

**TWO RIVERS
NATIONAL WILDLIFE REFUGE**

**HUNTING CHAPTER of
VISITOR SERVICES PLAN
JUNE 2013**

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INTRODUCTION

This Hunt Plan specifies hunting opportunities on Two Rivers National Wildlife Refuge as outlined in the **Mark Twain National Wildlife Refuge Complex Comprehensive Conservation Plan, approved July 27, 2004**, and the **Final Environmental Assessment and Finding of No Significant Impact for this Hunting Chapter of the Visitor Services Plan**.

This Hunting Chapter of the Visitor Services Plan describes in detail hunting opportunities on the Refuge and functions as the Refuge's Hunting Plan. Hunting is allowed in few areas of Two Rivers National Wildlife Refuge. Opening the Clarksville Island Division to hunting and expanding the species allowed to be hunted on the Calhoun Division will improve the limited hunting opportunities offered by the Refuge.

Description of the Refuge:

Two Rivers National Wildlife Refuge (NWR) was established in 1958 to protect and enhance habitat for migratory birds. The Refuge was managed as part of the Mark Twain National Wildlife Refuge Complex until 2000 when it was designated as a separate refuge and given its present name.

Spanning 60 miles of the Mississippi River in the states of Illinois and Missouri and 9 miles of the Illinois River, Two Rivers NWR is located near the confluence of the Mississippi and Illinois Rivers. The Refuge currently encompasses 9,225 acres of riverine and floodplain habitat scattered around the confluence.

The Refuge includes six divisions – Calhoun, Gilbert Lake, Batchtown, Portage Island, Apple Creek and Clarksville Island. The mosaic of wetlands, open water, bottomland forests and prairies provides habitat for numerous mammals, amphibians, reptiles, fish and birds. Two Rivers NWR functions as an important link for migratory birds that rest, feed, and winter along the Mississippi Flyway. More than 300 different species of birds funnel through this important river juncture on their fall migration, including more than 5,000,000 ducks and 50,000 geese. Open water pools, backwater sloughs, small impoundments, wetland management units and a cooperative farming program all contribute to this objective. In addition, more than 1,000 Bald Eagles over-winter in the area and the Refuge is one of the few remaining places where the *Boltonia decurrens* (decurrent false aster), a federally listed threatened plant, can still be found.

I. CONFORMANCE WITH STATUTORY AUTHORITY

The National Wildlife Refuge System includes federal lands managed primarily to provide habitat for a diversity of fish, wildlife and plant species. National wildlife refuges are established under many different authorities and funding sources for a variety of purposes.

Two Rivers NWR was established for the protection of wildlife and to provide public recreation. The Refuge's establishing authorities and related purpose include:

Migratory Bird Conservation Act

"...for uses as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C.715d

Fish and Wildlife Coordination Act

"...shall be administered by him (Secretary of the Interior) directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon,...." 16 U.S.C. 664

Refuge Recreation Act

"...suitable for - (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species...." 16 U.S.C. 460k-1 "....the Secretary....may accept and use....property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors...." 16 U.S.C. 460k-2 (16 U.S.C. 460k-460k-4), as amended).

The ability to hunt on refuges is covered under the National Wildlife Refuge Administration Act, 16 U.S.C 688dd (a) (2). This Act was amended in 1997 by the National Wildlife Refuge Improvement Act of 1997 (Public Law 105-57). In addition to fishing, wildlife observation, photography, environmental education and interpretation, hunting is one of six priority public uses that were identified in the Act (1997). The hunting program on the Refuge will conform to this statutory authority by the following legislation:

"...compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System and the purposes of many refuges...." Public Law 105-57, 111 STAT.1254, Sec.5. (B) (National Wildlife Refuge Improvement Act of 1997).

Included in this plan is a regulation to protect the bald eagle in accordance with the Bald and Golden Eagle Protection Act (The Eagle Act) (16 U.S.C. 668-668c). The Act provides criminal and civil penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" in many forms but also as to "disturb." To disturb is defined in the act as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1)

injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In 2011 the U.S. Fish and Wildlife Service, in conjunction with partnering states and organizations, developed "Conserving the Future- National Wildlife Refuges and the Next Generation" a vision for how National Wildlife Refuges will connect with the conservation constituency and lead future generations in becoming stewards for wildlife and wildlands. Recommendation 17 of this document emphasizes increasing quality hunting and fishing opportunities on National Wildlife Refuges.

Additional authority delegated by Congress, federal regulations, executive orders and several management plans, such as the 2004 Comprehensive Conservation Plan (CCP) for the Mark Twain National Wildlife Refuge Complex, guide the operation of the Refuge. The Compatibility Determination in Appendix F of the CCP contains a list of the key laws, orders and regulations that provide a framework for the proposed action.

Relationship to other plans and documents

In 2004 a Comprehensive Conservation Plan (CCP) and associated Environmental Assessment (EA) and Compatibility Determination (CD) were developed and approved for the Mark Twain National Wildlife Refuge Complex, which includes Two Rivers National Wildlife Refuge. The 2004 CCP, EA, and CD address future management of the Refuge, including visitor services. This Hunting Plan is a step down plan of the CCP, and as such, contains more detailed information describing the hunting program on the Refuge. This Hunting Plan will also be included as a chapter of the Visitor Services Plan upon its completion.

Goal 6, Public Use and Education Objective 6E of the CCP states that the Refuge will "improve the quality, as measured through visitor satisfaction surveys, and safety of the hunting program and increase opportunity where appropriate, in accordance with sound biological management objectives..." The proposed hunting opportunities provided in this Hunting Plan are an extension of this objective.

The Environmental Assessment in the CCP includes alternatives for potential hunting opportunities. The EA outlines four alternatives pertaining to Public Use and Education which include the following preferred alternative:

- Alternative A: (Preferred) Expanded Boundaries, Increased River Connectivity *Broaden Refuge Complex opportunities both to expand river/floodplain connectivity and to manage for habitat diversity for fish and wildlife resources on the Upper Mississippi River System through a Refuge boundary expansion (up to 27,659 acres) and use of adaptive management techniques within the 500-year floodplain of the Area of Ecological Concern.*
 - "...improve quality and safety of hunting programs & increase opportunity". 2.2
 - Alternative A permits additional hunting, fishing and non-consumptive public use activities where compatible with Service and Refuge objectives and the floodplain. 4.2.5

- Recreation opportunities increase. Additional access for consumptive and non-consumptive uses on new lands, trails and facilities. 4.6 Table 3 #7. Public Use and Education
- Alternative B: Current Program (No Action)
- Alternative C: Existing boundaries, maximum river connectivity
- Alternative D: Existing boundaries, least river connectivity

There were no findings of significant impact associated with the Preferred Alternative according to the Finding of No Significant Impact statement (FONSI) as part of the Environmental Assessment of the CCP.

An Environmental Assessment was also developed for this Hunting Plan. The alternatives considered in this Environmental Assessment are:

- Alternative A: No Hunting on the Refuge
- Alternative B: Hunting Program Remains as it Currently Exists (No Action).
- Alternative C: Expand Opportunity on Currently Hunted Refuge Lands, and Allow Limited Hunting of Deer and Turkey at Clarksville Island Division. (Preferred Alternative)

There were no findings of significant impact associated with the Preferred Alternative according to the Finding of No Significant Impact statement (FONSI) as part of the Environmental Assessment of the Hunting Plan.

In addition, an updated Compatibility Determination was developed for this plan, to include the proposed changes to expand hunting opportunities on the Calhoun Division and open Clarksville Island to hunting.

The draft Hunting Plan, Environmental Assessment and Compatibility Determination were available for a 30-day review and comment period. Upon completion of this Hunting Plan, the Service will publish in the Federal Register a Proposed Rule that updates the hunting program on the Refuge. Following the comment period on the Proposed Rule, a determination will be made whether to implement these updates. Subsequently, a Final Rule will be published outlining hunting on the Refuge.

III. STATEMENT OF OBJECTIVES

The objectives of the Two Rivers NWR Hunting Program are as follows:

- Provide opportunities to hunt wildlife species consistent with the laws and regulations of the State of Illinois that do not adversely affect local or regional wildlife populations, and are consistent with the 1997 National Wildlife Refuge System Improvement Act.
- Support the Conserving the Future vision document by implementing Recommendation 17 to increase quality hunting and fishing opportunities on National Wildlife Refuges.
- Provide wildlife-dependent recreation opportunities where appropriate, and improve the quality and safety of the recreational experience. (Goal 6 from the CCP)
- Improve the quality and safety of the hunting program and increase recreational opportunities where appropriate. (Objective 6E from the CCP)

Rationale: Hunting is one of the six priority wildlife-dependent recreational uses identified in the National Wildlife Refuge System Improvement Act of 1997. Service policy directs us to provide hunting opportunities when compatible with Refuge management, and offering this use was a long-term goal of the Refuge when it was established in 1958. Managed hunting programs help promote an understanding and appreciation of natural resources and their management. Additionally, hunting on the Refuge provides a traditional recreational activity with no definable adverse impacts to the biological integrity or habitat sustainability of Refuge resources.

Providing sanctuary for migratory birds limits hunting to few portions of the Refuge, but management has long understood the demand for, and importance of providing this activity. Hunting promotes understanding, appreciation, and support for Two Rivers NWR, the National Wildlife Refuge System, and natural resource conservation.

Strategies:

1. Prepare and submit all documents required to allow hunting as a use of the Refuge.
2. Coordinate hunting activities with stakeholders.
3. Implement state hunting seasons and regulations, where appropriate, in accordance with other Refuge objectives.
4. Manage hunting activities to minimize conflicts with other uses and resources.
5. To further manage population densities, provide a managed hunt for youth and disabled hunters.
6. Expand accessible hunting opportunities.
7. Provide adequate signage on all hunting areas.
8. Maintain up-to-date information in Refuge publications and web communications.
9. Provide adequate law enforcement coverage for hunting areas.
10. As additional land is acquired, evaluate the areas that are appropriate for hunting.

IV. ASSESSMENT

Currently, wildlife population dynamics are annually evaluated by the State of Illinois and U.S. Fish and Wildlife Service (FWS) as part of county, state, national or international wildlife population surveys. The Service and state agencies have not noted any significant adverse effects of hunting on regulated wildlife populations at Two Rivers NWR. The Service has determined that hunting is compatible with the purposes of the National Wildlife Refuge System.

White-tailed deer, migratory waterfowl (ducks and geese), wild turkey, furbearing mammals, shorebirds (woodcock, snipe and rail) and migratory passerine birds (mourning dove and crow) are monitored on the Refuge and surrounding areas by the Service and conservation partners. Fish, amphibians, reptiles and insects also are monitored, but not quite as frequently.

Specific monitoring efforts relative to this hunt plan include state population models based on harvest statistics for hunting white-tailed deer, wild turkey, small game, furbearers, and migratory game birds. These surveys combined with biological knowledge of individual species are used by the State of Illinois to determine bag limits and seasons for hunting.

Suitable habitat exists on the Refuge to support the proposed hunting opportunities according to species populations as determined by the State of Illinois. The number of animals harvested on the Refuge has no significant impact to state wildlife populations.

Recent assessments of the aforementioned consumptive species in the proximity of the Refuge indicate that those species have sustainable populations and do not indicate to be subjected to a general decline. Hunting, in general, was prevalent on the private lands that eventually became the Refuge before the Service purchased those lands. Suitable habitat exists on the Refuge lands to support the various proposed hunting programs. The viability of the game species populations proposed to be hunted is not expected to be negatively affected by hunting according to State season guidelines. In fact, some hunted species populations (e.g., white-tailed deer, resident Canada goose) have risen substantially and are considered locally overabundant.

It is the policy of the Service to protect and preserve all native species of fish, amphibians, reptiles, birds, mammals, invertebrates, and plants, including their habitats, which are designated threatened or endangered. Three federally listed threatened or endangered species are known or suspected to occur on the refuge. These species include the threatened decurrent false aster and Eastern prairie fringed orchid, and endangered Indiana bat. All of these species are associated with riverine or floodplain habitat except the orchid. A consultation pursuant to Section 7 of the Endangered Species Act was conducted as part of the Environmental Assessment associated with this plan. A finding of “May Affect but Not Likely to Adversely Affect species/critical habitat” was determined for Indiana bat and decurrent false aster and “No Effect” for Eastern prairie fringed orchid. No impacts are anticipated for state listed species.

Migratory Game Birds:

Annual assessments of migratory bird populations are based upon the distribution, abundance, and flight corridors of migratory birds. The annual Waterfowl Population Status Report published by the U.S. Fish and Wildlife Service includes the most current breeding population and production information available for waterfowl in North America and is a result of cooperative efforts by the Service, the Canadian Wildlife Service, various state and provincial conservation agencies, and private conservation organizations. The Illinois Natural History Survey conducts weekly aerial migrating waterfowl surveys of the Lower Illinois and Mississippi River corridor areas, including State-owned and managed lands surrounding the Refuge area, prior to the opening of the Illinois Central Zone Duck and Goose season, during the season(s) and post-season as a monitor of species migration periods.

Migratory birds that can be hunted on the Refuge include waterfowl, common moorhen, coot, rails, common snipe, mourning dove and woodcock. The number of birds harvested from Two Rivers NWR has no cumulative impact on migratory bird populations on a statewide or Mississippi Flyway scale thus opening the Calhoun Division hunted portion to hunting of migratory birds and maintaining current regulations in the Apple Creek Division will have no added adverse cumulative effect. In order to avoid possible disturbance to wintering bald eagles hunting of migratory birds is not allowed on the Clarksville Island Division.

In the Mississippi Flyway 7,647,000 ducks were harvested in 2010-2011 (Andy Raedeke, pers. Comm. 2012). The number of birds harvested from the Refuge has no cumulative impact on migratory bird populations on a statewide or Mississippi Flyway scale.

The American woodcock (*Scolopax minor*) is a popular game bird throughout eastern North America. The management objective of the Service is to increase populations of woodcock to levels consistent with the demands of consumptive and non-consumptive users. The woodcock population in the Central Region returned to the 10-year trend of non-significance after indicating a significant decline the previous year, 2010 (Cooper and Parker 2011).

The mourning dove (*Zenaida macroura*) is one of the most abundant species in urban, sub-urban and rural areas of North America. The annual harvest is estimated to be between 5 % and 10 % of the population (Otis et al. 2008). According to the Breeding Bird Survey (BBS) and FWS Mourning Dove Call Count Survey (CCS) the mourning dove population was stable in the Eastern Management Unit (EMU), including Illinois in 2012 and in the previous 5- and 10-year periods (2001-2011). All states bordering Illinois in both the Eastern and Central Management Units allow mourning dove hunting through regulated seasons.

Upland game:

Upland game includes small game, furbearers and wild turkey (turkey). Hunting these species is considered a compensatory form of mortality. It allows for a portion of upland game populations to be harvested annually because, if not taken by hunters, they would likely die prior to the next breeding season from other causes.

The number of upland game species harvested from the Refuge is small and many areas flood extensively every year. Upland game species such as bobwhite quail and rabbit have seen a steady decline in populations statewide as well as harvest. Available habitat for quail on the Refuge is not ideal (wet bottomland), but some quail are present. Annual harvest is estimated to be very low.

Squirrels may be abundant during the fall but squirrel harvest from the Refuge is estimated to be very few. Squirrel hunting is popular throughout the State of Illinois and offers the earliest opportunity for hunters to be afield. The forested acres of the Refuge support a good population of eastern fox squirrels and some eastern gray squirrels. Squirrel hunting on State –owned or –managed lands in Illinois has provided abundant opportunity resulting in an annual squirrel harvest ranging from 10,000 to 20,000 and averaging 15,500 squirrels (2001-10). This hunting program would afford additional hunting opportunity on the Refuge.

Upland game including small game hunting is allowed on the Apple Creek Division and hunted portion of the Calhoun Division. The number of upland game species harvested from the Refuge has no impact on populations on a statewide scale. In order to avoid possible disturbance to wintering bald eagles no upland game hunting is allowed on the Clarksville Island Division except for.

Illinois' wild turkey (*Meleagris gallopavo*) population has continued to expand since the first successful reintroduction in the 1970s and through 2003. Turkey hunting is allowed in the state of Illinois by permit only in both the Spring and Fall seasons. Turkey populations fluctuate primarily based upon weather conditions during hatching and brooding seasons. The estimated turkey population at the beginning of the year in 2011 was 500,000 (Illinois Department of Natural Resources). In the spring of 2010 the number of turkey harvested was 38,328 and 8,124 birds were harvested in the fall for a total reported harvest of 46,452 turkeys in 2011 (Illinois Department of Natural Resources). Hunters pursuing wild turkey on the Refuge are required to

obtain an applicable permit from the State and specific county, e.g. Calhoun County or Greene County; the Refuge issues no special permit. Spring hunting of turkey on the Refuge is not expected to affect turkey numbers as only male turkeys are harvested and seasons are set after the turkeys have had a chance to breed. Fall turkey harvest is low statewide. Through this hunting plan spring turkey hunting is allowed on the Apple Creek and Clarksville Island Divisions and the hunted portion of the Calhoun Division according to state regulations. Fall turkey hunting is allowed on the Apple Creek Division and hunted portion of the Calhoun Division according to state regulations and archery-only on the Clarksville Island Division.

Big game:

White-tailed deer (*Odocoileus virginianus*) are the most important big game mammal in Illinois. Deer hunting regulations in the state have changed a great deal since the first season in 1958. Today (according to the 2012-13 season) there are over 628,000 permits issued annually to deer hunters in Illinois resulting in the harvest ranging from 181,000 to 199,000 deer. Hunters harvested 181,451 deer in Illinois in 2012-13 (all season harvests combined). The Calhoun County combined season harvest for 2012-13 was 2,460 deer. The IDNR's deer management goal is to maintain a statewide deer population level that provides adequate opportunities for hunters and for people who enjoy watching deer, but low enough to minimize crop/landscape damage and deer-vehicle accidents. In 2012 deer densities remained stable throughout much of the state. Deer densities are generally higher in some of the urban counties south of the Refuge (Madison and St. Clair counties). Calhoun and Greene counties offer a diverse range of topography and have low human population density associated with the counties. Outfitted deer hunting is quite prevalent throughout the vicinity and trophy deer hunting is the objectively on the leased and outfitted properties. Thus, in various locales, deer density exceeds a typical statewide average of 20 deer per square mile.

Hunting is a highly regulated activity compared to non-hunting activities and generally takes place at specific locations, times, and seasons. These regulations reduce the impact to non-hunted species. Hunting is an appropriate wildlife management tool that can be used to manage harvestable White-tailed deer populations on the Refuge. Some wildlife disturbance will occur during the hunting season however this disturbance is minimal. White-tailed deer hunting is allowed in the Calhoun and Apple Creek Divisions according to state regulations, and on the Clarksville Island Division by archery method only.

V. DESCRIPTION OF THE HUNTING PROGRAM

Hunting opportunities

Hunting opportunities discussed in the CCP indicate areas for hunting Migratory Game Birds, Upland Game and Big Game. Those game species are as follows:

- Migratory Game Birds: moorhen, coot, rails, woodcock, common snipe, mourning dove and waterfowl (i.e., geese and ducks).
- Upland Game: turkey, small game (rabbit, pheasant, quail, squirrel, woodchuck), and furbearers (raccoon, opossum, striped skunk, gray fox, red fox, and coyote).
- Big Game: white-tailed deer

The following areas are designated hunting areas based on access, ability to manage, and boundary locations: Apple Creek Division (270 acres), approximately 100 acres of the Calhoun

Division east of Illinois River Road, and Clarksville Island Division (860 acres). A total of 1,230 acres are available for hunting of the 9,225 acres that make up Two Rivers NWR.

Seasons, bag limits, and regulations in all divisions are consistent with those set by the Illinois Department of Natural Resources (IDNR). Special regulations implemented in the Clarksville Island Division reduce the possibility of disturbance to wintering bald eagles.

All or parts of the Refuge may be closed to hunting at any time if necessary for public safety, to provide wildlife sanctuary, prescribed burning, or for other reasons. The Fish and Wildlife Service recommends maintaining a 330 foot buffer area around each bald eagle nest during the breeding season (USFWS 2007). Buffer areas around nests will be posted and closed to all public use, including hunting, to avoid disturbing breeding and nesting eagles. This eliminates game hunting in the immediate vicinity of these vital nesting areas.

A high priority for the Refuge is to provide compatible wildlife-dependent public uses such as hunting. Providing access for youth and persons with disabilities to Refuge programs and facilities is also important to the U.S. Fish and Wildlife Service. Accommodating individuals with disabilities typically entails granting exemptions to Refuge regulations for the purpose of enabling those persons to engage in compatible activities on the Refuge. The most common type of exemption given will be authorizations of limited duration which allow the use of motorized vehicles on existing roads and trails.

Certain Refuge units and parts of units may be opened to special hunts for youth and disabled hunters. A special hunt is a hunt that is limited to certain hunting methods or hunters. Timing and necessity of these hunts will be determined by Refuge staff in close coordination state agencies. These special hunts will be primarily used to manage game species and offer a high quality recreational experience for youth and disabled hunters.

Table 1. Hunting Activities Allowed on Specific Refuge Divisions

Refuge Unit	Migratory Game Birds	Upland Game Furbearer/small game/turkey	Big Game: Deer
Apple Creek (270 acres)	State Regs*	State Regs*	State Regs
Calhoun Division (100 acres east of Illinois River Rd only)	State Regs*	State Regs*	State Regs
Clarksville Island (860 acres)	None	Turkey only: State Regs* Fall-archery only Spring- firearms	State Regs Archery only

Batchtown	None	None	None
Portage Island	None	None	None
Gilbert Lake	None	None	None

**Hunters must possess and use only non-toxic ammunition while hunting this species or group of animals on the Refuge.*

Additional regulation:

Portable stands may be used but they must be removed at the end of each day's hunt. No nails, screws, or other hardware may be used to climb or secure blinds to the trees.

Consultation and Coordination with the State

Two Rivers NWR will allow hunting within the framework of state and federal regulations. Hunting on the Refuge is at least as restrictive as the State of Illinois. By maintaining hunting regulations that are as, or more, restrictive than the states, the Refuge ensures that they are maintaining seasons which are supportive of management on a local and regional basis. The Environmental Assessments associated with the CCP and this Hunting Plan have been reviewed and are supported by the Illinois Department of Natural Resources (IDNR). The Refuge has moved forward with developing this Hunting Plan based upon earlier formal coordination with these state agencies as well as intervening informal discussions. The results of this coordination are reflected in the CCP and this Hunting Plan. Two Rivers NWR will continue to consult and coordinate with the IDNR annually to maintain regulations and programs that are consistent with the states.

Methods of Control and Enforcement

The enforcement of Refuge and state hunting regulations, trespass, and other public use violations normally associated with management of a National Wildlife Refuge are the responsibility of the commissioned Refuge Law Enforcement Officer. The Law Enforcement Officer of the Refuge will cooperate with, and is assisted, by state, county and city police officers as well as state conservation officers. The procedures used for obtaining law enforcement assistance are based on the legal jurisdiction where incidents occur. The Refuge regularly meets with the various state, county, and city law enforcement agencies to develop agreements and strategies to ensure law enforcement operations are performed as safely and efficiently as possible. The Refuge also uses non-law enforcement staff to manage hunting activities. Refuge staff will administer the hunting program in coordination with the IDNR, local hunting clubs or chapters, and other organizations interested in hunting on the Refuge. The Refuge Law Enforcement Officer will provide assistance to ensure hunters comply with federal, state, and Refuge specific laws and regulations.

Funding and Staffing Requirements

A small amount of road maintenance, mowing, and other upkeep is funded and performed as part of regular Refuge management activities. Based on a review of the Refuge budget there is currently sufficient funding to ensure compatibility and to administer and manage hunting. Law enforcement is a primary tool necessary to ensure proper and safe administration of this use. A

Federal Law Enforcement Officer is stationed at Great River, Clarence Cannon and Two Rivers National Wildlife Refuges.

The Refuge also works with IDNR to ensure that conservation officers are aware of hunting on the Refuge, and are available to assist with law enforcement as a part of their routine duties.

As the Refuge continues to add to its land base, any changes in annual costs will depend on increased recreation and land management. Expenses include boundary posting and other signage, parking lot construction, gate installation, time spent developing brochures and regulatory signs, and other hunting specific activities. An increase in law enforcement patrols including vehicle costs and overtime might also be necessary.

VI. MEASURES TO BE TAKEN TO AVOID CONFLICTS WITH OTHER MANAGEMENT OBJECTIVES

Biological Conflicts

The Refuge avoids conflict related to biological resources by adopting the “wildlife first” principle explicitly stated in the National Wildlife Refuge Improvement Act of 1997. Conserving and restoring habitat for the benefit of wildlife species is an integral part of any long-range plan for national wildlife refuges. Thus, any public use activity deemed compatible should have no or minimal disturbance to habitat, wildlife, or the biological objectives of the Refuge. The Environmental Assessments that were developed for the Refuge CCP in 2004 and for this plan discuss potential impacts to habitat, game species populations, other wildlife, migratory birds, and threatened and endangered species. The assessment concluded that impacts of the current hunting program and the hunting opportunities outlined in the Preferred Alternatives will be non-existent, minimal, or temporary for all biological entities.

The potential for spread of invasive species onto the refuge is of concern. To prevent the spread of invasive species the refuge will educate hunters by including a notice in the refuge’s public use regulations and providing information on the refuge website.

Staff monitors species population trends to ensure that target species can be hunted on the Refuge without adversely affecting the species. These monitoring activities include direct observation of populations, consultation with state and Service species specialists, and review of current species survey information and research. In addition, the Refuge will limit or exclude hunting activities on portions of the Refuge. Areas of the Refuge that are not hunted provide sanctuary for wildlife species. If conflicts were to arise between the hunting program and the integrity of any biological entity on the Refuge or management activities that were biologically related, hunting will be delayed until resolution.

Typically, the breeding season of bald eagles in the Northern United States occurs from December to August. This time period overlaps with all of the proposed hunting seasons for migratory game birds, upland game, and big game. Active bald eagle nests are known to occur on the Refuge. A 330 foot buffer area will be designated around each eagle nest during the breeding season (USFWS 2007). The buffer areas around each nest will be posted and closed to

all public use, including hunting, to avoid disturbing nesting eagles. This eliminates game hunting in the immediate vicinity of these vital nesting areas.

Hunting on Clarksville Island is restricted to archery only for whitetail deer and fall turkey hunting because firearm hunting could potentially disturb wintering bald eagles on or near the island. In the Calhoun division hunting is restricted to approximately 100 acres to provide sanctuary for migrating waterfowl on other areas of the division.

Public Use Conflicts

In an effort to avoid conflicts with non-hunting priority recreational uses, as outlined in the Improvement Act, and for safety, the Refuge enforces a series of refuge-specific hunting regulations. Hunting is either not allowed on certain divisions or is restricted by location or methods.

Hunting open units will be administered in such a way to avoid conflict with any non-consumptive uses and to provide safety for all users. The boundaries of all lands owned by the Service are posted with Refuge boundary signs. Areas administratively closed to hunting are clearly marked with “Area Beyond This Sign Closed” signs.

Further hunting restrictions on the Refuge provide for visitor and employee safety around government property. These examples include Refuge owned residences, maintenance facilities and equipment.

Restriction to archery only for white-tailed deer and fall turkey hunting on Clarksville Island supports public safety due to the proximity to the city of Clarksville and Lock and Dam 24. Additionally, winter bald eagle watching is a popular activity in the city of Clarksville and firearm hunting could potentially disturb bald eagles on or near the island.

Allowing migratory game bird hunting in the hunted portion of the Calhoun Division provides consistency with state hunting regulations for users in the division and state hunting area nearby. As a result Refuge users should have fewer conflicts with other users and less confusion about regulations.

Administrative Conflicts

Refuge management activities can be accomplished without conflict with hunting activities through the use of administratively closed areas and methods of hunting.

VII. CONDUCT OF THE HUNT

Hunting Regulations

All hunting on the Refuge is consistent with state and federal laws and regulations and those pertaining to all National Wildlife Refuge System lands. Regulations specific to hunting on National Wildlife Refuges are found in 50 CFR 32.2 and are as follows:

The following provisions shall apply to each person while engaged in public hunting on areas of the National Wildlife Refuge System:

- (a) Each person shall secure and possess the required State license.
- (b) Each person 16 years of age and older shall secure and possess a Migratory Bird Hunting Stamp while hunting migratory waterfowl.
- (c) Each person shall comply with the applicable provisions of Federal law and regulations including this subchapter and the current Federal Migratory Bird Regulations.
- (d) Each person shall comply with the applicable provisions of the laws and regulations of the State wherein any area is located unless further restricted by Federal law or regulation.
- (e) Each person shall comply with the terms and conditions authorizing access or use of wildlife refuges, including the terms and conditions under which hunting permits are issued.
- (f) Each person must comply with the provisions of any refuge-specific regulations governing hunting on the wildlife refuge area. Regulations, special conditions, and maps of the hunting areas for a particular wildlife refuge are available at that area's headquarters. In addition, refuge-specific hunting regulations for migratory game bird, upland game, and big game hunting appear in §§32.20 through 32.72.
- (g) The use of any drug on any arrow for bow hunting on national wildlife refuges is prohibited. Archers may not have arrows employing such drugs in their possession on any national wildlife refuge.
- (h) The unauthorized distribution of bait and the hunting over bait is prohibited on wildlife refuge areas. (Baiting is authorized in accordance with State regulations on national wildlife refuges in Alaska).
- (i) The use of nails, wire, screws or bolts to attach a stand to a tree, or hunting from a tree into which a metal object has been driven to support a hunter is prohibited on wildlife refuge areas.
- (j) The use or possession of alcoholic beverages while hunting is prohibited.
- (k) You may possess only approved nontoxic shot while in the field, which we identify in 50 CFR 20.21(j), while on Waterfowl Production Areas, or on certain other areas of the National Wildlife Refuge System as delineated on maps, leaflets and/or signs, available at each refuge headquarters or posted at each refuge, or as stated in refuge-specific regulations. Where we allow turkey and deer hunting, you may use slugs and shot containing lead to hunt these species unless prohibited by refuge-specific regulations and/or State law.

The regulations, as they are published in the Code of Federal Regulations (CFR), are the official notification to the public. Copies of the CFR can be found in libraries and online.

Other regulations related to activities typically associated with hunting and found elsewhere in 50 CFR follow (in plain language) also apply to all National Wildlife Refuges.

- Public access, including hunting, is prohibited in administratively closed areas (50 CFR 26.21). (Examples of signs posted on administratively closed areas at Two Rivers National Wildlife Refuge include “Area Beyond This Sign Closed.”)
- Public access, including hunting, is allowed only in designated areas (50 CFR 26.21).
- No motorized vehicles are allowed within the hunting units except at designated parking areas or by Special Use Permit (50 CFR 27.31).
- Target shooting is prohibited (50 CFR 27.42, 27.43).

2013 Code of Federal Regulations 50 Part 32.32 (Illinois, Two Rivers National Wildlife Refuge)

The regulations, as they are published in the Code of Federal Regulations (CFR), are official notification to the public. Copies of the CFR can be found in libraries and on the internet. Hunting regulations specific to Two Rivers NWR are found in the Code of Federal Regulations: Section 32.32 Illinois (<http://cfr.vlex.com/source/code-federal-regulations-wildlife-fisheries-1099/page/21>).

A. Migratory Game Bird Hunting. We allow hunting of migratory game birds only on the Apple Creek Division in accordance with State regulations subject to the following conditions:

1. We prohibit the construction or use of permanent blinds, stands, scaffolds, or platforms (see § 27.92 of this chapter).
2. Hunters must remove boats, decoys, blinds, and blind materials (see §27.93 and 27.94 of this chapter) brought onto the refuge at the end of each day's hunt.

B. Upland Game Hunting. We allow upland game hunting only on the Apple Creek Division and the portion of the Calhoun Division east of the Illinois River Road in accordance with State regulations subject to the following condition: We allow hunting from legal sunrise to legal sunset.

C. Big Game Hunting. We allow hunting of white-tailed deer and turkey on the Apple Creek Division and the portion of the Calhoun Division east of the Illinois River Road in accordance with State regulations subject to the following conditions:

1. We prohibit the construction or use of permanent blinds, platforms, or ladders (see § 27.92 of this chapter).
2. Hunters must remove all portable hunting stands and blinds from the refuge at the end of each day's hunt (see §§ 27.93 and 27.94 of this chapter).

Two Rivers NWR Revisions to 50 CFR Part 32.32 for 2014

A. (Change) Migratory Game Bird Hunting. We allow hunting of migratory game birds only on the Apple Creek Division and the portion of the Calhoun Division east of the Illinois River Road in accordance with State regulations subject to the following conditions:

1. We prohibit the construction or use of permanent blinds, stands, scaffolds, or platforms (see § 27.92 of this chapter).

2. Hunters must remove boats, decoys, blinds, and blind materials (see §§ 27.93 and 27.94 of this chapter) brought onto the refuge at the end of each day's hunt.

B. (Change) Upland Game Hunting. We allow upland game hunting for wild turkey, small game, furbearers, and non-migratory game birds on the Apple Creek Division and the portion of the Calhoun Division east of the Illinois River Road, and turkey hunting only on the Clarksville Island Division. Upland game hunting is allowed from legal sunrise to legal sunset in accordance with State regulations subject to the following conditions: .

1. (Add) You may only use or possess approved nontoxic shot shells while in the field, including shot shells used for hunting wild turkey (see § 32.2(k)).

2. (Add) Wild turkey hunting on Clarksville Island Division is restricted to archery only in the fall and shotgun or archery in the spring.

C. (Change) Big Game Hunting. We allow hunting of white-tailed deer on the Apple Creek Division, Clarksville Island Division and the portion of the Calhoun Division east of the Illinois River Road in accordance with State regulations subject to the following condition:

1. We prohibit the construction or use of permanent blinds, platforms, or ladders (see § 27.92 of this chapter).

2. Hunters must remove all portable hunting stands and blinds from the refuge at the end of each day's hunt (see §§ 27.93 and 27.94 of this chapter).

3. (Add) White-tailed deer hunting on Clarksville Island is restricted to archery only.

Managed Hunts

Portions of the Refuge may be open to managed hunts. A managed hunt is an activity focused on discrete groups of hunters to provide them with additional opportunities or methods of hunting through a Refuge or partner-sponsored program. Groups include youth, people with disabilities and other underserved hunter populations. These special hunts will be primarily used to manage game species. These hunts will also provide a quality recreational hunting experience that may be limited or not available for these underserved populations within the structure of general public hunting. All managed hunts require Refuge specific authorization.

State Youth Deer, Turkey and Waterfowl Hunts

All Refuge units that are open to regular Illinois hunting seasons are also open to youth hunters during the state youth hunting seasons. Refuge specific regulations still apply.

Hunter Selection

For general hunting activities, there is no special hunter selection process. Hunters who are eligible to hunt under Illinois law are allowed to hunt on the Refuge.

Anticipated Public Reaction to Hunting

A positive reaction is anticipated by the public to maintaining and expanding hunting on the Refuge and opening the Clarksville Island Division to hunting as discussed in this Hunting Plan. In general, a hunting program on the Refuge is supported by the public and the opportunity to hunt has been an expectation since Refuge establishment in 1958. Some concern has been expressed about disturbing wintering bald eagle use on Clarksville Island and the Refuge staff has developed strategies to limit this disturbance.

Announcing and Publicizing Hunting

A news release will be sent out when the hunting plan is approved. Hunting opportunities will also be advertised through special interest groups such as the Alton Wood River Sportsman's Club and Migratory Waterfowl Hunters, Inc.

Hunting Orientation and Safety

The Refuge requires no specific orientation or safety training for hunters participating in general hunting activities. The state of Illinois has established hunter education and safety training requirements that have been in effect for several years. These apply to all hunters in Illinois including those that hunt the Refuge. Hunter orientation to refuge lands and areas open to hunting are provided directly on the Refuge through the use of signs, brochures, flyers, maps, or the internet.

Entry and Access Procedures

Walking is the preferred method of travel to access hunting locations; however, other methods of transportation maybe more practical depending on accessibility and the ability of the hunter. Access to Clarksville Island necessitates use of a boat. Special access accommodations for persons with disabilities may be allowed on a situational basis; but these accommodations will have restrictions to limit adverse impacts to Refuge habitats.

Non-motorized carts and sleds are permitted on the Refuge for hauling deer out. No ATVs, ORVs or snowmobiles are permitted on the Refuge.

Hunter Requirements

Hunters must comply with federal, state, and refuge-specific rules and regulations including licensing, registration of game, bag limits, etc. A hunter participating in a special hunt for persons with a physical disability must have a verified statement of the disability by a licensed physician or must be participating in a program for hunters with disabilities sponsored by a nonprofit organization. Hunters with disabilities possessing an IDNR issued permit exempting them from particular state regulations based upon their disability will be eligible to apply for refuge-specific authorization to participate in accessible hunting opportunities on the Refuge.

Youth hunters must be of legal age set by the state, to participate in a special youth hunt on the Refuge. Youth hunters must be accompanied by a mentor.

The Refuge does not routinely require hunters to report on hunting activities or harvests separately from that already required by the state of Illinois. State reporting requirements include the Migratory Bird Harvest Information Program (HIP), and turkey and deer registration. Should an additional reporting program be implemented, the Refuge will use the appropriate form approved by the Office of Management and Budget.

All belongings must leave with the hunter each day. Also, hunters on the Refuge are expected to be ethical and respect other hunters, non-consumptive users, wildlife species, and the environment while on Refuge lands.

VIII. REFERENCES

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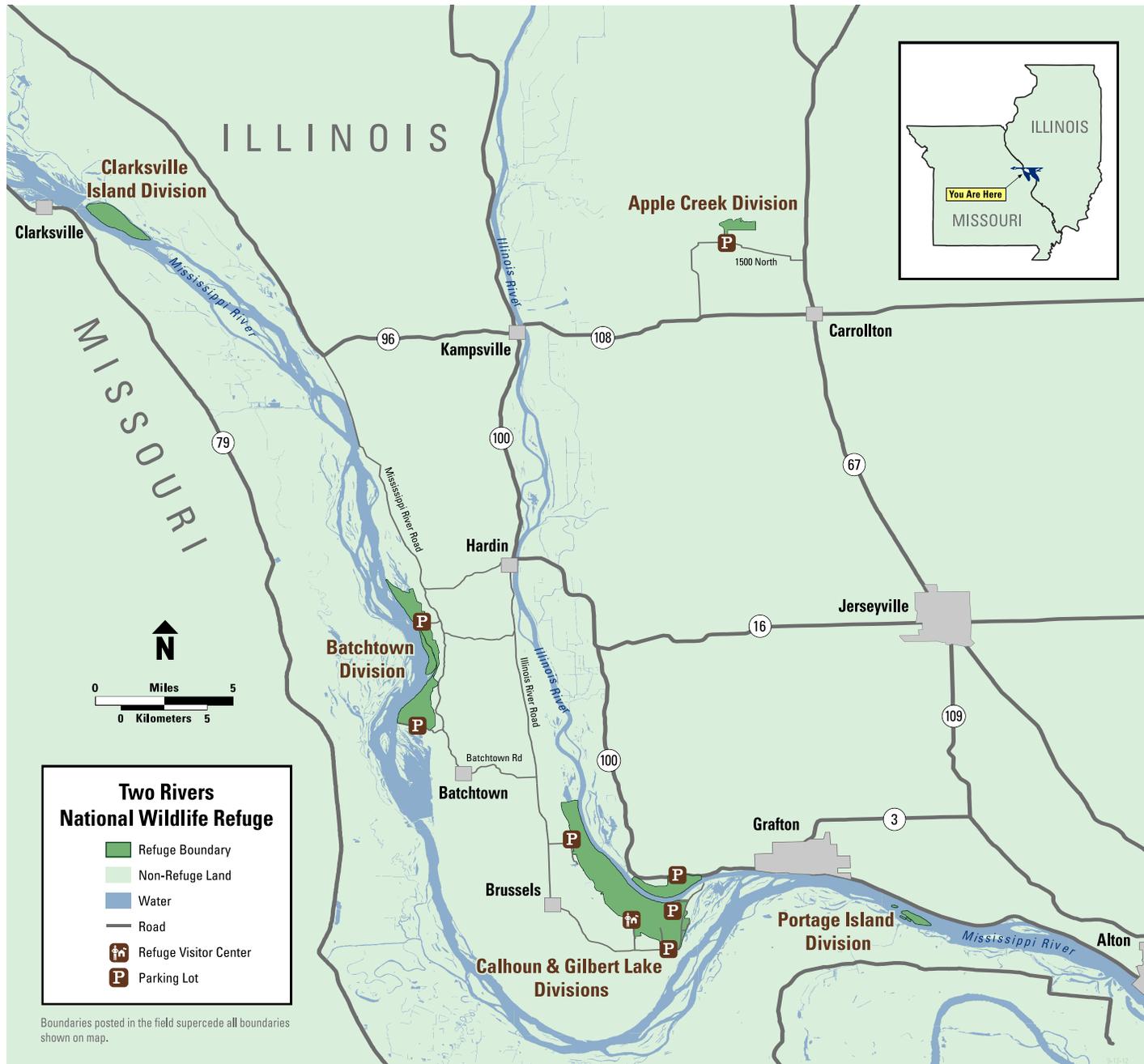
U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. U.S. Fish and Wildlife Service. Washington D.C.

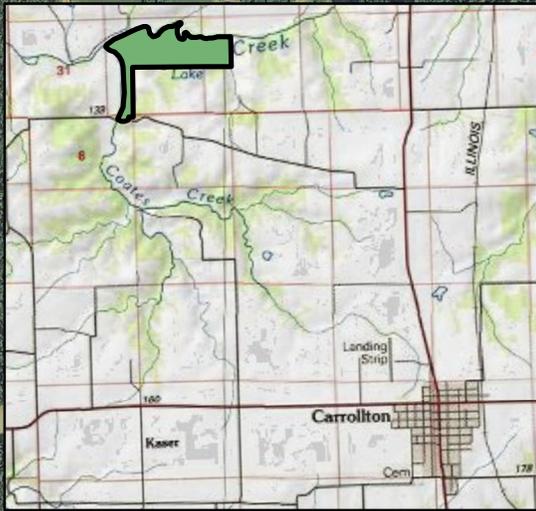
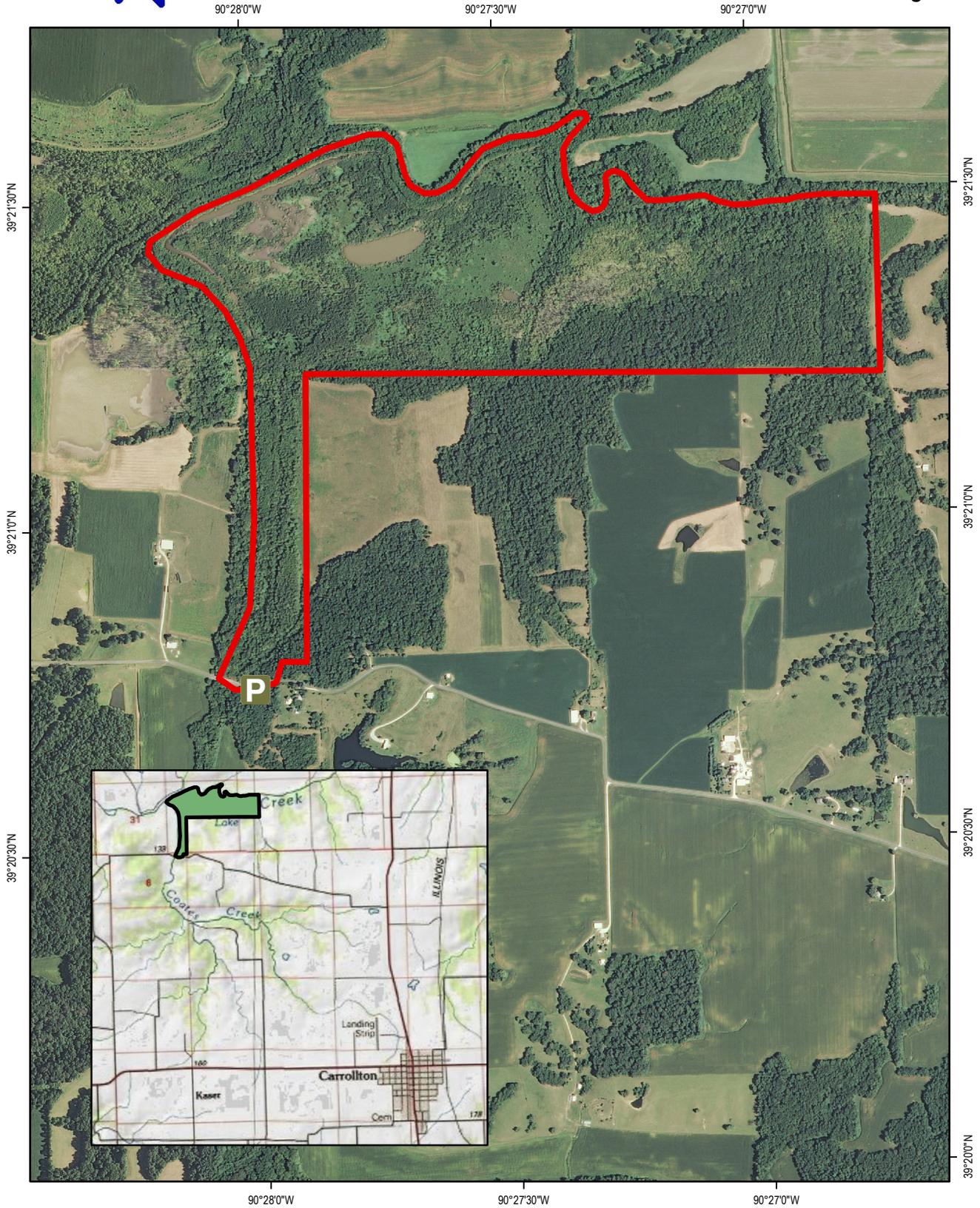
Appendix A: Refuge Maps



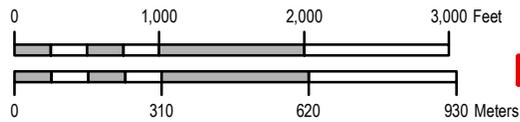
Two Rivers National Wildlife Refuge

Refuge Map





Notes:
 Apple Creek Division
 Projection: UTM Zone 15N - 2011 Naip
 Datum: NAD 1983
 Map Created: May 15, 2013

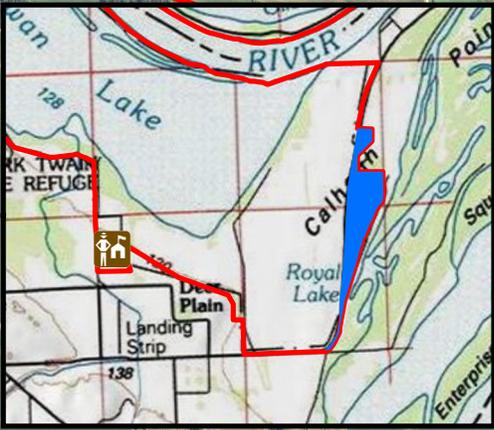
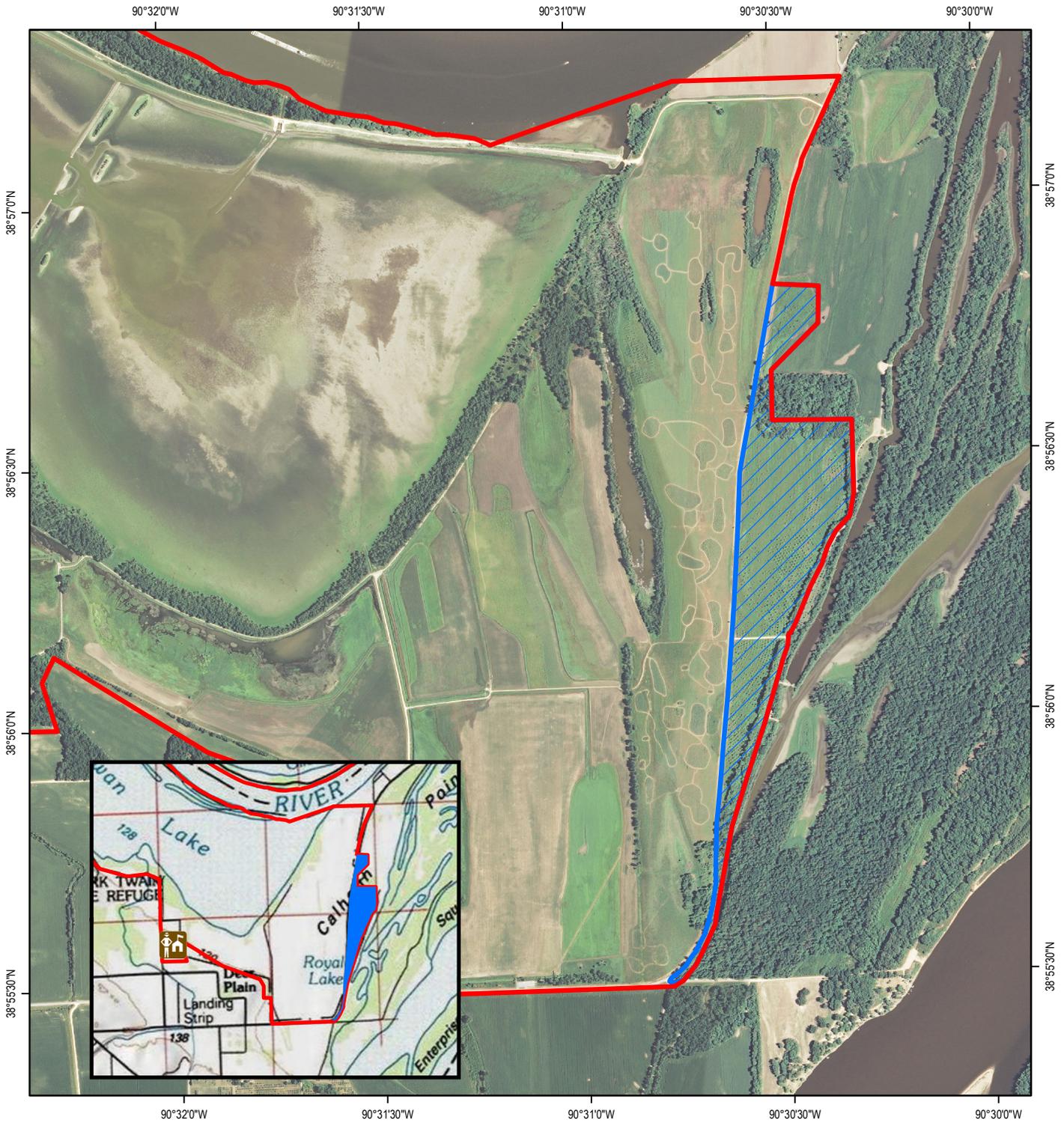


 Apple Creek Division

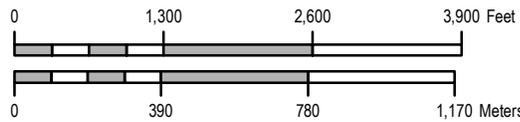
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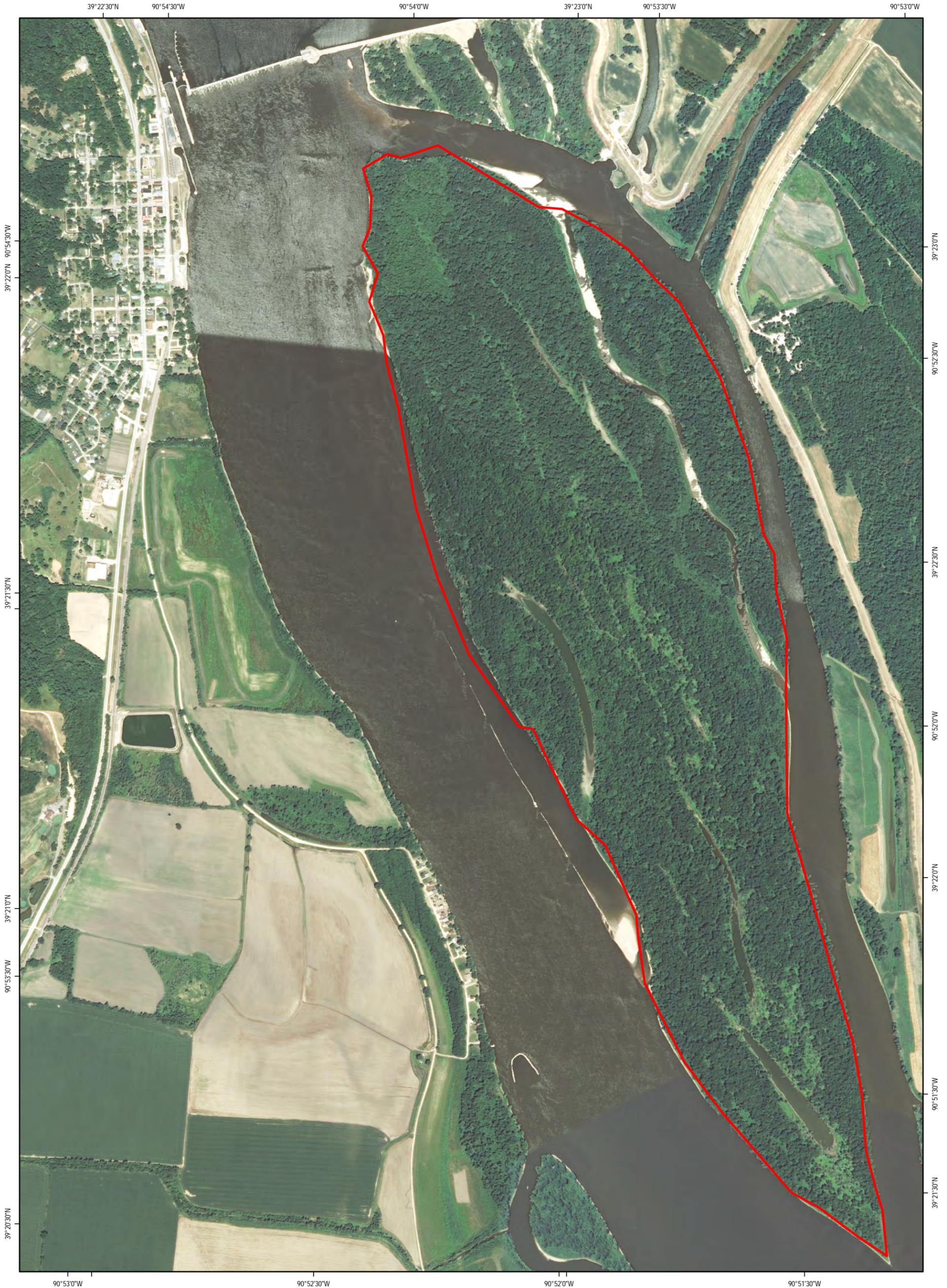
Two Rivers National Wildlife Refuge



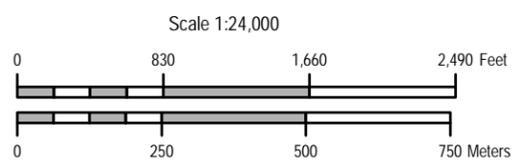
Notes:
 Calhoun Division: 4820 acres
 Projection: UTM Zone 15N - 2012 Naip
 Datum: NAD 1983
 Map Created: May 15, 2013



- Refuge Boundary
- Hunting Area



Notes:
 Clarksville Island
 Total Area: 860 acres
 Projection: UTM Zone 15N - 2012 Naip
 Datum: NAD 1983
 Map Created: October 9, 2012



Clarksville Isl. Boundary



Calhoun County, Illinois

