Chapter 1: Introduction and Planning Background

In this chapter:

1.1 Introduction
1.2 Purpose of and Need for Plan
1.3 Refuge Establishment and Purposes
1.4 Refuge Vision and Goals
1.5 Legal and Policy Framework
1.6 Other Conservation Initiatives

1.1 Introduction

Whittlesey Creek National Wildlife Refuge (NWR, Refuge) was established in 1999 to protect, restore, and manage coastal wetland and spring-fed stream habitat in Bayfield County near Ashland, WI (Figures 1-1 and 1-2). The Refuge is part of a large wetland and floodplain complex on the south shore of Lake Superior. The U.S. Fish and Wildlife Service (FWS, Service) currently owns 304 acres in fee title out of 540 acres authorized along lower Whittlesey Creek and 47 acres of easements out of 1,260 acres authorized in the 12,000-acre Whittlesey Creek watershed. The Refuge is located entirely within the town of Barksdale.

Restoration of coaster brook trout, an adfluvial (lake-run) brook trout native to Lake Superior, is a high priority for the Service and its partners. Migratory birds and many other fish and wildlife species also benefit from protection and restoration of stream, wetland, and forest habitat on the Refuge and throughout the watershed. The mouth of the creek is a favorite spot for waterfowl hunters.

Whittlesey Creek NWR is a partner in the multi-agency Northern Great Lakes Visitor Center (NGLVC, Visitor Center, Center), which offers opportunities for the public to become more connected with the natural world through environmental education, interpretive programs, special events, exhibits, and hands-on exploration. The Center also serves as headquarters and contact station for the Refuge.

1.2 Purpose and Need for Plan

The purpose of this Comprehensive Conservation Plan (CCP) is to guide management and administration of Whittlesey Creek NWR for the next 15 years and to help ensure that the Refuge meets the purposes for which it was established, contributes to the overall mission of the National Wildlife Refuge System (NWRS, Refuge System), and adheres to Service policies and other mandates. The CCP describes the desired future condition of the Refuge and provides guidance for management actions and decisions. The CCP addresses significant issues, sets goals and measurable objectives, and outlines strategies for reaching those objectives. The planning process informs and involves the general public, state and federal agencies, and non-governmental organizations who have an interest, responsibility, or authority related to the Refuge.

In addition, the landscape continues to undergo changes that affect habitat and wildlife, new threats to the Refuge are emerging, new laws and policies have been put in place, and new scientific information is available. Therefore, updated management guidance is needed that reflects these changes to help achieve Refuge goals for habitat, wildlife, and people.

Figure 1-1: General Location of Whittlesey Creek NWR

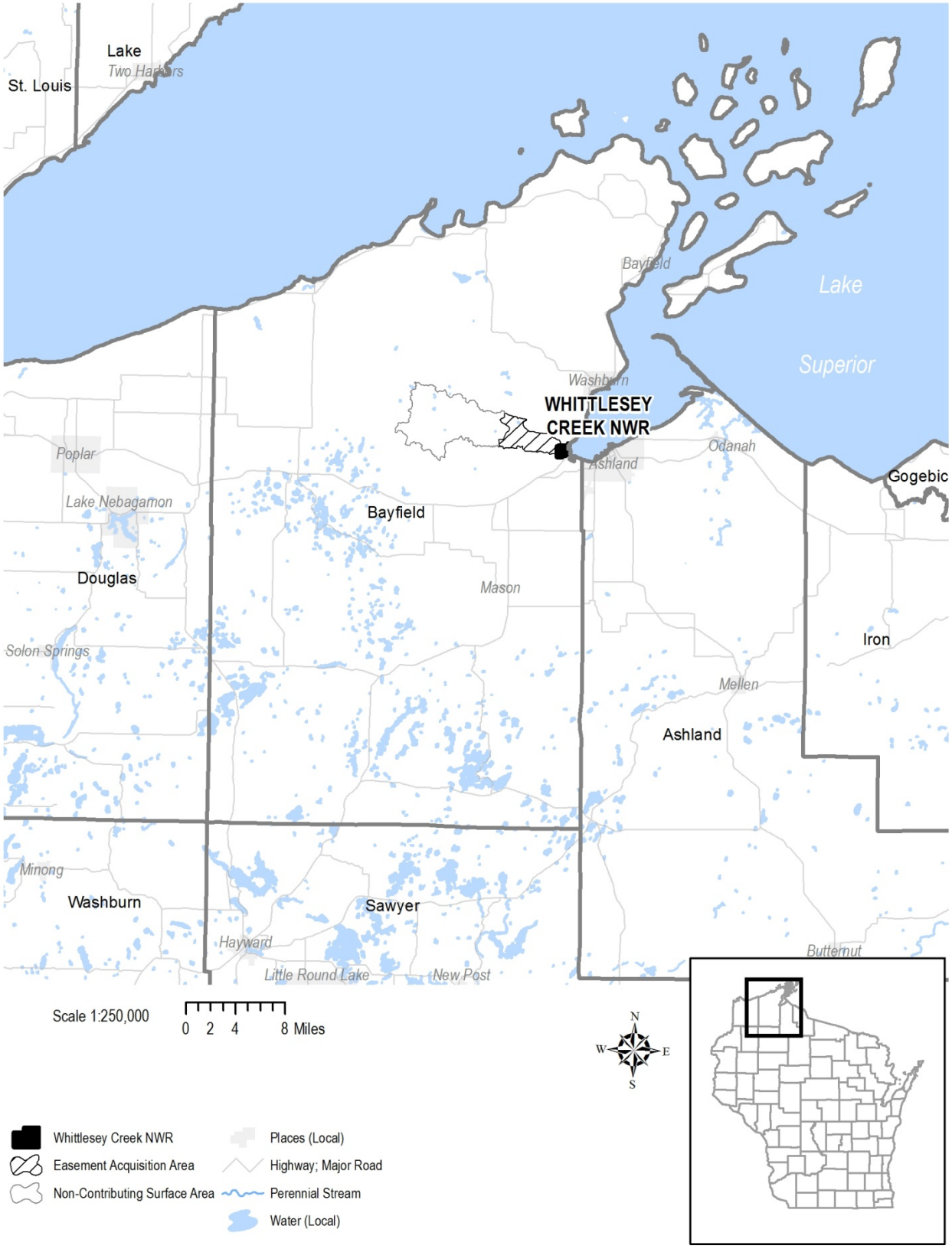
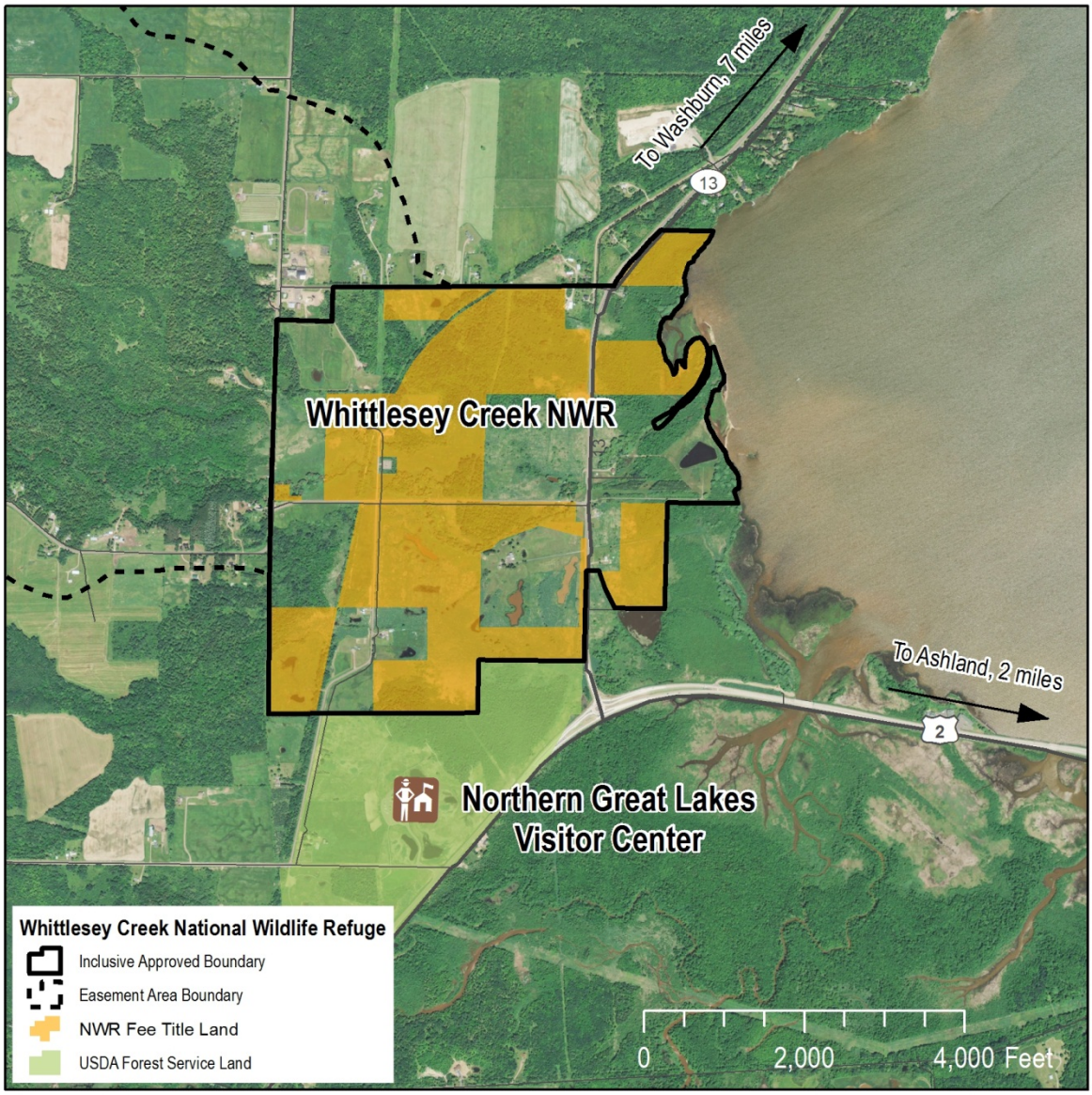


Figure 1-2: Whittlesey Creek National Wildlife Refuge



1.3 Refuge Establishment and Purposes

Whittlesey Creek NWR was officially established on September 30, 1999, when the first tracts of land were purchased by the Service. Historically, the landscape had been dominated by forests, streams, and wetlands that provided rich habitat for fish, waterfowl, and other wildlife, but the system had degraded significantly due to land use changes including logging, agriculture, and residential development long before 1999. The coaster brook trout, once abundant in the Lake Superior basin, had disappeared entirely from most of its historic range, including Whittlesey Creek.

Whittlesey Creek and its watershed had been the focus of conservation activity since at least the 1940s when livestock fencing and willow plantings were used to reduce erosion. Concerns

about flooding, stream changes, and loss of fish habitat were noted again in the 1950s (Red Clay Interagency Committee, 1960) and led to some watershed improvements designed to reduce erosion, sedimentation, and flood flows. Measures included plantings, farm pond construction, fencing to protect stream banks from livestock, and redirection of the lower mile of Whittlesey Creek, which previously had been straightened and rerouted by the U.S. Army Corps of Engineers (USACE).

In the late 1980s, a portion of the lower Whittlesey Creek floodplain was proposed for development into an 18-hole golf course. Development began with spreading of fill, fairway shaping, and construction of four ponds. Eventually the golf course project faltered but it prompted a coalition of environmental and government groups to propose permanent protection and restoration of the area as a national wildlife refuge instead. The proposed boundary included the last unprotected piece of a large coastal wetland and floodplain complex with spring-fed tributary streams at the head of Chequamegon Bay.

By then, Whittlesey Creek was recognized as having potential for restoration of coaster brook trout. In their joint management plan *Fish Community Objectives for Lake Superior* (Busiahn 1990), the agencies responsible for managing Lake Superior's fisheries called for re-establishing depleted stocks of brook trout by "management of habitat for spawning and rearing via habitat inventory, protection, and restoration of degraded habitat," expressly including tributary streams.

Whittlesey Creek also had been designated as an Outstanding Resource Water and as a Great Lakes Community stream by the state of Wisconsin and was a priority watershed in the state's non-point-source pollution abatement program (Wisconsin Department of Natural Resources [WDNR], 1996).

The new Refuge was approved by the Service in January 1998. The authorized boundary included fee title purchase of up to 540 acres of coastal wetlands, floodplain, and limited uplands along Whittlesey Creek and up to 1,260 acres of conservation easements within the watershed. Congress appropriated $650,000 in fiscal year 1999 to begin land acquisition. Grants and donations provided additional funding.

An interim CCP, written prior to Refuge establishment, provided an overview of future management until a final CCP could be completed. As an interim plan, it did not provide extensive detail but answered questions commonly posed by landowners and the public regarding Refuge management and possible public uses that could occur. Goals established at the time emphasized habitat protection and restoration for migratory fish and bird species, reintroduction of coaster brook trout, managing for priority public uses, an ecosystem-based approach to management, and partnerships. The plan specifically noted that stream and wetland restoration within the Refuge boundary "would ensure permanent protection for critical spawning grounds, providing an ideal situation to begin reintroduction of coaster brook trout." These priorities have guided programs on Whittlesey Creek NWR since it was established.

Each unit of the Refuge System has one or more purposes specified in or derived from the legal instruments that established, authorized, or expanded it. Our first obligation is to fulfill the purposes of each refuge. Chapter 601 FW 1 of the *U.S. Fish and Wildlife Service Manual* provides guidance for determining refuge purposes and using them in administration and management of the Refuge System. The purposes of Whittlesey Creek NWR derive from the Fish and Wildlife Act of 1956:

". . . for the development, advancement, management, conservation, and protection of fish and wildlife resources . . . 16 U.S.C. 742f(a)(4) ". . . for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude. . ." 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956).

1.4 Refuge Vision and Goals

The vision is a descriptive picture of how the Refuge will look in the future and provides a sense of direction and purpose. From the vision flow broad goal statements, which in turn provide the framework to develop more detailed and measurable objectives that are the heart of the CCP. The vision and goals are important as reference points for keeping objectives and strategies meaningful, focused, and attainable.

Refuge Vision

Restore and enhance Whittlesey Creek and its watershed for the benefit of coaster brook trout and other native wildlife and provide wildlife-based education in collaboration with the NGLVC partners.

Refuge Goals

Wildlife

Protect, restore, and maintain a diversity of wildlife species native to naturally functioning Refuge habitats, with special emphasis on coaster brook trout and migratory birds.

Habitat

Preserve, restore, and enhance the native habitats of Whittlesey Creek and its watershed.

People

Provide a diverse audience with opportunities to experience high quality, wildlife-dependent activities and to understand and appreciate a natural functioning landscape.

1.5 Legal and Policy Framework

The Refuge is managed as part of the Refuge System within a framework of organizational setting, law, and policy. Key aspects of the framework are summarized below. A listing of other laws and executive orders that have guided preparation of the CCP and that guide future implementation is found in Appendix D: Legal and Policy Guidance.

U.S. Fish and Wildlife Service

Whittlesey Creek NWR is administered by the FWS, the primary federal agency responsible for conserving, protecting, and enhancing the nation's fish and wildlife populations and their habitats. The Service shares this responsibility with other federal, state, tribal, local, and private entities, but also has specific responsibilities for migratory birds, threatened and endangered

species, certain interjurisdictional fish and marine mammals, and the Refuge System. The mission of the Service is:

> *"Working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people."*

National Wildlife Refuge System

The Refuge System had its beginning in 1903 when President Theodore Roosevelt designated a three-acre island off the Florida coast, Pelican Island, as a sanctuary for colonial nesting birds. Today, the Refuge System has grown to a network of more than 560 refuges and 38 wetland management districts across the country, with at least one in every U.S. state and territory.

The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. The administration, management, and growth of the Refuge System are guided by the following goals:

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered;
- Develop and maintain a network of habitats for migratory birds, anadromous and interjurisdictional fish, and marine mammal populations that is strategically distributed and carefully managed to meet important life history needs of these species across their ranges;
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts;
- Provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, and environmental education and interpretation); and
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

National Wildlife Refuge Improvement Act of 1997 and Related Policy

The National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) amended the National Wildlife Refuge System Administration Act of 1966 and became a true organic act for the Refuge System by providing a mission, policy direction, and management standards. The Improvement Act's main components include:

- A strong and singular wildlife conservation mission for the Refuge System;
- A requirement that the Secretary of the Interior maintain the biological integrity, diversity, and environmental health of the Refuge System;
- A new process for determining compatible uses on refuges;

- A recognition that wildlife-dependent public uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when determined to be compatible, are legitimate and appropriate public uses of the Refuge System;
- That these compatible wildlife-dependent recreational uses are the priority general public uses of the Refuge System; and
- A requirement to prepare a CCP for each refuge.

Compatibility Policy
No use that the Service has authority to regulate may be allowed on a unit of the Refuge System unless it is determined to be compatible (FWS, 2000a). A compatible use is a use that, in the sound professional judgment of the Refuge Manager, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge. Managers must complete a written compatibility determination for each use, or collection of like-uses, that is signed by the manager and the Regional Chief of Refuges in the respective Service region.

Biological Integrity, Diversity, and Environmental Health Policy
The Improvement Act directs the Service to "ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans." The biological integrity policy (FWS, 2001) helps define and clarify this directive by providing guidance on what conditions constitute biological integrity, diversity, and environmental health; guidelines for maintaining existing levels, guidelines for determining how and when it is appropriate to restore lost elements, and guidelines in dealing with external threats to biological integrity, diversity, and environmental health.

Wildlife-Dependent Recreation Policy
The Improvement Act identifies six priority wildlife-dependent recreational uses: hunting, fishing, wildlife observation and photography, and environmental education and interpretation. Congress directed the Service to grant these six public uses special consideration in the planning, management, establishment, and expansion of refuges. In addition, if determined compatible on a refuge, these six uses assume priority status over any other uses proposed or occurring on a refuge. The Service is to facilitate priority wildlife-dependent public use opportunities when they do not interfere with the ability to fulfill refuge purposes or the mission of the Refuge System. The wildlife-dependent recreation policy (FWS, 2006a) provides additional guidance for management of these uses on national wildlife refuges.

Wilderness Review

Refuge planning policy mandates that wilderness reviews be conducted through the comprehensive conservation planning process (FWS, 2000b). The criteria for wilderness designation are size, naturalness, opportunities for solitude or primitive recreation, and supplemental values. No lands within Whittlesey Creek NWR meet the criteria for wilderness established by Congress and described in Service policy (FWS, 2008a). Whittlesey Creek NWR does not contain 5,000 contiguous acres of roadless natural lands, nor does the Refuge possess any units of sufficient size to make their preservation practicable as wilderness. Refuge lands and waters have been substantially altered by humans, especially by logging, agriculture, residential development, and transportation networks.

1.6 Other Conservation Initiatives

The Service works closely with other government agencies and conservation organizations to develop and implement regional, national, and international conservation plans and initiatives. Several of these efforts relevant to Whittlesey Creek NWR are described below; their recommendations and priorities were reviewed and integrated where appropriate into this CCP.

Brook Trout Restoration

A Brook Trout Rehabilitation Plan for Lake Superior
The Great Lakes Fisheries Commission was established in 1955 by the Convention on Great Lakes Fisheries between Canada and the United States. The Commission has two major responsibilities: (1) to coordinate Great Lakes fisheries research and recommend measures that will sustain the productivity of fish species of concern, and (2) to formulate and implement a program to control sea lamprey populations in the Great Lakes.

A brook trout sub-committee of the Lake Superior Technical Committee developed this plan (Newman et al., 2003) to provide guidance for brook trout rehabilitation initiatives around Lake Superior. The goal is to maintain widely distributed, self-sustaining populations throughout their original range. The plan outlines actions needed to reach that goal under three categories: restore tributary habitat, regulate harvest, and introduce genetically appropriate strains through stocking.

Wisconsin Lake Superior Brook Trout Plan
The completion of the 2003 lake-wide brook trout plan resulted in the development of a similar plan in Wisconsin waters of Lake Superior specific to its tributaries and near-shore waters (WDNR and FWS, 2005). The goal of this plan is to “protect and improve self-sustaining brook trout populations and their habitat in Wisconsin’s Lake Superior basin and attempt to establish several populations that exhibit life history diversity (both stream resident and migratory ‘coaster’ life history types).”

The Wisconsin plan, developed jointly by the WDNR and the Service, emphasizes the importance of understanding brook trout resource requirements and the impact of human activities, and seeks to address errors in past actions that may have involved responding to symptoms of resource loss while failing to address the root problems brook trout face. The plan states that success will depend on a long-term commitment to watershed management and tributary habitat-forming processes, as well as partnerships between management agencies and citizens. Strategies are described for stream habitat and watershed health, harvest, rehabilitation stocking, genetics management, life history and management, interaction with non-native species, and outreach.

Migratory Bird Programs

Several partnership-based bird conservation initiatives have produced continental, national, and/or regional plans that help guide management decisions for refuges.

The *North American Waterfowl Management Plan* (NAWMP) began in 1986. The 2004 plan update states that its purpose is to “sustain abundant waterfowl populations by conserving landscapes, through partnerships, that are guided by sound science.” The NAWMP is

international in scope but is implemented through regional partnerships called "Joint Ventures." Whittlesey Creek lies within the Upper Mississippi River/Great Lakes Joint Venture.

Partners in Flight began in 1990 in response to growing concerns about declining populations of many landbird species. Its regional plans are based on a system of Bird Conservation Regions (BCRs). Whittlesey Creek NWR lies within the U.S. portion of BCR 12, the boreal hardwood transition zone, which extends across portions of northern Minnesota, Wisconsin, and Michigan.

The *North American Bird Conservation Initiative (NABCI)* is a continental effort to integrate all migratory bird conservation programs under one umbrella. NABCI has defined BCRs as its planning units. The U.S. NABCI Committee promotes conservation delivery via existing and new Joint Ventures nationwide, thus eliminating redundant partnership structures and separate biological planning processes. The Service is a member of the U.S. NABCI Committee.

Many bird conservation initiatives have a process for determining priority species using assessment scores based on factors such as population trends, threats, distribution, abundance, and relative density. The Service and other agencies often use these scores in developing their own lists of priority bird species. *Birds of Conservation Concern 2008* (FWS, 2008b) identifies migratory nongame bird species (beyond those already designated as federally threatened or endangered) that represent the highest conservation priorities of the Service. The list includes three distinct geographic scales—Bird Conservation Regions, FWS Regions, and National—and uses assessment scores from the North American Landbird Conservation Plan, the U.S. Shorebird Conservation Plan, and the North American Waterbird Conservation Plan.

Wisconsin Wildlife Action Plan

Congress created the State Wildlife Grants Program in 2001 to address the unmet needs of wildlife species in greatest conservation need and required that each state develop a comprehensive wildlife conservation plan to remain eligible for federal funds through the program. These plans address the needs of a wide array of wildlife but focus primarily on Species in Greatest Conservation Need (SGCN) and their habitats. SGCN are defined as animals whose populations are rare, declining, or vulnerable to decline and are below levels desirable to ensure their long-term health and stability. Wisconsin's Wildlife Action Plan (WDNR, 2005) provides a conservation roadmap that lists 149 vertebrate and 530 invertebrate SGCN and includes a menu of over 1,700 conservation actions to help secure the future of wildlife in the state.

The implementation strategy (WDNR, 2008) identifies the most critical conservation actions and locations to meet the state's long-term goal of conserving SGCN. Whittlesey Creek NWR is part of Fish Creek Conservation Opportunity Area (COA) within the Superior Coastal Plain Ecological Landscape. The Fish Creek COA is considered a high quality wetland community of state significance. The implementation strategy for the Superior Coastal Plain lists 19 high priority SGCN and 12 priority conservation actions for the Superior Coastal Plain including:

- Protect and restore harbor and river mouth shoreline and wetland habitats.
- Preserve and maintain large expanses of sedge meadow, coastal fen, and forested wetlands along the coast and manage in the context of a mosaic of community types.

- Manage forested wetlands and fens as part of a vegetation mosaic that includes other open wetland communities, shrub swamp, and swamp conifer forest.

Partners for Fish and Wildlife Program

The Service established the Partners for Fish and Wildlife Program (PFW, Partners Program) in 1987 to work beyond the boundaries of refuges with landowners and other partners to improve habitat on private lands for fish and wildlife. The program is voluntary, relies heavily on a partnership approach, and leverages both ideas and funding from a variety of sources. Cost sharing agreements and technical assistance are important components. Service biologists work one-on-one with landowners to plan, implement, and monitor their projects.

The overall goal of Partners Program projects is to return a site to the ecological condition that likely existed prior to loss or degradation. Priority ranking is given to proposed projects that meet these conditions:

- Improve habitat for migratory birds, threatened and endangered species, inter-jurisdictional fish, marine mammals, and other declining species.
- Complement activities on Refuge System lands, or contribute to the resolution of problems on refuges that are caused by off-refuge practices.
- Address species and habitat priorities that have been identified through Service planning teams (with our partners), or in collaboration with state fish and wildlife agencies.
- Reduce habitat fragmentation or serve as buffers for federal or state conservation lands.
- Result in self-sustaining systems that are not dependent on artificial structures.

Whittlesey Creek NWR is located within the Superior Coastal Plain focus area of the Wisconsin PFW program. Priority species for the focus area are mallard, wood duck, Canada goose, blue-winged teal, black duck, American bittern, and coaster brook trout. Five-year targets include restoration and enhancement of 150 acres of wetland and 100 acres of upland, as well as removal of two fish barriers.

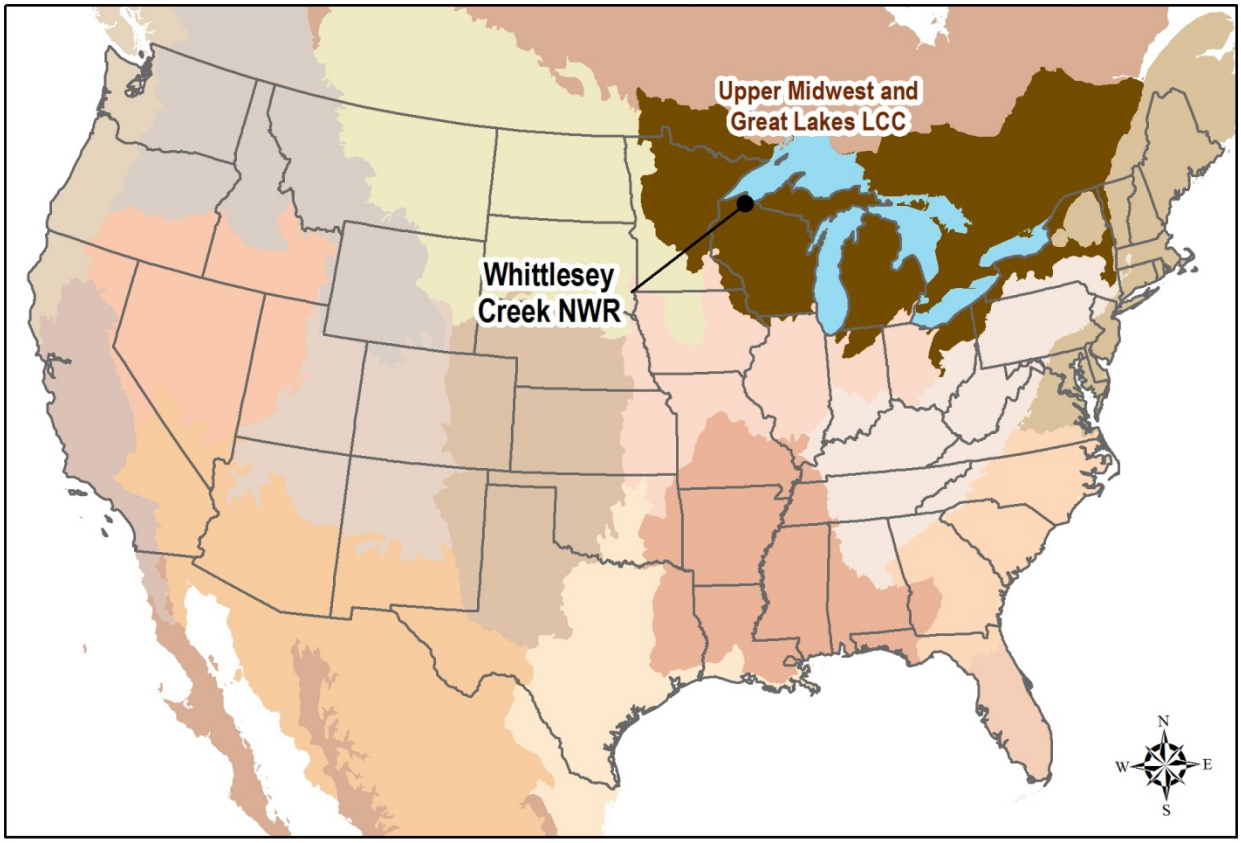
Landscape Conservation Cooperatives

Secretarial Order 3289, signed by Interior Secretary Ken Salazar in 2009, directed Department of Interior bureaus, including the Service, to stimulate the development of a network of Landscape Conservation Cooperatives (LCCs) to address landscape-scale stressors such as habitat fragmentation, genetic isolation, spread of invasive species, and water scarcity, all of which are magnified by accelerating climate change. LCC partnerships include states, tribes, federal agencies, non-governmental organizations, universities, and others. They recognize that conservation challenges transcend political and jurisdictional boundaries and require a more networked approach to ensure the sustainability of North America's land, water, wildlife, and cultural resources.

LCCs are intended to provide a strong link between science and conservation delivery and to connect site-specific protection, restoration, and management to larger goals supporting fish and wildlife populations and the natural systems that sustain them. By functioning as a network of interdependent units, LCC partnerships can accomplish a conservation mission no single

agency can accomplish alone. Each LCC operates within a specific landscape. Whittlesey Creek NWR lies within the boundary of the Upper Midwest and Great Lakes LCC (Figure 1-3).

Figure 1-3: Landscape Conservation Cooperatives



FWS Climate Change Strategic Plan

The Service's strategic plan for responding to climate change (FWS, 2010) establishes a basic framework for efforts to ensure the sustainability of fish, wildlife, and habitats and includes three key elements:

> **Adaptation**: Minimizing the impact of climate change on fish and wildlife through the application of cutting-edge science in managing species and habitats.
>
> **Mitigation**: Reducing levels of greenhouse gases in the Earth's atmosphere.
>
> **Engagement**: Joining forces with others to seek solutions to the challenges and threats to fish and wildlife conservation posed by climate change.

The plan recognizes the role of healthy ecosystems in helping fish and wildlife populations adapt to a changing climate. It also allows resource managers to be responsive as science, technology, and experience evolve over time:

> *"We will increase our adaptation efforts significantly in the near term as we respond to increasing climate change impacts. Our initial emphasis will be on reactive adaptation, as we work to build resilience in ecosystems through our management efforts and, in some cases, to buy additional time to increase our certainty regarding future landscape conditions . . . Over the long-term, however, we will work with partners to assemble the technical and institutional capability to increase anticipatory adaptation efforts, particularly as the impacts of climate change become more certain."*