

**SWAN LAKE  
NATIONAL WILDLIFE  
REFUGE**

**HUNTING CHAPTER of  
VISITOR SERVICES PLAN  
October, 2014**

Draft

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## INTRODUCTION

This Hunting Chapter will be part of the overall Visitor Services Plan for Swan Lake National Wildlife Refuge (Refuge). The Hunting Chapter formulates the general concept for hunting opportunities on Refuge managed lands as identified in the Refuge's 2011 Comprehensive Conservation Plan (CCP) (USFWS 2011).

Swan Lake NWR is located in Chariton County, Missouri, near the town of Sumner. The Refuge bounds approximately 10,670 acres of bottomland forest, grasslands, and wetlands within the Grand River floodplain of north central Missouri.

Franklin D. Roosevelt established the Refuge in 1937 through Executive Order 7563. "Refuge Purposes" is a term that refers to the purposes specified in or derived from one or more legal authorities used for establishing, authorizing, or expanding a national wildlife refuge. Below are the Purposes of Swan Lake NWR and their sources:

- "as a refuge and breeding ground for migratory birds and other wildlife" Executive Order 7563, dated Feb. 27, 1937)
- "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. 715d (Migratory Bird Conservation Act)
- "... particular value in carrying out the national migratory bird management program." 16 U.S.C. 667b (An Act Authorizing the Transfer of Certain Real Property for Wildlife)

In 1938, Company 1727 of the Civilian Conservation Corps (CCC) began work on levees to impound the waters flowing into the Refuge from Elk Creek, Turkey Creek, and Tough Branch. The CCC completed its work in 1942 and left behind several thousand acres of freshwater marsh and open water within Silver Lake and Swan Lake, the Refuge namesake. This change to the landscape caught the attention of migrating water birds, especially Canada geese, which shifted their wintering grounds north to the Refuge with a steady annual increase that peaked at more than 180,000 birds in 1977. Fewer geese winter on the Refuge today, but its mixture of habitats are home to a diverse wildlife community that attracts hunters, anglers, and wildlife watchers.

The Refuge receives around 40,000 visitors annually including tourist and local visitors. Visitor use is primarily oriented towards hunting, fishing, wildlife observation, and conservation education. From the first Saturday of March through the end of October the entire Refuge is open to foot traffic.

Today, the Refuge attracts concentrations of up to 150,000 waterfowl during fall and spring migrations, and as many as 800,000 snow geese concentrate on the Refuge during spring migrations. The Refuge is identified as a regional site under the Western Hemisphere Shorebird Reserve Network with 33 species of shorebirds that have been recorded using the Refuge. There have been 241 recorded bird species found on the Refuge.

In addition to Swan Lake NWR, the staff manages 4 outlying fee title units (Outlying Units) totaling 1361 acres. These units include:

1. Schmitt Unit (326 acres) located in Chariton County approximately 12 miles east of Swan Lake NWR.
2. Moresi Unit (357 acres) located in Cedar County approximately 179 miles southwest of Swan Lake NWR. This unit is made up of two tracts of property and will collectively be identified as the Moresi Units in this Hunting Plan.

Tract one is 238 acres and is located in Saint Clair County. It will be identified as the East Moresi Tract in this Hunting Plan.

Tract two is 119 acres and is located in Cedar County. It will be identified as the West Moresi Tract.

3. Bates Unit (230 acres) located in Bates County approximately 202 miles southwest of Swan Lake NWR.
4. Truman Reservoir Units (448 acres). This unit consists of four (4) tracts and will collectively be identified as the Truman Reservoir Units in this Hunting Plan. These units are all located approximately 170 miles from Swan Lake NWR.

Tract 1 is located in Henry County and consists of 34 acres. It will be referred to as the West Henry Tract in this Hunting Plan.

Tract 2 is located in Henry County and consists of 54 acres. It will be identified as the East Henry Tract in this Hunting Plan.

Tract 3 is located in Saint Clair County and consists of 240 acres. It will be identified as the West Saint Clair Tract in this Hunting Plan.

Tract 4 is located in Saint Clair County and consists of 120 acres. It will be identified as the East Saint Clair Tract in this Hunting Plan.

## **CONFORMANCE WITH STATUTORY AUTHORITY**

The Refuge Recreation Act of 1962 (16 U.S.C. 460K) authorizes the Secretary of the Interior to administer refuges, hatcheries, and other conservation areas for recreational use. The Refuge Recreation Act requires 1) that any recreational use permitted will not interfere with the primary purpose for which the area was established; and 2) that funds are available for the development, operation, and maintenance of the permitted forms of recreation.

Fundamental to the management of lands within the National Wildlife Refuge System (System) is the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57), an amendment to the National Wildlife Refuge System Administration Act of 1966. The National Wildlife Refuge System Improvement Act of 1997 provided a mission for the System and clear standards for its management, use, planning, and growth. The National Wildlife Refuge System

Improvement Act of 1997 recognized that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when determined to be compatible with the mission of the System and purposes of the Refuge, are legitimate and appropriate public uses of the System. Compatible wildlife-dependent recreational uses are the priority general public uses of the System and shall receive priority consideration in planning and management. Hunting as specified in this plan is a wildlife-dependent recreational use and the law states that as such, it “shall receive priority consideration in national wildlife refuge planning and management.” The Secretary of Interior may permit hunting on a refuge if it is determined that the use is compatible. The hunting program would not materially interfere with or detract from the fulfillment of the purposes of the refuge or the mission of the National Wildlife Refuge System.

Recreational hunting authorized by the regulations should not interfere with the primary purpose for which (Refuge) NWR was established. This determination is based upon the completion of a Compatibility Determination (Section D). The Refuge staff developed this Hunting Chapter (also referred to as Hunting Plan) to guide hunting on the Refuge while fulfilling the purposes in which the Refuge was established and providing wildlife-dependent recreation.

Guidance for authorizing public uses on National Wildlife Refuges is provided in the National Wildlife Refuge System Improvement Act (Improvement Act) of 1997 (USFWS 1997). The Improvement Act states, “compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System...through which the American public can develop an appreciation for fish and wildlife.” The Improvement Act recognizes that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation, when determined to be compatible, are legitimate and appropriate use of the Refuge System lands. The Improvement Act states that these specific six uses should receive priority consideration in refuge planning and management. Other uses not listed as priority public uses may be allowed if they are determined to be appropriate and compatible with the purposes for which the Refuge was established.

The U.S. Fish and Wildlife Service’s (Service) Final Compatibility Policy (USFWS 2000) pursuant to the Improvement Act delegates the responsibility of determining compatibility to the Refuge Manager with concurrence by the Regional Office Supervisor.

### Refuge Purposes

“Refuge purposes” is a term that refers to the purposes specified in or derived from one or more legal authorities used for establishing, authorizing, or expanding a national wildlife refuge, national wildlife refuge unit, or national wildlife refuge subunit. Below are the purposes of Swan Lake NWR and their sources:

n “as a refuge and breeding ground for migratory birds and other wildlife” Executive Order 7563, dated Feb. 27, 1937

n “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. § 715d (Migratory Bird Conservation Act)

n “... particular value in carrying out the national migratory bird management program.” 16 U.S.C. § 667b (An Act Authorizing the Transfer of Certain Real Property for Wildlife)

### Refuge Vision

The Refuge vision is a concise, descriptive statement of what the planning unit should be, or what the Service hopes to do, based primarily upon the mission of the National Wildlife Refuge System (Refuge System) and specific refuge purposes, and other mandates. The CCP established the following vision statement for Swan Lake NWR:

“Diverse and abundant wildlife flourishes within a mosaic of grass, trees, and wetlands recalling an earlier era when the Grand River meandered across its broad, open floodplain. Visitors enjoy recreation dependent on wildlife and show their appreciation by supporting conservation and Swan Lake National Wildlife Refuge.”

### **Relationship to other Plans and Documents**

In response to the Improvement Act, the Refuge began developing its CCP in 2007. The CCP was finalized in February, 2011 and established the management direction for the Refuge for the subsequent 15 years. While the CCP provides overall management direction, more detailed “step down” plans were to be developed to refine Refuge programs and operations (USFWS 2011).

This Hunting Plan is a step-down plan and will eventually be a chapter of the overall Visitor Services Plan. It also “steps down” from the CCP by beginning to implement the CCP’s goals, objectives, and strategies. Those goals, objectives, and strategies were developed within the context of overall Visitor Services. Within the CCP process, the Refuge completed a compatibility determination on hunting. Hunting was determined to be compatible with the mission of the Refuge during that process. This Hunting Plan is also the product of an Environmental Assessment process that helped to determine the direction to take the Refuge hunting program and the environmental consequences of the actions taken.

Upon completion and adoption of the 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 Refuge hunting as outlined in this Hunting Plan. Subsequently, a Final Rule will be publicized outlining hunting on the Refuge.

### **STATEMENT OF OBJECTIVES**

To fulfill the purposes for which the Refuge was established the Service envisions that it will make significant contributions by:

- Managing a mosaic of wetlands, grasslands, and bottomland forests providing habitat for migratory birds, threatened and endangered species, and other wildlife within the Grand River floodplain.
- Managing for diverse wildlife teeming within native habitats of the Grand River floodplain.
- Providing visitors enjoyable wildlife-dependent recreation and helping them to understand the natural and cultural resources of the Refuge and its role in their conservation.

A well-managed hunting program directly supports the overall purpose and goals of the Refuge. Although hunting has been a part of the Refuge's management program for many years, the CCP reflects updated hunting program goals.

The Refuge's hunting program objective as stated in the CCP is as follows:

Maintain existing hunting opportunities and within 2 years of CCP approval, propose changes to refuge regulations (as part of a formal opening package) that includes introducing duck hunting and small game hunting, and emphasizing opportunities for youth and the disabled. Within 7 years of approval of the Plan, reliably determine the number of hunting visits to the Refuge and that at least 85 percent of hunter's judge that they are being provided a quality opportunity. The following strategies were identified as options to help meet this objective:

- Any existing Refuge waterfowl hunting sites affected by the conversion of cropland to other habitats would be offset by providing hunting opportunities at other locations.
- As appropriate, prepare hunting opportunities for disabled hunters.
- Maintain one or more sanctuary areas free of hunting and other human disturbance to provide a feeding and resting area for migratory birds.
- Compile annual hunting statistics to determine hunter use, success, etc.
- Host a pre-season hunt public meeting to discuss and inform hunters about the hunting program and a post season hunt public meeting to receive feedback from hunters regarding the Refuge hunt program.
- Develop a mentoring program for youth waterfowl hunters.
- Continue cooperating with the Missouri Department of Conservation (MDC) in implementing seasons for resident game species.

In addition, this Hunting Plan has the following Objectives for the Refuge Hunting Program:

- Provide the public with a high quality recreational experience on more refuge lands and increase opportunities for hunters, especially for youth.
- Provide biological diversity by preserving the natural diversity and variety of biotic communities occurring on Refuge lands and aid in maintaining healthy deer populations and aid in reducing Light Goose Populations by effectively participating in the Light Goose Conservation Order.
- Provide wildlife-dependent public recreation as mandated by and according to Service policy.

## ASSESSMENT

- A. Are wildlife populations present in numbers sufficient to sustain optimum population levels for priority refuge objectives other than hunting?

### Migratory Birds

For Waterfowl and Geese, the annual assessments are based upon the distribution, abundance, and flight corridors of migratory birds. The annual Waterfowl Status Report (USFWS 2014) includes the most current breeding populations 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.

#### Waterfowl Use on Swan Lake NWR

Water bird surveys are conducted throughout the year at Swan Lake through ground counts conducted by Refuge Staff and aerial flights conducted by the Missouri Department of Conservation. Water bird numbers, including Ducks and Geese, are tracked utilizing Use Days. Use Days are the number of days that birds utilize an area over a given period of time. An example of a Use Day is if 1 bird used the Refuge for 1 day that would count as 1 Use Day or if 1 bird used the Refuge for 2 days that would count as 2 Use Days or if 2 birds used the Refuge for 2 days that would count as 4 Use Days.

**Table 1 Swan Lake Bird Count Data**

2013 Swan Lake Bird Count Use Days			
Ducks	Use Days	Geese	Use Days
American Wigeon	2,514	Greater-White Fronts	144,953
Blue-Winged Teal	121,454	Canada Geese	77,220
Bufflehead	1,350	Ross's Goose	56
Canvasback	6,268	Snow Geese	1,473,884
Common Goldeneye	1,600	<b>Total Goose Use Days</b>	<b>1,696,113</b>
Common Merganser	19,983		
Gadwall	748,241	American Coot	321,030
Greater Scaup	28	American Woodcock	0
Green-Winged Teal	145,773	Common Snipe	150
Hooded Merganser	7,939	Sora Rail	595
Lesser Scaup	103,112	Virginia Rail	0
Mallard	1,474,110		
Northern Pintail	240,514		
Northern Shoveler	143,534		
Ring-Necked Duck	152,991		
Ruddy Duck	13,944		
Wood Duck	8,731		
<b>Total Duck Use Days</b>	<b>3,192,084</b>		

## **Mourning Dove**

The mourning dove (*Zenaida macroura*) is one of the most abundant species in 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 MDC (Schulz, 2014):

Statewide results of the 2014 RDS showed 1.29 doves/mile; an 7.83% decrease compared to 2013 , a 6.74% decrease from the statewide 5-year average (2009-13; 1.39 doves/mile, SD 0.18), and a 6.74% decrease from the statewide 10-year average (2004-13; 1.39 doves/mile, SD 0.16). The northern zoogeographic regions showed fairly large increases over last years indices, while the southern and western regions showed declines. By zoogeographic regions, Mississippi Lowlands had the highest index (3.40 doves/mile), and the North and Eastern Riverbreaks and Ozark Plateau the lowest (.096 and 0.71 doves/mile, respectively). Survey results are also provided by Department management regions.

Long-term mourning dove trends from both RDS and CCS surveys provide an interesting picture. Since 1966, both surveys show a strong relationship to each other ( $r = 0.76$ ; 1966-2012). If we assume that these 2 surveys are tracking similar aspects of the mourning dove population, we see 3 things emerging from Figure 5. First, although trends have declined since 1966, the RDS trend has been relatively stable in the last 10 years. Second, although trends are lower today than during the late 1960s, RDS trends are near levels similar to the late 1940s and early 1950s. Third, some phenomena occurred during the late 1950s and early 1960s that caused trends to climb rapidly. Regionally, we can speculate that some beneficial and broad scale land use changes occurred in the Mississippi Lowlands, Northeast Riverbreaks, Northeastern Riverbreaks, and Western Prairie during the late 1950s and early 1960s. Regardless, the important point is that roadside trends are problematic at best when trends of similar variables contradict each other.

## **White-tailed Deer**

White-tailed deer (*Odocoileus virginianus*) represent one of the most important big game mammals in Missouri. Although viewed as being important by both hunters and non-hunters, deer also pose serious socioeconomic and ecological challenges for wildlife managers. Recommended regulations for 2010 reflect continued efforts to manage deer populations in the best interest of most Missourians affected by deer while providing the maximum amount of hunting opportunity. Continued liberal antlerless harvest opportunities in northern Missouri are intended to maintain deer numbers at current levels (Hansen, 2010).

According to the 2013 Swan Lake NWR Deer Spotlight Survey Report the information from deer spotlight surveys taken from 2008-2013 suggests that deer densities on Swan Lake NWR are now within the limits considered sustainable for this region and habitat type, which range from 15 – 25 deer/mi<sup>2</sup> (L. Hanson, MDC Deer Biologist, personal communication). Methods to reduce deer densities on Swan Lake NWR, including a sustained or slightly increased harvest program for deer, should continue to be used and evaluated. Figure 3 shows data compiled from those surveys.

**Table 2 The estimated density (D) of deer/mi<sup>2</sup>, 95% confidence limits for lower (D LCL) and upper (D UCL), estimated population (P) with 95% confidence limit for lower (P LCL) and upper (P UCL), and density coefficient of variation (DCV) for spotlight deer data**

Year	D LCL	Density (Deer/mi <sup>2</sup> )	D UCL	D CV	P LCL	Population	P UCL
2008	22.7	33.3	48.8	0.168	390	573	839
2009	15.8	23.3	34.4	0.189	271	401	592
2010	15.4	21.2	29.1	0.149	265	364	501
2011	12.0	18.3	27.9	0.209	206	314	480
2012	20.6	29.2	41.5	0.167	354	503	713
2013	17.9	26.7	39.8	0.19	307	459	685

### **Squirrel**

Gray and Fox Squirrels are the most common squirrels in Missouri and are found in abundance on Swan Lake NWR. Both are open to hunting in Missouri from the fourth Saturday in May through February 15 of the following year, which makes for a nine month season. In 2004, the end of the Missouri squirrel season was extended from January 15 to February 15. In 2010, the daily bag limit was increased from 6 to 10 squirrels and the possession limit increased from 12 to 20 squirrels.

### **Turkey**

Missouri is home to the eastern wild turkey (*Meleagris gallopavo silvestris*) where they are widely distributed over the state. Wild turkey populations are well maintained in Missouri using hunting as a management tool. Abundant suitable habitat is found in the state and the wild turkey populations flourish, management is geared toward keeping a sustainable turkey population.

Wild turkey populations have experienced dramatic increases and decreases in the past due to over hunting and unsustainable management practices. After the population decreased to around only 3,000 turkeys, hunting the species was no longer permitted in 1937. At this point efforts were made to restore the wild turkey population.

Restoration efforts were successful and there are currently hunt-able wild turkey populations in every county of Missouri and thousands of turkeys are harvested each year without negatively impacting their population sustainability. In 1995, it was estimated that there were 30 turkeys per km<sup>2</sup> of timber in areas once thought to be unsuitable habitat for turkeys, and higher densities in more suitable habitats (Kurzejeski et al. 1995). During years of low turkey reproductive success there are still ample hunting opportunities and no harm is done to the wild turkey population as a whole.

### **Rabbit**

Cottontail rabbits (*Sylvilagus floridanus*) are found in abundance from the forested areas of Missouri to the prairie and are known for their rapid rate of reproduction. They have relatively simple habitat requirements and therefore their population spans the state of Missouri. Rabbits are hunted in Missouri from October first until February fifteenth annually with a short youth hunt prior to the general open hunting season. The rabbit population is sustainable enough throughout Missouri that the current bag limit is 6 and the possession limit is 12.

## **Quail**

Northern bobwhite (*Colinus uirginianus*) is the common native quail species in Missouri and is currently found in every county. Their native habitat has slowly declined over the years as agriculture has increased in the state. Despite the habitat decline, the northern bobwhite can still be found in hunt-able populations. The hunting season for quail in Missouri is from November first to January fifteenth with a 2 day youth hunt before the season opens to the general public. The quail population is sustainable enough throughout Missouri that the current bag limit for these birds is 8 and the possession limit is 16.

## **Pheasant**

The ring-necked pheasant (*Phasianus colchicus*) is commonly found and greatly desired as a game bird in the state of Missouri. Populations throughout the state are variable as agricultural practices greatly impact their survival. As farmers and hunters are becoming more informed about the habitat requirements of the ring-necked pheasant their population is steadily increasing. This species thrives at the edges of crop fields where the field meets the forest line. They do not survive as well in grazed areas when livestock is present. For this reason pheasant population numbers are higher in the northern part of Missouri where there is less livestock and more crop fields.

Missouri is split into two zones for pheasant hunting, the North Zone and the South Zone. Each zone has a different hunting season. The North Zone season corresponds with the quail season and begins November first and continues until mid-January. The South Zone season is much shorter, beginning December first and only lasting a week and a half. The ring-necked pheasant population is mainly concentrated north of the Missouri River and as habitat improves statewide the population will slowly descend on the southern part of the state. The pheasant population in the South Zone is much smaller than in the North Zone and therefore bag limits are currently set at 1 until the population is more sustainable. Hunt-able populations are closely monitored in all parts of the state to carefully select appropriate bag limits and maintain populations.

## **Furbearers**

Furbearers include badger, bobcat, gray fox, raccoon, opossum, and red fox. These animals are abundant in various parts of the state depending on species. The hunting season is from November 15 to the end of January and furbearers can be hunted in any number according to state regulations. In addition Coyote are included and abundant in various parts of the state with an extended hunting season that goes from May 12 to March 31 of each year.

## **Crow**

American crows (*Corvus brachyrhynchos*) do not have specific habitat requirements as many other hunted bird species do. They can be found everywhere from the country to the city and have no specific dietary needs for survival. These circumstances in mind, the crow population is able to flourish in all parts of the state and offer exciting hunting opportunities without harm to the crow population. The crow population is so successful in fact that during the hunting season, which is November first through February third each year, there are no limits to crow harvest per hunter.

## **Amphibians**

Bullfrogs and Green Frogs are hunted in Missouri and are in abundance throughout the state. The statewide hunting season is June 30 through October 31.

### **B. Is there competition for habitat between target species and other wildlife?**

The Refuge has not directly studied habitat competition between the target species identified in this Hunting Plan and other wildlife. However, the only significant level of competition for habitat would be issues related to deer. Deer densities above the MDC target 25 deer per square mile can cause significant habitat damage. This damage can reduce the quality of these habitats for other species. Often times when deer numbers are too high it can cause browse lines which removes lower vegetative levels utilized by many species of wildlife for food and cover.

### **C. Are there unacceptable levels of predation by target species on other wildlife?**

Predation levels by target species identified in this Hunting Plan on other wildlife on the Refuge have not been measured. Most of the species identified are not predatory in nature such as waterfowl and deer. Some of the furbearers such as raccoons can be predatory upon nesting birds.

Please refer to the Environmental Assessment (Alternative B) for detailed analysis of environmental consequences and cumulative impacts leading to the development of this Hunting Plan.

## **DESCRIPTION OF HUNTING PROGRAM**

As noted in Section IV of this plan, all units of the Refuge support populations of migratory birds, big game, and various small game species. Swan Lake NWR is open to the public for various recreational uses through most of the year, including existing hunting programs. The four Outlying Units are not currently open to public use. A comparison of current and new hunting opportunities for 2013 is presented in Table 3.3.

**Table 3 Comparison of Current and New Hunting Opportunities by Unit**

Unit	Current Hunting Opportunities	New Hunting Opportunities for 2015 and Beyond
Swan Lake NWR	Open to: <ul style="list-style-type: none"> <li>• Goose Hunting (Daily Draw Hunt/Open Hunting)</li> <li>• Deer Hunting (Managed Firearms Deer Hunts Only)</li> <li>• <u>Approximately 10% of Refuge acreage is open to migratory bird hunting leaving approximately 90% left as inviolate sanctuary in accordance with Refuge purposes.</u></li> <li>• Yellow Creek Triangle is currently open to deer during the managed deer hunts.</li> </ul>	Open to: <ul style="list-style-type: none"> <li>• Goose Hunting (Daily Draw Hunt/Open Hunting)</li> <li>• Duck/Coot Hunting (Daily Draw Hunt)</li> <li>• Deer Hunting ( Firearms and Archery Managed Deer Hunt)</li> <li>• Dove Hunting (Open Hunting)</li> <li>• Squirrel Hunting (Open Hunting)</li> <li>• Yellow Creek Triangle open hunting unit open to state regulations</li> <li>• 10 % of Refuge acreage hunted for migratory birds leaving approximately 90% as inviolate sanctuary in accordance with Refuge purposes.</li> </ul>
Outlying Units	Closed to hunting	Open to: <ul style="list-style-type: none"> <li>• All hunting under statewide hunting regulations. (Open Hunting)</li> </ul>
*Daily Draw Hunt is open to licensed hunters in specified areas awarded by a daily draw. *Managed Deer Hunts are drawn through the MDC managed hunt system on an annual basis. *Open hunting is when licensed hunters are allowed to walk-in hunt in specific areas during the regular state open season for a specific species without a draw process.		

Where allowed, hunting on the Refuge follows the season, dates, and bag limits in the Missouri State Hunting Regulations. This reduces confusion when hunters participate in hunting activities on Service lands. Refuge staff hosts an annual post season hunt meeting to receive feedback about the hunting programs from the public. Updated information is also provided concerning hunting regulations before hunts take place.

**New Opportunities for 2015 and Beyond**

In this Hunting Plan, the Service is proposing new public hunting opportunities. These opportunities are comprised of opening new areas to hunting, opening hunting for additional species, and adding types of hunts to broaden opportunities for youth hunters, hunters with disabilities, and other underserved hunting populations. The Refuge hunting programs generally duplicate state season and regulations as appropriate. Missouri State Hunting Permits and Federal Duck Stamps are the only permits required. The specifics of each new and/or revised hunt are outlined as follows for each unit of Swan Lake NWR:

1. Swan Lake NWR

A map of hunting units on Swan Lake NWR can be found in Appendix B.

## A) Waterfowl Hunting

The existing hunting units of S1, S2, S3, T1, T3, V1, W1, and W2 will be open to the early teal season and youth waterfowl season.

The existing hunting units of R1, R4, S1, S2, S3, T1, T3, V1, W1, W2, N4, N2, A3, A7, B4, E1, G2, H2, and J2 will be open to waterfowl hunting during the duck season (including coots) and the late goose season.

Hunting will be open only during the waterfowl seasons on designated days during the season. There will be a 1:00 PM closure on hunting units S1, S2, S3, T1, T3, V1, W1 and W2 through December 15. The reason for these closures is to manage disturbances to migrating waterfowl during the fall migration period.

All units will be awarded through a daily draw conducted at the Refuge hunter check station or the Refuge may utilize the MDC draw system if it can be accommodated. Hunters will be drawn in groups of four. Hunt parties with at least one youth hunter under the age of 16 who is actively hunting will receive preference in the draws. The youth preference will be given by awarding the first two draws to hunt parties with a youth hunter. Hunters will be required to check in at the Refuge hunter check station utilizing the MDC green cards for waterfowl harvest.

During the Light Goose Conservation Order season, units R1, R4, N4, N2, A3, A7, B4, G2, H2, and J2 will be open to snow goose hunting every day with no afternoon closures. During the Conservation Order season the Refuge will utilize a self-check in system and hunters will be required to check in at the Refuge hunting headquarters utilizing the MDC green cards for waterfowl harvest. If hunting pressure becomes too high, a daily draw may be incorporated. During the Light Goose Conservation Order Season, snow goose hunters will be able to check out a hunting unit for 3 consecutive days starting with the day the unit is checked out. Hunters will not be able to check out the same unit back to back. The reason for allowing snow goose hunters to check out a unit for successive days is to increase use of the Refuge to meet the objectives of the Conservation Order. As snow goose hunting requires a large amount of decoys and considerable time and effort to lay out a decoy spread; only allowing one day use for this type of hunting dissuades snow goose hunters from utilizing the Refuge.

## B) Dove Hunting

The existing goose hunting units N4, N2, and A3 will be open to mourning dove hunting during the designated Missouri dove season. During dove season, hunters will utilize a self-check in system and will be required to check in at the Refuge hunter check station utilizing the MDC orange cards for dove harvest.

## C) Deer Hunting

Swan Lake NWR will host up to four managed white-tailed deer hunts, depending on deer population status from year to year, for more details see Section 7, Special Hunts.

1. Managed Firearms Deer Hunt for People with disabilities.

This hunt will be drawn for people with disabilities and hunters will be provided a blind to hunt from for a designated time frame, generally a weekend hunt. Emphasis of this hunt will be to provide recreational opportunities for people with disabilities and to control Refuge deer populations within MDC deer management objectives (15-25 deer/mi<sup>2</sup>).

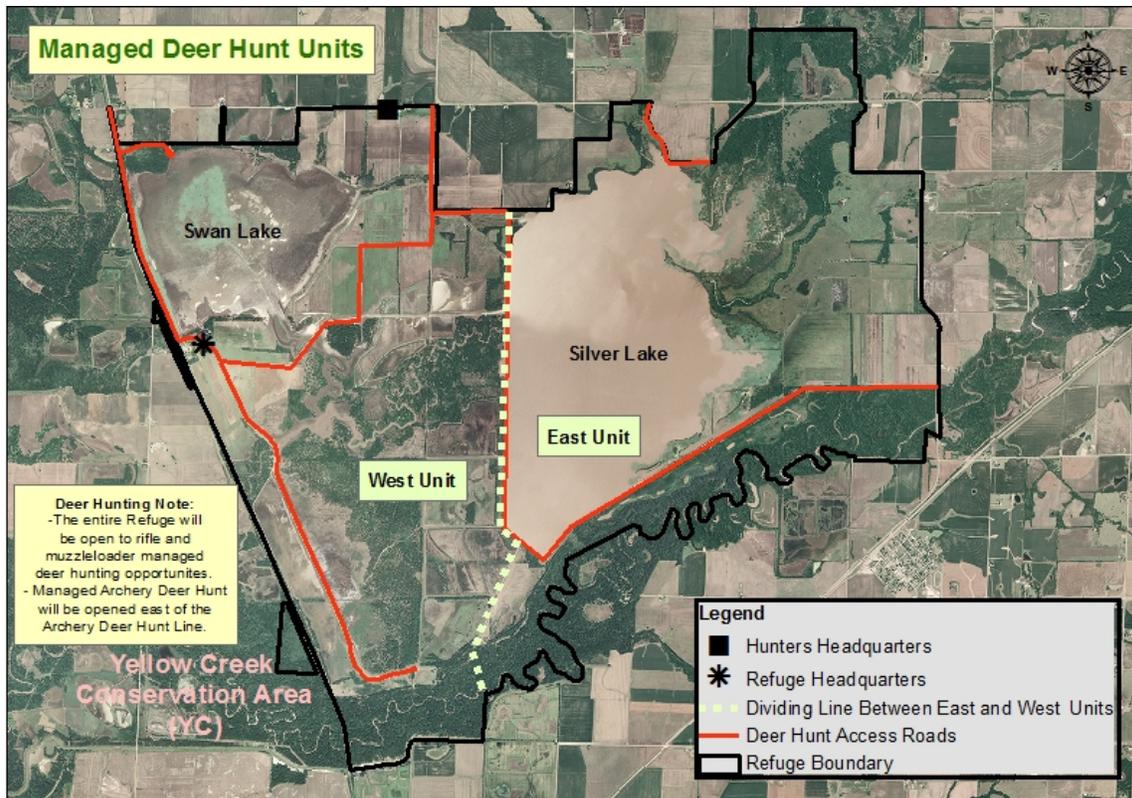
2. Managed Firearms Deer Hunt for Youth Age 16 and Under.

This hunt will be drawn through the MDC managed hunt system and will be for a designated time frame, generally a weekend hunt. Emphasis of this hunt will be to provide recreational opportunities for youth hunters and to control Refuge deer populations within MDC deer management objectives (15-25 deer/mi<sup>2</sup>).

3. Managed Firearms Deer Hunt open to all hunters.

This hunt will be drawn through the MDC managed hunt system and will be for a designated time frame, generally a weekend hunt. Emphasis of this hunt will be to control Refuge deer populations within MDC deer management objectives (15-25 deer/mi<sup>2</sup>) while providing recreational opportunities for consumptive use on the Refuge.

During the managed firearms hunts (2 and 3 above) the Refuge will be divided into two areas with half the hunters being designated to hunt on the east side of the Refuge and the other half designated to hunt on the west side of the Refuge, see Figure 4.

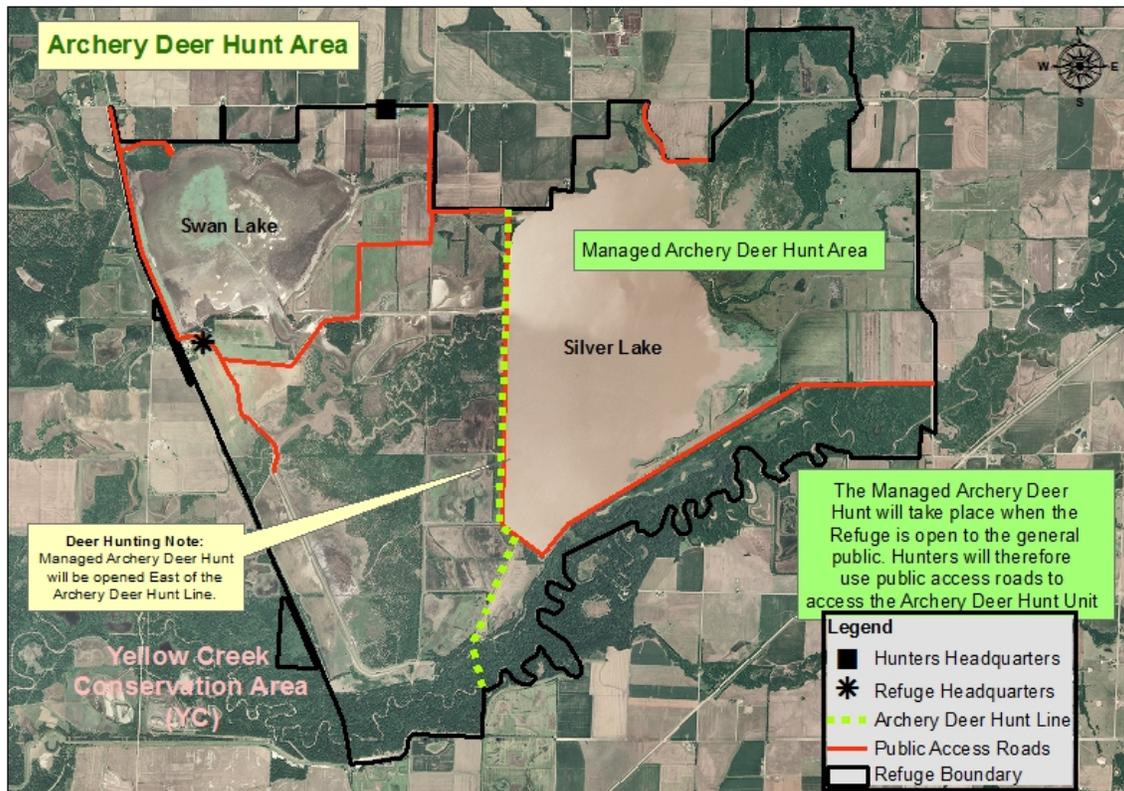


**Figure 1 Managed Firearm Deer Hunt Units**

All other hunting on the Refuge will be closed during the managed firearms hunts.

4. Managed Archery Deer Hunt open to all hunters.

This hunt will be drawn through the MDC managed hunt system and will be for a designated time frame; generally a two week period during the early fall. Emphasis of this hunt will be to provide recreational opportunities for hunters and to control Refuge deer populations within MDC deer management objectives (25 deer/mi<sup>2</sup>). Archery hunters will hunt in the designated Managed Archery Hunting Area, see Figure 2.



**Figure 2 Managed Archery Deer Hunts**

D) Squirrel Hunting

Squirrel Hunting will be open in the area along Yellow Creek (see Appendix C). Squirrel hunting will be open on Swan Lake NWR in the designated squirrel hunting unit concurrent with the Missouri squirrel season, currently open May 22 through February 15 of the following year. Vehicle access to the squirrel hunting unit will be limited to the hunter access portion of the east entrance road during that part of the squirrel seasons that falls after the last Sunday of October through December 15. This will limit disturbances to waterfowl sanctuary during peak migration times.

F) Yellow Creek Triangle Unit Open to State Regulations Except for Deer Firearms Season

A 40-acre unit will be open to all hunting in accordance with Missouri State Regulations with the exception of deer firearms hunting. This unit will be consistent with open hunting on the adjacent Yellow Creek Conservation Area. The Open Season Hunting Unit will be accessed by hunters from the Yellow Creek Conservation Area. Hunters may not access this area from the main part of the Refuge across the old rail road right-of-way which is under the jurisdiction of the City of Chillicothe at this time. Species which will be open to hunting are: migratory birds(Dove, Rail, Snipe, Teal, Ducks, Coots, Geese, and Woodcock), squirrel, turkey, cottontail rabbit quail, ring-necked

pheasant, crow, white-tailed deer, groundhog, amphibians including bull frogs and green frogs, and furbearers including badger, skunk, bobcat, coyote, gray fox, raccoon, opossum, and red fox.

## 2. Schmitt Unit, Moresi Unit, Bates Unit, and Truman Reservoir Unit (Map in Appendix C)

A) Open to all hunting according to statewide hunting regulations.

Species which will be open to hunting are: migratory birds (Dove, Rail, Snipe, Teal, Ducks, Geese, and Woodcock), squirrel, turkey, cottontail rabbit quail, ring-necked pheasant, crow, white-tailed deer, groundhog, amphibians including bull frogs and green frogs, and furbearers including badger, skunk, bobcat, coyote, gray fox, long-tailed weasel, raccoon, opossum, and red fox.

### **Consultation and Coordination with the State**

Previous to this plan, the Refuge hunting program has been developed in coordination with the MDC biologist, regional and area managers. This coordination was accomplished through formal and informal meetings.

The Refuge's consultation with MDC biologists and regional/area managers for the development of this Hunting Plan dates back to 2007 as the Refuge began a series of meetings to develop a vision for Refuge programs via the CCP process. The Refuge Manager has participated in two public meetings, 2008 and 2010, along with the MDC Big Game Biologist regarding deer hunting on Swan Lake NWR and in Chariton County. During the CCP public comment process the Refuge received comments from the public and MDC regarding the proposed hunting plan as identified in the CCP.

During the public scoping process for the Environmental Assessment of this Hunting Plan we received written correspondence from the Missouri Department of Conservation. Their correspondence provided feedback regarding the alternatives considered in the Environmental Assessment.

Following the adoption of this Hunting Plan, consultation and coordination with the MDC and others regarding its annual implementation will be a combination of formal and informal activities based upon the nature of the issues to be addressed.

### **F. Law Enforcement**

The enforcement of Refuge and State hunting regulations, trespass and other public use violations normally associated with management of a National Wildlife Refuge is the responsibility of commissioned Refuge Law Enforcement Officers. Refuge Officers cooperate with, and are 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, city, and county law enforcement agencies to develop agreements and strategies to ensure law enforcement operations are performed as safely and efficiently as possible.

The Refuge also utilizes non-law enforcement staff to manage hunting activities. For example, some staff works on alternate schedules so they are on the Refuge units during the hunting seasons. The staff assists hunters and non-hunters to ensure that all Refuge users understand where to locate areas that are open to hunting. Other Refuge staff and volunteers assist with special hunts for youth, hunters with disabilities, and other underserved hunting populations. The Refuge also utilizes contractors to check hunters in and out at the hunter check station, which significantly reduces the time commitment of the Refuge staff.

### **Funding and Staffing Requirements**

The annual costs of Refuge activities to attain the Hunting Program objective is an estimated \$12,220 out of an overall Refuge operation budget of about \$435,000 (FY13 Figures). These estimated costs include staff (28 days, \$ 6,720), contracting cost (\$3,500), and operating expenses (\$2,000). This estimate also includes Refuge staff activities associated with evaluating resources available for hunting (e.g. biological assessments of target species) as well as preparing for (e.g., special signage and access) and monitoring hunting activities.

## **MEASURES TAKEN TO AVOID CONFLICTS**

### **Biological Conflicts**

The Refuge avoids conflicts related to biological resources by adopting the “wildlife first” principle explicitly stated in the Improvement Act. The Refuge staff monitors species population trends to ensure that target species can be hunted at the Refuge without adversely affecting the species populations. 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 limits or excludes hunting activities of migratory birds on portions of the Refuge. Specific areas of the Refuge are not hunted to provide sanctuary for migratory bird species. Figure 3 below identifies hunting areas and access roads to those areas in relation to inviolate sanctuary on the Refuge. Special hunts with defined hunting hours and days are used to manage hunting pressure and overall take at appropriate levels.

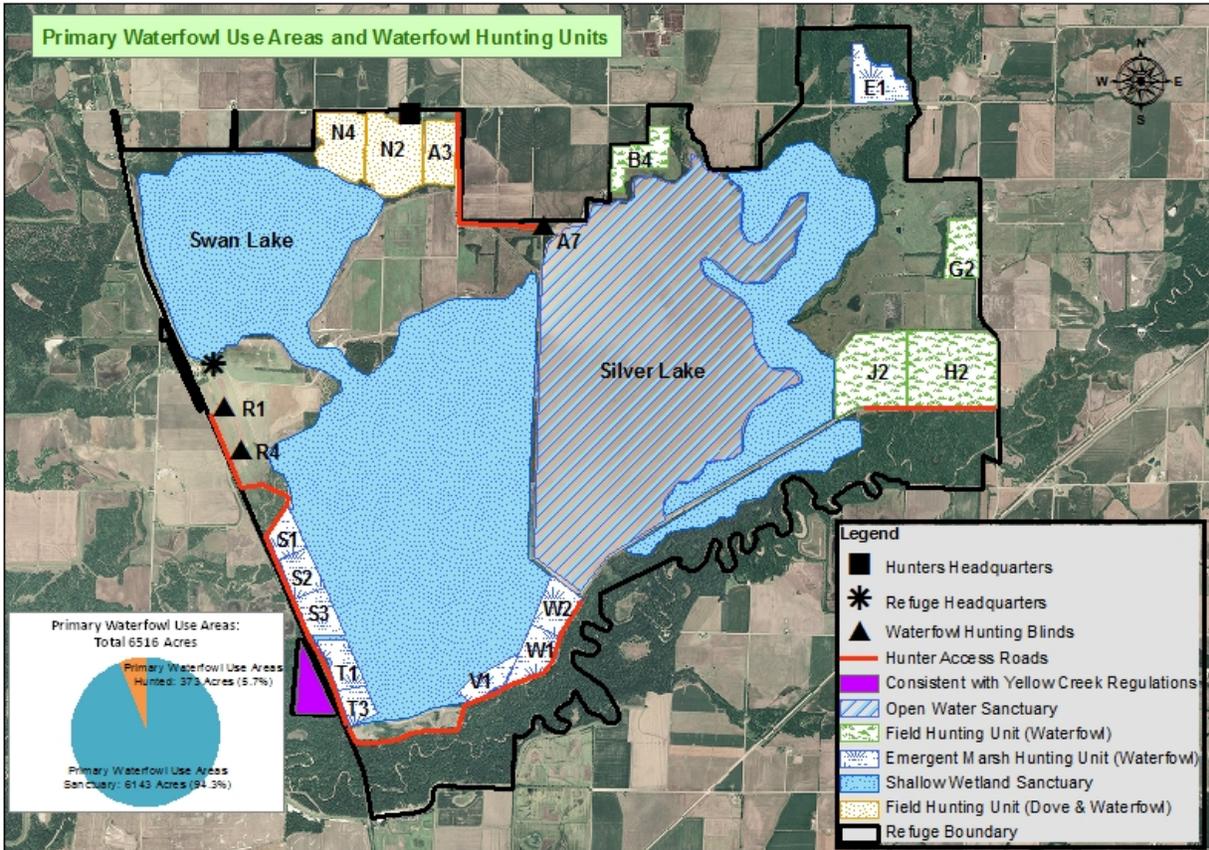
### **Threatened and Endangered Species**

The following Threatened & Endangered Species are found on Swan Lake NWR:

Piping Plover and Interior Least Terns are Endangered Species that are rarely found on Swan Lake NWR. In the past they have been observed during late summer periods outside of hunting season.

Indiana Bats are an Endangered Species that utilize bottomland forested site at Swan Lake NWR and have been observed on the Refuge. Northern Long-Eared Bats are proposed to be listed as an Endangered Species and have not been observed on the Refuge. Bats are active at night when the refuge is closed. Most of the areas where Bats might occur are not open to hunting during the same time periods that the bats are present.

A more detailed analysis of the impacts of the Hunting Program has been completed in the supporting Environmental Assessment and a Section 7 Intra Service Consultation has been completed with the Ecological Services Division of the US Fish and Wildlife Service.



**Figure 3 Waterfowl Inviolate Sanctuary and Waterfowl Hunting Units**

**Public Use Conflicts**

In an effort to avoid conflicts with non-hunting priority recreational uses that are outlined in the Improvement Act, and for safety, the Refuge enforces Refuge specific hunting regulations. Hunting is either not allowed on certain areas or is restricted by location, timing, and or methods.

The boundaries of all lands owned by the Service are posted with Refuge boundary signs. Areas administratively closed to hunting are clearly marked with “No Hunting Zone” or “Area Beyond This Sign Closed” signs.

The greatest conflicts have the potential to occur during the managed firearm hunts. These potential conflicts will be avoided because the Refuge is closed to all other uses, including other hunting such as squirrel and waterfowl, during the days the managed firearm hunts are conducted.

**Administrative Conflicts**

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

There is a potential for conflict with management activities during the fall prescribed fire season. Occasionally, an area open to hunting is proposed to receive a prescribed fire treatment. Typically, a notice of the impending treatment is posted at the unit public access points to alert

all users, including hunters. Prior to implementing the fire treatment, the treatment unit is scouted by Refuge fire staff to ensure that no one is endangered by the treatment. Because of the relatively high degree of non-hunting public uses of Refuge units, the increase in pre-fire scouting due to hunting is not a significant conflict.

There is the potential for conflict with Refuge farming practices. The Refuge agricultural units are farmed by private cooperators. There is a potential conflict with hunting activities during the fall harvest. Cooperators are given information about managed deer hunt dates and informed to stay out of the units during the hunts. Typically harvest is completed prior to the time of the managed deer hunts except during wet falls that prevent harvest until later in the fall. Farm cooperators will be informed to stay out of dove hunting units the first two weeks of September, when heavy use of dove hunting occurs. Farm cooperators will be informed to conduct harvest activities in waterfowl hunting units during the closed days of the hunts. In most years harvest is completed in these units well before the waterfowl hunting season begins, with the exception of the early teal season.

There is potential conflict between Refuge maintenance activities/wildlife surveys and hunting. Every attempt will be made to carry out these activities during periods when hunting is closed. When this cannot be avoided hunters will be notified during check in of potential disturbances caused by Refuge management activities. In some situations hunting or specific hunting units may be temporarily closed after proper notification to the public.

## **CONDUCT OF THE HUNT**

### **Hunting Regulations**

#### **Swan Lake National Wildlife Refuge Specific Hunting Regulations**

Hunting regulations posted in the CFR specific to the Swan Lake National Wildlife Refuge will be as follows:

*A. Migratory Game Bird Hunting.* The Schmitt, Moresi, Bates, Truman Reservoir, and Yellow Creek Triangle Units of Swan Lake NWR are open to Dove, Rail, Snipe, Teal, Ducks, Geese, and Woodcock according to Missouri State Hunting Regulations. We allow hunting Dove, Rail, Snipe, Teal, Ducks, Geese, and Woodcock, on designated areas of the Swan Lake NWR in accordance with State regulations subject to the following conditions :

1. We require Missouri Department of Conservation “Green Cards” while waterfowl and goose hunting and Missouri Department of Conservation “Orange Cards” while dove hunting on the Refuge in addition to all other required Federal and State license, stamps, and permits.
2. You must follow the designated check in and out procedures before and after hunting.
3. We only allow waterfowl and goose hunting during designated days of the waterfowl seasons, late goose season, and Spring Conservation Order Season.

4. Hunting use hours begin and end at designated times on designated hunting units. You must remove all equipment and be out of the units by the designated times.
5. During the Spring Conservation Order Season, hunters may check out a unit for a designated amount of time and leave their decoy spread and blind out overnight during that period.
6. Hunters may hunt only in the designated area they are assigned at the check station.
7. Hunting dogs must be leashed or kenneled when outside the hunting unit and under the control of the owner at all times.
8. Hunting units are restricted to parties no larger than four (4), unless otherwise designated.
9. Driving vehicles or ATVs into units is prohibited, hand-pulled carts are allowed. Vehicles must be parked in designated parking areas for the unit they have signed out.
10. Cutting of woody vegetation (see 27.51 of this chapter) on the Refuge for blinds is prohibited.
11. Hunting or shooting is not allowed on, across or within 100 feet of a service road, parking lot, or designated trail.
12. Waterfowl hunters may only have a designated number of shot shells in their possession while hunting in the designated waterfowl hunting units.

*B. Upland Game Hunting.* The Schmitt, Moresi, Bates, Truman Reservoir, and Yellow Creek Triangle Units of Swan Lake NWR are open to Quail, Rabbit, Squirrel, Ground Hog, bull frogs, green frogs, Pheasant, Raccoon, Coyote, Red Fox, Grey Fox, Bobcat, Opossum, Skunk, and Badger upland game hunting according to Missouri State Hunting Regulations. Hunting of squirrel is allowed on designated areas of the Swan Lake NWR in accordance with State regulations subject to the following conditions:

1. Open to squirrel hunting during the Missouri Squirrel Hunting Season on designated days and in designated areas of the Refuge.
2. Hunting is allowed with shotguns (nontoxic shot only for shotguns), handguns, and rim fire .22 caliber rifles.
3. Hunters may not access the Refuge across the boundary from neighboring private or public lands with the exception of accessing the Yellow Creek Triangle Unit from the Yellow Creek Conservation Area.
4. Hunting or shooting is not allowed on, across or within 100 feet of a service road, parking lot, or designated trail.

5. Hunting use hours begin and end at designated times on designated hunting units.

*C. Big Game Hunting.* The Schmitt, Moresi, Bates, and Truman Reservoir Units of Swan Lake NWR are open to big game white-tailed deer and turkey hunting according to Missouri State Hunting Regulations. The Yellow Creek Triangle is open to Deer Archery Hunting according to Missouri State Hunting Regulations. Hunting of deer is permitted on designated areas of the Swan Lake NWR in accordance with State regulations subject to the following conditions:

1. A Missouri Department of Conservation Permit is required along with Missouri Department of Conservation hunter identification tags and parking permits to hunt during the managed deer hunts.
2. Hunters are required to participate in a pre-hunt orientation for managed deer hunts.
3. Hunters must check in and out at the designated times during the Refuge managed deer hunts. Hunting use hours begin and end at designated times on designated hunting units.
4. Hunters may not access the Refuge across the boundary from neighboring private or public lands with the exception of accessing the Yellow Creek Triangle Unit from the Yellow Creek Conservation Area
5. Hunters must be hunting in their designated area only.
6. Entry onto Refuge is allowed one-hour prior to shooting hours during managed deer hunts. All hunters must be off the Refuge one-hour after shooting hours, unless permission has been granted by appropriate Service personnel to retrieve harvested game.
7. Hunting or shooting is not allowed on, across or within 100 feet of a service road, parking lot, or designated trail.
8. Use of portable tree stands and blinds are allowed during managed deer hunts and must be removed at designated times. All stands and blinds are required to have the hunter's name, address and phone number attached. Enclosed hunting blinds and stands must be marked with hunter orange visible from all sides during managed firearms hunts.
9. Hunting over or placing any salt or other mineral blocks on the Refuge is prohibited. (see 32.2(h)).
10. One adult mentor is allowed to accompany youth hunters in the field during the youth deer hunts.

Refuge specific regulations are made available to the public in the Refuge's hunting brochures and general brochure. They are also available on tear sheets. Refuge brochures are available at the Refuge Visitor Center, Hunting Headquarters (check station) and posted at Refuge kiosks

throughout the Refuge. Information about hunting on the Refuge is also posted on the Refuge website at [www.fws.gov/midwest/swanlake/](http://www.fws.gov/midwest/swanlake/). Information regarding the Refuge managed hunts is posted in the MDC Fall Deer & Turkey Hunting Regulations and Information Pamphlet.

## **Special Hunts**

Certain Refuge units and parts of units will be open only to special hunts. A special hunt is an activity focused on certain populations of hunters to provide them with additional opportunities or methods of hunting through a Refuge sponsored program or partners agreement. The populations targeted for these hunts are youth hunters, hunters with disabilities, or other underserved hunter populations. The goal of special hunts is to provide quality recreational hunting experiences that may be limited or unavailable for these underserved hunting populations with the structure of general public hunting. All special hunts require Refuge specific authorization and are conducted within the framework of the State seasons and regulations for the proposed hunted species.

### *Youth Deer Hunts*

One of the managed deer hunts at Swan Lake NWR is a youth deer hunt. This hunt is open to youth ages 11-15. Participants in this hunt apply to and are drawn through the MDC managed deer hunt draw process. Hunters are issued an MDC managed deer hunt permit for the hunt. All hunters are required to attend a pre-hunt orientation on the day prior to the hunt. Scouting is allowed the afternoon prior to the hunt and youth hunters are allowed to take along one adult mentor while hunting.

### *Accessible Deer Hunts*

One of the managed deer hunts at Swan Lake NWR is a deer hunt for people with disabilities. The Refuge has 10 accessible blinds that can be utilized. Hunters will apply and be drawn for this hunt through the MDC managed deer hunt draw process or by applying at the Refuge with an OPM approved *Form FWS 3-2354 Quota Deer Hunt Application*. Hunters are issued an MDC managed deer hunt permit for the hunt. Hunters are allowed to access their blind by vehicle or ATV and are allowed 1-2 assistants or Refuge volunteers to assist them during their hunt.

### *Archery Deer Hunts*

One of the managed deer hunts at Swan Lake NWR is an archery deer hunt. Hunters will apply and be drawn for this hunt through the MDC managed deer hunt draw process. The hunt will take place during a designated time frame in the early fall, usually a two week period on the east side of the Refuge. Hunters are issued an MDC managed deer hunt permit for the hunt and will be required to check in at the Refuge headquarters prior to hunting.

### *Youth Waterfowl Hunting Preference*

To encourage waterfowl hunters to mentor youth waterfowl hunters the Refuge may utilize a preference system on a few designated days of the season. When one member of the hunting party is under the age of 16 and actively hunting with the party that party will receive a preference in the draw that morning. All hunt parties with a qualified youth hunter will be drawn first for the first two blinds. After the initial draw for the first two blinds all hunt parties will be drawn for the remaining blinds.

The Refuge will also be open to waterfowl hunting during the state designated youth season.

### *Accessible Waterfowl Hunts*

Waterfowl hunting Blind A7 is a fully accessible blind and can be reserved in advance by hunters with disabilities. If the blind is not reserved it will be issued during the morning draw to the first hunter with a disability drawn for the blind. If the blind is not utilized it may be drawn out that day for other hunters. For Blind A7 to be reserved only one party member needs to be disabled.

### **Anticipated Public Reaction to the Hunt**

User conflicts between hunting and non-hunting visitors are likely to be minimal. Efforts have been made to minimize user conflicts and safety concerns by focusing hunting opportunities to specific areas, specific methods of take, and specific times. Non-hunting areas are still available for use by school groups, educational field trips, Refuge interpretive programs and other non-consumptive uses such as wildlife observation and wildlife photography. Hunting or shooting is not allowed on, across, or within 100 feet of a service road, parking lot, or designated trail.

Some neighboring landowners will voice concerns of opening the Refuge to waterfowl hunting in fear of losing sanctuary for migrating waterfowl. These concerns have been addressed through restrictions in hunting areas in addition to limiting the days and times that waterfowl hunting can occur on the Refuge. These measures will provide adequate inviolate sanctuary to migrating waterfowl as well as limit hunting pressure to a tolerable level for migratory birds and other wildlife utilizing the Refuge.

### **Hunter Application and Registration**

All managed deer hunts on Swan Lake NWR are conducted through the MDC managed deer hunt draw process or through the Refuge directly utilizing with an OPM approved *Form FWS 3-2354 Quota Deer Hunt Application*. Archery deer hunting on Outlying Units is allowed with an MDC issued archery deer hunt permit. No Refuge specific permits are required.

Squirrel hunting on Swan Lake NWR requires an MDC issued Small Game Hunting Permit. No Refuge specific permits required.

Dove hunting on Swan Lake NWR requires MDC issued Small Game Hunting Permit and a Missouri Migratory Bird Permit. No Refuge specific permits are required.

Waterfowl hunting on Swan Lake NWR requires MDC issued Small Game Hunting Permit and Missouri Migratory Bird Hunting Permit in addition to a Federal Duck Stamp. No Refuge specific permits are required.

Snow goose hunting on Swan Lake NWR during the Spring Conservation Order season only requires a Missouri Conservation Order Permit. No Refuge specific permits are required.

The Schmitt, Moresi, Bates, and Truman Reservoir Units of Swan Lake NWR will be open to all hunting according to Missouri State Hunting Regulations.

The Yellow Creek Triangle Unit on Swan Lake NWR will be open to statewide regulations with the exception of deer firearms hunting. No Refuge specific permits are required.

## **Hunter Selection**

There is no selection process for hunting on Outlying Units, the Yellow Creek Triangle or for squirrel hunting on Swan Lake NWR.

There is a pre-hunt draw process for waterfowl hunting. Hunters are drawn in parties of up to four. Hunting parties will select their hunting unit in the order that they are drawn. The Refuge may also incorporate the MDC draw system that is utilized on state conservation areas that are open for waterfowl hunting.

The selection process for dove hunting and the Spring Conservation Order season is a first come sign up basis. If hunting pressure ever requires restrictions in the number of hunters a draw process for these hunts will be incorporated much like is done for the waterfowl hunts.

Hunters are selected through the MDC managed deer hunt draw process for the managed deer hunts conducted on the Refuge or through the Refuge directly utilizing with an OPM approved *Form FWS 3-2354 Quota Deer Hunt Application*.

## **Announcing and Publicizing Hunts**

Hunting opportunities are posted on the Refuge's website, Visitor Center and the Hunting Headquarters. Managed deer hunt information is available in the MDC Fall Deer & Turkey Hunting Regulations and Information Pamphlet that is released every July. Information about waterfowl hunting is also provided on the MDC waterfowl hunting website.

The Refuge hosts a pre-season hunt meeting every September to discuss upcoming hunting seasons on the Refuge. The Refuge also hosts a post-season hunt meeting open to the public every March to receive feedback on the hunting programs from the previous fall hunting season.

## **Hunting Orientation and Safety**

There is an orientation required for hunters participating in the managed deer hunts on the Refuge. This orientation occurs on the day before the hunt and informs hunters about regulations, Refuge boundaries, and safety issues.

There is a brief orientation on Refuge regulations at the morning draws for waterfowl hunting.

There is no specific orientation briefing for squirrel and dove hunters on Swan Lake NWR or for archery hunters on the Outlying Units open to archery hunting.

The Refuge hosts, in partnership with MDC, a fall and a spring Hunter Education Course. This partnership helps to promote hunter education and safety in the local area and among Refuge users.

Signs will be posted at Outlying Units explaining regulations for hunting on these units.

## **Entry and Access Procedures**

Hunters are not allowed to access the Refuge from neighboring properties with the exception of the Open Season Hunting Unit which must be accessed from the Yellow Creek Conservation Area. Hunters must access designated hunting areas from within the Refuge boundaries by utilizing designated parking areas or parking along Refuge roadsides. For the managed deer hunts, waterfowl and goose hunts, and dove hunts hunters must check in and out at the Refuge Hunting Headquarters utilizing MDC harvest cards.

Access to Outlying Units for hunting will be through designated parking areas located on the units.

### **Hunter Requirements**

The Refuge does not impose any special requirement on those hunters participating in Squirrel hunting on the Refuge. All hunters (Missouri residents and non-residents) who are eligible to hunt under Missouri wildlife laws are allowed to hunt on the Refuge.

The Refuge requires hunters to report hunting activities or harvest utilizing MDC Green Cards for waterfowl, MDC Orange Cards for dove, and MDC deer harvest sheets for managed deer hunts. Green Cards, Orange Cards, and deer harvest sheets are used first by refuge staff to track refuge harvest data then returned to MDC to contribute to statewide harvest data. Hunters are also required to complete Migratory Bird Harvest Information Program (HIP) requirements. Should additional reporting be implemented, the Refuge will use the appropriate forms approved by the Office of Management and Budget.

Hunters participating in Refuge Managed Deer Hunts are required to participate in a pre-hunt orientation and possess all required MDC hunting permits. Deer hunters are required to check in each morning, out when finished hunting for the day and check out when finished hunting on the managed firearm hunts and/or when game has been harvested. Hunters check in and out at the Refuge Hunting Headquarters. When checking harvested game in at the Hunting Headquarters hunters are required to tele-check their deer with MDC.

### **Monitoring and Evaluation of the Hunting Program**

Specific objectives are outlined in the CCP along with defined strategies identified as options to meet those objectives; these can be referred to in Section III of this Hunting Plan. The Refuge will incorporate measures to monitor and evaluate the effectiveness of the hunting program and its impacts on wildlife populations.

The Refuge hosts a post season hunt meeting to receive feedback from the public regarding the Refuge hunting program. Information obtained during this meeting will be utilized to determine the effectiveness in meeting hunting program objectives as outlined in the CCP. Harvest data will continue to be tracked for the various hunting units. This data will allow us to track the overall hunter success of various units to ensure the program is providing a quality hunting experience. Harvest data will continue to be tabulated annually and shared with the public.

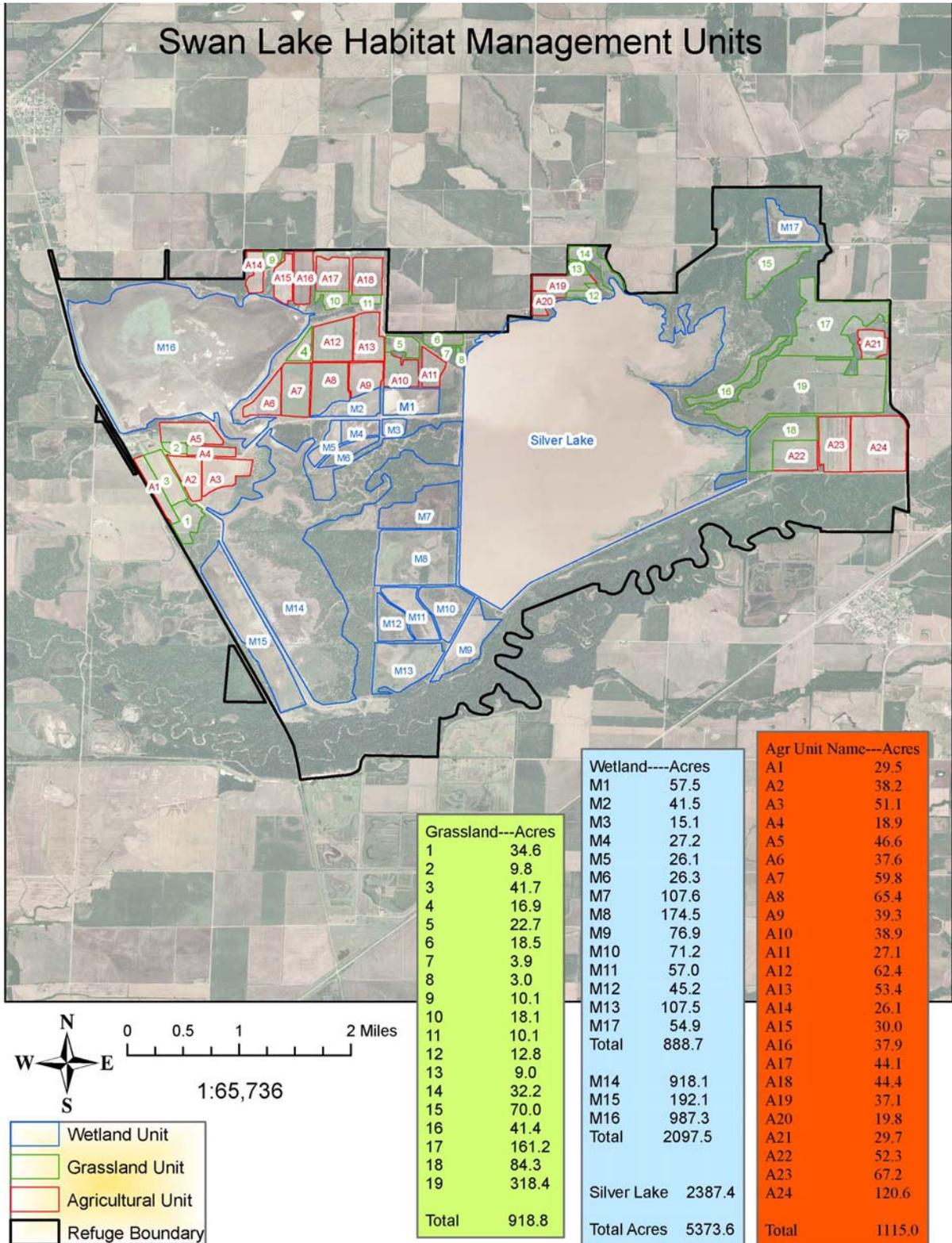
Data obtained from annual deer surveys, harvest data, and waterfowl surveys will be utilized in determining long term trends of populations utilizing the Refuge. The Refuge will consult with MDC in determining annual hunter numbers and harvest restrictions with regards to deer hunting. The Refuge deer hunting program will strive to assist MDC in meeting their herd population objectives as defined for the region and state.

Considerations will be made on an annual basis with regards to waterfowl and goose hunting access in relation to Refuge wetland conditions. In some years extreme drought or early fall floods prevent Refuge habitats from producing abundant foods for migrating birds. In years where habitat conditions are at a minimum, adjustments to the hunting program may be necessary to ensure the Refuge provides adequate inviolate sanctuary for migrating birds.

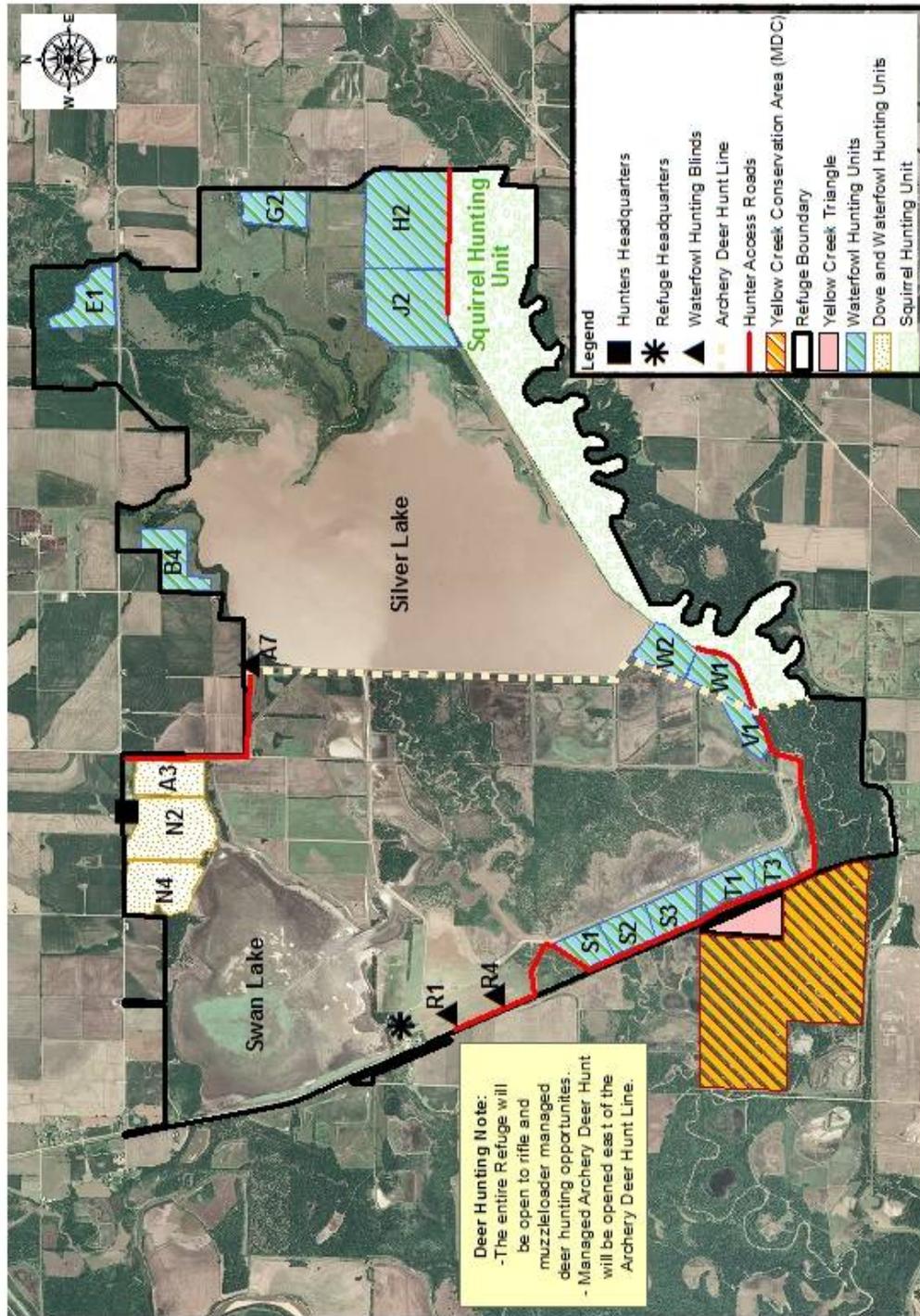
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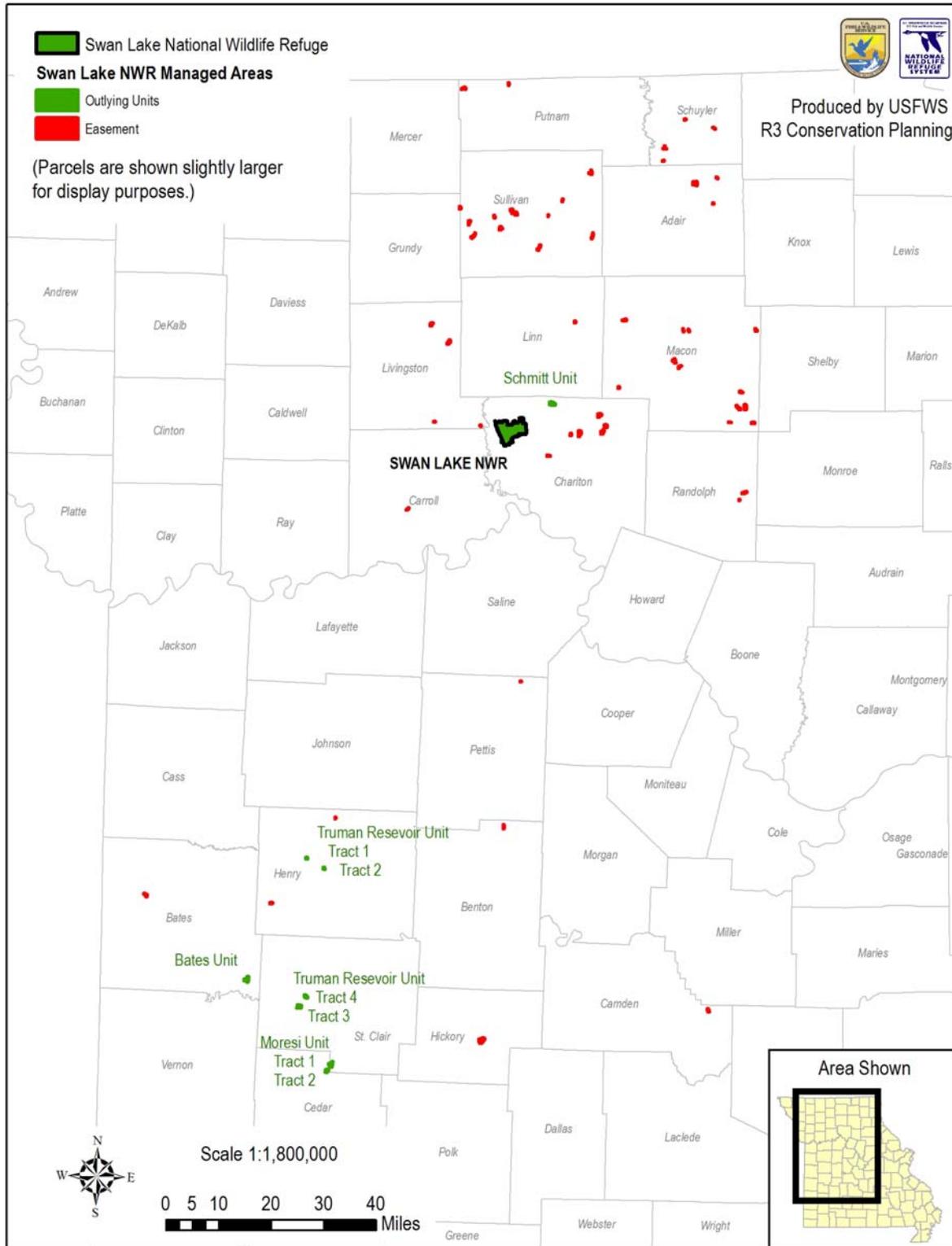
# APPENDIX A SWAN LAKE HABITAT MANAGEMENT UNITS (2011)



# APPENDIX B HUNTING UNIT MAP



# APPENDIX C OUTLYING UNITS



# APPENDIX D REFUGE VISITOR USE FACILITIES

