

Introduction

Background

Lakes provide aesthetic beauty, recreational opportunities and economic drawing power for both residents and visitors to the region. Lakes thrive on a delicate balance of physical, chemical, and biological facets, and alteration of the ecology of a lake or its watershed can result in a change of this delicate balance. Poorly designed development and overuse of lakeshore properties will result a decline in water quality. However, human presence in the lake environment can be one of minimal impact if management activities are practiced as a part of northern lake living.

Over one half of Presque Isle County's political boundary is defined by the Lake Huron Shoreline. Townships with coastal areas and inland lakes are seeing increased pressure for second and retirement home development. In the Presque Isle County Master Plan states, " Of these high growth townships, one common attribute is worth noting; namely, the presence of private property development on or near waterfront..... Not only is new residential development occurring in these townships, but homes that were previously used as vacation homes are being converted to year-round homes as homeowners retire and move north permanently."

In the eastern parts of Presque Isle County are Presque Isle Township and Krakow Township. Both are growing at rates greater than the County average. Presque Isle Township is the fastest growing community; receiving over one half of the County's population increase over the last decade. Grand Lake (5,822 acres), Long Lake (5,409 acres) and 41 miles of Lake Huron Shoreline are the reasons behind growth in both townships. Thompson's Harbor State Park and Michigan Department of Natural Resources own portion of the Great Lake's shoreline, the rest is in private ownership. Another driving force for growth in this part of the county is the Presque Isle Harbor Association. Subdivided in the 1970's, some 3000 lots were platted on the narrow stretch of land seated between the east shore of Grand Lake and Lake Huron. The development covers approximately 3000 acres of which 1500 acres are set aside as common space. Included in the association are parks on Lake Huron and Grand Lake as well as facilities such as clubs houses and an indoor swimming pool. Only 500 lots have been developed thus far, however, development rates are increasing compared to the first two decades of its existence.

Much of the area is part of a glacial sandy lake plain. Sand and other glacial deposits vary in thickness. Limestone bedrock is at or near the surface in large parts of Presque Isle and Krakow Townships. Stoneport Quarry is an active limestone mining operation, located in the land area between the eastern shores of Grand Lake and the Lake Huron Coast. An abandoned quarry called Rockport is located in the coastal watershed in the northeastern part of Alpena County. Geology and soils present severe building constraints in the area. The Northeast Michigan Karst Aquifer Protection Project identified eastern part of the County as highly sensitive. Grand Lake has glacial origins different than the numerous kettle lakes found further inland. Acting like a large bulldozer, the advancing continental glacier broke apart the level sedimentary bedrock and scoured out the long linear lake basin. There are several islands in Grand Lake. The sinkholes, exposed limestone bedrock, beach ridge and swale complexes, cobble and sand beaches, low dunes and extensive wetlands can be found in the townships. A number of threatened and endangered species can be found. The dwarf lake iris is so prolific in areas that some locals wonder how such a common species can be listed as globally rare.

Grand Lake - Coastal Watershed Plan

Coastal ecosystems, both near shore land areas and water areas are biologically rich. In northeast Michigan, near shore land areas are post glacial lake plains, typified by water deposited sand and gravel overlaying limestone bedrock. Great Lakes marshes and bedrock shoals provide cover, feeding and spawning habitat for fish populations. Coastal ecosystems provide critical habitat for resident and migratory birds. Pine-oak and aspen-birch forests; hardwood and conifer swamps; coastal marshes and fens; cobble and alvar beaches; numerous bays and peninsulas and several uninhabited islands are home to a high number of threatened and endangered species.

Coastal zones are prime areas for a wide variety of outdoor recreation. Hunting, fishing, boating, paddle sports, birding and hiking are a few of the recreational activities pursued within coastal areas. Quality of the recreational experience is dependent upon the quality and condition of the natural resources. Healthy ecosystems are better places to hunt, fish and bird watch than degraded, exhausted environs. Along with being great places to recreate, shorelines and near shore land areas are in high demand for residential development. The challenge for communities along the Great Lakes coastal areas is to accommodate and guide growth in a manner that supports healthy ecosystems.

Location and Regional Setting

Grand Lake is located in Presque Isle County in the Northeastern Lower Peninsula of Michigan. The watershed planning area includes the Grand Lake Watershed and several smaller coastal



watersheds from the outlet of Little Trout River south to the outlet of Long Lake. The planning area covers parts of Krakow, Presque Isle and Pulawski Townships in Presque Isle County, and Alpena Township in Alpena. While there is no incorporated city or village in the planning area, the Presque Isle Harbor Association functions as a community center. The Presque Isle Harbor Association (PIHA), when fully developed, will be the largest community in Presque Isle County.

Plan Development

This project was funded in part under the Coastal Zone Management Act of 1972, as amended, Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce and the Michigan Coastal Management Program, Michigan Department of Environmental Quality.

The purpose of this study is to provide a starting point for assessing the present condition of the Grand Lake Watershed and to utilize the results in pinpointing problem areas for immediate management implementation or future work. Before this study was undertaken, the quantity and quality of data available was very limited for Grand Lake. Managing water resources requires the use of complete and reliable information which necessitated filling the 'information void' with this intensive study.

The primary objective of the project is to develop a comprehensive plan which identifies Grand Lake's ecological values, potential and existing threats, and recommendations for long term protection.

Grand Lake - Coastal Watershed Plan

The need to take a proactive approach to protecting the water quality is paramount. Krakow and Presque Isle Townships each administer their own planning and zoning. Information and recommendations compiled in the watershed planning process will help communities make better land use decisions. Communities, major landowners and associations have a history of internal planning. Coordinated planning between all of the players has been somewhat limited. One of the key elements of the planning process will be formation of a multi-jurisdictional committee. Bringing the players together at one table to guide the plan development will have long term benefits.

The Grand Lake Watershed is presently part of a rich and diverse ecosystem. An ecosystem is a complex set of relationships between the living resources, habitats, and residents of an area. It includes all aquatic and terrestrial plants and animals, microorganisms, water, and soil. Plant and animal diversity (biodiversity) enables ecosystems to adapt to unanticipated pressures such as climate change, pest infestations and flooding. All of the watershed's diverse organisms, from the tiniest plankton to the awe-inspiring 500 lb. black bear, depend on the its water resources. Still, it is important to remember that while the term "watershed" conjures visions of sparkling lakes and abundant, trout-filled streams, most of the area within a watershed is actually terrestrial. Biodiversity, both aquatic and terrestrial, is a key factor in environmental stability, and is essential to the health and livability of the Grand Lake Watershed.

Urban and rural land uses in the Grand Lake Watershed directly affect the water quality of the lake, its streams and the groundwater supply. Polluted runoff from a wide variety of sources can destroy fish and wildlife habitat, kill fish, amphibians, reptiles, and insects, degrade the quality of drinking water, clog harbors and streams with sediment, and reduce water-related recreational opportunities. Activities that remove and consume water, such as irrigation and industry affect lake levels and stream flow. Because land use and water quality are so inextricably entwined, it is essential for a sound watershed management plan to incorporate a holistic approach into its design in order to maintain and enhance the balance and diversity of the region. Implementation of both regulatory & non-regulatory management practices will enable watershed residents, planning commissions, and local government to work together to protect these vital resources.

Watershed Planning Steering Committee

This plan was developed in partnership with the Grand Lake Watershed Planning Steering Committee, formed as part of this project. The steering committee served as an advisory group, meeting several times throughout plan development. Members included: Department of Environmental Quality-Coastal Zone Management, NEMCOG, Headwaters Land Conservancy, Presque Isle Township, Presque Isle Township Planning Commission, District Health Department #4, Presque Isle County Office of Soil and Erosion, Grand Lake Association, Presque Isle Harbor Association, Presque Isle Community Men's Club, local industry, businesses, private landowners and local media,.

The committee worked together to create a vision for the future of Grand Lake and smaller coastal watersheds. The plan includes a detailed non-point source inventory of the natural resources; evaluates the status of planning and zoning; identifies values and assets, issues and concerns and priority conservation areas, and includes recommendations for the protection of the ecological resources in the area.

Grand Lake - Coastal Watershed Plan

An education and outreach effort will include several articles in the Alpena Newspaper and the Presque Isle Advance, posting of the plan on NEMCOG's web site and presentations to local groups, governmental units and/or organizations. An important step in implementing the plan will be to build local support for the recommendations and strategies.

Committee Members

Terry Castro, Presque Isle Community Men's Club
Robert Graham, Presque Isle Community Men's Club
Frank Krist, Sanitarian for District Health Department #4
Steve Lang, Presque Isle Harbor Association
Bill Lewis, Citizen
Jerry Meek, Alpena County Planning Commission
Sally Mulka, Krakow Township Planning Commission
Cynthia Paavola, Presque Isle Township Trustee, Presque Isle Twp. Planning Commission
Dan Rivard, retired engineer
David Ward, Grand Lake Association
Richard Deuell, Northeast Michigan Council of Governments
Kathryn Arnold, Northeast Michigan Council of Governments

Other Participants

Pete Pettalia, Presque Isle Township
James Zakshesky, Presque Isle County Construction Codes
Charles Winters, Presque Isle Township Planning Commission
Fred Gottschalk, HeadWaters Land Conservancy
Brad Jensen, Huron Pines RC & D
Matt Smar, MDEQ-Coastal Zone Management
Bud Wegmeyer, Alpena County Board
Scott Smith, Environmental Health Director for District Health Department #4