

Appendix L: Land Protection Plan

Crab Orchard

National Wildlife Refuge

Boundary Modification

Land Protection Plan

June 2004

1. Project Description

Crab Orchard National Wildlife Refuge (NWR) was established on August 5, 1947, by Public Law 80-361. This Act of Congress transferred 22,575 acres from the Department of War (Illinois Ordnance Plant) and 21,425 acres from the Soil Conservation Service (Crab Orchard Creek Project) to the Secretary of the Interior. Since the Refuge was established, the Service has acquired and divested several parcels of land. In 1959, the Refuge transferred 921 acres of land located in its southeast corner to the U.S. Department of Justice for construction of a maximum security prison. In 1969, the Refuge acquired several scattered tracts of land in exchange for 160 acres that is now the site of the John A. Logan College. In a 1974 exchange, the Refuge acquired 15 acres of State of Illinois land in the vicinity of Little Grassy Fish Hatchery. In a 1979 exchange, Southern Illinois University acquired the current site of Touch of Nature Environmental Center and the Refuge acquired land south of Little Grassy Lake. Through the years the Refuge has purchased a few scattered parcels. In 2000, the Refuge used Natural Resource Damage Assessment funds to purchase 216 acres on its western edge. The total acres reported for Crab Orchard NWR in the Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service as of September 30, 2002 was 43,888.52.

The Washington Office of the U.S. Fish and Wildlife Service approved the study of potential additional refuge lands in 1990. The refuge did not pursue the study of additional lands until the Comprehensive Conservation Plan (CCP) process. The CCP planning effort was the logical time to re-examine all management and land protection issues related to the refuge. So, during the CCP effort we again looked at the possible need to adjust the boundary of the refuge.

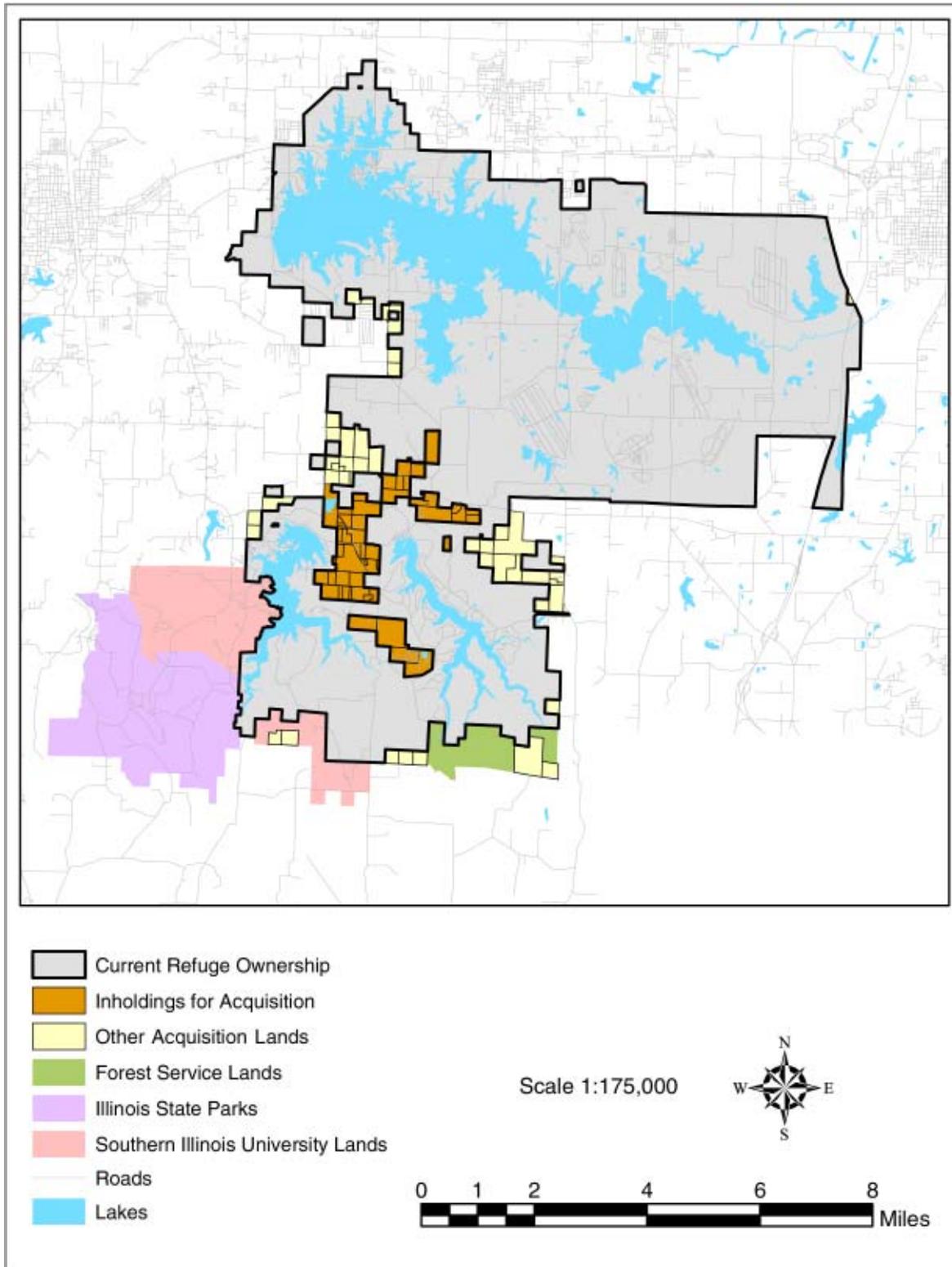
The preferred alternative within the environmental impact statement that accompanies the CCP contains a modification of the existing refuge boundary. This modification could result in the addition of approximately 4,242 acres to the Refuge. The boundary adjustment does not include and is independent of a possible land exchange with Southern Illinois University. The boundary modification would allow the acquisition of inholdings from willing sellers and moving segments of the boundary to roads that would better define the limits of the refuge. The boundary modification will increase the efficiency of management, reduce incompatible land uses, and enhance public use opportunities.

If acquired, the lands will contribute to the goals of the Refuge by reducing habitat fragmentation, removing disruptions to public access, reducing disturbance to wildlife, and reducing potential interference with management activities. If inholdings are acquired, there is the potential to restore habitats and further reduce fragmentation, particularly in the forested southwest portion of the Refuge. If inholdings are reduced, public access will be interrupted to a lessened extent by essentially reducing the boundaries with private property internal to the Refuge. Because developed property is often accompanied by increased human activity and pets, which can disturb wildlife, acquisition of inholdings and potentially developed property up to the well defined boundary of a road will lead to less disturbance of wildlife. Some refuge management activities, prescribed burning and hunting, for example, benefit from well defined boundaries. By bringing the refuge boundary to a road and acquiring inholdings, management, particularly burning and hunting programs, will be made more efficient and safer.

Currently, if a landowner wishes to sell or exchange land that is outside the authorized boundary of the refuge, the Service must complete an analysis for the individual parcel and complete environmental documents related to the transaction. This tract-by-tract analyses is inefficient and does not provide for an overall, cumulative analysis of the land transactions. The separate analysis also may delay a land transaction to the detriment of the seller.

The boundary modification is depicted in Figure 1.

Figure 1: Crab Orchard NWR Proposed Boundary Modification and Other Assorted Public Lands



2. Threats to and Status of the Resource

Habitat within the proposed modified boundary includes approximately 2,000 acres of farmland, some of which has reverted back to grasses, brush and hardwoods. The other land is composed of a combination of pasture, old field and mixed stands of oak, hickory, sycamore and tulip poplar. Without management, most areas will degrade due to their size, isolation, and absence of natural processes such as fire. The areas will continue to face residential development as population growth and housing developments continue. Development and incompatible uses in the proposed boundary modification area also places greater demands on the Refuge in safeguarding Refuge ecosystem structure and function for the benefit of Service trust resources.

3. Proposed Action and Objective

The Service is proposing to acquire approximately 4,242 acres that includes approximately 95 ownerships. We estimate that the cost of acquiring all of the land would be from \$4.3 million to \$8.6 million. The primary funding for acquisition would be from money appropriated from the Land and Water Conservation Fund. Since acquisition would only be from willing sellers, it is likely that if this acquisition were to occur, it would be over a period of decades. Because CCPs detail program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes, the CCP and this Land Protection Plan does not constitute a commitment for funding for future land acquisition.

Any acquired lands would become part of the Refuge. The annual costs for administration, operations and maintenance would be lower than acquiring non-adjacent lands. Operation costs will ultimately depend upon the amount of land purchased in fee and easement and habitat restoration requirements.

4. Protection Alternatives

This section outlines and evaluates two strategic alternatives for the restoration and preservation of approximately 4,242 acres of habitats surrounded by or adjacent to Crab Orchard NWR. The two protection alternatives discussed below are included in the alternatives considered in the Crab Orchard

NWR Comprehensive Conservation Plan Environmental Impact Statement (EIS). Protection Alternative A is incorporated into Alternative A of the EIS. Protection Alternative B is incorporated into Alternatives B, C, D, and E of the EIS.

4.1. Alternative A (No Action):

Under Alternative A, the Service would not seek realty interests in land and water within or adjacent to the Refuge. The Refuge would continue to offer landowners support through the Refuge's Partners for Wildlife program. The plants and wildlife of the area would continue to be impacted by residential and agricultural development and the quality of wildlife dependent recreational and aesthetic experiences would decline. Public use opportunities would be limited to private landowners and others with permission from landowners. If landowners in the proposed boundary expansion area wished to sell their land to the Service, each parcel would be evaluated separately. If acquisition were pursued, the process would not be completed quickly – to the detriment of the seller.

4.2. Alternative B (Preferred):

The Service would facilitate the protection of approximately 250 acres per year from willing sellers using outreach and technical assistance, cooperative management agreements, conservation easements and fee-title purchase of land (and/or donations from private parties) or a combination of all methods, depending on site, circumstances, and landowner interests. The estimate of 250 acres per year is based upon historical land acquisition funding levels in the Service's Region 3, which includes Illinois. Any acquisition of lands would be from willing sellers only, regardless of the type of interest. The Service would only acquire the minimum interest necessary to reach management objectives for the area.

Areas acquired in fee-title through donation or purchase would be owned by the Service and managed as part of Crab Orchard National Wildlife Refuge. Tracts in which an easement or lease is negotiated would remain in private ownership. Under any acquisition scenario, administration and management of the tracts would be done by the staff at the Refuge. This alternative would be carried out on a tract-by-tract basis as land and funding become available over an undetermined period of time.

If acquired, the lands would contribute to the goals of the CCP by reducing habitat fragmentation, removing disruptions to public access, reducing dis-

turbance to wildlife, and reducing potential interference with management activities. If inholdings are acquired, there is the potential to restore habitats and further reduce fragmentation, particularly in the forested southwest portion of the Refuge. Public access would be interrupted to a lessened extent by reducing the boundaries with private property internal to the Refuge. Because developed property is often accompanied by increased human activity and pets, which can disturb wildlife, acquisition of inholdings and potentially developed property up to the well defined boundary of a road would lead to potentially less disturbance of wildlife. Some refuge management activities, prescribed burning and hunting, for example, benefit from well defined boundaries. By bringing the refuge boundary to a road and acquiring inholdings, management, particularly burning and hunting programs, would be made more efficient and safer.

5. Alternative Preservation Tools

The alternative preservation tools proposed for the boundary modification area are fee title acquisition, conservation easements, wildlife management agreements, and private lands extension agreements. Other acquisition methods that could be utilized by the Service include donations, partial donations, or transfers.

5.1. Wildlife Management Agreements

These agreements are negotiated between the Refuge Manager and a landowner that specify a particular management action the landowner will do, or not do, with his or her property. For example, a simple agreement would be for the landowner to agree to delay mowing hay until after a certain date to allow ground nesting birds to hatch their young. More comprehensive agreements are possible for such things as wetland or upland restoration, or public access. These agreements are strictly voluntary on the part of the landowner and are voided if the property is sold.

As long as a landowner abides by the terms of the agreement, this protection can be effective in meeting certain preservation objectives. Unfortunately, because these agreements are voluntary and temporary, there is no long-term assurance the terms will continue to be met.

Direct Service costs for this alternative are generally low, but can add up to near fee title or easement costs if the agreement is for several years.

Staff time and administrative costs are relatively high since agreements must be monitored yearly and renegotiated when land ownership changes.

5.2. Leases

Under a lease agreement, the Service would negotiate with a landowner to receive use of the land or for some maintenance of the land in a given condition. Generally, the landowner would receive an annual lease payment. For example, the Service could lease 40 acres of grassland habitat to provide safe nesting for ground nesting birds. The landowner would not be able to hay or otherwise disturb the ground during the lease period.

Cost effectiveness of leases would vary depending on the length and payment terms of the lease. In many cases, the cost of a lease rapidly approaches the cost of outright purchase in a few years. Also, leases do not offer the long-term protection of habitat, and are more complex for the Service to administer than fee title or easement because of the monitoring, coordination, and administration requirements.

5.3. Conservation Easements

With a conservation easement, the Service in effect purchases a specific interest from a private landowner. For example, the Service may purchase a wetland easement that protects a wetland from draining, filling, and burning. The landowner gives up the right to drain, fill, and burn, but no other land rights. The wetland may still be cropped, or hayed, as natural conditions allow.

An easement that is commonly used on refuges is a conservation or non-development easement. Typically, a landowner would agree to refrain from commercial, industrial, or residential development or other major alteration of habitat. The landowner would continue to use the land as before the easement and retain rights such as hunting and control of trespass, for instance.

Easements are voluntary and purchased only from willing sellers. Payments for conservation easements are generally based on a percentage of the appraised value of the land and varies according to the use restrictions imposed. Easements are most often perpetual and compensation is a one-time, up-front payment.

Easements can be useful when existing land use of a tract is partially compatible with refuge purposes, and when the landowner desires to use the

land for some compatible purpose. Examples of land uses that are normally restricted under terms of a conservation easement include:

- # Development rights, agricultural, commercial and residential.
- # Alteration of natural topography.
- # Uses negatively affecting the maintenance of plant and wildlife communities.
- # Excessive public access and use; and
- # Alteration of natural water level.

Depending on the type of easement, this option may be cost effective in meeting certain Refuge management purposes. Some easements, however, may cost the Service more than 75 percent of fee value and cost efficiency is compromised. If the easement is not perpetual, long term resource protection is not guaranteed.

Easements are more difficult to manage than fee title transactions because of the monitoring, coordination, and administrative requirements. If a landowner fails to honor the easement contract, the Service must take steps to re-establish the terms of the contract.

In the short run, easements have more impact on the tax base of local municipalities than cooperative management agreements and leases, but less impact than fee-title acquisition. In the long run, Service acquisition of interest in lands may be beneficial to the tax base of local municipalities because of increased desirability of land and increased recreational opportunities.

5.4. Fee-Title Acquisition

Fee-title acquisition of land assures permanent protection of resources. All rights of ownership are transferred to the Service in fee title acquisition. Land is purchased only from willing sellers with offers based on fair market value appraisals. Some fee title acquisitions are accomplished through donation or exchange. Although initially the most costly for the Service, in the long run lands in fee-title are easier to manage and plan for because the Service has complete control. Staff time is saved by not having to renegotiate terms for less-than-fee title arrangements.

In the short run, fee-title acquisition will have the greatest impact on the tax base of local municipalities of any alternative preservation tools. The impact from reduced tax revenues to local government is partially offset by revenue sharing payments from the Service. In the long run, Service

acquisition of interest in lands may be beneficial to the tax base of local municipalities because of increased desirability of land and increased recreational opportunities.

6. Coordination

In the past the Service has coordinated with public agencies that manage adjacent lands. The primary agencies include Illinois Department of Natural Resources, Southern Illinois University, USDA Forest Service, and the U.S. Department of Justice. The Service expects to continue its coordination and cooperation with these agencies. In the past the Service has responded favorably to private landowner enquiries about possible sales and exchanges when the sale or exchange would benefit both parties. In the action that we are proposing here, we are making known to private landowners in the proposed boundary modification area the Service's desire to consider the Service as a possible buyer, if they should ever want to sell.

7. Sociocultural Impacts

Restoration, preservation, and management of additional lands by the Service will have little negative effect on the current lifestyles of individuals and communities in and around the Refuge. Landowners who choose to sell their land to the Service will be most affected. Owners of homes or farms who relocate will be reimbursed for moving expenses. Renters also receive certain relocation benefits, including assistance in finding suitable alternate housing that is affordable. Under certain conditions, some homeowners may be able to reserve a "life estate" on their homes, meaning they could remain in their homes for the rest of their lives after selling to the Service. This type of reservation does, however, reduce the amount paid for their homes. Other landowners who negotiate easements or other less-than-fee transactions may have to change certain land management practices to comply with conditions of the easement.

All land transactions will be purely voluntary in keeping with Service policy to purchase lands or rights only from willing sellers. The property rights of landowners who choose not to sell their land will not be directly affected by purchases around them since they will retain all right of landownership. The Service will always take into account the interests of adjacent landowners when managing acquired land.

Lands in which the Service acquires a fee interest will be open to public hunting, fishing, hiking, photography and other compatible refuge uses. Public use of the Refuge will probably not increase markedly over current levels, although the quality of experience that visitors have may be improved.

8. Summary Of Proposed Action

The priority for acquisition of parcels will be determined by refuge purposes; goals and objectives in the CCP; the potential to contribute to an unfragmented landscape component of forest or grassland; and pending development.

The following is a ranked list of priorities for protecting lands surrounded by and adjacent to the Refuge. This list will guide the Service in choosing when and where to use the various available protection tools. The list includes criteria that would rank the priority of a parcel of land considered for fee title purchase, although other protection tools would always be considered first.

This list will help assure that the limited resources available to the Service are used efficiently and effectively.

High Priority Land:

- # Habitat that immediately contributes to increasing an unfragmented block of forest or grassland.
- # Habitat that immediately contributes to the support of a threatened or endangered species.
- # Land with a clear likelihood of being developed for non-compatible uses.

Medium Priority Land:

- # Restorable habitat that will eventually contribute to a larger unfragmented block of forest or grassland.
- # Restorable habitat that will eventually contribute to the support of a threatened or endangered species.

Low Priority Land:

- # Habitat blocks that are dependent on other acquisitions to contribute to a larger unfragmented block of forest or grassland.
- # Other fish and wildlife habitats.
- # Lands that improve the management efficiency of existing Service lands.
- # Lands with significant development that require extensive restoration.

Preservation of any tract would first be sought by working with the landowners to achieve conservation goals they are interested in and that are consistent with Service interests. If a landowner is interested in other options, such as an easement or in selling fee rights to the property, the Service would base its decision of whether to acquire an interest in the land upon the availability of funds and the priority of the tract for preservation. Assistance to landowners for conservation work on their property will be provided through the Service's Partners for Fish and Wildlife Program and through any other programs which may be available in the future. Figure 2 illustrates proposed boundary modification tracts and their priority. Figure 3 and Table 1 depict and summarize the proposed action by tract.

Figure 2: Crab Orchard NWR Boundary Modification Tracts and Their Priority

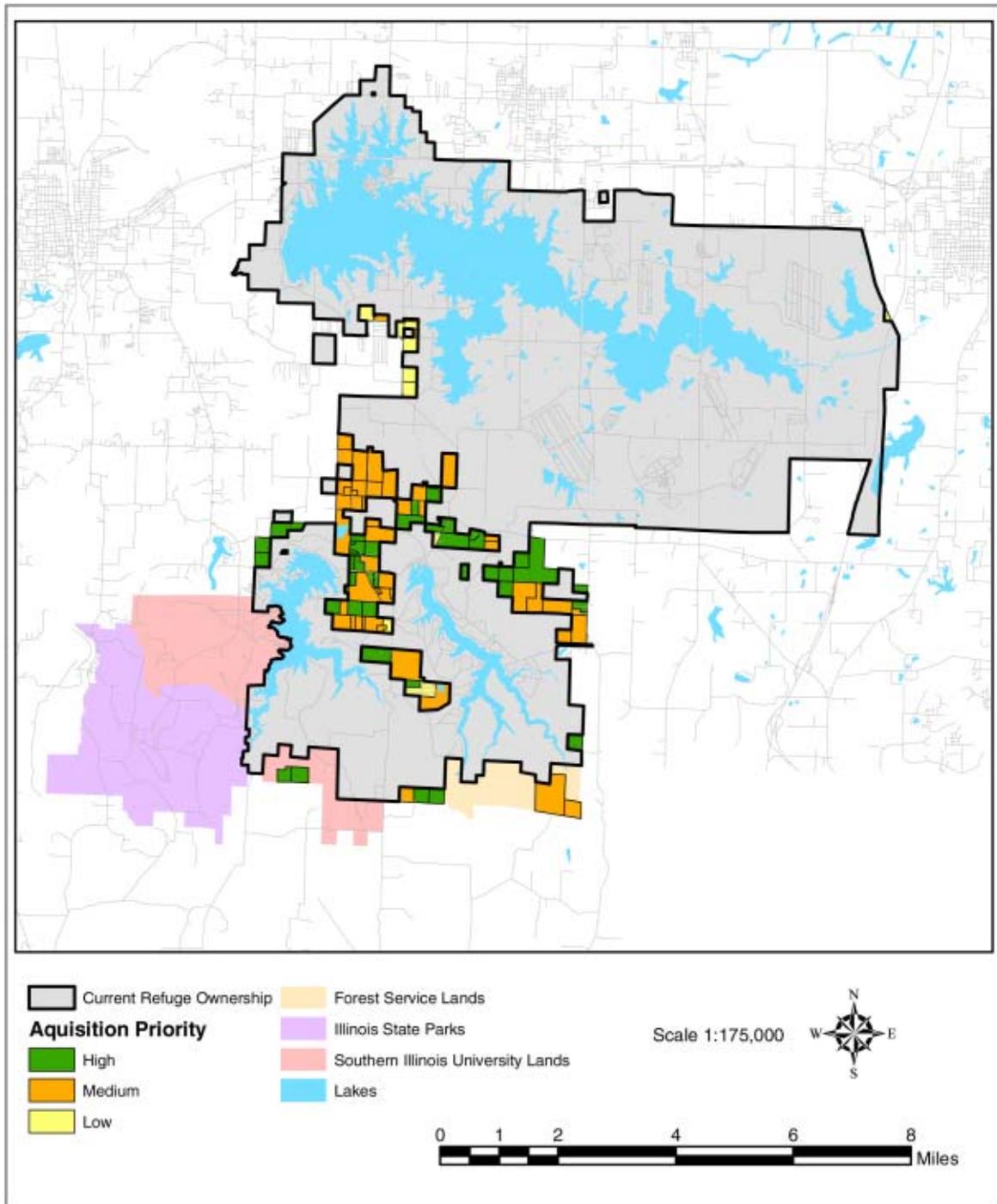


Figure 3: Crab Orchard NWR Boundary Modification Numbered Tracts

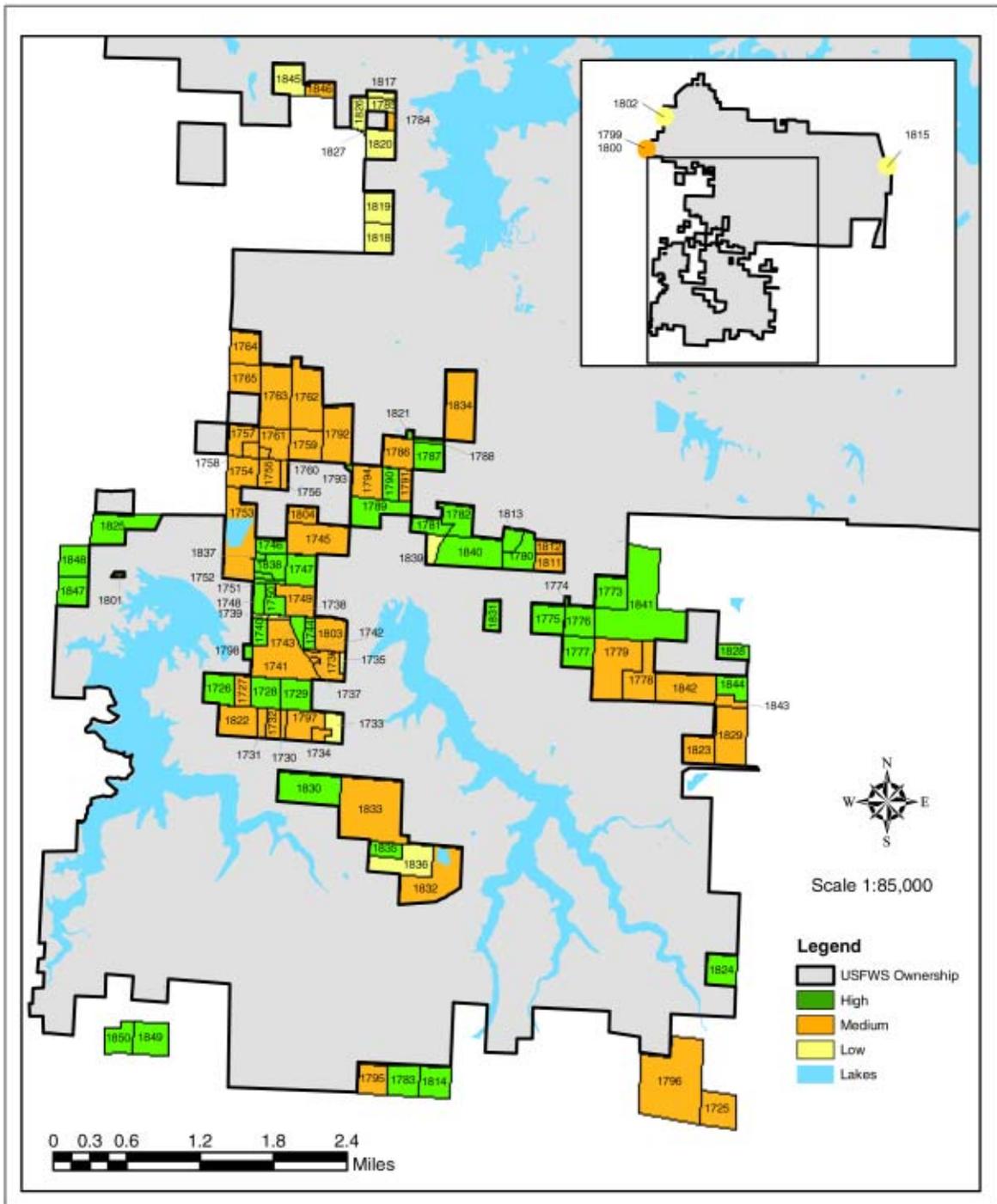


Table 1: Crab Orchard NWR Boundary Modification Tracts Identification Number, Approximate Acreage, Acquisition Priority, Possible Acquisition

Tract #	Acreage	Priority	Owner	Possible Acquisition
1725	51	Medium	Private	Easement/Fee
1726	39	High	Private	Easement/Fee
1727	21	Medium	Private	Easement/Fee
1728	40	High	Private	Easement/Fee
1729	42	High	Private	Easement/Fee
1730	8	Medium	Private	Easement/Fee
1731	12	Medium	Private	Easement/Fee
1732	19	Medium	Private	Easement/Fee
1733	23	Low	Private	Easement/Fee
1734	10	Medium	Private	Easement/Fee
1735	6	Low	Private	Easement/Fee
1736	34	Medium	Private	Easement/Fee
1737	2	Medium	Private	Easement/Fee
1738	4	Low	Private	Easement/Fee
1739	3	Low	Private	Easement/Fee
1740	18	High	Private	Easement/Fee
1741	114	Medium	Private	Easement/Fee
1742	2	Medium	Private	Easement/Fee
1743	13	High	Private	Easement/Fee
1744	14	High	Private	Easement/Fee
1745	82	Medium	Private	Easement/Fee
1746	18	High	Private	Easement/Fee
1747	42	High	Private	Easement/Fee
1748	15	High	Private	Easement/Fee
1749	46	Medium	Private	Easement/Fee
1750	22	High	Private	Easement/Fee
1751	6	High	Private	Easement/Fee
1752	5	High	Private	Easement/Fee
1753	114	Medium	Private	Easement/Fee
1754	42	Medium	Private	Easement/Fee
1755	30	Medium	Private	Easement/Fee
1756	11	Medium	Private	Easement/Fee
1757	30	Medium	Private	Easement/Fee
1758	11	Medium	Private	Easement/Fee
1759	43	Medium	Private	Easement/Fee
1760	5	Medium	Private	Easement/Fee
1761	37	Medium	Private	Easement/Fee
1762	88	Medium	Private	Easement/Fee
1763	82	Medium	Private	Easement/Fee
1764	42	Medium	Private	Easement/Fee
1765	41	Medium	Private	Easement/Fee
1773	42	High	Private	Easement/Fee

Table 1: Crab Orchard NWR Boundary Modification Tracts Identification Number, Approximate Acreage, Acquisition Priority, Possible Acquisition (Continued)

1774	2	High	Private	Easement/Fee
1775	42	High	Private	Easement/Fee
1776	39	High	Private	Easement/Fee
1777	42	High	Private	Easement/Fee
1778	62	Medium	Private	Easement/Fee
1779	105	Medium	Private	Easement/Fee
1780	39	High	Private	Easement/Fee
1781	25	High	Private	Easement/Fee
1782	39	High	Private	Easement/Fee
1783	42	High	Private	Easement/Fee
1784	7	Medium	Private	Easement/Fee
1785	19	Low	Private	Easement/Fee
1786	41	Medium	Private	Easement/Fee
1787	37	High	Private	Easement/Fee
1788	5	High	Private	Easement/Fee
1789	60	High	Private	Easement/Fee
1790	22	High	Private	Easement/Fee
1791	19	Medium	Private	Easement/Fee
1792	76	Medium	Private	Easement/Fee
1793	2	High	Private	Easement/Fee
1794	41	Medium	Private	Easement/Fee
1795	39	Medium	Private	Easement/Fee
1796	190	Medium	Private	Easement/Fee
1797	44	Medium	Private	Easement/Fee
1798	5	High	Private	Easement/Fee
1799	3	Medium	Private	Easement/Fee
1800	2	Medium	Private	Easement/Fee
1801	2	High	Private	Easement/Fee
1802	1	Low	Private	Easement/Fee
1803	44	Medium	Private	Easement/Fee
1804	21	Medium	Private	Easement/Fee
1811	25	Medium	Private	Easement/Fee
1812	15	Medium	Private	Easement/Fee
1813	16	High	Private	Easement/Fee
1814	42	High	Private	Easement/Fee
1815	11	Low	Private	Easement/Fee
1817	8	Low	Private	Easement/Fee
1818	40	Low	Private	Easement/Fee
1819	40	Low	Private	Easement/Fee
1820	40	Low	Private	Easement/Fee
1821	2	High	Private	Easement/Fee
1822	52	Medium	Private	Easement/Fee
1823	38	Medium	Private	Easement/Fee
1824	41	High	Private	Easement/Fee

Table 1: Crab Orchard NWR Boundary Modification Tracts Identification Number, Approximate Acreage, Acquisition Priority, Possible Acquisition (Continued)

1825	70	High	Private	Easement/Fee
1826	21	Low	Private	Easement/Fee
1827	1	Low	Private	Easement/Fee
1828	22	High	Private	Easement/Fee
1829	80	Medium	Private	Easement/Fee
1830	82	High	Private	Easement/Fee
1831	21	High	Private	Easement/Fee
1832	103	Medium	Private	Easement/Fee
1833	167	Medium	Private	Easement/Fee
1834	92	Medium	Private	Easement/Fee
1835	21	High	Private	Easement/Fee
1836	65	Low	Private	Easement/Fee
1837	3	High	Private	Easement/Fee
1838	27	High	Private	Easement/Fee
1839	16	Low	Private	Easement/Fee
1840	85	High	Private	Easement/Fee
1841	208	High	Private	Easement/Fee
1842	77	Medium	Private	Easement/Fee
1843	12	Medium	Private	Easement/Fee
1844	29	High	Private	Easement/Fee
1845	42	Low	Private	Easement/Fee
1846	17	Medium	Private	Easement/Fee
1847	41	High	Private	Easement/Fee
1848	42	High	Private	Easement/Fee
1849	49	High	Private	Easement/Fee
1850	34	High	Private	Easement/Fee

