

Executive Summary

Introduction

The State of the Basin Report provides a snapshot of the current condition of land and water resources in the basin and a look at the programs and staff who seek to preserve and restore those resources. It creates a vehicle for increased interagency cooperation and public involvement, through identification and prioritization of issues and objectives.

The premise of creating a report to "paint a picture" of each basin in the state stemmed from the Department's decision to take an ecosystem approach to resource management rather than a program by program approach. This holistic approach enables increased coordination among programs. Many individuals from both the land and water teams of the Lower Chippewa provided narrative for the report. The Lower Chippewa Partnership Team also played a key role in the development of the report by working to identify issues of concern and assisting in the public involvement review process.

Basin Characteristics

The Lower Chippewa Basin consists of 24 watersheds and portions of 15 counties, draining 5,300 square miles of land from the Holcombe dam downstream to the Mississippi River at Nelson (see Map 1 Lower Chippewa River Basin). Substantial portions of Barron, Dunn, Pierce, Pepin, Chippewa, Eau Claire and St. Croix Counties are located in the basin. In addition, Polk, Washburn, Sawyer, Rusk, Taylor, Clark, Jackson and Buffalo Counties are partially within the basin. The basin's diverse ecosystems range from the forests, lakes, swamps and bogs of the northern reaches, through agricultural lands nestled among meandering streams of the central portions to the rolling hills and prairies of the southern and western coulee region.

Lower Chippewa Basin Past and Present

Logging and agricultural land use dramatically transformed the pre-settlement ecosystem. At the present time, human population changes pose the biggest threat to native ecosystems and species. Sprawling development on the outskirts of cities and towns and conversion of agricultural lands to residential acres are fragmenting essential aquatic, shoreland, and terrestrial habitats. Increasing development pressure especially impacts lakes, streams and shorelands. These popular areas are being degraded even as we seek to enjoy their natural beauty and features to the fullest.

Department Presence in the Basin - Staff

About two-thirds of the Lower Chippewa River Basin is located in the Department's West Central Region, and the remainder is in the Northern Region. Together, approximately 120 permanent employees in the Land and Water Programs have part or all of their job responsibilities within the Lower Chippewa River Basin. Of these, approximately 55 work primarily within the Lower Chippewa River Basin.

Of about 50 Water Program staff, 26 work primarily within the Lower Chippewa River Basin, and of approximately 70 Land Program staff, about 29 work primarily within the Lower Chippewa River Basin.

Summary of Water Resources

Rivers and Streams

The Lower Chippewa River Basin has an abundant, diversified and unique river and stream resource. Streams in the basin range from high-gradient "coulee" type streams in the western-most portion of the basin to low-gradient sand-dominated streams in the central and eastern parts of the basin. These small streams support some of the

state's finest coldwater trout fisheries and excellent yet under-appreciated warmwater sport fisheries. In addition to the abundant and diversified small streams, there are several major rivers in the basin. "Big rivers", including the Chippewa, Red Cedar, Hay and Eau Claire Rivers, are complex and dynamic river resources. They provide habitat for several of the state's endangered and threatened aquatic species as well as unique and fragile plant and animal communities. Department partnerships with citizens, through the new Rivers and Streams Planning and Protection Grant Program, Habitat Improvement programs, Red Cedar Partnership and others are key to protecting, maintaining and enhancing the quality of these very complex, unique river and stream resources.

Lakes and Flowages

The Lower Chippewa River basin has approximately 300 lakes larger than 10 acres. There are also 79 named lakes and numerous unnamed lakes less than 10 acres. Lakes between 10 and 50 acres in size comprise over 80% of the 378 named lakes. Many of these lakes are a result of the glacial history of the basin. More than 80% of the natural lakes in the basin result from glaciers that pushed down from the north, into Barron, Washburn and Chippewa Counties.

The Lower Chippewa River basin has 69 flowages, which provide approximately 71% of the total acres of lake resources in the basin. Approximately 46% of these are larger than 100 acres, and 28% are larger than 500 acres. Barron and Chippewa Counties contain over 50% of the number and total acres of flowages in the basin. In Clark and Pierce County, flowages are the only lake resources present. Flowages also provide a majority of the lake resources in Dunn and Eau Claire Counties. Many of the smaller flowages (less than 50 acres) were created as shallow water impoundments for waterfowl production.

Six flowages on the Chippewa River within the Lower Chippewa Basin are the result of hydropower dams. One of these, Lake Wissota, is the largest water body in the basin. Numerous other flowages on basin streams and tributaries were created when dams were constructed for millponds, logging, and smaller sources of hydropower. Many of these dams remain in place, although they are no longer being used for their original purpose.

Summary of Land Resources

Biological Communities & Ecological Landscapes

Biological communities are defined and described based on a variety of factors including geographic location, species composition, topography, moisture, temperature, soils and climate. The Lower Chippewa Basin contains components of all seven biological communities: northern forests, southern forests, oak savannas, oak and pine barrens, grasslands, wetlands, and aquatic systems.

An ecological landscape is a *geographic area* that has similar land uses and ecological themes throughout. There are fifteen Ecological Landscape areas within Wisconsin, and five of these are found in the Lower Chippewa basin: Farm and Forest Transition, Central Sand Plains, Western Coulees and Ridges, North Central Forest, and Western Prairie

Issues of Concern

Land and water resource staff and the Partner Team worked together to identify important resource issues within the Lower Chippewa River Basin. These nine issues reflect the highest resource concerns of Department staff, the Basin Partner Team, and the public who attended open houses.

For each of the issues, staff and the Partner Team developed goals and objectives that were identified as most valuable for the resource needs of the Lower Chippewa River Basin. These goals and objectives are specific to the Basin but also reflect the Department's Strategic Goals, Strategic Implementation Plan and the Fisheries, Wildlife and Habitat Management Plan for Wisconsin - 2001 through 2007.

The nine issues are listed in order of relative importance based on input from DNR staff, the Partner Team and the public. The DNR has the skills, knowledge and resources to address many of these issues, goals and objectives; for some, other agencies or entities are more appropriate. Considerations for work effort expended by the WDNR

on these issues will include the ability of the department to play a role in addressing the issue, the resource benefit that can be accomplished related to the issue and the timeliness of the issue for achieving results.

A. Habitat: Loss, impairment, and fragmentation of native habitats have jeopardized the ecosystem function of sustaining, balanced communities of aquatic and terrestrial, animal and plant populations.

B. Sediment and Nutrient Sources: Excessive sedimentation to surface waters and net importation of nutrients (nitrogen and phosphorus) from point and nonpoint sources into the Lower Chippewa River Basin are degrading surface and groundwater for beneficial uses and threaten natural, diverse aquatic communities.

C. Development: Rural landscape and associated natural communities are being transformed into rural residential area, compromising the biological integrity of the landscape and creating forest fire protection issues. Growth and development of business and industry on urban perimeters encroaches on green space and alters infiltration and drainage patterns, with resulting flood hazards, reduced stream baseflow and water quality impairments.

D. Drinking Water and Groundwater: Agricultural and industrial practices, as well as urban/rural development threaten a high quality and plentiful groundwater resource in the Lower Chippewa Basin

E. Inventory and Monitoring: Efficient and effective resource management depends on knowledge of the current condition of each resource and whether the resource is stable, improving or declining. Basic inventory and monitoring data collection is incomplete and is needed for resource management decisions.

F.Dams: There is a need to reduce the number of streams impacted by aging smaller dams, which no longer serve their original function. Many present safety hazards and cause habitat impairment, including altered temperature regimes, fishery populations and movement, and water quality. Identification of the departmental role in community decision-making is necessary.

G. Education: Changing resource issues and needs in the Lower Chippewa basin require an integrated, dynamic educational strategy to address the public need for resource information. Successful resource management depends on a well-informed public that understands resource problems and potential solutions.

H. Recreation: Access to privately owned lands for outdoor recreation, hunting and fishing is diminishing as land uses change and conflicts develop between recreational user groups. Increased recreational use pressure and conflicts also impact public land management.

I. Staff/Agency Concerns: The need and demand for resource management services is increasing, but available staff and funding have not kept pace. Efficient resource management should include coordination between programs and agencies.