

**ENVIRONMENTAL ASSESSMENT to the WILDLAND**

**FIRE MANAGEMENT PLAN for**

**ST CROIX**

**WETLAND MANAGEMENT DISTRICT**



September, 2007

**Selection of Alternative  
And  
Finding of No Significant Impact (FONSI)  
to the  
St Croix WMD Fire Management Plan and Environmental Assessment**

An Environmental assessment (EA) has been prepared to identify the possible fire management options and alternatives along with the corresponding environmental consequences of such alternatives to the St Croix Wetland management District. This EA was written following the guidelines as set forth in the National Environmental Policy Act of 1969 (NEPA). This EA addressed two action alternatives along with evaluating the consequences of the no-action alternative.

**Alternative Selection:** The preferred alternative selected was alternative A which includes important and critical habitat restoration of the northern tallgrass prairie ecosystem. The habitat management and restoration is dependent upon the use of prescribed fire to successfully restore these sites.

**Justification:** The fire management program to be implemented on the St Croix Wetland Management District will successfully preserve and restore prairie wetland and grassland habitats for the myriad of fish and wildlife species dependent upon fire adapted ecosystems.

**Finding of No Significant Impact:** Based upon an evaluation of the information contained within this EA and the Fire Management Plan, I have determined that implementing the preferred alternative A is not a major Federal action that would alter and negatively impact the quality of the human environment within the context of Section 102(2)c of the National Environmental Policy Act of 1969. An Environmental Impact Statement will not be necessary to prepare. This decision is based upon the following facts:

- 1) Implementation of the fire program will restore and maintain critical northern tallgrass prairie habitat and associated wetland and grassland ecosystems originally found on the prairie landscape.
- 2) Minimal impacts will occur to any soil and water resources. These resources will be enhanced through restoration of natural water flows and nutrient movement and cycling.
- 3) Cultural resource sites discovered will be protected from disturbance.
- 4) The District contains no federally-listed threatened species. As determined by the Intra-Service Section 7 Biological Evaluations, fire activities will have no effect on these species.

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Regional Director, FWS, Region 3

Date:

UNITED STATES FISH & WILDLIFE SERVICE  
ENVIRONMENTAL ACTION STATEMENT

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of (describe action):

**Implementing the St Croix Wetland management District Fire Management Plan (9/2007)**

- \_\_\_\_\_ is a categorical exclusion as provided by 516 DM 6, Appendix 1 and 516 DM 2, Appendix 1. No further documentation will therefore be made.
- \_\_\_\_\_ is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.
- \_\_\_\_\_ is found to have significant effects, and therefore further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an EIS.
- \_\_\_\_\_ is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.
- \_\_\_\_\_ is an emergency action within the context of 40 CFR 1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents (list):

- \_\_\_\_\_ Environmental Assessment and FONSI
- \_\_\_\_\_ Public comments
- \_\_\_\_\_ Intra-Service Section 7 Evaluations

\_\_\_\_\_  
(1) District Manager      Date

\_\_\_\_\_  
(2) RHPO      Date

\_\_\_\_\_  
(3) REC      Date

\_\_\_\_\_  
(4) ARD      Date

\_\_\_\_\_  
(5) RD      Date

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**FINAL DRAFT**

## **Environmental Assessment for the St Croix WMD Fire Management Plan**

### **Abstract**

The U.S. Fish and Wildlife Service is proposing to implement a Fire Management Plan (FMP) for the St Croix Wetland Management District (District) located in west-central Wisconsin. This plan will specify a fire management direction for St Croix Wetland Management District, as described in detail through a set of goals, objectives, and strategies. This Environmental Assessment (EA) considers the biological, environmental, and Socio-economic effects that implementing the FMP (the preferred alternative) and other management alternatives will have on the most significant issues and concerns identified during the planning process.

### **Responsible Agency and Official:**

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### **Additional Contacts for information regarding this Fire Management Plan and Environmental Assessment are:**

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## Chapter 1

### Purpose and Need for the Proposed Action

#### **Purpose:**

The purpose of the Environmental Assessment is to consider various alternatives for managing fire at St Croix Wetland Management District. This management direction is described in detail through a set of goals, objectives, and strategies in the Fire Management Plan (FMP). The action is needed to address current management issues and to establish what action will be taken in regard to future use of fire as a management tool and fire suppression efforts.

This Environmental Assessment (EA) was prepared using the guidelines of the National Environmental Policy Act of 1969. The Act requires us to examine the effects of proposed actions on the natural and human environment. In the following sections, alternatives for future District fire management, the environmental consequences of each alternative, and the preferred management direction are described.

#### **Need:**

In order to meet Federal and specifically FWS regulations, an approved fire management plan must be in place before any prescribed burning may take place on the St Croix Wetland Management District.

The 1995 Final Report of the Federal Wildland Fire Management Policy and Program Review provides guiding principles that are fundamental to the success of the Federal wildland fire management program and implementation of review recommendations. These recommendations include Federal wildland fire policies in the areas of: safety, planning, wildland fire, prescribed fire, preparedness, suppression, prevention, protection priorities, interagency cooperation, standardization, economic efficiency, wildland/urban interface, and administration and employee roles. The 2001 Federal Fire Management Policy update addresses 17 distinct items, the foremost being safety; all FMPs and fire management activities must reflect this commitment.

The Federal Wildland Fire Management Policy that now governs wildland fire management provides for a full range of responses and the opportunity for wildland fires to be managed for resource benefits. This policy represents a significant departure from past fire management practices. All ignitions occurring in wildland areas are now classified as wildland fires or prescribed fires. Wildland fires include any non-structure fire, other than prescribed fire, that occurs in the wildland, regardless of whether the origin is natural (generally lightning) or human (accident or arson). All wildland fires will receive a suppression response. Prescribed fires include any fire ignited by management actions to meet specific objectives. Prior to the ignition of prescribed fires, a written, approved prescribed fire plan must exist, and NEPA requirements must be met. This EA

constitutes the requisite NEPA documentation and compliance for the FMP. Specific needs include:

- . • Wildland fires are managed with the appropriate response as directed by the FMP and analysis of the specific situation.
- . • Minimize burned area due to high values to be protected, threats to life or property, or other social, political, and economic considerations that outweigh potential environmental benefits.
- . • Implement a wildland fire suppression decision-making process that evaluates and compares alternative strategies with respect to safety, environmental, social, economic, political, and resource management objectives.
- . • Meet current Departmental and Service policies as well as Congressional direction regarding need for consistent, up-to-date FMPs.
- . • Plan for use of prescribed fire to restore the historic role of fire to fire dependent or fire adapted habitats.
- . • Use prescribed fire or other appropriate tools to reduce hazardous fuels to protect both District improvements and reduce risk of fire escape to adjacent land ownerships.

### **Background:**

The St. Croix Wetland Management District, established in 1993, manages 41 waterfowl production areas (WPAs) totaling 7,500 acres within an eight county District of west-central Wisconsin (Location map, Figure 1). The District also administers 14 conservation easements totaling 438 acres within a western Wisconsin area of eight counties. WPAs consist of wetland habitat surrounded by grassland and woodland communities. While WPAs are managed primarily for ducks and geese, they also provide habitat for a variety of other wildlife such as grassland birds, shorebirds, wading birds, mink, muskrat, wild turkey, and deer.

Historically, wildland fire played a major role in maintaining the northern tallgrass prairie ecosystem and associated wetland habitats. Fire was crucial in maintaining the early successional stages of the vegetation found here. Today, prescribed fire will be the preferred tool for restoring and maintaining these prairie grassland habitats.

### **Decision Framework:**

The Regional Director for the Great Lakes-Big Rivers Region (Region 3) of the U.S. Fish and Wildlife Service will use this Environmental Assessment to select one of the alternatives and determine whether the alternative selected will have significant



environmental impacts, requiring preparation of an Environmental Impact Statement (EIS). It is recommended that the reader refer to the Fire Management Plan (FMP) for St Croix Wetland Management District when reviewing this Environmental Assessment. An FMP is needed to address current management issues, propose a plan of action, and meet current policy which the Service and its partners can use to achieve the future vision for the District.

### **Policy, Authority, Legal Compliance, and Compatibility:**

The National Wildlife Refuge System includes Federal lands managed primarily to provide habitat for a diversity of wildlife species. The purpose(s) for which a particular Wetland Management District is established are specified in the authorizing document for that District. These purposes guide the establishment, design, and management of the District.

Additional authority delegated by Congress, Federal regulations/guidelines, Executive Orders and several management plans guide the operation and the management of the District and provide the framework for the U.S. Fish and Wildlife Service's proposed action. The key statutes and orders that guide St Croix WMD are summarized in the following section and under Authorities For FMP Development, page 8, of the FMP.

#### **Lacey Act of 1900, as amended (16 U.S.C. 701)**

Under this Law, it is unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants taken, possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving any fish, wildlife, or plants taken possessed or sold in violation of State or foreign law.

#### **Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711) Migratory Bird Treaty Act of 1978 (40 Stat. 755)**

The original 1918 statute implemented the 1916 convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. The 1978 Act amended the MBTA to authorize forfeiture to the U.S. of birds and their parts illegally taken, for disposal by the Secretary as he deems appropriate. Public Law 95-616 also ratified a treaty with the former Soviet Union specifying that both nations will take measures to protect identified ecosystems of special importance to migratory birds against pollution, detrimental alterations, and other environmental degradations.

#### **Migratory Bird Conservation Act (1929), as amended (16 U.S.C. 715-715s)**

The Act of 1929 established a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of Interior for acquisition with Migratory Bird Conservation Funds. The Secretary of Interior is authorized to cooperate with local authorities in wildlife conservation and to conduct investigations, to publish documents related to North American birds, and to maintain and develop Districts.

#### **Refuge Improvement Act (1997)**

This Act calls for managing the National Wildlife Refuge System to conserve biological diversity by applying the latest scientific information and methods to District management and its

evaluation, and by expanding the system through planned land acquisition. The Act also addresses how to determine the compatibility of each activity or “use” allowed on a District with the purpose of the District and the “wildlife first” mission of the National Wildlife Refuge System. It also requires each Refuge or District to develop a 15-year comprehensive conservation plan.

**Fish and Wildlife Coordination Act (1934), as amended (16 U.S.C. 661-666).**

The Act of 1934 authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with Federal and State agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. In addition, this Act authorizes the preparation of plans to protect wildlife resources, the completion of wildlife surveys on public lands, and the acceptance by the Federal agencies of funds or lands for related purposes, provided that land donations received the consent of the State in which they are located.

**Refuge Recreation Act, as amended, (Public Law 87-714.76 Sta. 653; 16 U.S.C. 460k 4 September 28, 1962).**

This Act authorized the Secretary of the Interior to administer Refuges, hatcheries, and other conservation areas for recreational use, when such uses do not interfere with the area’s primary purposes.

**National Wildlife Refuge System Administration Act of 1966 (U.S.C. 668dd-668ee).** This Act provides guidelines and directives for administration and management of all areas in the system, including “wildlife Districts, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas.”

**Fish and Wildlife Conservation Act of 1980 (Public Law 96-366, dated September 29, 1980). (“Non-game Act”) (16 U.S.C. 2901-2911; 94 Stat. 1322).**

Public Law 96-366 authorized the Service to monitor and assess migratory non-game birds, determine the effects of environmental changes and human activities, identify those likely to become candidates for endangered species listing, identify appropriate actions, and report to Congress 1 year from enactment. It also requires the Service to report at 5 year intervals on actions taken.

**The National Wilderness Preservation Act of 1964 Public Law 88-577 (16 U.S.C. 1131-1136)**  
Established a National Wilderness Preservation System for the permanent good of the whole people, and for other purposes. From this Act, Wilderness Areas are designated.

**The Protection of Timber Act of 1922 (42 Stat.857; 16 U.S.C. 594)**

Provides basic authority for the Secretary of the Interior to protect timber of lands under the Department’s jurisdiction from fire, disease, and insects.

**The Federal Noxious Weed Act Public Law 93-629 (7 U.S.C. 2801 et. Seq.; 88Stat. 2148)**  
Established a program to control the spread of noxious weeds.

**Fish and Wildlife Act of 1956, as amended [16 U.S.C. ss 742f (a) (4) (5)].**

This Act is the specific law granting authority for acquiring lands for national wildlife Districts. Under this Act, the Secretary of the Interior is authorized to take steps as may be required for the

development, advancement, management, conservation, and protection of fish and wildlife resources including but not limited to research, development of existing facilities, and acquisition by purchase or exchange of land and water or interests therein. The Act also authorizes the Service to accept gifts of real or personal property for its benefit and use in performing its activities and services. Such gifts qualify under Federal income, estate, or gift tax laws as a gift to the United States.

**Land and Water Conservation Fund Act of 1965.**

This Act provides funding through receipts from the sale of surplus Federal land, appropriations from oil and gas receipts from the outer continental shelf, and other sources for land acquisition under several authorities. Appropriations from the Fund may be used for matching grants to the states for outdoor recreation projects and for land acquisition by various Federal agencies, including the Service.

**The Refuge Revenue Sharing Act of 1935, as Amended.**

This Act established procedures for making payments to counties in which national wildlife refuges are located. Such payments come from revenues derived from the sale of products and privileges from national wildlife Districts, supplemented by Congressional appropriations. The revenues are deposited in a special Treasury account, and net receipts from this are distributed to counties or other units of local government to help offset their loss of tax revenue that occurs when land for national wildlife Refuges is acquired by the Federal Government and removed from tax rolls. Three formulas are used to determine payments.

**Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).**

These Executive Orders prohibit any significant changes to the natural and beneficial values of the floodplain or wetland and require avoidance of direct and indirect support of floodplain development.

**Executive Order 12996 (Management and Public Use of the National Wildlife Refuge System).**

This order defines a conservation mission for the District System to “preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plants of the United States for the benefit of present and future generations.” Six compatible Wildlife-dependent recreational activities (hunting, fishing, wildlife observation, photography, environmental education, and interpretation) are defined as priority uses. The order also provides for the identification of existing wildlife-dependent uses that would continue to occur as lands are added to the system. The order defines four guiding principles for management: habitat conservation, public use, partnerships, and public involvement.

**National Environmental Policy Act of 1969, as Amended.**

Established a National policy for the environment. Preparation of this EA is a part of the Service’s compliance.

**Executive Order 12372 (Intergovernmental Review of Federal Programs).**

In compliance, copies of this EA will be sent to the Minnesota Clearinghouse.

### **Clean Water Act, as Amended.**

Section 404 of this Act requires that a U.S. Army Corps of Engineers permit be obtained prior to dredging or filling in waters of the United States.

### **Endangered Species Act of 1973, as Amended**

Provided for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend, through Federal and State actions. A consultation pursuant to Section 7 of the Endangered Species Act was conducted as part of this project to ensure that the proposal would not affect the continued existence of any endangered or threatened species in the project area or result in destruction or adverse modification of their critical habitats.

### **National Historic Preservation Act.**

Section 106 of the Act of 1966 requires Federal agencies to consider the effects of their undertakings on properties meeting the criteria for the National Register of Historic Places. The regulations in 36 CFR, Part 800, describe how Federal agencies are to identify historic properties, determine effect on significant historic properties, and mitigate adverse effects. Section 110 of the 1966 Act codifies the salient elements from Executive Order 11593, "...to ensure that historic preservation is fully integrated into the ongoing programs and missions of Federal agencies." Section 110 also requires each Federal agency to establish a program to inventory all historic properties on its land.

### **Archaeological Resources Protection Act.**

Section 14 of this Act of 1979 requires an inventory program of all Federal lands. It applies to the protection of all archeological sites more than 100 years old (not just sites meeting the criteria for the National Register) on Federal land and requires archaeological investigations on Federal land be performed in the public interest by qualified persons.

### **The Native American Graves Protection and Repatriation Act of 1990.**

This Act directed Federal agencies to protect Native American human remains and associated burial items located on or removed from Federal land.

## **Chapter 2**

### **Management Alternatives**

#### **Introduction:**

The following alternatives are viable management alternatives developed with input from knowledgeable individuals and scrutinized by impartial professionals. **The alternatives are:**

**Alternative A: (Preferred) Prescribed burning would be utilized as a management tool. All wildland fires will be suppressed.**

**Alternative B: (No Action) No prescribed burning will be used. All wildland fires will be immediately suppressed.**

**Alternative C: No prescribed burning will be used. All wildland fires will be monitored and managed accordingly.**

**Descriptions of Alternatives Alternative A: (Preferred) Prescribed burning would be utilized as a management tool. All wildland fires will be suppressed.**

This alternative would allow for flexibility when considering management options. There are many benefits to the use of prescribed burning which, when combined with other management techniques such as mechanical treatments, allows for the best habitat management results. A considerable amount of effort will be expended in restoring the northern tallgrass prairie. The use of prescribed fire will allow for the successful re-establishment and restoration of these grasslands. Not only can time and money be saved, but the effects of fire management will meet habitat objectives in this fire dependent ecosystem better than any other method.

All wildland fires will be suppressed. Without the proper site preparation and pre-ignition controls involved in prescribed burning, wildland fires will have a greater likelihood of adversely affecting life, personal property, facilities, infrastructure and/or endangered species. Wildland fires will be suppressed utilizing Minimum Impact Suppression Techniques (MIST).

**Alternative B - (No Action) No prescribed burning will be used. All wildland fires will be immediately suppressed.**

This alternative prevents the use of prescribed burning as a management tool. Other, less effective and less efficient measures will be used to accomplish management objectives. All wildland fires will be suppressed immediately. The wetlands and water that are interspersed throughout the District would act to help contain wildland fires and reduce the occurrence of ignition. Without the proper site preparation and pre-ignition controls involved in prescribed burning, wildland fires have greater likelihood of affecting life, personal property, facilities, infrastructure and/or endangered species. Wildland fires will be suppressed utilizing Minimum Impact Suppression Techniques (MIST).

**Alternative C - No prescribed burning will be used. All wildland fires will be monitored and suppressed accordingly.**

This alternative prevents the use of prescribed burning as a management tool. Wildland fires would be allowed to burn in all areas of the District, as long as they meet the following criteria:

- . • must not endanger human life or health.
- . • must not endanger private or government-owned property.
- . • benefits must outweigh damage to natural resources.
- . • must not have any negative impact on endangered, threatened, or rare species.
- . • must be capable of being easily brought under control with the resources immediately available.
- . • are subject to a daily review of fire behavior and conditions in a Wildland Fire Implementation Plan. Wildland fires will be suppressed utilizing Minimum Impact Suppression Techniques (MIST).



## Chapter 3

### Affected Environment

#### General:

The St. Croix Wetland Management District, established in 1993, manages 41 waterfowl production areas (WPAs) totaling 7,500 acres within an eight county District of west-central Wisconsin (Location map, Figure 1) but at this time, WPA's are present only in St Croix, Polk and Dunn Counties. The Service has the authority to purchase WPAs in all eight counties and as this is done the FMP will be amended accordingly. The staff also administers an eight county Partners for Fish and Wildlife (PFFW) private lands district and an eight county Wildlife Management District, which involves management and enforcement of U.S. Department of Agriculture's Farm Service Agency Conservation Easements (CEs).

**Figure 1 - Location of St Croix WMD**



St. Croix Wetland Management District  
New Richmond, Wisconsin

## **Climate**

The District's climate is continental with cold winters and warm summers. The normal temperatures and annual precipitation averages for the period 1971-2000 for a region that includes Dunn, Pepin, Pierce, and St. Croix Counties and other southern counties present an adequate indication of the climate of the District. The region has an average annual temperature of 44.1 degrees Fahrenheit. July is the warmest month with an average temperature of 70.8 degrees Fahrenheit. The coldest month is January with an average temperature of 12.7 degrees Fahrenheit. Annual precipitation is 33.34 inches. The average monthly precipitation exceeds 3 inches for April, May, and September. The average monthly precipitation exceeds 4 inches for June, July, and August. (Source: State of Wisconsin Blue Book 2005-2006)

## **Physical Features**

The counties that lie within the St. Croix WMD owe much of their ecology to the glacial history of Wisconsin. Glaciers most recently flowed into Wisconsin about 25,000 years ago and reached their greatest extent, covering approximately two thirds of the state, some 14,000 to 16,000 years ago. The retreat of the ice front was interrupted a number of times by re-advances, the last one touched northwestern Wisconsin about 10,000 years ago. The area that contains most of the District's WPAs lies within the Western Prairie Ecological Landscape identified by Wisconsin in their *Strategy for Wildlife Species of Greatest Conservation Need*. This area is described as containing "the only true representative prairie potholes in the state. It is characterized by its glaciated, rolling topography and primarily open landscape with rich prairie soils and pothole lakes, ponds, and wet depressions, except for forested areas along the St. Croix River. Sandstone underlies a mosaic of soils. Silty loams that can be shallow and stony cover most of the area. Alluvial sands and peats are found in stream valleys."

The WPAs under current management occur in the historic vegetation types of Prairie, Oak Savanna, Southern Oak Forest, Southern Mesic Forest and Northern Mesic Forest. Currently the WPAs are grassland or forested in nature and include remnant tall grass prairie, seeded warm season prairie grasses, seeded cool season grasses, old brome pasture, oak savanna and southern hardwood forest. Scattered throughout are a few remnant native grasslands and oak savannas.

The District is almost entirely surrounded by private land, mostly former grasslands, agricultural lands and wetlands.

## **Vegetation**

The majority of the District consists of northern tallgrass prairie, grasslands and wetlands interspersed by shrub and scattered willow, aspen, maple-basswood and oak woodlands on glacial beach deposits.

Native prairie has declined 99.6 percent in areas historically covered by this ecosystem. (Samson and Knopf 1994). The need for tallgrass prairie habitat preservation and restoration has become more critical each year as the remaining native grassland fragments are removed and by the continuing declining status of many grassland bird species throughout their range. A native prairie is an excellent example of biodiversity, with its complex web of plants, mammals, birds, reptiles, amphibians, insects, and microscopic organisms. Native tallgrass prairie habitats can contain over

300 species of plants, 20 species of amphibians and reptiles, 260 species of birds and mammals and hundreds of species of insects, some so rare that only eight of some species have ever been collected. Many of our most endangered plant and animal species reside on remaining prairie fragments. Despite a broad consensus supporting the conservation of biological diversity, native prairie is largely neglected and continues to be lost (Samson and Knopf 1994). Large expanses of native prairie vegetation in private ownership have all but disappeared in western Wisconsin.

The Northern Tallgrass Prairie contains a mixture of native grasses including but not limited to; Little Bluestem (*Schizachyrium scoparium*), Blue Grama (*Bouteloua gracilis*), and the *Stipa* family of grasses including needle grass (*Hesperostipa comata*) and porcupine grass (*Hesperostipa spartea*). The transition upland/lowland grasslands contain Big Bluestem (*Andropogon gerardii*) and Indian grass (*Sorghastrum nutans*), while the wet lowland grasslands contain Prairie cordgrass (*Spartina pectinata*), and Blue joint reedgrass (*Calamagrostis Canadensis*).

### **Invasive Species**

Three categories of undesirable species (invasive, exotic, noxious) are found within the District. Invasive species are alien species whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Executive Order 13112 requires the District to monitor, prevent, and control the presence of invasive species. Exotic species are species that are not native to a particular ecosystem. Service policy directs the District to try to maintain habitats free of exotic species. Noxious weeds are designated by the U.S. Department of Agriculture or the Wisconsin Department of Agriculture as species which, when established, are destructive, competitive or difficult to control. Canada thistle and field bindweed (creeping Jenny), and leafy spurge are introduced species classified as noxious weeds in Wisconsin. Purple loosestrife and multiflora rose are introduced species classified as nuisance weeds.

Invasive, exotic and noxious weed species are relatively abundant within the District. These species are quite diverse and are found in most District habitats, although some are typically found in agricultural fields or lakes and ponds. Currently, most District control efforts focus on Canada thistle, spotted knapweed, leafy spurge, buckthorn and black locust. The principal invasive and exotic plant species within the District are reed canary grass, spotted knapweed, leafy spurge, garlic mustard, box elder, buckthorn, black locust, phragmites, hybrid cattail, brome and purple loosestrife. Exotic and invasive plant species pose one of the greatest threats to the maintenance and restoration of the diverse habitats found on WPAs. They threaten biological diversity by causing population declines of native species and by altering key ecosystem processes like hydrology, nitrogen fixation, and fire regimes. Left unchecked, these plants have come to dominate areas on some WPAs and reduced the value of the land as wildlife habitat. There is a bountiful seed source of many of these exotic/invasive species on the lands surrounding the WPAs, thus in order to be effective in our management plans, we must bring together a complex set of interests including private landowner, commercial, and public agencies.

### **Wildlife**

The District provides key tallgrass prairie and grassland habitat in the mosaic of prairies pothole wetlands that are so incredibly productive and important ecosystem habitats for resident and migratory birds. Grassland bird species have shown steeper, more consistent, and geographically more widespread declines than any other group of North American birds (Knopf 1994). Fifty-five



grassland plant or animal species in the U.S. are threatened or endangered (Samson and Knopf 1994). The District helps fill the void of this ever threatened grassland habitat complex so important to sustaining viable bird populations.

Wisconsin has developed a State Wildlife Action Plan that has analyzed the animal species of Wisconsin, identified those most in need of attention because they are declining or are dependent on habitat or places that are declining, and suggests conservation measures to ensure their survival. The document describing their analysis and findings is filled with information that helps identify conservation needs. For each Ecological Landscape of Wisconsin, it provides information on the overarching needs and opportunities in the landscape as well as lists of those natural communities which are major and important management opportunities. It also lists those Species of Greatest Conservation Need with high, moderate, or low degrees of probability of occurring in the landscape. The State's analysis provides a good basis for coordination of District activities with the State and other conservation organizations. This information is available in the State Wildlife Action Plan (<http://dnr.wi.gov/org/land/er/wwap/>).

The State of Wisconsin has designated the Western Prairie Habitat Restoration Area (WPHRA) as one of two important conservation focus areas within the state. When the first European settlers arrived in west central Wisconsin, in what is now St. Croix and Polk Counties, they found over 200,000 acres of tallgrass prairie and oak savanna. This complex of prairie, wetlands and oak savanna was very productive, both for wildlife and farming. Many of the local communities, such as Star Prairie and Erin Prairie, have names reflecting the surrounding prairie landscape. Only a small percentage of the original tallgrass prairie still exists, making it one of the rarest and most fragmented ecosystems in America. The goal of the WPHRA is to restore and protect 20,000 acres of wetland and grassland habitat in St. Croix and southwestern Polk counties.

### **Wetlands**

Wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin et al. 1979). It is estimated that the contiguous United States contained 221 million acres of wetlands just 200 years ago (Dahl 1990). By the mid-1970s, only 46 percent of the original acreage remained (Tiner 1984). Wetlands now cover about 5 percent of the landscape of the lower 48 states.

Wetlands are important to both migratory and resident wildlife. They serve as breeding and nesting habitat for migratory birds and as wintering habitat for many species of resident wildlife. Humans also benefit from wetlands as these habitats improve water quality and quantity, reduce flooding effects, and provide areas for recreation.

Wetlands are classified using a number of attributes including vegetation, water regimes (the length of time water occupies a specific area), and water chemistry. District wetlands are classified using the following water regime descriptions (Cowardin et al 1979):

- Temporarily flooded-surface water is present for brief periods during the growing season. The water table usually lies below the soil surface most of the season, so plants that grow in both uplands and wetlands are characteristic.

- Seasonally flooded-surface water is present for extended periods especially early in the growing season, but is absent by the end of the season in most years. When surface water is absent, the water table is often near the surface.
- Semi-permanently flooded-surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.
- Permanently flooded-water covers the land throughout the year in nearly all years. Vegetation is composed of obligate hydrophytes, such as cattails.

The District has focused on saving and restoring small wetlands. Wetland diversity is important because wetlands change continuously; a single wetland can not be maximally productive all the time. Waterfowl use different types of wetlands at different times during the breeding season. Laying hens may forage in ephemeral, temporary, and seasonal wetlands early in the season and shift to semi-permanent and permanent wetlands after the brood is hatched. Marsh birds need a variety of wetlands in close proximity so they can shift from one wetland to another as the wetlands cycle through different phases. Wetland complexes include a variety of basins, some shallow and some deep, in close proximity. Diverse wetland complexes are rare today because most shallow ephemeral, temporary, and seasonal basins have been drained.

Freshwater wetlands like those in the District are among the most productive in the world (Weller 1982). The dynamic water cycle creates a rich environment for many waterfowl and other marsh birds. Cycling water accelerates decomposition of marsh vegetation, resulting in a natural fertilizer. When the basins recharge in the spring, the water becomes a soup of nutrients and supports a diverse and healthy population of aquatic invertebrates, which feed reproducing waterfowl and marsh birds throughout the spring and summer.

Wetlands within the District occur in a diverse distribution of sizes, types, locations, and associations. The WPAs have approximately 1,452 acres of wetlands ranging in size from small seasonal basins less than half an acre in size to large permanent marshes.

### **Threatened, Endangered, and Candidate Species**

No Federally listed Threatened and Endangered (T&E) species are known to occur on the District. One active bald eagle nest is located on the Oak Ridge WPA in St. Croix County. Eagles are occasionally seen feeding on Waterfowl Production Areas throughout the District.

The Karner blue butterfly (KBB) is listed as endangered in all but Pepin and Pierce Counties within the District. To date, no KBBs have been identified on USFWS lands, nor has wild lupine, a critical component of KBBs habitat, been found on USFWS lands within the District. All actions taken under the FMP will consider effects on listed or potentially listed species.

### **Mammals**

Common mammal species for the District include white-tailed deer, raccoon, black bear, beaver, muskrat, mink, red squirrel, gray squirrel, eastern cottontail and numerous small mammals such as eastern chipmunks, deer mouse, meadow jumping mouse, meadow vole, shorttail shrew, white-footed mouse, thirteen lined ground squirrel and plains pocket gopher. Red fox are the most common carnivores of the area followed by coyote and gray fox. An inventory of mammal species has not been completed for the District.

## **Fish**

Data from surveys conducted in 1983-1992 indicated that seven species of fish were found on WPAs. These species were yellow perch, white sucker, golden shiner, pumpkinseed, fathead minnow, stickleback and mud minnow. In addition, brown trout are found in the Willow River which flows through the Betterly WPA.

## **Invertebrates**

Data from a study conducted from 1983 to 1992 indicated that there were 250 invertebrate taxa collected in WPA wetlands and adjacent uplands. This included 54 terrestrial taxa and 196 aquatic invertebrate species. A complete listing of invertebrate species can be found in Evard and Lillie (1996). Freshwater invertebrates are an extremely important food source for waterfowl, especially for hens during spring migration and egg laying.

## **Reptiles and Amphibians**

Streams, ditches and wetland basins provide the aquatic habitat required for a variety of turtles, frogs, toads, salamanders, and snakes. Data from state lists indicates that 19 species could be found on District lands. No surveys have been conducted on District lands to document species presence or distribution, although some species such as snapping turtle, painted turtle, and spring peepers are commonly seen or heard.

Reptiles and amphibians are important food sources for many mammals, birds and fish. Their numbers and diversity are often indicators of the health of an ecosystem. Many species of reptiles and amphibians are declining on a state and nationwide basis.

## **Chapter 4**

### **Environmental Consequences**

#### **Impacts Common to All Alternatives**

There are potential impacts common to all of the proposed alternatives. They are found as follows and not repeated in the individual alternatives.

#### **Cultural Resources**

Impacts to archeological resources by fire resources vary. Preparation for prescribed fire activities or to control wildfire are subject to Section 106 of the National Historic Preservation Act. Rather than repeat the protocols and procedures followed within region 3 of the U.S. Fish and Wildlife Service here, the accepted methodology is described in detail and found in Appendix A of the St Croix WMD Fire Management Plan.

The alternatives described and considered for selection are as follows:

**Alternative A: (Preferred) Prescribed burning would be utilized as a management tool. All wildland fires will be suppressed.**

**Habitat Impacts**

This alternative would allow for flexibility when considering management options, particularly in restoration and maintenance of northern tallgrass prairie ecosystems. Prescribed fire will allow for the control of undesirable grasses and encroaching woody vegetation in moist soil areas, on grasslands, and levees. The transition of previously farmed agricultural lands to restored native grasses is best accomplished and maintained with the use of prescribed fire.

Fire may also be used as a tool to eliminate woody vegetation encroaching in moist soil areas and to reduce the canopy of dense stands of vegetation. Vegetation control on moist soil units may be more effective with the periodic use of fire, and fire may trigger germination of beneficial plants.

**Biological Impacts**

Conversion of prairie lands and wetlands to desirable native grasses will provide higher quality habitat for migratory grassland birds, ground nesting birds, and other wildlife species. A mixture of grasses will also prolong the time that valuable nutrients are available to wildlife.

**Listed Species**

A bald eagle nest has been documented within the District boundary. The probability of fire threatening or damaging the nest is very low. Prescribed fire operations within the vicinity of the nest would be timed to avoid disturbance during the active nesting season.

Restoration of the native prairie grassland should greatly enhance the habitat conditions available for the Karner Blue Butterfly should it ever be determined to be present on the District.

**Administration**

Prescribed burning is generally more cost-effective than other management tools. Without the use of prescribed burning, heavy equipment and chemicals will be required to accomplish management goals of habitat restoration. Heavy equipment is expensive and time consuming to operate. Chemical use, for controlling undesirable vegetation is costly, demands strict oversight, and may pose unknown risks to the environment. Further, these two methods are not natural to the ecosystem as is fire.

**Health and Safety**

There is some risk of visitors being on or near an area where either wildland fire or prescribed fire operations are ongoing. Mitigation of this risk involves the use of closures, signage and patrol by District staff. Employees would be at some risk during all fire operations including prescribed fire application. The use of chemicals for the control of undesirable vegetation can also pose a health risk to the applicator and the environment.

## **Cumulative Impacts**

There are several potential impacts that may be considered cumulative. One is the effect of smoke from either wildland or prescribed fires on visibility within the District area. Proper planning of prescribed fire operations would mitigate a large percentage of this impact over the immediate area. Prescribed fire smoke effects on regional haze and that impact on the visibility in the area is not known but can be expected to add to haze levels on burn days. Smoke from wildland fire would also have an effect on regional haze but is considered a natural event under the EPA air quality regulations.

The second cumulative effect is related to restoration of native vegetation to District grasslands, supported by fire application. Under this alternative, prescribed fire use would restore and maintain the valuable northern tallgrass prairie ecosystem. Continued loss of prairie habitat on federal lands within the District area would cease.

A third potential effect is the enhancement of neotropical and migratory bird populations with improved habitat conditions. Prescribed fire planning would address issues of timing to reduce conflicts with nesting and fledging seasons. Additionally, grasslands are recognized by many as the most imperiled ecosystem worldwide. The avian assemblages associated with grasslands also are at risk - grassland bird populations have shown steeper, more consistent, and more geographically widespread declines than any other guild of North American species (Department of the Interior 1996). Breeding Bird Survey data from 1966-1993 indicate that almost 70 percent of 29 grassland bird species adequately surveyed by BBS data had negative population trends; more than half of these were statistically significant (Northern Prairie Wildlife Research Center, USGS). Restoration of the northern tallgrass prairie would increase the acreage of this valuable and currently reduced cover type so important to bird habitat. Since settlement of the prairie region in conjunction with westward expansion by European immigrants, a high percentage of the acreage of the tallgrass prairie has declined to seriously low levels. Habitat restoration on St Croix WMD result in increased acreage of tallgrass prairie.

**Alternative B - (No Action) No Prescribed burning will be used. All wildland fires will be immediately suppressed.**

## **Habitat Impacts**

Under this alternative, District habitats can be managed successfully; however, management is much more costly and labor intensive. Without the ability to conduct prescribed burns on the District, habitat conditions will continue to deteriorate for area wildlife. Grassland conditions would remain in a deteriorated state, making them less attractive to migrating grassland birds, ground nesting birds, and other wildlife species. Increased encroachment of undesirable woody fuels would likely continue in the absence of fire.

Management options for dealing with invading moist soil plants, and proliferating aquatic emergent vegetation is limited to mechanical and chemical options.

## **Biological Impacts**

Nearly every species which relies upon the grassland, wetland habitat complex would be



potentially negatively impacted should management lose the ability to properly utilize prescribed fire as a management tool. Growth of trees and shrubs in these grassland areas would greatly reduce their value for grassland nesting species of birds. Many of these bird species will not nest or reproduce successfully near trees.

### **Listed Species**

Management practices involving mechanical site disturbances to control undesirable vegetation, may leave soils barren and exposed to the elements. Increased surface erosion is possible under these conditions. The siltation of wetlands within the District could take place resulting in a declining water quality issue and is a major concern. A decline in water quality and the fish populations would have a negative impact on the bald eagle.

There is the potential for wildland fires under extreme drought conditions to result in increased runoff due to the removal of the grass and duff layer with a resultant decrease in water quality. Wildfires occurring under extreme conditions could also have direct negative effects on Karner Blue populations or a key component of it's habitat such as wild lupine.

### **Administration**

Heavy equipment and chemicals will be required to accomplish management goals. Heavy equipment is expensive to acquire and maintain, time consuming to operate and requires specialized operator training. Mechanical methods of controlling vegetation along levees and in moist soil units are costly and labor intensive. The use of chemicals is costly and demands strict supervisory oversight and may pose unknown risks to the environment. Mechanical and chemical treatments on a regular basis are not as cost effective as prescribed fire application.

The planned restoration of District grasslands to native tallgrass prairie would require chemical alternatives and mowing. Increased use of heavy equipment and chemicals, for controlling undesirable vegetation is more costly. The labor required to complete the mechanical methods, is more expensive due to the hours consumed by equipment operations, cost of maintenance and fuel, chemical costs, etc. In addition, the use of pesticides requires strict oversight and may pose unknown risks to the environment.

### **Health and Safety**

The use of chemicals for the control of undesirable vegetation can pose a health risk to the applicator. There is some risk to District visitors under this alternative from wildland fire but none from prescribed fire operations. Wildland fire suppression risks to employees is identical to the risk under Alternative A, there is no employee risk from prescribed fire operations since they would be banned from use under this alternative.

### **Cumulative Impacts**

There are several potential impacts that may be considered cumulative. One is the effect of smoke from wildland fires on the visibility within the District area. Smoke from wildland fire would also have an effect on regional haze but is considered a natural event under the EPA air quality regulations. Prescribed fire is not an issue under this alternative.

The second cumulative effect is related to restoration of native prairie grassland from their current condition by the use of chemical or mechanical means. Chemical and mechanical methods are much more costly to implement than is prescribed fire. Under this alternative, a loss of, or reduction in funding to support equipment and chemical costs could potentially cause a loss of prairie acreage on the District and, although small, contribute to the loss of prairie nationally.

A third potential effect is the enhancement of neotropical bird populations with improved habitat conditions. Mechanical and chemical treatments would address issues of timing to reduce conflicts with nesting and fledging seasons.

**Alternative C - No Prescribed Burning will be used. All wildland fires will be monitored and managed accordingly.**

**Habitat Impacts**

Efforts will go forward to restore and maintain prairie grasslands using chemical and mechanical means, which will be less effective than fire, but may meet the objectives. Without the ability to conduct prescribed burns on the District habitat, conditions will deteriorate for area wildlife. In the absence of fire, wetlands may deteriorate and become more susceptible to invasion by undesirable woody vegetation. Management options, for dealing with invading moist soil plants and proliferating aquatic emergent vegetation, are limited to mechanical and chemical options.

**Biological Impacts**

Less than optimal management yields fewer waterfowl and associated species, such as puddle ducks which are dependent upon a healthy wetland complex for nesting and brood habitat. Prairie grassland quality may suffer and therefore, dependant species such as sharptail grouse, prairie chicken, and native plant species may suffer. Use of chemicals in the absence of fire may pose unknown threats to wildlife.

Grassland conditions would deteriorate, making them less attractive to migrating birds, ground nesting birds, and other wildlife species. Without the effective use of fire, wetlands and moist soil areas will likely experience invasion by undesirable vegetation species forcing waterfowl, shorebirds, and other species to look for suitable habitat elsewhere. Nearly every species resident to the District would be negatively impacted should management lose the ability to properly utilize prescribed fire. Wildland fires would be allowed to burn as long as they weren't posing a threat to private, government, historical, or economically important properties. Under this Alternative, whole sections of upland grasslands and wetland areas could potentially be destroyed. This could cause a major shift in habitat types and wildlife usage, and could also potentially threaten wildlife populations on the District. Species utilizing wetlands for nesting and resting cover could be adversely affected due to the loss of habitat and the destruction of plant species. In addition, depending on the time of occurrence of the wildfire, ground nesting birds could be severely impacted through the loss of active nests.

Management would be by mechanical and chemical means. The natural maintenance of the northern tallgrass prairie and associated wetland ecosystem through the use of prescribed fire would not occur. This would have long term implications regarding degradation of this critical habitat.

## **Listed Species**

Management practices involving mechanical site disturbances to control undesirable vegetation, may leave soils barren and exposed to the elements. Increased surface erosion is possible under these conditions. The siltation of wetlands within the District could take place resulting in a declining water quality issue and is a major concern. A decline in water quality and the fish populations would have a negative impact on the bald eagle.

There is the potential for wildland fires under extreme drought conditions to result in increased runoff due to the removal of the grass and duff layer with a resultant decrease in water quality. Wildfires occurring under extreme conditions could also have direct negative effects on Karner Blue populations or a key component of it's habitat such as wild lupine.

## **Administration**

Mechanical methods of restoring and maintaining vegetation is costly and labor intensive. The use of chemicals is costly and demands strict supervisory oversight. Fire is the most cost-effective means for accomplishing management goals and needs.

Prescribed burning is generally more cost-effective than other management tools. Without the use of prescribed burning, heavy equipment and chemicals will be required to accomplish management goals of habitat restoration. Heavy equipment is expensive and time consuming to operate. Chemical use, for controlling undesirable vegetation is costly, demands strict oversight, and may pose unknown risks to the environment. Further, these two methods are not natural to the ecosystem as is fire.

## **Health and Safety**

The use of chemicals for the control of undesirable vegetation can pose a health risk to the applicator. There is some risk to District visitors under this alternative from wildland fire but none from prescribed fire operations. Wildland fire suppression risks to employees is identical to the risk under Alternative A, there is no employee risk from prescribed fire operations since that are banned from use.

The use of chemicals for the control of undesirable vegetation can also pose a health risk to the applicator and the environment. There is some risk of visitors being near an area where wildland fire use operations are ongoing. Mitigation of this risk involves the use of closures, signage and patrol by District staff. There is no employee risk from prescribed fire operations since that technique is banned from use.

## **Cumulative Impacts**

There are several potential impacts that may be considered cumulative. One is the effect of smoke from wildland fires on the visibility of the District airshed. Smoke from wildland fire would also have an effect on regional haze but is considered a natural event under the EPA air quality regulations. Monitored fires are likely to be longer duration events.



The second cumulative effect is related to restoration of native vegetation to District prairie grasslands, supported by chemical or mechanical means. Under this alternative, a loss of, or reduction in funding to support equipment and chemical costs could potentially cause a loss of prairie acreage on the District and, although small, contribute to the loss of prairie nationally.

A third potential effect is the enhancement or reduction of neotropical and migratory bird populations with changing habitat conditions. Mechanical and chemical treatments would have to address issues of timing to reduce conflicts with nesting and fledging seasons. Other cumulative impacts from expanded fire coverage under this alternative include possible migrations of many species to less desirable areas, a decrease in biodiversity, a decline in waterfowl usage, damage to threatened and endangered plants as well as a decline in endangered animal species populations. These declines could result from reduced habitat and water quality, reduced plant diversity.

### Summary of Environmental Consequences by Alternative

<b>Impact</b>	<b>Alternative A - Full Wildland Fire Suppression, Prescribed fire applied as necessary. May Include the use of mechanical fuels treatments as needed.</b>	<b>Alternative B - Full Wildland Fire Suppression, No prescribed fire applied (No Action Alternative)</b>	<b>Alternative C - Wildland Fire Monitored and Managed Accordingly, No Prescribed Fire Applied.</b>
Environmental Justice	No Environmental Justice Issues identified	No Environmental Justice Issues identified	No Environmental Justice Issues identified
Cultural Resources	Wildland Fire Impacts expected to be minimal	Wildland Fire Impacts expected to be minimal	Wildland Fire Impacts expected to be minimal
Habitat	Habitat Improved	Potential decline in habitat quality.	Potential decline in habitat quality.
Biological	Improvement	Low possibility of any improvement	Potential decline in biological quality and diversity.
Listed Species	No Change	No Change	No Change
Administrative	Reduced Management Impacts	Higher costs for management are likely	Higher costs for management are likely
Health and Safety	Some increased risk in prescribed fire operations. No change to public safety.	No prescribed fire employee risk. No change to public safety.	Some decrease to employee safety. Potential elevated risk to public safety.
Cumulative	Improvement of overall northern tallgrass prairie and wetland ecosystem habitat. Greatly improved habitat for migratory bird species and waterfowl, along with resident plant and animal species.	No meaningful change	No meaningful change

## Chapter 5

### List of Preparers

**Tim Hepola, Regional Fire Ecologist, Ft. Snelling**

**Tom Kerr, District Manager, St Croix WMD**

**Joel Kemm, Prescribed Fire Specialist, St Croix WMD**

**John Dobrovolny, Regional NEPA Coordinator, Ft Snelling**

## Chapter 6

### List of Agencies, Organizations, and Persons Contacted

**Elected Federal Officials Federal Agencies Wisconsin Department of Natural**

**Resources City/County/Local Governments**

**U.S. Post Office Public Libraries Organizations**

## Chapter 7 **EDIT**

### Public Comments and Responses

This Fire Management Plan and Environmental Assessment were opened for a 30 day public review and comment period starting on xxxxxx, 2007. The news release is found on the next page.

The review period closed with no further public comment or participation.

Department of the Interior Environmental Assessment  
U.S. Fish & Wildlife Service St Croix NWR Fire Management Plan

FOR IMMEDIATE RELEASE Contact: Joel Kemm 715-246-7784

#### **U.S. Fish and Wildlife Service Seeks Public Comment on draft Fire Management Plan for the St Croix Wetland Management District**

The U.S. Fish and Wildlife Service is seeking public comment on a draft Fire Management Plan for St Croix Wetland Management District in west-central Wisconsin. Once approved, the plan will direct the use of fire for managing habitats and responding to wildfires on the District for the next five years.

Written comments on the FMP can be mailed to Tom Kerr at St Croix Wetland Management District, faxed to the fax number above, or sent via e-mail to [Tom\\_Kerr@fws.gov](mailto:Tom_Kerr@fws.gov). Comments should be received by the District by the close of business xxxxxx, 2007.

The St. Croix Wetland Management District, established in 1993, manages 41 waterfowl production areas (WPAs) totaling 7,500 acres within an eight county District of west-central Wisconsin (Location map, Figure 1) but at this time, WPA's are present only in St Croix, Polk and Dunn Counties. The Service has the authority to purchase WPAs in all eight counties and as this is done the FMP will be amended accordingly. The District also administers 14 conservation easements totaling 438 acres. WPAs consist of wetland habitat surrounded by grassland and woodland communities. While WPAs are managed primarily for ducks and geese, they also provide habitat for a variety of other wildlife such as grassland birds, shorebirds, wading birds, mink, muskrat, wild turkey, and deer.

The U.S. Fish and Wildlife Service is the principal federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System, which encompasses 545 national wildlife Districts, thousands of small wetlands and other special management areas. It also operates 69 national fish hatcheries, 63 Fish and Wildlife Management offices and 81 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally

significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Assistance program, which distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

## **Chapter 8**

### **References Cited**

**St Croix Wetland Management District Draft Environmental Assessment to the Comprehensive Conservation Plan (CCP)**

**FINAL DRAFT**

## **Chapter 9**

### **Intra-Service Section 7 Biological Evaluations**

**FINAL DRAFT**

08-I-0004

**Intra-Service Section 7 Biological Evaluation Form**  
Region 3

Originating Person: Joel Kemm Date Submitted: 9/06/2007  
Telephone Number: 715-246-7784

I. **Service Program and Geographic Area or Station Name:**  
Refuges – St. Croix Wetland Management District

II. **Flexible Funding Program** (e.g. Joint Venture, etc) if applicable:

III. **Species/Critical Habitat:** List federally-listed, proposed, and candidate species or designated or proposed critical habitat that occur or may occur within the action area:

Karner Blue Butterfly (*Lycaeides Melissa samuelis*)

The Karner blue butterfly (KBB) is listed as endangered in all but Pepin and Pierce Counties within the District. To date, no KBBs have been identified on USFWS lands, nor has wild lupine, a critical component of KBBs habitat, been found on USFWS lands within the District however, protocols have been established to minimize the negative effects of prescribed burning and will be described below.

IV. **Location:** Location of the project including County, State and TSR (township, section & range):

The St. Croix Wetland Management District covers eight counties in west central Wisconsin including Burnett, Washburn, Polk, Barron, St. Croix, Dunn, Pierce and Pepin. Project locations are on 43 Waterfowl Production Areas located in St. Croix, Polk and Dunn Counties.

V. **Project Description:** Describe proposed project or action or, if referencing other documents (e.g. the Grant Proposal), prepare an executive summary (attach additional pages as needed):

**Prescribed Burning on WPAs.**

The proposed action is the establishment of a Fire Management Plan (FMP) to facilitate the use of prescribed fire to manage prairie habitats and to manage the suppression of wildfire on the St Croix Wetland Management District. Fire has been documented to be a natural process, required by many native prairie species to survive the vigorous aggressiveness of invasive species.

Three main fire management goals exist for the District: the protection of adjacent private property from wildland fire, the proactive reduction of hazardous fuels, and resource management (to renovate, restore, create, or maintain diverse native plant communities to restore and perpetuate indigenous wildlife and habitat).

VI. **Determination of Effects:**

**(A) Description of Effects:** Describe the effects of the action(s) on the species and critical habitats listed in item III. For each section 7 determination made below, attach an explanation of such determination



for all applicable species or critical habitat. Documentation should justify your determination.

#### Karner Blue Butterfly

Karner Blue Butterflies have not been found on District lands to date. Wild lupine, a key component of KBB habitat has also not been found on District lands.

**Effect:** Until wild lupine has been established, Karner Blue Butterflies would not be expected to be found on WPAs, so no adverse effects are expected.

In anticipation that someday Karner Blue may be found on District WPA's, St Croix WMD staff will consider protocols to appropriately use prescribed fire as a management tool. In using prescribed fire as a management tool, two general guidelines apply. The first is that the positive effects of fire on Karner blue habitat must be weighed against any negative impacts to the butterfly. Fire is known to be an important component in maintaining savanna/barrens habitat that acts by reducing accumulated plant litter, exposing bare soil, reducing nitrogen content of the soil, promoting increased soil temperatures, and setting back growth of plants that compete with native, desirable vegetation. However, fire can also have negative effects on the butterfly (and other invertebrates) such as direct mortality and/or reduction of food plants.

Recommendations for Prescribed Fire Management of Karner Blue Habitat:

1. **Burn Frequency:** The optimal burn frequency per burn unit with respect to Karner Blue is no greater than once every 4 years to allow populations ample time to recover. Design burn rotations so that populations can rebuild numbers on burned areas before adjoining source colonies are burned.
2. **Number/Size of Burn Units:** Divide contiguous Karner Blue breeding Habitat into a minimum of 3 burn units. For each prescribed burn, leave at least 2 unburned units with an adequate firebreak between them to protect against wildfire or other chance events that may damage the residual population. Where burn units are greater than 40 acres, maintain over the long-term an unburned refugium within the burn unit by alternative management such as mowing or herbicide use, or simply exclude an occupied lupine area during a fire for the short-term. Such a measure will promote greater Karner population survival and facilitate post-burn Karner recolonization throughout the treated unit.
3. **Type of Burn:** Vary the degrees and intensities of burns. Aim for patchy burns, leaving a mosaic of burned and unburned areas whenever possible and compatible with the overall needs of the habitat.
4. **Timing of Burns:** Fire is known to have different effects depending on the season it occurs. Consult the Fire Effects Information System to research methods to favor/discourage community components by altering seasonal burning.

Additional management guidelines may be found in the "Final Karner Blue Recovery Plan – September, 2003" prepared by the Karner Blue Butterfly Recovery Team for the U.S. Fish and Wildlife Service, Region 3.

**(B) Determination:** Determine the anticipated effects of the proposed project on species and critical habitats listed in item III. Check all applicable boxes and list the species associated with each determination.

**Response requested**

"No Effect" This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. List species applicable to this determination (or attach a list): **Karner Blue Butterfly**

Concurrence  
(optional)

"May Affect but Not Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is not likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Concurrence

"May Affect and Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Formal  
Consultation

"Not Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Concurrence  
Informal Conference  
optional

"Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Formal Conference

Thomas M. Ken 9/14/2007

Signature

Date

[Supervisor at originating station]



**Reviewing Ecological Services Office Evaluation** (check all that apply):

A. **Concurrence**  **Nonconcurrence**   
Explanation for nonconcurrence: \_\_\_\_\_

B. **Formal consultation required** \_\_\_\_\_  
List species or critical habitat unit \_\_\_\_\_

C. **Conference required** \_\_\_\_\_  
List species or critical habitat unit \_\_\_\_\_

*Trise Clemency*  
Signature [Reviewing ES Office Supervisor]

Date 10/10/07

Name of Reviewing ES Office GBFO

O:\TE\S7\FORMS\R3intra-s7\_form.wpd\14 September 2007  
JSzymanski\19 June 2002

00-1-0000

**Intra-Service Section 7 Biological Evaluation Form**  
Region 3

Originating Person: Joel Kemm Date Submitted: 9/10/2007  
Telephone Number: 715-246-7784

- I. **Service Program and Geographic Area or Station Name:**  
Refuges – St. Croix Wetland Management District
- II. **Flexible Funding Program** (e.g. Joint Venture, etc) if applicable:
- III. **Species/Critical Habitat:** List federally-listed, proposed, and candidate species or designated or proposed critical habitat that occur or may occur within the action area:

Karner Blue Butterfly (*Lycaeides Melissa samuelis*)

The Karner blue butterfly (KBB) is listed as endangered in all but Pepin and Pierce Counties within the District. To date, no KBBs have been identified on USFWS lands, nor has wild lupine, a critical component of KBBs habitat, been found on USFWS lands within the District however, protocols have been established to minimize the negative effects of brush/tree cutting and will be described below.

- IV. **Location:** Location of the project including County, State and TSR (township, section & range):

The St. Croix Wetland Management District covers eight counties in west central Wisconsin including Burnett, Washburn, Polk, Barron, St. Croix, Dunn, Pierce and Pepin. Project locations are on 43 Waterfowl Production Areas located in St. Croix, Polk and Dunn Counties.

- V. **Project Description:** Describe proposed project or action or, if referencing other documents (e.g. the Grant Proposal), prepare an executive summary (attach additional pages as needed):

**Mechanical Fuel Treatments on WPAs.**

In an effort to restore the historic native prairie and oak savanna vegetation found on many of the WPAs in the Wetland Management District, the FWS will be removing trees and shrubs from restoration sites. Many of these trees are found adjacent to property boundaries, in open fields, at old building sites, along old fence lines, in wood lots and in pine plantations. The trees and shrubs will be removed by one of several techniques including contract timber sales, special use permits, contract tree and shrub removal or FWS staff using equipment to remove trees and shrubs. Most of the tree species to be removed include buckthorn, green ash, black locust, Siberian elm and box elder. Pine plantations will also be removed through the habitat restoration process. Native oak species (burr oak, white oak, Hill's oak are most common) will not be removed from the restoration sites. Trees and shrubs are removed at all times of the year with preference for winter removal or removal during times when soil conditions permit equipment operation without resulting in rutting or other soil damage. Most sites are located on sandy well drained soils. Following tree removal, the sites will be burned to remove any slash or tree residue and then planted with local ecotype native grass and forb seed. A cover crop may be planted for one or two years to provide a fuel source to carry the fire and assist

with removing slash from the site. Sites will be intensively burned for several years to reduce the growth of shrubs and trees.

VI. **Determination of Effects:**

**(A) Description of Effects:** Describe the effects of the action(s) on the species and critical habitats listed in item III. For each section 7 determination made below, attach an explanation of such determination for all applicable species or critical habitat. Documentation should justify your determination.

**Karner Blue Butterfly**

Karner Blue Butterflies have not been found on District lands to date. Wild lupine, a key component of KBB habitat has also not been found on District lands.

**Effect:** Until wild lupine has been established, Karner Blue Butterflies would not be expected to be found on WPAs, so no adverse effects are expected.

In anticipation that someday Karner Blue may be found on District WPA's, St Croix WMD staff will consider protocols to appropriately use varied habitat management tools. Mechanical management tools such as cutting, girdling, mowing, chipping may be used to stimulate aspects of historical grazing and browsing and even to achieve many of the effects of fire, such as reducing surface fuel accumulation (thereby reducing the intensity of subsequent fire), opening ground for seed germination and seedling establishment, and curbing growth of competing woody and herbaceous plants. Because mechanical management is believed, at least in the short term, to result in lower mortality of Karner blues and other faunal components of the community than does prescribed fire, it should be strongly considered as an alternative or a complement to fire management.

Recommendations for mechanical management of Karner Blue Habitat:

- a. Set blade height no lower than 6-8 inches to avoid the many eggs deposited on vegetation below that level.
- b. Mow no more frequently than once per year.
- c. Divide occupied habitat into at least 2 units each of which supports lupine and nectar sources for adults during both flight periods. Leave at least one management unit untreated each season.
- d. Mow lupine areas no sooner than September 1, once all second-flight females have laid their eggs and died.
- e. Let clipped vegetation remain where it falls, as it will likely contain eggs (see below for large amounts of woody brush). Clippings may be collected and deposited in another site that supports lupine.
- f. If possible use light equipment likely to have the least impact on vegetation and Karner Blue eggs.
- g. When brushing woody growth, remove the slash from the cut area or chip it so it doesn't cover lots of lupine. Minimize harm to the butterflies by cutting in the winter.
- h. Logging/chipping/thinning of pine plantations and other closed-canopy stands of trees will be used to expand habitat for Karner blue, however precautions will be taken to minimize the effects of such activities on Karner blue and its habitat and will follow



guidelines discussed in "Final Karner Blue Recovery Plan – September, 2003"  
prepared by the Karner Blue Butterfly Recovery Team for the U.S. Fish and Wildlife  
Service, Region 3.

**(B) Determination:** Determine the anticipated effects of the proposed project on species and critical habitats listed in item III. Check all applicable boxes and list the species associated with each determination.

**Response requested**

"No Effect" This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. List species applicable to this determination (or attach a list): **Karner Blue Butterfly**

Concurrence  
(optional)

"May Affect but Not Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is not likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Concurrence

"May Affect and Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Formal  
Consultation

"Not Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Concurrence  
Informal Conference  
optional

"Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

\_\_\_\_\_ Formal Conference

Thomas M. Ken 9/14/2007  
Signature Date  
[Supervisor at originating station]

**Reviewing Ecological Services Office Evaluation** (check all that apply):

A. Concurrence  Nonconcurrency   
Explanation for nonconcurrency:

B. Formal consultation required   
List species or critical habitat unit

C. Conference required   
List species or critical habitat unit

Louise Clamen  
Signature [Reviewing ES Office Supervisor]

Date 10/10/07

Name of Reviewing ES Office GBFO