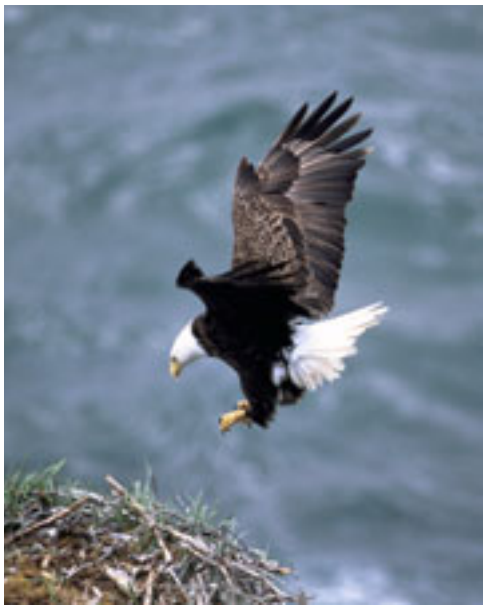
Chapter 2: The Planning Process

2.1 Explanation of Plan Development



U.S. Fish & Wildlife Service

This CCP was prepared in compliance with the National Wildlife Refuge System Improvement Act of 1997, the National Environmental Policy Act of 1969, and Service policy guidance set forth in the Departmental Manual (see part 602 of the Fish and Wildlife Service Manual at the Internet website, www.fws.gov).

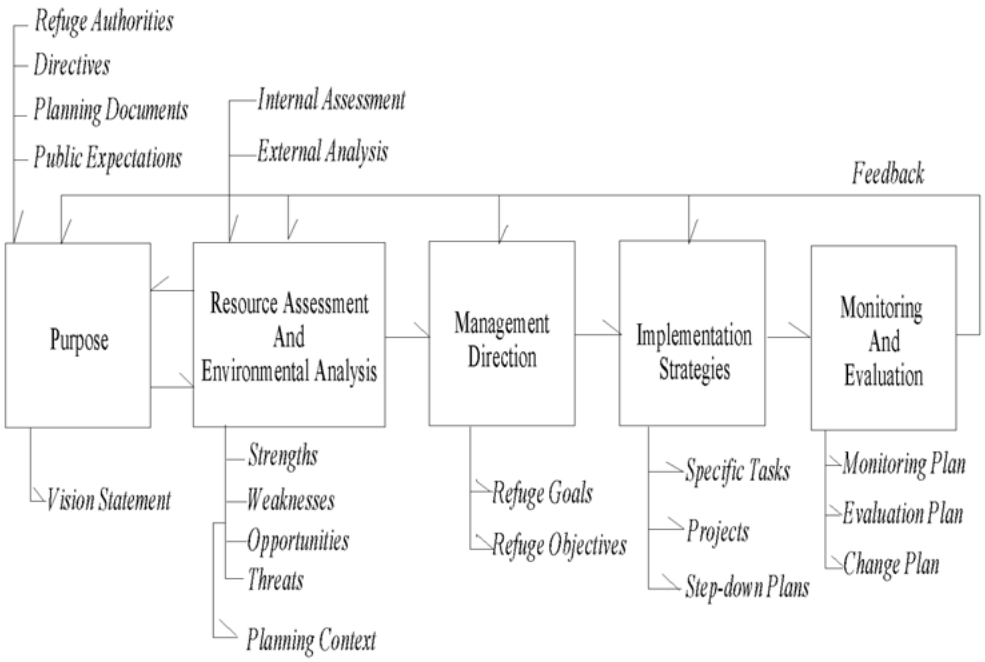
While there are many steps involved in developing a CCP, the process the planning team followed for developing the Necedah NWR CCP focused around five functional parts (Figure 3):

- Reaffirming the Refuge's purpose and developing vision,
- Conducting an operational assessment and environmental analysis,
- Establishing management direction (goals and objectives),
- Developing a range of programs, activities, and projects to achieve desired outcomes (implementation strategies), and
- Developing protocols to monitor and evaluate progress.

As a first step, the planning team developed a vision statement to provide focus for the actions and character of the Refuge, as well as to clarify its purpose and direction. In developing the vision statement, the planning team reviewed the Refuge's authorizing legislation, national and regional directives, internal and external planning documents, and information relative to the public's expectations for the Refuge. Figure 3 was adapted from Justis et al. 1985.

An operational assessment and environmental analysis was performed to identify the Refuge's current strengths, weaknesses, opportunities, and threats. Strengths and weaknesses refer to internal factors, operational components controlled by management such as habitat, certain fish and wildlife populations, resource conservation, cooperative programs, administration, work force, public use, and maintenance. Opportunities and threats refer to external factors, such as favorable actions or situations in the Refuge environment that can benefit the Refuge, or unfavorable actions or situations in the Refuge environment that may impede operation and/or development of the Refuge. External

Figure 3: Planning Process Model for the Necedah NWR Comprehensive Conservation Plan



factors include the Refuge's biological environment, physical environment, political/legal environment, economic environment, and socio/cultural environment. The results of the operational assessment and environmental analysis formed a planning context and provided the basis from which management direction was derived.

Management direction was established through a strategic framework, which we define as a pattern of purposes, policies, programs, actions, decisions, or resource allocations that describe what the Refuge is, what it does, and why it does it. Refuge goals were developed that articulate broad direction, end results, or positions to be achieved. Refuge objectives serve as intermediate-term targets necessary for the accomplishment of goals.

Strategies and projects were developed to describe the means, methods, and approaches used to achieve Refuge objectives (also answers the who, what, why, when, and where questions). However, in many cases step-down management plans will be developed to provide the specific details necessary for implementation of objectives, strategies, and projects. In this regard, step-down management plans refer to annual work plans, fire management plans, public use plans, inventory and monitoring plans, and occupational safety and health plans (see Chapter 5 for a list of step-down plans and schedules for revisions). Thus, the CCP provides an overview of future Refuge programs and projects and leaves the details of scheduling and budgets to be developed as funding levels and staffing patterns become clearer. Refuge staff will set priorities and make decisions based on Refuge operating needs and directives from Regional and Washington Office staff.

Finally, the fifth process function dealt with developing monitoring and evaluation protocols. Four basic steps capture this process function: (1) identification and establishment of predetermined standards of strategy performance, (2) a measurement of the actual performance results, (3) a

comparison of the results achieved against those previously established, and (4) determining whether the CCP is producing the desired results, or if corrective action is necessary. The CCP was developed using the best information available at the time of preparation. As new and better information emerges, including new input from partners and stakeholders, the CCP will be revised. Additional step-down plans will be developed to address plan monitoring, plan evaluation, and plan change procedures. Adaptive management will be fundamental to keeping the plan active and effective.

2.2 Public Involvement

U.S. Fish & Wildlife Service

Scoping is the process of identifying opportunities and issues related to a proposed action. The Service publicly announced it was preparing a CCP for the Refuge in June 1997. Since that time, information about the planning project has been provided to the public through news releases, presentations, interviews, informational letters, and one-on-one briefings. Federal, state, local, and private entities were involved in the scoping process. More than 6,000 people were sent information on the Refuge CCP (e.g., letters, newsletters, draft CCPs), including landowners in the four townships surrounding the Refuge (information was obtained from Juneau County and Wood County tax records) and landowners in the Yellow River Focus Area. Others involved were Wisconsin's Congressional Delegation, the U.S. Department of Agriculture, elected officials representing Juneau and Wood counties, the Wisconsin DNR, local governments, representatives of national, state, and local conservation organizations, neighboring landowners, and other interested people.

Public input was considered at all phases of the CCP planning process. The Service coordinated its scoping effort closely, and corresponded frequently with many of the aforementioned entities. Since June of 1997, 10 public meetings were held to gather public input. In addition, three draft CCPs/EAs were released for public review. The first draft was released in August 1998. The second draft was released in July 2000, and a third draft was released in October 2001. Draft documents were published on the Service's website for this planning project, and paper copies were provided in all of the libraries in the counties surrounding the Refuge. In October 2001, a summary of the draft CCP was mailed to individuals who requested to be on the Necedah NWR mailing list. Comments received during the scoping and public involvement process covered a wide range of interests.

The Service used a highly participatory planning process to develop the Necedah NWR CCP. Throughout the CCP process, the Service initiated outreach to diverse stakeholders and afforded numerous opportunities for public input. Information about the CCP was provided to stakeholders and the general public through news releases, presentations, interviews, informational letters, newsletters, public meetings, briefings, and the Internet. Questionnaires, focus groups, public meetings, and one-on-one discussions were used to gather input from Refuge visitors, neighbors, and other stakeholders. A geographic information system (GIS) was developed to aid in the analysis and transfer of information. Additional information on the public involvement process is located in the Environmental Assessment (Appendix A).

2.3 Issues

In response to the Service's proposed action to prepare and implement a CCP for the Refuge and from questions raised in conversations and correspondence with individuals and organizations within

and outside the Service, the Service identified several significant issues to analyze in the planning process, specifically:

- *Service trust resources*: What effect will Refuge management actions have on listed species, waterfowl and other migratory birds, and biological diversity (internal issue)?
- *Refuge visitor services:* What effect will Refuge management actions have on the quality of visitor services provided at the Refuge, namely hunting, fishing, wildlife observation, photography, environmental education, and interpretation (internal/external issue)?
- *Habitat management*: What effect will Refuge habitat management actions have on the quantity and quality of habitats within the Refuge and the Refuge watershed, namely the wetlands, forests, and open landscapes (internal issue)?
- *The Yellow River Focus Area:* How will Refuge management actions affect the habitat in the Yellow River Focus Area, and how will those management actions impact private property rights and the areas tax base (external issue)?

2.4 Opportunities and Issues

2.4.1 Service Trust Resources

Numerous Service trust resources utilize the Refuge and the Yellow River Focus Area for meeting one or more of their life cycle needs, including four Federally listed threatened or endangered species. Under the Endangered Species Act of 1973, as amended, the Service has primary responsibility to conserve not only jeopardized life, but also the natural resources on which life depends. Federally listed species include the Karner blue butterfly (federally listed as endangered), Eastern timber wolf (federally listed as endangered), Whopping Crane (federally listed as endangered), and Bald Eagle (federally listed as threatened). The Eastern massasauga rattlesnake, which is currently a candidate for federal listing, is found in low numbers in the Yellow River Area. Several state-listed threatened or endangered species also use the Refuge, including the Blanding's turtle and Trumpeter Swan. The Refuge also supports several rare, threatened, or endangered species of plants, including the spring beauty, oval-leaved milkweed, and wooly milkweed, and provides habitat for several important plants (e.g., wild lupine) that support rare organisms (e.g., Karner blue butterflies). Protecting endangered and threatened species and restoring them to secure status in the wild is a primary responsibility of the Service and the Refuge.

Many bird species are declining across part or all of their breeding range in the Midwest (Peterjohn et al. 1994). Breeding Bird Surveys for the Great Lakes-Big Rivers Region indicate that numerous grassland nesting, non game species in the Midwest have shown extensive declines since the mid-1960s (National Biological Survey 1995). Grassland-dependent birds have shown steeper, more consistent, and geographically more widespread declines (25-65 percent) than any other group of North American birds (Samson and Knopf 1994). Several of these declining species utilize the Refuge and the Yellow River Area. These include the Bobolink, Henslow's Sparrow, Grasshopper Sparrow, Vesper Sparrow, Savannah Sparrow, Lark Sparrow, Field Sparrow, Dickcissel, Eastern Meadowlark, and American Bittern. The Grasshopper Sparrow and Dickcissel have declined over 80 percent in Wisconsin since the mid-1960s. Many others, especially those associated with rare oak savannas (e.g., Red-headed Woodpecker, Northern Flicker), have experienced similar, though less dramatic declines.

In total, more than 230 different species of birds have been observed on the Refuge since its inception. The Refuge has long been considered an important migratory stopover area for waterfowl such as Mallards, Blue-winged Teal, Ring-necks, and Wood Ducks. Other migrant bird species that utilize the Refuge during spring, summer, or fall include: Canada, Snow, and White-fronted Geese; Sandhill Cranes; Woodcock; Snipe; Great Blue Herons; Swans; egrets; Dickcissels; warblers; Brown

Thrashers; several different species of sparrows; meadowlarks; Sora Rails; Black-crowned Night Herons; Bobolinks; bitterns; and Red-tailed Hawks; just to name a few. During migrations, three species of geese, 10 species of dabbling ducks, nine species of diving ducks, and Trumpeter and Tundra Swans can be found on the Refuge.

The Refuge has incomplete inventories for many of its natural, archeological, and cultural resources, including wildlife and habitat. Monitoring systems needed to conserve and properly manage Refuge resources are inadequately funded. Monitoring and evaluation systems need to be developed to measure progress toward habitat goals.

2.4.2 Refuge Visitor Services

The National Wildlife Refuge System Improvement Act of 1997 has ushered in a new era of public involvement on national wildlife refuges. Providing for public uses is now an essential part of Refuge missions across the country. Necedah NWR has always been a popular destination for hunting and fishing enthusiasts. However, in recent years other uses, such as wildlife observation and wildlife photography, hiking, environmental education and interpretation have surpassed traditional activities in terms of public interest.

The Refuge currently has two major needs relative to providing quality services to its visitors. First, the main office (which also serves as the visitor center) is ineffective as an initial visitor contact point due to its isolation, distance from a main road, and small size. The current facility has no formal education features, with the exception of a small conference room, and it is lacking in interpretive programming displays. In recent years, Refuge programs and activities have attracted over 150 participants at some events. The current facility accommodates a maximum of 30 people. Programs are held in the office space, reducing productivity of staff who are not directly involved with the event. It also compromises the overall effectiveness of the educational experience, due to the distraction of office business and the lack of student comfort.

Public use of the Refuge now exceeds over 150,000 visits annually. Three state highways border the Refuge: 21, 80 and 173. The Wisconsin Department of Transportation numbers from 1995 (the latest information available) shows that over 1,500 vehicles a day use Highway 173; more than 3,200 vehicles a day travel on Highway 21; and over 1,100 use Highway 80 each day. Occupants of these vehicles are all potential visitors to the Refuge. Due to small, inconvenient facilities and poor signage, many of these potential visitors are currently being overlooked.

Further, the Refuge is now the site for an experimental Whooping Crane population, an attraction that will undoubtedly increase visitor use long-term at the Refuge. During the first year of the 10-15 year reintroduction program, the Refuge hosted an event that drew more than 600 visitors. The project frequently drew the attention of the media. This increased use of the Refuge could further disseminate key messages about the Refuge, its resources, and the National Wildlife Refuge System.

Another need relates to the quality of the existing visitor facilities at the Refuge. There is a need to renovate existing facilities for safety and accessibility, to improve visitor information systems (signs and brochures), and to bring public facilities up to Service standards. To improve customer service, the Refuge needs to collect additional information on Refuge visitor volume, characteristics, opinions, and what their expectations are for the Refuge. Key components to customer service is having suitable facilities (addressed above) and having an eager work force that can provide quality service. Current refuge staffing patterns do not emphasize the importance of good customer service. A strong volunteer base exists and could easily be used in the contact areas. A volunteer coordinator is vital. Seasonal public use staff could also help meet increased needs during peak times.

Another visitor services concern learned through scoping is that the Refuge is not known and understood within the local area. This was made apparent during the multi-year planning process for

the Refuge CCP. Many people living near the Refuge do not distinguish the Service from the Wisconsin DNR, or understand that the Refuge is part of a national system of Refuges dedicated to perpetuating the nation's fish and wildlife resources for the enjoyment of present and future generations. The Refuge needs to promote its recreation and educational opportunities, as well as raise awareness of the importance of the Refuge among the various economic and environmental interests that influence public policy and Refuge management direction.

2.4.3 Habitat Management

The need for additional wildlife habitat conservation, restoration and management at the Refuge has been made clear by the declining status of numerous grassland, savanna, and wetland dependent species of birds (see "Service Trust Resources" above) and numerous studies that have demonstrated that habitat loss or degradation is a common causal factor in many of those declines.

Of the estimated 221 million acres of wetland habitat present in the lower 48 states at the time of colonial America, only 103 million acres remain (47 percent). Draining, dredging, filling, leveling, and flooding have reduced wetlands by 50 percent or more in 22 states, and 10 states have lost 70 percent or more (Dahl 1990). Prior to European settlement, Wisconsin had approximately 10 million acres of wetlands. Currently less that 47 percent remain (Dahl, 1990).

U.S. Fish & Wildlife Service

In recent years, many plant and animal species associated with Midwestern grasslands have experienced serious declines, primarily due to habitat loss and alteration of natural structure and function (e.g., predation, exotic species, fire suppression, habitat fragmentation, drainage/ flooding). The original tallgrass prairie, which extended from western Indiana to the eastern part of Kansas, Nebraska, and North and South Dakota and south to Oklahoma and Texas, has been virtually eliminated throughout its historic range. Recent surveys suggest that 82.6 to 99.9 percent declines in the acreage of tallgrass prairie have occurred in 12 states and one Canadian province since European settlement. The State of Wisconsin has lost over 99 percent of its original prairies. For years following the initial conversion of native Midwestern prairies, many prairie-dependent wildlife remained relatively stable through their ability to colonize agricultural grasslands. However, 20th century agricultural grassland loss has followed a similar path of decline as native prairie loss in the 19th century. In many parts of the Midwest, agricultural grasslands are at their lowest level in more than 100 years.

Similarly, oak savanna, which covered approximately 27-32 million acres of the Midwest prior to European settlement (Nuzzo 1985), has become one of the nation's most endangered ecosystems (Noss et al. 1995). Nationwide, over 99 percent of the original savanna has been lost, and Midwestern oak savannas are among the rarest ecosystems in the Nation. Historically Wisconsin had roughly 4 million acres of savannas. Today, less than 60,000 acres remain, and much of what remains is highly degraded. Nuzzo (1985) found that by 1985 only 113 sites (2,607 acres) of quality oak savanna remained across the Midwest. Development has destroyed, fragmented, and disrupted the natural processes needed to maintain quality oak savanna ecosystems.

The wide-scale loss of oak savanna and pine barren ecosystems across 12 states and the province of Ontario, Canada, has had severe negative impacts on Karner blue butterflies (Karner Blue Butterfly

Habitat Conservation Plan and Environmental Impact Statement, 1999). As a result, the Karner blue butterfly was proposed for federal listing on January 21, 1992, and listed as endangered on December 14, 1992. Today scattered populations are only found in portions of New Hampshire, New York, Michigan, Wisconsin, Indiana, and Minnesota. The Refuge is home to the world's largest remaining population of Karner blue butterflies, providing habitat for 12 population complexes. No critical habitat has been designated for this species. The long-term effect of these landscape-scale losses of important ecosystems has yet to be determined.

The long-term declines in early successional forests across the north-eastern and north-central United State has contributed to the decline of many bird species. Selective harvesting, fire suppression, urban sprawl, and cessation of agricultural abandonment contributed to the present imbalance in distribution of young forests (Oliver and Larson, 1999).

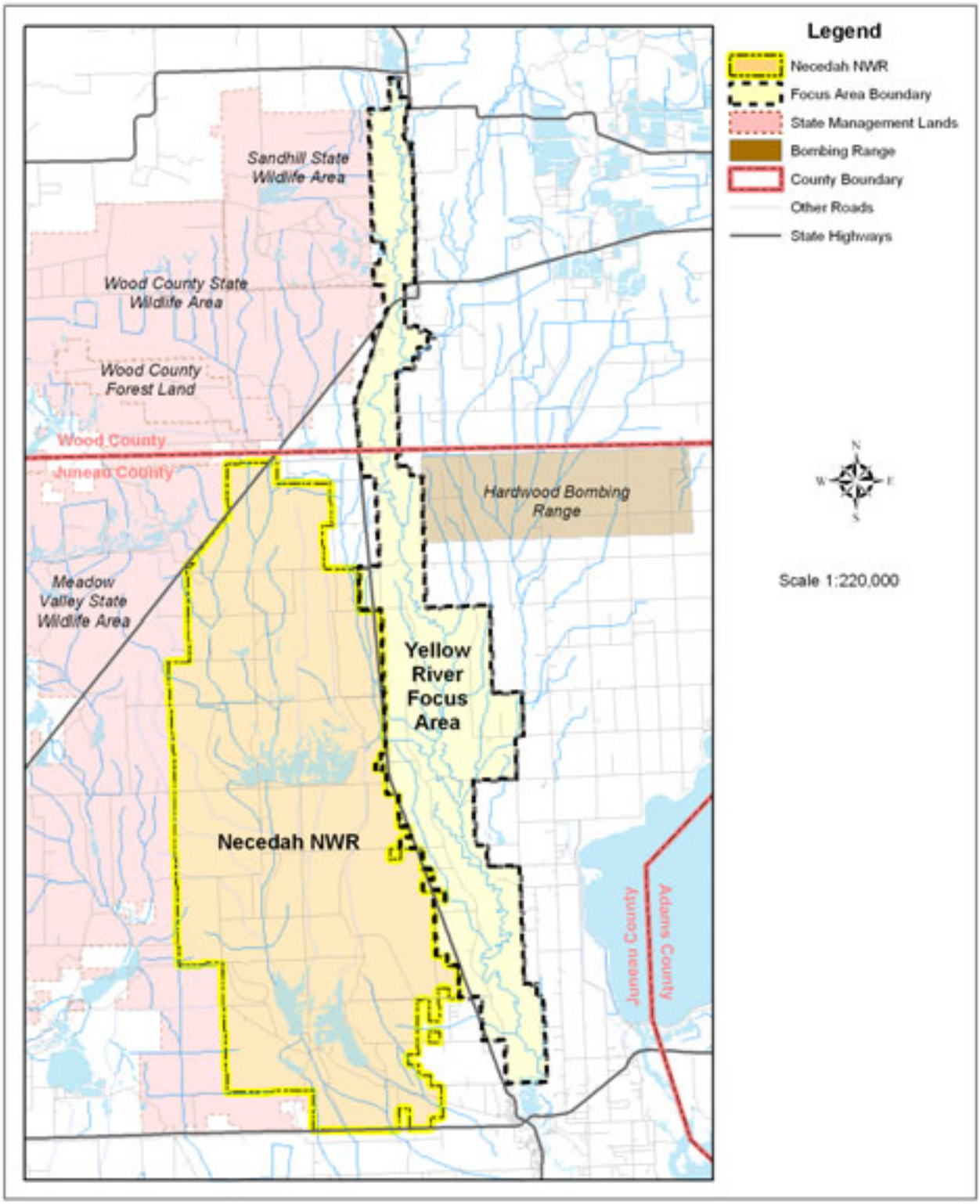
The Refuge is facing increasing threats to its ecological and health due to air, water, and noise pollution, exotic species, and incompatible recreational uses. Of late, a new round of change threatens many remaining ecosystems in the Refuge area. A trend called "rurbanization" where rural areas containing quality wildlife habitat are being converted to a more densely developed state. In recent years, the population of the area surrounding the Refuge has expanded, while the size of the undeveloped land base continues to shrink, leaving many natural areas as scattered fragments of increased importance for scientific study, education, and conservation of natural ecological processes. According to the U.S. Census, the Town of Necedah and the Town of Finley grew by 34 percent and 27 percent respectively between 1990 and 2000. As a result, many of the large natural areas around the Refuge (and in the Yellow River Area) are at risk of being fragmented through housing development, driveways, etc., which diminishes the value of these areas for area-sensitive wildlife like the Bobolink, Prairie Chicken, and many large mammals. Habitat size, shape, and amount and type of edge are important factors in the reproductive success of many grassland birds. It is this type of development that particularly threatens the remaining oak savanna habitat in this region. Without management, most areas will continue to degrade due to their size, isolation, absence of natural processes such as fire and hydrologic cycle maintenance, and inadequate buffers conserving them from surrounding agricultural and urban land uses. It also places greater demands on the Refuge and its partners in terms of safeguarding Refuge ecosystem structure and function for the benefit of Service trust resources.

2.4.4 The Yellow River Focus Area

The Yellow River Area (Figure 4), which lies east of the Refuge within an area referred to as Wisconsin's Central Sand Plain Natural Division, provides a unique opportunity to conserve rare and declining bottomland forest and adjacent upland habitat for the benefit of listed species, waterfowl and other migratory birds, and native biological diversity. According to Wisconsin's Statewide Natural Area Inventory, extensive field reconnaissance by the Refuge, and other sources, the Yellow River Area represents one of the few remaining quality bottomland hardwood forest ecosystems in the Midwest. Silver maple, swamp white oak, green ash, and river birch dominate the floodplain, while the lower sandy ridges, slightly higher than the flood plain, support white oak, bur oak, shagbark hickory, basswood, and white pine. The highest of these areas were once oak and pine savannas, one of North America's most endangered habitats, with only .02 percent of its pre-settlement acreage remaining. The shrub spectrum within the area varies in density from sparse to impenetrable, and includes buttonbush, dogwoods, prickly ash, winterberry, and wild grapes. The herbaceous layer of the forested areas support wood nettle, coneflowers, ferns, and many sedges. Aggressive non-native species are currently not an issue.

Many rare, uncommon, and declining species of animals have been documented in the Yellow River Area in recent years. Many of them are sensitive to size, isolation, context, and quality of habitat. These include the Eastern massasauga, Blanding's turtle, Red-shouldered Hawk, Cerulean Warbler, Acadian Flycatcher, Yellow-crowned Night-heron, Prothonotary Warbler, and Louisiana Waterthrush.

Figure 4: Yellow River Focus Area



Several neo-tropical migrants that are suspected of or exhibiting extensive population declines that use the area include the Verry, Wood Thrush, Sedge Wren, Blue-winged Warbler, and Golden-winged Warbler. Waterfowl species include Mallard, Wood Duck, and Hooded Merganser. Bald Eagles utilize the area year-round and at least one active nest has been documented. Great Blue Heron rookeries are found in the Yellow River Area as well as extensive Wood Duck nesting. Federally listed endangered Karner blue butterflies are also found on Friendship and Plainfield soils throughout the area. These soil types offer potential for expansion of oak savanna and the restoration of essential Karner blue butterfly habitat.

While rich in biological diversity, the Yellow River Area is experiencing degradation, primarily due to rural development and lack of habitat management, and could benefit from habitat conservation and management practices designed to sustain its ecological value. Habitat conservation and management practices could take the form of financial incentives to landowners, prescribed fire, mowing, wetland and upland restorations, and forest management. Recreational development pressures are high in the area. An expansion of agricultural activities could directly impact Yellow River habitats and create many indirect impacts due to habitat fragmentation, withdrawal and discharge of surface and ground waters, and construction of needed infrastructure.

Many Federal, state, and local conservation organizations support stewardship and conservation of the natural resources in the Yellow River Area. Several property owners have indicated an interest in selling their land and/or a conservation easement on their land to the Service. Many landowners within the 21,952-acre Yellow River Focus Area have contacted the Refuge in recent years in search of technical assistance in managing their land for wildlife. Between 2000 and 2002, 121 landowners owning 17,308 acres in the Yellow River Focus Area received technical assistance from the Service. However, an organized group of Yellow River property owners as well as several local units of government strongly oppose any public acquisition of land in the area (fee title and conservation easements) that could potentially restrict future cranberry bed expansion, residential development, and impact the area's tax base.