

Ferson-Otter Creek Watershed Plan Executive Summary



Watershed Planning

Watershed planning is a public process involving local residents, governmental agencies, and other concerned interests. Stakeholders are those individuals or parties participating in the planning process as well as the interests they represent since they all have a vested interest, or stake, in the overall health of the place they live or work. The planning process and resulting plan are therefore informed by both local knowledge and science-based information. Addressing nonpoint-source pollution to protect good water quality or improve poor water quality is the primary purpose for developing a watershed-based plan. However, other objectives can also be pursued, as they are often related to the health of water resources.

Watershed

boundary

Figure 1. What is a watershed?

A watershed is the land area from which rainwater and snowmelt drains into a body of water such as a stream or lake. Watershed boundaries are defined by nature and are largely determined by the surrounding topography or "lay of the land."

ynda vvanis, Guide to Illinois Lake Manageme A watershed is defined as the land area from which surface runoff from precipitation drains to a common point downhill; usually another stream, river, lake or estuary. In this planning process, the watershed is used as an organizing principle for understanding the interrelationships among the many ways that people view, impact, and interact with both land and water resources. When combined with an adaptive management approach to plan implementation, the plan and its stakeholders offer a potentially effective framework for producing and evaluating project and policy recommendations to correct water resource problems. It is from this viewpoint that the Ferson-Otter Creek Watershed plan was created.

Planning Process

The Ferson-Otter Creek Watershed planning process was designed to be stakeholderdriven with assistance from the Chicago Metropolitan Agency for Planning (CMAP) and other partner agencies. As the project lead, CMAP facilitated monthly meetings from September 2010 to December 2011 and provided technical assistance for the watershedbased plan. CMAP also facilitated one evening Open House to give a wider variety of stakeholders greater access to the planning process and coordinated two "stream walks" in which stakeholders learned about both healthy landscapes and areas in need of improvement within their watershed. Together these activities directed the development of the plan based on stakeholder input and best professional judgment.

The Conservation Foundation (TCF) and the Fox River Ecosystem Partnership (FREP) are both partners in the planning process. In coordination with CMAP and FREP, TCF served as the watershed coordinator, convened local stakeholders, and executed an information and outreach campaign during the planning process. FREP supported this effort by upgrading their website, serving as a source of watershed planning news and information, and highlighting watershed planning activities in their monthly Downstream e-Newsletter.

The following sections provide the plan highlights. The Ferson-Otter Creek Watershed Plan in its entirety can be found at **www.cmap.illinois.gov/watershed-planning**.



Watersheds are important because what we do on the land directly affects the quality of our surface waters, drinking water supply, local economy, wildlife habitat, and recreational resources.

Washington Department of Ecology

Introduction

The Ferson-Otter Creek Watershed is located within the Lower Fox River Basin (Hydrologic Unit Code [HUC] 07120007) and consists of Ferson Creek (HUC 071200070104) and Otter Creek (HUC 071200070103) subwatersheds. Ferson and Otter Creeks and their tributaries form over 55 stream miles throughout the watershed. The Ferson-Otter Creek Watershed is located on the urban fringe of the Chicago metropolitan area in Kane County, the 5th most populated county in Illinois. Since 2000, the watershed has experienced a 49% increase in population and is now home to an estimated 51,000 people. As seen in Figure 3, the watershed includes portions of the Cities of Elgin and St. Charles, the Villages of Campton Hills, South Elgin, and Lily Lake, and the townships of Campton, Plato, Elgin, and St. Charles.⁴

About half of the watershed's land area is located in unincorporated Kane County. The majority of the watershed's land use is either residential or agricultural in nature. Although the watershed has experienced rapid growth in the last decade, the watershed contains some substantial protected open space areas such as the LeRoy Oakes Forest Preserve, Fitchie Creek Forest Preserve, and Meissner-Corron Forest Preserve to name a few. A summary of basic watershed data is found in Table 1.

Size of watershed	54 square miles (34,560 acres)	
Municipalities in watershed	Campton Hills, Elgin, South Elgin, St. Charles, Lily Lake	
Population in watershed	50, 704	
Percent of developed land area (2005)	29%	
Land in unincorporated Kane County	19,456 acres/56%	
Land in residential use (2005)	12,381 acres/36%	
Land in agricultural use (2005)	11,596 acres/33%	
Land in protected open space	3,771 acres/11%	
Length of stream network in watershed	55.1 miles	
Water supply source	Groundwater and Fox River ³	
Dominant soils	Silt Loam or silty clay loam, Hydrologic Soils Group B	
Percentage of parcels on septic	70%	

Table 1: Summary of basic watershed data²

1 Information summarized here is documented comprehensively in the full plan.

2 All values for 2010 unless otherwise noted.

3 Only Elgin obtains drinking water from the Fox River among communities in the Ferson-Otter Creek Watershed.





Purpose of the Plan

The plan provides a roadmap for improving local water quality and thus, the quality of life for those that live, work, and play within the Ferson-Otter Creek Watershed. Water quality is generally evaluated by the absence or presence of certain elements (e.g. water chemistry) or attributes (e.g. aquatic biology, physical characteristics of stream network). Although many of these elements are naturally occurring and not innately harmful, it is their excessive concentrations, in some cases, that can negatively affect water quality. Table 2 provides a summary of common water quality indicators and associated sources of impairment.

WATER QUALITY INDICATOR ⁴	POTENTIAL PRIMARY SOURCES OF IMPAIRMENT	
Chloride	Road salt, water softeners	
Fecal coliform	Potentially many, including failing septic systems, pet waste, waterfowl and other wildlife waste, manure, illicit sewer connections, etc.	
Dissolved oxygen	Sediment oxygen demand, algal blooms/respiration, hydrologic modification	
Phosphorus	Wastewater treatment plants, septic systems, urban & agricultural runoff including pet, waterfowl/wildlife, & livestock waste	
Nitrogen	Wastewater treatment plants, septic systems, urban & agricultural runoff including pet, waterfowl/wildlife, & livestock waste	
Suspended sediments	Erosion from streambanks, lakeshores, construction sites, agricultural fields	

Table 2: Water quality indicators and potential primary sources of impairment

Regular testing of Illinois' streams and lakes for these and other pollutants is managed by the Illinois Environmental Protection Agency (IEPA). Water bodies are assessed for certain designated uses (e.g., aquatic life, primary contact, water supply) and the results are produced every two years in the *Illinois Integrated Water Quality Report and Section 303(d) List* (Report). In the 2010 Draft Report, the Ferson-Otter Creek Watershed was assessed for two of the seven designated uses for a stream: Aquatic Life and Primary Contact. The Report's findings are spatially displayed in Figure 4. Both Ferson and Otter Creeks were found to be in full support (i.e. not impaired) of the Aquatic Life designated use.





However the Report finds Ferson Creek to be impaired or not supporting of the Primary Contact (e.g. swimming, water skiing) designated use due to fecal coliform contamination (Otter Creek was not assessed for primary contact). As the only confirmed contaminant in the watershed, **stakeholders set a fecal coliform target load reduction of 44% for the geometric mean of the number of fecal coliforms per 100 mL.** This pollutantload reduction is derived from data collected by Illinois EPA compared with the Illinois water quality standard for fecal coliform as is shown below in Table 3.

Table 3: Ferson Creek fecal coliform contamination

WATER QUALITY STANDARD	FLOW WEIGHTED MEAN CONCENTRATION IN FERSON CREEK	IEPA IMPAIRMENT STANDARD	REDUCTION NEEDED
Geometric Mean	355 (#/100mL)	200 (#/100mL)	44%

In order to work towards achieving this reduction, the plan recommendations will focus in part on reducing fecal coliform to the extent possible. Recommendations also address water quality in Ferson-Otter Creek Watershed more broadly, including projects and policies to reduce contaminants other than fecal coliform in water runoff and to protect and restore stream and habitat quality. Details about recommendations are discussed below.

Additional Water Quality Concerns

While total phosphorus, sedimentation/siltation, and total suspended solids are identified causes of impairment in the mainstem Fox River below the mouth of Ferson Creek, neither nutrients nor sediment are implicated as causes of any designated use impairment within Ferson Creek in the Report. Illinois offers statistically-derived guidelines that are used to identify potential designated use impairment. Water quality data for Ferson Creek and their associated guidelines are compared in Chapter 3. Neither the nutrient concentrations nor suspended solids concentration exceeds the recommended guidelines in the watershed. Thus, the Ferson-Otter Creek Watershed stakeholders did not set a threshold for acceptable nutrient or sediment concentrations. Establishing target load reductions for nutrients or sediment, therefore, was deemed unnecessary at this time. It should be noted that although the Report does not show definitive data pointing to an impairment, nutrients and sediment are still a stakeholder concern in the watershed, which is affirmed by the plan's short-term project recommendations discussed on the following page.

Stakeholder Concerns and Goals

As a first task in developing plan recommendations, stakeholders identified local water quality concerns beyond the watershed's identified cause of designated use impairment (fecal coliform). Stakeholders identified nutrients, sediment and other pollutants from runoff as potential concerns in Ferson and Otter Creeks. Stakeholders were also interested in addressing impacts from development and stormwater management in the watershed more broadly. Additionally, stakeholders want to protect the quality of the stream corridor and open space throughout the watershed. Specifically, log jams, beaver dams along the creek, and tree and debris removal were also noted by stakeholders regarding the physical and ecological health of streams and open space. Public outreach and education were identified as important areas to address in the plan, particularly education for riparian landowners to encourage best management practices. Lastly, the need for more recreation and education opportunities on public land in coordination with Kane County was expressed.

As a next step, goals were then drafted directly from the concerns expressed by the stakeholders. The final goals outlined below capture the desired outcomes for the watershed. Recommendations throughout the plan will address each of these goals.

- 1) Reduce fecal coliform contributions to Ferson and Otter Creek.
- 2) Reduce nutrients, sediments, and other pollutant contributions to Ferson and Otter Creek.
- 3) Raise stakeholder (residents, public officials, etc.) awareness about the importance and best management practices of proper watershed stewardship.
- 4) Promote land use and best management practices that minimize increases in the volume of stormwater runoff and reduce the risk of flood damage.
- 5) Protect the quality and quantity of our water supplies.
- 6) Improve the physical condition of our waterways.
- 7) Develop an effective and lasting Watershed Coalition to foster continuing stewardship efforts in the watershed.

Plan recommendations

Stakeholder concerns and goals guided the plan's recommendations. Plan recommendations are organized into three groups: (1) Project, (2) Policy, and (3) Education and Outreach and can be found in Chapters 4, 5, and 6 respectively. Recommendations are aimed at a variety of implementers including local governments, homeowners associations, and community groups. Furthermore the recommendations have been approved by the Ferson-Otter Creek Watershed Coalition (Coalition) as actions that will improve water quality in the watershed. It should be noted that these recommendations are advisory in nature.

Project Recommendations

Four types of on-the-ground projects were identified in the plan: stream stabilization, buffer establishment, detention basin retrofit, and stream habitat restoration. These projects, summarized in Table 4 are scheduled to be implemented within 5 years of plan completion and are referred to as short-term projects.

Short-term projects were selected based on the following criteria:

- Ability to address the primary contact use impairment in Ferson Creek;⁵
 Ability to support Ferson-Otter Creek Watershed Goals;
- Ability to address aquatic life and fish consumption impairments in downstream segment of the Fox River;
- And degree of lead implementer, local, and municipal support.

Table 4: Ferson-Otter Watershed Creek plan's 21 short-term projects, by IEPA project category

PROJECT NUMBER	LEAD IMPLEMENTER	PROJECT NAME	IEPA PROJECT CATEGORY
1-14	South Elgin ⁶	Streambank Stabilization for Otter Creek	Hydrologic
15	Kane County Forest Preserve District	Streambank Stabilization in Leroy Oakes Forest Preserve	Hydrologic
16	Lake Campton Property Owners Association	Vegetative Clearing and Naturalized Buffer Installation for Lake Campton	Other
17	Kane County	Dam Modification/Removal	Other
18	South Elgin	Detention Basin Retrofit at Corron School	Urban
19	Elgin	Detention Basin Retrofit at Edgewater/Columbine Subdivisions	Urban
20-21 ⁷	Campton Township	Stabilization Projects	Urban

5 Limited data and knowledge about exact locations and sources of primary contact impairment were understood and taken into consideration.

6 Fourteen stabilization projects are represented here, each with a different site location on Otter Creek. See full plan for details.

7 Two stabilization projects are represented here. See full plan for details.

Expected Water Quality Benefits and Costs

CMAP retained the services of Hey and Associates to calculate pollutant load reduction and cost estimates for each of the above short-term projects. Sediment, total suspended solids, phosphorus, fecal coliform, and nitrogen reductions were considered in the estimates. Table 5 summarizes expected pollutant load reductions organized by IEPA project categories.⁸

Table 5: Expected pollutant load reductions organized by IEPA project categories

IEPA PROJECT CATEGORY	SEDIMENT (tons/year)	TSS (lbs/year)	PHOSPHORUS (lbs/year)	FECAL COLIFORM (counts/year)	NITROGEN (lbs/year)
Hydrologic	108	_	173	_	434
Other	_	421	3	250,000,000,000	5
Urban	14	1,474	28	1,220,000,000,000	1,159
Total - All categories	122	1,895	204	1,470,000,000,000	1,598

Additionally, costs for each short-term project have been calculated and are displayed in Table 6. However, it should be noted that some lead implementers will need to further develop project proposals. This will likely affect and potentially increase the estimated/ preliminary project costs due to a number of reasons including unforeseen variables such as site conditions, implementation timelines, etc. Funding for these short-term projects will likely come from state and federal grants and local sources.

Table 6: Short-term project costs

IEPA PROJECT CATEGORY9	ACCUMULATIVE COST OF SHORT-TERM PROJECTS
Hydrologic	\$1,265,029
Other	\$304,721
Urban	\$221,827
Total – All categories	\$1,791,577

After the short-term projects were identified from all of the stakeholder on-theground project submissions, the remaining projects were classified as long-term, with implementation expected within 5-10 years of plan completion. Long-term projects can be found in the plan's Appendix. Please note that the long- and short-term projects outlined in the plan do not represent all the opportunities for water quality improvement projects in the Ferson-Otter Creek Watershed.

Policy Recommendations

In addition to on-the-ground projects, changes in policy can also have a positive effect on water quality. Policies (i.e., ordinances and codes) can encourage or require certain practices for responsible land development and continued stewardship. Green infrastructure, groundwater protection, agricultural best management practices, and ordinance recommendations are included in the plan's policy recommendations section. Additionally, policy recommendations that specifically address fecal coliform are highlighted separately. All recommendations are shown in **BOLD** text.

Green Infrastructure

Green infrastructure can be described as an interconnected system of open space and natural areas that provides many services including habitat for wildlife; flood protection; recreational opportunities; water quality protection; and groundwater recharge.¹⁰ To address the preservation of open space and natural areas, the plan created a Green Infrastructure Framework that consists of two tiers — Tier 1 and Tier 2. The purpose of these tiers is not to prioritize open space and natural areas, but rather to group certain characteristics, functions, and areas together so that integrated policy recommendations can be applied to these grouped areas.

Tier 1, or the Reserve, includes protected public and private open space; the stream network and recommended buffers (100 feet); threatened and endangered species sites; and the 100-year floodplain (Figure 5).¹¹ For all Tier 1 land, the plan's green infrastructure recommendation is as follows:

• All Tier 1 area landowners should apply or maintain protective measures including conservation easement (purchased or donated).

Tier 2, or Developable Land includes: hydric soils; groundwater recharge areas; high sensitivity aquifer areas; critical woodland areas; significant tree stands; remnant natural areas; and existing, proposed, and potential greenways and trails (e.g., green infrastructure corridors) (Figure 5). Currently, land in Tier 2 is not formally protected but contains characteristics that are valuable to maintaining and protecting water quality. For all Tier 2 land, the plan's green infrastructure recommendation is as follows:

• All Tier 2 area landowners should incorporate low impact development (LID) best management practices when and if the Tier 2 land is developed.¹²

8 Project specific pollutant load reductions are found in the full plan.

9 Project specific costs are found in the full plan.

10 "Managing Wet Weather with Green Infrastructure," U.S. EPA, last modified January 4, 2011, accessed November 9, 2011, http://cfpub.epa.gov/npdes/home.cfm?program_id=298.

12 Or similar concepts like conservation design and light imprint.

¹¹ The floodplain includes all floodways.





Groundwater Protection

Groundwater protection is especially important in the Ferson-Otter Creek Watershed because the majority of the watershed's communities rely solely on groundwater for water supply.¹³ The plan's groundwater recommendations are generally aimed at local governments and are summarized as follows:

- Adopt groundwater protection ordinances.
- Establish Wellhead Protection Programs.
- Implement sensible salting practices.
- Install demand-initiated water softeners.
- Review street sweeping practices.
- Become a WaterSense Partner.¹⁴
- Adopt portions or all of CMAP's Model Water Use Conservation Ordinance.¹⁵

Agricultural Recommendations

There are many best management practices (BMPs) available and appropriate for implementation in agricultural areas. The Natural Resource Conservation Service (NRCS) Field Office Technical Guides (FOTG) comprehensively document conservation practices applicable to the State of Illinois as well as standards and specifications for these practices. The plan's agricultural recommendations are in line with the NRCS Guides, are generally aimed at agricultural landowners, and are summarized as follows:

- Livestock managers should implement livestock exclusion fencing to separate livestock from direct contact with streams.
- Heavy use area protections should also be established to reduce erosion from livestock.
- Agricultural landowners should adopt integrated nutrient and/or pest management plans that help to reduce nutrient and pesticide runoff to streams in the watershed planning area.
- Cropland management practices such as rotational grazing, cover cropping and/or conservation tillage should be implemented to control erosion and reduce required nutrient applications.
- Agricultural landowners should implement general best management practices like upland erosion controls, streambank or lake shore protection (e.g., filter strips), and/or wetland protection/restoration to protect water quality, in addition to agriculture-specific BMPs discussed above.

Ordinance Recommendations

Local ordinances and codes such as subdivision standards for development regulate and guide impacts from land use. For example, how a community addresses impervious surfaces such as sidewalks, streets, and parking has a substantial effect on the community's runoff both in terms of water quality and quantity. Research has shown that as impervious cover in a watershed increases, generally so do the concentrations of nutrients, sediment, and trace metals in surface waters.¹⁶ The plan's ordinance recommendations are generally aimed at local governments and are summarized as follows:

- Local governments should adopt ordinances that incentivize:
 - Shared parking;
 - Decreased dimensions in residential driveways/parking areas;
 - Use of biorention for on-site stormwater treatment;
 - Development design that minimizes road width and length;
 - Flexible arrangements to meet parking standards.
- Local governments should adopt ordinances that include:
 - Allowances for stormwater management BMPs and reductions in impervious cover;
 - Reduced setbacks, smaller lots, and cluster developments.
- Local governments should adopt policies and incentives that:
 - Utilize existing infrastructure such as water and sewer;
 - Encourage compact, mixed use, and transit-orientated developments.
- Local governments should consider mandatory no-development buffer codes for critical areas such as wetlands, floodplains, lakes, streams, and rivers.
- Local governments should adopt programs for tree protection and maintenance on public properties and right-of-ways, require tree replacement for losses during development, and implement tree planting initiatives.
- 13 Only Elgin obtains drinking water from the Fox River among communities in the Ferson-Otter Creek Watershed.
- 14 U.S. EPA WaterSense Program, http://www.epa.gov/watersense/.
- 15 Chicago Metropolitan Agency for Planning (CMAP) Model Water Use Conservation Ordinance, www.cmap.illinois.gov/Water-2050
- 16 The Center for Watershed Protection. Impacts of Impervious Cover on Aquatic Systems. Mansfield, CT: University of Connecticut, 2003. <u>http://clear.uconn.edu/projects/TMDL/library/papers/Schueler_2003.pdf</u> (accessed November 8, 2011).

Fecal Coliform Recommendations—Critical Areas Analysis

Three metrics were analyzed at a subwatershed level to help target fecal coliform-related policy recommendations: density of pet populations, density of parcels that likely use septic systems, and percentage of agricultural areas used for livestock and equestrian purposes.¹⁷ The analysis approximates which areas of the watershed are likely generating higher unit-area loads of fecal coliform contamination. Consequently, the following recommendations are made based on this analysis:

- The Village of Campton Hills and Kane County should adopt a pet waste pickup ordinance.
- The Village of Campton Hills, the Village of Lily Lake, and Kane County should require or at least encourage cyclical septic system maintenance.
- Livestock and equestrian landowners in the Village of Campton Hills and Kane County should be contacted and encouraged by local authorities or agencies (e.g., county Soil and Water Conservation Districts) to adopt manure management plans and livestock exclusion (from direct access to streams) practices.

Education and Outreach Recommendations

Throughout the watershed planning process, the stakeholders discussed education and outreach efforts extensively. The following recommendations and list of activities were determined to be desirable actions following plan completion. To accomplish these actions, stakeholders expressed an interest in partnering with local, regional, and state resources with similar goals and missions.

The Ferson-Otter Creek Watershed Coalition should:

- Hire a part-time watershed coordinator to promote and coordinate the implementation of the watershed plan's recommendations;
- Partner with existing organizations to provide a 319 grant writing workshop to assist lead implementers with 319 applications;
- Work with partnering organizations to raise awareness about all potential sources of fecal coliform bacteria and water quality;
- Heavily target landowners/Homeowners Associations, especially those identified in the critical areas analysis for fecal coliform, about proper septic maintenance and warning signs of a failing system;
- Distribute U.S.EPA's Healthy Lawn Care Practices and Reduce Runoff: Slow it Down, Spread it Out, Soak it in! DVD to Homeowners Associations for use at meetings as an educational tool;
- Continuously work with municipalities to promote the use of CMAP's Model Water Use Conservation Ordinance in their respective municipalities;
- Hold two educational seminars per year on stormwater issues for all NPDES¹⁸ Phase II permit holders in the watershed;
- And encourage participation in the following programs in the next three-five years:
 - Envirothon Competition (every high school in the watershed);
 - World Water Monitoring Day;
 - Watershed Quilt Program.

¹⁷ Full analysis found in Chapter 3 of the plan.

¹⁸ National Pollutant Discharge Elimination System (NPDES). For more information, http://cfpub.epa.gov/npdes/

- School districts and park districts within the Ferson-Otter Creek Watershed should implement the Mighty Acorns program within the next five years.
- The USDA Agriculture in the Classroom (AITC) program should be implemented or expanded in the Ferson-Otter Creek Watershed in the next 5 years.
- Support strategies to implement water science curriculums into classrooms and training opportunities for teachers that will increase their capacity to incorporate concepts of water science in their environmental education classrooms. Support activities that will promote the growth of students' awareness of water-related employment opportunities and educational criteria.

(A complete list of recommendations is found in the full plan.)

Timeline and Implementers

A schedule for plan implementation was developed for each recommendation category (Project, Policy, and Education and Outreach) with the assumption that the plan will be updated every five years. The short-term projects outlined in Chapter 4 are scheduled for completion by the end of 2016. It should be noted that project implementation is based on a variety of factors including, but not limited to, securing appropriate funding and receiving participation from willing landowners and local governments.

In addition to short-term projects, the watershed plan also describes numerous policy recommendations. Identified parties are encouraged to consider and implement the plan's policy recommendations by 2016. To help facilitate these efforts, CMAP or other consultants can provide assistance to communities for those recommendations that are related to comprehensive plans and ordinances, such as incorporating CMAP's Model Water Use Conservation Ordinance. Furthermore the Coalition will continue to work with the watershed's communities to support this effort. The outreach and education recommendations will be an on-going effort for the Coalition, partnering agencies, homeowners associations, and other relevant groups that are active within the watershed. The pace of implementation of the outreach and education recommendations would be greatly increased by hiring a part-time watershed coordinator.

Additional Monitoring Needs

As stated throughout the plan, fecal coliform is the watershed's only identified impairment (specifically in Ferson Creek). Although the Illinois 303 (d) list has identified potential sources for the primary contact impairment as urban runoff and storm sewers, and runoff from forests, grasslands and parks, both the geographical location(s) and origin(s) of fecal coliform contamination are still unknown.

By 2016, more detailed and frequent monitoring should be implemented throughout the Ferson-Otter Creek Watershed. The Coalition should partner with Fox River Study Group (FRSG) and Illinois State Water Survey (ISWS) to develop a more robust water quality monitoring scheme with a goal of achieving an improved understanding of the sources and locations of fecal coliform within the watershed. After such monitoring data are collected and analyzed with conclusive results, the Coalition can reevaluate the plan's recommendations and make appropriate adjustments to priorities at that point.

Acknowledgments

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About CMAP

The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization. Its GO TO 2040 planning campaign is helping the region's seven counties and 284 communities to implement strategies that address transportation, housing, economic development, open space, the environment, and other quality of life issues. See **www.cmap.illinois.gov** for more information.

Cover image courtesy of Holly Hudson, CMAP



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