Environmental Plans

Section V

Indiana Department of Natural Resources
Lake Michigan Coastal Program

Indiana Coastal Nonpoint Pollution Control Program

Indiana Department of Natural Resources, Lake Michigan Coastal Program
2005
http://www.in.gov/dnr/lakemich/files/6217_Final.pdf

About the Plan

This document represents the effort of the Indiana Department of Natural Resources, Indiana Department of Environmental Management, and countless partner organizations to develop a Nonpoint Pollution Control Plan for the Indiana Lake Michigan drainage basin. Nonpoint source pollution refers to pollution resulting from land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. As a part of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Congress requires that states and territories with approved coastal management programs develop a coastal Nonpoint Pollution Control Program to address water-quality impairment of coastal waters. The six federal nonpoint source categories—agriculture; forestry; urban and rural areas; marinas; hydromodification; and wetlands, riparian areas, and vegetated treatment systems—and 55 management measures are described in each of the six category chapters of the document. The programs and/or practices that Indiana uses to address each nonpoint source category are identified and summarized for each of the federally defined management measures.

Goals

The chapters provide an overview of how the state intends to meet each of the 55 management measures. This is a framework document, and details regarding the implementable actions and timelines can be found in the LMCP Assessment and Multi-Year Strategy documents (the most recent can be found here). The general chapter structure is as follows:

A. Introduction
B. Potential Sources of Nonpoint pollution in Indiana's coastal watershed
    1. Issue Area
C. Chapter specific management measures implemented in Indiana's coastal watershed
    1. Management Measure
        a. Definition
        b. Applicability
        c. Existing programs or practices and lead agencies (reference table)
        d. Enforcement Mechanisms
D. Coordination Methods
E. Goals and objectives for Chapter
    1. Introduction
    2. Goals
    3. Reference Table

Indiana State Wildlife Action Plan (SWAP)

Indiana Department of Natural Resources, Division of Fish and Wildlife
2015
http://www.in.gov/dnr/fishwild/files/SWAP/fw-SWAP_2015.pdf

About the Plan

The intent of the SWAP is to avoid "random acts of conservation" and to help people care more for land and resources. This document to serves not only as the guide for future Division of Fish & Wildlife operations, but also for those of the conservation community as a whole. The SWAP was designed as a living document and a strategic vision with a goal of preserving Indiana's fish and wildlife diversity. Most important, this document forms a framework for developing and coordinating conservation actions involving all conservation partners and safeguarding all fish and wildlife species. The identified habitat types in the SWAP are: Agricultural Lands, Aquatic Systems, Barren Lands, Developed Lands, Forests, Grasslands, Subterranean Systems and Wetlands.

Recommendations

The threats that were identified for the Great Lakes region are:

- Habitat loss
- Invasive species
- Law and policy
- Dams and water management and use
- Fish passage
- Pollution
- Habitat loss to barrens and bogs/fens

The report provides a more detailed breakdown of top threats and conservation actions for Species of Greatest Conservation Need and habitat types in Chapter VI.

Tools, Strategies, and Lessons Learned from EPA Green Infrastructure Technical Assistance Projects

U.S. Environmental Protection Agency, Office of Wastewater Management
2015
https://www.epa.gov/sites/production/files/2016-01/documents/gi_tech_asst_summary_508final010515_3.pdf

About the Resource

Since 2012, the U.S. Environmental Protection Agency (EPA) has supported technical assistance projects in communities across the country. This report can be used as a resource for those communities wanting to use green infrastructure as a business-as-usual stormwater management, infrastructure investment, and/or community development tool. This report summarizes successes and lessons learned from EPA's on-the-ground work with communities implementing green infrastructure projects. It matches problems with real-world, tested solutions. With a guide to green infrastructure practices and a table of benefits, city managers can share the report with potential collaborators and stakeholders.

Recommendations

The report recommends that varying types of green infrastructure can be used to address the following community issues:

- Improving water quality and water conservation
- Strengthening the local economy
- Enhancing community and infrastructure resiliency

In addition to offering an overview of ways in which green infrastructure can be used, the report contains a list of cities in which EPA has worked. Readers can use the links to read individual reports that pertain to projects in which they are interested.

Implementing Stormwater Infiltration Practices at Vacant Parcels and Brownfield Sites

U.S. Environmental Protection Agency, Office of Water and Office of Solid Waste and Emergency Response
2013
http://www.epa.state.il.us/water/watershed/publications/implementing-stormwater-infiltration-practices.pdf

About the Resource

This document was developed to assist communities, developers and stakeholders in making decisions about whether to implement green infrastructure infiltration practices at vacant parcels or brownfield sites. Communities seeking to implement sustainable stormwater management frequently use rain gardens, bioswales, permeable pavement and other practices—often referred to as green infrastructure—to manage runoff. Vacant or under-used parcels may appear to be promising places to locate stormwater infiltration practices. However, it is important to reconcile the goal of sustainably managing stormwater with brownfield site considerations. Infiltrating stormwater at sites where contaminants are present may mobilize the contaminants and increase the potential for groundwater contamination. This document guides the reader through the site assessment stages: Phase I Environmental Assessment, Phase II Environmental Assessment, and Supplemental Site Assessment. The resource also includes a section and decision tree that aids the reader in determining if infiltration is appropriate for the site based upon the findings of the environmental assessments.

Recommendations

Stormwater infiltration practices can provide important sustainability benefits, so long as the vacant parcels and brownfields selected do not pose groundwater contamination risks. Important tasks that must be done to adequately assess the risk are:

- Understand previous uses of the site
- Test soil to determine the type and concentration of possible contaminants
- Collaboratively create a site design and, if necessary, a cleanup plan

Valuation of Ecosystem Services for Lake, Porter, and LaPorte Counties, Indiana

The Conservation Fund for Northwestern Indiana Regional Planning Commission
2015
http://www.nirpc.org/media/51550/giv_2.3_ecosystem_services_valuation_report.pdf

About the Report

According to The Conservation Fund, ecosystem services are the collective benefits from an array of resources and processes that are supplied by nature. Since 2004, the Chicago Wilderness Green Infrastructure Vision (GIV) has served as a spatial representation of the region's ecosystem services. The Chicago Wilderness GIV is being used every day by planners and decision makers at the local, state, regional and federal levels to guide existing planning efforts and evaluate conservation and restoration opportunities that support preserving and managing the GIV network. This project provides an overview of ecosystem services and green infrastructure; explains ecosystem service valuation models and monetary valuation estimates from GIV 2.3 data for Lake, Porter, and La Porte Counties for six services; and maps the location of these services.

Findings

The models produced the following ecosystem services monetary valuation estimates:

- Water flow regulation/flood control ($4 billion/year)
- Water purification ($393 million/year)
- Groundwater recharge ($1.4 billion/year)
- Carbon storage ($4.3 million/year)
- Air purification ($319 million/year)
- Recreation and ecotourism ($1.9 billion/year just for existing public land, including $121 million/year for Indiana Dunes State Park and $168 million/year for Indiana Dunes National Lakeshore)

The report provides specific findings and recommendations for each of the six topical areas explored in the study.

Northwest Indiana Watershed Management Framework

Northwestern Indiana Regional Planning Commission
2011
https://www.nirpc.org/2040-plan/environment/water-resources/watershed-management/northwest-indiana-watershed-management-framework

About the Resource

Updated by NIRPC in 2011, this resource document was created to assist communities and organizations in developing watershed management plans. The Watershed Framework includes a variety of information to help stakeholders characterize existing watershed conditions for their watershed of interest. It has been organized to follow the Indiana Department of Environmental Management's Watershed Management Plan Checklist requirements as closely as possible.

A watershed plan is a strategy and a work plan for achieving water-resource goals that provides assessment and management information for a geographically defined watershed. The primary purpose of a watershed management plan is to guide watershed coordinators, resource managers, policy makers, and community organizations to restore and protect the quality of lakes, rivers, streams and wetlands in a given watershed. The plan is intended to be a practical tool with specific recommendations on practices to improve and sustain water quality. These are also "living" documents. This means that as conditions change over time in a watershed, the plan must be reexamined and revised to reflect goals that have been achieved or not met.

Watershed management plans exist or are in progress for the following watersheds:

- Deep River-Portage Burns Waterway
- Salt Creek
- Trail Creek
- Galena River
- Dunes Creek
- Deep River-Turkey Creek
- West Branch Little Calumet
- East Branch Little Calumet
- Coffee Creek
- Grand Calumet River-Indiana Harbor Ship Canal

Indiana Clean Marina Program Guidebook

Indiana Department of Environmental Management
2012

https://www.in.gov/idem/lakemichigan/2540.htm

About the Resource

The Indiana Clean Marina Program and guidebook was developed in collaboration with many state agency and local partners. The Indiana Clean Marina Guidebook provides marinas, boatyards, yacht clubs, and recreational boaters with environmentally friendly practices to control nonpoint source pollution and protect our lakes and rivers. Because pollutants generated upstream in the watershed are often delivered via surface runoff to the waterway in which the marina is located, the water quality within a marina is a reflection of the marina itself and the watershed as a whole. This guidebook provides the framework on which the Indiana Clean Marina Program is based and steps that explain how a marina can obtain the Clean Marina designation.

Goals

If a marina is in compliance with state and federal regulations and also incorporates a high percentage of the best management practices recommended in this guidebook, it can be designated as an Indiana Clean Marina. Marinas that have been designated as Indiana Clean Marinas are authorized to fly the Indiana Clean Marina flag and use the Indiana Clean Marina logo in their advertising. The flag and logo are signals to boaters that a marina is a steward of Indiana's aquatic resources. The best management practices contained within this guidebook include the following:

- Marina Site Location and Design
    - Marina Flushing
    - Water Quality Assessment
    - Habitat Assessment
    - Shoreline Stabilization
    - Storm Water Run-off
    - Fueling Stations
    - Sewage Facilities
- Marina and Boat Operation
    - Solid Waste (Trash & Marine Debris)
    - Fish Waste
    - Liquid Materials
    - Petroleum Control
    - Boat Cleaning
    - Public Education
    - Boat Operation
    - Exotic & Nuisance Aquatic Species

Tipping Points & Indicators: Supporting Sustainable Communities in Great Lakes States

Illinois-Indiana Sea Grant
2015
http://tippingpointplanner.org

About the Tool

Tipping Points and Indicators, a research and extension program for Great Lakes coastal communities, helps local decision makers, including watershed management groups and planning entities, identify impacts of land-based activities that threaten the sustainability of ecosystems in their watershed. The program includes two components: a web-based decision support system (tippingpointplanner.org) and a facilitated community forum to explore policy and management interventions necessary to keep coastal ecosystems from reaching critical tipping points and moving to unstable conditions. The decision support tool was developed over a three-year period based on a region-wide user needs assessment, involvement from Sea Grant sustainable coastal development specialists in all Great Lakes states, and continuous input from pilot communities, consultants, researchers and facilitators.

Goals

The goal of the tool is to enable diverse stakeholder participation in land-use decisions and natural resources management strategies to plan and maintain projects within a watershed. It gives watershed planning groups and other groups of stakeholders the information they need to determine how close a watershed is to known tipping points. The facilitated workshop guides participants through the decision support system modules to enable community groups to collaborate and explore the website, customized tools, and GIS maps to determine planning priorities linked to community values. The online tool produces maps and action plans that can be helpful for use in grant proposals or planning documents. Action plans touch on topics that include planning, local ordinances, policy incentives, changing community practices, and education.