

Chapter 5: Refuge Boundary Expansion



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This CCP contains an expanded boundary of approximately 27,659 acres for four of the five Complex refuges. While this represents a large effort, the total area identified is rather modest within the context of a larger than 1.3-million acre Area of Ecological Concern. It also represents only a portion of the 130,000 additional habitat need identified for the Mark Twain Reach in the Interagency Habitat Needs Assessment cosponsored by the USGS and USACE. Whether viewed as large or modest, the identified parcels are those that best contribute to the goals of the plan. In the

aggregate the proposal delineates a reasonable approach to address Service habitat and floodplain concerns with willing sellers during the 15-year plan horizon. The land acquisition and subsequent implementation of habitat restoration efforts represent essential strategies to achieving plan goals and objectives on a systemic scale within Area of Ecological Concern (AEC).

Land Acquisition Factors

The selected alternative of the associated environmental assessment (see Appendix H) includes an expanded land acquisition component. The concept of identifying up to 60,000 acres spread over 487 miles of the River to the Complex's potential acquisition boundary originated in the early 1990s, when the Service initiated efforts to examine a larger section of the Upper Mississippi River corridor. This evaluation included the "Middle Mississippi River" (local name for the lower 200 miles of the UMR), which had not been included in earlier efforts.

The Galloway Report (see the Relationship to Other Plan section in Chapter 1) contained several quotes, such as the following:

“Even before the Great Flood of 1993, we had started to realize that some of the areas within our levees should have never been cleared for farming. The events of the last year have driven this point home. Many farmers with marginal and sub marginal land are tired of fighting the river and want to find a way to get out from under their financial burdens.”

Letter from Union County Board of Commissioners to U.S. Senator Paul Simon (IL), April 1994.

In response to the Great Flood of 1993, the Service prepared a Big Rivers Ascertainment Initiative that proposed strategies for evaluating lands to be acquired for the protection and restoration of sustainable representative habitats along the Illinois, Missouri and Mississippi rivers. There was also a smaller, more focused PPP prepared for four areas in the Middle Mississippi River in response to the flood. Congress funded the Complex for this land acquisition as part of a broader federal strategy to assist flood prone farm landowners and to restore some floodplain function. This effort was initially referred to as the Tanahkwe District of the refuge, but the unit was not staffed as a separate station at the time. No lands were purchased at Powers Island. In spite of a great deal of initial interest there, was eventually a very low percentage of landowners applied to enroll in the Wetland Reserve Program. Lands were purchased at Wilkinson Island, Harlow Island and Meissner Island. The Shawnee National Forest also acted to address the flood issue by purchasing some of the Wetland Reserve Program (WRP) easements on floodplain lands and has evaluated a proposal to extend their boundary westward to the river's edge between Grand Tower and Thebes. This effort has been called the Inahgeh addition to the forest. The American Land Conservancy has worked in partnership with the Shawnee National Forest since the start of the post flood project. The presence of this government/non-government joint endeavor on the Illinois side of the Middle Mississippi River is the reason the CCP Area of Ecological Concern (AEC) was adjusted to exclude this section from further Refuge land protection consideration.

In 1997, final approval was obtained from the Washington Office to study the potential addition of up to 60,000 acres to the Mark Twain NWR Complex. Since the CCP planning effort was scheduled to begin soon, it was decided that the detailed evaluation of the expansion would be incorporated into the comprehensive plan. Evaluating locations that best contribute to accomplishing the goals and objectives outlined in this plan identified specific parcels. Prioritizing areas into four tiers further refined this process and identified approximately 56,000 acres for consideration. The top priority tier in this process contains 27,659 acres; tier 2 contains 14,084 acres; tier 3 contains 8,537 acres; tier 4 contains 5,393 acres. Following evaluations of these tiered options at the Regional and Washington Office levels, the refuge was approved to advance the planning process at the tier one level. This top priority level is split between four refuges in the following amounts: Port Louisa NWR, 6,681 acres; Great River NWR, 5,237 acres; Two Rivers NWR, 983 acres; Middle Mississippi River NWR, 14,758 acres.

Considerations for selecting specific parcels and their priority in this expansion include:

- refuge purposes;
- the goals and objectives of this CCP;
- interagency input, such as the jointly prepared Middle Mississippi River Habitat Rehabilitation Initiative, and other habitat focus areas

- the sites' potential to restore riverine wetland and forest values;
- Levee District flood histories;
- the Habitat Needs Assessment (HNA) developed by the Corps, Service, USGS and five UMR states; and
- the opportunity to remove agriculture from the most flood prone and erodible areas;
- providing additional recreational access in areas where existing access is limited.

Parcels contained in the project boundary will not only contribute to the goals of the CCP, but these lands will also assist with public policy matters addressed by other federal, state, and local agencies. Nutrient cycling on additional floodplain lands will contribute to the reduction of nitrogen flowing down the river and a subsequent reduction in Gulf Hypoxia. By opening the width of the floodplain and increasing floodwater storage, the potential damage to urban areas and other developed and protected lands is reduced. Also, some flood prone farmlands have been more expensive to the government through disaster relief payments in recent years than the fee value of the land to purchase. The increase of recreational opportunity is another positive in addition to the primary goal of restored habitat values. The identified lands all contribute to the habitat needs within the River corridor. They also complement broader federal government goals and responsibilities for fiscal management and good government practices beyond the Interior Department objectives.

Much of the land within the proposed boundary is located in the Middle Mississippi River reach of the UMR. Very little public ownership exists there and floods have been particularly hard on floodplain farmers in that portion of the river. Most of the lands there will be managed for forest and aquatic habitats. The forests will provide a contiguous corridor for nesting and migrating birds and aquatic habitats will be managed for the benefit of big river fish. Expansions of the flood zone will contribute to the floodplain management and water quality goals. An exact prediction of the habitat types that will result in any area cannot be made until the areas have been acquired and various detailed options can be explored on-site. However, it is estimated that locations of the expansion above St. Louis will result in habitat types that are proportioned close to the distribution that now occurs in those refuges. This distribution generally being: forest types 50 percent, wetland and aquatic types 30 percent, and other terrestrial types 20 percent. Since there will be an increased emphasis on connectivity rather than isolated wetlands in the Middle Mississippi River section, the proportions there are estimated to be 65 percent forest, 20 percent wetland, and 15 percent other terrestrial habitats.

The initial demarcation of the proposed boundary was accomplished using refuge Geographical Information System (GIS) data, which is used primarily for biological analysis at the refuge. As such, the potential units listed by this means totaled 31 areas containing approximately 134 landowners. The total acreage of the 31 separate areas equals 27,659 acres. However, that acreage figure may be high because it contains some parcels that include open water areas between fee title lands, such as backwater channels within an island complex. These figures will be refined by means of a tract-by-tract evaluation of the parcels as they are recorded in county courthouses.

During the 15-year planning period outlined in this plan, it is not expected that the Complex will actually acquire an interest in all the lands included in the proposed boundary. It is recognized that under normal budget conditions, acquiring 12,000 to 15,000 acres is a realistic estimate during the 15-year plan period. However, it is still important to plan for a larger project area. The needed habitat for a sustainable system is estimated to be an additional 130,000 acres, according to the HNA. Partner agencies, particularly the COE,

have looked to the Fish and Wildlife Service to identify the highest priority lands for meeting sustainable system needs. The areas identified in the CCP boundary expansion proposal, including tiers 2 through 5, will also be used by those partners as specific resource information along the corridor in the event of another disaster mobilization. It is anticipated that other authorities, such as the COE or FEMA, could be used to purchase lands in the event of another flood on the scale of 1993. The proposed boundary will help delineate the highest priority areas for system scale resource attention.

In addition to the parcels detailed in plan maps, the Complex has also been coordinating on this issue with the Ameren/Union Electric power corporation. The company owns some land in the pool 19 river area since their hydroelectric plant was built in Keokuk, Iowa, in 1913, which predated the 9-foot navigation channel project. There are also many private parcels both along this shoreline and submerged that have a long history of resource value, particularly for fish and diving ducks. The lower pool is too large to include exact parcel information regarding key submerged lands. However two “generic” parcels have been included in the CCP top tier land protection proposal. Port Louisa Refuge will explore purchase, or long-term leases, of small, key parcels that enable an open water restoration project “anchor point” have been discussed as a possibility for EMP projects or other restoration activities.



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It is estimated that the cost to acquire nearly 28,000 acres would be anywhere from \$20 million to \$27 million. Since acquisition would only be on a willing seller basis, it is likely that if this acquisition were to occur, it would be over a period of decades. The estimate for the 15-year planning period is \$13 million for the 12,000 to 15,000 acres. Public and private partnerships will be utilized to reduce this cost to the Service.

The estimate for long-term Operations and Maintenance funding needs to manage these lands is relatively low for two reasons. First, most of the land will simply be opened to the River and farming practices stopped. Subsequent much of the forests and wetlands will develop naturally under those conditions. Posting will be required and additional law enforcement coverage may be needed to accommodate the additional public use on the expanded refuge areas. The second reason O&M costs will be lower than normal situations is the presence of partnerships in place on the River. Lands that contain a particularly high restoration value if some level of development is applied can be achieved through programs such as the COE's EMP, or other authority to improve environmental conditions on the River. In all instances, the “forces of the river” will be employed in attempts to mimic natural conditions and reduce O&M costs wherever possible.

Maps showing the existing and proposed boundaries are included in Appendix M.

Revenue Sharing

The U.S. Fish and Wildlife Service, as a federal agency, is exempt from taxation. As refuge lands are acquired, that acreage is removed from county tax rolls. In 1935, the Service began to make revenue sharing payments in lieu of property tax payments to counties that contained Service land. The revenue originally consisted of receipts from the sale of refuge products such as grazing fees, haying, farming, timber sales and oil and gas royalties. Some larger refuges also charge an entrance or user fee, however the Mark Twain NWR Complex charges no entrance fees.

Counties with refuge land initially received 25 percent of the revenue generated from the sale of refuge products within their borders. This worked well for some counties, but not all refuges produce income. Much of the Mark Twain NWR is COE General Plan land, not Service fee title. Revenue returned to each county is based on revenue generated from fee title land. In addition, where farming occurs within the fee title acreage of the Mark Twain NWR, crops are split on a crop share basis. Land is not cash rented. However in 1964 the law was changed to allow all affected counties a portion of revenue money even if no income was generated in their county that year.

The Refuge Revenue Sharing Act authorizes annual payments based on the greatest return to counties and is calculated under one of three formulas: 1) 25 percent of revenues generated by refuge sales; 2) \$0.75 per acre; or 3) three-quarters of 1 percent of the appraised value of the Service land in the county. Appraised value is determined on the type of use at the time of purchase and is re-evaluated every 5 years.

Beginning in 1976, shortages in revenue sharing payments caused reductions to be less than the full eligible payment to local counties. Even though the Refuge Revenue Sharing Act, as amended in 1978, authorizes Congress to supplement the fund to enable full payment, which has happened only once, in 1981. Since 1981, the Service's average annual payments have been 75 percent of the eligible payment. In fiscal year 2003 the payments were 49 percent of the eligible payments.