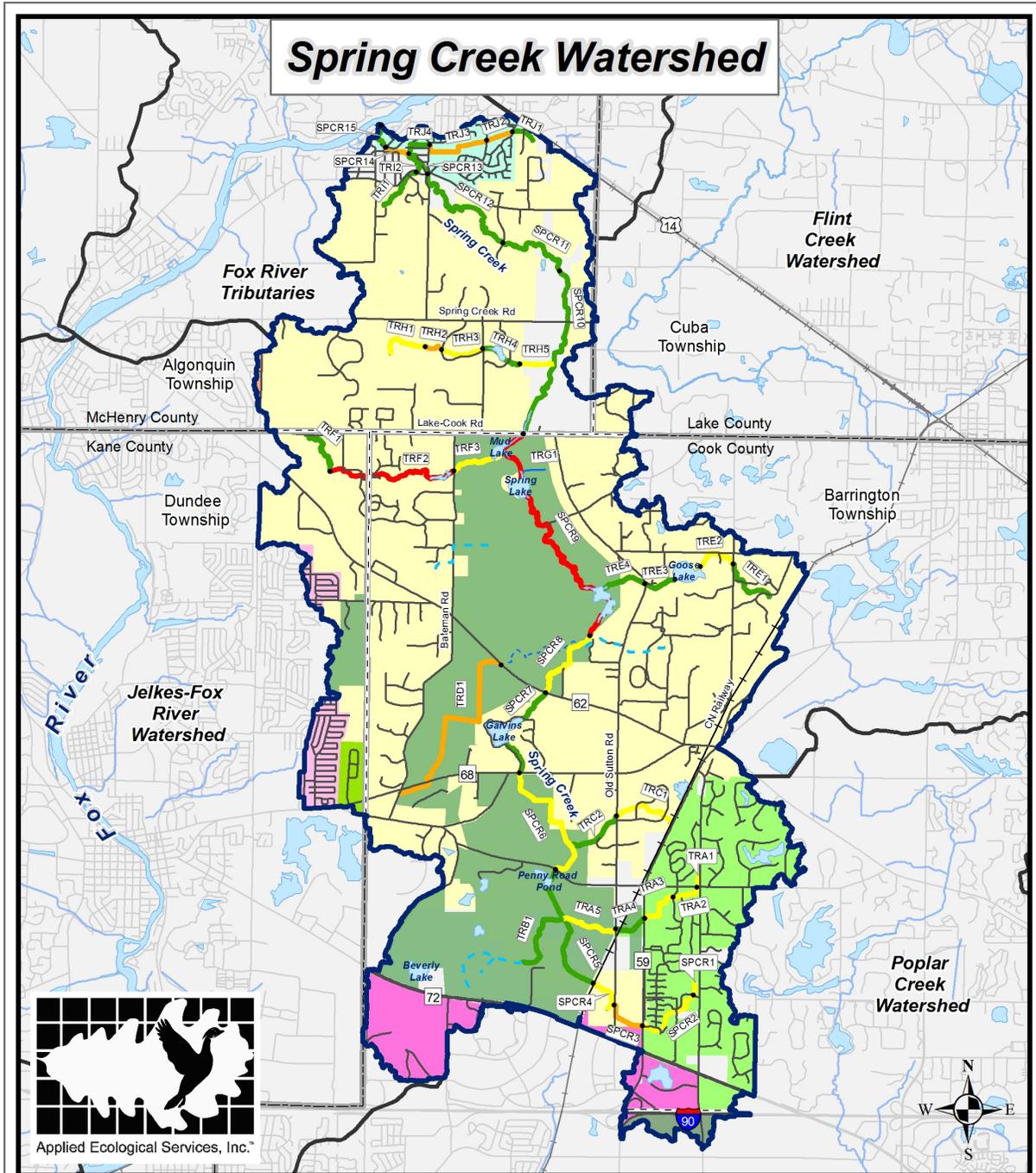
Potential streambank and buffer quality improvement project along reach TRC1

Stream and riparian area projects usually include three water quality improvement components; 1) improved buffers; 2) stabilized streambanks using bioengineering; and 3) restored riffles/grade controls. Buffer improvements usually require removal of invasive species followed by replacement with native vegetation to primarily prevent erosion and filter runoff but also to improve wildlife habitat. Streambank stabilization recommendations include re-meandering, slope regrading, and native vegetation plantings. Riffles/grade controls are associated with naturally meandering stream channels. Installation of these structures is recommended where channel conditions are degraded.

Figure 51 shows the location of all potential stream and riparian area restoration and maintenance projects by reach ID# and priority while Table 39 lists details about each recommendation within the appropriate jurisdiction. Critical Areas reaches and reaches with significant problems on agricultural and public land are generally assigned High or Medium priority for implementation. Reaches located on private land are most often assigned Low priority.

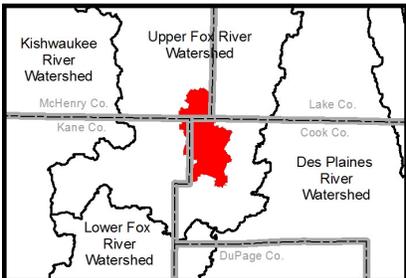


Woody invasives (reach TRE2) and mowed turf grass (reach TRH1) observed along Spring Creek & Tributaries



DATA SOURCES Barrington Area Council of Governments
Metropolitan Water Reclamation District
U.S. Census Bureau
U.S. Geological Survey

Fig. 51: Stream and Riparian Area Restoration and Maintenance

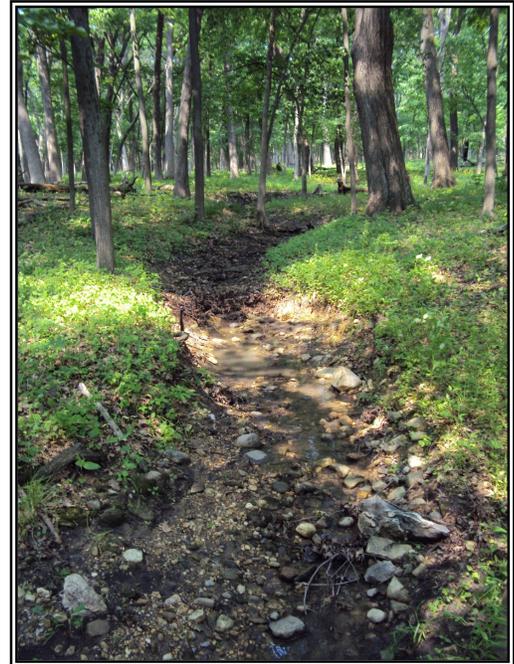


Legend		Jurisdiction		Stream and Riparian Recommendations	
	Railroad		Algonquin		Fox River Grove
	Roads		Barrington Hills		Hoffman Estates
	Spring Creek Watershed		South Barrington		County Forest Preserve
	Adjacent Watershed		East Dundee		Township Boundary
	County Boundary		Open Water		Stream Segment Endpoints
	Open Water				Secondary Drainage
					Critical Area
					High Priority
					Medium Priority
					Low Priority

0 3,500 7,000 14,000 Feet

5.2.6 Other Measures

While conducting Management Measure inventories of detention basins, ponds, wetlands, and lakes, within the watershed in spring 2011, the Project Team also looked for other potential projects that fit under categories such as gully stabilization, rain garden creation, residential swale stabilization, wetland detention/storage creation, and prairie restoration. Overall, 2 gully stabilization projects, 1 drainage swale needing protection, 1 potential wetland detention area, and 5 large-scale natural area restoration projects were discovered. The challenge within the community is the lack of a parks division for maintenance. Encouragement of education of landscapers to incorporate and maintain naturalized areas is encouraged. Figure 52 shows the location of all “Other Measures” by ID# while Table 39 lists details about each recommendation within the appropriate jurisdiction.



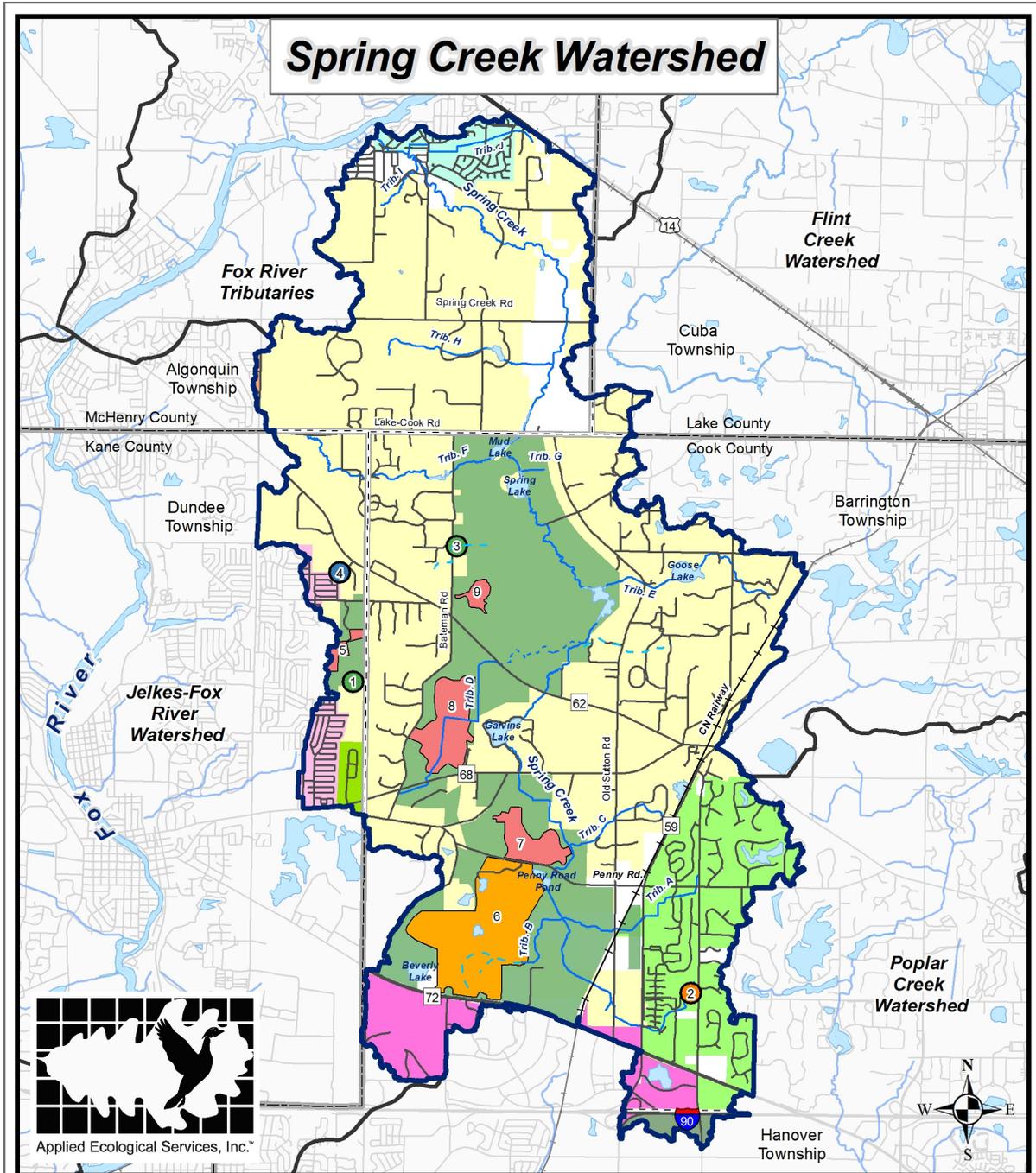
*Eroded channel originating from flatwoods
in Helm Woods Forest Preserve*

The Forest Preserve District of Cook County highly recommends several additional Management Practices:

- Control of buckthorn in hydric soils and sensitive soil slopes surrounding the Spring Lake Nature Preserve lakes.
- Recover sensitive soils and slopes in important recharge areas: brush control in extensive sloping meadows west of Spring Creek, South of Donlea Road, and wooded slopes west of the creek, north of Donlea Road within SCVFP.
- Protection of properties, waterways, & water quality in Priority Protection Areas 1, 2, and 3.
- Better stormwater management and pollutant/fertilizer control along Tributaries F & E.
- Better stormwater management, drain tile disablement, easements, native landscaping, fertilizer reduction, and pond retrofits along contributory drainage originating in the Riding Center west of Bateman Road.

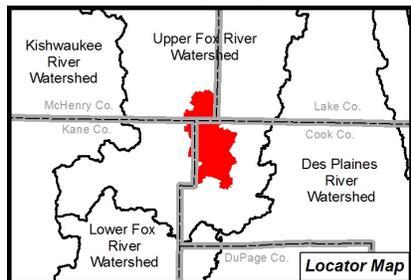
The FPDCC believes it is “Critically” important to address the drainage that feeds Tributary B within SCVFP from corporate and IDOT owned and managed areas along Route 72 and to the south. The FPDCC indicates that a swale and also incised channel drain through this area causing erosion and off site pollution leading to invasive species gaining a foothold. FPDCC makes the following recommendations for this area:

- *IDOT Route 72 Stormwater*: Vegetate median strips as bioswales, elevate inflow grates so bioswales retain water during storm events, and vegetate non-vegetated concrete.
- *Prairie Stone*: Consider modifying current curb and gutter system into bioswale/green infrastructure system, using native landscaping, retrofitting with permeable pavement, and raise the outlet in existing detention area to retain additional water.
- *Sears Center*: Control invasive species, revegetate with more sturdy native plants, evaluate maintenance regime and adapt if needed, elevate outlet structure to all additional water retention.



DATA SOURCES Barrington Area Council of Governments Illinois Department of Revenue
Metropolitan Water Reclamation District Illinois State Geological Survey
U.S. Census Bureau U.S. Geological Survey

Fig. 52: Other Measures



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Table 39. Site Specific Management Measures Action Plan.

ALGONQUIN TOWNSHIP											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
76	N of Lake Cook Rd, W of Ridge Rd.	1.5 acres	Resident (Private)	Wet bottom detention basin with narrow natural buffer dominated by cattail and willow; hydrologically connected to Trib. H via swale.	Design and implement project to increase buffer and plant with native vegetation, remove invasive species, and maintain indefinitely.	TSS= 73% TN= 40% TP= 45%	Medium	Resident (Duchossois)	Ecological Consultant	\$7,750 to install native prairie buffer; \$500/year maintenance	5-10 Years
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
70	S of Plum Tree Rd.	1 acre	Resident (Private)	Ponds with mowed turf grass buffer; horse corrals located close to pond.	Design and implement project to convert turf grass buffer to native prairie vegetation, plant native emergent plants, and maintain indefinitely.	TSS= 73% TN= 40% TP= 45%	Low	Resident	Ecological Consultant	\$10,000 to install native prairie buffer & plants; \$500/year maintenance	10+ Years
WETLAND RESTORATION (See Figure 49)											
Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.											
2	See Figure 49	124 acres	Residents (Private)	124 acre drained wetland complex along Spring Creek on primarily equestrian/pasture land. Note: location is considered a "Critical Area".	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=6 tons/yr; TN=518 lbs/yr; TP=31 lbs/yr	High (Critical Area)	Residents	Ecological Consultant; CFC USACE; NRCS/SWCD; Illinois EPA	\$500,000 to design/permit/install/maintain wetland	1-5 Years
STREAM & RIPARIAN AREA RESTORATION/MAINTENANCE (See Figure 51)											
Stream restoration and maintenance projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources. They improve water quality by stabilizing eroded banks, reduce flooding by reconnecting channelized streams to the historic floodplain, and improve natural resources by improving habitat.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
SPCR10	County Line Rd. to End Equestrian Area	9,267 lf	Residents (Private)	Reach is moderately channelized through equestrian area with poor buffer quality but with only minor streambank erosion.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody and herbaceous species followed by installation of native seed. Enhance channel by installing up to 3 artificial riffles.	TSS=2.8 tons/yr TN=23 lbs/yr TP=3 lbs/yr	Low	Residents	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$170,000 invasive species removal and native seeding; \$12,000 to install 3 riffles	10+ Years
SPCR13	Algonquin Rd. to Utility Corridor	1,819 lf	Residents (Private)	Reach meanders naturally through residential area and exhibits low to moderate streambank erosion with poor riparian buffer condition. Debris jams are common in this reach.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody and herbaceous species followed by reintroducing native vegetation. Remove debris jams from channel.	TSS= 0.9 tons/yr TN=10 lbs/yr TP= 2 lbs/yr	Low	Residents	Ecological Consultant	\$42,000 invasive woody & herbaceous species removal; \$17,000 native seeding; \$8,000 debris removal	10+ Years; Debris Removal Ongoing
TRH5	Beginning of Equestrian Area to Spring Creek	1,628 lf	Resident (Private)	Reach is highly channelized in pipe through much of reach. Riparian corridor is mostly mowed turf grass.	Design, permit, and implement project to "daylight" stream and create 50-foot wide native prairie buffer.	TSS= 0.4 tons/yr TN=4 lbs/yr TP= 0 lbs/yr	Medium	Resident	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$25,000 design/permit; \$163,000 install	5-10 Years

BARRINGTON HILLS											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
39	End of Tricia Ln.	3 acres	Resident (Private)	Wetland bottom detention basin dominated by invasive species.	Implement yearly maintenance to eradicate invasive species.	Not Applicable	Low	Resident	Ecological Consultant	\$1,500/year maintenance	Ongoing
55	Old Sutton Rd./ Creekside Ln.	7 acres	Resident (Private)	Wet bottom detention basin online & at headwaters of Trib. C. Basin is located in heavily used horse pasture within no use restrictions. Note: location is considered a "Critical Area".	Restrict horse access to basin and install buffer of native vegetation.	TN= 33 lbs/yr; TP= 3 lbs/yr; TSS= 2 tons/yr	High (Critical Area)	Resident	Barrington Hills; RCBH	\$36,000 to install native prairie buffer; \$2,000/year maintenance; Fencing costs	1-5 Years
56, 57, 58	Rt. 68/New Sutton Rd.	2.75 acres	IDOT (Private)	Wet and wetland bottom detention basins surrounded by mix of native and invasive species; garbage is also present.	Implement invasive species control and garbage removal.	Not Applicable	Low	IDOT	IDOT; Ecological Consultant	\$2,750/year	Ongoing
59, 60	W Pond Gate Rd.	1.5 acre	Resident/ HOA (Private)	Dry bottom detention basins with mowed turf grass throughout.	Design and implement project to convert turf grass to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident/ HOA	Ecological Consultant	\$8,000 to install prairie buffer; \$750 year maintenance	10+ Years
63	Berron Ln. W of Bateman Rd.	0.75 acre	Resident/ HOA (Private)	Wet bottom detention basin with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident/ HOA	Ecological Consultant	\$7,000 to install prairie buffer and plants; \$500/year maintenance	10+ Years
64	N Rolling Hills Dr.	0.25 acre	Resident/ HOA (Private)	Dry bottom detention basin with mowed turf grass throughout.	Design and implement project to convert turf grass to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident/ HOA	Ecological Consultant	\$1,500 to install prairie buffer and plants; \$500/year maintenance	10+ Years
65	NW side Bateman Rd.	0.75 acre	Prairie Hills Estates HOA	Dry bottom detention basin along Bateman Road vegetated with various grasses and surrounded by woody vegetation.	Implement yearly maintenance.	Not Applicable	Low	Prairie Hills Estates HOA	Ecological Consultant	\$500/year maintenance	Ongoing
66	W of Old Dundee Rd	1 acre	Resident (Private)	Wet bottom detention basin dominated by invasive woody species along shoreline.	Implement woody invasive species removal.	Not Applicable	Low	Resident	Ecological Consultant	\$5,000 for invasive woody removal	10+ Years
67, 69, 70	Residential Subdivision along Jennifer Ct.	5 acres	HOA (Private)	Wet and wetland bottom detentions with turf grass side slopes located in newer residential development.	Design and implement project to convert turf grass slopes to native prairie vegetation, install native emergent & wet prairie plants at water line and bottom of wetland basin, and maintain indefinitely.	TSS=77.5% TN=20% TP=44%	Medium	Homeowners Association	Ecological Consultant	\$50,000 to install native prairie buffer & plants; \$1,000/acre/year maintenance	5-10 Years
68	W of Brinker Rd.	1 acre	Resident (Private)	Shallow wet bottom detention basin with mowed buffer; located between two horse pastures.	Design and implement project to convert buffer to native prairie vegetation, install native emergent plants, and maintain indefinitely.	TSS=77.5% TN=20% TP=44%	Low	Resident	Ecological Consultant	\$10,000 to install prairie buffer and plants; \$500/year maintenance	5-10 Years
71	Between Old Sutton & Brinker Rds.	3.75 acres	Resident (Private)	Wet bottom detention basin with native prairie buffer.	Implement maintenance to maintain prairie buffer.	Not Applicable	Medium	Resident	Ecological Consultant	\$1,750/year maintenance	Ongoing
72	Residential Lot W of Hawley Woods Rd.	1 acre	Resident (Private)	Wet bottom detention basin with culvert blowout and buffer of invasive species and turf grass at headwaters of Trib. E.	Design and implement project to convert tuft grass and invasive species areas to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely. Fix culvert blowout.	TSS=77.5% TN=20% TP=44%	Medium	Resident	Ecological Consultant & Civil Engineer	\$10,000 to install native prairie buffer & plants; \$5,000 to repair culvert; \$2,500/year maintenance	5-10 Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
73	County Line Rd: Plum Grove Farm	1.5 acres	Resident (Private)	Wet bottom detention basin/pond with mowed turf grass along buffer	Design and implement project to convert turf grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$18,000 to install prairie buffer & plants; \$750/year maintenance	10+ Years
74	Barrington Bourne Rd.	0.1 acre	Resident (Private)	Wet bottom detention basin with mowed turf grass buffer and rip-rap at shoreline.	Design and implement project to convert turf grass buffer to native prairie vegetation, plant native emergent plants along waterline, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$2,000 to install prairie buffer and plants; \$500/year maintenance	10+ Years
75	Peraino Circle, NE of Lake Cook and Ridge Rds.	2.4 acres	Resident (Private)	Wet bottom detention basin with naturalized buffer; some invasive species present.	Implement maintenance program to eliminate invasive species.	Not Applicable	Low	Resident	Ecological Consultant	\$750/year maintenance	Ongoing
77, 79, 80	Moate Ln. & Ascot Ln.	3 acres	Resident/HOA (Private)	Dry bottom detention basin with mowed turf grass throughout.	Design and implement project to convert turf grass to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident/HOA	Ecological Consultant	\$15,500 to install native prairie buffer; \$1,000/acre/year maintenance	10+ Years
78	N Spring Cr. Rd. & E Meadow Hill Rd.	0.25 acre	Resident (Private)	Wet bottom detention basin/decorative pond with mowed turf grass buffer. This pond has little stormwater management function.	Design and implement project to convert turf grass buffer to native prairie vegetation, plant native emergent plants along waterline, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$3,500 to install prairie buffer & plants; \$500/year maintenance	10+ Years
81	Spring Cr. Rd. W of Braeburn	1.5 acres	Resident (Private)	Dry bottom detention basin with work currently being done to drain area.	Design and implement project to allow basin to be wetland by restoring hydrology, plant with native vegetation, and maintain indefinitely.	TSS=77.5% TN=20% TP=44%	Low	Resident	Ecological Consultant, USACE	\$13,000 to install native prairie buffer & plants; \$750/year maintenance	10+ Years
82	Braeburn N of Spring Cr. Rd.	2.25 acres	Residents (Private)	Dry bottom detention basin with mowed turf grass throughout; partially farmed west of property line.	Design and implement project to convert existing vegetation to native prairie; create buffer in farmed area, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Residents	Ecological Consultant; SWCD/NRCS	\$11,000 to install native prairie buffer; \$1,500 year maintenance	10+ Years
83	N Chapel Rd.	0.1 acres	Resident (Private)	Wet bottom detention basin with mowed buffer and turbid water; drains surrounding horse farms.	Design and implement project to convert buffer to native prairie vegetation, plant native emergent plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant	\$2,000 to install prairie buffer and plants; \$500/year maintenance	5-10 Years
84	Burning Oak Trl.	0.25 acre	Resident (Private)	Wet bottom detention with natural buffer.	Implement yearly maintenance.	Not Applicable	Low	Resident	Ecological Consultant	\$500/year maintenance	Ongoing

POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)

Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.

Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.

18	SE of Healy Rd	6.5 acres	Resident (Private)	Large pond with mostly mowed turf grass buffer; geese present.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant	\$65,000 to install prairie buffer & plants; \$3,250/year maintenance	5-10 Years
19	W of Healy Rd.	1 acre	Resident (Private)	Pond with mostly mowed turf grass buffer, algae, and geese present.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$5,000 to install prairie buffer & plants; \$500/year maintenance	10+ Years
22	W of Healy Rd.	5 acres	Resident (Private)	Pond with mostly natural shoreline and clean water.	Implement routine maintenance.	Not Applicable	Low	Resident	Owner	\$1,250/year maintenance	Ongoing
25	Between New Sutton Rd. & Creekside Ln.	1 acre	Resident (Private)	Pond bordered by cattail and other invasive species; narrow buffer is present near house.	Design and implement project to create native prairie buffer near house. Implement invasive species control around perimeter of pond.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$3,000 to install prairie buffer; \$500/year maintenance	10+ Years
27	Residential area W of Rail Road	15 acres	Residents; CN Railway (Private)	Large wetland complex with overall good wildlife habitat but bordered by invasive species.	Implement invasive species control	Not Applicable	Medium	Residents; CN Railway	Ecological Consultant	\$7,000/year maintenance	Ongoing

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
27	Residential area W of Rail Road	15 acres	Residents; CN Railway (Private)	Large wetland complex with overall good wildlife habitat but bordered by invasive species.	Implement invasive species control	Not Applicable	Medium	Residents; CN Railway	Ecological Consultant	\$7,000/year maintenance	
28	Bartlett Rd.	1 acre	Resident (Private)	Pond with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$10,000 to install prairie buffer & plants; \$500/year maintenance	10+ Years
29	SW of Intersection New Sutton & Rt. 62	1 acre	Owner (Private)	Wetland with mixture of mowed turf grass and old field buffer.	Design and implement project to convert turf grass and old field buffer to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Owner	Ecological Consultant	\$5,000 to install prairie buffer; \$500/year maintenance	10+ Years
30	Woodcreek Rd.	0.25 acre	Resident (Private)	Ponded/turf grass area that appears to flood after rain events.	Design and implement project to convert low area to wetland planted with native vegetation.	TSS=77.5% TN=20% TP=44%	Low	Resident	Ecological Consultant	\$5,000 to install native vegetation; \$500/year maintenance	10+ Years
31	SW corner Bateman & Rt. 68	0.5 acre	Resident (Private)	Pond with naturalized buffer dominated by buckthorn.	Remove invasive buckthorn from pond buffer.	Not Applicable	Low	Resident	Ecological Consultant or Tree Service	\$4,000 to remove buckthorn	10 + Years
32	NW Rt. 68 & Bateman Rd.	1 acre	Resident (Private)	Pond with mowed turf buffer.	Design and implement project to create native prairie buffer, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$10,000 to install prairie buffer & plants; \$500/year maintenance	10+ Years
33	Between Rt. 62 & Rt. 68	24 acres	Resident (Private)	Galvin's Lake: Privately owned lake online with Spring Creek. Lake is lined with rip-rap; mowed turf grass buffers encircle much of lake.	Implement project to convert turf grass buffer areas to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant	\$65,000 to install prairie buffer; \$6,000/year maintenance	5-10 Years
34	S of Helm Rd.	0.5 acre	Resident (Private)	Pond with natural buffer but heavily dominated by invasive woody species.	Remove invasive woody species from pond buffer.	Not Applicable	Low	Resident	Ecological Consultant	\$3,000 to remove invasive woody species	10+ Years
35	W of Brinker Rd.	3.5 acres	Resident (Private)	Pond with mixture of natural and mowed turf buffer.	Convert turf grass buffer to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$10,000 to install prairie buffer; \$1,750/year maintenance	10+ Years
36	W of Brinker Rd	1 acres	Resident (Private)	Pond with naturalized buffer of native species.	Maintain buffer.	Not Applicable	Medium	Resident	Ecological Consultant; Owner	\$500/year maintenance	Ongoing
37	Old Sutton Rd.	6 acres	Resident (Private)	Large pond with natural buffer of invasive species.	Implement project to eradicate invasive species along buffer and replant with native vegetation; maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$15,000 to install prairie buffer; \$3,000/year maintenance	10+ Years
38	Old Sutton Rd.	6 acres	Resident (Private)	Large wetland complex that extends onto SCVFP; native prairie buffer surrounds wetland on residence.	Maintain prairie buffer.	Not Applicable	Medium	Resident	Ecological Consultant; Owner	\$3,000/year maintenance	Ongoing
39	Between Old Sutton & Brinker Rds.	40 acres	Residents/ HOA (Private)	Goose Lake: Natural lake surrounded by natural/wetland buffer but dominated by invasive species.	Implement invasive species control.	Not Applicable	Low	Residents/ HOA	Ecological Consultant; CFC	\$10,000/year maintenance	Ongoing
41	W of Brinker Rd.	1 acre	Resident (Private)	Wetland dominated by invasive reed canary grass and buffer of invasive woody species.	Implement project to eradicate reed canary grass and replant with native wetland vegetation; remove woody invasives along wetland buffer.	Not Applicable	Low	Resident	Ecological Consultant; CFC	\$8,000/acre native vegetation; \$5,000/acre invasive woody removal; \$500/year maintenance	10+ Years
40	Hills & Dales Rd.	1.5 acres	Residents (Private)	Pond with mixture of natural and mowed turf buffer.	Convert turf grass buffer to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Residents	Ecological Consultant	\$4,000 to install prairie buffer; \$750/year maintenance	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
42	Hills & Dales Rd.	1 acre	Resident (Private)	Wetland dominated by invasive reed canary grass; buffer is partially mowed turf grass.	Implement project to eradicate reed canary grass and replant with native wetland vegetation. Convert turf grass buffer areas to native prairie.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$8,000 to install native vegetation; \$500/year maintenance	10+ Years
43	W of Hills & Dales Rd.	0.25 acre	Resident (Private)	Pond surrounded by horse pasture.	Limit horse access to pond, convert pond buffer to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant; RCBH	\$1,000 to install prairie buffer; \$500/year maintenance	5-10 Years
44	Hills & Dales Rd.	0.5 acre	Resident (Private)	Pond with mixture of mowed turf grass and invasive woody buffer.	Implement project to convert turf grass buffer areas to native prairie vegetation; Remove invasive woody species from other areas.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$5,000 to install prairie buffer; \$500/year maintenance	10+ Years
45	Hills & Dales Rd.	1 acre	Resident (Private)	Pond lined with seawall; mowed turf grass along buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$5,000 to install prairie buffer; \$500/year maintenance	10+ Years
46	NW corner Old Sutton & Donlea Rds.	3.25 acres	Resident (Private)	Pond with mostly natural buffer of invasive species.	Implement invasive brush removal around pond buffer.	Not Applicable	Low	Resident	Ecological Consultant	\$22,750 to remove invasive brush	10+ Years
49, 50	W of Bateman	0.25 acre	Resident (Private)	Two small ponds with small buffer along half of shoreline.	Install wider buffer of native prairie vegetation.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$3,000 to install prairie buffer	10+ Years
51	Between Algonquin & Lake Cook Rds.	6 acres	Owner	Large wetland with good wildlife habitat; dominated on borders by invasive reed canary grass.	Implement maintenance to eradicate reed canary grass.	Not Applicable	Low	Owner	Ecological Consultant	\$500/year maintenance	10+ Years
52	N of County Line Rd.	1.5 acres	Resident (Private)	Pond with mowed turf grass buffer. Pond is located at headwaters of Trib. F.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant	\$15,000 to install prairie buffer and plants; \$750/year maintenance	5-10 Years
53	NW corner Haegers Bend & County Line Rds.	2 acres	Residents (Private)	Pond with natural buffer of mostly invasive species.	Implement invasive species control.	Not Applicable	Low	Residents	Ecological Consultant	\$1,000/year maintenance	10+ Years
54	Barrington Bourne Rd.	1 acre	HOA (Private)	Pond with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Residents/ HOA	Ecological Consultant	\$10,000 to install prairie buffer; \$1,000/acre/year maintenance	10+ Years
55, 57	NE Meadow Hill & Lake Cook Rds.	2.5 acres	Residents (Private)	Ponds with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, plant native emergent plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Residents	Ecological Consultant	\$25,000 to install prairie buffer and plants; \$1,250/year maintenance	10+ Years
56	NE Meadow Hill & Lake Cook Rds.	0.1 acre	Resident (Private)	Small wetland with mowed turf grass to edge.	Convert turf grass buffer to native prairie vegetation.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$2,000 to install prairie buffer	10+ Years
58	SW corner Country Oaks Ln. & Country Oaks Dr.	0.25 acre	Resident (Private)	Small wetland dominated by invasive reed canary grass.	Implement reed canary grass control and overseed with native wetland species.	Not Applicable	Low	Resident	Ecological Consultant	\$5,000 to control invasives and overseed	10+ Years
59	S Little Bend Road	10 acres	Residents (Private)	Large wetland complex in relatively good condition.	Implement yearly maintenance.	Not Applicable	Low	Homeowners Association	Ecological Consultant	\$5,000/year maintenance	Ongoing
61	W Spring Lake Rd.	3.4 acres	Residents (Private)	Pond with wooded buffer to west, south and east sides are mowed turf grass buffer.	Install a rain garden on the south property from the sump pump drainage. Install a native prairie buffer on the south side and portions of the east side. Reduce invasives and perform maintenance.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant; CFC	\$5,000 to install garden; \$10,000 to install prairie buffer; \$1,750/year maintenance	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
62	SW of Braeburn Ln.	0.75 acre	Resident (Private)	Large wetland complex dominated by invasive reed canary grass. Wetland is located at headwaters of Trib. H.	Implement ongoing maintenance.	Not Applicable	Low	Resident	Ecological Consultant	\$500/year maintenance	Ongoing
63	Braeburn Ln.	0.75 acre	Resident (Private)	Pond with natural buffer dominated by invasive species.	Remove invasive species from buffer and replant with native species; maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$2,000 to install prairie buffer; \$500/year maintenance	10+ Years
64	Braeburn Ln.	0.75 acre	Resident (Private)	Pond with buffer of mostly mowed turn grass.	Design and implement project to create native prairie buffer, install native wetland plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$7,000 to install prairie buffer & plants; \$500/year maintenance	10+ Years
65	Ridgecroft Rd.	5 acres	Resident (Private)	Large pond with mostly wooded shoreline and mowed turf grass beneath. Pond is online with Trib. H.	Design and implement project to naturalize pond buffer with native prairie/woodland vegetation; install native emergent plants along waterline, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Resident	Ecological Consultant; CFC	\$50,000 to install prairie buffer and plants; \$2,000/year maintenance	5-10 Years
66	SW Spring Cr. Rd. & Ridge Rd.	0.1 acre	Resident (Private)	Small pond with mowed turf buffer.	Design and implement project to create native prairie buffer.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$2,000 to install prairie buffer	10+ Years
67	Chapel Rd.	9 acres	Owner (Private)	Large wetland at Chapel Rd. with narrow buffer in agricultural areas. Road shows signs of flooding.	Install native prairie buffer along agricultural areas.	TSS=70% TN=53% TP=61%	Low	Owner	NRCS/SWCD; Ecological Consultant	\$20,000 to install prairie buffer	10+ Years
69, 71	S of Plum Tree Rd.	5.5 acres	Residents (Private)	Ponds with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, plant native emergent plants, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Residents	Ecological Consultant	\$50,000 to install prairie buffer and plants; \$2,250/year maintenance	10+ Years
68	Chapel Rd.	1 acre	Ag Field Owner (Private)	Farmed wetland that is currently a mudflat.	Allow wetland to reestablish by stopping row crop farming and installing native plants and seed; install prairie buffer around wetland.	TSS=77.5% TN=20% TP=44%	Low	Owner	Ecological Consultant; NRCS/SWCD	\$5,000 to install prairie buffer;	10+ Years
72	SW Plum Tree and Braeburn Rds.	0.3 acre	Resident (Private)	Small wetland in residential area; surrounded by invasive buckthorn.	Remove invasive buckthorn.	Not Applicable	Low	Resident	Ecological Consultant	\$3,000 to remove buckthorn	10+ Years
77	Just W. of Bateman & S. of Lake-Cook	6 acres	Residents (Private)	Online pond that takes water from much of upstream residential development. FPDCC indicates that significant fertilizers in runoff flow through pond prior to entering Nature Preserve. Note: location is considered a "Critical Area" by FPDCC.	FPDCC recommends reworking this pond in ways that would decrease pollutant loading to the Nature Preserve. Pond could be altered to be a wetland filter.	TN= 640 lbs/yr TP= 213 lbs/yr TSS= 65 tons/yr	High (Critical Area)	Residents	FPDCC; Ecological Consultant	\$100,000 to plan and convert pond into wetland filter	1-10 Years

WETLAND RESTORATION (See Figure 49)

Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.

Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.

1	See Figure 49	37.9 acres	Owner (Private)	Large drained wetland at headwaters of Trib. F on private agricultural land; potentially feasible to restore wetland as a mitigation bank. Note: location is "Critical Area" and potential wetland mitigation bank.	Restore mitigation wetland and create prairie buffer by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS= 14 tons/yr; TN= 135 lbs/yr; TP= 29 lbs/yr	High (Critical Area)	Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC; Wetland Banker	\$550,000 to create wetland mitigation bank; fair market value for purchase of land if required	1-5 Years
3	See Figure 49	7 acres	Residents (Private)	Drained wetland located on private residential lots; limited feasibility to restore wetlands.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Residents	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$50,000 to design/permit/construct/maintain wetland	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
4	See Figure 49	6.9 acres	Owners (Private)	Drained wetland with west portion located primarily on private agricultural land; east portion is located on private residential lots. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Medium	Owners	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$50,000 to design/permit/construct/maintain wetland	5-10 Years
10	See Figure 49	7.2 acres	Owner (Private)	Drained wetland located on private agricultural land. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Medium	Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$50,000 to design/permit/construct/maintain wetland	5-10 Years
12	See Figure 49	14.9 acres	Residents (Private)	Drained wetland located on private pasture/agricultural land; limited feasibility to restore wetlands.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$100,000 to design/permit/construct/maintain wetland	10+ Years
18	See Figure 49	13.7 acres	Residents (Private)	Drained wetland located on private residential lots; limited feasibility to restore wetlands.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Residents	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$100,000 to design/permit/construct/maintain wetland	10+ Years
19	See Figure 49	14.9 acres	Owners (Private)	Drained wetland located on private agricultural land dissected by Old Sutton Rd. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Medium	Owners	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$100,000 to design/permit/construct/maintain wetland	5-10 Years
20	See Figure 49	6.4 acres	Residents (Private)	Drained wetland located on private equestrian/pasture area; limited feasibility to restore wetlands.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Residents	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$45,000 to design/permit/construct/maintain wetland	10+ Years
21, 24, 25, 26	See Figure 49	90 acres	Residents (Private)	Drained wetland complexes located on private equestrian/pasture area. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Medium	Residents	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$400,000 to design/permit/construct/maintain wetland	5-10 Years
22	See Figure 49	46.9 acres	Resident (Private)	Large drained wetland located on private land this currently agricultural. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	High	Resident or Future Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$230,000 to design/permit/construct/maintain wetland	1-5 Years
23	See Figure 49	6.2 acres	Residents (Private)	Drained wetland located on private residential lots; limited feasibility to restore wetlands.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Residents	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$43,000 to design/permit/construct/maintain wetland	10+ Years
27	See Figure 49	5.7 acres	Resident (Private)	Drained wetland located on private agricultural lot. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Resident	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$40,000 to design/permit/construct/maintain wetland	10+ Years

PRIORITY PROTECTION AREAS (See Figure 50)											
Acquiring and restoring or implementing future conservation and/or low density design development in Priority Protection Areas will enhance green infrastructure benefits.											
Technical and Financial Assistance Needs: Technical and financial assistance needed to acquire land for restoration or conservation/low density development is high because of land, design/permitting, and construction costs.											
2	See Forest Preserve District of Cook County										
3	See Forest Preserve District of Cook County										
4	Between County Line Rd. & Rt. 62 (see Figure 50)	123 acres	Owner (Private)	Site consists primarily of agricultural and wooded land at headwaters of Tributary F. Parcels will likely be developed to residential in the future. Note: site is considered a "Critical Area".	Implement conservation and/or low density design into future development to reduce environmental impacts.	TSS= 51 tons/yr TN=508 lbs/yr TP=111 lbs/yr	High (Critical Area)	Future Developer	Barrington Hills, Kane County, Ecological Consultant; USACE	Cost to implement conservation and/or low density design cannot be determined at this time	Design & Implementation of Future Development
5	SW Spring Cr. Rd. & Haegers Bend Rd. (See Figure 50)	185 acres	Owner (Private)	Site is agricultural land with extensive drained wetlands at headwaters of Tributary F. The site contains Critical Area Wetland Restoration site #1 that could be built as a Mitigation Bank for Longmeadow Rd. extension & other impacts. Note: site is considered a "Critical Area".	The first option is to acquire, protect, and create a wetland mitigation bank site surrounded by prairie buffer. The second option is to implement conservation and/or low density design into the site if it is developed in the future.	TSS= 61 tons/yr TN=610 lbs/yr TP=133 lbs/yr	High (Critical Area)	Future Developer	Barrington Hills, McHenry County, Ecological Consultant; USACE	See cost to construct wetland mitigation bank under Wetland Restoration site #1	1-5 Years for mitigation bank
6	NW of Spring Cr. Rd. & Braeburn Rd. (See Figure 50)	288 acres	Owners (Private)	Site consists primarily of agricultural land surrounded by residential in an area likely to see additional residential development in the future. Note: site is considered a "Critical Area".	Implement conservation and/or low density design into future development to reduce environmental impacts.	TSS=103 tons/yr TN=1,025 lbs/yr TP=234 lbs/yr	High (Critical Area)	Future Developer	Barrington Hills, McHenry County, Ecological Consultant; USACE	Cost to implement conservation and/or low density design cannot be determined at this time	Design & Implementation of Future Development
STREAM & RIPARIAN AREA RESTORATION/MAINTENANCE (See Figure 51)											
Stream restoration and maintenance projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources. They improve water quality by stabilizing eroded banks, reduce flooding by reconnecting channelized streams to the historic floodplain, and improve natural resources by improving habitat.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
SPCR3	Rt. 59 to Old Sutton Rd.	1,983 lf	Owner (Private)	Reach flows through agricultural area and exhibits moderate streambank erosion, is highly channelized, and the riparian buffer condition is poor. Note: Reach is considered a "Critical Area".	Design, permit, and implement project to improve channel condition, stabilize streambanks, and improve buffer by: 1) install artificial riffles, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS=172 tons/yr; TN= 343 lbs/yr; TP= 172 lbs/yr	High (Critical Area)	Current or Future Owner	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$60,000 design/permit; \$300,000 install	1-5 Years
SPCR4	Old Sutton Rd. to CN Railway	2,087 lf	Owner (Private)	Reach flows through agricultural area and exhibits low/moderate streambank erosion, is highly channelized, and the riparian buffer condition is poor.	Design, permit, and implement project to improve channel condition, stabilize streambanks, and improve buffer by: 1) install artificial riffles, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS= 29 tons/yr; TN=59 lbs/yr; TP= 29 lbs/yr	Medium	Current or Future Owner	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$63,000 design/permit; \$315,000 install	5-10 Years
SPCR7	SCVFP Rt. 68 to	5,206 lf	Resident: Galvin's Property (Private)	Reach meanders naturally through mixture of residential and agricultural areas and exhibits low streambank erosion with poor riparian buffer condition dominated by woody invasives. Galvin's Lake is online with Spring Creek in this reach.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody species followed by reintroducing native vegetation.	TSS=0.5 tons/yr TN= 9 lbs/yr TP=1 lbs/yr	Low	Current of Future Owner	Ecological Consultant	\$82,500 woody species removal; \$33,000 native seeding	10+ Years
SPCR11	End Equestrian Area to Rock Ridge Rd.	4,182 lf	Residents (Private)	Reach meanders naturally through large lot residential area and exhibits low streambank erosion and poor riparian buffer condition. Debris jams are common in this reach. Note: partially located in Algonquin Township.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody and herbaceous species followed by reintroducing native vegetation. Remove debris jams from channel.	TSS=2.2 tons/yr TN=24 lbs/yr TP=3 lbs/yr	Low	Residents	Ecological Consultant	\$95,000 invasive woody & herbaceous species removal; \$38,000 native seeding; \$10,000 debris removal	10+ Years; Debris Removal Ongoing
SPCR12	Rock Ridge Rd. to Algonquin Rd.	6,941 lf	Residents (Private)	Reach meanders naturally through large lot residential area and exhibits low streambank erosion and poor riparian buffer condition. Debris jams are common in this reach. Note: partially located in Algonquin Township.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody and herbaceous species followed by reintroducing native vegetation. Remove debris jams from channel.	TSS=3.6 tons/yr TN=39 lbs/yr TP=6 lbs/yr	Low	Residents	Ecological Consultant	\$159,000 invasive woody & herbaceous species removal; \$63,500 native seeding; \$15,000 debris removal	10+ Years; Debris Removal Ongoing

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
TRC1	CN Railway to Old Sutton Rd.	3,162 lf	Residents (Private)	Reach is located in large lot residential area. Upstream 2/3 is wooded with invasives, downstream 1/3 has turf lawn buffer. Moderate streambank erosion is present.	Implement project to improve 50-foot wide wooded area buffer by removing invasives and establishing native vegetation. Improve turf grass areas by extending 50-foot wide native prairie buffer. Install up to 3 artificial riffles.	TSS= 0.8 tons/yr TN=9 lbs/yr TP=1 lbs/yr	Medium	Residents	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$29,000 invasive woody species removal; \$14,500 native vegetation seeding; \$6,000 for 3 riffles	5-10 Years
TRC2	Old Sutton Rd. to Spring Creek	2,976 lf	Residents (Private)	Reach is located in residential area where riparian corridor is dominated by invasive woody species. Debris jams are also present. Note: downstream portion of site is in SCVFP.	Implement project to improve 100-foot wide riparian corridor by removing invasive woody species then establishing native vegetation. Remove woody debris jams.	TSS= 1.5 tons/yr TN=17 lbs/yr TP=2 lbs/yr	Low	Residents	Ecological Consultant	\$55,000 invasive woody species removal; \$27,000 native vegetation seeding; \$10,000 debris removal	10+ Years
TRE1	W Hills & Dales Rd. to Brinker Rd.	3,029 lf	Residents (Private)	Reach is located in residential area dominated by invasive woody species along the stream corridor. Culvert at Hills & Dales Rd. backs up a significant amount of water.	Implement project to improve 50-foot wide riparian corridor by removing invasive woody species then establishing native vegetation. Maintain Hills & Dales Rd. Culvert.	TSS= 0.8 tons/yr TN=9 lbs/yr TP=1 lbs/yr	Low	Residents	Ecological Consultant	\$28,000 invasive woody species removal; \$14,000 native vegetation seeding	10+ Years; Culvert Maintenance Ongoing
TRE2	Brinker Rd. to Goose Lake	3,610 lf	Residents (Private)	Reach is located in residential area dominated by invasive woody species along the stream corridor. The stream in this reach is moderately channelized with moderate streambank erosion.	Design, permit, and implement project to improve channel condition, stabilize streambanks, and improve buffer by: 1) install artificial riffles, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS= 62 tons/yr TN=146 lbs/yr TP= 73 lbs/yr	Medium	Residents	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$75,000 design/permit; \$550,000 install	5-10 Years
TRE3	Goose Lake to Old Sutton Rd.	1,739 lf	Residents (Private)	Reach is located in residential area and surrounded by wetlands dominated by invasive species.	Implement ongoing invasive species control along the stream corridor.	Not Applicable	Low	Residents	Ecological Consultant	\$16,000/year maintenance	Ongoing
TRE4	Old Sutton Rd. to Spring Creek	2,486 lf	Residents (Private)	Reach is located in residential area for approximately 500 lf before entering wetland area within SCVFP. 500 lf section is dominated by invasive species along the corridor.	Implement project to improve 50-foot wide riparian corridor along first 500 lf by removing invasive woody species.	Not Applicable	Low	Residents	Ecological Consultant	\$23,000 invasive woody species removal	10+ Years
TRF1	County Line Rd. to SE Deepwood Rd.	3,101 lf	Owner (Private)	Reach flows through wooded area heavily overgrown with invasive species.	Implement project to improve 50-foot wide riparian corridor along reach by removing invasive woody species.	Not Applicable	Low	Owner	Ecological Consultant	\$28,500 invasive woody species removal	10+ Years
TRF2	SE Deepwood Rd. to Bateman Rd.	6, 930 lf	Residents (Private)	Reach flows primarily through large wetland complex dominated by invasive species. Large lot residential development borders the wetland complex. Note: reach eventually flows to Spring Lake Nature Preserve.	Implement maintenance plan to control invasive species throughout the riparian corridor and remove debris from the stream channel. FPDCC also recommends better management practices such as improved buffer, reduced fertilizer and herbicide use, and drain tile disablement.	Not Applicable	High	Residents	Ecological Consultant	\$24,000/year maintenance	Ongoing
TRH1	Headwaters to Braeburn Rd.	2,420 lf	Residents (Private)	Moderately eroded and channelized reach flowing through residential area. Riparian buffer is mix of invasive shrubs and lawn grass.	Implement project to improve 50-foot wide riparian corridor in areas with lawn grass or invasive woody species. Install small-scale bank protection with natural rock where needed.	TSS= 0.6 tons/yr TN=7 lbs/yr TP= 1 lbs/yr	Medium	Residents	Ecological Consultant; USACE	\$40,000 invasive woody species/turf removal converted to native vegetation; \$10,000 small rock treatments	5-10 Years
TRH2	Braeburn Rd. to Bow Ln.	863 lf	Resident (Private)	Highly channelized reach with severely eroded streambanks in residential area. Riparian buffer is also dominated by invasive woody species and/or turf grass. Project site is considered a "Critical Area"	Design, permit, and implement project to improve channel condition, stabilize streambanks, and improve buffer by: 1) install artificial riffles, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS=124 tons/yr; TN=249lbs/yr; TP=124 lbs/yr	High (Critical Area)	Resident	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$20,000 design/permit; \$175,000 install	1-5 Years
TRH3	Bow Ln. to Meadow Hill Rd.	2,042 lf	Residents (Private)	Reach with moderately eroded steambanks and poor riparian buffer condition in residential area.	Implement project to improve 50-foot wide riparian corridor by removing invasive woody species and areas with turf grass then establish native vegetation. Install up to 3 artificial riffles to act as grade controls to reduce erosion.	TSS= 0.5 tons/yr TN=6 lbs/yr TP=5 lbs/yr	Medium	Residents	Ecological Consultant; NRCS	\$14,000 invasive woody species and turf removal; \$9,500 native vegetation seeding; \$9,000 to install 3 riffles	5-10 Years
TRH4	Meadow Hill Rd. to Equestrian Area	2,115 lf	Residents (Private)	Reach with overall poor riparian buffer condition in residential area. Buffer is mix of invasive woody species and mowed turf grass.	Implement project to improve 50-foot wide riparian corridor by removing invasive woody species and areas with turf grass then establish native vegetation.	TSS= 0.5 tons/yr TN=6 lbs/yr TP=5 lbs/yr	Low	Residents	Ecological Consultant	\$14,000 invasive woody species and turf removal; \$9,500 native vegetation seeding	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
TRI1	Headwaters near Church Rd. to Algonquin Rd.	2,688 lf	Residents (Private)	Reach with overall poor riparian buffer condition in residential area. Buffer is dominated by invasive woody species. Debris jams are also present.	Implement project to improve 50-foot wide riparian corridor along reach by removing invasive woody species. Remove debris dams as needed.	Not Applicable	Low	Residents	Ecological Consultant	\$25,000 invasive woody species removal; \$10,000 debris removal	10+ Years
TRI2	Algonquin Rd. to Spring Cr.	669 lf	Residents (Private)	Reach with overall poor riparian buffer condition in residential area. Buffer is mix of invasive woody species and mowed turf grass.	Implement project to improve 50-foot wide riparian corridor along reach by removing invasive woody species and replacing turf grass with native vegetation.	Not Applicable	Low	Residents	Ecological Consultant	\$15,000 invasive woody species removal; \$4,000 to convert lawn to native vegetation	10+ Years
TRJ1	Headwaters E of Foxmoor Rd. to Foxmoor Rd.	1,234 lf	Residents (Private)	Reach is located in residential area where invasive woody and herbaceous species dominate the buffer. Debris jams are also present.	Implement project to improve 50-foot wide riparian corridor by removing invasive woody & herbaceous species then establishing native vegetation. Remove debris jams as needed.	TSS= 0.3 tons/yr TN=3 lbs/yr TP=1 lbs/yr	Low	Residents	Ecological Consultant	\$15,000 invasive woody & herbaceous species removal; \$6,000 native vegetation seeding; \$5,000 debris removal	10+ Years; Debris Removal Ongoing

BARRINGTON TOWNSHIP											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
24	Residential Subdivision N of Liberty Dr.	1 acre	HOA (Private)	Wet bottom detention basin with rip-rap shoreline and mowed turf grass buffer. Water is turbid and algae present.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$10,000 to install prairie buffer & plants; \$500/year maintenance	10+ Years
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
4	Residential Lot N of Rt. 72	0.25 acre	Resident (Private)	Duckweed covered pond with buffer of invasive reed canary grass and various invasive trees/shrubs.	Design and implement project to remove invasive species and replace with native wetland and prairie vegetation along buffer then maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$3,000 to install prairie buffer; \$500/year maintenance	10+ Years
6	E of Old Sutton Rd.	3 acres	Owner (Private)	Wetland located between road and degraded oak woodland; Spring Creek borders wetland to north. Wetland is dominated by invasive species.	Install wider buffer between agricultural field and wetland; remove invasive woody species from woodland area.	TSS=70% TN=53% TP=61%	Low	Owner	Ecological Consultant; NRCS/SWCD	\$10,000 to install buffer; \$4,000 woody removal	10+ Years
7	NW corner Rt. 72 & Sutton Rd.	15 acres	Owner of Agricultural Field (Private)	Large wetland complex surrounded by agricultural field. Wetland is dominated by invasive species.	Implement invasive species control and improve buffer to agricultural areas.	TSS=73% TN=53% TP=61%	Low	Owner	Ecological Consultant; SWCD/NRCS	\$7,000/year maintenance	Ongoing
12	Between Sutton & Old Sutton Rds.	0.5 acre	Owner (Private)	Pond at landscape operation with eroded banks and poor buffer quality.	Design and implement project to install native prairie buffer and fix erosion along toe of slope.	TSS=90% TN=90% TP=90%	Low	Owner	Ecological Consultant; USACE; NRCS/SWCD	\$3,000 to install prairie buffer; \$37,500 to stabilize erosion	10+ Years
21	N of Penny Rd.	0.75 acre	Resident (Private)	Small pond with natural buffer of invasive species.	Design and implement project to remove invasive species from buffer and replace with native wetland and prairie vegetation then maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Resident	Ecological Consultant	\$4,000 to install prairie buffer; \$500/year maintenance	10+ Years
WETLAND RESTORATION (See Figure 49)											
Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.											
14	See Figure 49	52.5 acres	Owner (Private)	Large drained wetland at headwaters of Spring Creek in active agricultural field. Wetland restoration is potentially feasible. Note: location is considered a "Critical Area".	Restore wetland and create prairie buffer by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland and buffer; and 4) conduct short and long term maintenance and monitoring.	TSS= 22 tons/yr; TN= 275 lbs/yr; TP= 55 lbs/yr	High (Critical Area)	Future Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$250,000 to design/permit/construct /maintain wetland	1-5 Years

CARPENTERSVILLE											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
OTHER MEASURES (See Figure 52)											
These projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Technical and financial assistance needed to implement these projects varies depending on complexity.											
4	NE Sioux Ave.	0.7 acre	Habitat for Humanity	Stormwater from residential subdivision flows to degraded natural area behind homes; flooding occurs on Sioux during heavy rain events.	Design and implement project to create naturalized wetland detention storage area.	TSS= 14 tons/yr TN=72 lbs/yr TP=21 lbs/yr	High	Village	Ecological Consultant; USACE; NRCS	\$15,000 design/permit; \$40,000 install	1-5 Years

EAST DUNDEE											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
61, 62	Prairie Lake Rd. Industrial Park	5.25 acres	Industrial Park (Private)	Wet bottom detention basins with naturalized buffer dominated by invasive species.	Design and implement project to convert weedy buffer areas to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Industrial Park	Ecological Consultant	\$50,000 to install prairie buffer & plants; \$2,500/year maintenance	10+ Years

FOREST PRESERVE DISTRICT OF COOK COUNTY											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
1	Poplar Cr. Forest Preserve; SE corner I90 & Bartlett Rd.	2 acres	FPDCC	Pond with mixture of native and invasive species around buffer. FPDCC indicates that IDOT may be widening the road here.	FPDCC recommends that SCW work with the tollway authority to redesign water control upon widening the road. Changes could include storm management to help protect wetland by implementing bioswales, raised outlets, etc. Also implement invasive species control.	Not Applicable	Low	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	Cost for storm management not know; \$1,500/year maintenance	Ongoing
5	SCVFP N of Rt. 72	15 acres	FPDCC	Beverly Lake: lake with natural wooded buffer but dominated by invasive species.	Implement woody invasive species control around lake buffer.	Not Applicable	Low	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$50,000 to remove woody invasives	Ongoing
20	SCVFP S of Penny Road	9 acres	FPDCC	Penny Road Pond: lake with natural buffer dominated by invasive species.	Implement invasive species control and replacement with native vegetation.	TSS=73% TN=40% TP=45%	Low	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$25,000 to removed invasives & establish native species	10+ Years
47, 48	Mud Lake & Spring Lake: SCVFP S of Lake Cook Rd.	60 acres	FPDCC	Spring Lake & Mud Lake: large natural lakes with natural buffer but with dominance of invasive woody species. Lakes are located in Spring Lake Nature Preserve.	The FPDCC recommends first removing invasive woody species from the surrounding areas that impact hydrology then supplementing with native vegetation if necessary. Specifically target buckthorn that is dewatering hydric soils and disablement of existing drain tiles.	Not Applicable	High (Critical Area)	FPDCC	FPDCC; INPC; Friends of Spring Cr.; Ecological Consultant	\$250,000 to remove invasives & supplement native species	1-5 Years
WETLAND RESTORATION (See Figure 49)											
Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.											
7, 8	SCVFP (See Figure 49)	9.7, 10 acres	FPDCC (Public)	Drained wetlands located within SCVFP at headwaters of Trib. B. These areas are currently being addressed by USACE feasibility study.	Restore wetlands by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Medium	FPDCC	Ecological Consultant; USACE; NRCS/SWCD; Friends of Spring Creek	\$100,000 to design/permit/construct /maintain wetlands	1-5 Years
9, 13, 16, 29	SCVFP (See Figure 49)	15, 7.2, 11.4, 25.1 acres	FPDCC (Public)	Drained wetland complexes located within SCVFP in areas that were tile drained and farmed in the past. Wetland restoration is potentially feasible.	Restore wetlands by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	High	FPDCC	Ecological Consultant; USACE; NRCS/SWCD; Friends of Spring Creek	\$300,000 to design/permit/construct /maintain wetlands	1-5 Years
15	SCVFP (See Figure 49)	44.8 acres	FPDCC (Public)	Large drained wetland within SCVFP at headwaters of Trib. B that receives runoff from IDOT, Sears, and Prairie Stone areas. Wetland restoration is potentially feasible. FPDCC considers this site as medium priority.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=19 tons/yr; TN= 235 lbs/yr; TP= 47 lbs/yr	Medium	FPDCC	Ecological Consultant; USACE; NRCS/SWCD; Friends of Spring Creek	\$225,000 to design/permit/construct /maintain wetland	5-10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
28	SCVFP (See Figure 49)	334.6 acres	FPDCC (Public)	Large drained wetland within SCVFP surrounding channelized drainage ditch (Trib. D). Area was heavily farmed and tiled drained in past. Wetland restoration is potentially feasible. Note: location is considered a "Critical Area".	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) fill Trib. D and construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS= 142 tons/yr; TN= 1,375 lbs/yr; TP= 289 lbs/yr	High (Critical Area)	FPDCC	Ecological Consultant; USACE; NRCS/SWCD; Tile Expert; Friends of Spring Creek	\$850,000 to design/permit/construct/maintain wetland	1-5 Years
PRIORITY PROTECTION AREAS (See Figure 50)											
Acquiring and restoring or implementing future conservation and/or low density design development in Priority Protection Areas will enhance green infrastructure benefits.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
2	Between CN Railway and Rt. 72 (See Figure 50)	180 acres	Owner (private)	Site is currently agricultural and abuts SCVFP east of CN Railway. Northern portion of site is in Barrington Twp. The site contains Critical Areas: Wetland Restoration site #14 and stream reach SPCR3. Note: site is considered a "Critical Area".	Acquire and protect the parcels then restore native vegetation to the site as an extension of SCVFP.	TSS= 75 tons/yr TN=944 lbs/yr TP= 188 lbs/yr	High (Critical Area)	Current Owner; FPDCC	FPDCC; Ecological Consultant	Cost to acquire, protect, and restore parcels cannot be determined at this time	When/if land becomes available for purchase
3	Between Rt. 62 & 68 (See Figure 50)	492 acres	Resident (Private)	Site abuts SCVFP to the east, is mostly agricultural, and contains Galvin's Lake. Note: site is considered "Critical Area".	Acquire and protect the parcels then restore native vegetation to the site as an extension of SCVFP.	TSS=140 tons/yr TN=1,756 lbs/yr TP= 350 lbs/yr	High (Critical Area)	Current Owner; FPDCC;	FPDCC; Ecological Consultant	Cost to acquire, protect, and restore parcels cannot be determined at this time	When/if land becomes available for purchase
STREAM & RIPARIAN AREA RESTORATION/MAINTENANCE (See Figure 51)											
Stream restoration and maintenance projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources. They improve water quality by stabilizing eroded banks, reduce flooding by reconnecting channelized streams to the historic floodplain, and improve natural resources by improving habitat.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
SPCR5	SCVFP CN Railway to Penny Rd.	6,698 lf	FPDCC (Public)	Reach is located in SCVFP in area with moderate invasive woody brush and other herbaceous invasives in the riparian zone. The stream is moderately channelized with low streambank erosion.	Design, permit, and implement project to improve channel condition and 100-foot buffer by: 1) install artificial riffles, 2) remove invasive woody species, and 3) enhance buffer with native vegetation.	TSS=0.2 tons/yr TN=2 lbs/yr TP=2 lbs/yr	Low	FPDCC	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$12,000 for 3 riffles; \$120,000 woody species removal; \$60,000 native seeding	10+ Years
SPCR6	SCVFP Penny Rd. to Rt. 68	6,917 lf	FPDCC (Public)	Reach is located in SCVFP in area with heavy invasive woody brush and other herbaceous invasives in the riparian zone. The stream is moderately channelized with low streambank erosion.	Design, permit, and implement project to improve channel condition and 100-foot buffer by: 1) install artificial riffles, 2) remove invasive woody species, and 3) enhance buffer with native vegetation.	TSS=0.2 tons/yr TN=3 lbs/yr TP=2 lbs/yr	Medium	FPDCC	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$12,000 for 3 riffles; \$160,000 woody species removal; \$63,500 native seeding	5-10 Years
SPCR8	SCVFP Rt. 62 to N of Springwood Ln.	4,458 lf	FPDCC (Public)	Reach is located in SCVFP in area with heavy invasive woody brush along riparian corridor west of Springwood Ln. The stream is moderately channelized with low streambank erosion.	Design, permit, and implement project to improve channel condition and 100-foot buffer by: 1) install artificial riffles, 2) remove invasive woody species, and 3) enhance buffer with native vegetation.	TSS=0.4 tons/yr TN=7 lbs/yr TP=2 lbs/yr	Medium	FPDCC	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$8,000 for 2 riffles; \$105,000 woody species removal; \$50,000 native seeding	5-10 Years
SPCR9	N of Springwood Ln. to County Line Rd.	14,622 lf	FPDCC (Public)	Reach is located in SCVFP in area with minimal invasive woody brush encroachment along the riparian corridor but dominated by invasive herbaceous species. The stream is naturally meandering with areas of moderate erosion via lateral cutting. Northern portion of reach is located in Spring Lake Nature Preserve.	Implement project to improve 100-foot buffer by removing invasive herbaceous species and enhancing with native vegetation. Also spot treat eroded undercuts as needed.	TSS=0.3 tons/yr TN=4 lbs/yr TP=3 lbs/yr	High	FPDCC	FPDCC; INPC; Friends of Spring Cr.; Ecological Consultant	\$175,000 to remove invasives and seed with native species; \$300,000 to spot treat erosion	1-10 Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
TRA4	SCVFP Sutton to Old Sutton Rds.	1,629 lf	FPDCC (Public)	Reach is located in SCVFP in area that was previously a tree farm. The stream in this reach is moderately channelized and the riparian area condition is poor. Minimal streambank erosion exists but numerous debris jams are present.	Implement project to improve buffer w/in 100 feet of stream by doing a drain tile investigation then removing invasive woody species followed by reintroducing native vegetation. Remove debris jams that cause flooding.	TSS=0.8tons/yr TN= 7 lbs/yr TP=1 lbs/yr	Low	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$37,500 invasive woody species removal; \$15,000 native seeding;	5-10+ Years
TRA5	Old Sutton Rd. to Spring Creek	2,790 lf	FPDCC (Public)	Reach is located in SCVFP in relatively open area. Invasive trees and shrubs line the stream through this moderately channelized reach.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody species. Improve channel by installing up to 2 artificial riffles.	Not Applicable	Medium	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$51,000 invasive woody species removal; \$8,000 for 2 artificial riffles	5-10 Years
TRB1	N of Wichman Rd. to Spring Creek	3,903 lf	FPDCC (Public)	Reach is located in SCVFP in relatively open area. Invasive trees and shrubs line the stream in some areas.	Implement project to improve buffer w/in 100 feet of stream by removing invasive woody species as needed.	Not Applicable	Low	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$36,000 invasive woody species removal	10+ Years
TRD1	S of Rt. 68 to Rt. 62	10,313 lf	FPDCC (Public)	Highly channelized reach located in SCVFP in area that was historically tile drained and farmed. This reach is a "Critical Area" that also lies within "Critical Area" wetland restoration site #28.	Disable adjacent draitile network and fill stream channel or pull back berm edges to restore historic wetland hydrology then plant with native vegetation.	TSS=151 tons/yr TN=278 lbs/yr TP=107 lbs/yr	High (Critical Area)	FPDCC	Ecological Consultant; USACE; IDNR; MWRD; NRCS; Tile Expert	See Wetland Restoration #28	1-5 Years
TRF3	Bateman Rd. to Mud Lake	2,792 lf	FPDCC (Public)	Reach is located in SCVFP west of Mud Lake in area bordered by extensive wetland complex. Reach is located in Spring Lake Nature Preserve.	Continue to implement maintenance program in the riparian corridor. FPDCC indicates that better management of TRF2 upstream would lead to more improvements TRF3	Not Applicable	Medium	FPDCC	FPDCC; Friends of Spring Cr.; Ecological Consultant	\$25,500 invasive species control	5-10 Years

OTHER MEASURES (See Figure 52)

These projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.

Technical and Financial Assistance Needs: Technical and financial assistance needed to implement these projects varies depending on complexity.

3	Along Donlea E of Bateman	1,200 lf	FPDCC	Highly eroded gully/ravine that does not appear connected to any stream or waterbody.	Stabilize erosion in bottom of ravine using variety of hard armoring and bioengineering practices.	TSS=240 tons/yr TN=480 lbs/yr TP=240 lbs/yr	Low	FPDCC	Ecological Consultant; USACE; NRCS	\$20,000 Design/Permit; \$180,000 install	10+ Years
6	SCVFP 160-Headwaters (See Figure 52)	545 acres	FPDCC	Mosaic of degraded savanna/woodland, pasture, prairie, and wetland complexes at the headwaters of Tributary B. Note: Friends of Spring Creek volunteers are conducting ongoing restoration work in this area.	Restore degraded savanna-prairie ecosystem to increase biodiversity and provide savanna and grassland bird habitat. Implement 1) invasive brush clearing, 2) herbicide applications, 3) mowing, 4) controlled burns, and 5) seeding with native species.	Not Applicable	High	Friends of Spring Creek & FPDCC	Ecological Consultant, CFC	\$1,490,000 to restore prairie/savanna	Ongoing
7	SCVFP Galloping Hill (See Figure 52)	110 acres	FPDCC	Degraded prairie ecosystem with remnant fen communities. Note: Friends of Spring Creek volunteers are conducting ongoing restoration work in this area.	Restore degraded prairie ecosystem to increase biodiversity and provide grassland bird habitat. Implement 1) invasive brush clearing, 2) herbicide applications, 3) mowing, 4) controlled burns, and 5) seeding with native species.	Not Applicable	High	Friends of Spring Creek & FPDCC	Ecological Consultant, CFC	\$220,000 to restore prairie	Ongoing
8	SCVFP (See Figure 52)	192 acres	FPDCC	Degraded remnant prairie/wetland complex. Note: Friends of Spring Creek volunteers are conducting ongoing restoration work in this area.	Restore degraded prairie/wetland complex to increase biodiversity and provide grassland bird habitat. Implement 1) herbicide applications, 2) mowing, 3) controlled burns, and 4) seeding with native species.	Not Applicable	Medium	Friends of Spring Creek & FPDCC	Ecological Consultant, CFC	\$192,000 to restore prairie/wetland	Ongoing
9	SCVFP Steeplechase (See Figure 52)	28 acres	FPDCC	Degraded prairie/shrubland complex. Note: Friends of Spring Creek volunteers are conducting ongoing restoration work in this area.	Restore degraded prairie/wetland complex to increase biodiversity and provide grassland & shrubland bird habitat. Implement 1) selective brush clearing, 2) herbicide applications, 3) mowing, 4) controlled burns, and 5) seeding with native species.	Not Applicable	Medium	Friends of Spring Creek & FPDCC	Ecological Consultant, CFC	\$84,000 to restore prairie/shrubland	Ongoing

FOREST PRESERVE DISTRICT OF KANE COUNTY											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
OTHER MEASURES (See Figure 52)											
These projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Technical and financial assistance needed to implement these projects varies depending on complexity.											
1	Helm Woods Forest Preserve	500 lf	FPDKC (Public)	Eroded gully/wash originating from high quality flatwoods community. Gully has potential to downcut to the extent that it could dewater and degrade the flatwoods.	Install rock check dams/grade controls as needed to reduce erosion and maintain water levels in the flatwoods.	TSS= 40 tons/yr; TN=80 lbs/yr; TP=40 lbs/yr	High	FPDKC	FPDKC; Ecological Consultant	\$20,000 for 5 rock check dams	1-5 Years
5	Helm Woods Forest Preserve	65 acres	FPDKC (Public)	Old field areas dominated by European grasses.	Restore short grass prairie to attract grassland birds.	TSS=0.5 tons/yr; TN=5 lbs/yr; TP=4 lbs/yr	Medium	FPDKC	FPDKC; Ecological Consultant	\$130,000 to install short grass prairie vegetation	5-10 Years

FOX RIVER GROVE											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
73, 74, 75, 76	Foxmore Park	9 acres	Fox River Grove (Public)	Chain of four ponds with mixture of mowed turf grass, woodland, and wetland buffers dominated by invasive species.	Design and implement project to convert turf grass and other invasive species dominated buffer areas to native vegetation, plant native emergent plants along shoreline, and maintain indefinitely.	TSS=77.5% TN=20% TP=44%	Medium	Fox River Grove	Ecological Consultant	\$80,000 to install prairie buffer & install plants; \$4,000/year maintenance	5-10 Years
STREAM & RIPARIAN AREA RESTORATION/MAINTENANCE (See Figure 51)											
Stream restoration and maintenance projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources. They improve water quality by stabilizing eroded banks, reduce flooding by reconnecting channelized streams to the historic floodplain, and improve natural resources by improving habitat.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
SPCR14	Utility Corridor to Lincoln Ave.	1,282 lf	Fox River Grove WTP (Private)	Reach flows adjacent to Fox River Grove WTP. The reach is highly channelized through the first half then meanders to Lincoln Ave. Streambank erosion is moderate riparian buffer condition is poor. Note: Reach is considered a "Critical Area".	Design, permit, and implement project to improve condition of channelized reach, stabilize streambanks, and improve buffer by: 1) install artificial riffles, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS= 22 tons/yr; TN=22 lbs/yr; TP=22 lbs/yr	High (Critical Area)	Fox River Grove	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$38,000 design/permit; \$190,000 install	1-5 Years
SPCR15	Lincoln Ave. to Fox River	1,295 lf	Residents	Reach is moderately channelized through through residential area and exhibits minimal streambank erosion with poor riparian buffer condition.	Implement project to improve buffer w/in 50 feet of stream by removing invasive woody and herbaceous species followed by reintroducing native vegetation.	TSS= 0.3 tons/yr TN=4 lbs/yr TP= 1 lbs/yr	Low	Residents	Ecological Consultant	\$15,000 invasive woody & herbaceous species removal; \$6,000 native seeding	10+ Years
TRJ2, TRJ3	Foxmoor Rd. to Algonquin Rd.	4,563 lf	Fox River Grove	Highly channelized reach of stream flowing through Foxmoor Park. Riparian buffer is dominated by invasive woody species. Upstream portion of reach flows through pipe to first pond. Riparian buffer in Stanger is mowed turf grass. Note: Area is considered a "Critical Area".	Design, permit, and implement project to improve channel condition and riparian buffer by: 1) daylight 400 lf section east of Foxmoor Rd., 2) install artificial riffles in channelized areas, 3) remove invasive woody species and/or turf grass along 50-100 foot wide buffer and connect south buffer to adjacent ponds, 4) reintroduce native vegetation in the buffer areas.	TSS= 78 tons/yr; TN=132 lbs/yr; TP=66 lbs/yr	High (Critical Area)	Fox River Grove	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$25,000 design/permit; \$180,000 install	1-5 Years
TRJ4	Algonquin Rd. to Spring Creek	1,358 lf	Residents	Highly channelized reach through dense residential area with riparian buffers dominated primarily by turf grass and invasive woody species.	Design and implement project to remove turf grass and invasive woody species from 15-30-foot wide buffer and plant native vegetation.	TSS=0.2 tons/yr; TN=2 lbs/yr; TP=0 lbs/yr	Low	Residents	Ecological Consultant	\$10,000 invasive woody species & turf grass removal; \$10,000 native seeding	10+ Years

HOFFMAN ESTATES											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
2	Development SW of Rt. 72 & IL 59	0.1 acre	Commercial Develop. (Private)	Small wet bottom detention basin bordered by paver blocks in retail/commercial development.	Implement yearly maintenance.	Not Applicable	Low	Commercial Development	Landscape Company	Not applicable	Ongoing
3	Sutton Crossing Development	18 acres	Sutton Crossing (Private)	Wet bottom detention basin designed to collect stormwater runoff from future Sutton Crossing development. Basin buffer is mowed turf grass. Note: location is considered a "Critical Area."	Design and implement project to convert basin to wetland bottom by regrading then installing native prairie vegetation and emergent plants, then maintain indefinitely.	TSS= 76 tons/yr; TN= 1,386 lbs/yr; TP= 134 lbs/yr	High (Critical Area)	Sutton Crossing	Ecological Consultant	\$185,000 to install prairie buffer & install plants; \$4,500/year maintenance	1-5 Years
4	Sutton Crossing Development	3.5 acres	Sutton Crossing (Private)	Wet bottom detention basin designed to collect stormwater runoff from future development. Basin buffer is mowed turf grass.	Design and implement project to convert basin to wetland bottom by regrading then installing native prairie vegetation and emergent plants, then maintain indefinitely.	TSS=86% TN=55% TP=68.5%	High	Sutton Crossing	Ecological Consultant	\$35,000 to install prairie buffer & plants; \$2,000 year maintenance	1-5 Years
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
2	Sutton Crossing Development	8 acres	Sutton Crossing (Private)	Wetland dominated by invasive common reed, reed canary grass, and cattail; buffer is corn field.	Design and implement project to install native prairie vegetation buffer, herbicide invasive species, install native wetland plants, and maintain indefinitely.	TSS=77.5% TN=20% TP=44%	Medium	Sutton Crossing	Ecological Consultant	\$80,000 to install prairie buffer & plants; \$2,000/year maintenance	5-10 Years
3	Beverly Quarry S of Rt. 72	300+ acres	Beverly Gravel & Plote (Private)	Gravel quarry that is currently being filled/regraded for future use. Note: Lake is part of "Critical Priority Protection Area #1.	Incorporate quarry lake into conservation design elements as part of future development.	Not Applicable	High	Future Owner	Hoffman Estates; Ecological Consultant; Illinois EPA; USACE; NRCS/SWCD	Not applicable	Initiated during future development design phase
WETLAND RESTORATION (See Figure 49)											
Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.											
5	See Figure 49	8.1 acres	Owner (Private)	Drained wetland located primarily on private agricultural land. West end is located in SCVFP. Wetland restoration is potentially feasible.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Owners	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$55,000 to design/permit/construct/maintain wetland	10+ Years
6	See Figure 49	5.0 acres	Owners (Public & Private)	Drained wetland located in public park.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Owners	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$35,000 to design/permit/construct/maintain wetland	10+ Years

PRIORITY PROTECTION AREAS (See Figure 50)

Acquiring and restoring or implementing future conservation and/or low density design development in Priority Protection Areas will enhance green infrastructure benefits.

Technical and Financial Assistance Needs: Technical and financial assistance needed to acquire land for restoration or conservation/low density development is high because of land, design/permitting, and construction costs.

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
1	Beverly Quarry South of Rt. 72 (See Figure 50)	334 acres	Beverly Materials LLC (private)	Site is currently a gravel quarry. Future landuse plans from Hoffman Estates shows the area becoming mixed residential and retail development. Note: site is considered a "Critical Area".	Implement conservation and/or low density design into future development to reduce environmental impacts.	TSS= 12 tons/yr TN=292 lbs/yr TP= 30 lbs/yr	High (Critical Area)	Future Developer	Hoffman Estates, Ecological Consultant; USACE; MWRD	Cost to implement conservation and/or low density design cannot be determined at this time	Design & Implementation of Future Development

SOUTH BARRINGTON											
ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
DETENTION BASIN RETROFITS & MAINTENANCE (See Figure 47)											
Detention basin retrofit and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement detention basin retrofits is relatively low while financial assistance is moderate. Private landowners will require the greatest assistance.											
1	Allstate Development	12 acres	Allstate (Private)	Large wet bottom detention basin that collects stormwater runoff from Allstate Complex; also located at headwaters of Spring Creek. Exhibits mowed turf grass buffer.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	High	Allstate	Ecological Consultant	\$90,000 to install prairie buffer; \$3,000/year maintenance	1-5 Years
5, 6, 7	Residential Subdivision along Pendwater Ln.	1 acre	HOA (Private)	Wet bottom detention basins with rip-rap shoreline and mowed turf grass buffer. Water is turbid.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$10,000 to install prairie buffer & plants; \$10,000/year maintenance	10+ Years
8	Arboretum Shopping Center	15 acres	Arboretum (Private)	Large naturalized wet bottom detention basin that collects stormwater runoff from Arboretum Shopping Center.	Implement short and long term maintenance to establish native vegetation.	Not Applicable	High	Arboretum	Ecological Consultant	\$7,000 year maintenance	Ongoing
10, 11, 12	Arboretum Shopping Center	3 acres	Arboretum (Private)	Naturalized wet bottom detention basins located in newer development.	Implement short and long term maintenance to establish native vegetation.	Not Applicable	Medium	Arboretum	Ecological Consultant	\$1,500/year maintenance	Ongoing
9, 16	Residential Subdivision W of Bartlett Rd.	10 acres	HOA (Private)	Wet bottom basins with rip-rap shoreline and mowed turf grass buffer. Water is turbid and with algae.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$100,000 to install prairie buffer & plants; \$5,000/year maintenance	10+ Years
18	N of Morgan Rd.	4 acres	HOA (Private)	Wet bottom detention basin in residential area at headwaters of Spring Creek. Basin side slopes are currently turf grass.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Homeowners Association	Ecological Consultant	\$40,000 to install prairie buffer & plants; \$2,000/year maintenance	5-10 Years
22	Woods of S. Barrington	3.75 acres	HOA (Private)	Existing wetland converted to wet bottom detention basin in recent residential development.	Implement invasive species control along basin buffer.	Not Applicable	Low	Homeowners Association	Ecological Consultant	\$2,000/year maintenance	Ongoing
13, 14, 15, 17, 19, 20, 21, 23, 25, 26, 27, 28, 29, 31, 32, 33, 37, 40, 42, 47	The Woods of S. Barrington Residential Subdivision	45 acres	HOA (Private)	Existing wet bottom detention basins naturalized with native vegetation located in newer residential development.	Implement short and long term maintenance to establish native vegetation.	Not Applicable	Medium	Homeowners Association	Ecological Consultant	\$20,000/year maintenance	Ongoing
30	Barbara Rose Elementary School	4 acres	School (Public)	Dry bottom detention basin designed to collect stormwater runoff from school and parking lot. Note: basin is considered a "Critical Area."	Design and implement project to convert tuft grass to native prairie vegetation and maintain indefinitely.	TSS= 10 tons/yr; TN= 88 lbs/yr; TP= 13 lbs/yr	High (Critical Area)	School	Ecological Consultant; SCW	\$25,000 to install prairie vegetation; \$500/year maintenance	1-5 Years
34, 35	Spring Creek Residential Subdivision	3.75 acres	HOA (Private)	Wet bottom basins with rip-rap shoreline and manicured turf grass side slopes. Water is turbid. Located at headwaters of Tributary A.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Homeowners Association	Ecological Consultant	\$58,000 to install prairie buffer; \$1,875/year maintenance	5-10 Years
36	Lakeshore Estates Residential Subdivision	2 acres	HOA (Private)	Wet bottom detention basin with mixture of natural/weedy buffer, rip-rap, and turf grass buffer; located at headwaters of Tributary A.	Design and implement project to create buffer of native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$15,000 to install prairie buffer & plants; \$1,000/year maintenance	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
38	Lakeshore Estates Residential Subdivision	37 acres	HOA (Private)	Large wet bottom basin with rip-rap shoreline and mowed turf grass buffer located in residential subdivision at headwaters of Tributary A.	Design and implement project to convert tuft grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Homeowners Association	Ecological Consultant	\$285,000 to install prairie buffer & plants; \$10,000/year maintenance	5-10 Years
42, 43, 44, 48, 52, 53, 54	Spring Creek Residential Subdivision	15 acres	HOA (Private)	Wet bottom basins with mowed turf grass buffer.	Design and implement project to convert turf grass buffer to native prairie vegetation, install native emergent plants at water line, and maintain indefinitely.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$175,000/to install prairie buffer; \$7,500/year maintenance	10+ Years
45	Spring Creek Residential Subdivision	10 acres	HOA (Private)	Existing wetland converted to wet bottom detention basin located in residential development.	Implement invasive species control along basin buffer.	Not Applicable	Low	Homeowners Association	Ecological Consultant	\$2,500/year maintenance	Ongoing
46, 49, 50, 51	Residential Subdivision along Easting Mere and Windridge Rds.	25 acres	HOA (Private)	Wet bottom detention basin with rip-rap shoreline and mowed turf grass buffer..	Design and implement project to convert tuft grass buffer to native prairie vegetation.	TSS=73% TN=40% TP=45%	Low	Homeowners Association	Ecological Consultant	\$65,000 to install prairie buffer; \$6,000/year maintenance	10+ Years
POND, LAKE, AND WETLAND RETROFITS/MAINTENANCE (See Figure 48)											
Pond, lake, and wetland retrofits and maintenance recommendations primarily address improving water quality and wildlife habitat.											
Technical and Financial Assistance Needs: Technical assistance needed to implement pond, lake, and wetland retrofits is relatively low; financial assistance is moderate. Private landowners will require the greatest assistance.											
8, 9	The Woods of S. Barrington Residential Subdivision	1.25 acres	Owner (Private)	Wetlands overgrown with invasive herbaceous and woody species.	Implement invasive species control.	Not Applicable	Low	Owner	Ecological Consultant	\$1,500/year maintenance	Ongoing
10	The Woods of S. Barrington Residential Subdivision	6.75 acres	Private Lot	Large pond dominated by invasive species along buffer.	Implement invasive species control along pond buffer.	Not Applicable	Low	Owner	Ecological Consultant	\$2,000/year maintenance	Ongoing
11	The Woods of S. Barrington Residential Subdivision	2.5 acres	HOA (Private)	Preexisting wetland complex in newer development. Wetland exhibits many overgrown and dead willows and buffer dominated by invasive species.	Implement invasive species control and remove hazardous dead trees.	Not Applicable	Low	Homeowners Association	Ecological Consultant	\$1,500/year maintenance; \$10,000 dead tree removal	Ongoing
13, 14	W of Bartlett Rd.	22 acres	HOA (Private)	Large wetland complex dominated by invasive species along buffer.	Implement invasive species control along pond buffer.	Not Applicable	Medium	Owner	Ecological Consultant	\$6,000/year maintenance	Ongoing
15, 16	SW corner Penny & Revere Dr.	3 acres	School (Public)	Wetland complexes dominated by invasive species.	Implement invasive species control.	Not Applicable	Low	School	CFC; SWCD/NRCS; Ecological Consultant	\$1,000/year maintenance	Ongoing
17	NW corner Penny Rd. & Shoreside Dr.	0.5 acre	Resident/ HOA (Private)	Wetland dominated by invasive common reed, reed canary grass, and cattail; buffer is mowed turf grass.	Design and implement project to convert turf grass buffer to native prairie vegetation, herbicide invasive species, install native wetland plants, and maintain indefinitely.	Not Applicable	Low	Resident/ HOA	Ecological Consultant	\$5,000 to install prairie buffer and plants; \$2,250/year maintenance	10+ Years
23, 24	Woods of South Barrington Residential Subdivision	7 acres	HOA (Private)	Extensive pond/wetland complex bordering new residential development. Pond exhibits natural buffer but is dominated by invasive species.	Eradicate invasive species around pond buffer and replant with native prairie vegetation; maintain indefinitely.	TSS=73% TN=40% TP=45%	Medium	Homeowners Association	Ecological Consultant	\$30,000 to install prairie buffer; \$1,750/year maintenance	10+ Years

ID#	Location	Units (size/length)	Owner (public or private)	Existing Condition	Management Measure Recommendation	Pollutant Reduction Efficiency	Priority	Responsible Entity	Sources of Technical Assistance	Cost Estimate	Implementation Schedule
26	W of Brooke Ln.	6 acres	HOA (Private)	Wetland complex dominated by invasive species.	Implement invasive species control.	Not Applicable	Low	Homeowners Association	Ecological Consultant	\$1,500/year maintenance	Ongoing
WETLAND RESTORATION (See Figure 49)											
Wetland restoration projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Wetland restoration projects are typically complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration.											
11, 17	See Figure 49	12 acres	Owner (Private)	Drained wetland located primarily on private tree farm/agricultural land. Wetland restoration is potentially feasible; limited feasibility to restore wetland.	Restore wetland by: 1) determine project feasibility, 2) design and permit project; 3) construct and plant wetland; and 4) conduct short and long term maintenance and monitoring.	TSS=77.5% TN=20% TP=44%	Low	Owner	Ecological Consultant; USACE; NRCS/SWCD; Illinois EPA; CFC	\$60,000 to design/permit/construct/maintain wetland	10+ Years
STREAM & RIPARIAN AREA RESTORATION/MAINTENANCE (See Figure 51)											
Stream restoration and maintenance projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources. They improve water quality by stabilizing eroded banks, reduce flooding by reconnecting channelized streams to the historic floodplain, and improve natural resources by improving habitat.											
Technical and Financial Assistance Needs: Stream restorations complex and require high technical and financial assistance needs to protect land, design, construct, monitor, and maintain the restoration. The project becomes more complex in areas that flow through several governing bodies or multiple private residences. Technical and financial assistance associated with stream maintenance is generally low for minor tasks such as removing debris.											
SPCR1	N of Bridges Rd.	648 lf	Owner (Private)	Reach is recently restored. Stream banks show little erosion and riparian area is in good condition.	Implement ongoing maintenance including yearly invasive species control and controlled burning every three years to sustain overall condition.	Not Applicable	Medium	Owner	Ecological Consultant	\$1,500/year maintenance	Ongoing
SPCR2	Bridges Rd. to Rt. 59	3,595 lf	Owner (Private)	Reach is recently restored. Stream banks are stable but stream is moderately channelized.	Implement ongoing maintenance including yearly invasive species control and controlled burning every three years to sustain overall condition.	Not Applicable	Medium	Owner	Ecological Consultant	\$4,000/year maintenance	Ongoing
TRA1	Bartlett Rd. to Penny Rd.	629 lf	HOA (Private)	Reach flows through new residential development and exhibits moderate streambank erosion. The riparian area is in good condition.	Design, permit, and implement project to improve channel condition and stabilize streambanks by: 1) install artificial riffles and 2) restore streambanks using bioengineering techniques.	TSS=14 tons/yr; TN=14 lbs/yr; TP=14 lbs/yr	Medium	Homeowners Association	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$20,000 design/permit; \$100,000 install	5-10 Years
TRA2	Penny Rd. to Mesa Rd.	1,419 lf	HOA (Private)	Reach flows along north side of new residential development. This reach is highly channelized with a riparian area in poor condition.	Design, permit, and implement project to improve channel condition, reconnect to adjacent wetlands, and improve buffer condition by: 1) install artificial riffles as grade controls, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS= 10 tons/yr; TN=23 lbs/yr; TP=14 lbs/yr	Medium	Homeowners Association	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$42,500 design/permit; \$213,000 install	5-10 Years
TRA3	Mesa Rd. to Sutton Rd.	2,222 lf	HOA (Private)	Reach flows along west side of new residential development. This reach is highly channelized with a riparian area in poor condition.	Design, permit, and implement project to improve channel condition, reconnect to adjacent wetlands, and improve buffer condition by: 1) install artificial riffles as grade controls, 2) restore streambanks using bioengineering techniques, and 3) install native prairie buffer.	TSS=16 tons/yr; TN=36 lbs/yr; TP=18 lbs/yr	Medium	Homeowners Association	Ecological Consultant; USACE; IDNR; MWRD; NRCS	\$57,00 design/permit; \$333,000 install	5-10 Years
OTHER MEASURES (See Figure 52)											
These projects are implemented primarily to improve water quality but also have excellent secondary benefits for reducing flooding and improving natural resources.											
Technical and Financial Assistance Needs: Technical and financial assistance needed to implement these projects varies depending on complexity.											
2	Park in Woods of S. Barrington Development	300 lf	HOA (Private)	Mowed turf grass swale draining recently constructed park area to Tributary A.	Vegetate swale and buffer with native vegetation.	TSS= 1.9 tons/yr TN=6 lbs/yr TP=2 lbs/yr	Low	Homeowners Association	Ecological Consultant	\$3,000 to stabilize with native vegetation	10+ Years