

watershed planning



The Water Resource Protection and Conservation Toolkit

This is one of a series of 12 fact sheets developed by the Northwestern Indiana Regional Planning Commission with funding from the Joyce Foundation for the Water Resources Protection and Conservation Toolkit. The toolkit provides background on, and methods to protect and conserve local water resources. These tools are intended to help citizens and local officials to manage and protect water resources for future generations.

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How Can Local Watershed Planning Benefit Communities?

Watershed planning is a method for maintaining, protecting, and restoring the natural resources within a watershed while also enhancing the quality of life in our communities. Watershed plans should be used to integrate multiple water resource protection and conservation activities and goals as outlined in this set of fact sheets.

What is a Watershed?

A watershed is defined as the land area where water drains into a water body such as a lake or river. Political boundaries usually do not coincide with the natural drainage boundaries of a watershed. Thus, the most effective watershed planning is developed in cooperation with other communities within the watershed.

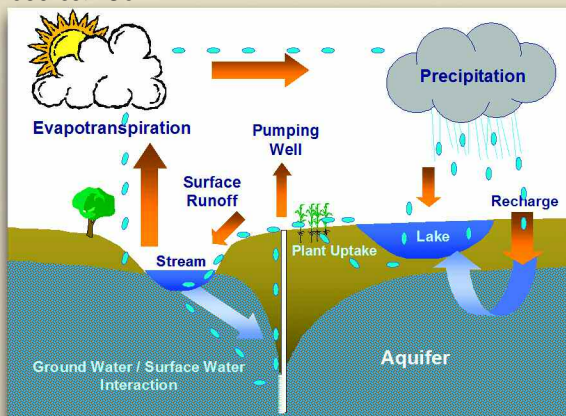
General Watershed Planning, Assessment, and Restoration Tools

Center for Watershed Protection
www.cwp.org

Sample Watershed Plans
www.cwp.org/pubs_download.htm

Watershed Protection Tools
www.cwp.org/tools_protection.htm

Source: USEPA



Water Resources and The Natural Water (or Hydrologic) Cycle

Water resources can be significantly affected by development activities. Water resources move through the water cycle, sometimes called the hydrologic cycle. The water cycle is the continuous movement of water from ocean, lakes, rivers, and other water bodies to air and land then back to these water bodies through rain and snow in a cyclic pattern as water is used and re-used. Some water infiltrates (or seeps into) the ground or evaporates back into the atmosphere.



What are the Benefits of Watershed Planning?

Environmental Benefits:

- Improves quality of water for drinking and recreational use.
- Enhances water supply.
- Protects wildlife habitat and improves natural resources.
- Controls flooding by restoring riparian and wetland areas.



Community Benefits:

- Directly involves community members in developing a vision for the future of the watershed.
- Provides opportunities to educate citizens on protecting and fixing the environment that do not conflict with current and future development.
- Gives citizens an active voice in protecting and restoring natural resources that are important to them.
- Provides opportunities to cooperate with neighboring communities.

Financial Benefits:

- Reduces costs for meeting regulations and fixing damage that would happen if sensitive areas are developed.
- Reduces costs for drinking water treatment.
- Provides a new organization through which to get state and federal grants to improve the environment.

Forming a Watershed Plan

Developing a Watershed Management Plan for Water Quality: An Introductory Guide, Revised 6/18/03,
www.deq.state.mi.us/documents/deq-swq-nps-Watershe.pdf

Guidance for Developing Watershed Implementation Plans in Illinois, March 1998,
www.epa.state.il.us/water/watershed/publications/watershed-guidance.pdf

Indiana Watershed Planning Guide, August 2003,
www.in.gov/idem/water/planbr/wsm/iwpg/content.html

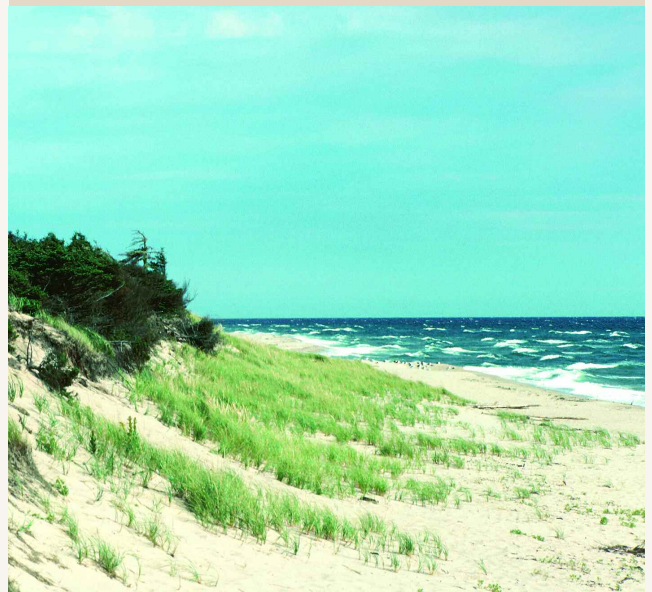
Purdue University Watershed Inventory Workbook for Indiana: A Guide for Watershed Partnerships, Purdue University,
www.ecn.purdue.edu/SafeWater/watershed/inventoryf.pdf

This Watershed Inventory Workbook for Indiana is designed for groups beginning to develop watershed management plans.

Safe Water for the Future, Purdue University.
www.ecn.purdue.edu/SafeWater/watershed/

This website provides education to communities on the location, extent, and properties of their watershed, and how to form a watershed partnership.

Wisconsin Bureau of Watershed Management,
www.dnr.wi.gov/org/water/wm/programs.html





What Goes Into a Successful Watershed Planning Process?

The most successful watershed plans follow this process:

1. Identify key individuals, businesses, leaders, landowners, and decision-makers.
2. Establish goals and objectives.
3. Inventory watershed resources and conditions.
4. Assess waterbody/watershed problems.
5. Recommend management practices for prevention and remediation.
6. Develop an effective action plan.
7. Adopt plan and integrate it into local governments' comprehensive plans.

What are Outcomes from the Process?

- Setting goals and objectives to protect and enhance local water resources.
- Planning to update ordinances to protect high quality water resources.
- Developing open space conservation plans.
- Establishing local stewardship and education projects.
- Identifying site specific restoration and enhancement projects.

Center for Watershed Protection Watershed Assessment and Restoration Manuals

The following manuals are available for purchase from the Center for Watershed Protection at:

<http://www.cwp.org/usrm.htm>

- **Center for Watershed Protection Manual #1: An Integrated Framework to Restore Small Urban Watersheds.**
The manual introduces the basic concepts and techniques of urban watershed restoration, and sets forth the overall framework we use to evaluate subwatershed restoration potential.
- **Center for Watershed Protection Manual #4. Urban Stream Repair Practices.**
This stream repair manual concentrates on practices used to enhance the appearance, stability, structure, or function of urban streams.
- **Center for Watershed Protection Manual #10. Unified Stream Assessment: A User's Manual.**
The Unified Stream Assessment (USA) is a rapid technique to locate and evaluate problems and restoration opportunities within the urban stream corridor. It includes field assessment sheets and a Microsoft Access database to input the information from the field assessment sheets.
- **Center for Watershed Protection Manual #11: Unified Subwatershed and Site Reconnaissance: A User's Manual.**
This manual examines pollution sources and restoration potential within upland areas of urban subwatersheds. The manual provides detailed guidance on how to perform specific assessments and investigations. Together, these rapid surveys help identify upland restoration projects and source control to consider when devising subwatershed restoration plans.

For more information, please contact:

Northwestern Indiana Regional Planning Commission

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North Branch of the Chicago River Watershed Plan

www.co.lake.il.us/smc/planning/northbranch/default.asp

The North Branch of the Chicago River Watershed Management Plan for Lake County, Illinois is designed to direct development, redevelopment, retrofitting activities, and land conservation efforts in the North Branch, to protect the river and watershed from further degradation, and to mitigate flood damage. The Plan also provides a means to coordinate the watershed management activities of the 14 municipalities, 7 townships, and 4 drainage districts located within the Lake County portion of the watershed. The Plan was formally adopted by the County in fall 2000.

The North Branch Plan addresses several key urbanized watershed issues identified by project partners and other stakeholders at workshops and planning meetings. They include:

- flood damage
- poor water quality
- protection of natural resources
- streambank erosion
- lack of stream access
- poor inter-jurisdictional communication and coordination
- lack of watershed awareness by government, developers, businesses and the general public

The Lake County Plan is one of four components of a larger North Branch Watershed Project which includes the watershed area in Cook County. Other components of the project include in-the-ground best management practice (BMP) demonstration projects, an urban watershed planning handbook, and an education and outreach program. An Illinois Environmental Protection Agency grant largely funds the North Branch Project.

Northwestern Indiana Regional Planning Commission Regional Watershed Plan

www.nirpc.org

Located on approximately 45 miles of the southern shore of Lake Michigan, Lake, Porter, and LaPorte counties encompass approximately 1,513 square miles. Within this area there are two large watersheds partially lying within the three counties. They are the Little Calumet-Galien Basin, which lies in the northern portion of the counties along Lake Michigan, and the Kankakee River Basin, which lies to the south. The plan is a four year effort to be completed in late 2005 to develop a strategy to look at water quality on a bigger scale. Along with this Toolkit, the plan is part of the Northwest Indiana Water Planning Initiative. This plan is unique in that the two basins in the study are very diverse.

Little Calumet-Galien Basin

- Northwestern part is one of the major industrial centers of the United States.
- Densely populated and includes most of the urbanized communities within the three counties.
- Plan will address the impairments related to urban development, growth trends and the sites that will be left behind as the population shifts to the south, and issues related to Lake Michigan and the coastal area.

Kankakee River Basin

- Less densely populated, has more open land, and more agricultural uses.
- As development and population continue to shift to the south and east, the effects of this trend will be felt the hardest in this basin.
- Plan will address primarily agricultural impacts on water quality and how to preserve water quality from the potential effects of new development and growth that this basin could see in the next 20 years.