Ferson-Otter Creek Watershed Plan
DRAFT Education and Outreach Chapter

4.1.4 Education and Outreach

We all have an impact on water quality. From the cars that we drive to the fertilizer we put on our lawns, pollutants from these activities and many others wash off the land and flow across the landscape, often through storm sewer systems, to our rivers and streams. These individual actions have relatively small impacts on water quality, but when looked at cumulatively they have a huge impact. This is nonpoint source pollution, so named because it does not originate from one pipe, but from many sources scattered across the landscape. Nonpoint source pollution is the nation's largest remaining water quality problem.

Education and outreach is essential to improving water quality within a watershed. If people don't understand what effects their actions have on water quality, improvements might be made through regulation and incentives, but only for a period of time. People want to do the right thing; they often just don't know what it is or how to do it. A watershed plan needs to include ways to make stakeholders aware of the issues, educating them on what needs to be done, and motivating them to take action. If stakeholders are involved in creating and implementing the plan, research shows that the watershed will have a higher level of long-term support and success.

Education of local residents must start with the basics; many studies have found that although the general public has heard the term "watershed," few are able to define it or explain how they have an impact on it. Not only will the education and outreach campaign need to define terms, but it will need to raise a general awareness of the problems in the watershed and the potential solutions. Then the campaign will need to find a way to motivate residents to act, contributing to improving water quality through their own actions, their government, and those which they support financially. The impact of not taking action must also be demonstrated.

This section of the watershed plan will lay the groundwork for creating a successful education and outreach campaign. First, it will summarize some existing literature on how to create a successful education and outreach campaign. Then it reviews some education and outreach activities that occurred during the watershed planning effort. Lastly, this section closes with a look ahead at education and outreach activities that were determined by the stakeholders to be necessary for improving water quality in the Ferson-Otter Creek watershed.

4.1.4.1 Resources for Watershed Education and Outreach Campaigns

There are many resources available to assist in developing an effective watershed education and outreach campaign. Agencies like U.S. EPA and IEPA have many resources available including U.S. EPA's *Getting in Step: a Guide for Conducting Watershed Outreach Campaigns* (2003) and IEPA's *Guidance for Watershed Action Plans in Illinois* (2007). Not-for-profit organizations like the Center for Watershed Protection and The Conservation Foundation are also great sources of information, often having brochures, fliers and other information applicable to watershed problems already on hand. The following information summarizes key findings from these resources.

Cause-Based Marketing
Research has shown that cause-based or social marketing is the most effective way to get people to change their behavior. Cause-based marketing is the practice of looking at people as consumers, but instead of selling products or services, as a watershed group, we are selling ideas, attitudes and behaviors. The goal of cause-based marketing is not to make a profit, but to improve society and the environment. Part of this campaign should include persuading the public that there is a problem that only they can solve.

Identifying the Audience
Before any of the following education and outreach strategies are employed, the target audience(s) must be identified. Different strategies will be used for different audiences. For example, if the goal is to reduce fecal coliform in the watershed, then targeting residents that have pets might be an effective strategy. The target audience should be broken down into the smallest segment possible to achieve the best results, then creating a message that resonates with the target audience and inspires them to act.

Understanding the Audience
Knowing some information about the target audience(s) is essential. Campaign audiences have varied values and beliefs, and they will not necessarily be the same as those implementing the watershed plan. The following is a list of a few questions that are important to know about the target audience(s), before education and outreach activities begin:

What does the audience know already?
What are their existing beliefs and perceptions?
How does the audience receive messages and information?
What will make the audience change their behavior?
Other important factors include: Education, age, culture, and religion.

In order to create a successful education and outreach campaign, it is necessary to understand the audience(s). What causes the audience to engage in the behaviors we want to change? How can we most effectively convey that message to them? How can we motivate the audience(s) to change? The understanding of the audience can be completed at the same time or subsequent to identifying the audience(s). Surveys, focus groups, and even simple observations can lead to a greater understanding of the audience and a successful campaign.

Barriers
Another component to establishing a successful education and outreach campaign is anticipating problems and road blocks. Barriers are just that: problems that might prevent residents from changing their behavior. Often barriers include time and/or resources. A barrier can also be that a person is simply not aware of the affect of their actions.

A common barrier is that the action desired is not socially acceptable. For example, rain gardens or other native vegetation is often perceived as looking weedy or unkempt. A resident might want to improve infiltration and have a low maintenance garden, but is resistant to installing a rain garden because he doesn't want to offend his neighbors. The message needs to be conveyed to that resident and his neighbors that natives can be planted in beds, can be low to the ground, and not look weedy. In this regard, barriers can be minimized or removed.

Social Norms
Related to the example just cited are social norms. Social norms are the behavioral expectations and cues within a group of people. It is a social norm that we maintain our lawns with grass species that are mowed to a certain height frequently. Through education and outreach, new examples need to be created showing the different, desired action. Then one by one, new social norms need to be established. People are more likely to change their behavior if they see someone else benefitting from the new behavior.

Creating the Message
Messages must be clear and contain specific calls to action. They are designed to raise awareness, educate or motivate to action. Campaigns should inform and suggest acceptable behaviors. People are more likely to change their behaviors when they see other people modeling the behavior first.

Messages need to capture the audience's attention. What is needed to get the audience's attention will vary by different segments of the audience. Insights to this information may have been gleaned when identifying the audience, through information such as demographics or may be indicated by the message itself.

Ask people to do something in response and let them know what effect this behavior will have. Be clear and concise. Consider what behavior you are trying to change and what behavior should replace it.

Formatting the Message
How the message is distributed to the audience can make or break an outreach campaign. The packaging of a message can help foster relationships and a sense of community, build understanding, and motivate people to action or it can be expensive and time consuming while producing little results. The target audience(s) should dictate which format should be used to convey the message. Formats can change over the course of the campaign.

A campaign could start out raising general awareness with public service announcements (PSAs) and once the audience understands the problem, brochures could be distributed to further inform residents about what they can to do to contribute to the solution. According to the U.S. EPA's Getting in Step guide, if the budget is small, the frequency in which your audience hears or sees the message is important. The following describes formats and messages that were used during the planning effort and what the Partnership would like to do going forward.

4.1.4.2 Education and Outreach Activities during Watershed Planning
A variety of education and outreach activities took place during the creation of this plan. They have laid the groundwork for a successful education and outreach campaign and may also indicate what may not work in the future.

Website
Materials for the watershed planning effort are currently located at the Fox River Ecosystem Partnership website: www.foxriverecosystem/ferson_otter.org. Agendas, maps, upcoming events, and the watershed plan are posted there.

Literature
Two brochures were developed as part of the watershed planning effort. The first brochure provides information about the watershed planning effort itself. The second brochure contains more detailed information about nonpoint source pollution and BMPs. In addition, a poster was developed for the Ferson-Otter Creek watershed to show what can be done to reduce potential sources of fecal coliform, thereby improving water quality.

FREP Noon Networks
Stakeholders helped identify and coordinate a program for the (October 19, 2011) FREP Noon Network.

Stream Walks
Stakeholders and landowners visited various points of interest and concern along both Ferson and Otter Creeks. A second stream walk was held at the St. Charles Park District's Otter Creek Bend Park. Members and stakeholders toured the park and heard from Steve Belz, from Black Creek Hydrology, regarding two 319 implementation projects for bank stabilization.

Municipal Outreach
We created PowerPoint presentations to help keep our municipal partners informed of the watershed planning process, and to let them know we would be visiting again to ask for plan adoption. We made scheduled appearances with municipal staff, board and/or committee members at Lily Lake, South Elgin, Campton Hills, St. Charles, Campton Township and Kane County.

Presence in the Community
Throughout the late summer and early fall we participated in a number of community events in each of the communities identified in the Ferson-Otter Creek Watershed. We participated and/or distributed information to stakeholders at: (locations to be supplied by the time we submit this chapter)

Open House
The watershed planning process was presented to stakeholders at a public forum on March 29, 2011 from 4:30 – 6:30 PM, where people could ask questions of the committee, consultants, and other parties involved in writing the plan.

4.1.4.3 Education and Outreach Activities Going Forward

Throughout the watershed planning process, the stakeholders discussed education and outreach a number of times. The following activities were determined to be desirable. Stakeholders expressed an interest in partnering with state and regional resources with similar goals and missions. Please see Appendix A for a list of state, regional, and local resources.

Organization
Momentum from the planning process will continue through the organization of a "coalition" to help encourage plan implementation. The coalition would be best served by hiring a watershed coordinator. The watershed coordinator would provide a focused, local approach to watershed planning, taking into consideration regional activities and opportunities. The ideal candidate will be familiar with available resources, grant writing, and fostering collaborative partnerships/efforts.

Public Awareness Campaign
It may be desirable to put a number of the activities listed below together into a campaign that would pool resources from and benefit the entire watershed. The campaign would have a fixed timeframe and include pre- and post- testing to gauge effectiveness.

Website
Websites are an excellent way of quickly connecting to a large audience. A mix of scientific and general information about the watershed can be located all in one place. The material can be changed and updated frequently and people can provide feedback and information quickly. A website is a relatively inexpensive education and outreach tool.

Brochures
Printed material is a popular format for conducting education and outreach activities. It can be created easily and inexpensively. People can refer to printed materials again and again. The current brochures should continue to be distributed as long as they are useful. New brochures could be developed or adapted to cover additional topics including BMPs for homeowners, information on proper salt and fertilizer use, and information on fecal coliform.

Public Service Announcements
A public service announcement (PSA) can be an inexpensive way to reach a variety of people. PSAs can be broadcast on radio, television or even on websites. In addition to the US EPA's PSA on lawn care, local college students and broadcasting classes can be used to assist in the creation of a PSA. PSAs are often aired for no charge on local cable access channels or radio stations, although time slots may not be ideal.

Targeted Audiences
In order to prioritize our outreach and education activities, stakeholders identified the following targeted audiences to increase awareness of watershed issues, inform them of potential solutions, and motivate them to act:

Children/Students

- *Curricula and Training*
  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.

- *The Watershed Quilt Program*
  The Nature Quilt Project is a grassroots project inspired by the Nature Quilt Project in Macomb, Illinois. Our local version of the project builds on recommendations of the recent Aux Sable Creek Watershed Plan that recommends introducing the concepts of watersheds and stormwater in the classroom as well as working on programs with children such as precipitation monitoring, runoff tracing, stream monitoring and analysis, and habitat assessments.

  Project Mission: Raising awareness of the assets, opportunities and challenges in our local natural areas to gain a better understanding of the interconnectedness between people and the natural world around them through children's education. We do this through promoting outdoor environmental education, environmental literacy, the arts, cultural discovery and activism demonstrating the ability of children to make a positive difference in addressing global environmental challenges.

- *Agriculture in the Classroom*
  USDA Agriculture in the Classroom supports state programs by providing a network that seeks to improve agricultural literacy — awareness, knowledge, and appreciation — among PreK-12 teachers and their students. The program is carried out in each state, according to state needs and interests, by individuals representing farm organizations, agribusiness, education and government.

- *World Water Monitoring Day*™
  World Water Monitoring Day™ is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies.

- *Envirothon Competition*
  The Envirothon is an exciting, fun way for high school students to learn about the environment. It combines in-class curriculum with hands-on field experiences, while demonstrating the role people have in important environmental issues, such as forestry and wildlife management, water quality, and soil erosion. At the completion of the year-long learning process, the Envirothon conducts a series of competitions where students are tested on five subjects: soil, aquatics, wildlife, forestry and a specific environmental issue, which changes from year to year.

- *Mighty Acorns*
  Mighty Acorns is a stewardship-based curriculum for 4th-6th graders. Classes adopt a natural area in their community and visit it throughout the school year in order to participate in stewardship activities. Each field trip is preceded by a classroom lesson on related ecological concepts. Summer nature camps for Mighty Acorns have also been developed through partnerships between The Conservation Foundation and local park districts.

Adults/Homeowners Associations

- *Conservation @ Home*
  Conservation @ Home is a program created by The Conservation Foundation which is geared towards homeowners. The program encourages and recognizes property owners who protect and/or create yards that are environmentally friendly and conserve water. This includes planting native vegetation, creating butterfly and rain gardens, and removing invasive species. Conservation @ Home is appropriate for outreach to municipalities, park districts, homeowners and homeowner associations through seminars, workshops, one-on-one conversations and the distribution of printed materials.

- *HOA/ Adult Presentations*
  Stakeholders believe the watershed would benefit from providing a "suite" of topics to present to Homeowners Associations throughout the watershed. The topics might include a series of presentations covering the following topics: soil testing/ fertilizer, native plants, no mow zones, detention ponds retrofit and management, rain barrels/gardens, etc. A variety of agricultural and natural resource topics are available through the KD-SWCD Community Assistance program.

- *Partners for Conservation*
  Provides technical and financial assistance (cost-share) to landowners to address erosion issues. The Kane-DuPage Soil and Water Conservation District administers this program with funding provided by the State of Illinois through the Illinois Department of Agriculture. Practices on agricultural land include: Grassed waterways, grade stabilization structures, water & sediment control basins, filter strips, nutrient management, etc. Practices not specific to agricultural land include: Streambank stabilization and restoration, well sealing, rain gardens, and special projects (non-traditional practices such as urban stormwater basin retro-fitting).

- *Events/ Conferences*
  The Coalition could promote its message about improving water quality in the Ferson-Otter Creek Watershed by attending and distributing information at existing events/ conferences or by creating their own event (watershed tour, an environmental fair, or a listening session). The Coalition would benefit from the opportunities to talk to residents and gauge their understanding of the water quality problem as well as hear their concerns about the watershed. In an effort to pool resources, share ideas, and provide technical assistance, the Coalition might also pursue coordinating a session at a larger, regional conference. Professionals are encouraged to attend workshops and conferences hosted by government agencies or non-profit water-quality groups.

- *River Sweep*
  A river sweep is a coordinated, periodic clean-up of area waterways. The purpose is to create a connection between people and the river by having volunteers remove trash and debris from the river. Funding for supplies is available through the IEPA SCALE grant program.

- *Storm Drain Stenciling*
  Storm drain stenciling involves volunteers painting a stenciled message on or near a storm drain as well as handing out literature explaining what they are doing. Stenciling is a way of explaining nonpoint source pollution to the general public and connecting volunteers and residents to the environment.

Decision Makers/Municipal Officials

- *Policy, Codes and Ordinance Review*
  Utilize the US EPA's "Water Quality Scorecard: Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scale," and "Managing Wet Weather with Green Infrastructure" resources to help municipalities increase awareness of and help guide them through the process of removing barriers, revising and creating codes, ordinances, and incentives to better protect water quality.

- *Regional Planning*
  Development of a regional floodplain management plan. Potential benefits of the plan include: improvement of public safety; reduction of flood damage costs to communities; increase in resources for local flood safety programs; opportunities for reduced flood insurance rates for communities participating in FEMA's Community Rating System; improvement of riparian vegetation, wildlife habitat and water quality; preservation of historical land uses; retention of natural beauty of the area.

- *Water Sense Program*
  Encourage partnerships with WaterSense, an IEPA Partnership Program. As a partner the organization will have access to tools and resources to promote and educate residents the need for water efficiency. Using water more efficiently makes sense for consumers, communities, and the environment. Water efficiency measures, as part of broader conservation efforts, can help reduce water and wastewater infrastructure costs and ensure resources for future generations.

  Our growing population is putting stress on water supplies and distribution systems, threatening human health and the environment. The average household uses 100+ gallons of water each day. Water has become a national priority. A recent study showed at least 36 states are anticipating local, regional, or statewide water shortages by 2013. However using water more efficiently, will help preserve supplies for future generations, save money, and protect the environment. WaterSense makes it easier to identify water-efficient products and practices.

- *Technical Workshops*
  For municipal and county planning, engineering and public works staff members. Topics would be chosen that address water quality issues, particularly fecal coliform, presented by Kane-DuPage Soil and Water Conservation District as well as The Conservation Foundation.

- *Natural Resource Information (NRI) Reports*
  The Kane-DuPage Soil and Water Conservation District provides natural resource information to officials of the local governing body and other decision makers. The NRI report intends to present the most current natural resource information available in an understandable format for sites that are being considered for development. It contains a description of the present conditions and resources available and their potential impact on each other.

- *Soil Erosion & Sediment Control*
  Expertise provided by the Kane-DuPage Soil and Water Conservation District to agencies (Illinois EPA, United States Army Corps of Engineers) and local governments (County and Municipal Government) as part of a cooperative agreement.

Appendix A

Ferson-Otter Creek Watershed Action Plan
Regional Resources

The Chicago Metropolitan Agency for Planning
The Chicago Wilderness
The Conservation Foundation
The Delta Institute
Friends of the Fox
Illinois Department of Natural Resources
The Morton Arboretum
National Council for Public Partnerships
National Resource Conservation Service
Open Lands
Peggy Notebaert Native Museum
Pizzo & Associates
United States Department of Agriculture
United States Fish and Wildlife
United States Geological Survey

Local Resources

Elgin Parks and Recreation
Fox Valley Park District
Kane County Farm Bureau
Kane County Forest Preserve District
Kane-DuPage Soil and Water Conservation District
South Elgin Parks and Recreation
St. Charles Park District
Sugar Grove Park District