

Chapter 7: Response to Comments Received on the Draft Environmental Impact Statement and Comprehensive Conservation Plan

The Notice of Availability for the Crab Orchard National Wildlife Refuge Draft Environmental Impact Statement (DEIS) and Comprehensive Conservation Plan was published in the Federal Register on October 17, 2005. The minimum 45-day comment period for a DEIS was extended to 90 days at the outset due to the interest in the Comprehensive Conservation Plan. The comment period ended January 17, 2006. Copies of the DEIS were distributed as hard copies and compact disk. The document was also available for viewing or downloading from the planning web site. In response to the DEIS, a total of 1,983 comments were received via letters, emails, public meeting comment forms, petition, and oral comments. The total accounts for numerous repetitious comments included in form letters. The number of commentors on the DEIS totaled 642. Some commentors submitted comments on a number of topics and sometimes in multiple forms.

Submissions were examined for content and each commentor was entered into a log. The comments were extracted from the submission and grouped into topics, which provide the organization for this Response to Comments chapter. Within the topics some comments have been grouped into a theme representative of a common theme by more than one commentor. Some individual comments were unique enough in nature that they did not fit into a theme. These individual comments were responded to separately within a topic. Table 48 displays the number of comments that were received and that

are represented in a topic. Table 49 functions as a table of contents for locating a topic's comment and response.

The names and addresses of those submitting comments, with the exception of names from petitions, were entered into our mailing list database. The full comments are available on the website, www.fws.gov/midwest/planning/craborchard. Comments received from agencies and organizations are reproduced in their entirety at the end of this chapter.

Changes have been made to the DEIS based on comments received. Changes made to the DEIS are referenced in the comment's response. The changes include modification to the alternatives, including the proposed action, and typographical and factual corrections.

Table 48: Comment Topics and Number of Comments Received for Each Topic on Crab Orchard NWR Draft Environmental Impact Statement and Comprehensive Conservation Plan

Comment Topic	Number of Comments
Wildlife/Habitat	
Forest fragmentation	57
Grassland fragmentation	55
Pine forest management/conversion	55
Reforestation	50
Prescribed burning	46
T&E species management	46
Waterfowl	24
Invasive plants	16
Wetland/moist-soil management	13
Clearing fencerows	7
Early successional habitat	6
Water quality	5
Grass field borders	4
Conservation easements	2
Fire management	2
Fisheries	2
Air quality	1
Agriculture	
Agricultural croplands	50
Pastures	17
Hay	9
Recreation	
Hunting	238
Trapping	206
Crab Orchard Boat & Yacht Club	202
14-day camping stay limit	132
Gas motor restriction Devils Kitchen Lake	89
Equestrian trails	88
Fishing	82
ATVs	57

Table 48: Comment Topics and Number of Comments Received for Each Topic on Crab Orchard NWR Draft Environmental Impact Statement and Comprehensive Conservation Plan (Continued)

Comment Topic	Number of Comments
Personal watercraft (jet skis)	43
Devils Kitchen Campground	38
Reducing recreational opportunities	34
No-wake zones Crab Orchard Lake	21
Recreation fees	13
The Haven	13
Hiking/biking trails	10
Waterskiing	10
Playport Marina	9
Law enforcement	5
Swimming	5
Picnicking	3
Sailboarding/windsurfing	3
Wildlife Observation and Photography	3
Environmental education	2
Fishing tournaments and fish-offs	2
Rockclimbing	2
Collecting wild plant foods	1
Scuba diving	1
Industry	
Industry	11
Wilderness	
Wilderness	67
Lands	
Land acquisition/boundary modification	54
Land exchange with SIU	54
Eliminate area designations	8

Table 49: Where to Find Topics and Service Responses

Comment Topic and Response	Page
Wildlife/Habitat Comments	
Waterfowl	Page 179
Protection of Non-game Wildlife	Page 180
Threatened and Endangered Species	Page 180
Fisheries	Page 181
Wetlands/Moist-soil Management	Page 181
Forest Fragmentation	Page 182
Forest Management	Page 182
Pine Forest Management/Conversion	Page 183
Reforestation	Page 186
Grassland Fragmentation	Page 188
Grass Field Borders	Page 188
Early Successional Habitat	Page 188
Clearing Fencerows	Page 188
Fire Management	Page 190
Prescribed Burning	Page 190
Invasive Plants	Page 191
Water Quality	Page 191
Air Quality	Page 192
Conservation Easements	Page 193
Right-of-Way Management	Page 193
Agriculture	
Agricultural Croplands	Page 193
Pastures/Grazing	Page 195
Hay Fields	Page 197
Recreation (General)	
Hunting	Page 198
Fishing	Page 199
Fishing Tournaments and Fish-offs	Page 199
Trapping	Page 200
Wildlife Observation and Photography	Page 200
Environmental Education	Page 200
No-wake Zones on Crab Orchard Lake	Page 200

Table 49: Where to Find Topics and Service Responses

Comment Topic and Response	Page
Restriction of Gas Motors on Devils Kitchen Lake	Page 201
Closure of Devils Kitchen Campground	Page 202
14-Day Camping Stay Limit	Page 203
Horseback Riding/Equestrian Trails	Page 205
Hiking/Biking Trails	Page 208
Swimming	Page 208
Picnicking	Page 209
Crab Orchard Boat & Yacht Club	Page 209
The Haven	Page 211
Youth Camps	Page 212
Playport Marina	Page 212
Waterskiing	Page 212
Collection of Wild Plant Foods	Page 212
Recreation Fees	Page 212
Law Enforcement	Page 214
Sailboarding/Windsurfing	Page 214
ATVs	Page 214
Personal Watercraft (Jet Skis)	Page 215
Rock Climbing	Page 215
Scuba Diving	Page 216
Reducing Recreational Opportunities	Page 216
Industry	Page 216
Wilderness	Page 220
Research Natural Areas	Page 223
Land Exchange with SIU	Page 223
Land Acquisition/Boundary Modification	Page 224
Eliminate Area Designations	Page 225
Clean-up of Hazardous Waste on the Refuge	Page 226
Economics	Page 227
National Environmental Policy Act	Page 228
Purposes of Refuge vs. Refuge System	Page 230

7.1 Response to Comments

7.1.1 Wildlife / Habitat

7.1.1.1. Waterfowl

Comment: The Refuge should maintain enough food resources through the cooperative farm program to support 6.4 million goose use-days; the document should add the amount of standing corn acreage unharvested in addition to the actual, but harvested corn acreage; the standing corn acreage is probably the most important food source for wintering populations of Canada Geese. Fields that are in weeds and not mowed should be planted to grain or hay that the geese would use. The Service should manage its agricultural resources in a manner that not only allows for maximum profit for farmers, but for effective wildlife management as well. This should include allowing enough food for wintering flocks of geese equal to the maximum population over the past five years.

Response: Our goal is to provide enough food to support 6.4 million goose-use-days using a variety of food resources. Although most of this food comes from the Refuge agricultural program, ultimately our goal is to provide the food—and whether we provide it with agricultural crops, managed moist-soil wetlands, or other habitats—is of secondary importance. Traditionally, 25% of the corn crop is left standing in the fields unharvested. In the future, we may vary the amount of corn left unharvested, as long as the 6.4 million goose-use-days goal is met. We manage the Refuge agricultural program to be a profitable venture of cooperative farmers, but not for maximum profit. We currently provide food well above the goose-use levels experienced over the last five years (Table 3, page 41 of the Draft EIS/CCP). The 5-year average for 2001-2005 is 1.6 million goose-use-days.

Comment: There is a flock of resident geese on the refuge. Prime nesting habitat on the refuge is disappearing due to erosion on the lake. We ask that you provide nesting structures for the resident geese.

Response: The Mississippi Flyway Giant Canada Goose Management Plan (Giant Canada Goose Committee, Mississippi Flyway Council Technical Section, 1996) describes the high reproductive potential and low mortality rates of giant Canada Geese in the Mississippi Flyway. The Plan also notes that agricultural and natural resource dam-

age, including depredation of grain crops, over-grazed pastures and degraded water quality, have increased as resident Canada Goose populations have grown. Considering the negative effects of resident geese, the committee described its intention to not take any actions to specifically encourage increased nesting of resident Canada Geese. We agree with the findings and recommendations of the Plan and do not intend to provide nesting structures for resident geese. For further information on goose management see the Final Environmental Impact Statement: Resident Canada Goose Management, which is intended to guide and direct resident Canada Goose population growth and management activities in the conterminous United States, and is available at <http://www.fws.gov/migratorybirds/issues/cangeese/finaeis.htm>.

Comment: The Service should note the tragedy that occurs in the spring within sight of Rt. 148 Bridge concerning Canada Geese attempting to nest on the “island” just west of the bridge.

Response: We are aware of the Canada Geese nesting on this island. We note that cormorants roosting in the trees on this island impact goose nesting success.

Comment: There is no mention of the pounds of corn per acre that would be available on the acres of corn planted that are needed to feed 6.4 million goose days. No mention is provided of the pounds/bushels of corn that are produced/acre on the Refuge cropland. The size and numbers of ears observed by me indicates that the geese are going to get awfully hungry.

Response: We calculated the amounts of Canada Goose food produced on the Refuge in conjunction with Illinois Department of Natural Resources personnel using widely accepted techniques. Calculations are based on known calorie requirements of Canada Geese, the average production (weight and calories per acre) of different habitats (harvested corn, unharvested corn, wheat, clover, moist soil wetlands, etc.), and the amount of each habitat on the Refuge. There is some discussion of this in the Draft EIS/CCP (pages 89-91). The actual numbers used in the calculations are available at the Refuge.

Comment: The range of peak counts of Canada Geese would be informative along with the average peak count. There was a strong concern among biologists in the 1980's that there was not enough food to nourish the wintering geese.

Response: The peak count (highest number) of Canada Geese on the Refuge for each year is displayed in Figure 22 (page 90 in the Draft EIS/CCP). Overall goose use is better measured by the total number of goose-use-days on the Refuge for each year (Figure 23, page 90). Although there may have been concern regarding food quantity during the 1980s, this has not been an issue for 20 years. We have an abundance of food resources for Canada Geese (Table 3, page 41 of Draft EIS/CCP) that easily meet our goal of providing food to support 6.4 million goose-use-days.

Comment: The number of Canada Goose-use days needed on the refuge has been decreasing in the last decade, with fewer geese at the peak and with the geese coming later and leaving earlier. Hunters want to provide a safety net for geese in case northern lands experience a very cold winter. Providing feed for ten times the present number of goose-use days is excessive. The Refuge should reduce crop acreage to a level that reflects the most realistic projection of over-wintering waterfowl numbers. Maintaining unneeded crop acreage means that substantial amounts of land will be unavailable for conversion to additional forest or grassland habitat.

Response: We agree that under normal circumstances, the Refuge will have more food available for Canada Geese than the numbers of geese that have been using the Refuge in recent years. We have opted to take a conservative approach when it comes to providing food for wintering Canada Geese. We would rather have some food left unused than risk not having an adequate amount if required. Agriculture is also one of the legislated purposes of the Refuge (Appendix G, page 281 of the Draft EIS/CCP), so we will set aside land for agriculture regardless of the needs of Canada Geese.

Comment: The Ducks, Shorebirds and other Waterbirds Goal specifies maintaining and enhancing populations of ducks, shorebirds and other waterbirds. However, the objective and strategy identified primarily benefits waterfowl. Either the goal should be revised or additional

objectives/strategies should be added to provide benefits for shorebirds and other waterbirds (e.g., creation/management of mudflats, submergent wetlands and emergent wetlands, maintaining water levels conducive to shorebirds, etc.).

Response: The objective and strategy for the Ducks, Shorebirds and other Waterbirds Goal are general and do not outline actions specific to waterfowl or shorebirds and other waterbirds. More detailed descriptions of management actions will be outlined in the step-down Habitat Management Plan (Appendix A, Table 48, page 185 in the Draft EIS/CCP), which will be completed after the Final EIS/CCP is published.

7.1.1.2. Protection of Non-Game Wildlife

Comment: With declining populations for many wildlife species, it is important for the Refuge to focus on the protection of non-game wildlife, and make that a priority at least equal to the propagation of game animals, such as ducks, geese and deer.

Response: We agree that public lands are important to the existence of many species of plants and game and non-game animal species. We think that our plan increases management for non-game wildlife, especially our plans for forest and grassland management.

Comment: We believe the current survey activities could be enhanced by including monitoring events for certain types of birds. In particular, surveys of area-sensitive forest birds and grassland and shrubland species would contribute valuable information to Refuge and national goals. We recommend the Service add this component to existing survey work.

Response: We have done some surveys of forest, grassland and shrubland birds. More detailed descriptions of future surveys will be outlined in the Monitoring and Inventory step-down plan (Appendix A, Table 48, page 186 in the Draft EIS/CCP), which will be completed after the Final EIS/CCP is published. We will keep your comment in mind when the step-down plan is developed.

7.1.1.3. Threatened & Endangered Species

Comment: The Refuge should give any Illinois state endangered or threatened species the same proactive considerations and protections that they would afford any federally listed species that

occurs on the Refuge. The Refuge should always consult with the IDNR Division of Natural Heritage regarding any action that may impact any state-listed species that occur at or near Crab Orchard National Wildlife Refuge. We would like to see the Service and the Illinois DNR enter into a formal agreement that the Refuge managers will consult with IDNR biologists every time a management action could possibly involve a state T & E species.

Response: We will be proactive regarding the management of state-listed species, but because federally-listed species often face more widespread threats, they may be higher priorities. We are happy to continue to work with IDNR and we will consult with the Division of Natural Heritage.

- # **Comment:** We do have some concerns that illegal ATV riding, jet skis, power boats and other commotion will disturb the nesting of the bald eagles, and even discourage some eagles from nesting on the refuge, especially if the nesting population continues to increase. We would support closing off more fingers of Crab Orchard Lake and the other lakes to motor boats. We also strongly advocate strict policing of illegal ATV riding to protect these species.

Response: We will continue to use the guidelines set forth in the Northern States Bald Eagle Recovery Plan (USFWS 1983). We also have concerns about disturbance of bald eagle nests, but have seen no evidence of negative impacts caused by human disturbance. Nests that have been built close to a road or a busy part of Crab Orchard Lake appear to produce young at rates similar to other nests on the Refuge. If human activities, legal or illegal, appear to be negatively impacting nesting bald eagles, we will take action to address the issue.

7.1.1.4. Fisheries

- # **Comment:** The bluegill fishing on Devils Kitchen Lake hasn't been as productive as in the past. The number of bluegill beds has greatly declined. The shoreline is almost completely taken over by moss or some other type of water vegetation. The decline in bluegill beds has gotten worse as the moss has gotten thicker. Perhaps you could look into this and see if something can be done about it. Either by spraying or some other type of vegetation control.

Response: We have been discussing the amount of aquatic vegetation present in Devils Kitchen Lake with Illinois DNR fisheries personnel. The vegetation that you refer to as a problem is Eurasian watermilfoil (*Myriophyllum spicatum*). Vegetation control is being considered, but must be weighed against other concerns such as water quality and impacts on other species.

7.1.1.5. Wetlands/Moist-soil Management

- # **Comment:** Alternative E states 50 -70 acres of moist-soil wetlands will be developed during the 15 year period of the CCP. The Refuge should increase the amount of wetlands developed over this planning period. This total seems to under-achieve the opportunities currently on Refuge. All available locations based on topography and soil type should be assessed and developed as moist-soil management areas whenever possible. Even areas without suitable sources for critical water control manipulations should be considered because spring drawdowns may provide adequate food resources for wetland wildlife species. In situations where undesirable plants (cocklebur) infest these wetlands, appropriate management and seeding could provide necessary food resources and microhabitat for macroinvertebrates. Protection of isolated wetlands and small ponds are important for amphibian populations.

Response: We agree that there may be more opportunities for wetland development and plan to target 150-200 acres. Wetland development on the Refuge is constrained by topography. The largest, most suitable wetland development sites on the Refuge have already been developed. We would be happy to work with Illinois DNR in the identification of additional wetland sites. We are currently working on surveying additional sites for development as wetlands.

- # **Comment:** The Refuge should place a higher priority on developing wetlands than on planting trees.

Response: We plan to develop new wetlands (150-200 acres) and plant trees (490 acres). The area of suitable sites that can be practically developed as wetlands, however, is limited by the terrain. The largest, most suitable wetland development sites on the Refuge have already been developed. It is unlikely that we could find the same number of acres as will be planted in trees (490 acres). We are currently working on surveying additional sites for development as wetlands.

Comment: I suggest creating a wetland out of the pond behind the visitor center. This make much more sense than spending 2.5 million to reinforce a dam that is less than 500 yards away from a 7000 acre lake.

Response: A cost-benefits analysis will be conducted before work on the dam behind the visitor center is undertaken.

7.1.1.6. Forest Fragmentation

Comment: We support the consolidation of closed canopy hardwood forest in order to provide habitat for forest interior birds, whose populations have been decreasing at an alarming rate.

Response: We appreciate the support of our proposed action.

Comment: Where are the priority wildlife species identified? The effort should be to enhance and/or improve habitat for those species. Some species will be adversely affected by reducing habitat fragmentation. The establishment and expansion of hardwood forest will not be good for grassland and border species.

Response: Resource conservation priority species are listed in Table 33 (page 130 of the Draft EIS/CCP). The effects of each alternative are discussed in Section 4.1.1 Quantifying Effects of Alternatives on Wildlife Species (page 128) and displayed in Table 34 (page 131). The U.S. Fish and Wildlife Service Region 3 conservation priority species that inhabit the general area of the Refuge are listed in Appendix N of the Draft EIS. This list of species is a subset of the region-wide list found in *Fish & Wildlife Conservation Priorities Region 3*. This document is available for viewing at: <http://www.fws.gov/midwest/News/documents/priority.pdf> Our proposed management actions would enhance grassland habitat. An abundance of edge habitat will remain on the Refuge.

Comment: I fully agree that emphasis should be placed on maximizing unfragmented forest and applaud the intention of the Refuge to do so. I am surprised, however, at the conclusion that the small changes that you cite will make a significant difference, particularly in brood parasitization by cowbirds.

Response: Our forest management program should provide tangible benefits for many forest-nesting bird species, including some reduction in

cowbird parasitism. We have adopted many of the forest tract management guidelines recommended in the scientific literature, such as those published by Illinois DNR (IDNR. 1993. *Habitat establishment, enhancement and management for forest and grassland birds in Illinois*). Management actions taken to increase the amount of forest, and especially to increase the amount of core area forest (more than 100 meters from non-forest habitat), should result in decreased nest parasitism. Most of the increase in the amount of forest on the Refuge will be the result of the maturation of existing forest and the succession of fallow fields and shrublands into forest (2,200 out of 2,700 acres of additional forest by year 2100). We project the amount of core area forest will increase by over 40% in 15 years and 180% in 100 years (Page 136 of Draft EIS).

Comment: Owing to the pre-historical importance of forest over grassland in this area, I favor emphasis on forest.

Response: We agree. About 25,000 acres of the Refuge is forest; grasslands cover around 2,000 acres. In 100 years we estimate that about 28,000 acres of the Refuge will be forested with around 2,000 acres in grassland.

Comment: Plans to reduce forest and grassland fragmentation benefit certain birds, but it will adversely affect food and habitat for geese, deer, turkey, and many small animals.

Response: We have an abundance of food resources for Canada Geese (Table 3, page 41 of Draft EIS/CCP) that easily meet our goal of providing food to support 6.4 million goose-use-days. Food and habitat for deer, turkey and small mammals may be slightly reduced, but our focus is largely on resource conservation priority species that are migratory birds and an endangered mammal (Table 33, page 130 of the Draft EIS/CCP).

7.1.1.7. Forest Management

Comment: We believe that it is crucial to establish and maintain the Refuge's forests as being composed primarily of oak-hickory forest types. Oaks are keystone species that are critically important for sustaining the forest ecosystem including many wildlife species. We recognize that active management is required to maintain the oak-hickory component of the forest. With a lack of disturbance, maple trees increase in numbers and

oak-hickory trees steadily decrease. The forest floor becomes intensely shaded and understory species begin to disappear. In areas where disturbances such as tree harvest have occurred, new oak-hickory forests are more likely to develop and predominate. Professional foresters know that an oak-hickory forest cannot be sustained and regenerated without vegetative disturbance.

We are concerned, however, that the disturbance regime proposed for forested lands is essentially insignificant, especially for hardwood stands. The Refuge should harvest its hardwood stands at a rate sufficient to maintain the oak-hickory ecosystem and prevent conversion to maple-beech. Fire should be introduced to oak-hickory forests as well as pine stands. Prescribed fire language should be broad enough to allow growing season fire as well as dormant season; managers may need higher mortalities than those produced during the dormant season. Prescribed fire should continue to be allowed in those pine stands converting to hardwoods to enable managers to manipulate the mix of species toward a higher percentage of oak-hickory. Without silvicultural data, we are unable to recommend an appropriate disturbance regime. Suffice it to say that significant disturbance in the form of harvest, fire, and other methods must occur within the historic range of variability for the oak-hickory species present if they are to flourish.

Little data is presented to support or explain the silvicultural program and, indeed, one is led to the conclusion that upland forest composition is of little importance to the refuge. The EIS and Plan must articulate, and support by appropriate management, a desired future condition for all of the Refuge's forested lands.

Response: We agree that our general forest management program needs to be described in more detail. Thank you for pointing out this oversight. Accordingly, we have modified the Features Common to All Alternatives section to include a goal, an objective and strategies to address general hardwood forest management. Much greater detail regarding this program will be presented in the Refuge's *Habitat Management Plan*, which is a step-down plan scheduled to be completed after the CCP is approved.

Comment: The draft CCP does not describe practical or effective management of the land acquired from SIU in 1979 along the southern

Refuge border on Rocky Comfort Road. The 1979 land appears to be in worse shape now than in 1979.

Response: The projected conditions for this land are represented in Figures 9 and 10 of the Draft EIS. The specific techniques and timing for strategies to achieve this land cover will be described more specifically in a step-down *Habitat Management Plan* that will be initiated and completed after the CCP is approved. Most of the tract acquired from SIU in 1979 had been cleared of trees. Since that time, the Refuge has allowed natural succession to occur in these old fields resulting in the slow recovery of the forest. It should be noted that all stages in this decades-long process provide important habitats for wildlife.

7.1.1.8. Pine Forest Management/Conversion

Comment: The Illinois DNR and others support the conversion of non-native pines to native hardwoods through timber harvest (thinning), prescribed burning, and either by natural regeneration or augment with plantings when necessary.

Response: We intend to apply silvicultural treatments that encourage advance regeneration of desirable hardwoods; plantings should rarely, if ever, be needed. Treatments may include thinnings, final removal cuttings, and prescribed burning.

Comment: We do not support the use of commercial logging to convert stands of non-native pines to hardwoods. We have witnessed previous "clear cutting" of pines on the refuge by commercial contract loggers. Soil disturbance, compaction of soil by large machinery, and uprooting of hardwood saplings caused by the commercial logging can all cause setbacks to the conversion of pines to hardwoods. A plan to thin non-native pine stands without the use of heavy, industrial equipment could be implemented.

Response: Commercial timber sales are the most efficient and cost effective means to accomplish removal of trees. Timber sale contracts have appropriate special conditions to minimize disturbance and protect resources. Refuge personnel inspect the timber cutting operations daily or as often as necessary to ensure compliance with

the contract. Harvest operations do cause short-term disturbance on the site, but recovery occurs within one to three years.

- # **Comment:** In the past when stands of pine trees were completely cut down on the Refuge, people who used those areas of the refuge were horrified. No explanations were given to the public as to the reasons. I would hate to see the same thing happen again and urge that adequate public notification and even involvement in the process occur before change is made.

Response: We intend to notify the public and solicit comments as required by NEPA before any timber harvest operations.

- # **Comment:** We have observed in some areas of Shawnee National Forest where there were clearcuts that pines were regenerating and growing just as fast as the oaks and other hardwoods. For one thing, deer eat small oaks, but not pines. To keep this from happening would take close management.

Response: Pines can regenerate on a site whenever there is a seed source overhead or nearby. Deer feed on or otherwise physically damage both hardwoods and pines. Follow-up treatments to remove unwanted pine seedlings or saplings would be desirable, especially if they are determined to be hindering the hardwood regeneration.

- # **Comment:** We object to the proposal to remove all pines. What reason is there other than that these particular species are not native to this exact area? They are not non-native; all being native North American trees that were planted during the 1930's mainly by the CCC. These are 70 years old and provide habitat for a large number of birds and other wildlife. To remove pines so that native hardwoods could be planted would reduce forest diversity for at least 50 years. Various hardwoods are now becoming established in the pine groves. The few remaining living CCC veterans would be most disappointed to know that their efforts were being destroyed for some idealistic notion.

Response: We classify all the pine species planted on the Refuge as non-native because none occurred here naturally. We feel that focusing on restoring plants native to the local area is more appropriate than perpetuating plants beyond their natural range. We also feel that species-rich

hardwood forests are much more diverse than monocultural pine stands. The pines were originally planted under the direction of the Soil Conservation Service primarily to quickly establish vegetative cover to control soil erosion. The long-term objectives for the pine plantations were to provide wood products and hasten restoration of native hardwoods.

- # **Comment:** A tremendous benefit of pine is that its early successional habitat and winter cover are created for wildlife" (W.K Clatterbuck, associate professor of forestry, wildlife and fisheries at the University of Tennessee} With this in mind and then observing it on my own for more than thirty years I feel strongly that there should not be a large reduction of them. We planted, they adapted and it would be wrong to remove them.

Response: Pines on the Refuge provide a negligible amount of early successional habitat because the stands are mature (40 to 70 years old). The Refuge has a substantial amount of native, eastern red-cedar forest which provides winter cover for wildlife. We intend to convert non-native pine plantations to native hardwoods as proposed because, generally, hardwood forests provide much better habitat than pine.

- # **Comment:** Oppose radical methods of thinning pine stands, such as final shelterwood cuts, which can damage the existing hardwoods in a mixed stand and can set back the recovery of hardwoods.

Response: The final cutting under the shelterwood silvicultural system is a removal cutting not a thinning. The final removal cutting is necessary to release the advance reproduction of hardwoods from the shade of the pine overstory to allow vigorous growth. Another reason it is desirable to remove all pines from a given site is to prevent them from regenerating from seed and competing with the young hardwoods. Damaging the young, hardwood advance reproduction is unavoidable during harvest operations and not necessarily undesirable. Following disturbance by cutting (or burning), the hardwoods will sprout vigorously from the rootstock and grow more rapidly than a seedling of the same age.

- # **Comment:** Support removal of pines, but over an extended period of time, not during the breeding season and not in its entirety.

Response: We intend to convert pine stands to native hardwoods through a process which mimics natural succession. We will primarily use the shelterwood silvicultural system to accelerate the process of removing pines and promoting establishment and growth of desirable hardwoods. We will schedule cuttings to minimize harmful effects on wildlife. We intend to favor the oak-hickory forest type on sites that are suitable because they provide high quality wildlife habitat.

Comment: It would be desirable to keep pine stands in recreational areas, especially the Harmony Trail area, but also in and around campgrounds, fishing and picnic sites, etc. Pines supply diversity, aesthetic qualities. There are places, such as along the Devil's Kitchen shoreline, where the pine stands are narrow, where the pines are older, and where regeneration of hardwoods is already occurring naturally. To remove pines in those areas makes no sense and could be damaging to bird populations that use the trees as food sources and shelter in winter (such as irruptive red-breasted nuthatches and pine warblers that have overwintered for decades at Crab Orchard and that also breed regularly in the refuge) and as breeding sites for species such as Cooper's hawks and owls.

Response: We agree that there may be some locations where removing pines may not make sense. We also agree that pine trees do provide habitat for some species of birds, but our focus is largely on the resource conservation priority species identified in the Draft EIS/CCP (Table 33, page 130). The forest species on this list generally prefer hardwood forest.

Comment: In those areas where pine stands are thick and wide, and where hardwood regeneration is not occurring, we urge the refuge to adopt pine-removal policies that will be as unintrusive or disruptive as possible. Pine removal in those areas should be planned over a long as period of time to allow for bird species to adapt to the habitat changes.

Response: We intend to proceed with accelerating succession in all pine stands to encourage native hardwoods while minimizing any harmful effects on Refuge resources. Since we would focus management on larger stands, some small, remote patches will probably remain for several decades.

Comment: Support the removal of the large pine "plantations" to support and improve hardwood regeneration, I feel it would be beneficial to Pine Warblers and some migratory species such as Pine Siskens, Yellow-rumped Warblers, Purple Finches, and Red-breasted Nuthatches to leave a few of the scattered pines, including some of the small pine rows. Ribbons of pines and small scattered pine stands do provide essential shelter, food, and habitat to a number of bird species and should not negatively impact hardwood forest management. In the large pine stand/plantations, I urge the refuge to adopt pine-removal policies that will be as unintrusive or disruptive as possible. Pine removal in those areas should be planned over a long period of time to allow for bird species to adapt to the habitat changes. I urge you to plan any habitat changes, including tree removal, during times other than the prime breeding season of mid-March through August.

Response: We agree that pine trees provide habitat for some bird species, but the focus of our plan is largely on resource conservation priority species that are listed in the Draft EIS/CCP (Table 33, page 130). The forest birds on this list generally prefer hardwood forest. Refuge-wide pine removal will likely take many years and be a gradual process. Breeding season for wildlife, especially migratory birds and the endangered Indiana bat, will be a major factor in scheduling vegetation management activities.

Comment: No thinning of pines should take place within 50 yards of the shoreline. Crab Orchard Lake is beautiful because of its shaded shorelines. The pines will naturally die and be overtaken by oak and hickory, so there is no reason to destroy the shadiness of the shorelines in the short-term.

Response: Pines border a small fraction of the 125-mile shoreline of Crab Orchard Lake. A good deal of shade will remain elsewhere along the shore following cuttings in pine stands. Without silvicultural treatments tailored specifically toward promoting oak and hickory, less desirable forest types could capture the site in many cases.

Comment: I oppose logging. Logging drives out wildlife and birds making them homeless and subject to death and injury. Logging also causes erosion, creates heat islands, and changes the composition of the trees that grow. Given the

many, substantial objections to logging, it is interesting that the lure of money and greed seems to override all of them.

Response: Logging does cause short-term disturbance, but recovery occurs within one to three years. Commercial timber sales are strictly a means to accomplish habitat management treatments; the timber harvested is a by-product of management and the proceeds we collect are deposited in the National Wildlife Refuge fund.

7.1.1.9. Reforestation

Comment: Illinois DNR and others support reforestation of 490 acres to reduce forest fragmentation. Reforestation efforts should focus south of Grassy Road to improve forest habitats for neotropical birds and other forest wildlife species; recent literature suggests that forest portions within Crab Orchard NWR may not provide critical breeding habitats because of insufficient acreage and may actually be a poor source of recruitment due to heavy predation; therefore, management goals for neotropical birds might emphasize migratory stopover habitats rather than breeding habitats; the document should also indicate the number of acres which have already been converted from cropland and other fields to forest.

Response: We agree that the amount of forest on the Refuge may not be large enough to provide high-quality habitat for the most area-sensitive forest-nesting birds. Our forest management plans should provide benefits for many forest-nesting bird species, including some reduction in cowbird parasitism. Our forest management plans follow many of the forest tract management guidelines recommended by Illinois DNR (IDNR. 1993. *Habitat establishment, enhancement and management for forest and grassland birds in Illinois.*). Since 1990, about 881 acres have been reforested on the Refuge; 254 acres of cropland, 397 acres of grassland, and 230 acres of brushland.

Comment: There are currently more acres of forest in Illinois than at any time since at least 1924 (Herkert, J.R. ed 1992.) Despite this increase in forest acreage, populations of many species of forest birds continue to decline. In Illinois, nest predators may destroy as many as 80% of all nests for some species of woodland birds (Robinson, S. K 1988.) Clearly the problem is more than just the acreage of habitat available. The Draft

EIS/CCP supports reforestation of approximately 500 acres of forest. The estimated cost for the necessary reforestation would be \$ 500.00 per acre (Final Restoration Plan July, 1997.) for a total cost of \$ 250,000.00. The proposed acreage suggested for tree planting will have a miniscule effect (in view of the hundreds of thousands of acres of timber that exists within this state) on attracting the Neotropical song birds. Reforestation will be detrimental to our waterfowl populations. After weighing the pros and cons should your decision be to add more acres of reforestation, we would suggest that the same number of acreage be planned for wetland development, conservation, and management for Ducks, Geese and Shore Birds. Every attempt should be made to avoid reforestation in goose use areas.

Response: The area of forest in Illinois reached its lowest point around 1924, as shown in the table below. Since that time the area of forest in the state has increased somewhat. Unfortunately, much of this old-field or successional forest does not provide suitable or adequate habitat for many species of forest birds, especially area-sensitive species. The size, arrangement, and species composition of forest tracts and the age/size of the trees growing there are important factors in determining suitability as wildlife habitat. We intend to develop several moist-soil management areas on suitable sites. The area of suitable sites that can be practically developed, however, is limited by the terrain. Therefore, the area we propose to reforest will exceed that of new moist-soil units. The sites we have identified for reforestation typically receive little to no goose use.

These data compiled by Iverson *et al.* (1989) show historical amounts of forestland in Illinois.

The sites proposed to be reforested were strategically selected based on their location and capacity to create large blocks of forest, thereby reducing habitat fragmentation. None of these sites currently receive a significant amount of goose use. We have not observed any detrimental effects on waterfowl caused by past reforestation projects, nor do we expect any from those proposed. We plan to construct several new moist-soil management units. The table above shows that the area of forest in Illinois in 1985 was only 31 percent of the area in 1820, which is around the time of European settlement. Likewise, Williamson County had only 33 percent of its original

Table 50: Area of Forest in Illinois and Williamson County in 1820, 1924, and 1985 (acres)¹

Year	1820	1924	1985
Illinois	13,804,600	3,021,700	4,263,100
Williamson County	257,500	39,900	85,300

1. [Iverson, L.R., R.L. Oliver, D.P. Tucker, P.G. Riser, C.D. Burnett, and R.G. Rayburn. 1989. *The forest resources of Illinois: an atlas and analysis of spatial and temporal trends*. Illinois Natural History Survey Special Publication 11. 181 p.]

forest area by 1985. While Illinois had 4.2 million acres of forest in 1985, the individual tract size has decreased along with the quality of the habitat provided. Most forest tracts in the state have become severely fragmented, which is thought to be the primary reason for declining breeding success of some forest birds.

Comment: There are more than plenty of trees and wooded areas within the "closed" portion of the refuge. We suggest any and all reforestation be conducted outside of the "closed" portion of the refuge to minimize the impact felt by migratory waterfowl and surrounding property owners. By planting trees you or the service have no idea which private landowner on the refuge perimeter you will be affecting by changing the flight pattern of the geese leaving the refuge.

Response: About 270 acres of the 490 acres of proposed reforestation sites are located in the restricted use area. None of these 18 sites currently receive a significant amount of goose use. We do not expect any change in flight patterns of geese as a result of our reforestation projects.

Comment: Reforestation for neotropical songbird habitat will only bring bird flu to the area.

Response: Our proposed reforestation projects are designed to consolidate forested areas by converting open land to forest. This will benefit a number of area-sensitive bird species that require large blocks of closed canopy forest. Forest birds are not likely to introduce avian influenza to this area. In the wild, waterfowl are the principal carriers of avian influenza.

Comment: A cooperative farmer would like to keep bottomland fields that he farms in crop production instead of planted in trees.

Response: The subject fields are located along the west side of Grassy Creek south of Westgate Road. These two fields are within one of the large

forest blocks we have identified in which openings will be minimized or eliminated to reduce forest habitat fragmentation. We have weighed the wildlife conservation purpose against the agricultural purposes for this land and feel the wildlife benefits justify the conversion. When we take farm fields out of production as proposed, we will make adjustments to equitably allocate the remaining farm fields among all our cooperative farmers.

Comment: Portions of the Refuge cropland have been replanted with trees within the last 15 years. Have these areas been identified in the land cover descriptions as developing forests?

Response: See Figure 21: Land Cover of Crab Orchard NWR, 2000, on page 85 of DEIS, and Table 6: Area and Percent cover of Habitats on Crab Orchard NWR, 1807 and 2000 on page 86. The sites that have been reforested are identified as "Fallow Herbaceous Field" or "Early Successional Oak Forest (reforested)." Note that the "Fallow Herbaceous Field" cover type includes some sites that have not been reforested.

Comment: Oak and hickory may not thrive in bottomland fields bordering Little Grassy Creek. It would take many decades to reach the desired goal. The usual growth of low-value softwoods grows quickly and tends to crowd out the hardwoods making it less likely to achieve the desired reduction of fragmentation. The reforestation will greatly affect a cooperative farming operation that has made large investments and are concerned about loss of income.

Response: We intend to select appropriate oak, hickory, and other desirable species to match the site conditions. Bottomlands typically develop a profuse growth of volunteer trees, shrubs, and vines. In most cases, the longer-lived species will eventually grow through and express dominance after two or three decades. At this age trees start

mast (acorn or nut) production, which continues for many more decades. Bottomland hardwood forests are some of the most biologically diverse and productive habitats of this area. Restoring forest along Little Grassy Creek would benefit this riparian zone almost immediately by protecting water quality (reduce water temperature, reduce sediment load, reduce pesticide runoff). In the longer term, the forest would provide high quality habitat and reduce forest fragmentation as part of a large forest block. Reduction of forest fragmentation would result independent of the composition of the forest. When we take farm fields out of production as proposed, we will make adjustments to equitably allocate the remaining farm fields among all our cooperative farmers.

Comment: The final concern is about the plan to reforest the area I commonly refer to as Grassy Bottoms. This is the area in the SW 1/4, SW 1/4 of Section 4; the NE 1/4, NE 1/4 of Section 8 and the W 1/2 of the NW 1/4 of Section 9, Township 9 South, Range 1 East of the 3rd PM. This cropland area is surrounded on the north, northeast and west by flooded timber areas which provide excellent areas for large numbers of waterfowl to not only winter, but also nesting for many wood-ducks. The close proximity of the corn or beans of this agricultural area provides a definite asset to these waterfowl. This area is one of my favorite areas to observe the wildlife and I feel that reforesting this area would serve no wildlife, but rather create a potential harm to many.

Response: If feasible, our tentative plan for this area is to construct a moist-soil management unit. If we determine that constructing a moist-soil management unit is not feasible here, we would probably reforest the site because it is located within one of the large forest blocks where we intend to minimize openings. In either case, we expect the wildlife benefits to increase under the conversion.

7.1.1.10. Grassland Fragmentation

Comment: Support consolidation of grasslands on the refuge and the conversion of fescue and cool season grasses to native warm season grasses.

Response: We appreciate the support for this portion of the proposed alternative.

Comment: Plans to reduce grassland fragmentation are to benefit certain birds, but it seems to me it will adversely affect food and habitat for geese, deer, turkey, and many small mammals.

Response: The Refuge has an abundance of food resources for Canada Geese (Table 3, page 41 of Draft EIS/CCP) that easily meet our goal of providing food to support 6.4 million goose-use-days. Food and habitat for deer, turkey and small mammals may be slightly reduced, but our focus is largely on resource conservation priority species that are migratory birds and an endangered mammal (Table 33, page 130 of the Draft EIS/CCP).

7.1.1.11. Grass Field Borders

Comment: Establish 60-foot field borders of native warm season grass adjacent to select croplands beginning in the public hunting area; this will improve wintering and brood habitats for bob-white quail, rabbits, turkey, other wildlife species and increase hunting opportunities.

Response: We plan to add about 100 acres of 30-foot-wide borders of native warm-season grasses in row crop fields in the open portion of the Refuge (page 44 of the Draft EIS/CCP). We will be happy to work with Illinois DNR to identify fields where 60-foot borders are possible. However, Refuge agricultural fields tend to be small and 60-foot borders may be too large.

7.1.1.12. Early Successional Habitat

Comment: The CCP should direct the maintenance of a number of areas (acreage) of early successional habitats that are crucial to certain resident and migratory species.

Response: We plan to maintain 300 acres of early succession habitat (page 44 of Draft EIS/CCP) by using prescribed fire or mechanical treatment (mowing, disking) to disturb about 200 acres every 3 to 5 years and adding about 100 acres of 30-foot-wide borders of native warm-season grasses in row crop fields in the open portion of the Refuge.

7.1.1.13. Clearing Fencerows

Comment: The clearing of 8 miles of linear fence rows to improve nearby grasslands may not result in accomplishing the goal to improve habitats for grassland birds; the acreage of grasslands on the refuge and in the county most likely

will not contribute significantly to increase breeding populations of grassland birds; destroying fence rows may actually hurt resident wildlife without providing measurable benefits to grassland birds.

Response: Our goal for grassland birds (page 11 of the Draft EIS/CCP) was meant to place emphasis on priority species (Table 33, page 130 of the Draft EIS/CCP). Removal of linear forest habitat and hedgerows adjacent to agricultural fields would benefit Canada Geese and grassland nesting birds. Clearing fencerows will remove some habitat for some resident species, but only a small proportion of the fencerow habitat on the Refuge will be removed. The benefits to grassland birds from reducing or removing woody vegetation in grassland areas is supported in the scientific literature (Herkert *et al.*, 1996. *Management of Midwestern grassland landscapes for the conservation of migratory birds*. U.S. Forest Service, General Technical Report NC-187.)

Comment: Resident wildlife and some birds will be adversely affected by the removal of 124 acres of linear forest habitat and 8 miles of hedge row. This may be a small part of the Refuge but it is an adverse effect that has not been adequately discussed in the document.

Response: Clearing fencerows will remove some habitat for some resident species, but only a small proportion of the fencerow habitat on the Refuge will be removed. The effects on wildlife are discussed in Section 4.1.1 Quantifying Effects of Alternatives on Wildlife Species (page 128 in the Draft EIS/CCP). The vast majority of negative impacts on shrubland species will be the result of habitat succession, the natural process of shrub-dominated habitat converting to tree-dominated habitat.

Comment: What wildlife would be adversely affected by the removal of 15 acres of lineal forest and 2 miles of hedge rows? Would archeological and historical resources be adversely affected by such actions? Earth moving is anticipated.

Response: Some shrubland species are listed in the Draft EIS/CCP (page 84) and effects on wildlife are discussed in Section 4.1.1 Quantifying Effects of Alternatives on Wildlife Species (page 128 in the Draft EIS/CCP). Fencerow clearing will require the same protection of archeological

resources as any other Refuge activity. The archeological objective is outlined in the Draft EIS/CCP (page 24).

Comment: Have you considered delaying the removal of fencerows, which might provide temporary bobwhite habitat, until more extensive habitat has been established?

Response: We will consider delaying the removal of fencerows until more extensive habitat has been established, but we feel that northern bobwhites are more limited by nesting habitat (grassland) than by other cover.

Comment: We wish to reiterate our concerns regarding the proposal for removal of linear forest habitat and hedgerows. The purported purpose of the action is to benefit grassland birds. However, such an activity would impact some species of grassland birds, such as loggerhead shrikes (a species of interest). Loggerhead shrikes nest in hedgerows and linear forested areas. In addition, these habitats provide perch sites for foraging and singing activities. The removal of these important habitats would make some areas completely unsuitable for loggerhead shrike use. Other grassland birds may be impacted in a similar manner. Additionally, woody fence rows and hedge rows provide critical wintering habitat for many species of songbirds that are more susceptible to predation when seeking shelter at the edge of large forested tracts.

Response: Fencerow removal is an action intended to help the Refuge meet a goal for grassland bird management (page 11 of the Draft EIS/CCP) which places emphasis on resource conservation priority species (Table 33, page 130 of the Draft EIS/CCP). The loggerhead shrike is one of 29 priority species for which we are managing. Clearing fencerows will remove some habitat for some species, but only a small proportion of the fencerow habitat on the Refuge will be removed. The benefits to grassland birds from reducing or removing woody vegetation in grassland areas is supported in the scientific literature (Herkert *et al.* 1996. *Management of Midwestern grassland landscapes for the conservation of migratory birds*. U.S. Forest Service, General Technical Report NC-187.)

7.1.1.14. Fire Management

Comment: What and where do "wildlands" occur on the Refuge? No maps depict that habitat type. Would burning affect bald eagle nest trees or potential nest trees?

Response: "Wildland" is a fairly new term often used by fire management professionals when referring to undeveloped land, which could be forest, brushland, grassland, etc. The term is not meant to describe a habitat type. Bald eagle nest trees are typically located in bottomland forests, which we do not intend to burn.

7.1.1.15. Prescribed Burning

Comment: Illinois DNR and others support the use of prescribed fire in forest and grasslands to increase their productivity to wildlife. The Refuge should implement a program of prescribed burning in existing hardwood stands to encourage oak regeneration, eliminate woody and non-woody exotics in the understory, and discourage the establishment of shade tolerant tree species in the overstory. Prescribed fire language should be broad enough to allow growing season fire as well as dormant season; managers may need higher mortalities than those produced during the dormant season. Prescribed fire should continue to be allowed in those pine stands converting to hardwoods to enable managers to manipulate the mix of species toward a higher percentage of oak-hickory. Without silvicultural data, we are unable to recommend an appropriate disturbance regime. Suffice it to say that significant disturbance in the form of harvest, fire, and other methods must occur within the historic range of variability for the oak-hickory species present if they are to flourish.

Maintaining grasslands via cyclic controlled burning will go far in controlling unwanted non-native, invasive shrub and vine species and those trees, like honeylocust and autumn-olive, that opportunistically sprout or sucker up in grassland areas.

Response: We concur.

Comment: Pages 132-134, Section 4.2.7, Prescribed Fire - A section on faunal effects should be added.

Response: We agree. We have inserted a section describing the effects of prescribed fire on fauna.

Comment: Prescribed fire is a form of manipulation that should be avoided within wilderness except if and when it is necessary to protect survival of a T & E species, or absolutely necessary to protect adjoining private properties. Wilderness Watch supports a let-burn policy for naturally occurring fires, with actions taken outside the wilderness boundary such as fuel removal and fireproof wraps to protect adjoining property. If greater suppression efforts still seem necessary in a particular circumstance to protect survival of a T & E species, or to protect human health and safety or property, then a second-tier effort can consider air drops of water (first) and retardant (second) if water drops are not adequate in controlling the intensity and direction of the fire. The potential impacts of fire retardant on birds and wildlife should be assessed in the CCP.

Response: Our rationale for the need to reintroduce fire in the natural system is to simulate the documented, historical fire regime in the oak-hickory forests by utilizing the natural tool of fire. The goal is to preserve the natural conditions and primeval character of the Wilderness by restoring the essential element of fire. The lack of natural disturbance, such as fire, in the oak-hickory forests has often resulted in fire-intolerant species such as sugar maple replacing fire-tolerant tree species, as well as aiding encroachment of non-native and invasive species. Major changes in land use over the landscape surrounding the Wilderness have greatly reduced the capacity for natural fire to reach the Wilderness. Our approach is consistent with the Service's policy and guidelines.

The Service's *Refuge Manual* (6 RM 8.8 D.) addresses prescribed burning in wilderness as follows: "When consistent with refuge objectives and contingent upon the existence of a current, approved fire management plan for the wilderness area, prescribed burning is permitted. Burning may even be desirable within wilderness, especially when fire is a natural force that has historically affected the area or when fire is necessary to restore, maintain, protect, or preserve the wilderness resources and values of the area, or when controlled burning can reduce fire hazards to the refuge or wilderness. Using mechanically-created firebreaks and motorized equipment for prescribed burning is generally

not permitted on a wilderness area. However, firebreaks may be constructed contiguous to the wilderness area.”

The Service’s *Draft Wilderness Stewardship Policy Pursuant to the Wilderness Act of 1964* states: “We may use prescribed fire to maintain or restore ecological integrity that has been degraded by human influence or is necessary to protect or recover threatened or endangered species.” (66 FR 10)

We intend to revise the Refuge’s *Fire Management Plan* to allow for wildland fire use in the Wilderness and elsewhere on the Refuge. We agree that precautionary measures must be taken when implementing prescribed fire operations in the Crab Orchard Wilderness. We intend to use only minimal impact techniques during implementation of prescribed fires and during management of natural ignitions within the Wilderness. We expect to use ground-based ignition, control, and suppression tactics only, and do not anticipate the need for aerial techniques or chemical retardants.

7.1.1.16. Invasive Plants

Comment: Non-native and exotic plant populations invading the refuge should be controlled. Autumn-olive and multiflora rose are strongly invasive and are detrimental to achieving national wildlife refuge objectives and should be controlled. There is particular concern for protecting the Rocky Bluff area from invasive plants, especially garlic mustard that has not been found there yet but is spreading greatly in Southern Illinois. Use herbicides only after other methods have not worked. A number of volunteers could be recruited for control of plants such as garlic mustard and winter creeper. Since horses tend to spread invasive species, horse trails should be monitored.

Response: We agree that control of invasive species should receive high priority. We will use available resources to help control autumn-olive and multiflora rose, but these species are especially problematic because they are extremely prolific and have become entrenched over much of the Refuge and surrounding lands. We have made and will continue to make concerted efforts to detect, monitor, and control invasives and we welcome any assistance from volunteers. We typically use an integrated pest management approach to managing invasive species.

Comment: Presently, Refuge’s designated wilderness areas suffer from invasive species such as autumn-olive, multiflora rose and Japanese honeysuckle, all of which endanger native flora. The CCP recognizes that these plants are all are common throughout the Refuge’s wilderness and are likely to become even more problematic in the near future. Exterminating these species and restoring native habitat is a critically important responsibility of the Service. In the words of Aldo Leopold, wilderness is a laboratory, a base datum or normality, a picture of how healthy land maintains itself. The Service should consider the extermination of invasive species a top priority in the final CCP.

Response: We agree that control of invasive species should receive high priority. We have made and will continue to make concerted efforts to detect, monitor, and control invasive species throughout the Refuge.

Comment: The Refuge should monitor the environmental impacts caused by new invasive species.

Response: We would like to monitor the environmental impacts of invasive species, but with our limited resources, we think we must devote our resources to the monitoring and control of known populations. We will rely on reports in the professional literature and research scientists to provide information about the environmental impacts.

7.1.1.17. Water Quality

Comment: Incentives and education for landowners in the watershed(s) of the Refuge will help minimize erosion on their land, thus reducing sedimentation in the three lakes. The "no wake" zones will help minimize erosion and disturbance of wildlife.

Response: We appreciate your recognition and support for the proposed strategies. Although shoreline erosion caused by boat wakes is relatively minor compared to that caused by natural wave action, designating additional no wake zones will contribute to reducing erosion.

Comment: The Refuge has taken a "good neighbor policy" with respect to addressing soil disturbance activities that occur around the Refuge. Even though the activities cause significant soil erosion that cause sediments to enter Crab

Orchard Lake, little effort and no known actions have been taken to protect the Refuge or the lakes. What specific efforts will occur in the future under the implementation of Alternative E? Just talking to landowners is not enough.

Response: The strategies we intend to implement are listed on page 45 of the Draft EIS/CCP under Water Quality Goal in Section 2.6.3.2 Wildlife Conservation Goals. These strategies go beyond just talking to landowners about improving water quality. However, since we have no enforcement authority, our approach is one of encouraging voluntary cooperation in the stewardship of the watershed.

- # **Comment:** We recommend the Final EIS include a discussion of possible partnerships designed to reduce non-point pollution and sedimentation to improve water quality on the Refuge. Developing opportunities for volunteers and user groups to work cooperatively with neighboring businesses, industry, and local governments would not only develop a sense of ownership and foster good community relations, but also result in improved habitat quality and recreational activities on the Refuge. Discussions could include opportunities for environmental education and drafting and enacting ordinances designed to protect water quality.

Response: The strategies we intend to implement are listed on page 45 of the Draft EIS/CCP under Water Quality Goal in Section 2.6.3.2 Wildlife Conservation Goals. They include working with Illinois EPA, landowners, municipalities, developers and cooperative farmers to improve water quality. We would certainly welcome any assistance from volunteers and user groups in this endeavor. A possible framework for this cooperative effort is the Big Muddy River Ecosystem Partnership under the Illinois DNR Conservation 2000 program, which was in its initial stage of formation a few years ago. We expressed our desire to join this partnership at the time, but apparently little further progress has been made to date.

- # **Comment:** Two-cycle motors should be banned on all lakes due to pollution. As a long-range goal, the use of 2-cycle outboard motors should be phased out in favor of less-polluting 4-cycle motors. This could be done over a period of years.

Response: We appreciate the concern. Fortunately, newer motors that are less polluting should gradually replace 2-cycle models. We do not intend to restrict the use of 2-cycle boat motors.

7.1.1.18. Air Quality

- # **Comment:** Prescribed burns release smoke, which is visible. Prescribed burns release stored up mercury, extremely harmful to people/children/elderly. Prescribed burns also release fine particulate matter, which drifts for thousands of miles causing lung cancer, heart attacks, strokes, pneumonia, allergies and asthma, all of which cause billions in health care for Americans with no health insurance. Why are you causing these negative health effects? Don't tell me about smoke which you can see. Fine particulate matter is invisible to the eye. And you are causing health issues with all of this burning and loading the air with pollutants like this. Who is the regional fire management coordinator and how much does this person know about fine particulate matter? In prescribed burning, are any medical doctors consulted? Are the clean air people brought in? Do they sign off? Is the local lung cancer group advised of this assault on their air, as well as the asthma affected?

Response: In general, air quality of the area is good. No significant local concerns regarding air quality exist. Our prescribed burning activities comply with federal and state air pollution regulations. We obtain open burning permits from the Illinois EPA prior to every burn. Smoke is managed through scheduling and using appropriate surface wind and atmospheric conditions to direct and disperse smoke. Management of smoke is incorporated into the planning of all prescribed fires. Sensitive areas such as populated areas and roads are identified and precautions taken to safeguard visitors and neighbors. A guiding principle of the National Fire Plan is hazardous fuels reduction. The NFP directs us to incorporate public health and environmental quality considerations in fire management activities undertaken for the hazardous fuels management program. Our fire management program is administered by professionals at the local, regional, and national levels.

7.1.1.19. Conservation Easements

Comment: Section 3.7.3: Someone in the Service, other than the Refuge, should be held accountable for the lack of proper administering the conservation easements. The lack of monitoring and enforcement of the easements is a flagrant non-performance issue that is not a fault of the Refuge staff. Congress, the Bureau of the Budget and the U.S. Attorney should be made aware of this. Page 111, Section 3.7.3, Conservation Easements - This section discusses how conservation easements fit into the NWRS. However, none of the alternatives address the needs of Conservation Easements or how they will be managed over the next 15 years.

Response: We intend to manage the conservation easements according to established policy. We have added an objective under the protection goal in *Features Common to all Alternatives* to describe our proposed outcomes and strategies. The omission of the objective was an oversight in the Draft EIS. Thank you for pointing out the omission.

7.1.1.20. Right-of-way Management

Comment: Although not mentioned in your draft plan, power company right-of-way land should be written in as part of your 10-year plan. Specifically, we ask you to have a policy in place for power companies to follow regarding breeding birds. Power companies should not be allowed to cut, burn, spray, or otherwise disturb the habitat for breeding birds from mid-March through August.

Response: We customarily coordinate with electric utility and road right-of-way managers to minimize possible negative effects on wildlife caused by their operations. We restrict the timing and extent of treatments and restrict the products used for chemical treatments.

7.1.2 Agriculture

7.1.2.1. Agricultural Croplands

Comment: Just as industry compromises the purpose of the Refuge and the mission of the Refuge system, agriculture is also entirely inappropriate on refuge lands. Presently, 10% of the Refuge is covered by cropland that requires herbicide and fertilizer. According to the CCP, the original justification for establishing agricultural plots was to

provide food for wintering Canada Geese and to “fulfill the agricultural purpose of the Refuge”. The Service is incorrect to implement such sweeping habitat modifications for the benefit of a single species. The Service should be interested in the best overall plan for maintaining the wild state of the land, rather than constructing artificial habitat. In addition, farming limits the biodiversity of the Refuge’s native ecosystem communities by managing for a few select species such as wheat and corn.

Farming on Refuge lands is addressed in *Fulfilling the Promise*: “Rather than farming intensively to provide food for migratory birds, moist soil units could provide abundant natural foods” (p.13). The document also asserts: “In order to maintain or restore biodiversity, management should mimic, where possible, natural systems” (p.21). Therefore, in order to comply with the Service’s vision document and the Refuge’s mission, cropland must be eliminated from the Refuge in order to allow for restoration of native habitat.

Response: We disagree that agriculture is entirely inappropriate on refuge lands. Agriculture can be used to meet National Refuge System mission objectives. In addition, agriculture is a legislated purpose of Crab Orchard Refuge (Appendix G, page 281 in the Draft EIS/CCP). The National Wildlife Refuge System Improvement Act of 1997 states that “...if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System;”

Comment: Agriculture creates a mosaic of natural lands and artificially crafted lands, allowing no observable tract to witness long term natural processes. While it is encouraging that the smallest slivers of farm land (those less than 5 acres) would be discontinued, the patchwork nature of the agriculture land as a whole causes problems, leading to serious habitat fragmentation.

Response: We agree that managing non-agricultural habitats in a mosaic of agricultural lands can limit natural processes. However, agriculture is a legislated purpose of the Refuge. Recognizing the negative aspects of the patchwork nature of the agriculture land, we are proposing to manage two areas of the Refuge as large forest

blocks. Our proposal seeks a balance among the many mandates that we are obligated to follow and environmental factors.

- # **Comment:** The use of pesticides on farmland is dangerous and potentially lethal to native organisms. The CCP states that “pollutants from agriculture include sediment, nutrients and pesticides (CCP, p.126). This practice will compromise the conservation of wildlife and therefore negate the primary purpose of the Refuge. Spraying of poisonous herbicides and pesticides should be banned at Crab Orchard NWR.

Response: Refuge staff and cooperative farmers will most likely continue using herbicides on the Refuge following national policy. Pesticide use on National Wildlife Refuge System lands is governed by U.S. Department of the Interior Pesticide Use Policy (U.S. Department of the Interior, Departmental Manual, Part 517, Chapter 1), and the Fish and Wildlife Service’s Refuge Manual (7 RM 14). The use of insecticides is generally not allowed, except in rare circumstances. The use of herbicides is reviewed at the Regional and National levels. Further, a pesticide use proposal (PUP) must be prepared for each chemical used in pest control programs on refuge lands (7 RM 14). PUPs are used to evaluate the specifics of proposed chemicals, treatment sites, application methods, and sensitive aspects of use.

- # **Comment:** Convert small crop fields not used by Canada Geese to native warm season grass. Consider reduction in agricultural uses, perhaps eliminating small acreage sites.

Response: We agree. We have edited the strategy for Objective 1 in the agricultural goal in our proposed action to include reviewing small fields (less than 5 acres) and dropping those that are not profitable from the row cropping program and converting them to other cover (about 15 fields totaling 52 acres)

- # **Comment:** Sierra Club supports cutting back on the amount of refuge land used for row crops from the proposed 4,400 acres down to 2,200 acres or less. Although agricultural use is one of the four “purposes” of the land for Crab Orchard Refuge, there is nothing that says how much of the land has to be used for agriculture. Sierra Club supports cutting back the amount of Crab Orchard Refuge land in agriculture to one half or less of the land proposed for agriculture in pre-

ferred Alternative E, in order to provide more room for natural lands instead of farm land. We are especially concerned with the amount of row crops on the refuge. With such a large portion of Illinois taken over by row crops, we really do not need our refuges to devote much land to row crops.

Response: We chose to focus more on the conservation effects of agricultural practices (mowing dates, fescue conversion, etc.) than on the number of acres farmed. The amount of agricultural land on the Refuge has been greatly reduced over the years (Figures 36 and 37 on page 114 of the Draft EIS/CCP). Reducing the amount of agricultural land to 2,200 acres would have a considerable negative economic impact on farmers and the local agricultural economy. We also believe that, for the time being, the Refuge agricultural program provides an important safety net for wintering Canada Geese. It is also unlikely that the Refuge would have the resources to manage the conversion of 2,200 acres of agricultural land to more natural habitat.

- # **Comment:** You should consider whether or not row crops are really necessary for supporting the geese on the refuge. Can't land in its natural state, such as more moist soil units, support the geese? Has this alternative been considered?

Response: This approach has been considered, but the majority of Canada Goose food is produced on agricultural lands and it is unlikely we could meet our present goal without agriculture (Table 2, page 41 in the Draft EIS/CCP). The area suitable for sites that can be practically developed as moist soil units is limited by the terrain. The largest, most suitable wetland development sites on the Refuge have already been developed.

- # **Comment:** If we are to encourage neo-tropical migrant interior forest birds, then we should make sure row crops are not grown adjacent to the forested area, since that increases the number of bird predators to the forested area, according to studies done by Scott Robinson and Jeff Hoover (IDNR - Natural Heritage Division studies).

Response: We agree that some agricultural lands grown adjacent to forested areas increase the number of bird predators in the forest. This is a large part of the reason we plan to manage two large forest blocks on the Refuge (page 41 of the Draft EIS/CCP).

Comment: Limiting mowing of fields until after nesting of grassland birds is good. Land and resource management initiatives such as tweaking agricultural practices to provide more efficient and proper land usage are well thought out.

Response: We appreciate the support for our proposed actions.

Comment: Atrazine used on row crop fields could be very beneficial in helping to control exotic and invasive plant species. Atrazine has cleared every question proposed if used properly and in moderation. It should be allowed to be used in moderation on this Refuge. The decisions made for crop protection chemicals are not based on the local Refuge needs. Also the area soil types, cropping practices, timing of application, and rainfall are not addressed in making the list of products that can be used on our local Refuge—they are made by someone sitting in an office in Minnesota. The reason products are important is because the Refuge in its plan “proposes” a mowing date of August 1. First let me state the Refuge has already imposed the August 1 mowing date much to the objection of its tenant farmers. Most of the species on page 87 have already produced viable seed to reproduce by August 1. So without some type of control—chemical or mechanical—these species will continue to be a growing threat to habitat. I feel the plan should allow for mowing of first ear clover before August 1 to prevent weed seed from multiplying. This would still leave one-half the fields for ground nesting birds. In all my years of mowing these fields I have seen very few nesting birds. In fact when you are mowing it usually attracts many birds to feed on the disturbed bugs. There has been no study shown to document that shows that mowing prior to August 1 has damaged the nesting population.

Response: Pesticide use on National Wildlife Refuge System lands is governed by U.S. Department of the Interior Pesticide Use Policy (U.S. Department of the Interior, Departmental Manual, Part 517, Chapter 1), and the Fish and Wildlife Service’s Refuge Manual (7 RM 14). The use of insecticides is generally not allowed, except in rare circumstances. The use of herbicides is reviewed at the Regional and National levels. Further, a pesticide use proposal (PUP) must be prepared for each chemical used in pest control programs on refuge lands (7 RM 14). PUPs are used to evaluate the specifics of proposed chemicals, treatment sites, application methods, and

sensitive aspects of use. Atrazine is not an approved herbicide for use on National Wildlife Refuge System lands and is very unlikely to be approved for regular use in the Refuge agriculture program. We agree that the limited availability of herbicides for Refuge use and the August 1 mowing date will make the control of some weeds challenging. Although there have been no studies on the Refuge examining the effects of mowing on nesting birds, many studies of the issue have indicated that mowing does negatively impact nesting grassland birds. For example, Frawley (1989) found that, in Iowa alfalfa fields, all active above ground nests and 50% of active ground nests were destroyed by hay mowing. Grassland bird nests destroyed as a result of mowing have been observed on the Refuge.

[Frawley, B.J. 1989. The dynamics of non-game bird breeding ecology in Iowa alfalfa fields. M.S. thesis. Iowa State Univ., Ames. 94p.]

Comment: The bottomland fields should be kept in agricultural production. They should not be planted in trees. Bottomland fields get a lot of wildlife use.

Response: We agree that bottomland agricultural fields do provide useful habitat for some wildlife. Our focus is largely on the resource conservation priority species listed in Table 33 (page 130 of the Draft EIS/CCP), which mostly do not use agricultural fields.

7.1.2.2. Pastures/Grazing

Comment: Replacing fescue with native grasses is an excellent idea that will benefit a variety of wildlife, particularly quail. Healthy grasslands will benefit migratory species as well as resident species.

Response: We appreciate the support for our proposed action.

Comment: Convert all fescue pastures to a 50 percent combination of native warm season grass and cool season grass mixtures (timothy, clover, redbud, orchard grass)

Response: This is very similar to what would occur under our preferred alternative. We would convert fescue pastures to other cool-season grasses and native, warm season grasses with higher wildlife value.

Comment: Conversion of fescue pastures to native, warm-season grasses and more cool-season grasses will only benefit forest and grassland birds. We do not agree with this plan because again you are taking away waterfowl habitat and grazing pastures. Should you do this we recommend that the same number of acres used for this conversion be replaced with wetland development and management for waterfowl. Many of these pastures are used for both feeding areas and loafing, resting areas for the Canada Goose, probably mostly loafing and resting areas around ponds with some food value. These grasses for the most part will be mowed "tall" and will not be suitable habitat for the Canada Goose. We oppose this act just as strongly and much the same as Reforestation. As we set down and discuss these issues we have a hard time understanding why the USFWS would destroy much of our goose habitat at CONWR.

Response: Much of the pasture that is converted from fescue to other grass will still be used as loafing areas for geese, especially around ponds. In addition, there will be thousands of other acres of potential loafing areas available: corn fields, wheat fields, clover fields, hay fields, and other open habitats. The Refuge has an abundance of food resources for Canada Geese (Table 3, page 41 of Draft EIS/CCP) that easily meet our goal of providing food to support 6.4 million goose-use-days. While we plan to develop 150-200 acres of new moist soil wetlands, the area of suitable sites that can be practically developed is limited by the terrain. The largest, most suitable wetland development sites on the Refuge have already been developed. It is very unlikely that we could find the number of acres equal to the acres of fescue converted (1,000 acres). We are currently working on surveying additional sites for development as wetlands.

Comment: The grazing program in Alternative E proposes to reseed pastures with native warm-season grasses. The study claims on page 159 higher forage production. That may be beneficial if the fields were used for hay production. The assumptions made on page 159 that all the cattle grazing were yearlings and sold at the end of the grazing period. Most of the cattle on the Refuge are cow-calf breeding herds.

Response: The increase in forage production mentioned on page 159 relates to Alternative D, which would focus on adding better forage spe-

cies. In our preferred alternative (Alternative E), our goal in converting fescue pastures is to find replacement forage species that are not invasive, provide good wildlife habitat, and provide good grazing forage. We may use native and/or non-native species to reach this goal. Pastures may not be more productive for grazing under the preferred alternative. We agree that most cattle on the Refuge are cow-calf breeding herds. We think the economic effects are similar to those depicted with the yearling assumption.

Comment: Alternative D is a better choice than Alternative E for the grazing program because it adds legumes to pastures, subdivides larger pastures, and includes rotational grazing. There are currently very few pastures in southern Illinois that are warm-season grasses that are successful for grazing.

Response: We agree that, based on cattle production, Alternative D would be the best alternative. In our preferred alternative (Alternative E), we are attempting to balance our goals and find replacement forage species that are not invasive, provide good wildlife habitat, and provide good grazing forage. We agree that there is limited grazing of warm-season grasses in southern Illinois.

Comment: An additional suggestion concerning the grazing pastures and paddocks would be to look into the possibility of replacing cattle with native bison.

Response: There are some good reasons for replacing cattle with native bison, but we are unlikely to do so at this time because: 1) grasslands are scattered throughout the Refuge without any one area large enough to be a good area for bison, 2) fencing and other management costs for bison could be quite high, and 3) it is unclear whether there are any strong conservation-based reasons for managing a captive population of bison.

Comment: In the past, grazing activity has been ended by October 1. This year, cattle grazed in parts of the closed areas well after that date. The posted September 30 deadline should be re-established and enforced.

Response: We moved the grazing date to mid-November in 2004 and plan to keep it there as long as conditions allow. Currently our pastures are dominated by fescue, which grows quite well

in the fall and provides good forage in October and November. The cattle are removed in mid-November because of the November deer season and the desire to remove cattle before pasture soils become water saturated during winter conditions.

Comment: The Refuge currently allocates approximately 1,000 acres of grazing land to support 375 head of cattle. Typically, grazing on a refuge is inappropriate and against the intent of the Refuge Improvement Act, unless it can be demonstrated essential to meet the refuge purpose. Allowing even controlled, prescribed grazing poses numerous adverse environmental impacts to sensitive habitat areas, including the compacting of soils, sedimentation, and the degradation of water quality. The CCP does not sufficiently demonstrate that grazing is a necessary management tool essential to the Refuge's purposes. Therefore, grazing should be prohibited.

Response: We disagree that grazing should be prohibited on the Refuge. Grazing is a standard agricultural practice in the area that is a part of how we meet our agricultural purpose. We feel we can use grazing practices that protect soils and water quality.

7.1.2.3. Hay Fields

Comment: There is support to limit mowing of fields until after nesting of grassland birds. This policy should be a permanent part of refuge management in the future. There should also be a date set in spring which delineates the start of the "no mowing during nesting" season. For example, there will be no mowing from the first day of spring (March 21) or the first day ground nesting birds start building nests.

Response: The Refuge has a mowing plan that designates mowing seasons for different habitats. Most mowing takes place August through November with exceptions for developed recreation sites, administrative areas, road intersections, etc.

Comment: I encourage conversion to native grasslands and prairies and the consolidation of grassland habitats. All effort should be made to remove fescue and other non-native grasses as they provide little to no support for Northern Bobwhite and other grassland bird species. Healthy grasslands will benefit migratory species as well as resident species.

Response: This is very similar to what would occur under our preferred alternative. We would convert fescue pastures to other cool-season grasses and native, warm season grasses with higher wildlife value.

7.1.3 Recreation (General)

Comment: There is a need to recognize the recreation need and demands of the public. There has been little effort in this document to recognize how the Refuge fits into the entire recreation that is available in southern Illinois. The issues of budget constraints and Refuge mission are mentioned, but there is little discussion in the following text on these issues.

Response: We agree that a thorough analysis of the recreation need and demands for Southern Illinois similar to the analyses prepared for a Statewide Comprehensive Outdoor Recreation Plan (SCORP) is desirable. Our recreational concerns, however, are far more basic for the immediate future. We think we need to improve our minimal, basic facilities to accepted standards as a first priority. We heard from enough people during scoping to know that we have challenges in the management of recreation as it now exists. Given our budget and budget prospects, we think it is realistic to address our most immediate needs before more completely analyzing how we fit into the recreational landscape of Southern Illinois. Data from the Illinois SCORP published in 2004 will be used as a reference

Comment: The Refuge's recreation focus should be on wildlife-dependent recreation.

Response: Our challenge is to meet our responsibilities related to the purposes of the Refuge, which includes non-wildlife-dependent recreation, and recognize the values and mission of the National Wildlife Refuge System. We think at Crab Orchard our responsibility is to provide opportunities for both wildlife- and non-wildlife dependent recreation. Part of the CCP planning process has been to explore the alternatives and balance between the various forms of recreation. See the last section of the comment and responses for a further discussion on the precedence of refuge purposes over System Mission.

7.1.3.1. Hunting

Comment: Illinois DNR recognizes that greater hunting opportunities exist on the Refuge and suggests opening greater portions of the restricted area on a limited time zone to increase refuge hunting programs (dove, turkey, limited entry (weekly draw) archery 4 point/side or antlerless and quail/rabbit) including youth hunting opportunities emphasizing high quality experiences. Others, also, would like to see more hunting opportunities in the restricted use area of the refuge.

Response: Our plans include creating additional hunting opportunities within the restricted use area of the Refuge. These hunting opportunities will target the non-traditional hunting segment of the public such as youth, persons with disabilities and women.

Comment: Hunting should continue on the Refuge.

Response: Hunting was identified in the Refuge Improvement Act as a priority public use and will continue at Crab Orchard Refuge.

Comment: Hunting on the Refuge should end.

Response: Hunting is one of the six wildlife-dependent public uses of national wildlife refuges specifically encouraged by the National Wildlife Refuge System Improvement Act of 1997. Whenever a particular type of hunting is compatible with the Refuge's purposes, goals and objectives, and can be conducted in a sustainable manner, it may be permitted. Wildlife populations are monitored, and where a population is below target levels, hunting is suspended or reduced until the population recovers. Limited trapping is conducted at Crab Orchard of furbearers that damage infrastructure, like muskrat and beavers, and other mammalian predators and carnivores. The trapping is conducted by permittees and on a sustainable, relatively small scale. As with hunting, trapping is suspended when the populations of target species appear to be low.

Comment: Fox hunting and dog trials should be prohibited on the Refuge, because it disturbs wildlife and destroys vegetation.

Response: If the comment is referring to traditional foxhunting meets, we agree. A compatibility determination was conducted on this activity and it was found not compatible. The compatibility determination on foxhunting was published as part of

Appendix J in the Draft EIS/CCP. Dog trials are not conducted on the Refuge. Individuals wishing to train hunting dogs for their personal use may obtain a special use permit to conduct this activity.

Comment: Controlled waterfowl hunt should be more developed with pits and flooded fields.

Response: It would be difficult to establish pits in the areas where the controlled waterfowl hunt is conducted. These areas are a part of our agriculture program and the fields are on a crop rotation system. Under the rotation system the fields are fallow in some years, which would not attract waterfowl. One of the reasons for the controlled hunt is to provide a hunting opportunity that results in a reasonable harvest opportunity.

Comment: Need more food plots for small game.

Response: The Refuge has a large agriculture program with over 2,500 acres of corn and soybeans planted annually. We feel the crop fields provide more food than we would ever be capable of providing with food plots.

Comment: The Refuge provides wildlife habitat management for one of the main waterfowl stops along the Mississippi Flyway. In order for that to continue we feel all deer hunting on the refuge should be done prior to waterfowl hunting season or after waterfowl season. Deer hunting in the closed areas of the refuge during the month of December is having a devastating effect on the early migrating geese that are stopping here in November and December each year. The practice of deer hunting in the closed area of the refuge alters the "normal" migration of Canada Geese, many ducks, and shorebirds. In order to protect the migrating waterfowl there should be no activities in the restrictive (closed) areas of the refuge during the waterfowl season. We propose that all the now restrictive (closed) areas remain closed to protect the fall migration of waterfowl. This problem has an easy fix and we feel the FWS should look at this problem in length and come up with a solution immediately.

Response: The Refuge deer population is maintained just below carrying capacity through a carefully managed deer hunting program. Harvesting of deer is necessary to prevent excessive competition between deer and other species, minimize crop depredation on surrounding farms, reduce deer related traffic accidents and to maintain a healthy deer population. The current deer

seasons in the restricted area (closed portions) are in November and the first week of December. These are statewide seasons and it would be difficult for us to move these seasons. However, we do appreciate the concern and plan to prohibit deer hunting in areas with heavy waterfowl concentrations in order to reduce disturbance to migrating waterfowl.

7.1.3.2. Fishing

Comment: The gates at Carterville Beach and Lookout Point Beach should be removed to allow easier access to bank fishing. These areas were open to vehicles at one time. Ponds on the refuge need better management. They are beginning to get a lot of growth on the bank making it difficult to bank fish.

Response: There are numerous high quality bank fishing areas available on the refuge, including several newly renovated areas on Wolf Creek road that provide fishing docks and fish attractors, as well as areas accessible to people with disabilities. The limited and declining use of the two refuge beaches did not justify the high maintenance cost and liability associated with operating them. The city of Carterville was approached and offered an opportunity to operate the Carterville beach, but declined due to cost and liability concerns. The areas remain open to walk-in fishing.

Comment: There are several places to fish on the Refuge the Visitor Center Pond should be converted into wetland area instead of spending \$2.5 million to re-do the dam when you have a large lake within one mile of the area.

Response: Local newspaper reports that indicated \$2.5 million would be spent to rehabilitate the dam at the Visitor Center pond were incorrect. Our division of engineering is currently evaluating the project, and much of the work will be done with refuge staff and equipment – saving the taxpayers hundreds of thousands of dollars. The Visitor Center pond is one of our most heavily used public fishing ponds, and it is a priority for us to maintain this area for quality bank fishing.

7.1.3.3. Fishing Tournaments and Fish-offs

Comment: All fish-offs departing from the same boat ramp is not necessary.

Response: Requiring all fish-offs on Crab Orchard Lake to use the Take Pride in America boat ramp reduces congestion on other ramps for non-fish-off lake users. It also allows law enforcement officers to determine that any weigh-ins taking place at the other boat ramps are by individuals who do not possess a valid Fish-off Use Permit.

Comment: Why are Fish-offs not allowed to give out prize money, but the big tournaments can give out prize money?

Response: In 1992, we defined a fishing tournament as any fishing event that has more than 20 boats or has prizes or money in excess of \$100.00. Organizers of these events solicit participants by the use of fliers, advertisements or public service announcements, and conduct post-event activities which bring publicity to the tournament or winners. We decided to allow five authorized tournaments annually on the Refuge by special use permit. In our decision we weighed the recreational and charitable value of tournaments against the possible detrimental effects to other users and the fishery resource.

One purpose of these tournaments is to raise money for non-profit, charitable organizations. In addition, the number of participants (sometimes exceeding 400 individual anglers) involves large overhead expenses and administrative burdens. In order to meet the purpose of fund-raising as well as offset overhead and administrative costs, organizers of these designated tournaments are allowed to offer prize money to attract enough participants to meet their goal of charitable giving.

Fish-offs are considered competitive fishing events for relatively small, local clubs, and because of the smaller character (20 boats or fewer) and much lower overhead and administrative costs, significant entry fees and prize money are not necessary to offset overhead or administrative expenses. Therefore, our policy of not allowing the distribution of prize money for fish-offs will continue in order to limit the number and scope of fund-raising events on the Refuge.

Comment: How are fishing tournaments decided on, as to who gets to have a tournament?

Response: The Refuge has five (5) Special Use Permits issued each year for sanction fishing tournaments on Refuge waters. They are: Take

Pride in America on Little Grassy Lake, the Little Egypt Bass Tournament on Devils Kitchen Lake, the Bill Harkins Tournament, Boy Scouts Tournament, and Mid-West Bass Classic all on Crab Orchard Lake. The organizers of these tournaments have conducted these tournaments on the Refuge for many years.

The current policy is that as long as the organizers of the above tournaments meet the special conditions of their Special User Permit they can continue to hold the tournament on Refuge waters. If for some reason the tournament organizer decides to discontinue their event, the tournament will not be replaced by another event.

- # **Comment:** Entry fee towards tournaments should not go to charity but should be used towards stocking the lakes, improving fish habitat, etc.

Response: Currently \$10.00 of every entry fee is committed to the improvement of the fisheries on Crab Orchard Lake.

- # **Comment:** What are the procedures in determining when and who gets to have a fish-off?

Response: Fish-offs are club events that have 20 boats or fewer with a scheduled date, time, and ramp on either Crab Orchard, Devils Kitchen or Little Grassy Lakes. Fish-offs are regulated by a fish-off-permit. Any organization may have one fish-off per lake, per year, for a total of three Refuge fish-offs. We allow one fish-off per lake per day and do not allow any to take place on holiday weekends, i.e., Memorial Day, Fourth of July, Labor Day. Fish-off permits are issued on a first-come, first-served basis.

7.1.3.4. Trapping

- # **Comment:** Trapping should not occur on the Refuge. It is not a priority use; it poses a serious hazard to non-target wildlife; it is not compatible. The animals are part of the ecology of the area.

Response: A compatibility determination we prepared found that carefully controlled trapping contributes to the habitat and wildlife management goals of the Refuge. We consider trapping to be a management tool that, in some cases, is the only means by which nuisance animals can be removed. This activity will be limited to areas of the Refuge that are designated by the Refuge wildlife biologist, and carefully regulated through the issuance of special use permits.

- # **Comment:** Trapping should continue to be part of the overall management program.

Response: Limited trapping will be allowed in designated areas of the Refuge through special use permits.

7.1.3.5. Wildlife Observation and Photography

- # **Comment:** Wildlife observation should be given emphasis over hunting. Wildlife observation is the most popular activity and most economically productive for the area. Hunter numbers are diminishing each year, which means the time and money devoted to support the activity should be reduced.

Response: Wildlife observation and hunting are both important recreational activities on the refuge and each were identified as priority wildlife-dependant public uses in the Refuge Improvement Act. Both uses are considered compatible with the refuge purposes. We have not observed a reduction of hunter numbers on the Refuge.

- # **Comment:** Relocate the observation deck on Route 148 closer to the water.

Response: The location of the observation deck was chosen to provide adequate wildlife viewing opportunities without disturbing the wildlife. Moving the deck closer to the water is likely to preclude the use of a portion of the wetlands by wildlife.

7.1.3.6. Environmental Education

- # **Comment:** Educational focuses are a welcome initiative. I suggest supplementary lesson plans, wildlife projects for science fairs, and educator training for the outdoor classroom, as areas of focus for encouragement of local educators K1-K12 to participate with the wildlife classroom.

Response: Thank you for your support and ideas. We will consider your ideas as we develop our education program more fully.

7.1.3.7. No-wake Zones on Crab Orchard Lake

- # **Comment:** The no-wake zones on Crab Orchard Lake are a good idea. The zones improve safety and overall fishing experience; reduce noise disturbance to wildlife, especially nesting birds; decrease erosion of the lake shore; enhance boating; provide alternate options for people who

want to canoe with reduced noise level; reduce likelihood that nesting bald eagles will be disturbed.

More no-wake zones should be added to the plan.

Response: We appreciate the support for the no-wake zones. Additional no wake zones would result in an overall reduction of areas available for waterskiing. We have modified our original proposal and reduced the extent of the no-wake zone based on comments that we received from waterskiers. (See the following comment and response.)

- # **Comment:** All the coves should not be included in the no-wake zone. The proposed plan will limit good waterskiing opportunities and lead to congestion in the center of the lake.

Response: We recognize that areas of the lake that are protected from prevailing winds are valuable for waterskiing. We have reduced the size of the no-wake zones in the lake in our proposal to better accommodate waterskiing in these areas.

- # **Comment:** The no wake zones should be removed during waterfowl season. Rule-abiding hunters will lose the best hunting spots to hunters who violate the zoning rules and speed.

Response: Waterfowl hunters are expected to obey no-wake zones along with all other users. Additional enforcement may be appropriate during the waterfowl season if no wake zones are routinely violated.

7.1.3.8. Restriction of Gas Motors on Devils Kitchen Lake

- # **Comment:** Limiting the use of gas motors on Devils Kitchen Lake will be good for wildlife and people using the lake; reduce the noise levels in the adjacent Crab Orchard Wilderness and enhance the wilderness experience there; and may be needed in order to comply with the Wilderness Act (wilderness values) and Refuge Improvement Act of 1997 (biological integrity).

Response: We appreciate the support for this portion of our proposal. We feel that reducing noise levels on the lake would be good for some users, but needs to be balanced with the desire of other users to use gas motors. (See the following comment and our response.) We have found no evidence that noise from 10-hp gas motors has a

negative impact on wildlife. We agree that reducing noise levels on Devils Kitchen Lake could enhance the wilderness experience in the adjacent Crab Orchard Wilderness.

We do not agree that limitations on gas motors are required to comply with the Wilderness and Refuge System Improvement Acts. While the Crab Orchard Wilderness borders much of the southern part of Devils Kitchen Lake, the lake is not in the Wilderness, therefore motors may be allowed without violating the Wilderness Act. We have found no evidence that noise from 10-hp gas motors has a negative impact on biological integrity.

- # **Comment:** There should be no gas motor use on any of Devils Kitchen Lake as in Alternative D.

Response: We feel that the use of gas motors on Devils Kitchen Lake is a compatible and appropriate use enjoyed by many Refuge visitors.

- # **Comment:** Limiting the use of gas motors on Devils Kitchen Lake will limit access to the best fishing areas on the lake and the Panthers Den Wilderness, which will reduce hunting, fishing and other recreation opportunities; be unsafe, especially during windy or rough water conditions; boats can get stuck on top of a submerged standing tree and an electric motor or paddling provide insufficient power for getting a boat off; electric motors would be too slow and have too limited battery life to be useful on the lake; noise is not an issue and the Service has not demonstrated that gas motors create a nuisance; an additional limit to public access that will make the lake less attractive to the public and reduce tourism in the area; the area should be a no wake zone.

Response: Based on these comments and a site visit, we have modified our proposal. The modification will prohibit the use of gas motors on Devils Kitchen Lake in Grassy Creek and the eastern arm of Devils Kitchen Lake from the mouth of Grassy Creek south to the Refuge boundary. The portion of the lake south of Line Road #6 boat ramp will be designated a no-wake zone. The modification will allow continued access to the majority (85 percent) of the lake by boats using gas motors and provide the power that some feel is required for safe navigation. Boats equipped with gas motors would be able to use the entire

lake, but would be required to use only an electric motor or paddles for propulsion on 107 acres (15 percent) of the lake.

Access to fishing areas and Panther Den Wilderness will be only slightly limited. Although the current motor limit was established to provide for recreation purposes and not safety and access, we agree that under certain conditions, using an electric motor or paddles could be less safe than using a gas motor. This may require some additional judgment by boaters regarding weather and water conditions. We would not ticket a boater for using a motor if it was required for safety purposes. Some Refuge users do feel that the noise created by gas motors is a nuisance. The purpose of our modification is to offer an area on one of the large Refuge lakes that would provide a different boating experience for the public and also address the concerns of gas motor users. We feel that offering a different boating experience on a portion of the Refuge may make Devils Kitchen Lake more attractive to some users and actually increase recreational use. Our modification of the original proposal has made the majority of the area in question a no wake zone.

- # **Comment:** The restriction on gas motors favors a minority user group (canoes and kayaks) at the expense of a majority group (boats with gas motors).

Response: When possible, we try to accommodate appropriate, compatible uses. With approximately 8720 acres of Refuge lakes open to boating, we feel restricting the use of gas motors on about 100 acres is not overly restrictive

7.1.3.9. Closure of Devils Kitchen Campground

- # **Comment:** Illinois DNR recommends, as a compromise to closing the Devils Kitchen campground, converting it to primitive camping which might be popular to some constituents who use non-motorized watercraft. Income from this campground might also help sustain the Devils Kitchen Marina vendor.

Response: We agree. We have modified our proposed strategy in response to comments on the Draft EIS/CCP. Under our final proposed action, the concession at Devils Kitchen Campground will provide limited primitive camping, boat rental, and picnicking opportunities.

- # **Comment:** We advocate the reduction of commercial uses and recreation not compatible with wildlife on Crab Orchard Refuge, including the proposal to close the Devil's Kitchen Campground. We think that uses of refuge land for camping and related activities, such as high speed motor boats, water skiing, etc., should be minimized. To lessen the impact of these activities that are not compatible with wildlife, we support concentrating them at Crab Orchard Lake, and remove them from Devil's Kitchen Lake and Little Grassy Lake.

Response: We have modified our proposed strategy in response to comments on the Draft EIS/CCP. Under our final proposed action, the concession at Devils Kitchen Campground will provide limited primitive camping, boat rental, and picnicking opportunities. We feel that these low-impact activities are compatible with wildlife and support the recreation purpose of the Refuge.

- # **Comment:** If the Devils Kitchen concession people would have been given the help they had asked for from the different Refuge managers this campground could have been a prime site. It still could be if a portion of money from the user fee, boat sticker and Playport/Image boat-slip programs were spent to improve this area. Without a commitment such as this, it does need to close.

Response: Our plan is to consolidate and improve the camping facilities on Crab Orchard Refuge. Based on comments on our draft proposal, we have modified our preferred alternative to provide a limited number of semi-developed, tent camping sites at Devils Kitchen Campground rather than close the entire campground. The current campground was designed in the 1960s for the small recreational vehicles prevalent at that time. Because of the location of the campground and its ageing infrastructure, much work would be required before the campground would meet the needs of today's larger recreational vehicles. We feel that we can better provide camping opportunities for larger RVs at Little Grassy and Crab Orchard Campgrounds, while providing a more primitive experience at Devils Kitchen Campground.

- # **Comment:** Devil's Kitchen campground should be closed. The boat dock should remain open.

Response: We have modified our draft proposal to now allow some camping and the boat dock. See the first comment and response in this section.

Comment: The FWS indicates that the campground at Devils Kitchen is too steep to maintain; however, the campground appears to be in adequate shape, and it has been maintained for many years.

Response: The current campground was designed in the 1960s for the small recreational vehicles prevalent at that time. Because of the location of the campground and its ageing infrastructure, much work would be required before the campground would meet the needs of today's larger recreational vehicles. We have modified our preferred alternative to provide a limited number of semi-developed, tent camping sites at Devils Kitchen Campground rather than close the entire campground. We feel it is appropriate to provide a more primitive camping experience at Devils Kitchen Campground, while providing full-service, recreational vehicle camping at Little Grassy and Crab Orchard Campgrounds.

Comment: Devils Kitchen Campground receives much use. Closing it will be a waste of tax dollars spent in the past to develop it. Since you plan to close this campground, where are we to camp in November of each year when we come down from Belleville 2 ½ hours away to hunt? What is the alternative for us? You want people to use Devils Kitchen Lake and surrounding area, but you take away a place to stay right on the lake. Makes sense only to you. Keep the little place open or give us a better alternative.

Response: Based on comments on our draft proposal, we have modified our preferred alternative to provide a limited number of semi-developed, tent camping sites at Devils Kitchen Campground rather than close the entire campground. Under the current concessionaire these campsites would be available during the deer hunting season.

Comment: If this plan goes through, 15 years from now, I doubt if there will be any camping or boats with motors on any of the lakes. Surely something can be done to meet a happy medium between U.S. Fish & Wildlife and Tourism to secure a future for all.

Response: We do not share your outlook. We think the plan will lead to higher quality recreation, including camping and motorboating, and the economic benefit from tourism will continue.

7.1.3.10. 14-day Camping Stay Limit

The 14-day stay limit should be implemented. The limit is fairer and will open up more and better spots for weekend campers; improve the look of campsites; prevent the feeling of being an "outsider" on land that should be available to all; be consistent with DNR and COE (federal regulations). Many other options exist in Southern Illinois for those who want a longer camping or even permanent living environment.

Response: We appreciate the support for the proposed policy. The proposed 14-day limit is the length of stay that most Federal and State campgrounds in the area, as well as nation-wide, provide.

Comment: The campground facilities need to be improved. Money is needed in the near future to improve and expand the campgrounds. Careful monitoring of concession operations is important. Long-term campers should maintain a neat and orderly campsite.

Response: We agree that the campgrounds need to be improved. However, we do not think it is realistic to anticipate a budget that would allow an expansion of the campgrounds. We think our approach to consolidate the campgrounds and improve the reduced number of sites is a realistic approach to anticipated budgets and revenues. Our intent is to offer a higher quality camping experience through improvement of facilities. We expect to be more diligent in monitoring the concession operations and campsite appearance on the Refuge.

Comment: The consolidation of the camping areas is a good idea, because it will provide more space for wildlife.

Response: We are proposing the consolidation as a way to improve camping on the Refuge. We anticipate only a slight increase in wildlife habitat as a result of the consolidation.

Comment: Camping should not be allowed except in campgrounds.

Response: Your comment restates the current regulations: camping is only permitted in designated campgrounds on the Refuge.

Comment: The 14-day stay limit should not be implemented. Campsites are never full except on holiday weekends. The stay limit reduces stability for foster children who camp regularly at Crab Orchard Campground; causes hardship to senior citizens and campers who are not physically able to move their RV every two weeks. They may need to sell the RVs, which will result in lost revenue to local businesses. Long-term camping is an established practice; provides more time to experience fishing and hunting and other activities; is not available at a public site at many campgrounds in southern Illinois; provides a unique type of camping experience. Those who work full-time and can only camp on the weekends would not be able to make arrangements on a regular basis to move the camping units every 14 days. Gasoline prices prohibit moving a camper numerous times during the summer. Many who camp on the Refuge are locals who can not afford to travel and enjoy staying in one campground for the season.

Response: Our intent is not to create hardship, but rather to offer a higher quality camping experience through consolidation and improvements at the facilities. By limiting the length of stay, more people will have the opportunity to use the prime campsites. We think the occupancy rate will increase with improved facilities and visitor numbers will increase. There are private campgrounds in Southern Illinois that provide extended stay opportunities for people who desire that arrangement and its advantages to them. We acknowledge that people accustomed to staying for long periods at Refuge campgrounds will be required to change their routine. We think, in balance, that the fairness and other benefits of the proposed limits outweigh the disruption to the long-term campers' experience. Even with stay limits, a camper could move among the multiple campgrounds on the Refuge without an interruption in consecutive camping days.

Comment: The 14-day stay limit should not be applied to Little Grassy Campground. The Crab Orchard Campground is large and can accommodate short-term campers. Little Grassy Campground should be left alone.

Response: Our reasoning of fairness and providing a higher quality camping experience applies to all Refuge campgrounds. We think we should standardize camping regulations throughout the Refuge.

Comment: The Refuge seems to be discouraging most recreational use, which will completely eliminate tourism; cause some to not purchase recreational use stickers and not visit the Refuge at all. It gives the impression that most recreationists aren't welcome, and it will reduce revenue and the local economy. The strategy seems to be designed to fail and justify to the public an eventual land exchange with SIU.

Response: Our intent is quite the opposite from discouraging use. Upon implementation of the Final CCP, we plan to consolidate, improve, and encourage camping through use of a national reservation system with the idea of generating more tourism. We think that improved facilities and better service will increase visitation and revenue. We plan to continue to support both the traditional non-wildlife dependent, as well as wildlife-dependent recreational uses on the Refuge. The Final CCP is the document we intend to follow for the next fifteen years. The land exchange is not a part of our plans.

Comment: If the "land campers" are required to move every 14 days, then the houseboats should also be required to leave the premises before returning for another camping stay.

Response: We do not see the campers and houseboats as equivalent. Camping units are designed to be mobile and are generally driven, or pulled, by the owner. Houseboats are meant to remain on the water and in the event of a need to be transported, generally require a special vehicle, trailer, and are often "Wide Loads".

Comment: The concessionaire will have a difficult time making a profit if the revenue from long-term stays is taken away. The money it takes to operate the campground is much greater than the revenue generated by a 14-day stay. Other campgrounds operated by the state and federal government utilize tax payer dollars and do not have to make money to pay labor and insurance as a concession does. The monthly people keep steady money coming in and help provide safety for each

other. Limiting the campground stay and taking reservations are not cost effective, ask the Corps of Engineers.

Response: Consolidating and improving facilities allows the Refuge to concentrate both staff and resources to improve facilities and make them more marketable, safe, efficient, and accessible to a broader portion of the general public. With improvements and implementation of a reservation system, we think more people will visit. Increased visitor numbers will enhance the opportunity for a concessionaire to make a profit.

Comment: If the long-term, exclusive use of campsites is the concern, put limits on that. There is no need or rationale to require campers to leave the entire campground. Equity is understandable, but “greater opportunity” would not occur as some campers may discontinue going to Crab Orchard Campground. A reasonable compromise would be to designate a few campsites as 14-day limit. Limit the use of individual camp sites and allow campers to remain in the campground but on a different site after the initial 14 days. Other options include designating zones within the campground. Designating Loop A in the Crab Orchard Campground for long-term camping would leave prime spots for the short-term campers. Or, designate Loop E and F as long-term camping, A and B as short-term, and D as primitive. Senior citizens and disabled campers should be exempted from the 14-day stay limit. Perhaps 30, 45, and 60 day lengths of stay could be considered.

Response: We have modified our initial proposal to phase in the 14-day length of stay that incorporates ideas expressed in the comments. Part of our modification is to designate areas of the Crab Orchard and Little Grassy Campgrounds as long-term camping for the first two years. In the following two years we plan to limit lengths of stay to 28 days in the long-term area. We think that in a consolidated campground with fewer sites, the general practice of limiting the length of stay in the campground is still likely to be the fairest to all users. We think that if we allowed visitors to move from site to site without leaving the campground that they would have an advantage in selecting sites over short-term visitors who are coming from a distance.

Our modified proposal for the implementation of a length of stay limit of 14 nights, which is comparable with other Federal and State campgrounds,

will be phased in. For the first two years, approximately one-half of the campsites would remain available for long-term camping and the other half for stays up to 14 days maximum. The second two year period would permit up to one-third of campsites be available for 28-day stays and the remaining two-thirds would be limited to 14-day maximum stays. Finally, beginning in the fifth year camping would be exclusively 14-day maximum stays. We would require campers to remove all equipment from the campground for 48 hours at the end of any consecutive 14-day stay. Storage of equipment such as recreational vehicles and trailers would be prohibited. In addition, a reservation system will be phased in for Refuge campgrounds.

7.1.3.11. Horseback Riding/Equestrian Trails

Comment: The restrictions on horseback riding are needed. There is a need for a designated trail to be mapped and signed, a closure during wet conditions, and a prohibition of access from private lands. The trail should avoid Research Natural Areas because they threaten the natural integrity of these sites.

Response: The needs are addressed in our proposed action. We have modified our proposed route to avoid the Research Natural Areas. The River To River Trail Society publishes a trail guidebook with maps. We will provide a free trail brochure that includes user information and a map of the portion of the trail on the Refuge. The trail will be adequately marked on the ground and signs will be posted at trailheads. The trail will only be accessible from designated trailheads. The trail route as originally proposed does enter both parcels of the Devils Kitchen Lake RNA. A slight realignment of the trail at both locations will resolve this conflict.

Comment: The Refuge section of the River to River Trail provides a good connection because riding on pavement is unsafe.

Response: We recognize the safety concerns. However, we intend to close the trail during the wet conditions to protect the trail from erosion, and if equestrians want to ride through on the River to River Trail, they will have to bypass the Refuge on public roads during the time of the closure.

Comment: The proposal for horseback riding is too restrictive. There should be: more trails; use of some or all of the existing user-created trails; a trail loop; year-round use of the trails.

Response: We are responsible for the stewardship and preservation of the Crab Orchard Wilderness. Since the vast majority (4.5 miles of 5.1 miles) of the proposed hiking/equestrian trail would be within the Wilderness, we must ensure that the construction, maintenance, and use of the trail does not conflict with the spirit and intent of the Wilderness Act. The Act does not prohibit such trails or horseback riding, but establishes limits on what activities are allowed in a wilderness. Our proposal is designed to provide a compatible and sustainable section of off-road trail that links other sections of the River to River Trail. We feel this is the most extensive project that we could undertake and accomplish given the resources likely to be available. Managing and maintaining the extensive network of existing user-created trails would surely exceed our capabilities. We feel the seasonal closure to horse traffic during times when the soil is wet and soft is necessary to prevent damage to the trail tread and the surrounding area.

Comment: Equestrians should be allowed the enjoyment of their solitude and primitive experiences.

Response: Our proposal offers equestrians and hikers the opportunity to ride or walk more than five miles through the most primitive, scenic and remote area of the Refuge.

Comment: The proposal for horseback riding is not good because it restricts access to the Refuge from adjacent private land. Access is needed to retrieve hounds that stray onto the Refuge. With restricted access the value of property adjacent to the Refuge would decline and the local economy would suffer.

Response: In order to fulfill our role as land stewards, we feel we must restrict horseback riding to the designated trail to control the environmental impacts. Land adjacent to the Refuge may be viewed as less desirable to equestrians, but we do not feel that restricting access from private property will negatively impact land values or the local economy as a whole. Several studies have found that property values are increased as a result of being adjacent to open or park land.

Comment: Alternative A (No Action) is the best alternative for equestrians because it provides more opportunities to ride with few restrictions.

Response: We think supporters of Alternative A overlooked that under this alternative horseback riding in the Wilderness would remain an unauthorized use and would be stopped with increased enforcement.

Comment: The Service has presented no scientific evidence of resource damage caused by horses; in the past 42 years there has been no erosion of any type on the existing trails.

Response: We have observed soil disturbance and erosion ranging from slight to severe caused by horse traffic on much of the proposed trail route and elsewhere on user-created trails. We disagree that no erosion has occurred on existing trails. We plan to fully assess the existing condition of the trail during the design phase of this project.

Comment: Horse riding raises concerns about impacts on soil, water, plants, nesting birds and other wildlife. Seasonal closures may not be effective; serious erosion on trails was observed in nearby Giant City State Park even though they are seasonally closed. Horses are major carriers of invasive species seed. A single trail would concentrate horseback riding and its impacts. A better alternative would be more trails to spread out the impacts.

Response: If the trail is designed, constructed, and maintained properly, the impacts associated with horseback riding should be tolerable. We intend to design, construct, and manage use of the trail so that no soil erosion will occur. We intend to regularly inspect the area and take any necessary actions to repair or correct problems, such as erosion, trail braiding, etc. We intend to monitor the area to detect the presence of invasive plants and take the necessary actions to control them. We intend to revise the *Wilderness Management Plan* and conduct a thorough environmental analysis prior to officially authorizing this use. If horses stay on the designated trail, the associated impacts on wildlife should be comparable to those of hikers walking on the trail. We think concentrating the use is the best way to monitor and control the impacts associated with the use.

Comment: Horseback riding; degrades the Wilderness; may not be an appropriate use in the Wilderness; as a previously unauthorized use in the Wilderness, should not now be allowed; may open the area to and encourage illegal ATV use.

Response: The Wilderness Act does not prohibit horse trails or horseback riding. We must ensure that the construction, maintenance, and use of the trail does not conflict with the spirit and intent of the Act. If the trail is designed, constructed, and maintained properly, the impacts associated with horseback riding should be within acceptable limits. We think that by authorizing the use under specified conditions we will be able to better protect the area than we can now. We plan to patrol and enforce regulations to prevent vehicle trespass and protect resources.

Comment: Monitoring and enforcement of horse trail regulations would be difficult, especially with limited staff; horseback riders often leave horse trails to ride on hiker-only trails in Giant City State Park; horses and hikers often widen or braid trails in areas that have been rutted by horses.

Response: We plan to monitor the condition of the trail and take any necessary corrective actions. We intend to post informational and regulatory signs at trailheads and other access points. We plan to patrol and enforce regulations to protect resources. We recognize this will be a particular challenge until visitors become familiar with the regulations. With time and education, we think horseback riders will comply with the regulations and the burden of enforcement will be lessened.

Comment: Horseback riding could conflict with hunters and impact hikers through trail damage.

Response: We intend to seasonally close the trail to horses, which would coincide with most of the hunting seasons. Horse traffic certainly has the potential to damage the trail. We intend to harden the tread so that it will withstand the impact of horse hooves under most conditions. To prevent damage, we intend to close the trail to horses during times when the ground is wet and soft. We plan to enforce regulations to protect resources and minimize conflicts between users.

Comment: The Refuge may not be able to adequately maintain the trail if it becomes popular and results in increased horse traffic. Horse trails require more trail management to prevent impacts.

Response: We agree that horse traffic will likely increase in the future and result in increased challenges of trail maintenance. We intend to harden the tread so that it will withstand the impact of horse hooves under most conditions. To prevent damage, we intend to close the trail to horses during times when the ground is wet and soft. Trail maintenance will be an ongoing, cooperative effort by the Refuge, U.S. Forest Service, and River to River Trail Society. We plan to monitor the condition of the trail and take any necessary corrective actions. We plan to patrol and enforce regulations to protect resources.

Comment: A trail fee should only be imposed if the proceeds are shared with all trail landowners and the fee covers use of the entire trail.

Response: We have no control over other landowners granting or denying use of the River to River Trail or charging a fee. The Refuge's recreational fee would apply to those who drive a vehicle onto the Refuge, park, and ride or walk the trail.

Comment: The Service does not have the authority to selectively abandon a portion of the River To River Trail.

Response: We are not seeking to abandon a portion of the Trail. We are seeking just the opposite—to authorize the Trail on the Refuge. Currently, The River to River Trail has no official designation on the Refuge. Horseback riding was prohibited in the Wilderness when it was established and our current regulations do not permit horseback riding off of roads. Our proposal is to explicitly recognize an approved route through the Refuge and then manage and enforce our regulations in a manner that fulfills our legal obligations.

Comment: Horseback riders are a deterrent to poachers and illegal drug activity.

Response: We feel that the presence of horseback riders would have a negligible effect in deterring illegal activities.

Comment: Commercial horse camps have no right to treat the Refuge as a cash cow.

Response: Currently there are no commercial horse camps adjacent to the Refuge. Giant City State Park has a public horse camp whose patrons can access the River to River Trail and ride to the Refuge.

Comment: The Refuge can do more to protect against degradation caused by illegal horse use. There is a need to close user-made trails and write tickets for violators without delay.

Response: Our current regulations do not address horseback riding, thus this use is technically prohibited. However, we have not actively enforced this prohibition in recent years. On the other hand, we would not hesitate prosecuting someone responsible for creating a new trail by cutting vegetation, marking the route, etc. We intend to close all trails to horses except the designated River to River Trail section following approval of the CCP. Our proposal is designed to provide a sustainable trail for horseback riding and prohibit this use on all other user-created trails.

Comment: Brown-colored hill gravel rather than light-colored limestone should be used for trail work because it would blend better with the natural soil color and because limestone gravel is sharp on the foot and provides calcium for brown-headed cowbirds. The trail through the Wilderness should be cleared no more than a maximum width of 4 feet.

Response: We agree with you. Another undesirable effect of placing crushed limestone on the naturally acidic soils is that it tends to increase the pH of the soil, which may cause changes in the plant community on the site.

Comment: Who will pay for trail maintenance?

Response: The Refuge will be largely responsible for trail construction and maintenance. The funds needed for this project have not yet been estimated or requested. We intend to enter into a cooperative agreement with the River to River Trail Society and the U.S. Forest Service by which the official designation as the River to River Trail will be made. This agreement will also specify each partner's responsibilities, including trail maintenance. The River To River Trail Society is a volunteer organization formed to establish, promote, and maintain the 146-mile RTR

Trail. Any of the partners would be free to apply for grants or organize volunteer workers to perform trail maintenance.

7.1.3.12. Hiking/Biking Trails

Comment: The Refuge has been a partner in planning for the Williamson County, Marion-to-Carterville/Carbondale Trail. A preliminary alignment for the Trail through the Refuge was proposed in the 2003 Greenways and Trails Plan for Williamson County. Refuge managers have identified a potential trail corridor through the Refuge, using old roadbeds and possibly an old railroad bed. Further identification of a more definite alignment would significantly support the development of the trail. The Refuge is strategically located between the communities and will be important in providing the central portion of the trail, connecting the communities, and making a recreation and alternative transportation facility available to the County's residents and visitors.

Response: The Refuge supports this proposal and intends to cooperate with local interests to develop this Marion-to-Carbondale bicycle trail. A proposed alignment of the trail has been identified by Refuge staff, however support from local interests and funding will ultimately determine the location and scope of this project.

Comment: As a cyclist, I like the idea of including a bicycle trail on the northern boundary of the refuge, but only if it protects those areas that are needed for wildlife habitat. A logical location would be adjacent to or close to Old 13 Rt. on the east side of 148 perhaps connecting with the easterly extension of Post Oak Road and then leading onto regular refuge roads. Fencing along the south side of the trail might be necessary to protect adjacent wildlife habitat.

Response: Goal 12, Objective 12.1, Strategy 2 includes exploring the potential for a bicycle route within the restricted use area of the refuge, along old railroad beds and refuge roads. Impacts to wildlife will be considered and mitigated in the planning process for this trail.

7.1.3.13. Swimming

Comment: In the past there were more swimming areas. The swimming areas have long been inaccessible to the public.

Response: Swimming is allowed on Little Grassy and Crab Orchard Lakes. There are several beaches and swimming areas on Little Grassy Lake located at the various group camps and the Little Grassy Campground. The Crab Orchard Campground maintains a public beach on Crab Orchard Lake. Other public beaches on Crab Orchard Lake were closed because of declining use, liability concerns, and increased maintenance and operation costs. The current beach at the Crab Orchard Campground is under-utilized, but will continue to be available to the public along with the areas on Little Grassy Lake.

7.1.3.14. Picnicking

Comment: In the past there were many picnic areas. Today most of those areas are closed.

Response: When the Refuge experienced a budget cut in non-program uses in 1973, several picnic areas were closed. Although there has been a reduction in picnic areas on the Refuge, rarely do we see the existing facilities used to capacity. We feel it is unlikely that we could support high quality facilities at all of the former locations; therefore we intend to consolidate and improve picnic facilities at the Greenbriar, Wolf Creek, Harmony Trail, Cambria Neck, Playport Marina and the former Images Marina site.

7.1.3.15. Crab Orchard Boat & Yacht Club (COBYC)

Comment: The Crab Orchard Boat and Yacht Club should be converted to a public facility. This is public land for public use and should not be used for exclusive-use purposes. The Refuge should draft a policy that would result in eventual return of this property to public use or to closure for wildlife conservation purposes.

Response: Our plan is to support both the traditional, non-wildlife-dependent as well as wildlife-dependent recreational uses on the Refuge, and by converting the COBYC to a concession, this area will be available to the general public for use. The public use benefits from the area help fulfill the recreation purpose of the Refuge and are not out-weighted by the wildlife conservation benefits that would be obtained through conversion of the site.

Comment: The Crab Orchard Boat and Yacht Club should be granted the concession permit.

Response: The plan calls for the COBYC to remain for two years after the CCP is approved. After two years, all interested parties will have an equal opportunity to bid on the concession contract. Giving preference to the Club organization in awarding the concession contract is not within the federal regulations that we must follow.

Comment: According to the text in Section 2.5, the Crab Orchard Boat and Yacht Club would not be closed immediately, but in two years, to allow the members to amortize their recent investments. Is two years an adequate amount of time? Members have worked hard and spent a lot of money to maintain the facility that is to be taken away by the government.

Response: According to the lease, "...the COBYC agrees to amortize, to a "No Value" status any additional improvements to COBYC area sites, and, structures, facilities, equipment, construction modifications or alterations, regardless of cost to COBYC or of installation date. The additional improvements will automatically become properties of the U.S. Government at the termination or expiration date of the current contract period or extension thereof." Legally, we could require the Club to leave at the end of their current lease. However, we feel it is fair to allow the COBYC to remain an additional two years following the finalization of the CCP to further amortize their investment.

Comment: The Crab Orchard Boat and Yacht Club should continue as it has in the past. The Club's alcohol ban, caretaker, and safe, family atmosphere is appreciated and seems to cater to senior citizens and children. The Club has provided a place for reunions, birthdays, church events and other activities. Non-members feel welcome. During the past year, the clubhouse was used over 150 times for functions other than club activities. The cost of joining the Club is low.

Response: We plan to retain the alcohol ban and safe, family atmosphere when the COBYC is made into a concession. The concession contract could include retention of a caretaker. By opening the area to the general public, it is our intention that all Refuge users have an opportunity for the same type of experience at the facility. The cost to use the area will remain comparable to other camping and boat slip rental rates on the Refuge. Also, the area will be available to every-

one when converted to a concession, as opposed to being limited in the form of a club membership offered to a set number of people.

- # **Comment:** The Fish & Wildlife Service lease limits the Club to 400 members and does not allow merchandise or services to be offered. There are no restrictions to membership except those imposed by the Refuge.

Response: The current lease, originating in 1985, does not specify a maximum number of members for the Club.

- # **Comment:** Appreciate that it is the only place to go to enjoy Crab Orchard Lake without paying an entrance fee or purchasing a special decal.

Response: In lieu of paying a membership fee, when the facility becomes a concession, the cost to utilize the area, as well as camping and boat slip rental rates, will remain comparable to that of other Refuge concessions.

- # **Comment:** It is safer to fish from COBYC docks than Rt. 13 or Wolf Creek Causeway.

Response: While we strive for all Refuge facilities to be safe for visitors, we appreciate your comment.

- # **Comment:** The revenue to the Refuge will be less if the Club is converted to a concession.

Response: It is our opinion that by opening the area to the general public, an opportunity exists for more visitors to use the facility, thus generating more revenue for a concession.

- # **Comment:** A fixed income would force me to give up my boat and dock if the Club is turned into a concession.

Response: There should not be a substantial increase in your rate. Rates for dock rentals on the Refuge are kept at similar levels to alleviate competition among the facilities on-site.

- # **Comment:** To single out the Club is unacceptable and discriminating.

Response: In a review of the Crab Orchard National Wildlife Refuge activities in 1971, the Office of Survey and Review Audit Operations of the United States Department of Interior found that “continued sponsorship of the Crab Orchard Boat and Yacht Club is not compatible with established public policy as it grants a privileged

position on public recreational facilities to a private membership club.” The auditors recommended that the Club’s permit be terminated and the facilities be placed under a concession agreement. In a 1985 review of a proposed lease with the Club, the Office of Solicitor, United States Department of Interior, commented that exclusive use by the Club still continued.

Given the doctrine of fairness and its interpretation by other federal land management agencies, the Service intends to implement the auditors’ recommendation to convert the site of the Crab Orchard Boat and Yacht Club to a concession. The Service has tried to satisfy the intent of fairness in the past through a variety of conditions and agreements with the Club, but recognizes now that the 1971 recommendation should be implemented to more fully provide the most benefit to the most people.

- # **Comment:** The public has an opportunity to apply for membership with no restrictions.

Response: By eliminating the “membership” aspect and converting to a concession, no applications or waiting period would be necessary to use the area.

- # **Comment:** If the Club is made public, the grounds and facilities will run the risk of becoming too populated and less cared for.

Response: Just as compliance of the agreement with the COBYC is currently enforced, so will the terms of the concession contract, ensuring the grounds and facilities are maintained. It is not our intent to increase the number of campsites or docks that will be available to the general public and it is assumed that if people who want to use the area for other activities feel it is too crowded on a given day, there are other opportunities available on the Refuge.

- # **Comment:** The people who govern the Refuge are not in tune with the people who use it. Visitors see a need for more places like this

Response: As administrators of government land and facilities, it is our responsibility to consider the broad range of views of the public, to comply with regulations, and use the best information and judgement possible. We think we understand the views of the current users of the Refuge. We know that we can not satisfy everyone as we have heard opposite viewpoints on nearly every topic addressed in our planning. We are trying to meet

our responsibilities in an open and fair manner. It is our responsibility to provide quality recreational opportunities to benefit a broad portion of the public who will have an equal opportunity to use them.

- # **Comment:** Why not open the gates to the marina? The plan for the sailboat marina seems like exclusive use for the SIU boat club.

Response: Playport Marina, as well as the Crab Orchard and Little Grassy Campgrounds, are seasonal use areas. The gates are closed in the off-season (November through March) because the areas themselves are closed to business at that time. From April through October these areas are open until 10:00 p.m. when, as is the case at the COBYC, the gates are closed until 6:00 a.m. the following day. There is no plan for a “sailboat marina” for the SIU boat club as you reference.

- # **Comment:** The name and activities descriptions should be changed to more accurately define the “club” as it truly functions. Elimination of a maximum membership cap and changing the Club’s name would alleviate the “exclusive use” perception. This area is open to the public in the same manner as other docks and related facilities on the lake—first come, first served. Anyone can get on the list to rent a dock or join.

Response: We agree that a name change is in order. We think the changes that must be made are more fundamental than changing names, descriptions, and perceptions, however. We think the basic relationship between the operator of the area and the Refuge needs to change. A concession contract will clarify the facilities and uses that will be made available to the general public. The current “Club” organization will have a chance to bid on the opportunity to continue operation of the area under a new contract. While we agree that dock space is limited and is rented on a first come-first served basis, a concession operation would allow all visitors, not just club members, an equal opportunity to use the area.

- # **Comment:** The proposed change to the Crab Orchard Boat and Yacht Club violates the good faith agreement that has been used for many years. The Club should be given another 100 year lease.

Response: The Club currently operates under a lease contract, the most recent of which was written in 1985 and has been amended and renewed, as appropriate. The lease and its amendments specify the terms and conditions the Club has adhered to for these past twenty years. We realize that some members are under the impression that an extended lease exists, but neither the Club nor the Refuge has been able to find documentation of a 100-year lease.

7.1.3.16. The Haven

- # **Comment:** The Haven is technically in the same category as the Crab Orchard Boat & Yacht Club. However, the facility is making a positive contribution to the well being of disabled veterans; others can access the facility with an appropriate contact; and it requires little Refuge money and staff time. The Haven should be treated differently than the Boat & Yacht Club and remain.

Response: Our plan is for the Haven to remain on the Refuge. The Refuge does plan to assess a nominal fee to the Haven in order to help recover our administrative expenses. We also plan to work collaboratively with Haven personnel to provide more wildlife-dependent recreation to a broader portion of the public to more fully realize the broader purposes of the Refuge and the mission of the National Wildlife Refuge System.

- # **Comment:** With the exception of established church and scout camps, which are based on refuge land, we would like to see stronger language and policies regarding other exclusive-use sites in the refuge: the boat and yacht club and The Haven. A member-only boat and yacht club at a national wildlife refuge has always struck us as a great anomaly. This is public land, for public use and U.S. Fish and Wildlife regulation, and should not be used for exclusive-use purposes. We encourage you to draft a policy that would result in eventual return of this property to public use or to closure for wildlife conservation purposes.

Response: Our plan is to convert the Crab Orchard Boat & Yacht Club to a public concession. See the previous section for a fuller discussion of comments and response regarding the Club. We view The Haven slightly differently than the Club. As other comments have noted, the Haven’s primary focus is to serve veterans. Because of their past service and sacrifice, we think that this group deserves special consider-

ation at a federal facility. See the first comment and response in this section for our expectations related to the Haven.

7.1.3.17. Youth Camps

Comment: We recognize the tradition of private church and scout camps which are established on refuge land and the difficulties, at this late date, of disturbing those camping and educational facilities. We recognize the long term good that can come from children's experiences in nature. We are pleased that Crab Orchard will allow the camps to remain, but we also endorse your proposal to begin charging fees for programs to help recover some of the costs that the refuge incurs in the private camp areas.

Response: We appreciate the support for our proposed action.

7.1.3.18. Playport Marina

Comment: The efforts of the Refuge in rebuilding the former Playport Marina are appreciated. It is a beautiful area. Glad the area is included in the draft plan.

Response: We appreciate the support for our past efforts and the proposed plan.

7.1.3.19. Waterskiing

Comment: I support the reduction of water skiing areas.

Response: We appreciate the support of the proposed action. However, after hearing comments from other visitors, we have modified our proposed action and excluded some areas from our original proposal. The areas that we have excluded are sheltered from the wind and are popular alternative with waterskiers when.

7.1.3.20. Collection of Wild Plant Foods

Comment: Collection of wild plant foods for personal use should be stopped. The native plants can be used for personal financial gain. The taxpayers who own this land believe this destroys the area. I don't think you should be able to take anything from this area. It is not compatible and, in fact, is destructive.

Response: We have determined this use to be compatible. Items collected are for personal use only; no commercial activities are allowed. We do not think this activity has significant harmful effects to

these renewable resources or the ecosystem. We have seen no evidence of harm caused by collection of wild plant foods for personal use.

7.1.3.21. Recreation Fees

Comment: Sierra Club opposes the "Fee Demo" program being used on our national parks, forests and refuges. Instead, we support the adequate funding of the FWS and of the Refuge, and deplore the trend of Congress to cut the budgets for the FWS and other national land management agencies. We understand why land managers would latch onto user fees to make up for budget cuts. However, these user fees are another tool being used by commercial recreation interests to worm their way into using more and more of our public resources for their private profit. This can easily lead to high impact recreation pushing out the low impact, wildlife related recreation that is supposed to be the focus of recreation on wildlife refuges.

Response: Whether to collect fees from visitors on public lands is a persistent and ongoing national debate. You have correctly identified Congress as a key entity in this debate. The authority for the sale and disposition of recreation user fees is found in the Federal Lands Recreation Enhancement Act (From the 2005 Consolidated Appropriations Act (PL 108-447) signed into law by President Bush on December 8, 2004). The new authority limits recreation fee collection to the NWRS and this authority will expire December 2014. It the policy of the Service to collect recreation user fees on NWRS land wherever feasible, practical, and cost effective. Our fee collection at the Refuge meets these three criteria. The Service policy is to manage all recreation fees to help achieve the purposes of the National Wildlife Refuge System and the National Wilderness Preservation System; and provide revenue to support operation, maintenance, and expansion of wildlife-dependent recreational use opportunities (hunting, fishing, wildlife observation and photography, environmental education and interpretation) for visitors to the NWRS.

Comment: People who most need free, public recreation will be the people who are excluded because they cannot afford the fees. The Refuge should have one free day per week, when anyone, regardless of income, can use the public lands of

the refuge. When access is granted to the public, the access should not be determined by the ability to pay.

Response: The current entrance fees for Crab Orchard Refuge are \$2.00 for a day pass, \$5.00 for a week pass, and \$15.00 for an annual pass. Fees are set based on comparisons with prices and services offered by other public agencies and private entities. We think the refuge fees exclude few people. Because most access to the Refuge is by car, the fee is a small part of the total cost of a visit when the cost of transportation is figured in. The Refuge currently offers nine (9) free days during the year. These days coincide with Earth Day, National Free Fishing Days, Public Lands Days, National Hunting and Fishing Day, and National Wildlife Refuge Week. All of the Refuge interpretive programs such as Eagles Days and Wildflower Walks are also free. Entrance fees are not charged to anyone visiting the visitor center or using the observation platform and the photo blind on Route 148.

Comment: A single entrance fee is discussed in several places in this document. Table 1 on page 29 shows twelve fees. What is meant by a single entrance fee - one for each type of visitor?

Response: The text that refers to a "single entrance fee" is wrong. We will edit the text in the Final EIS. The table on page 29 correctly reflects our proposal. Congress passed an act during our planning that changed how we propose to collect fees. The table was updated, but not the text. Entrance fees provide access into a recreation site and user fees authorize a visitor to use specific facilities, programs or resources sponsored by a recreation site. We collected fees in the past as user fees under authority of the Omnibus Consolidated Rescissions and Appropriations Act of 1996. The Service is now collecting fees under the authority of the Federal Lands Recreation Enhancement Act (REA), which was a part of the 2005 Consolidated Appropriations Act (PL 108-447). In the language of the REA a user fee is referred to as an expanded amenity recreation fee. To meet the direction of the REA, we are now going to collect an entrance fee and an expanded amenity recreation fee for boat launching facilities and quota hunts. The proposed fee schedule in Table 1 reflects the multiple categories and classifications for how the

entrance fee can be paid and the user fees for boat launching. Our proposal is consistent with the standard schedule for most refuges.

Comment: As I understand it, the fee program is to generate funds for "improvements" on the refuge. While this sounds admirable, I question when the fee program will end and these improvements stop. Improvements often times become urban sprawl development type that ultimately detracts from the mission of a wildlife refuge. As we continue to collect user fees, we need to create more improvements to justify the user fee creating a never ending circle. Even something benign as improvements in the boat ramp parking areas create large light pollution from security lights that can be seen for miles. A careful planning program is needed to prevent an "urban sprawl city park type developmen" in the quest for tourism dollars.

Response: The Fish and Wildlife Service is currently drafting guidelines that will require each refuge collecting recreation fees to develop a five year business plan for the expenditure of recreation fees. The Federal Lands Recreation Enhancement Act specifies how refuges can expend funds from recreation fees. On the Refuge we envision better, not more, facilities. We plan to concentrate on repair, maintenance, and facility enhancement related directly to visitor enjoyment, visitor access, and health and safety during the life of the CCP. Our proposed consolidation of facilities is counter to the notion of sprawl.

Comment: Are the charges for the human activities sufficient to pay for the full costs of the facilities? If this area starts making itself into a public recreation park, then the wildlife and birds are negatively impacted. I thought this was a "wildlife refuge". Is there some change in mission?

Response: Recreation fees do not cover the full cost of facilities or services. The Refuge's operations and maintenance budget and volunteers also contribute to providing for visitor services. For a discussion of the purposes of the Refuge and mission of the System, see "Purposes of Refuge vs. Refuge System" section in the response to comments.

Comment: The proposed fees on page 29 seem extremely low. They should be ramped up by one thousand per cent. If hunting continues, I would

like to see a hunting license fee to be paid by anyone who steps into this refuge to cost \$500.00 per year. You are running this refuge with a focus on hunting/killing so these gun wackos should start paying the freight.

Response: Our proposed fee schedule follows the standard schedule for most Refuges. We do not agree with your suggested fee for hunting. The National Wildlife Refuge System Improvement Act of 1997 directs us to consider hunting as a priority general public use and to give it priority consideration in planning and management. The Act encourages us to find ways to permit hunting, if it is compatible. We have found hunting to be compatible at Crab Orchard National Wildlife Refuge. The fee you suggest is inconsistent with our direction to facilitate this priority general public use.

7.1.3.22. Law enforcement

Comment: Law enforcement should be increased on the Refuge. There has been inadequate enforcement of fishing regulations on Refuge waters. Some anglers feel they can do anything since they will not be checked. The lack of law enforcement in the Wilderness and other areas has indicated to the public that the Refuge doesn't care. So, all types of unauthorized activities have been increasing that adversely affect the quality of experiences on the Refuge and the public perception of the Refuge and the Service. Law enforcement must be increased and emphasis on what efforts are conducted need to be changed. Drugs and indecent exposures are problems, but trespass, illegal sized fish and habitat destruction should not be allowed on the Refuge. More law enforcement needed to enforce no wake zones.

Response: We agree that more enforcement is needed. Our proposed action includes plans to increase law enforcement staffing above the current levels. Increased staffing, though, is dependent on increased budget allocations.

7.1.3.23. Sailboarding/windsurfing

Comment: There is a need for year round access and better places/facilities for windsurfing.

Response: The facilities for windsurfing and sailboarding are currently located at Playport Marina. Individuals docking boats at this facility have year-round access. At this time there are no plans to establish additional windsurfing facilities; however,

this should not preclude launching at public boat ramps and the use of sailboards on waters open to their use.

7.1.3.24. ATVs

Comment: Thrill craft, such as ATVs, should not be used on the refuge. The inefficient two-stroke engines of ATVs spew out as much as 30 percent of their fuel unburned. The noise these machines make is incompatible with wildlife and also with all of the priority recreation uses of the refuge. The damage ATVs create on soils and vegetation can be extreme. ATV use may disturb the nesting of the bald eagles, and even discourage some eagles from nesting on the refuge, especially if the nesting population continues to increase. The nature of these machines encourages irresponsible, reckless and inconsiderate behavior in the riders. Refuge managers should put high fines (\$1000 fines, as recommended by federal judge Gilbert) on the illegal use of ATVs on the refuge or to confiscate the ATVs of people riding illegally and causing damage on the refuge. It takes such extreme measures to discourage ATV riders. Swift action is needed, or the illegal ATV misuse and damage will continue to increase. Conservation Police Officers who patrol state owned Illinois DNR land have the authority to confiscate boats and other property of people who flout the state wildlife conservation laws. The FWS should do the same.

Response: ATV use, in general, is not permitted on the Refuge. We do not propose expanding the use of ATVs by the public on the Refuge. We currently issue a very limited number of special use permits to people with disabilities authorizing them to use specific roads in a limited area for specific activities. The Refuge policy on ATV use is much more restrictive than on adjacent Forest Service or Illinois DNR lands. Enforcement of unauthorized ATV use on the Refuge is ongoing. Refuge officers do not have the latitude to assess high fines for illegal ATV use. They are required to follow an established schedule of fines.

Comment: On page 323, the CCP/DEIS states: "The refuge issues several special use permits annually to disabled deer hunters authorizing them to use an ATV on designated routes for access." These special use permits raise a red flag. The U.S. Forest Service has a handicap ATV program on Shawnee National Forest, which has expanded to include over 1200 handicap permits.

These permits allow the riders to ride on any trail in the forest and allow the handicapped rider to be accompanied by another person on a second ATV. The reason there are so many handicap permits on SNF is because it is very easy to get a physician to write a letter saying the person has a handicap. In other words, the program is very much abused on SNF, because the Forest Service has made it too easy to get a handicap ATV permit. For that reason, we oppose any use of ATVs on the refuge, including use by handicapped hunters. It can prove to be a slippery slope. At the very least, the FWS should make sure there is a test that screens out all but the truly handicapped hunters to ride ATVs on the Refuge. The FWS should designate a strict route for the ATVs and limit the handicapped hunting on the Refuge to short time periods. Do the ATV riders use trails or roads on the refuge, or a combination of both? How many days are handicapped hunters allowed to hunt on the Refuge? Does another hunter accompany the handicapped hunter on another ATV? What are the criteria to qualify for the handicapped hunter special use ATV permit?

Response: The Refuge policy on ATV use allows riders who meet the Illinois DNR disability standard set forth in the State Hunting Digest to request a special use permit for use on approximately 3.5 miles of established service roads in the open area of the Refuge. Riders must stay on these established roads. Only disabled hunters who are not afforded a special disabled hunting area on the Refuge are eligible for permits. We do not allow another person to accompany the permittee on a separate ATV. Enforcement of unauthorized ATV use on the Refuge is ongoing. Fewer than 10 disabled ATV permits have been issued on the Refuge in each of the last 5 years.

Comment: An ATV trail should be established on or instead of the horse trail, because ATV's cause less erosion.

Response: There are currently no authorized horse trails on the Refuge. The equestrian trail that is proposed will go through the Crab Orchard Wilderness, where ATVs would not be allowed. Areas where we do allow limited ATV use by hunters with disabilities are established roads where erosion is not likely to occur.

7.1.3.25. Personal Watercraft (Jet Skis)

Comment: Personal watercraft should not be allowed on the refuge. The inefficient two-stroke engines of jet skis spew out as much as 30 percent of their fuel unburned. Research has shown that one jet-ski driven for 8 hours emits as much pollution as a car driven for 100,000 miles. The noise these machines make is incompatible with wildlife and also with all of the priority recreation uses of the refuge. Jet ski users greatly increase the danger of accidents on the lake, and interfere with priority uses of the Refuge, such as fishing and wildlife observation. They are incompatible with swimming, canoeing and other recreation that is allowed on the lake. In addition, the nature of these machines encourages irresponsible, reckless and inconsiderate behavior in the riders. Conservation Police Officers who patrol state owned IDNR land have the authority to confiscate boats and other property of people who flout the state wildlife conservation laws. We don't see any reason why the FWS shouldn't do the same. As the surrounding areas develop more residential and commercial properties, there will probably be increased pressure to allow more types of recreational use on the lakes. Limits need to be set NOW to preserve the objective of caring for wildlife. The need to confine the use of such craft to designated areas will put a strain on law enforcement staff.

Response: The portion of Crab Orchard Lake east of the Wolf Creek Road causeway is closed to all watercraft seasonally to protect migratory waterfowl. Additional no-wake zones are proposed east of the Route 148 causeway and in many fingers off of the main body of the lake. We do not expressly prohibit any kind of watercraft, although no-wake zones do preclude the use of fast-moving watercraft in portions of the lake. We think the proposed no-wake zoning will reduce the risk of accidents on the lake and conflicts with other visitors. We intend to enforce existing speed limits and rules governing the allowable noise levels that apply to all watercraft on the remainder of the lake.

7.1.3.26. Rock Climbing

Comment: Rock climbing should not be allowed on the Refuge because of lack of supervision and safety.

Response: We appreciate the support of our proposed action. We feel that better opportunities for this activity exist at nearby locations.

7.1.3.27. Scuba Diving

Comment: Scuba diving should be allowed on the refuge. Scuba diving is in tune with the mission of the refuge since it can lead to many more diverse areas like aquatic science. Also, law enforcement could utilize the lakes to develop their own search and rescue units. This would help the local economy.

Response: Swimming is prohibited in Devils Kitchen Lake because the submerged trees are a swimming hazard that can not be properly marked. The lack of water clarity in Crab Orchard Lake is not conducive to scuba diving. Little Grassy Lake is the only Refuge lake where scuba diving would be feasible and swimming is allowed. Because of potential conflicts with group camp users and recreational anglers, we do not think that recreational scuba diving would be appropriate on Little Grassy Lake. Scuba diving, as part of search and rescue training, has been and can be authorized on the Refuge with a special use permit issued by the refuge manager. We don't think that the numbers of people involved in scuba diving would contribute measurably to the local economy when compared to other recreational uses that can be promoted.

7.1.3.28. Reducing Recreational Opportunities

Comment: The October 2005 Project Update states that "Citizens were concerned about the loss of recreational opportunities and lack of support for recreation by the Refuge." This concern is highly exaggerated. The public is offered extensive recreational opportunities by the Refuge and takes full advantage of them. Many people consider the Refuge to be a public park rather than a wildlife refuge.

Response: We have heard from people throughout the planning process that recreational opportunities on the Refuge are fewer than they once were. Recreational facilities and sites have been reduced. The perception and challenge of providing for recreation arises, in our view, because recreation is one of the purposes of the Refuge. And, when the Refuge was established the Service recognized several non-wildlife-dependent recreation activities as appropriate. The Refuge has been challenged to provide for all recreation

when competing for funds within an agency with a wildlife focus. The proposed action to consolidate and improve facilities is an attempt to recognize the desire for non-wildlife-dependent recreation and the realities of the agency's budget.

Comment: Over the years we have witnessed diminishing recreational opportunities on the Refuge. There are fewer picnicking and swimming opportunities. Parts of the refuge should remain open all year to recreational opportunities. The Image Marina and the gates at Cambria Neck should be reopened to the public.

Response: Approximately 23,000 acres, or more than half of the total Refuge acreage, is open year-round to the public. In addition, portions of the restricted use area are open for special hunts, auto tours, and wildlife observation events. Our plan is to maintain and improve picnicking in the recreational areas at Greenbrier, Wolf Creek Road, Harmony Trail, Playport Marina, Devils Kitchen and the former Images Marina site. The former Carterville and Lookout Point Beach areas are still open to the general public, but are not maintained as recreation areas. These beaches were operated several years as a part of the Crab Orchard Campground concession contract. They were removed from the contract on request of the concessionaire because of liability concerns and increased maintenance and operating expenses. The Refuge did not have the personnel or funds to operate and maintain the facilities at a level where visitors would have an enjoyable experience. Images Marina and Cambria Neck are open to the public as day-use areas. Because of serious law enforcement issues in the past, Cambria Neck will be managed as a walk-in picnic area until such time that the picnic facilities can be re-located to a renovated day-use area at the former Images Marina site.

7.1.4 Industry

Comment: Although industry was located on part of the refuge land before Congress designated that land as part of Crab Orchard Refuge, industry is still inherently incompatible with preservation of wildlife. We are concerned with the impacts on the wildlife of air, water, noise and light pollution and truck traffic associated with the industry. We urge the FWS to steadily decrease the amount of industry on the refuge

through attrition. We agree with others that most of the industry on the Refuge would be better situated within one of the small cities in the area.

Response: Public Law 80-361 established the purposes of the Refuge, including industry. Our preferred alternative supports maintaining the existing industrial tenants, and as they depart, if buildings remain suitable, the Refuge would seek new tenants. Also, as buildings are deemed unsuitable, they will be removed. Our tenants are bound by either a Lease Contract or Special Use Permit, which dictate the terms and conditions they are to adhere to, including environmental compliance. In our approach we are seeking a balance among the purposes of the Refuge, responsible use of existing facilities with an awareness of environmental and social impacts.

- # **Comment:** Existing tenants are expected/required to upgrade and maintain leased facilities. This appears to be an unreasonable and unusual requirement as landlords usually provide proper facilities in order for prospective tenants to consider and be interested in leasing the facility.

Response: Our requirements are outlined in the individual Lease Contracts and/or Special Use Permits. If the tenant or prospective tenant feels the requirements are unreasonable, we are certain they would not agree to the terms and conditions and would not use Refuge property. Given our past and projected budget history, we think that it is unlikely that we will have the funds to upgrade industrial facilities. If we were to rely on our own funding, industrial sites would soon disappear from the Refuge. We are seeking to keep the options open for our current and potential industrial tenants by allowing them the opportunity to upgrade the existing facilities.

- # **Comment:** I urge that industrial buildings that have reached the end of their useful lifetimes be vacated and removed. While it may make sense to issue leases to new businesses that can use currently viable buildings, I can see little value to the Refuge in spending resources to bring poor-quality structures up to standard, or allowing the businesses, themselves, to do so. In my opinion, slowly discontinuing non-munitions industrial activity is a positive long-term goal.

Response: We agree with this assessment for the most part. However, we think that if a business wants to upgrade and use a structure then we should allow it to further meet our industrial pur-

pose specified in Public Law 80-361. As buildings are deemed unsuitable, they will be removed as suggested.

- # **Comment:** Industrial sites should be consolidated and replacing tenants only if buildings are suitable for occupancy since industrial sites are part of the mission. Careful selection of tenants is important to assure that there are no more hazardous waste disposals. Industries must be required to conform to all health, safety and environmental standards. Continue cleanup of contaminated areas.

Response: Our proposed action is consistent with these points.

- # **Comment:** The old industrial area adjacent to Blue Heron Pond is a disgrace to the Refuge and should be taken care of NOW. This area is contaminated and requires costly remedies. Since it as built while under the control of the war department, why should the refuge be saddled the full reasonability of clean up? This is where all the federal, state and local officials should band together to hammer out a solution!

Response: We appreciate your opinion regarding appropriation of funds toward various Refuge endeavors. We have personnel at the Refuge committed strictly to environmental clean up activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as "Superfund." Through the CERCLA staff's efforts, sites are being remediated with funding from sources including Department of the Interior and "Potentially Responsible Parties" (PRPs).

- # **Comment:** In the past, the munitions industry operated in ignorance of their affect on the habitat and wildlife. PCBs were used as heat transfer agents. Prior to the discovery of their toxicity in 1976, and the subsequent ban, 1.5 billion pounds of PCBs were manufactured in the United States alone. We are almost guaranteed that additional discoveries of the harmful effects of industry to our public lands will happen in the future. A national wildlife refuge with the ecological values of Crab Orchard is no place for such a risky gamble with our natural resources. It is ludicrous to consider perpetuating this ill-considered use of refuge land, given all the new information about the effects of the munitions industry and their landfill waste on human health, wildlife and the

condition of the land. If the Service continues to promote the munitions industry, a dangerous precedent could be set that will weaken the spirit of the 1997 Refuge Improvement Act. If there is only one lesson to be learned from the allowance of industry on a refuge, it is that the effects cause severe environmental damage that is costly to clean up. The short-term benefits of industry are far outweighed by the incalculable long-term losses caused by soil and water contaminations.

Response: We appreciate your concern. The munitions manufacturer located on the Refuge, General Dynamics, follows strict environmental compliance guidelines. The company's Environmental, Health and Safety Policy, as well as its ISO 14000 certification demonstrate General Dynamics' commitment to protecting human health, the environment and our natural resources.

Comment: Clearly, when industry was included in Public Law 80-361, it was done so as a secondary aim, under the misguided belief that healthy wildlife and the munitions industry could co-exist on refuge lands. The harmful ramifications of that decision had not yet been observed. While we encourage the CCP's proposal to relocate non-munitions industry to industrial parks, as outlined in Alternative C, the exclusion of the munitions industry is an unacceptable omission.

Response: Public Law 80-361 established four *equal* purposes: wildlife conservation, agriculture, recreation and industry. The Refuge Improvement Act of 1997 states that: "...if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System." As stated on page viii of the Draft EIS/CCP, "We think that, overall, we are meeting the intent of the law...We determined that all existing activities are compatible." See also the previous comment and response related to environmental health.

Comment: We are alarmed and strongly disagree that the Service's preferred alternative (Alternative E) sanctions industry on the Refuge by allowing new tenants to move into vacated facilities and maintain practices that damage the Ref-

uge (CCP, p.54). The language in Public Law 80-361 should be read to promote wildlife conservation first.

Response: We do not condone nor intend to allow tenants to "maintain practices that damage the Refuge" and will hold them to the strictest environmental standards. Public Law 80-361 established four *equal* purposes for the Crab Orchard National Wildlife Refuge: wildlife conservation, agriculture, recreation and industry.

Comment: The purpose of the Crab Orchard Refuge first and foremost states that the Refuge was established "for the conservation of wildlife" (Public Law 80-361). Although the purpose also includes the development of agricultural, recreation and industry, they are listed subsequent to wildlife conservation and can thus be understood as secondary purposes. The language in the purpose of the Refuge clearly delineates conservation as its own distinct value. By upholding industry, while failing its commitment to wildlife conservation, the Refuge is not within the bounds of the law. It can therefore be inferred that any other activity prohibiting wildlife conservation is illegal and inappropriate on Refuge land.

Response: We do not agree. Public Law 80-361 established four *equal* purposes for the Crab Orchard National Wildlife Refuge. The hearing record associated with the law does not support the claim that Congress considered the conservation of wildlife as a dominant purpose. Additionally, the four purposes are not always listed in the same order in Public Law 80-361. While the purposes of the Refuge might not seem compatible with the mission of the National Wildlife Refuge System (System), the purposes take precedence over the mission of the System. We feel that overall we are meeting the intent of the law.

Comment: The Service can not allow the operation of facilities that damage natural resources on the Refuge, while simultaneously honoring the Refuge's clear purpose to conserve wildlife. Industry detracts from the Refuge purpose by converting land away from wildlife habitat and emitting hazardous materials in ecologically sensitive lands. By supporting the munitions industry, the Refuge violates the overall mission of the Refuge system and its wildlife first mandate. The final CCP should eliminate all industry on the Refuge.

Response: We do not agree with this interpretation of Public Law 80-361. The four purposes were established as *equal* purposes. We do not intend to fail in our commitment to wildlife conservation while concurrently supporting the other three purposes. See the last section of the response and comments for a further discussion of refuge purposes and system mission.

Comment: Chapter 2.5 of the CCP lists alternatives that were considered but not analyzed in detail. Among these is the alternative to: "[h]ave the industrial purpose removed from refuge purposes." The CCP explains that the Service did not seriously analyze this alternative because of the potential economic impact such a transition would incur. Specifically, the draft states: "The removal of industry as a purpose would be seen as a threat to the local economy (CCP, p. 21)." We are baffled that the Service reached this sweeping conclusion without an appropriate economic study. National wildlife refuges are to protect and conserve wildlife and natural resources - not to uphold the local industrial economy. Two compelling reasons confound the argument that economic necessity prompts the retention of industry in the Refuge. First, an agreement to relocate industries to industrial parks would retain their presence within Williamson County and thus avoid any adverse effects to the economy (CCP, p. 160). As the CCP states, there are several nearby industrial parks that are suitable relocation sites for industrial manufacturing (CCP, p. 54). Secondly, the Refuge itself is a stimulant to the local economy. Freed of industry, visitation would most likely increase, as would profits to both the Refuge and to surrounding business.

Response: The effect on the local economy and jobs was one part of our consideration. Another part of our consideration that we noted was that "suitable infrastructure still exists on the Refuge to support the munitions industry." While most industries can relocate to industrial parks, the munitions industry is limited in its location due to safety and security concerns. It seems to us that the decision to not pursue this option is a basic and simple one, which does not require an economic study. Congressional action is required to change the purpose of the Refuge. Because of the economic effect and existing munitions industry infrastructure, we saw little likelihood of support from the community and Congress in removing the industrial purpose from the Refuge.

Comment: The Refuge should not be placed in competition with industry or the local economy. Crab Orchard Refuge is a dominant force in the community both because of its economic contribution and because it provides quality of life. In fact, Crab Orchard Refuge is among the most highly visited refuges in the nation. Furthermore, there are ways to compensate for any potential short-term, lost income to the Refuge. After all, in both the 2002 and 2004 Banking on Nature reports, the majority of visitors revealed they would have spent more money on their refuge trips. Banking on Nature indicates that the greatest stimulus to the local economy is generated by out-of-town visitors. An attractive tourism scheme could help bring additional revenue to the town.

Response: We agree that the Refuge contributes to the local economy and the community's quality of life and that tourism can bring additional revenue to the community. We do not agree, however, that the Refuge is a dominant force in the economy. Our economic analysis showed that the Refuge is a small part of the total economy of the community. Although it is difficult to quantify, we do think the Refuge's influence on the quality of life might more likely be characterized as significant or dominant.

Comment: The CCP highlights one additional reason for the munitions industry's presence on the Refuge: national defense. It is not the job of the Service to "contribute to and support national defense" as it claims in the CCP. Rather, it is the mission of the Service to work "with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people" (<http://www.fws.gov/who/>).

Response: We agree with your statement of the Service's mission. However, the Refuge has an industrial purpose and it is our responsibility to fulfill that purpose. We think that it makes sense for us as managers of a federal facility to fulfill the Refuge's industrial purpose by supporting national defense.

Comment: We are pleased that the USFWS maintains a commitment to the industries located within the refuge. While we recognize that it is sometimes difficult to balance the existence of

industry with the natural setting of the refuge, we feel that the continued existence of these employers is crucial to our regional economy.

Response: We appreciate the endorsement of our approach and the proposed action.

- # **Comment:** Industry should do no harm to the Refuge. The General Dynamics facility may or may not be doing harm—it's hard to tell but certainly the depleted uranium munitions production poses a possible and deadly threat to the environment and to Refuge staff, General Dynamics personnel, and volunteers and visitors should there be an accident.

Response: While we understand your concerns, the munitions manufacturer located on the Refuge, General Dynamics, follows strict environmental compliance guidelines. The company's Environmental, Health and Safety Policy, as well as its ISO 14000 certification demonstrate General Dynamics' commitment to protecting human health, the environment and our natural resources.

7.1.5 Wilderness

- # **Comment:** We urge the management of Crab Orchard Refuge to adhere to the FWS Draft Wilderness Stewardship Policy, as follows: "We will take action to prevent or minimize unnatural sounds that adversely affect wilderness resources or values or visitors' enjoyment of them."

I can be in the wilderness area and hear motorcycles, chainsaws, trucks beeping, dogs barking from Lake View Estates.

Response: Minimizing unnatural sounds in the Crab Orchard Wilderness is an ongoing challenge that becomes more difficult as development on adjacent private land increases. Under the preferred alternative, the authorized boundary of the Refuge would expand and adjacent lands would be acquired from willing sellers by fee title or easement. Additionally, restrictions on the use of outboard motors in the southern end of Devils Kitchen Lake are proposed under this alternative. The acquisition of lands adjacent to the Wilderness and re-zoning of the southern end of Devils Kitchen Lake should help diminish unnatural sounds in the Wilderness.

- # **Comment:** We whole heartedly support adding the two blocks of refuge land within the wilderness area as designated wilderness. Section 6 of the

1964 Wilderness Act states: "The Secretary of Agriculture may accept gifts or bequests of land within wilderness areas designated by the Act for preservation as wilderness." This would also apply to the Secretary of Interior. This section probably means that the 120 acres acquired by the FWS after designation of Crab Orchard Wilderness can automatically become wilderness, and needs no act of Congress to designate these acres as wilderness.

The Service is *obligated* to forward to Congress any suitable recommendations in a Wilderness Study Report that moves from the Refuge Director through the Secretary of Interior and the President (Fish and Wildlife Service Manual, chapter 7, part 610). Wilderness designation is an essential step in restoring and preserving the natural conditions of the Crab Orchard Refuge and strengthening the Wilderness Preservation System in its entirety. It is an absolute priority that the Service adheres to their objective to recommend wilderness designation within two years after the approval of the CCP.

Response: Our interpretation of the gifts or bequests clause is that it does not apply in this instance because neither a gift nor bequest is involved. We plan to recommend wilderness designation through the Secretary of the Interior Department, Congress, and the President.

- # **Comment:** The wilderness review identified a 558-acre tract of land contiguous with the southern boundary of the Crab Orchard Wilderness, which was acquired by a 1979 land exchange with Southern Illinois University. Although this tract does not currently qualify to be designated as a WSA because it does not meet the criteria for naturalness, it does have value as potential wilderness. It is of utmost precedence that the Service allows natural ecological succession to occur and restore the area's natural wilderness character for the eventual designation of the land as wilderness. This land should be able to be declared part of the wilderness area by the Secretary of Interior. The 1964 Wilderness Act (Section 6) states: "The Secretary of Agriculture may also accept gifts of bequests of land adjacent to wilderness areas designated by this Act for preservation as wilderness if he has given sixty days advance notice thereof to the President of the Senate and the Speaker of the House of Representatives."

Response: Additional removal of exotic plants and debris needs to take place in order to accomplish restoration of this tract prior to being considered for designation as wilderness. Currently this area does not meet the criteria for wilderness designation. We do not think this land can be accepted under the bequest clause. The land was not acquired as a bequest.

- # **Comment:** Benchmark conditions should have been established right after the wilderness area was designated in 1976. Management of an area should be guided by the principle that wilderness conditions should not be allowed to erode from the benchmark conditions. If there are no benchmark conditions that were established, then benchmark conditions should be established and recorded as soon as possible.

Any human manipulation within the wilderness should not be allowed until and unless a "minimum tool analysis" has been conducted. Thus, any horse trail within the Crab Orchard Wilderness should not be allowed until an analysis of appropriateness has been done, including a minimum tool analysis. Attached is a worksheet for the minimum tool analysis that we urge you to use before taking management action in the Wilderness Area.

Response: We intend to follow all applicable laws and policies in managing the Crab Orchard Wilderness.

- # **Comment:** The "Wilderness Management Plan" for the Crab Orchard Wilderness states: "Access to the interior of the Wilderness will continue to be permitted only to those on foot." We advocate that the FWS keep this policy and limit horse riding to the segment of the River to River Trail proposed for the Wilderness, unless the FWS decides that horse riding is an inappropriate use for the Crab Orchard Wilderness.

The "Wilderness Management Plan" also states: "An Enforcement Officer and vehicle are needed for patrol of the Wilderness...." Since mechanized vehicles are prohibited on wilderness by The Wilderness Act of 1964, it is illegal for an enforcement officer to be patrolling with a vehicle, unless he is patrolling the access points outside the wilderness. We do urge the refuge management to assign at least one enforcement officer to patrol the Wilderness Area, just not on any mechanized vehicle. If horses are to be allowed in the Wilderness Area, it would be expeditious to

have a law enforcement officer on horse back to patrol the area, although patrol on foot would be adequate. Some Sierra Club members have noted a deer stand in a tree in the wilderness area, which is illegal.

Response: Our preferred alternative includes plans to increase law enforcement staffing above the current levels. We anticipate that Refuge officers will patrol the Wilderness primarily on foot as opposed to horseback. All Refuge personnel will abide by the general prohibition of wheeled vehicles. While deer stands are allowed in the open area of the Refuge, including the Wilderness, they must be removed at the end of each day.

- # **Comment:** We advocate that the revised management plan for the Wilderness include the following paragraph from the management plan written in 1979: "Once the restoration work is completed in the Wilderness, securing adequate personnel and funding on a continued basis will be absolutely essential for maintaining the Area in a wilderness condition. The Area is entirely too small and has too much access to be managed by a "hands-off" policy. With adequate funding the wilderness character can be preserved at the current level of public use. If this use becomes excessive, additional funds will be required to implement a program to control the numbers of people using the Area." It seems to us that a "hands-off" policy has taken over in recent years, and allowed user-made horse trails and ATV use to degrade the wilderness resource and character. We strongly urge the refuge management to devote more funds and resources to management of the Wilderness.

Response: We will keep the recommendation in mind as we revise the Wilderness Management Plan.

- # **Comment:** While it is imperative to be expeditious in taking management actions in the CO Wilderness, it is also imperative to use the "minimum tool analysis" procedure before taking action. Some in the management team at CONWR have expressed the desire to use bulldozers for trail work in the CO Wilderness. This is another slippery slope and blurs the "bright line" put forth by the 1964 Wilderness Act, which prohibits motors in wilderness areas. First might be a small bulldozer, then someone decides a large bulldozer

would do the job better, next someone will be taking a dump truck with stones down the trail. It's best not to start on that path!

Response: We intend to follow all applicable laws and policies in managing the Crab Orchard Wilderness. Benchmark conditions will be established and a minimum tool analysis will be conducted before any trail construction begins in the area. We do not intend to use any heavy equipment in the Wilderness.

- # **Comment:** Page x: Under Wilderness, no revision of the 1985 Wilderness Management Plan is needed until an accurate assessment of the anticipated adverse impacts are described and evaluated.

Response: We intend to thoroughly assess the impacts of constructing and maintaining a path in the Wilderness as part of the River to River Trail for use by equestrians and hikers prior to its official designation. We would also need to revise the 1985 *Wilderness Management Plan* to authorize horseback riding before designating the River to River Trail.

- # **Comment:** Updating the management plan will also fulfill the requirement by the National Wildlife Refuge System Improvement Act of 1997 that the Secretary of Interior must: "maintain the biological integrity, diversity, and environmental health of the National Wildlife Refuges" (16 U.S.C. § 668dd (a)(4)(B)). The Service has appropriately recognized that such values are best overall maintained by designating certain areas as wilderness. However, unmanaged horseback riding and gas motor usage should be banned within the Refuge's wilderness because they are detrimental to wilderness values and in direct violation of The Wilderness Act.

Response: The issue of unmanaged horseback riding will be addressed under the preferred alternative. Gas motors, either on boats or land vehicles, have never been allowed within the Wilderness.

- # **Comment:** Please let the 1985 Wilderness Management Plan remain unaltered.

Response: The Crab Orchard Wilderness Management Plan (1985) states: "No trail construction will be undertaken in the future." Horseback use and trails have developed inconsistent with the existing Wilderness Management Plan. In 1993, The River to River Trail

Society sought permission to realign the River to River Trail from public, paved roads to a route through the Wilderness. Because the preferred alternative includes this new trail alignment, changes to the existing equestrian use regulations, and additional land to be included in the Wilderness, the Wilderness Management Plan will need to be revised.

- # **Comment:** Trail development in the wilderness should be kept to a minimum.

Response: Under the preferred alternative, only one trail – the River to River Trail – would be designated in the Wilderness.

- # **Comment:** Support the designation of the additional 120 acres of Wilderness, but only if you intend, and have the backbone, to protect it as Wilderness. The wilderness area is being degraded by horses, and I am opposed to what it will look like in the distant future if your proposed horse use becomes part of the plan.

While I think it's admirable to extend the wilderness area, I think putting a horse trail through it really goes against the original intent of this special designation. The horse trail at Giant City has become a huge gully due to use when the ground is wet, and it really splits the habitat and affects the scenic beauty. I realize the horse lobby is powerful in Illinois, but with the whole Shawnee to ride in, I don't think one group of users should be able to change the definition of what wilderness is.

Response: Under the preferred alternative, user-made horse trails would no longer be allowed. Horseback riding will be limited to the designated River to River Trail, and access will be from established trailheads only. The trail will be designed and constructed to minimize damage from equestrian traffic. Also, seasonal closures will be enforced during wet periods to further minimize the damage within the Wilderness.

- # **Comment:** I am not totally against having wilderness areas, but I do disagree with how they are maintained. I disagree with the concept of absolutely no motorized or wheeled vehicles. I believe that wildlife personal should be able to patrol these areas with ATVs. More importantly, they should be allowed to use equipment to establish food plots and nesting areas for wildlife. Since the early 1970s, I have spent a lot of time hunting and hiking in the areas now designated as wilderness.

I will admit that it is good for some species of wildlife, but it has been detrimental to others. The deer and turkey populations have thrived, though I do feel that the quality of deer has decreased. But where once there were many coveys of quail and countless rabbits, none now exist due to the change in the habitat. Being able to maintain food plots and grass fields for nesting instead of letting it grow up into a tangled mess of thickets would benefit all the wildlife.

Response: The Wilderness Act generally prohibits the use of motorized vehicles in the Wilderness. Maintaining artificial food plots and early successional habitat would not be appropriate in the Wilderness. Many other areas of the Refuge, including agricultural fields, pastures, prairie and young forests, are managed to provide habitat for deer, quail, rabbits, migratory birds and other wildlife. As natural succession takes place and forests mature, it is common for wildlife species that prefer early successional stages to decline while those that prefer later successional stages increase in abundance.

7.1.6 Research Natural Areas

Comment: Research Natural Areas (RNAs) should be protected from any activities that would threaten the native vegetation or features that distinguish these areas, including the closing the areas to the public, if necessary. These areas should be used to educate the public to appreciate and value the native plants, animals and other features of these areas, as long as the use would not damage their natural values. Outings with refuge interpreters should be conducted in order to learn more about the RNAs on the refuge.

Response: We see no need to close RNAs to public use at this time because no threats have been identified. Most of the RNAs are located in the restricted use area, thus public use is very low. Two RNAs that warrant close monitoring are Devils Kitchen Dam RNA and Devils Kitchen Lake RNA; the former because the popular Rocky Bluff Trail traverses the area and the latter because it currently receives a fair amount of horse traffic. We are open to the suggestion of conducting outings for environmental interpretation; in fact, many visitors enjoy the spring wildflower walks we conduct along Rocky Bluff Trail.

7.1.7 Land Exchange with SIU

Comment: The land swap (Alternative B) proposal would lead to excessive commercialization and increase the level of recreation that is not wildlife related. It could easily lead to unacceptable disturbance of wildlife and wildlife-related recreation. We also oppose any long-term lease that would lead to the excessive commercialization that has been proposed by people at SIU-C and others. We are concerned that, even though the land swap with SIU-C was found unfeasible, some people will continue the pursuit of the proposal to build commercial facilities such as a hotel, marina, restaurant, water park, par 3 golf course, etc. on Crab Orchard Lake by leasing the land from the FWS. Likewise, we are concerned that the FWS will find such an arrangement hard to resist, because it would provide more revenue for running the refuge. We are opposed to such commercialization and privatization of public land.

Response: We have noted your concern. The CCP, which does not include the land exchange or long-term lease proposal, is the document we intend to follow for the next fifteen years. If proposals were considered to build commercial facilities of the magnitude suggested, the CCP would need to be revised and public notice and involvement would be a part of the planning process.

Comment: The draft CCP does not describe practical or effective management of the lands to be acquired from SIU under Alternative B.

Response: We did not pursue more detailed habitat planning for the lands to be acquired in a potential land exchange when it became clear that an exchange was not feasible due to unequal land values.

Comment: It is unusual and bothersome that the Service thinks that Southern Illinois University (SIU) can construct, operate and maintain recreation facilities. That is totally inappropriate use of education funding, student tuition and fees and university staff. The exchange would result in "urban sprawl development." There is adequate infrastructure available in the surrounding communities for those needing such accommodations. The refuge should be seen as a refuge from urban sprawl and development for humans. Not considered, or at least not mentioned in the text, is the fragmenting of the Refuge by removing a sub-

stantial amount of land along the largest lake on the Refuge and allowing the major development of non-refuge recreation facilities. The DEIS does not address the significant adverse impacts that would be caused by such action.

Response: In considering the land exchange as a valid alternative, we considered the proposal by Southern Illinois University as a good faith proposal. We have no reason to doubt their sincerity or ability to carry out their proposal. In looking at the proposal we recognized the potential for considerable development in the northwest corner of the Refuge and recognized that this is not the traditional role of a national wildlife refuge. We saw positive aspects to the development in that it would better provide non-wildlife-dependent recreation than we have been able to provide. We thought with this general recreation provided by another entity we would be able to better concentrate on the System mission and wildlife-dependent recreation. We recognized that there would be trade-offs. We also recognized that we would be forfeiting some wildlife benefits in the exchange. We viewed the issue primarily of giving up acres of habitat, rather than as increasing fragmentation. The area already is considerably fragmented and the land that would be given up is essentially on a corner of the Refuge and therefore would not degrade an existing large block of forest or grassland. We think the Draft EIS presents an adequate analysis for the exchange as represented in Alternative B given that it is not the proposed action.

Comment: A positive aspect of a land exchange or long-term lease agreement with SIU would be that the purposes of the refuge could be better served by letting SIU handle the public uses on the 500 acres that would be transferred to SIU.

Response: We considered this point in evaluating the alternatives. Please see the response to the previous comment for a fuller discussion of the topic.

7.1.8 Land Acquisition/Boundary Modification

Comment: The proposal to purchase additional land from will sellers will consolidate the refuge lands and make it a more compact piece of land; lower the size of the refuge boundary exposed to possible incompatible uses; facilitate management; prevent property from being lost forever to

housing and industrial development. Buying inholdings from willing sellers should be the top priority for land acquisition on the refuge.

Response: We appreciate the support for our proposed action.

Comment: The Rocky Bluff Trail and surrounding area is probably the most natural, pristine area on the refuge, evidenced by a profusion of native spring flowers. In addition, the area has other scenic features, such as a waterfall, interesting rock formations and a clear stream adjacent to the trail. Many of our members use the Rocky Bluff Trail, especially in the spring. Some members make weekly visits in April and May in order to see all of the species in bloom. Sometimes our group sponsors educational walks on the trail. For the above reasons, this area is of special concern to Sierra Club. One concern is that owners of the inholding adjacent to the Rocky Bluff area could negatively impact Rocky Bluff through incompatible development. We think it is important to safeguard against such development, and also to provide a protective buffer for Rocky Bluff. We advocate that the refuge management continue efforts to arrange a land swap or outright purchase of the private inholding adjacent to the Rocky Bluff area and trail. The trail has already been re-routed and shortened because part of the trail was on the property of the private adjacent land owners. We advocate that acquisition of this inholding be ranked as a top priority acquisition for the refuge, and that Refuge managers find a way to make this land swap work.

Response: We agree. This inholding has been identified as a high priority acquisition in the Refuge Boundary Modification and Land Protection Plan. Lands may be exchanged or acquired through fee title, lease or easement from willing sellers only.

Comment: Doesn't Congress have to act to change any refuge boundary? Considerable public interaction has occurred in other expansions of refuges when lands are removed from tax roles.

Response: Congressional action is not required to change any refuge boundary. Since the Refuge was established, the Service has acquired and divested several parcels of land (Appendix L, page 355 in the Draft EIS/CCP). The effects of Refuge expansion on taxes is discussed in the Draft EIS/CCP (page 144). Land acquired by the Refuge would be taken off the county tax rolls.

However, payments in lieu of taxes (revenue sharing) would be made to the respective counties. These payments are expected to be nearly equivalent to taxes.

- # **Comment:** Why would there be “.. increased challenges..” if the Refuge boundary is not changed? Without explanation, this is an unsupported attempt to disregard this alternative.

Response: Increased challenges are expected from pressures of more development and higher density use. Other refuges in similar circumstances have experienced encroachment and conflicting uses when development nears the boundary. The boundary modification would allow the acquisition of inholdings from willing sellers and moving segments of the boundary to roads 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.

- # **Comment:** My main concern is expansion of the Crab Orchard National Wildlife Refuge under the terms explained. This is one way expansion in that land can be purchased but none sold as to widen a highway like Route 13 in Williamson County. I'm against any money being used for expansion unless this ongoing problem is changed.

Response: Since the Refuge was established, the Service has acquired and divested several parcels of land (Appendix L, page 355 in the Draft EIS/CCP). Highway projects that have occurred on the Refuge include: Interstate 57, the completion of Highway 148, and widening Route 13 from 2 lanes to 4 lanes.

- # *Comment:* The Service has put forward the idea of straightening their boundaries and also entering into conservation agreements with adjacent landowners. I would be interested in acquiring the 120 acres of land bordering on the east side of the Refuge at a fair price.

Response: At this time, no lands on the east side of the Refuge are for sale. The land is fulfilling the purpose of the Refuge and the mission of the Service in its present state.

- # **Comment:** Do not acquire the non-contiguous land west of Southern Illinois University's Touch Of Nature.

Response: The land west of Touch of Nature was part of the land exchange proposed in Alternative B. We have no plans to acquire these lands under our current proposal.

- # **Comment:** Do not acquire more land, maintain the land you have.

Response: We think the acquisition of lands from willing sellers has the long-term benefits cited in the Draft EIS and by supporters of the proposal in the first comment under this topic. We will continue to do the best we can to maintain our lands with the staff, resources, and partners available to us.

7.1.9 Eliminate Area Designations

- # **Comment:** We support the elimination of the area designations in order to allow flexibility of management on the refuge.

Response: We appreciate the endorsement of our proposed action.

- # **Comment:** The changing of the classification of areas will only change labels on maps. Management responsibilities would be identified with descriptions of activities and shown on maps within the CCP.

Response: We think the new classification will make management of the Refuge and its use clearer to visitors. We agree that descriptions and maps would make the details of management more clear. We expect to include more detail in step-down plans for habitat management and visitor services, which will follow the adoption of the CCP.

- # **Comment:** I see no harm in helping visitors feel welcome in the Refuge but do not understand the plan to do away with the former land classification that indicates... “where wildlife would be emphasized and where recreation would take place.” Your intention is not clear. Stating... “We propose to...treat the entire Refuge as one unit...” sounds as if you plan to open all areas to recreation. If this is the case I am strongly opposed.

Response: Our intention is to balance our management responsibilities across all portions of the Refuge. Our draft plan states that wildlife management will be a major focus for all lands encompassed by the boundaries of the Refuge (page 28 of Draft EIS/CCP). Only the industrial area of the Refuge, formerly known as Ordill,

Area II or the Closed Area, would retain the designation of “restricted use area” because of safety and security concerns.

- # **Comment:** Your Draft Plan still does not abide by the agreements set forth by the Gallatin Count settlement act, the Department of Defense (War Department), the Agriculture Dept, and others for continuing the Crab Orchard Creek Project.

Response: We assume the comment is referring to the Gallatin Farms Resettlement Project under which occupants of land bought by the government to construct Crab Orchard Lake could receive assistance in resettling elsewhere. We think the Service is fulfilling its obligations. We know of no obligation to “continue the Crab Orchard Creek Project.” Our direction comes from the law that established the Refuge.

- # **Comment:** As stated in the supporting documents in 1946, Pro and Con for the passage of Public Law 361, it clearly states that if all the various departments agreed to the transfer of lands (Public Law 361) to the Dept. of The Interior, 2200 acres of the 44000 plus in the Crab Orchard Creek Project would be given to the Dept. of The Interior for specific purpose of a closed Refuge. This Refuge would provide for the protection and a nesting place for the migratory waterfowl traveling the Mississippi Flyway. The rest of these acres would continue as the Crab Orchard Creek Project. All of this land would be transferred to The Dept. of The Interior and managed by the U.S. Fish and Wildlife Service. These documents clearly state how you manage the Crab Orchard Creek Project. 22,000 acres on the east side of these lands if transferred (Public Law 361) will be a refuge. The remaining 22,000 plus acres will become the largest Recreation Facility in the State of Illinois.

Response: We do not agree with this analysis and interpretation of the hearing record for H.R. 3043 held by the Subcommittee on Conservation of Wildlife Resources of the Committee on Merchant Marine and Fisheries, House of Representatives, Eightieth Congress held May 21, June 4, 5, 13, 1947. Public Law 80-361, which was the outcome of the hearing, transferred the Crab Orchard Creek Project and Illinois Ordnance Plant lands to the Department of the Interior and directed the Secretary of the Interior to classify all of these lands to determine the most ben-

eficial use for “wildlife conservation, agricultural, recreational, industrial, and related purposes” (Appendix G, page 281 of the Draft EIS/CCP).

- # **Comment:** You changed the management set forth by Public Law 361. Over the years since 1947 your Refuge signs were moved to include the areas (outside) of the Refuge so these areas became Refuge. By congressional Law this was illegal and still is. It takes an act of congress to change Public 361 to change these (inside) (outside) boundaries. Your Draft CCP Plan should not include the areas OUTSIDE of the Refuge.

Response: We disagree that the placement of Refuge signs is illegal. Public Law 80-361 transferred the Crab Orchard Creek Project and Illinois Ordnance Plant lands to the Department of the Interior and directed the Secretary of the Department of the Interior to classify all of these lands to determine the most beneficial use for “wildlife conservation, agricultural, recreational, industrial, and related purposes” (Appendix G, page 281 of the Draft EIS/CCP). The refuge signs mark the boundary of the lands administered by the Service. The refuge signs do not designate the purpose of the lands that they demarcate.

- # **Comment:** I remember when the lake was originally built and this is not what the government promised us. Not only was the lake supposed to be for wildlife, but there was to be a sense of balance with recreational access for all the southern Illinois residents. What happened to that promise?

Response: We believe that management of the Refuge does strike a balance among the four legislated purposes: wildlife conservation, recreation, agriculture, and industry.

7.1.10 Clean-up of Hazardous Waste on the Refuge

- # **Comment:** Clean-up on the refuge should continue, as long as it is done in an environmentally responsible way.

Response: We are continuing our efforts to remediate all known contaminated sites. Our methods are designed to be environmentally responsible.

- # **Comment:** Have the unexploded ordinance been removed in all areas? I expect that some parts of the Refuge will remain off limits to the public.

Response: The CERCLA personnel located at the Refuge are continually working to identify as well as remediate contaminant sites on the Refuge. There was a clean up and removal of unexploded ordnance between 1998 and 2000, and any new discoveries will be removed and remediated as well. There are some areas of concern that are off limits for the safety of the public.

7.1.11 Economics

Comment: There is no mention of the effect of hunting Canada Geese around the Refuge on the economies of the two counties. A section needs to be added that provides information on the economic benefits that are realized by the hunting of waterfowl, especially geese, in areas around the Refuge.

Response: We recognize that economic benefits are realized by the community from hunting near the Refuge. We did not estimate these effects because we are providing approximately the same habitat for waterfowl, especially geese, under all alternatives, and we do not expect any alternative to measurably change the economic benefit of hunting around the Refuge.

Comment: There is no mention of how user fees or funds from concessions or funds from industrial tenants affect the economy.

Response: The analyses, to the extent that the data allow, are presented in Section 3.12 of the EIS.

Comment: There is no mention of the removal of lands from tax roles in the discussion of the preferred alternative or in the socioeconomic discussion.

Response: The topic is discussed in Section 4.7.7 of the EIS and Section 5.4 of Appendix L: Land Protection Plan.

Comment: Rental receipts from industrial tenants are shown and discussed briefly. Are the total receipts returned to the Refuge or just part of the total? This reader did not find this subject or that of receipts from concessions in the discussions of economics.

Response: From 2001-2005, approximately 85% of industrial receipts were returned to the Refuge. Currently, 100% of fee payments from concessionaires are returned to the Refuge.

Comment: The preferred alternative contains strategies that will change the anticipated amounts of rental and concession receipts received. These are economic impacts that need to be addressed.

Response: If all industrial tenants other than defense-related industries chose to leave the Refuge, rental receipts would decline by about 12 percent. We expect concession receipts to remain about the same or increase somewhat because better quality facilities should attract more visitors and more frequent visits. In addition, the preferred alternative proposes operation of Playport Marina and a boat ramp at the former Images Marina site under concession contract. The economic effects related to camping are summarized in Section 4.8.1.7 and Table 41 on page 157 of the Draft EIS.

Comment: I find no discussion of “payment in lieu of taxes” that are paid to the counties in Section 3.12. This is an economic issue that needs discussion especially when additional lands are being considered for inclusion to the Refuge. What levels have been provided in recent years?

Response: This topic is discussed in Section 4.7.7 of the Draft EIS and mentioned in Section 5.4 of Appendix L: Land Protection Plan. The most recent payments made by the Service to the counties under the Refuge Revenue Sharing Act are shown in the Payments in Lieu of Taxes for Crab Orchard NWR table.

Table 51: Payments in Lieu of Taxes for Crab Orchard Refuge, Fiscal Years 2000 – 2004 (dollars)

Year	Williamson County	Jackson County	Union County
2000	138,000	10,195	3,295
2001	141,072	10,406	3,363
2002	131,831	9,721	3,142
2003	126,707	5,225	3,020
2004	233,846	10,740	4,674

Comment: We believe that part of the intent in the creation of the Crab Orchard National Wildlife Refuge was to bring rural economic development to Southern Illinois. The Refuge has great renewable resources that can provide a sustainable flow of wildlife and other products (timber, clean water, recreation, etc.), revenue to county governments, and jobs to Southern Illinois. We believe it is time for the Refuge to renew its commitment to be a leader in rural economic development.

Response: The economic analysis shows that the Refuge contributes to the local economy, but it does not have an impact that permits it to be a leader. We anticipate that we will continue to contribute to the economy through most programs of the Refuge – agriculture, industry, and recreation.

Comment: Recreation and tourism are important industries in our southern counties and the Refuge can and should make great strides in supplying those industries as well. The Refuge should showcase selected regionally significant natural features and tourist attractions with state-of-the-art facilities to attract and hold tourists in Southern Illinois. Because of the economic and social importance of horse riding, we fully support the provision of a well-designed, well-maintained trail in the Crab Orchard Wilderness.

Response: The economic analysis in Section 3.12 shows the Refuge's role in the economy. The intent of the plan is to improve Refuge facilities and make them more attractive. The amount of use, especially by non-residents, of the horse trail will determine its economic importance.

7.1.12 National Environmental Policy Act

Comment: As a retired Service employee that worked with federal actions that affected land and water for the last 16 years of my career, I am very disturbed and disappointed with the DEIS and CCP. A DEIS should be; 1. an accurate description of the environments that will be affected by the proposed federal action(s). 2. a description of the adverse environmental effects which can not be avoided. 3. an objective (rather than subjective) description and evaluation of the feasible and prudent alternatives.

The DEIS does not fit the items I have identified above. There are sections that have similar titles and the introductions speak to the subjects, but the texts and tables fall far short of the content that was sought by NEPA and the Council on Environmental Quality. Words like "minimal" and "small" in the texts and tables do not show amounts that are needed to fully and accurately describe what the author(s) are referring to. Most readers would not be able to understand what the effects of an action(s) will be or if they are beneficial or adverse. In my opinion, the DEIS would not be acceptable to the Division of Ecological Services.

Response: The DEIS has had review within the agency, by the State, the EPA and the public. We think the DEIS adequately depicts the effects of our proposal over 15 years.

Comment: The CCP attempts to inform the reader what is planned for the next 15 and 100 years. However, the date of 2015 is not 15 years in the future. Someone should have updated the document when the rewriting of the initial documents were assembled in 2002-2004; 2006 plus 15 is 2021. The CCP will guide management for supposedly 15 years, but the end of this period will be 2021 and NOT 2015 as stated many times.

Response: The dates in the document are a function of the length of the planning period. We think the analysis of the issues still applies within the sensitivity of our analysis. We will change the relevant dates when the stand-alone CCP is assembled after a Record of Decision is issued.

Comment: The Purpose of the DRAFT EIS is to identify anticipated environmental impacts that would occur with the implementation of feasible and prudent alternatives. The preferred CCP alternative should be the least damaging alternative. A DEIS DOES NOT SELECT a management direction! The CCP is the management direction!

Response: We have edited the text in Section 1.3 to clarify the purpose of the EIS.

Comment: Section 4.5 - Alternative C: This alternative is not compared with all alternatives. Therefore, this DEIS is inadequate in coverage. How can the least damaging alternative be identified?

Response: The comparison across all alternatives is presented in Table 47.

Comment: Section 4.7.7: “If acquired” is not an appropriate lead-in. Since this is a discussion of the preferred alternative, this section of the DEIS/CCP should be addressing the environmental impacts of such action. The text should not be a JUSTIFICATION of the proposed action. The last sentence in this section, “Eventually a larger . . .” is a justification and is not appropriate for this section.

Response: “If acquired” emphasizes that acquisition is from willing sellers only and not totally under control of the Service. We think the last sentence does describe the effect of increased benefit to area-sensitive birds. We do not think it is a statement of justification.

Comment: Section 4.12: This is a poor discussion of cumulative impacts and provides no comparisons between all alternatives. The preferred alternative should be explained in depth.

Response: We think the two page discussion adequately describes the cumulative effects. The preferred alternative is described in detail in Chapter 2 and Appendix A.

Comment: Section 4.12.2: This narrative is TOTALLY INAPPROPRIATE for this document. The exchange with SIU has been removed from consideration per the Executive Summary narrative. This section should address what is anticipated to occur as a result of the implementation of each alternative and especially the preferred alternative. FRAGMENTATION OF THE REFUGE SHOULD BE UNACCEPTABLE TO THE SERVICE!

Response: We think a full discussion of the alternative is warranted and discloses the consideration that it was given in the planning process. The pattern of the Refuge’s land ownership has to be weighed against many factors. Changing the pattern of ownership and possible fragmentation of habitat was considered during the evaluation of the alternative.

Comment: Table 47: No specifics are provided to accurately identify effects. Decisionmakers and readers need facts, like acres and numbers, to compare. The use of subjective words, like minor, minimal, reduction, fewer, increase and decrease, are only rough indicators and a reader does not know what is meant. The Service should not expect the public to accept this kind of an explanation of the effect of such a significant action as

the CCP. This type of wording is considered as “justification terminology” by most reviewers of DEIS. This wording would not be acceptable if being reviewed by Ecological Services staff.

Response: Table 47 is a summary of effects. The details of effects are displayed in earlier text, tables, and maps.

The DEIS has had review within the agency, by the State, the EPA and the public.

Comment: The choice of alternatives offered by the alleged “experts” at this NWR is offensive. It is as if the administration is thrusting their plans down our throat. We want the right to make choices on EACH ELEMENT of this plan, and not to have to choose ones of the agency’s choosing. That is the purpose of a free public education – to have citizens able to make choices – to read, to decide. This attempt to make the public fit into boxes of the agency’s choosing is offensive and should be stopped as a practice by this agency.

Response: We think the evaluation is fair and meets the intent and requirements of NEPA. The elements of the plan are inter-related and are most effectively developed and considered as a set. We have considered the comments of the public in modifying the preferred alternative. The modifications have resulted in changes to selected elements of the plan.

Comment: Commenting on their wishes is not the hallmark of a free and independent citizenry - it is a boldfaced attempt to make people accede to what the agency wants. They have no right to make decisions for the public.

Response: In our role as administrators and stewards of the National Wildlife Refuge, we are given the responsibility of making decisions considering public input. Public involvement is the heart of the planning process.

Comment: Please take the word “conservation” out of the plan. The word “conservation” is a deceptive word, only used to hide the fact that hunting/killing, murder of wildlife and birds is taking place. It is a clever and deceptive word. I think the word protection is much more appropriate. The people are in favor of protection, and not conservation (secret code word for killing).

Response: Congress mandates that the document be called a “Comprehensive Conservation Plan.” It is not within our authority to remove “conservation”

from the plan title and we think the word is used appropriately in the document consistent with the Wildlife Refuge System Improvement Act of 1997.

7.1.13 Purposes of Refuge vs. Refuge System

Comment: Although the enabling legislation that established CONWR specified the multiple purposes of agriculture, industry, recreation, and wildlife conservation, the National Wildlife Refuge System Improvement Act of 1997 established the primary mission of the National Wildlife Refuge System as wildlife conservation. In cases where there may be competition between this mission and other legislated uses (recreation, agriculture, and industry), wildlife conservation should be given preference. If the Service intends to genuinely follow the vision spelled out in the Improvement Act, then the purpose of the Refuge must be amended and all industry, grazing, and agriculture must be eliminated from the Refuge.

Response: We are given very clear direction on precedence when the purpose of a refuge conflicts with the mission of the System. The National Wildlife Refuge System Improvement Act of 1997 directs "...if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System". Our decisions are based on this direction to first protect the purposes of the refuge. Congressional action is required to amend or change the purposes of the Refuge.

Illinois Department of Natural Resources



Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271
217.785.0075 • <http://dnr.state.il.us>

Rod R. Blagojevich, Governor

Joel Brunsvold, Director

December 20, 2005

Mr. Dan Frisk
Refuge Manager
Crab Orchard National Wildlife Refuge
8588 Route 148
Marion, IL 62959

Dear Mr. Frisk:

The Illinois Department of Natural Resources appreciates the opportunity to review the Crab Orchard National Wildlife Refuge Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement (EIS) Williamson, Jackson, and Union Counties, Illinois. The Crab Orchard Wildlife Refuge is of great importance to the people of the State of Illinois and we remain vitally interested in its present and future management. The process of planning for the future of the Refuge, as we know from past experience, can be a complex undertaking. Let me congratulate you and your staff for using the best available science while trying to balance the needs and demands of a broad range of interested publics.

I wish to express our support for the preferred Alternative E. Among the alternatives presented, it provides the best guidance for natural resource management activities on the Refuge and to assure wildlife diversity and maintain forest ecosystem health. It is important to note that Alternative E provides land and resource management direction that is clearly complimentary to the State of Illinois Comprehensive Wildlife Conservation Plan & Strategy (CWCPS). As the Illinois Department of Natural Resources and US Fish and Wildlife Service begin implementation of the CWCPS and CCP, respectively, a renewed level of partnership among the two agencies, and mutual support for the other's conservation activities, will be important in meeting the ambitious goals outlined in each plan.

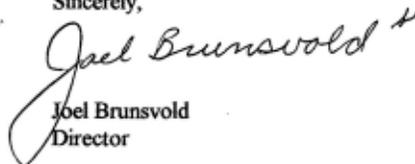
While we are in support of Alternative E, we also believe there is opportunity for improvement within this alternative. To that end, we would hope the attached comments would be taken under consideration and incorporated into the final CCP.

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Illinois Department of Natural Resources

To the extent it would be useful, I am willing to commit appropriate persons of my staff to work cooperatively in helping to resolve any of these matters. I think this would be an excellent time and opportunity to take our longstanding cooperative relationship to a new level of mutual support.

Sincerely,



Joel Brunsvold
Director

Attachments

cc: Leslie Sgro
Mike Conlin
John Buhnerkempe
Scott Stuewe
Joel Cross
Mike Mason
Glen Kruse

Illinois Department of Natural Resources

Comments to Crab Orchard National Wildlife Refuge Draft CCP and EIS

FISHERIES:

- Note: In proposed CCP, sport fish management Crab Orchard Refuge waters has been left as status quo in all alternatives.
- IDNR supports making many of the major Crab Orchard Lake coves and shallow areas no-wake zones. This is a good idea for improved safety and the overall fishing experience.
- IDNR does not support the closure of the south end of Devils Kitchen Lake to gasoline motors. Since this portion of Devils Kitchen Lake is approximately 300 acres and is full of standing timber (which is just under the surface), IDNR would like USFWS staff to consider making it a no wake zone. No wake status would allow anglers the opportunity to navigate the area and remove their boats from hazards and escape storms without relying solely upon an electric trolling motor or a paddle. We feel that gasoline outboards running at no wake speed will be compatible with non-motorized types of watercraft, like canoes and kayaks, and this is a reasonable compromise for all parties involved (even though anglers make up a vast majority of all boaters on Devils Kitchen Lake).
- IDNR recommends, as a compromise to closing the Devils Kitchen campground, would be converting it to primitive camping which might be popular to some constituents who use non-motorized watercraft. Income from this campground might also help sustain the Devils Kitchen Marina vendor.

WILDLIFE:

The area which is known as Crab Orchard National Wildlife Refuge was approximately 95% forested during presettlement times. Today, land cover types comprise: 56% forest, 20% lakes, 10% cropland, 6% wetland, 4% grassland, 2% shrub and 2% other.

- CONWR should maintain enough food resources through the cooperative farm program (approximately 4,500 acres - grain and legume) to support 6.4 million goose use-days; the document should add the amount of standing corn acreage unharvested in addition to the actual, but harvested corn

Illinois Department of Natural Resources

acreage; the standing corn acreage is probably the most important food source for wintering populations of Canada geese

- alternative E states 50 -70 acres of moist-soil wetlands will be developed during the 15 year period of the CCP; IDNR encourages the Refuge to increase the amount of wetlands developed over this planning period. This total seems to underachieve the opportunities currently on Refuge. All available locations based on topography and soil type should be assessed and developed as moist-soil management areas whenever possible. Even areas without suitable sources for critical water control manipulations should be considered because spring drawdowns may provide adequate food resources for wetland wildlife species. In situations where undesirable plants (cocklebur) infest these wetlands, appropriate management and seeding could provide necessary food resources and microhabitat for macroinvertebrates
- convert all fescue pastures to a 50 percent combination of native warm season grass and cool season grass mixtures (timothy, clover, redtop, orchardgrass)
- IDNR supports the conversion of non-native pines through timber harvest to native hardwoods either by natural regeneration or augment with plantings when necessary;
- IDNR strongly supports the use of prescribe fire in forest and grasslands to increase their productivity to wildlife
- IDNR recognizes that greater hunting opportunities exist on the Refuge and suggests opening greater portions of the restricted area on a limited time zone to increase refuge hunting programs (dove, turkey, limited entry (weekly draw) archery 4 point/side or antlerless and quail/rabbit) including youth hunting opportunities emphasizing high quality experiences
- reforestation efforts should focus south of grassy road to improve forest habitats for neotropical birds and other forest wildlife species; recent literature suggests that forest portions within Crab Orchard NWR may not provide critical breeding habitats because of insufficient acreage and may actually be a poor source of recruitment due to heavy predation; therefore, management goals for neotropical birds might emphasize migratory

Illinois Department of Natural Resources

stopover habitats rather than breeding habitats; the document should also indicate the number of acres which have already been converted from cropland and other fields to forest, the draft EIS under-values habitat for shorebird and wetland birds—with modest increases in the moist-soil areas (450 acres or 1% of the refuge), habitat for this group could be easily expanded while still providing waterfowl forage

- establish 60' field borders of native warm season grass adjacent to select croplands beginning in the public hunting area; this will improve wintering and brood habitats for bobwhite quail, rabbits, turkey, other wildlife species and increase hunting opportunities;
- the CCP should direct the maintenance of a number of areas (acreage) of early successional habitats which are crucial to those resident and migratory species
- convert small croplands not utilized by Canada geese and fescue/cool season grass fields to native warm season grass
- the clearing of 8 miles of linear fence rows to improve nearby grasslands may not result in accomplishing goals to improve habitats for grassland birds; the acreage of grasslands on the refuge and in the county most likely will not contribute significantly to increase breeding populations of grassland birds; destroying fence rows may actually hurt resident wildlife without providing measurable benefits to grassland birds
- control non-native and exotic plant populations invading the refuge
- we suggest that the Refuge consider making the campground stay limits consistent with DNR and COE (federal) regulations
- equestrian use should be limited to designated trails and time zoned to prevent damage and conflicts with other user groups which is similar to DNR regulations.

NATURAL HERITAGE:

- We recommend the Refuge refrain from designating equestrian trails within any of the Refuge's Research Natural Areas (RNA's), recognizing that

Illinois Department of Natural Resources

equestrian use holds the potential for threatening the natural integrity of these sites.

- On pages 11-12, under section 1.13.1 of the Wildlife Conservation Goals for T/E species, it states "maintain or enhance populations of federal and, **where compatible**, state threatened and endangered species that occur at or near Crab Orchard National Wildlife Refuge". Page 267 shows Appendix E, which lists the potential list of state T/Es comprising 31 species.

IDNR strongly suggest that the USFWS CONWR give any IL state endangered or threatened species the same proactive considerations and protections that they would afford any federally listed species that occurs on the Refuge, IDNR encourages the Refuge to consult with the IDNR Division of Natural Heritage regarding any action that may impact any state-listed species that occur at or near Crab Orchard National Wildlife Refuge.

FORESTRY:

- IDNR supports the conversion of non-native pine stands to native hardwood through thinning and prescribed burning.
- IDNR encourages CONWR to implement a program of prescribed burning in existing hardwood stands to encourage oak regeneration, eliminate woody and non-woody exotics in the understory, and discourage the establishment of shade tolerant tree species in the overstory.
- IDNR supports reforestation of 490 acres to reduce forest fragmentation.

ADDITIONAL COMMENTS:

- The Refuge has been a partner in planning for the Williamson County, Marion-to-Carterville/Carbondale Trail. A preliminary alignment for the Trail through the Refuge was proposed in the 2003 **Greenways and Trails Plan for Williamson County**.

Refuge managers have identified a potential trail corridor through the Refuge, using old roadbeds and possibly an old railroad bed. Further

Illinois Department of Natural Resources

identification of a more definite alignment would significantly support the development of the trail.

DNR encourages the Refuge to continue to include this trail in its planning efforts. The Refuge is strategically located between the communities and will be important in providing the central portion of the trail, connecting the communities, and making a recreation and alternative transportation facility available to the County's residents and visitors.

U.S. Department of Agriculture, Forest Service

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United States
Department of
Agriculture

Forest
Service

Shawnee National Forest
Supervisor's Office

50 Highway 145 South
Harrisburg, IL 62946
618-253-7114
TTY 618-253-1070

File Code: 1500

Date: February 22, 2006

Dan Frisk
Refuge Manager
Crab Orchard National Wildlife Refuge
CCP Comment
8588 Route 148
Marion, IL 62959

Dear Dan,

First of all, congratulations on the publication of the Draft Environmental Impact Statement (DEIS) and Comprehensive Conservation Plan (CCP) for the Crab Orchard National Wildlife Refuge. I know that it has been a long process, similar to our forest plan revision process. I realize that the comment period on the DEIS and CCP closed in January and I apologize for not getting something to you sooner.

In reviewing the DEIS and CCP, it is interesting to note the similarity in many of the issues related to the management of the Crab Orchard National Wildlife Refuge and the Shawnee National Forest. Issues, goals and objectives that appear to be pertinent on both the Crab Orchard Refuge and the Shawnee National Forest include: maintaining water quality; improving wildlife and aquatic habitat; management for threatened and endangered species; reducing forest and grassland fragmentation; improving the quality of recreation; the need for prescribed fire; conversion of non-native pine plantations to native hardwoods; control of invasive species; and management of wilderness to preserve wilderness character.

One issue that we are unsure how it would be addressed in the CCP for the Crab Orchard National Wildlife Refuge is the natural succession of the oak-hickory forest type to maple-beech on many sites in southern Illinois and throughout the central hardwood region. Although the Executive Summary (*page xi*) states that "a Refuge goal has been to manage for productive oak-hickory forest dominated by native species," there does not appear to be a similar goal or objective associated with the preferred alternative in the DEIS and CCP. Additionally, there does not appear to be any silvicultural practices listed as possible activities to help maintain the oak-hickory forest type. Since the Crab Orchard National Wildlife Refuge has similar sites, forest types, and native wildlife species that utilize the oak-hickory forest as preferred habitat, similar to the Shawnee N. F., we anticipated this would be a similar issue on the Refuge, and your goal "to manage for productive oak-hickory forest dominated by native species" would be carried forward into the new CCP. Prescribed burning and silvicultural practices needed to maintain the oak-hickory forest type on the Shawnee National Forest have been supported by the Illinois Department of Natural Resources and The Nature Conservancy, as well as other conservation organizations. I would imagine there would be similar support for maintenance of the oak-hickory type on the Crab Orchard Refuge.



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U.S. Department of Agriculture, Forest Service

If you have any questions related to these comments, or any other issues related to our forest plan revision, please let us know. Best of luck as you and your staff as you conclude this planning effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Nicholas', with a large, stylized flourish extending to the right.

HURSTON A. NICHOLAS
Forest Supervisor

U.S. Department of the Army, Corps of Engineers



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
REND LAKE PROJECT OFFICE
12220 REND CITY ROAD
BENTON, ILLINOIS 62812-9803
(618) 724-2493
Fax (618) 724-4089

January 4, 2006



Crab Orchard National Wildlife Refuge
8588 Route 148
Marion, Illinois 62959

RE: CCP Comment

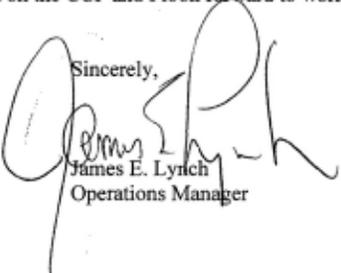
To Whom It May Concern:

I would like to thank the U.S. Fish and Wildlife Service for the opportunity to review and comment on the Crab Orchard National Wildlife Refuge Draft Environmental Impact Statement and Comprehensive Conservation Plan (CCP). The CCP thoroughly covered the purpose for the plan, the alternatives and the environmental affects and consequences.

We have reviewed the various alternatives identified in the plan and agree that Alternative E, the preferred alternative, will best serve the people of Southern Illinois and the region and will provide continued quality habitat for fish and wildlife. The U.S. Army Corps of Engineers at Rend Lake also strives to meet the needs of the people of this region while protecting our abundant resources. I feel that the efforts of both our agencies as well as those of other Federal and State agencies in Southern Illinois have created a truly unique environmental and outdoor recreational opportunity for our visitors, and your CCP shows your dedication to continuing towards this effort.

Thank you again for the opportunity to comment on the CCP and I look forward to working with the Fish and Wildlife Service in the future.

Sincerely,


James E. Lynch
Operations Manager

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U.S. Environmental Protection Agency

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGIONS 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 11 2006

REPLY TO THE ATTENTION OF:

B-19J

Dan Frisk
Refuge Manager
Crab Orchard National Wildlife Refuge
8588 Route 148
Marion, Illinois 62959

Re: **Draft Environmental Impact Statement and Comprehensive Conservation Plan for the Crab Orchard National Wildlife Refuge, Williamson, Jackson, and Union Counties, Illinois -- EIS No. 20050450**

Dear Mr. Frisk:

The U.S. Environmental Protection Agency (U.S. EPA) has reviewed the Draft Environmental Impact Statement (EIS) and Proposed Comprehensive Conservation Plan (Plan) for the Crab Orchard National Wildlife Refuge (Refuge) in accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA). We are pleased to have this opportunity to add U.S. EPA's suggestions to the planning effort for the Refuge.

Located in southern Illinois, the Refuge consists of approximately 43,800 acres established for wildlife, agriculture, recreation, and industry. Various land cover types include forests, shrubland, grassland, open water, and cropland. There is a mix of public and private lands within the Refuge's proclamation boundary.

Several issues identified as important to Refuge planning and the need for change include wildlife conservation, recreation, the role of the Refuge in regional economy, communication between the Refuge and the community, and wilderness habitat. The U.S. Fish and Wildlife Service (USFWS) evaluated five alternatives in the Draft EIS for revision of the Refuge Plan. The five alternatives address these issues in a variety of ways, such that each would meet the stated purpose and need. The Preferred Alternative, Alternative E, emphasizes reducing habitat fragmentation via removal of non-native pine species and restoration of oak-hickory vegetation, increasing the number of acres managed as moist soil units, improving recreation on the Refuge, and aggressively controlling non-native invasive plant species. Compared to the existing Refuge Plan, this alternative has an increased focus on wildlife-dependent uses.

This planning effort is timely and critical to the continued health of the Refuge and realization of its goals. The Refuge remains among the few areas capable of maintaining plant and animal diversity on a landscape scale while providing recreational opportunities to satisfy the growing public demand for outdoor recreational experiences in natural settings. Because of these demands upon the Refuge, the U.S. EPA supports the preferred alternative identified in the Draft EIS, which appears to strike a balance between ecosystem considerations and public use.

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U.S. Environmental Protection Agency

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Specifically, the U.S. EPA would like to commend the USFWS for maintaining or enhancing populations of forest, early successional and grassland species as much as possible within the multi-purpose mission of the Refuge. Additionally, by utilizing a vast array of volunteers, Refuge management has found a way to support conservation efforts in the midst of budget constraints.

Based on our review of the document, we have assigned a rating of **LO (Lack of Objections)** to the Draft EIS and proposed Plan. A summary of the rating system used in the evaluation of these documents is enclosed for your reference. We offer the following comments for consideration during development of the Final EIS and the final Refuge Plan.

Water Quality within the Refuge

The draft Plan indicates that water quality and sedimentation remain ongoing concerns for water bodies on the Refuge. Refuge waters are impacted from a variety of sources – agricultural runoff, wastewater treatment effluent, urban runoff, channelization, and industrial contaminants.

We recommend the Final EIS include a discussion of possible partnerships designed to reduce non-point pollution and sedimentation to improve water quality on the Refuge. Developing opportunities for volunteers and user groups to work cooperatively with neighboring businesses, industry, and local governments would not only develop a sense of ownership and foster good community relations, but also result in improved habitat quality and recreational activities on the Refuge. Discussions could include opportunities for environmental education and drafting and enacting ordinances designed to protect water quality

Monitoring

Refuge staff, Illinois Department of Natural Resources staff, and volunteers survey various aspects of wildlife use on the Refuge. The surveys provide information for refuge management and support state and national conservation efforts. We believe the current survey activities could be enhanced by including monitoring events for certain types of birds. In particular, surveys of area-sensitive forest birds and grassland and shrubland species would contribute valuable information to Refuge and national goals. We recommend the USFWS add this component to existing survey work.

Thank you for your willingness to consider our comments; we hope they will be useful to you. If you have any questions concerning these comments, please contact Kathleen Kowal of my staff at (312) 353-5206.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Science, Ecosystems and Communities

Enclosure – Summary of Rating Definitions

U.S. Environmental Protection Agency

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS state, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

U.S. Fish & Wildlife Service, Ecological Services



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Marion Illinois Suboffice (ES)
8588 Route 148
Marion, IL 62959
(618) 997-3344

January 10, 2006

Memorandum

To: Dan Frisk, Refuge Manager, Crab Orchard National Wildlife Refuge

From: Joyce Collins, Assistant Field Supervisor, Marion, Illinois Ecological Services Field Office *Joyce Collins*

Subject: Crab Orchard NWR Draft Environmental Impact Statement (DEIS) and Comprehensive Conservation Plan (CCP)

Below are comments regarding the Draft EIS and CCP. We appreciate the opportunity to review the subject document and look forward to further coordination with your staff as we complete Section 7 consultation under the Endangered Species Act.

GENERAL COMMENTS

1. Section 7 Consultation – As previously discussed, a Biological Assessment must be prepared that addresses the affects (direct, indirect and cumulative) of the proposed 15-year CCP on federally listed threatened and endangered species. The Biological Assessment should address the wide array of proposed actions to be implemented with the preferred/selected alternative. Should it be determined that the proposed action is likely to adversely affect any listed species, formal consultation would be required. We remind you that regulations specify up to a 90 day consultation period and 45 days to prepare the Biological Opinion. Hence, once we mutually agree to initiate consultation, it may take up to 135 days to complete.

Listed species that should be addressed in the Biological Assessment include the endangered Indiana bat (*Myotis sodalis*) and the threatened bald eagle (*Haliaeetus leucocephalus*). No other listed, proposed or candidate species are known to occur or potentially occur within the action area. Also, there is no designated critical habitat in the project area.

The action area for purposes of analysis includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR §402.02). The action area is defined by measurable and detectable changes in land, air and water or to other measurable factors that will result from the proposed

U.S. Fish & Wildlife Service, Ecological Services

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action. The action area is not limited to the “footprint” of the action, but rather encompasses the biotic, chemical, and physical impacts to the environment resulting directly or indirectly from the action.

The action area for the CCP is the area that encapsulates the reach of all the direct and indirect environmental impacts of the project. That is, the area in which the biotic, chemical, and physical impacts to the environment that are anticipated to occur. The action area for the CCP will encompass the entire CONWR proclamation boundary plus lands one mile outside of the proclamation boundary for the CONWR lands that abut the boundary.

The area indirectly affected by the action includes the area affected by noise, smoke and sediment transport from upland areas into streams that occur in response to activities on the CONWR property. Activities such as timber harvest will generate noise. The level of noise generated will vary depending upon the methods and equipment being used or operated, but is not expected to reach outside the project boundary. As an example bulldozers and chainsaws run at full throttle are expected to produce low frequency noise, that at half a mile away is detected at the decibel level of normal conversation (de Hoop and Lalonde 2003). Prescribed fire will generate smoke that may drift short distances from the project area. Smoke dissipates into the air column and detectable levels are minimal at a distance of one mile from the fire. Similarly, sediment originating on CONWR lands and entering aquatic systems is likely to be deposited a certain distance downstream, depending on velocity and mean particle size (Ritter et al., 1995). Based on channel morphology and velocity of streams on the CONWR, sediment particles would be expected to be deposited within one mile of the origination point under normal flow conditions. Thus the action area encompasses the entire proclamation boundary and extends out one mile.

De Hoop, C.F., and N.J. Lalonde. 2003. Some measured levels of noise produced by logging equipment in 1998. Louisiana Forest Products Development Center, Working Paper #58.

Ritter, D.F., R.C. Kochel, and J.R. Miller. 1995. Process Geomorphology, Third Edition. Wm. C. Brown Publishers, Dubuque.

2. Most of the photographs within the DEIS/CCP are not credited. It is appropriate to give credit to individuals and/or agencies responsible for photographs. If this information is unknown, this should be identified.
3. Discussion of the preferred alternative (Alternative E) is not conducive to understanding what the proposed action is. The objectives and strategies for the preferred alternative should be clearly identified in the section describing alternatives (Chapter 2) instead of referring back to other alternatives (e.g., Alternatives B and C).
4. We wish to reiterate our concerns regarding the proposal for removal of linear forest habitat and hedgerows. The purported purpose of the action is to benefit grassland birds.

U.S. Fish & Wildlife Service, Ecological Services

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However, such an activity would impact some species of grassland birds, such as loggerhead shrikes (a species of interest). Loggerhead shrikes nest in hedgerows and linear forested areas. In addition, these habitats provide perch sites for foraging and singing activities. The removal of these important habitats would make some areas completely unsuitable for loggerhead shrike use. Other grassland birds may be impacted in a similar manner. Additionally, woody fence rows and hedge rows provide critical wintering habitat for many species of songbirds that are more susceptible to predation when seeking shelter at the edge of large forested tracts.

5. The Ducks, Shorebirds and other Waterbirds Goal specifies maintaining and enhancing populations of ducks, shorebirds and other waterbirds. However, the objective and strategy identified primarily benefits waterfowl. Either the goal should be revised or additional objectives/strategies should be added to provide benefits for shorebirds and other waterbirds (e.g., creation/management of mudflats, submergent wetlands and emergent wetlands, maintaining water levels conducive to shorebirds, etc.).

SPECIFIC COMMENTS

1. Page i, Executive Summary, Introduction, 3rd paragraph, 3rd sentence – The DEIS serves as a mechanism to evaluate various alternative actions, to seek public involvement in development and evaluation of alternatives and to inform the public of agency actions. It is the CCP that will establish management direction for the next 15 years.

2. Page viii, 2nd paragraph, 3rd sentence – It is stated that “we propose to officially designate a horse trail through the Crab Orchard Wilderness.” The strategy under Objective 7 on page 27 states “cooperate with partners to plan, construct and maintain a sustainable trail system.” These statements appear inconsistent. Is the plan to have a trail or a trail system which implies many trails?

3. Page 1, Proposed Action, last sentence – The location of the CCP and Land Protection Plan within the document should be identified.

4. Page 9, Figure 4 – This map does not include Middle Mississippi River NWR lands or IDNR lands located on the MMR.

5. Page 19, Section 2.4.5.2, Summary, Sentences 5 and 6 – Although non-native pine plantations may be of low value, they do provide habitat for Indiana bats. Therefore, it is recommended to revise the 5th sentence to read “The Refuge would continue to protect nesting bald eagles and protect, restore and/or enhance Indiana bat habitat.

6. Page 21, Section 2.6, Detailed Description of Alternatives and Relationship to Goals, Objectives and Strategies, 3rd paragraph – 1) Since the CCP is for a 15 year period, all management scenarios and analyses should be evaluated for the year 2020, not 2015; and 2) The location of the maps referenced in this paragraph should be identified.

U.S. Fish & Wildlife Service, Ecological Services

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7. Page 27, Wilderness Goal, Objective 7, Strategy 1 – See comment #2 above regarding establishing a trail versus a trail system.
 8. Page 31, Prescribed Fire, 3rd complete paragraph from top – The statement that “We may conduct prescribed fire at any time of year” is not consistent with Page 27, Wilderness Goal, Objective 3, Strategy 2.
 9. Page 44, Forest, Early Successional and Grassland Birds Goal, Objective 2, Strategy 1 – The type of silvicultural treatment to be utilized for pine thinning should be identified and described.
 10. Page 69, Alternative E – As stated previously, the objectives and strategies should be described in this section instead of referencing back to Alternatives B and C. It is confusing and difficult to understand what the preferred alternative entails with the current format.
 11. Page 80, Section 3.2.4, Climate – The highest mean monthly temperature is 79° F in July?
 12. Page 80, Section 3.2.5.1, Crab Orchard Lake – The percentage of land cover in the watershed does not total 100% (16% missing).
 13. Page 81, Section 3.2.5.2, Little Grassy Lake – The percentage of land cover in the watershed does not total 100% (9% missing).
 14. Page 82, Section 3.2.5.3, Devils Kitchen Lake – The percentage of land cover in the watershed does not total 100% (9% missing).
 15. Page 94, Indiana bat surveys – This paragraph needs to be clarified. Previous surveys have primarily been associated with particular projects. To our knowledge no comprehensive surveys have been conducted to determine Indiana bat use/abundance on CONWR.
 16. Page 95, Figure 24 – This graph should be clarified to identify if the numbers represent winter counts, summer counts or both.
 17. Page 111, Section 3.7.3, Conservation Easements – This section discusses how conservation easements fit into the NWRS. However, none of the alternatives address the needs of Conservation Easements or how they will be managed over the next 15 years.
 18. Page 129, Section 4.1.1, Quantifying Effects of Alternatives on Wildlife Species – Although the Potential Species Occurrence (PSO) scores focus more on habitat quantity, quality is also a consideration with habitat potential given a rank of 0, 1, 2, or 3 (no, low, medium or high). According to Table 34, the PSO scores for grassland and shrubland birds significantly decline under all alternatives over the current condition. This would
-

U.S. Fish & Wildlife Service, Ecological Services

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seem to reflect that both quantity and quality of habitat for these species will decline. Therefore, none of the preferred alternatives achieve the goal of maintaining or enhancing populations of early successional and grassland birds. Only forest birds are maintained and enhanced a small degree.

19. Pages 132-134, Section 4.2.7, Prescribed Fire – A section on faunal effects should be added.

20. Page 133, Section 4.2.7.4, Listed Species – The statement that “Prescribed fires will also occur outside of the breeding season of Indiana bats” is inconsistent with the statement on Page 31 that “We may conduct prescribed burns at any time of year.”

21. Page 151, Section 4.7.1.3, Area-sensitive Forest Bird Species – The term “core area habitat” should be defined.

22. Page 151, Section 4.7.1.4, Waterfowl and Other Water Bird Species – The environmental consequences for waterfowl are described. What are the environmental consequences for “Other Water Bird Species”?

23. Page 152, Section 4.7.1.5, Grassland Birds - This discussion is inadequate to describe the full range of environmental consequences to grassland birds. As discussed previously, many species of grassland birds depend upon grassland for foraging, however, they nest in other habitat types (e.g., loggerhead shrikes, bluebirds, eastern kingbirds, etc.). Conversion of pasture from fescue to warm-season grasses will benefit some species. The loss of linear forest habitat and hedgerows will adversely affect other species. These impacts should be described in order to give a fair analysis of environmental consequences. It is unclear how prohibiting mowing until August 1 of each year will improve conditions for grassland birds with Alternative E as this is the current management strategy (e.g., conditions remain the same and are not improved).

24. Page 152, Section 4.7.1.6, Shrubland Birds – One of the goals is to “maintain or enhance populations of forest, early successional and grassland birds...”. However, there does not appear to be any benefits provided to early successional bird species with any of the alternatives. If no benefits are to be provided, then the goal is not being achieved.

25. Pages 162-163, Section 4.12.1.2, Grasslands, last paragraph, last sentence – Grassland habitat will be improved for some species by removing fencerows and other linear woody habitat but will be adversely impacted for other species. This should be described.

26. Page 173, Appendix A: Goals, Objectives, Strategies and Implementation – Information in the document indicates that Appendix A is the CCP. It should be labeled as such.

27. Pages 175-176, Appendix A, 1.1 Objective, Strategy 7 – This strategy calls for removal of trees from explosives storage bunkers and replace with grass. Just as linear

U.S. Fish & Wildlife Service, Ecological Services

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forest habitat and hedgerows provide important habitat for breeding grassland birds and various species of wintering birds, the forested habitat on explosive bunkers provide similar benefits. Loggerhead shrikes are known to have nested in trees/shrubs on bunkers in both Area 13 and Area 6.

28. Page 176, Goal 3, Ducks, Shorebirds, and other Waterbirds, 3.1 Objective – See previous comment regarding habitats for shorebirds and other waterbirds.

29. Pages 195 – 209, Appendix C: Laws and Orders – This section should include Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds

cc: R3, Chief, Division of HC/EC (Krska)
R3, Chief, Division of T/E (Miller)
R3, Migratory Birds

City of Carterville



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November 2, 2005

MAYOR
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CITY CLERK
Joyce A. Carney

TREASURER
Mark R. Carney

ALDERMAN/WARD 1
Michael Carney
John Flora

ALDERMAN/WARD 2
Jacob Rindlerman
Richard Stevenson

ALDERMAN/WARD 3
Carl Trombino
Thomas E. Keim

ALDERMAN/WARD 4
John Geiselman
Phyllis Emery



Crab Orchard
National Wildlife Refuge
8588 Route 148
Marion, IL 62959

To Whom It May Concern:

On behalf of myself, the City Council, and the citizens of Carterville I am writing to respond to the Comprehensive Conservation Plan.

We strongly object to further restrictions of the recreational facility within the Crab Orchard National Refuge as described in the revised plan.

Specifically,

1. Closing the campground at Devil's Kitchen
2. Converting the Crab Orchard Boat & Yacht Club to a Concession Contract
3. Expanding No Wake Zones on Crab Orchard Lake
4. Restriction to limit camping to 14 day stays
5. Closing of the Haven

Due to past measures already taken to restrict Refuge recreational activities we have seen drastic changes to these areas. For example, the majority of the public beaches on the lake have been improved and then closed, the Carterville shelter house area was closed, and numerous picnic sites have already been closed. The closing of Gateway Marina, which was the last place to purchase gasoline or supplies on the lake, has made it very difficult for people to utilize the lake facilities as they had always done in the past. Therefore, they are choosing to do recreational boating and swimming at other lakes without the restrictions they face here. These combined closures have had a devastating effect to tourism, recreation, and economic development in our area.

City of Carterville



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Adding more restrictions to the refuge seems to be part of a plan to eliminate tourism completely and provide very limited access to what could be a growing and thriving recreational area.

We are very concerned about the proposed changes, and would appreciate having a voice in this matter.

Sincerely,

Charles W. Mausey, Mayor

Mike Carney, Alderman

Phyllis Emery, Alderperson

Jacob Rendleman, Alderman

Tony Trombino, Alderman

John Geiselman, Alderman

Steve Stevenson, Alderman

John Flora, Alderman

Tom Keim, Alderman

MAYOR
Charles W. Mausey

CITY CLERK
Joyce A. Carney

TREASURER
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U.S. Rep. John Shimkus

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JOHN M. SHIMKUS
19TH DISTRICT, ILLINOIS

513 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
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ENERGY AND COMMERCE
COMMITTEE

SUBCOMMITTEES:
ENERGY AND AIR QUALITY
VICE CHAIRMAN

HEALTH
TELECOMMUNICATIONS AND
THE INTERNET
BALTIMORE CAUCUS
CO CHAIRMAN

Congress of the United States
House of Representatives
Washington, DC 20515-1319

February 21, 2006

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www.house.gov/shimkus

Director H. Dale Hall
U.S. Fish and Wildlife Service
1849 C St NW
Mail Stop 3238 MIB
Washington, DC 20240-0001

Dear Director Hall:

Thank you for the opportunity to comment on the Crab Orchard National Wildlife Refuge Environmental Impact Statement. Although the Refuge is not within my Congressional District, I certainly appreciate the shared boundary with the Shawnee National Forest which is within my Congressional District. I also appreciate the U.S. Fish and Wildlife Service's efforts to offer alternatives for the management of the Refuge.

While I understand that the Refuge preferred alternative is Alternative E, I believe that combining the resource goals of Alternative E with the strong recreational goals found in Alternative B is the best course of action. I believe that Alternative B provides the best opportunities for recreational use of the Refuge. Alternative B would allow equestrian use on "public roads and a designed River to River Trail (page 50)." As you are aware, the River to River trail is currently the only designated trail in the Shawnee National Forest. I am certainly in support of the additional recreational opportunities that would be provided by connecting the River to River trail to areas in the Refuge for hikers and horseback riders.

It is important that the Refuge not diminish the status of recreation to a secondary role in management of the Refuge. Recreation and resource management should not be mutually exclusive.

I am also very concerned about access to private property tracts within and along the borders of the Crab Orchard National Wildlife Refuge. Any final plan should include options to maintain access to private property.

I urge you to work to develop a management plan alternative that allows the agency to provide both resource management and recreational opportunities. I also urge you to continue to work for a trails system that will support equestrian use both in the Refuge that will link with the trail system being established in the Shawnee National Forest so that horseback riders may enjoy both the Forest and the Refuge. Therefore, I encourage you to work with local partnership groups in finding a way to help support trail maintenance activities in order to minimize the seasonal closures proposed in Alternatives B, C, and E.

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U.S. Rep. John Shimkus

Director H. Dale Hall
February 21, 2006
Page # 2

Thank you in advance for your attention to this issue. I regard it as an issue important to the equestrian use in the Shawnee National Forest, which is a vital socio-economic issue for my District. I will continue to provide the leadership and support in the House of Representatives to see that there is adequate trail access in both the Crab Orchard National Wildlife Refuge and the Shawnee National Forest which includes the River to River Trail.

Sincerely,



JOHN SHIMKUS
Member of Congress

JMS:hrh

cc: Secretary Gail Norton

Mr. Dan Firsk, Refuge Manager, Crab Orchard National Wildlife Refuge ✓

Animal Protection Institute



**ANIMAL
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January 9, 2006

Refuge Manager
Crab Orchard National Wildlife Refuge
CCP Comment
8588 Route 148
Marion, IL 62959

Sent via U.S. Mail and e-mail: conwr-ccp@fws.gov

RE: Draft CCP and EIS for Crab Orchard National Wildlife Refuge

To Whom It May Concern:

On behalf of the Animal Protection Institute (API) and our 85,000 national members and supporters, 4,900 of whom reside in Illinois, we are pleased to offer these comments on the Draft Comprehensive Conservation Plan and Environmental Impact Statement (Draft CCP/EIS) for the Crab Orchard National Wildlife Refuge.

Our organization is very concerned that in managing National Wildlife Refuges (NWRs), the U.S. Fish and Wildlife Service (FWS) has strayed far from its own policy, which "directs that *wildlife comes first* in the National Wildlife Refuge System" (602 FW § 1.4A; emphasis added). Many refuges allow, and even encourage, activities detrimental to wildlife, including hunting, fishing, trapping, motor boating, and jet skiing. In many instances, these recreational uses are permitted in the absence of thorough and accurate impact assessments and biological data on the species inhabiting and migrating through the refuge.

While the National Wildlife Refuge System Improvement Act of 1997 16 U.S.C. § 668dd, et seq. (hereafter "the Act") establishes hunting as a priority use, the Act also requires refuges to conduct rigorous scientific research into the status of refuge wildlife populations and use this information to guide refuge planning. Moreover, wildlife trapping is not included as a "priority use" in the Act and therefore does not carry the same weight in regard to activities that refuge managers are expected to favor and expand in the management planning process.

It is our hope that the Crab Orchard National Wildlife and Fish Refuge management team will help to restore this public land system to its original purpose of providing a "refuge and breeding place" for "migratory birds, other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and aquatic plants." (Per Public Law 268).

Requirements of the National Wildlife Refuge System Improvement Act of 1997

FWS regulations require that before the sanctioning of hunting, trapping, or fishing can occur, a determination must be made that "wildlife are surplus to a balanced conservation program on any wildlife refuge area" (50 C.F.R. §31.2 et seq.). To determine if there is a surplus of wildlife on a refuge, the "populations and requirements of wildlife species ... shall be determined by population census, habitat evaluation, and other means of ecological study" (Id. at §31.1).

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Further, the Act requires that the FWS “ensure the biological integrity, diversity and environmental health of the [Refuge] System are maintained” (Section 7(e)(2)(B), National Wildlife Refuge System Improvement Act) and that refuge planning be firmly grounded in these concepts. A thorough discussion and investigation of the biological integrity, diversity, and environmental health of a refuge must therefore occur before planning can ensue.

In developing each comprehensive conservation plan under this subsection for a planning unit, the Secretary, acting through the Director, shall identify and describe ... the distribution, migration patterns, and abundance of fish, wildlife, and plant populations and related habitats within the planning unit (Section 7(e)(2)(B), National Wildlife Refuge System Improvement Act)

The mere presence of a species on a refuge is not evidence of a surplus; rather, a surplus determination has to consider both the population size and requirements of the target species. If no surplus is determined, then, unless the species is damaging or destroying federal property within a refuge, the species cannot be subject to live removal or lethal control, including through official animal control operations.

Therefore, attempting to determine compatible wildlife-dependent recreation for the Crab Orchard National Wildlife and Fish Refuge before this process has been completed may violate these mandates. This is especially true for the consideration of hunting and trapping, since both activities result in the direct and intentional removal of species and can negatively impact populations, particularly when such activities are geographically focused in a particular region and/or on a particular species.

The Current Trapping Program Should Be Suspended

The Draft CCP /EIS is particularly weak in the evaluation of the impacts and compatibility of trapping on the refuge.

According to the 1997 U.S. Fish and Wildlife Service National Wildlife Refuge Trapping Survey, Crab Orchard National Wildlife Refuge has three trapping programs for which the primary purposes are facilities protection, research, and recreation. Target species include muskrat, beaver, raccoon, opossum, striped skunk, weasels, mink, red fox, grey fox, and coyote. According to the survey, the types of traps used on the refuges include live enclosure, steel-jaw leghold, and Conibear-type kill traps. The Draft CCP/EIS also indicates that snares are used.

However, the Draft CCP/EIS fails to describe the impacts that the current (and future) trapping programs have on the environment and on target and non-target wildlife. In fact, trapping receives only brief mention in the Draft CCP/EIS, in the Appendix, in the form of the Compatibility Determination. There, only one (recreational trapping) of the three types of trapping programs conducted at the refuge is evaluated. [The Determination states, “*This compatibility determination does not apply to trapping activities where the Service awards a contract or permit for the removal of animals to facilitate management.*”]

Consequently, the Draft EIS/CCP does not allow for the adequate evaluation and consideration of the Refuge’s trapping programs within the proposed alternatives. It is therefore premature for the FWS to issue a Final CCP and EIS prior to a thorough assessment of the Refuge’s trapping programs.

Moreover, the Compatibility Determination’s evaluation of recreational trapping appears to be largely based on conjecture rather than rigorous scientific study specific to wildlife populations and dynamics of the Crab Orchard National Wildlife and Fish Refuge.

Animal Protection Institute

The Compatibility Determination states that “*individual animals are harvested and removed, yet data indicates these furbearer populations, with the exception of red fox, are increasing*”; however, it fails to indicate the source of the “data” on which this assertion is based. Since a program for surveying of furbearing species is not listed on page 94 of the Draft CCP/EIS, where refuge directed monitoring programs are detailed, we presume that the FWS is relying on wildlife population “data” from the state wildlife agency. If so, this data must be independently and rigorously evaluated by the FWS and should include information specific to the species trapped within the refuge boundaries. In addition, the FWS admits that trapping may directly impact wintering waterfowl through disturbance and displacement and that trappers may “*inadvertently take non-target species such as river otter.*” However, it later claims that such impacts by trappers are “insignificant,” but offers no explanation for how this was determined.

The Draft Compatibility Determination also fails to evaluate the benefits to migratory birds, wintering waterfowl, and fish by the habitat altering behavior of heavily trapped species such as muskrat and beaver, and the impact of trapping on these beneficial activities or how trapping, which in general fails to follow the laws of natural selection by removing the healthiest animals, affects the genetic health and vigor of populations in the long term.

API contends that FWS must either fully analyze its trapping programs in a revised Draft EIS/CCP and re-circulate an amended version for public comment or suspend the current trapping programs until these programs are fully analyzed, publicly reviewed, and brought into compliance with Refuge policies, regulations, and statutes.

Body-Gripping Traps Pose Serious Hazard to Non-Target Wildlife

There is widespread agreement among veterinarians, veterinary associations, biologists, and the general public that the primary traps used today—legholds, Conibears and snares—are both inhumane and indiscriminate.

In addition, leghold traps and Conibear traps pose a serious hazard to non-target wildlife, including threatened and endangered species (T&E species). Records obtained from state and federal wildlife agencies by API show that bald eagles, lynx, wolves, and other species listed under the Endangered Species Act have been injured and killed in leghold and Conibear traps. Recently, when animal advocates provided documentation that three Bald Eagles and numerous Canada Lynx had been incidentally killed in traps set for coyotes in the state of Maine, the Maine Attorney General ruled that the state Inland Wildlife & Fisheries agency had to end its coyote trapping program until the state obtained an Incidental Take Permit (ITP) under the Endangered Species Act from the FWS. We contend that this is just the beginning of a much larger issue regarding the significant hazards traps pose to threatened and endangered species and that both state and federal wildlife management agencies are required by law to mitigate harm and seek ITPs if there is potential harm/take of T&E species from the use of traps. The Draft CCP and EIS for the Upper Mississippi River National Wildlife and Fish Refuge, however, fail to address this issue. We therefore contend that the FWS must reissue a revised DCCP and EIS that thoroughly analyzes this issue and open this document up to public comment prior to the issuance of a final CCP and EIS.

Any assessment of trapping on refuges must include a thorough literature review of trap studies and of the potential impacts traps may have on non-target wildlife. At a minimum, the following considerations should be incorporated into the Refuge trapping program assessment:

A. Leghold traps

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The Animal Welfare Institute sent a questionnaire to veterinarians in Illinois, Michigan, New York, Texas, North Dakota, Washington, and Louisiana. Veterinarians were asked if they supported or opposed the use of this trap. An overwhelming percentage, 79.3 percent of the 936 veterinarians responding, opposed steel-jawed leg-hold traps. The Animal Welfare Institute survey also requested information relative to injuries to pets and wild animals. More than 4,000 injuries or deaths of domestic or non-target animal were reported from the 936 veterinarians in seven states (CDFG pg. 95-96).

Atkeson (1956) reported that >24% of minks, raccoons, and foxes were crippled while escaping from leghold traps set in on a National Wildlife Refuge in Alabama over a four year period. In contrast, opossums and skunks were crippled in only 2% of captures. For the purposes of this study, "all animals were considered crippled that pulled out of traps, escaped by wringing off or gnawing off feet, or escaped with traps." During a study of population dynamics in Canada, MacPherson (1969) found most trapped arctic foxes he observed had ingested pieces of their own hair, bone, and skin. The struggle can also lead to a variety of bone fractures, including simple, compound, and compression fractures. Olsen et al. (1986) observed a 91% leg fracture rate for coyotes caught in unpadded traps, while 3 of 4 captured kit foxes caught had nearly or completely amputated their trapped leg. Damage to teeth and gums can occur when a captured animal attacks the trap with its mouth in an attempt to escape (MacPherson 1969; England 1982; Van Ballenberghe 1984; Keuhn et al. 1986; Kern et al. 1994; Hubert et al. 1997), though this type of injury is generally ignored by most trapping studies (Onderka et al. 1990). England (1982) found severe dental injuries in 58% of adult foxes captured in leghold traps while Van Ballenberghe (1984) reported that injuries to teeth, lips and gums occurred in 46% of 109 wolves captured. Other studies corroborate these findings (Berchielli and Tullar 1980; Novak 1981; Englund 1982; Van Ballenberghe 1984; Tullar 1984; Kuehn et al. 1986; Linhart et al. 1988; Olsen et al. 1988; Onderka et al. 1990; Phillips et al. 1992; Kern et al. 1994; Mowat et al. 1994; Proulx et al. 1994; Phillips et al. 1996; Hubert et al. 1997).

Despite the preponderance of evidence showing that leghold traps cause severe injuries to captured animals, most studies have actually underestimated the extent of injuries caused by these devices. With very few exceptions (Onderka et al. 1990; Hubert et al. 1997) injury studies have limited their analysis of injuries to the trapped limb (Tullar 1984; Olsen et al. 1986, 1988; Houben et al. 1993; Gruver et al. 1996; Phillips et al. 1996) or the leg plus the head (Van Ballenberghe 1984; Kern et al. 1994) and thus have not considered injuries to other areas of the body. The importance of examining the whole body was stressed by Hubert et al. (1997), who found leg injury scores of coyotes were approximately 15% lower than whole body scores. Without an analysis of the entire body, critical injuries may be missed and therefore the true extent of injury not determined.

Aside from the injuries they cause, leghold traps are notorious for not being species-specific. Beasom (1974), Berchielli and Tullar (1980), and Novak (1981) found nontarget animals comprised 56%, 32% and 76% of leghold captures, respectively and Beasom (1974) noted that "more individuals and species of animals were caught with steel traps in this study than with any other control methods used."

B. "Padded" Leghold traps

While padded leghold traps are ostensibly more humane than unpadded traps, studies confirm that even padded traps can cause significant damage to trapped animals.

"In a letter to the Department dated August 13, 1990, Dr. N. C. Buyukmihci, DVM, Associate Professor of Surgery, University of California, Davis, writes: 'Several studies have been done comparing the effects of padded versus unpadded traps on various animals. These have shown that both could and did cause the same degree of damage to a limb, including laceration of skin and fracture of bones'" (CDFG pg. 98).

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"Padded leghold traps show injury reduction for some species, but not for others. They have failed to consistently reduce injuries to raccoons. (Bishop 1990)... The No. 1 ½ size padded traps cause fewer injuries to foxes than standard traps, but there was no difference of bobcats. Considering research findings to date, Soft Catch traps achieve injury reduction for some species, but not for others" (Bishop 1990, from CDFG).

While padded leghold traps have been shown to reduce the occurrence and severity of injuries in a number of target species by 48–85% (Saunders and Roswell 1984; Olsen et al. 1986; Onderka et al. 1990), injuries have not been eliminated and injuries to smaller nontarget species may be especially severe. Even if captured animals are alive when released, any injury or disfigurement will invariably reduce an animal's ability to survive. Van Ballenberghe (1984) noted that "Reduced fitness and shortened life span ultimately resulting from capture caused injuries may be as important to consider as proximate mortality."

New devices have the potential to reduce the incidence of non-target captures. Pan tension devices (PTD) have been shown to exclude up to 98% of nontarget animals in studies (Turkowski et al. 1984; Phillips and Gruverd 1996). However, since PTDs also reduce target capture rates, it is unlikely that they will be widely used by commercial and recreational trappers. If the refuges insist that leghold traps are needed for research, then padded traps equipped with pan tension devices should be required.

C. Conibear Traps

As a trap designed to kill animals instantly, the Conibear poses a serious hazard to T&E species and other non-target wildlife. While studies suggest that the ability of kill-type traps to produce rapid death have been greatly improved, for a number of species (Proulx et al. 1989; Barrett et al. 1989; Proulx et al. 1990; Proulx and Barrett 1993; Proulx et al. 1995) there have been no significant advances in reducing nontarget captures. Research has shown that for every target animal captured at least two other nontarget animals are caught (Novak 1987; Barret et al. 1989; Proulx and Barrett 1993).

The California Department of Fish and Game reported that "Several factors keep this trap from killing consistently and quickly, including the size of the animal, the species involved, the position of the animal at trap closure, and the impact and clamping levels of the trap. The most significant flaw is the trigger system that performs erratically, preventing a fatal blow to the animal's body" (CDFG pg. 94).

Alternatives to Trapping for Migratory Bird and Facilities Protection

Research indicates that killing predators to protect ground-nesting birds does not reliably increase breeding populations of ground-nesting birds; where such increases have been documented, they tend to be temporary at best (Cote and Sutherland 1997). Lethal predator control raises ethical questions and may be no more effective, especially over the long-term, than innovative non-lethal solutions (Goodrich and Buskirk 1995).

It is well known that killing wildlife as a means to resolve human/wildlife conflicts is ineffective in the long run, an important argument that the Draft CCP/EIS does not adequately address. When animals are killed, they leave behind a habitat vacancy that new animals eventually fill — particularly if the attracting features or resources have not been eliminated. There are many humane, non-lethal wildlife management tools available to resource and refuge managers to alleviate conflicts. For example, with regard to beaver conflicts, the construction of water-level control devices could be used to prevent flooding and could serve as a humane substitute for trapping and killing beavers. Such devices have been successfully

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implemented by municipalities and state wildlife agencies in a number of states, including Maine and Connecticut, and should be used more frequently by federal wildlife management agencies.

With this in mind, we request that the FWS provide the following information in a revised Draft CCP and EIS:

- Current and historic (last 20 years) population status of species targeted in refuge trapping programs.
- Number of target and non-target animals trapped each year under the current trapping program(s) and projected data on number of animals trapped under any proposed action.
- Impacts of species-specific "overpopulations" on ecosystem and / or other species.
- Description, and degree, of damage to facilities/habitat as a result of perceived "overpopulations" of targeted species, if any, and effects of trapping in past years on perceived damage and on targeted species populations.

We also ask that the FWS discuss and evaluate the following:

- Alternative, non-lethal methods of habitat protection/facilities management.
- What efforts have been taken to reduce trap-related injuries to captured animals?
- What are the real and potential impacts to non-target species, including threatened and endangered species?
- What threatened and endangered species have been incidentally trapped on the refuges that currently allow trapping?
- What efforts are taken to ensure that non-target species will not be injured or killed by the current or proposed trapping programs?
- Feasibility of implementing non-lethal water-level control devices for controlling beaver damage (including, but not limited to, Beaver Deceiver devices, Clemson Levelers, Beaver Bafflers, diversion dams, pipe systems).
- Feasibility of implementing other non-lethal beaver control methods including, but not limited to, different types of fencing (including wire mesh and electrical systems), tree wrapping, and textural and taste repellents.
- Complete assessment of the economic, environmental, and social benefits that beaver, muskrat and other trapped species provide to habitat and wildlife enhancement and for wildlife watching activities.

Public opposition to trapping

The Draft CCP and EIS fail to fully assess public attitudes toward various activities allowed on the Crab Orchard National Wildlife and Fish Refuge.

The majority of people who visit refuges do so to observe wildlife and enjoy nature. According to the FWS 1995 survey of 27.1 million refuge visitors, 81.5 percent went for environmental education purposes, to view and photograph wildlife and for similar non-consumptive reasons, while only 4.5 percent went there to hunt or trap. Most Americans view wildlife refuges as sanctuaries, places where wild animals are protected from human exploitation. A 1999 national Decision Research public opinion poll showed that a vast majority of Americans oppose trapping on National Wildlife Refuges and would like to see this public land system managed for the benefit and protection of wildlife:

- 79% of those polled opposed allowing trapping on America's National Wildlife Refuges.
- 88% of those polled support either a ban on all commercial and recreational trapping for fur or a ban on cruel types of traps, such as leghold or body-gripping traps.
- 88% agreed that wildlife and habitat preservation should be the highest priority of the refuge system.

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- 83% disagreed that the rights of hunters and trappers are more important than the need to protect wildlife on refuges.
- 78% opposed allowing refuge officials to kill wildlife by trapping, hunting, or poisoning.
- 78% oppose tax dollars being spent to allow commercial fur trapping of wildlife on refuges
- 71% agreed that as long as refuge officials can remove dangerous animals, there is no reason to allow any other killing of animals on refuge property

We ask that national polling data that specifically address public attitudes about recreational activities on refuges be incorporated and cited within a revised Draft CCP and EIS.

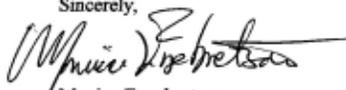
Conclusion

We appreciate the opportunity to comment on this issue, which is of great importance to our members and supporters nationwide.

To reiterate, API contends the FWS cannot separate the impact assessment of its trapping programs from the CCP/EIS process. The FWS must either fully analyze its trapping programs in a revised Draft CCP/EIS and re-circulate an amended version for public comment or suspend the current trapping programs until these programs are fully analyzed, publicly reviewed, and brought into compliance with Refuge policies, regulations, and statutes.

We thank you for your consideration of these comments and look forward to reviewing a revised Draft CCP and EIS when these documents become available and request to be informed of their availability for further comment.

Sincerely,


Monica Engebretson
Senior Program Coordinator


Camilla H. Fox
Director of Wildlife Programs

RELEVANT LITERATURE

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Audubon Council of Illinois

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AUDUBON COUNCIL of ILLINOIS

13474 N. 130 E Rd.
Homer, IL 61849
January 12, 2006

U. S. Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attn: Draft IES Comment
8588 Route 148
Marion, IL 62959

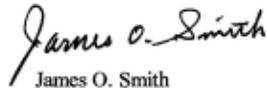
Dear Sirs;

The Audubon Council of Illinois consists of representatives of approximately 20,000 members of the National Audubon Society in the state of Illinois. At the last meeting of the Audubon Council of Illinois, 12/10/05, a motion was made to send a letter to the Crab Orchard National Wildlife Refuge concerning the proposed management plan. I was the one selected to compose and send the letter.

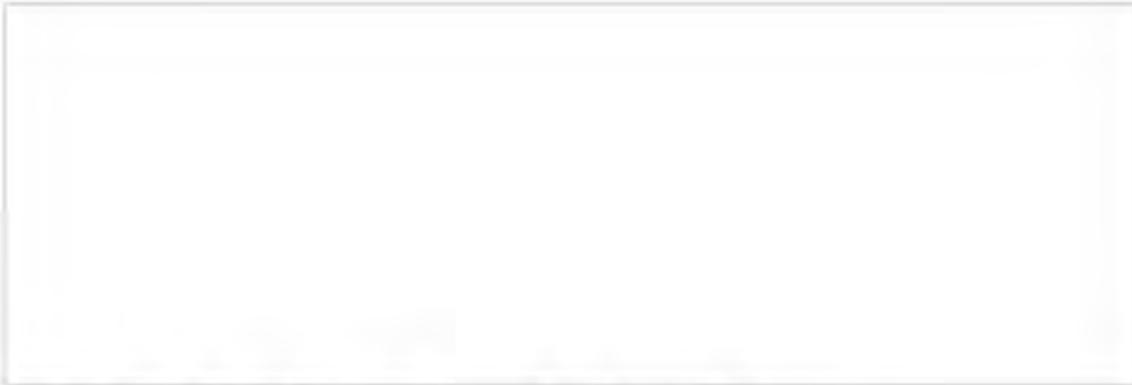
The full IES is far too complicated to comment on all of it.

What we do object to is one proposal to remove all pines. What the reason is other than that these particular species are not native to this exact area. They are not non-native; all being native North American trees that were planted during the 1930's mainly by the CCC. These are 70 year old that provide habitat for a large number of birds and other wildlife. To remove pines so that native hardwoods could be planted would reduce forest diversity for at least 50 years. Various hardwoods are now becoming established in the pine groves. The few remaining living CCC veterans would be most disappointed to know that their efforts were being destroyed for some idealistic notion.

Sincerely yours,


James O. Smith

Back Country Horsemen of Illinois



"Marcia & Dwight Pray"
<mulehavn@shawneeli
nk.net>

01/16/2006 09:00 PM

To: <r3planning@fws.gov >
cc:
Subject: Crab Orchard NWR CCP

As chairman of Back Country Horsemen of Illinois and an avid trail rider I support any alternative that allows the River to River trail to become a designated trail in the refuge. This would be safer than riding 5 miles of road.

Sincerely,
Dwight Pray, Chairman BCH of IL

California Wildlife Federation Inc.



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CALIFORNIA WILDLIFE FEDERATION, INC.

P.O. Box 1527 • SACRAMENTO, CA • 95812-1527
(916) 441-7563 • FAX (916) 441-6490

January 12, 2006

US Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attn: Draft EIS Comment
8588 Route 148
Marion, IL 62959

Dear Sirs:

The California Wildlife Federation is a sportsmen's conservation organization in California. We hold among our purposes, to secure more and better outdoor opportunities for all citizens through the promotion of and better understanding of conservation, enhancement, scientific management, and wise use of our natural resources.

We see in the attempt to prohibit hunting and trapping on Crab Orchard National Wildlife Refuge near Marion, Illinois, a poorly reasoned and shortsighted plan. Wildlife conservation in this country was developed by, was and has been lobbied for, promoted and sustained, and paid for by recreational hunters and fishermen.

The love of hunters for the game they pursue, forged the science of game management and hunting regulation. To exclude sportsmen now would deny the refuge of a vital management tool for sustaining a healthy wildlife population.

Thank you for giving us the opportunity to comment.

Sincerely yours,

Randall S. Walker
President
California Wildlife Federation, Inc.

Crab Orchard Boat & Yacht Club

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RESPONSE TO CCP DRAFT PROPOSAL

We would like to present the following information as support for allowing the Crab Orchard Boat & Yacht Club to continue serving the general public of Southern Illinois:

The Wildlife's Comprehensive Conservation Plan proposes to convert the Club's facilities into a concession contract. Quote "**This would end what amounts to private use of public land and make the facilities more available to the general public**". That statement is very confusing when you consider the following:

January 26, 1973 Special Use Permit # Sup-41-73 was issued to the Crab Orchard Boat & Yacht Club. The Purpose stated was "Maintaining and Operating a **Public Membership Club**".

The lease we have today is basically the same as the one placed into effect on **April 1, 1985** which states in part --- Whereas, it is the purpose of the Secretary to facilitate enjoyment by the **general public** of the recreational opportunities of the area to an extent consistent and compatible with the primary purpose and ---- Whereas, the accomplishment of said purpose requires that certain facilities and services be provided for the **public** visiting the refuge and ----- Whereas, the Secretary desires the Club to establish and operate such facilities and services at reasonable rates under the supervision and regulation of the Secretary.

Section 2 Paragraph A (2) states, the Club shall provide necessary facilities and services necessary which facilities and services shall be constructed and otherwise provided at the expense of the Club for the **general public** which at a minimum shall be a Clubhouse, comfort station, handicapped fishing docks, etc.

Clearly the Club was established for **Public Membership and General Public Use** but certain provisions in the lease, drawn up by the refuge, with virtually no input from the Club, state the following:

Section 3 Paragraph B Expressly prohibits the Club from offering for sale to non-Club members any merchandise or service.

Paragraph c. The Club facilities shall only be made available to Club members in good standing.

A membership limit of 400 members was allowed for the Club.

Section 9 Franchise Fee—The Club shall pay to the Regional Director prior to February 15 an annual Base Fee of \$500.00. In addition the **Concessionaire** shall pay 2% of the gross annual receipts for the preceding year.

Section 18 Paragraph O (is entitled)Inspection of Concessionaire Facilities

Summary Analysis

1

Crab Orchard Boat and Yacht Club

RESPONSE TO CCP DRAFT PROPOSAL

From the lease information it is obvious that the Refuge interrupted this as a **public membership** and Crab Orchard Boat & Yacht Club is a **Concessionaire** in carrying out that role.

In many ways we do not fit the role of a truly private club. We are not allowed to control access through the club grounds during the hours it is open. People may drive through the facility and even stop and fish from the bank if they so desire. Anyone who desires to become a member may sign up and become a member within a short time frame. Currently we are exhausting the waiting list every year so there is no problem becoming a member. In fact on average one out of five prospective members actually follow through and join the Club. Generally we will have about 20 openings each year for new members and that requires a waiting list of approximately 100 names. Currently we have 43 names on the waiting list for membership in 2006.

Another point needs to be made about the limited use of the facility by the public. There are more of the general public that use this facility than the Crab Orchard Campgrounds over an annual period of time. There are several reasons for this. There are many meetings such as Churches, Businesses, Senior Citizen Groups, Bass Clubs, Federal Prison System, Family Groups, etc. that use the facility year round. We maintain a calendar for scheduling the meetings and it should be noted that these events are conducted on a "no charge" basis.

There are many other reasons why we as a "Not For Profit Organization" can better serve the general public such as:

- A) The profit motive is not in the equation. That is critical in the ultimate cost borne by the general public. Our goal is to provide a quality environment for the members at minimum cost.
- B) We try to accomplish leasehold improvements by paying for the materials and doing all possible labor on a volunteer basis. Our annual dues are only \$100 per member however we were able to spend over \$100,000 in the last year and one-half to improve the facility. We have approximately seven meals for the membership and their guest per year. We have often said the food a member can consume in a year can more than off set the annual dues expense.
- C) We have a more vested interest in the Club for the long haul whereas in a truly business venture many things can be compromised especially near the end of a contract period.
- D) We have a Custodian available 24-7. That is very important to the people from a safety standpoint.
- E) We provide a great fellowship atmosphere for members, many of whom come out to the facility very early in the morning to fish, talk, drink coffee and just visit. That is not a common occurrence when profit is the driving force.
- F) We have a designated boat, in the water at all times, to help with any of the general public who may be in distress or in need of help on the lake. Strictly a courtesy to the public and general membership.
- G) We have worked effectively with the Refuge Management over many years and want this relationship to continue for many more. (Club was incorporated in 1941)

Crab Orchard Boat and Yacht Club

RESPONSE TO CCP DRAFT PROPOSAL

- H) The Crab Orchard Campground charges the public \$3 per vehicle just to enter. The boat club entrance is always open to the public from 7AM to 10PM daily. The public drives, walks, jogs, and bicycles through the grounds daily. Neighboring households bring their children to play on our playground without hindrance.
- I) The docks at Playport are gated and locked. The public must pay a fee to gain access and this is limited by the number of docks available. The docks at the Club are open for public inspection and limited in use by the number of members imposed on the Club by our lease with the Refuge. There are no restrictions on who may become a member.

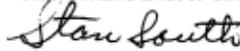
Potential solution to perceived problem:

- 1) Eliminate maximum membership cap?
- 2) Change Club name?
- 3) If additional concessions need to be made by the Crab Orchard Boat & Yacht Club, what is that in order for us to comply with Refuge Criteria?

We trust your evaluation will result in a favorable determination for our facility.

Thank you

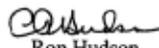
Crab Orchard Boat & Yacht Club Trustees



Stan South

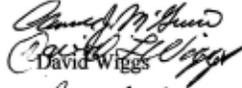


Mike Petty



Ron Hudson

Carroll McGuire



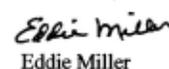
David Wiggs



Don Vaughn



R.E. Bailey



Eddie Miller



Ray Crow

October 26, 2005

Crab Orchard Waterfowl Association

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Crab Orchard Waterfowl Association
10242 Limb Branch Lane
Marion, Illinois 62959
October 31, 2005

U.S Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attention: Draft EIS Comment
8588 Route 148
Marion, Illinois 62959

Thank you for the opportunity to express our concerns and proposals concerning your Comprehensive Conservation Plan for Crab Orchard National Wildlife refuge. You agreed in your brochure to reexamine your proposals and possibly make modifications on what you learn from our comments. The Crab Orchard Waterfowl Association would like to make the following comments and suggest the following proposals.

There are currently more acres of forest in Illinois than at any time since at least 1924 (<Herkert, J.R. ed 1992. >) Despite this increase in forest acreage, populations of many species of forest birds continue to decline. In Illinois, nest predators may destroy as many as 80% of all nests for some species of woodland birds (<Robinson, S. K 1988. >) Clearly the problem is more than just the acreage of habitat available.

The Draft EIS/CCP supports reforestation of approximately 500 acres of forest. The estimated cost for the necessary reforestation would be \$ 500.00 per acre (<Final Restoration Plan July, 1997. >) for a total cost of \$ 25,000.00. Our Association will not support any plan that suggests more agriculture land being converted to reforestation. After weighing the pros and cons **should your decision be to add more acres of reforestation, we would suggest that the same number of acreage be planned for wetland development, conservation, and management for Ducks, Geese and Shore Birds.** Every attempt should be made to avoid reforestation in goose use areas.

Public Law 361 dated August 1947 "The Wildlife Conservation Law" and one of Crab Orchard National Wildlife Refuge's four objectives are to protect, enhance, and manage natural resources and the Refuge landscape through an ecosystem approach that sustains optimum populations of migratory waterfowl, native fish and wildlife species, and threatened and endangered wildlife. This refuge provides wildlife habitat management for one of the main waterfowl stops along the Mississippi Flyway. In order for that to continue **we propose that the deer season on the closed portions of the refuge be moved to October and November each year.** Deer hunting in the closed areas of the refuge during the month of December is having a devastating effect on the early migrating geese that are stopping here in November and December each year. In order to protect the migrating waterfowl there should be no activities in the restrictive (closed) areas of the refuge during the waterfowl season. **We propose that all the now restrictive (closed) areas remain closed to protect the fall migration of waterfowl.**

Conversion of fescue pastures to native, warm-season grasses and more cool-season grasses will only benefit forest and grassland birds. We do not agree with this plan because again you are taking away waterfowl habit and grazing pastures. **Should you do this we recommend that the same number of acres used for this conversion be replaced with wetland development and management for waterfowl.**

There are a small flock of resident geese that have made the refuge their home. You permit nesting facilities for other types of birds and are proposing a reforestation plan for the Neotropical Migrant Songbird. **We would like to request that you furnish or allow our association to furnish nesting structures for the resident geese that are now residing on the refuge.**

Thank you for considering our proposals and request. We feel like they are all valid recommendations that you may take to the Regional Director for approval to adopt for the management direction for Crab Orchard National Wildlife Refuge.

Glenn Lancaster – President Crab Orchard Waterfowl Association.

Crab Orchard Waterfowl Association

Mike Brown/R3/FWS/DOI
11/28/2005 07:22 AM

To: Thomas Palmer/R3/FWS/DOI@FWS
cc
bcc
Subject: Fw: Meeting

Mike Brown
Refuge Wildlife Biologist
Crab Orchard National Wildlife Refuge
8588 Rt. 148
Marion, IL 62959

618/997-3344 x317 mike_brown@fws.gov

----- Forwarded by Mike Brown/R3/FWS/DOI on 11/28/2005 07:22 AM -----



"Glenn Lancaster"
<glenland@henderson.net>

11/27/2005 07:47 PM

Please respond to
glenland@henderson.net

To: dan_frisk@fws.gov, mike_brown@fws.gov
cc: tbgb@hcis.net, DMhunt148@aol.com,
fpetersohn1932@aol.com
Subject: Meeting

Please submit this letter with our comments concerning your
Comprehensive Conservation Plan.
We would also like to meet with you as soon as you know what plan you
are going to recommend for Crab Orchard National Wildlife Refuge.



Thank You Glenn Comprehensive_Conservation_Plan.doc

Florida Airboat Association

512



Gatorstick@aol.com
01/10/2006 08:46 PM

To: conwr-ccp@fws.gov
CC:
Subject: Support Hunting on Crab Orchard NWR

Folks,

Please Support Hunting and trapping on Crab Orchard NWR as this is a compatible & sensible outdoor family recreational activity.

Thank you.

Captain Phil Walters
Florida Airboat Association-President
16147 Ravendale Dr.
Tampa, Fl. 33618
813-968-6154

The Florida Airboat Association is an umbrella statewide sportsmen organization of airboat related businesses, organizations and clubs. We actively promote safe boating while protecting our natural resources. The FAA members have a long tradition as leaders in conservation, humanitarian aid and protection of Florida's native habitats by both word and action of it's members. The members of the Florida Airboat Association received United States Congressional recognition in 2005 for their resolve in volunteer rescue efforts of hurricane Katrina victims.

Girl Scouts of Shagbark Council



Thomas J. Larson
Crab Orchard National Wildlife Refuge
CCP Comment
8488 Route 148
Marion, IL 62959

Girl Scouts of Shagbark Council
304 N 14th Street
Herrin, IL 62948
T 618 942 3164 F 618 942 7153
Toll Free 888 317 6353
girlscouts@shagbark.org

January 17, 2006

Dear Thomas J. Larson:

Girl Scouting builds girls of courage, confidence, and character, who make the world a better place. We believe in this mission and how through these characteristics, the girls of today can make a difference.

Educating today's youth in the areas of environmental conservation and preservation can be traced back to the start of the Girl Scout movement in 1912. Today, Girl Scouts continue to learn about the earth and how they can make a difference through helping endangered species, developing creative recycling projects, and working on a variety of earned age-appropriate awards such as the Environmental Health Badge or the Eco-Action Interest Project Award.

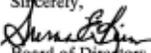
In 1951, Girl Scouts in Southern Illinois partnered with the Crab Orchard National Wildlife Refuge to provide girls with outdoor education opportunities. The result was Camp Cedar Point, a place where girls of all ages, ethnic origins, and socioeconomic backgrounds could gather to learn and experience nature. Five decades—and countless young minds—later, Cedar Point continues to teach girls about the environment.

Just this past year, nearly 1,500 girls between the ages of five and seventeen took part in more than 850 hours of environmental education at Camp Cedar Point. Cedar Point allows girls to see nature at its finest. For most of these girls it is a place for many "firsts" such as their first camping experience, lake swim, out-of-doors scientific experiment and hiking experience. Each stay provides lessons in stewardship, leadership, and self-confidence. At Cedar Point the modern technology of today takes a backseat to the mysteries and fascinations of nature.

During summer resident camp, attendees receive environmental instruction daily as taught by the camp's environmental program director. Lessons include the importance of conservation and preservation as outlined in the Refuge's goal on page 370 of the CCP draft. Girls also learn about the natural history of the property, its flora, fauna, and geological make-up. Daily attention to these natural elements builds knowledge and appreciation for all the components of the ecosystem. During weekly cookouts, girls practice fire safety and leave-no-trace procedures for low-pact camping. These skills can be brought home and shared with their families who may also use the Refuge resources.

The Refuge's Comprehensive Conservation Plan included a proposal to set "nominal administrative and use fees" for group camps as described on page 29. The Council would support a nominal annual fee (such as \$100), which would pose little hardship and allow the Council to continue to provide a quality learning opportunity for girls throughout the region. We ask that while setting fees the Refuge keeps in mind the Council's not-for-profit status.

To the Council's delight, Table 4 in the CCP draft shows no indication of plans to phase out the group camps. We believe our shared values as expressed through Refuge goals and the Girl Scout program lead themselves to a continued successful partnership for both our organizations. The council is committed to continuing its work as a Refuge partner in youth education. We would very much like the opportunity to discuss the possibility of a long-term lease for the youth camp with Refuge officials. Our goal is to provide opportunities for girls for many years to come while also helping support Refuge goals and mission.

Sincerely,

Board of Directors
Girl Scouts of Shagbark Council



Where Girls Grow Strong.

Illinois Federation for Outdoor Resources

432



"Cecil Becker"
<iforpresbob@nrsn.com>
>

To: <scnwr-cctv@fws.dmv>
Cc: [REDACTED]
Subject: CRAB ORCHARD EIS & CCP

01/13/2008 07:53 PM

U. S. Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
8588 Route 148
Marion, Illinois 62959

ATTN: Draft EIS & CCP Comment

On behalf of the Illinois Federation For Outdoor Resources (IFOR), an Illinois Not-For-Profit Conservation Organization with a membership in excess of 76,000 outdoor recreational Users we have reviewed your very well prepared Comprehensive Conservation Plan (CCP) and fully support your Plan subject to the following comments: Two areas of major concern to our membership which consists primarily of hunters, fishermen, trappers and Equestrians is those portions of your plan pertaining to trapping, fishing, and Equestrian use.

First and very important to our membership is the inclusion in your plan to continue hunting, fishing and trapping in the refuge. We strongly recommend that these programs be maintained and that they remain in your Final plan. We are aware that Anti-Hunting groups are campaigning very hard to remove all hunting, fishing and trapping from all Federal Refuge lands and we commend the U. S Fish & Wildlife Service for continuing these programs today and into the future and including them in your Comprehensive Conservation Planning.

Controlled Hunting, fishing and Trapping Programs are valued programs which maintain a sound biological balance between wildlife, habitat and the natural resources of the refuge.

Our second concern is that you should maintain a healthy program for equestrians. The proposed horseback riding trails under Alternatives B, C, and E do not provide sufficient trails for equestrians. The elimination of equestrians on the River-to-River Trail would be a significant loss for the many equestrians who travel this trail from the Ohio River to the Mississippi river. We encourage you to provide more designated horse trails under alternatives B, C and E.

In addition we totally disagree with the prohibited use of equestrian trails under Alternative D. We would also like to recommend that all user created trails become designated trails as these trails will allow adjoining property owners to continue enjoying the refuge as they have for many years. Eliminating these trails will lower property values and damage the overall local economy.

Thank you for the opportunity to comment. If our organization can be of any help during this planning process, please do not hesitate to contact us.

C. E. (Bob) Becker

Illinois Trappers Association

Illinois

PAUL E. KELLEY, PRESIDENT &
EDUCATION DIRECTOR
P.O. Box, 75, Hudson, IL 61748

MIKE GRAGERT, VICE PRESIDENT
P.O. Box 20, New Douglas, IL 62874

TIMOTHY M. KELLEY, TREASURER
R.R. #3, Box 111, Petersburg, IL 62675



Association

Trappers

KRAIG KAATZ, SECRETARY
15636 Lockwood Ave., Oak Forest, IL 60452

JOSEPH KELLEY, LEGISLATIVE DIRECTOR
R.R. 1, Box 48, Colfax, IL 61728

346

Dear Crab Orchard National Wildlife Refuge Manager:

On behalf of the Illinois Trappers Association, I would like to thank you for this opportunity to participate in the current Comprehensive Conservation Plan (CCP) process. As the plan will guide Refuge management for the next fifteen years, I submit the following comments with all the respect and thoughtfulness that this occasion dictates and hope they will be considered in a cooperative spirit.

In reference to the main goals set out by the Draft CCP, it is highly encouraging that no major wildlife resource program changes are planned. In particular, we are pleased to see that regulated trapping will continue to be part of the overall wildlife management program at Crab Orchard. It is our opinion that trapping and hunting programs contribute to at least three of the four Primary Purposes of the Refuge. For instance, regulated trapping constitutes one of the most efficient methods by which to control certain wildlife populations and wildlife-related nuisance problems, not to mention being one of the best ways in which to gather reliable data on parameters such as population trends and disease vectoring, clearly contributing to the Primary Purpose of Wildlife Conservation.

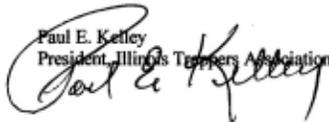
Trapping certainly can play a highly beneficial role in the Agricultural Purpose of the Refuge. When coupling that Crab Orchard is an extremely important migratory waterfowl area with the fact that agricultural practices are integral to waterfowl management on the site, regulated trapping of beavers, muskrats, and the like to protect levees, water control structures, and prevent cropland flooding takes on a critical importance. The ability to use trapping as a management tool also allows for control of animals such as raccoons that can sometimes negatively impact crops.

In regards to Recreation, trapping facilitates every aspect of this Primary Purpose. Trapping is a viable and healthy outdoor activity that can be enjoyed by people of all ages. Those who trap, due to the close contact with wildlife, specifically, and nature, in general, involved with this pursuit, most definitely gain a greater awareness of and appreciation for the resources with which they interact. In addition, almost no other outdoor activity engenders a responsible outdoor code of ethics within its participants than trapping because of the great responsibilities that come with humanely setting and running a trap line.

In summation, because we understand that trapping provides so many tangible benefits towards Refuge management, we are greatly pleased to see that its continued use at Crab Orchard is planned. It is extremely reassuring to know that professional wildlife managers will continue to employ sound wildlife management practices such as trapping in order to insure that our natural resources will be perpetuated in good condition to future generations.

Should you want to discuss any matters brought forward in this correspondence, please feel free to contact me at (309) 726-1443 or at PKELLEYP@aol.com.

Thank you very much for your time and consideration,

Paul E. Kelley
President, Illinois Trappers Association


Help perpetuate the Nation's oldest industry, the "Fur Trade"

National Wild Turkey Federation

470

17 January 2006

U.S. Fish and Wildlife Service
Crab Orchard National Wildlife Refuge

Attn: Draft EIS Comment:

The National Wild Turkey Federation (NWTF) is a conservation organization devoted to the conservation of the wild turkey and the preservation of the hunting tradition. As the regional biologist for the NWTF in IL, IA, and MO I am writing this letter of support for the Crab Orchard Comprehensive Conservation Plan alternative E.

The conservation movement was founded by responsible consumptive users (hunters and fishermen) in the early part of the previous century, recognizing the need to govern the use of renewable resources. At the same time, it was recognized that in order to govern use, reliable data concerning abundance, biology, behavior, and habitat requirements would have to be measured as a basis for recommendations. As early as the late 1930's sportsmen recognized that if natural resource management were to succeed, a significant and reliable source of funding would be required to advance the effort. Since these early days, this user pay, user benefit strategy has flourished along with most hunted or fished species dependent upon the management that hunters and fishermen exclusively pay for. Over the same period of time that sportsmen have gladly paid the way for the success of the conservation movement that supports their passions, other special interest groups have actively fought to deny them their passions. While not all will hunt or fish, it is a fact that most non-consumptive users would not be supportive of having to pay any fee to pursue their passions.

Anti-hunting strategists can not demonstrate how fish, wildlife, and the acquisition and management of the habitats that support them will be paid for in the absence of hunting and fishing and hunters and fishermen. Therefore, it is my belief that managers pay close attention to 2 additional species in decline on the national refuge system including Crab Orchard; the "cash cow" and the "golden goose." Hunters and fishermen only want the opportunity that the resource can support and since they are the foundation of conservation because of their dollars, their needs should be prioritized ahead of all others.

Hunting has always been an accepted use of the refuge system in the past and is currently recognized by professional resource managers responsible for refuge management, as a legitimate use of the area. Therefore, it is our (NWTF) recommendation that hunting remain an authorized recreational activity at Crab Orchard and all other National Wildlife Refuges and expanded where possible.

Sincerely;

John D. Burk
Regional Biologist for IL, MO, and IA
National Wild Turkey Federation
(573)592-7865

National Wild Turkey Federation



"jburknwtf"
<jburknwtf@sbcglobal.net>

01/17/2006 12:08 PM

To: <conwr-ccp@fws.gov>
cc: "Garver, J" <Garver.J@email.msn.com>
Subject: Attn: Draft EIS Comment Crab Orchard National Wildlife Refuge CCP

Attached are my comments for the NWTF concerning the Crab Orchard Comprehensive Conservation



Plan for Crab Orchard. crab orchard.doc

River to River Trail Society

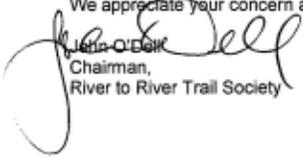
51

US Fish and Wildlife Service:

I wish to submit a few comments on the draft EIS/CCP on behalf of the River to River Trail Society. Our organization supports the River to River Trail by providing a comprehensive trailguide, a web page, we provide telephone advice to hikers, shuttle service and hold free Saturday hikes for people. We are also part of the Coast to Coast American Discovery Trail which is a 6,500 mile from Cape Henlopen to Point Reyes California.

The refuge was very generous in letting us set the trail over some parts of the refuge in order to move it off back roads and into the wilderness. We wish to continue this arrangement since it has worked well to our mutual satisfaction. We would also ask that equestrians be permitted to use the trail during the off season in that there are fewer users at that time and they tend to be only local people riding close to their home.

We appreciate your concern and listening to our comments.


John O'Dell
Chairman,
River to River Trail Society

Sierra Club

Sierra Club Comments on the Crab Orchard National Wildlife Refuge Draft Environmental Impact Statement and Comprehensive Conservation Plan, January, 2006

Sierra Club is a national environmental protection, conservation, and outdoor activity organization. The national organization currently has about 800,000 members. Illinois Chapter Sierra Club covers the whole state of Illinois, with about 27,000 members. Shawnee Group Sierra Club covers 22 of the southernmost counties in Illinois, with approximately 500 members. All levels of Sierra Club speak as one voice, and adhere to the same environmental policies. Below are the Sierra Club's comments on the Crab Orchard National Wildlife Refuge Draft CCP and DEIS.

Land Swap or Lease

We oppose the land swap (Alternative B) proposal because this would lead to excessive commercialization and increase the level of recreation that is not wildlife related. It could easily lead to unacceptable disturbance of wildlife and wildlife-related recreation.

We also oppose any long-term lease that would lead to the excessive commercialization that has been proposed by people at SIU-C and others. We are concerned that, even though the land swap with SIU-C was found unfeasible, some people will continue the pursuit of the proposal to build commercial facilities such as a hotel, marina, restaurant, water park, par 3 golf course, etc. on Crab Orchard Lake by leasing the land from the FWS. Likewise, we are concerned that the FWS will find such an arrangement hard to resist, because it would provide more revenue for running the refuge. We are opposed to such commercialization and privatization of public land.

Such a development could lead to gross commercialization of the Crab Orchard Lake area, which in turn could create even more pressure on the refuge management and the FWS to manage for recreation that is incompatible with the mission and purposes of Crab Orchard Refuge. For example, it seems inevitable that the eutrophication and filling in of Crab Orchard Lake will continue. If some entity, such as SIU-C or developers, lease land from the refuge and put a lot of money into developing a restaurant, marina, hotel, etc., then there will be pressure to dredge Crab Orchard Lake to make sure the lake remains deep enough for high powered motor boats for water skiing. In addition, there would be extreme pressure on the refuge management to allow clients of the commercial facilities to be able to water ski, jet ski, etc. in more and more of Crab Orchard Lake.

User Fees

Sierra Club is dismayed at the creeping commercialism and privatization infecting the management of our public lands. We think that federal land managers should look at people as "citizens", not "customers," "leasers," or "commercial partners."

Sierra Club opposes the "Fee Demo" program being used on our national parks, forests and refuges. Instead, we support the adequate funding of the FWS and of the Refuge,

Sierra Club

and deplore the trend of Congress to cut the budgets for the FWS and other national land management agencies. We understand why land managers would latch onto user fees to make up for budget cuts. However, these user fees are another tool being used by commercial recreation interests to worm their way into using more and more of our public resources for their private profit. This can easily lead to high impact recreation pushing out the low impact, wildlife related recreation that is supposed to be the focus of recreation on wildlife refuges.

The fee for automobile stickers required for using the roads and parking areas on the refuge amounts to an entrance fee. Thus, these fees can end up being exclusionary for people who cannot afford the stickers. People who most need free, public recreation will be the people who are excluded because they cannot afford the fees.

At the very least, the Refuge should have one free day per week, when anyone, regardless of income, can use the PUBLIC LANDS of the refuge. We fully support excluding all people from areas of the refuge when necessary for the benefit of the wildlife. However, when access is granted to the public, the access should not be determined by the ability to pay.

Mowing

We support the delay of mowing until August 1st - or even later - to make sure the mowing does not disturb nesting grassland birds. There should also be a date set in spring which delineates the start of the "no mowing during nesting" season. For example, there will be no mowing from the first day of spring (March 21) or the first day ground nesting birds start building nests.

Agricultural Leases

Sierra Club supports cutting back on the amount of refuge land used for row crops from the proposed 4400 acres down to 2200 acres or less. Although agricultural use is one of the four "purposes" of the land for Crab Orchard Refuge, there is nothing that says how much of the land has to be used for agriculture.

Sierra Club supports cutting back the amount of Crab Orchard Refuge land in agriculture to one half or less of the land proposed for agriculture in preferred Alternative E, in order to provide more room for natural lands instead of farm land. We are especially concerned with the amount of row crops on the refuge. With such a large portion of Illinois taken over by row crops, we really do not need our refuges to devote much land to row crops. In addition, if we are to encourage neo-tropical migrant interior forest birds, then we should make sure row crops are not grown adjacent to the forested area, since that increases the number of bird predators to the forested area, according to studies done by Scott Robinson and Jeff Hoover (IDNR - Natural Heritage Division studies).

Sierra Club

Another possibility that we think should be considered is whether or not row crops are really necessary for supporting the geese on the refuge. Can't land in its natural state, such as more moist soil units, support the geese? Has this alternative been considered?

The number of Canada Goose-use days needed on the refuge has been decreasing in the last decade, with fewer geese at the peak and with the geese coming later and leaving earlier. Now, about one-tenth of the peak number – 20,000 or less – is coming to the refuge in winter at the peak of the goose population. Hunters argue that the refuge must keep providing a level of crops for wildlife at the same level as 20 years ago. The hunters want to provide a safety net for geese in case northern lands experience a very cold winter or a drop in food levels for Canada geese, thus driving up the number of geese migrating to the refuge. We think that providing feed for ten times the present number of goose-use days is excessive. Even if geese in northern regions are forced south again by a cold winter, will they come this far south? Will the northern hunters come south if high goose populations at the refuge are only an occasional, unpredictable aberration?

We do not think that the refuge should be obligated to provide for so many geese that have ceased to come south – at least not for ten times the number of goose-use days than have been needed at the refuge recently. Thus, we think it would be reasonable to plan a safety net for possibly 3 million goose days annually, thus cutting in half the amount of land planted in row crops.

Land Acquisition

We fully support the proposal to buy inholdings within the refuge boundaries, and think that buying inholdings from willing sellers should be the top priority for land acquisition on the refuge.

We also support acquisition of adjacent lands that would consolidate the refuge lands and make it a more compact piece of land. Such acquisitions would lower the size of the refuge boundary exposed to possible incompatible uses, and would facilitate management on the refuge.

Conversion of Pine Stands to Hardwoods

We support the goal of converting the stands of non-native pines on the refuge to hardwoods. However, we do not support the use of commercial logging in order to achieve this goal. We have witnessed previous “clear cutting” of pines on the refuge by commercial contract loggers. These loggers were not being supervised by any refuge personnel, and were not using best management practices. For example, one of our members witnessed commercial loggers on the CO Refuge using skidders that were plowing up the ground and even uprooting hardwood saplings in the process. Soil disturbance, compaction of soil by large machinery, and uprooting of hardwood saplings

Sierra Club

caused by the commercial logging can all cause setbacks to the conversion of pines to hardwoods. We do support the use of fire and planting hardwoods to hasten the conversion of non-native pine stands to hardwoods. We also support some thinning of the pines, if it is done in an environmentally sensitive way.

We have observed in some areas of Shawnee National Forest where there were clearcuts that pines were regenerating and growing just as fast as the oaks and other hardwoods. For one thing, deer eat small oaks, but not pines. To keep this from happening would take close management.

Commercial Facilities on the Refuge

We advocate for reduction of commercial uses and recreation not compatible with wildlife on Crab Orchard Refuge. We support the proposal to close the Devil's Kitchen Campground. We think that uses of refuge land for camping and related activities, such as high speed motor boats, water skiing, etc., should be minimized. To lessen the impact of these activities that are not compatible with wildlife, we support concentrating them at Crab Orchard Lake, and remove them from Devil's Kitchen Lake and Little Grassy Lake.

We also support conversion of the Crab Orchard Boat and Yacht Club to a public facility. Although boating – other than fishing boats – is not one of the six wildlife related activities, at least converting this private commercial facility into a public facility is a step in the right direction. We oppose private commercialization of public land.

As stated elsewhere, we oppose leasing the refuge land for purposes that would detract from the mission and purposes of the refuge.

Research Natural Areas

We recognize the need for Research Natural Areas (RNAs) and fully support the protection of these areas from any activities that would threaten the native vegetation or features that distinguish these areas. We would support closing these areas to the public, if necessary, for their protection. However, at the same time, we advocate using these areas to educate the public to appreciate and value the native plants, animals and other features of these areas, as long as that would not damage their natural values. Sierra Club would welcome the chance to schedule outings with refuge interpreters in order to learn more about the RNAs on the refuge.

Industry on the Refuge

Although industry was located on part of the refuge land before Congress designated that land as part of Crab Orchard Refuge, industry is still inherently incompatible with preservation of wildlife. We are concerned with the impacts on the wildlife of air, water, noise and light pollution and truck traffic associated with the industry. We urge the FWS to steadily decrease the amount of industry on the refuge through attrition. We agree

Sierra Club

with others that most of the industry on the Refuge would be better situated within one of the small cities in the area.

Consolidation of Grasslands

We support consolidation of grasslands on the refuge, and the conversion of fescue and cool season grasses to native warm season grasses. These changes will provide additional, improved habitat for grassland bird species, which have experienced alarming population declines because of a decrease in habitat. Larger, consolidated areas of grassland will also be more beneficial to these species.

Consolidation of Hardwood Forest Areas

We support the consolidation of forested areas on the refuge, especially to protect species of neo-tropical migrant birds, which require large blocks of closed canopy forest in order to thrive. The forested areas must be large enough and have a continuous canopy so that the interior forest species of birds are protected from predators such as raccoons and cats, and from parasitic species such as the brown-headed cowbird. Studies done by Jeff Hoover and Scott Robinson in Shawnee National Forest have shown that when forested areas are smaller and fragmented, with a large forest edge, then predation levels become very high. Brown-headed cowbirds were found to lay eggs in 90% of wood thrush nests in fragmented areas of Shawnee National Forest. Further studies by Hoover and Robinson have shown that when row crops are adjacent to forested areas, nest predation is higher than when grassland or hay fields border the forested areas.

Rocky Bluff Area & Trail

The Rocky Bluff Trail and surrounding area is probably the most natural, pristine area on the refuge, evidenced by a profusion of native spring flowers. In addition, the area has other scenic features, such as a waterfall, interesting rock formations and a clear stream adjacent to the trail. Many of our members use the Rocky Bluff Trail, especially in the spring. Some members make weekly visits in April and May in order to see all of the species in bloom. Sometimes our group sponsors educational walks on the trail.

For the above reasons, this area is of special concern to Sierra Club. One concern is that owners of the inholding adjacent to the Rocky Bluff area could negatively impact Rocky Bluff through incompatible development. We think it is important to safeguard against such development, and also to provide a protective buffer for Rocky Bluff. We advocate that the refuge management continue efforts to arrange a land swap or outright purchase of the private inholding adjacent to the Rocky Bluff area and trail. The trail has already been re-routed and shortened because part of the trail was on the property of the private adjacent land owners. We advocate that acquisition of this inholding be ranked as a top priority acquisition for the refuge, and that Refuge managers find a way to make this land swap work.

Sierra Club

Federal T & E Species

We support continuing efforts to protect the bald eagles and Indiana bats on the Refuge. We do have some concerns that illegal ATV riding, jet skis, power boats and other commotion will disturb the nesting of the bald eagles, and even discourage some eagles from nesting on the refuge, especially if the nesting population continues to increase. We would support closing off more fingers of Crab Orchard Lake and the other lakes to motor boats. We also strongly advocate strict policing of illegal ATV riding to protect these species.

State T & E Species

We urge refuge managers to give more attention and concern to protection of Illinois Threatened and Endangered species on the Refuge. We also urge you to make sure to always consult the Illinois Dept. of Natural Resources Natural Heritage biologists for Jackson, Union and Williamson Counties when proposing a management action. The IDNR biologists keep track of the locations of state T & E species and are a great resource for protecting our state listed species. We would like to see the FWS and IDNR enter into some formal agreement that the Refuge managers will consult with IDNR biologists every time a management action could possibly involve a state T & E species. They would be able to tell you more precisely whether or not that action would threaten a state T & E species. We are sure you would want to keep all of the state T & E Species from needing federal T & E designation.

Wetlands

We support the maintenance of small ponds and wetlands on the Refuge. As I'm sure you know, there is great concern over the decrease of amphibian populations. Small ponds and wetlands that do not contain fish that eat the frog eggs are very important for maintaining a thriving population of various frog and toad species. Since the U.S. Supreme Court decision to remove federal protection from isolated wetlands a few years ago, Illinois isolated wetlands remain unprotected in all but a few northern counties in Illinois. That makes the protection of isolated wetlands and small ponds on the Refuge even more important.

Thrill Craft: ATVs and Jet Skis

Sierra Club opposes all use of thrill craft, such as ATVs and jet skis on the refuge. The inefficient two-stroke engines of jet skis and ATVs spew out as much as 30 percent of their fuel unburned. The noise these machines make is incompatible with wildlife and also with all of the priority recreation uses of the refuge. The damage ATVs create on soils and vegetation can be extreme. In addition, the nature of these machines encourages irresponsible, reckless and inconsiderate behavior in the riders. We urge refuge managers

Sierra Club

to put high fines (\$1000 fines, as recommended by federal judge Gilbert) on the illegal use of ATVs on the refuge or to confiscate the ATVs of people riding illegally and causing damage on the refuge. It takes such extreme measures to discourage ATV riders. Swift action is needed, or the illegal ATV misuse and damage will continue to increase. Conservation Police Officers who patrol state owned IDNR land have the authority to confiscate boats and other property of people who flout the state wildlife conservation laws. We don't see any reason why the FWS shouldn't do the same.

We oppose the proposal to allow jet skis on the Refuge. Jet ski users greatly increase the danger of accidents on the lake, and interfere with priority uses of the Refuge, such as fishing and wildlife observation. Research has shown that one jet-ski driven for 8 hours emits as much pollution as a car driven for 100,000 miles.

Handicap ATV Use

We have been told that ATV use is incompatible with the refuge mission and purposes, and that ATV use is not permitted on the refuge. We support this policy. However, on page 323, the CCP/DEIS states: "The refuge issues several special use permits annually to disabled deer hunters authorizing them to use an ATV on designated routes for access." These special use permits raise a red flag for us. The U.S. Forest Service has a handicap ATV program on Shawnee National Forest, which has expanded to include over 1200 handicap permits. These permits allow the riders to ride on any trail in the forest and allow the handicapped rider to be accompanied by another person on a second ATV. The reason there are so many handicap permits on SNF is because it is very easy to get a physician to write a letter saying the person has a handicap. In other words, the program is very much abused on SNF, because the Forest Service has made it too easy to get a handicap ATV permit. For that reason, we oppose any use of ATVs on the refuge, including use by handicapped hunters. It can prove to be a slippery slope. We are sure the FWS understands the extreme damage that can be caused by ATV use – tearing up the soil, disturbing wildlife, extreme air and water pollution, and extreme noise pollution. At the very least, the FWS should make sure there is a test that screens out all but the truly handicapped hunters to ride ATVs on the Refuge.

We also support the FWS in designating a strict route for the ATVs and limiting the handicapped hunting on the Refuge to short time periods for hunting.

We would like to know:

Do the ATV riders use trails or roads on the refuge, or a combination of both?

How many days are handicapped hunters allowed to hunt on the Refuge?

Does another hunter accompany the handicapped hunter on another ATV?

What are the criteria to qualify for the handicapped hunter special use ATV permit?

Illegal ATV Use

We understand that illegal ATV use has become a problem on the refuge. We strongly urge the FWS to do whatever is necessary to stop this activity. Fines should be raised to

Sierra Club

a level that is a true deterrent, such as the \$1000 fine that has been suggested by federal judge Phil Gilbert in Benton. Refuge personnel should make sure to follow through with prosecution to make sure illegal ATV use is really penalized. Illinois Conservation Police have the authority to confiscate the property of hunters or fishers who break the law. Law Enforcement Officers on the refuge should have the same authority. High fines and confiscation of property would serve as a real deterrent that would greatly decrease the number of illegal ATV riders on the refuge. A slap on the wrist, such as a \$75 or \$100 fine is not enough to discourage the illegal ATV riding on Shawnee Forest and would not be deterrent enough on the Refuge either.

Jet Skis

Studies have shown that one jet-ski driven for 8 hours emits as much pollution as a car driven for 100,000 miles – and that goes straight into the air and water. Jet skis are a hazard on a lake that has many other kinds of water craft, such as Crab Orchard Lake. They are incompatible with fishing, swimming, canoeing and other recreation that is allowed on the lake. Also, they can create hazardous and dangerous situations, which make it more likely that people would be injured or even killed. The noise pollution and air and water pollution make jet skis very incompatible with wildlife. We strongly recommend that the FWS ban jet skis on the refuge.

No Wake Zones

We support the no-wake zones in Crab Orchard “necks.” The noise caused by motorized boats disturbs wildlife, especially nesting birds. Having more no-wake zones should also decrease the erosion of the banks in Crab Orchard Lake, which is contributing to the sediment and the filling-in of the lake.

No Gas Motors at South Ends of Devil’s Kitchen & Little Grassy Lakes

We support banning gas motors in Devil’s Kitchen Lake. The south end of Devil’s Kitchen Lake is surrounded by the Wilderness Area. Minimizing the noise from motors within the wilderness will definitely improve the wilderness character of the area and improve the wilderness experience for people. Minimizing the noise should also improve conditions for forest interior species.

We also advocate banning gas motors at the fingers of Little Grassy Lake that border the CO Wilderness Area in order to improve the wilderness character and the wilderness experience.

Management of the Lakes

We support measures to minimize sedimentation in the three lakes. We support incentives and education for landowners in the watershed(s) of the Refuge to minimize

Sierra Club

erosion on their land, thus reducing sedimentation in the three lakes. We support proposed closures to motor boats on Crab Orchard Lake “necks” and the seasonal closure to protect migrating ducks and geese. We support the “no wake” zones to minimize erosion and disturbance of wildlife.

Protection of Non-Game Wildlife

Public lands are quickly becoming the last refuge for many species, with rapid development of rural areas and the sprawling development of urban areas. With declining populations for many wildlife species, it is important for Crab Orchard Refuge to focus on the protection of non-game wildlife, and make that a priority at least equal to the propagation of game animals, such as ducks, geese and deer.

Camping

We support the consolidation of the camping areas on the Refuge in order to provide more space for wildlife. We also support limiting camping to 14 days at a time. With burgeoning populations and increasing recreation demands, recreation resources must be shared by more people. State parks already have a 14 day limit.

Horse Trails

We do question the appropriateness of allowing horse riding in the Wilderness Area. Wilderness is a valuable and increasingly rare resource in and of itself. Horse riding can become difficult to control, especially if the refuge law enforcement staff is inadequate. Redirecting the horse riding to another area of the refuge should be considered. All illegal user-made horse trails and horse use should be immediately curtailed by issuing tickets and fines. Delaying control of horse use will only allow the use to increase, and lead to worse management problems in the future. According to the FWS publication “Fulfilling the Promise”, page 16, “Refuges must...develop goals and objectives now and implement them on the ground.” Thus, we strongly urge Refuge management to start closing off illegal user-made trails and issuing tickets to horse riders using those trails without delay! *See the section on Wilderness for further discussion of horse trails in the Wilderness Area.*

Horses are a major carrier of invasive species seeds. Since decreasing the invasive species on the Refuge is a high priority on the Refuge, horse riding should be kept to a minimum on the Refuge, if the decision is made to allow horses on the Refuge.

The debate includes whether horse riding would be allowed on the refuge, and if it is, where it would be allowed, plus how many trails would be allowed. We do not have a problem with horse riding on the maintained refuge roads, as long as there is enough law enforcement to keep them on the roads. We agree with the CCP/ DEIS that horses, if allowed on trails, should be confined to designated trails, again with the caveat that there

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must be strict enforcement to keep horses on the trails. We agree that cross-country horse riding should not be allowed on the refuge, because under wet and freeze-thaw conditions, new trails and erosion problems can easily develop. Also, cross-country horse riding could disturb nesting birds and other wildlife.

Any trails or roadways that are designated for horse riding on the Refuge should be mapped and signed. Any trails should be well-maintained to minimize erosion problems trail widening and trail braiding.

We support seasonal and wet weather closure of horse trail(s) because soft, wet trail conditions greatly increase the likelihood of damage to the trail tread, of trail braiding and of trail erosion. The freezing and thawing conditions during the winter months have led managers of state forests and parks in Illinois to close trails during those months. Also, certain wet conditions can trigger the closing of trails to horse use, such as for 24 hours after a rain of 1 inch or more.

Since the River to River Trail segment proposed (and actually already on the ground) in Crab Orchard Refuge is part of a long trail, we support rerouting the CO segment of the trail onto the old R to R Trail route (which did not pass through the refuge) during seasonal closure of the trail in CO Wilderness.

If the refuge management does approve the River to River Trail through the Crab Orchard Wilderness, then we urge you to use hill gravel that is natural colored and rounded rather than limestone that is white and sharp on the feet. First, we favor the hill gravel in order to have the stone blend in with the natural surroundings, rather the stark contrast of the white limestone. Second, studies have shown that the limestone provides calcium for brown headed cowbirds and allows them to lay more eggs in the nests of other birds, including neo-tropical migrants within the Wilderness Area.

We also recommend keeping the trail though the wilderness only about four feet wide at the maximum - wide enough for two horses to pass each other without going off the trail.

We oppose allowing access trails from private land onto the refuge. This could easily lead to more trail proliferation.

Invasive Species Control

Sierra Club supports the use of herbicides only after other means have been shown to be inadequate. We support your ban on use of insecticides and agree that insects should be controlled by birds, bats, fish and other wildlife on the refuge. We realize that invasive species are the second biggest threat to native species, after habitat destruction. Prevention of non-native species invasion should be a priority. Eradication of aggressive invasives, such as garlic mustard, winter creeper and Japanese stilt grass should be carried out as soon as any of those species are discovered on the refuge. We have some members who are willing to help with pulling non-native invasive species (NNIS) such as

Sierra Club

garlic mustard, Japanese stilt grass and winter creeper, especially if they threaten a high quality area such as Rocky Bluff. When considering allowing horse use on the Refuge, management should keep in mind the fact that horses can be a major factor in the spread of NNIS.

Fox Hunting and Dog Trials

We oppose allowing any fox hunting or dog trials on the Refuge because they involve cross-country horse riding, which greatly disturbs wildlife and tears up vegetation.

Prairie and Savannah

Prairie and savannah were once common in Illinois, but are now reduced to small fragments. Any prairie or savannah area on the refuge- whether high quality, degraded, or restored - should be protected and managed to improve the quality of that area.

Elimination of Area Designations

We support the elimination of the area designations in order to allow flexibility of management on the refuge.

Clean up of Hazardous Waste on the Refuge

Sierra Club has been lobbying nationally to restore money to the CERCLA (Superfund). We also support fines for companies that were responsible for the reckless disposal of toxic and hazardous materials in the past - and also in the present. We fully support the continued clean-up on the refuge, as long as it is done in an environmentally responsible way.

Crab Orchard Wilderness Area

Sierra Club is concerned that the refuge management is currently doing nothing to stop the ongoing creation of user-made trails in the wilderness area. Waiting until the CCP is finalized before taking action probably means that more and more user made trails will be created in the wilderness in the interim. It is a fact that horse riders are creating and using trails through the wilderness area. As stated on page 109 of the CCP: "Although horseback riding was prohibited when the Wilderness was designated, this use has become increasingly common in the years since then, likely as a result of lax enforcement." Law Enforcement officers on the refuge should be giving tickets to the horse riders on illegal trails NOW! Signs should be posted at all access points that horses must stay on the River to River Trail, and not use or make any new trails, and not ride cross-country in Crab Orchard Wilderness. All the user-made trails within the wilderness should be brushed NOW, with signs at the access points, indicating that those trails are

Sierra Club

illegal and not to be used. If immediate action is not taken, then keeping horse riders from using the illegal trails and from making new illegal trails will become increasingly difficult, as has been witnessed on Shawnee National Forest.

We urge the management of Crab Orchard Refuge to adhere to the FWS Draft Wilderness Stewardship Policy, as follows: "We will take action to prevent or minimize unnatural sounds that adversely affect wilderness resources or values or visitors' enjoyment of them."

Refuge employees should monitor the wilderness area regularly to make sure illegal activities are not taking place. Some Sierra Club members have noted a deer stand in a tree in the wilderness area, which is illegal.

We whole heartedly support adding the two blocks of refuge land within the wilderness area as designated wilderness. Section 6 of the 1964 Wilderness Act states: "The Secretary of Agriculture may accept gifts or bequests of land within wilderness areas designated by the Act for preservation as wilderness." This would also apply to the Secretary of Interior. This section probably means that the 120 acres acquired by the FWS after designation of Crab Orchard Wilderness can automatically become wilderness, and needs no act of Congress to designate these acres as wilderness.

We also fully support adding the adjacent block of refuge land south of the wilderness to the wilderness area. This land should be able to be declared part of the wilderness area by the Secretary of Interior. The 1964 Wilderness Act (Section 6) states: "The Secretary of Agriculture may also accept gifts or bequests of land adjacent to wilderness areas designated by this Act for preservation as wilderness if he has given sixty days advance notice thereof to the President of the Senate and the Speaker of the House of Representatives."

We support the proposal of "no gas motor usage" on Devils Kitchen Lake and also advocate no gas motor usage on the south end of Little Grassy Lake. Since the south ends of both lakes are adjacent to the wilderness area, banning gas motors there would greatly enhance the wilderness character of the area by eliminating much of the noise from gas motors.

The Crab Orchard Wilderness, when designated, was to be managed according to the 1964 Wilderness Act. The 1964 Wilderness Act states that in order to maintain the quality of "Wilderness Character", the area should remain "untrammelled", undeveloped with minimal evidence of human occupation and presence, where natural processes prevail, providing solitude or primitive and unconfined recreation. Attached is the "Wilderness Character Monitoring Indicators" chart, which is an aid for monitoring and managing to maintain or improve the quality of the wilderness character.

Benchmark conditions should have been established right after the wilderness area was designated in 1976. Management of an area should be guided by the principle that wilderness conditions should not be allowed to erode from the benchmark conditions. If

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there are no benchmark conditions that were established, then benchmark conditions should be established and recorded as soon as possible.

Any human manipulation within the wilderness should not be allowed until and unless a "minimum tool analysis" has been conducted. Thus, any horse trail within the Crab Orchard Wilderness should not be allowed until an analysis of appropriateness has been done, including a minimum tool analysis. Attached is a worksheet for the minimum tool analysis that we urge you to use before taking management action in the Wilderness Area.

The "Wilderness Management Plan" for the Crab Orchard Wilderness states: "Access to the interior of the Wilderness will continue to be permitted only to those on foot." We advocate that the FWS keep this policy and limit horse riding to the segment of the River to River Trail proposed for the Wilderness, unless the FWS decides that horse riding is an inappropriate use for the Crab Orchard Wilderness.

The "Wilderness Management Plan" also states: "An Enforcement Officer and vehicle are needed for patrol of the Wilderness...." Since mechanized vehicles are prohibited on wilderness by The Wilderness Act of 1964, it is illegal for an enforcement officer to be patrolling with a vehicle, unless he is patrolling the access points outside the wilderness. We do urge the refuge management to assign at least one enforcement officer to patrol the Wilderness Area, just not on any mechanized vehicle. If horses are to be allowed in the Wilderness Area, it would be expeditious to have a law enforcement officer on horse back to patrol the area, although patrol on foot would be adequate.

We also advocate that the revised management plan for the Wilderness include the following paragraph from the management plan written in 1979: "Once the restoration work is completed in the Wilderness, securing adequate personnel and funding on a continued basis will be absolutely essential for maintaining the Area in a wilderness condition. The Area is entirely too small and has too much access to be managed by a "hands-off" policy. With adequate funding the wilderness character can be preserved at the current level of public use. If this use becomes excessive, additional funds will be required to implement a program to control the numbers of people using the Area." It seems to us that a "hands-off" policy has taken over in recent years, and allowed user-made horse trails and ATV use to degrade the wilderness resource and character. We strongly urge the refuge management to devote more funds and resources to management of the Wilderness.

While it is imperative to be expeditious in taking management actions in the CO Wilderness, it is also imperative to use the "minimum tool analysis" procedure before taking action. Some in the management team at CONWR have expressed the desire to use bulldozers for trail work in the CO Wilderness. This is another slippery slope and blurs the "bright line" put forth by the 1964 Wilderness Act, which prohibits motors in wilderness areas. First might be a small bulldozer, then someone decides a large bulldozer would do the job better, next someone will be taking a dump truck with stones down the trail. It's best not to start on that path!

Sierra Club

We have attached the comments submitted by TinaMarie Ekker of Wilderness Watch during the Refuge CCP scoping period, because we think it includes excellent guidance on management of the wilderness, based on laws, the FWS "Fulfilling the Promise", and the Draft FWS Wilderness Stewardship Policy. We hope you will re-read those comments to refresh your mind, and strengthen your commitment to preserving the wilderness character of Crab Orchard Wilderness.

Sincerely,



Barbara McKasson, Chair
Shawnee Group Sierra Club
899 Rowan Rd.
Makanda, IL 62958

Shawnee Resource Conservation & Development Area, Inc.

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Shawnee

RESOURCE CONSERVATION & DEVELOPMENT AREA, INC.

502 COMFORT DRIVE, SUITE E • MARION, ILLINOIS 62959 • PHONE (618) 993-5396 EXT. 6 • FAX (618) 993-2924

January 13, 2006

Crab Orchard National Wildlife Refuge
CCP Comment
8588 Route 148
Marion, IL 62959

To Whom It May Concern:

Thank you for the opportunity to comment on the Crab Orchard National Wildlife Refuge DEIS and Comprehensive Conservation Plan.

The Shawnee RC&D Council covers the 16 southernmost counties in Illinois, including all of the Crab Orchard National Wildlife Refuge, and is composed of representatives of local Soil and Water Conservation Districts, county governments, and other community leaders. The Shawnee RC&D, through its network of volunteers is a key organization addressing natural resources and rural economic development issues. It operates under four formal committees, one of which is the Forestry Committee. The Forestry Committee members include professional foresters, natural resource professionals, farmers and forestland owners. Officers of the committee are professional foresters.

First, let us say that we commend the Refuge for the professionalism reflected in the comprehensive draft environmental impact statement and plan.

We believe that it is crucial to establish and maintain the Refuge's forests as being composed primarily of oak-hickory forest types. Oaks are keystone species that are critically important for sustaining the forest ecosystem including many wildlife species. We recognize that active management is required to maintain the oak-hickory component of the forest.

On the Kaskaskia Experimental Forest, sixty years of records demonstrate what happens when the forest is allowed to develop with no disturbance. With a lack of disturbance, maple trees increase in numbers and oak-hickory trees steadily decrease. The forest floor becomes intensely shaded and understory species begin to disappear. In areas where disturbances such as tree harvest have occurred, new oak-hickory forests are more likely

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Shawnee Resource Conservation & Development Area, Inc.

to develop and predominate. On the Shawnee National Forest, twenty-year-old commercial clearcuts are regenerated with vigorous young oak-hickory stands. Professional foresters know that an oak-hickory forest cannot be sustained and regenerated without vegetative disturbance.

We support plans to convert pine stands to native hardwood species through commercial timber sales, the use of prescribed fire, and other means. We support afforestation efforts on open lands. We are concerned, however, that the disturbance regime proposed for forested lands is essentially insignificant, especially for hardwood stands. The Refuge should harvest its hardwood stands at a rate sufficient to maintain the oak-hickory ecosystem and prevent conversion to maple-beech. Fire should be introduced to oak-hickory forests as well as pine stands. Prescribed fire language should be broad enough to allow growing season fire as well as dormant season; managers may need higher mortalities than those produced during the dormant season. Prescribed fire should continue to be allowed in those pine stands converting to hardwoods to enable managers to manipulate the mix of species toward a higher percentage of oak-hickory. Without silvicultural data, we are unable to recommend an appropriate disturbance regime. Suffice it to say that significant disturbance in the form of harvest, fire, and other methods must occur within the historic range of variability for the oak-hickory species present if they are to flourish.

Little data is presented to support or explain the silvicultural program and, indeed, one is led to the conclusion that upland forest composition is of little importance to the refuge. The EIS and Plan must articulate, and support by appropriate management, a desired future condition for all of the Refuge's forested lands.

The Council generally supports, but urges modification of, the preferred alternative to include a much more aggressive forest management program.

We believe that part of the intent in the creation of the Crab Orchard National Wildlife Refuge was to bring rural economic development to Southern Illinois. The Refuge has great renewable resources that can provide a sustainable flow of wildlife and other products (timber, clean water, recreation, etc.), revenue to county governments, and jobs to Southern Illinois. We believe it is time for the Refuge to renew its commitment to be a leader in rural economic development.

Recreation and tourism are important industries in our southern counties and the Refuge can and should make great strides in supplying those industries as well. The Refuge should showcase selected regionally significant natural features and tourist attractions with state-of-the-art facilities to attract and hold tourists in Southern Illinois. Because of the economic and social importance of horse riding, we fully support the

Shawnee Resource Conservation & Development Area, Inc.

provision of a well-designed, well-maintained trail in the Crab Orchard Wilderness.

Thank you again for providing us with the opportunity to comment. We look forward to the re-emergence of the Crab Orchard National Wildlife Refuge as an important partner in the sustainable development of Southern Illinois.

Sincerely,

A handwritten signature in cursive script that reads "Daniel Price".

Dan Price, Chairman

Shawnee Trail Conservancy

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"Linda Granneman"
<lindag999@hotmail.co
m>
12/21/2005 11:27 AM

To: <r3planning@fws.gov >
cc:
Subject: Crab Orchard NWR CCP

Monday, December 19, 2005

U.S. Fish & Wildlife Service
Crab-Orchard National Wildlife Refuge
Attention: Draft EIS/CCP Comments
8588 Route 148
Marion, IL 62959

I have reviewed the Draft EIS and CCP and would like to offer the following comments;

First, I would like to complement you and your staff for a document that was very informative and easy to read by a non-professional.

Second, my main interest of concern is the equestrian trails. I am pleased that you offer a designated River-to-River segment to connect with the Giant City and Panther Den trails.

I do feel, however, the equestrian community does require more trails in this Wilderness Area. The equestrians should be allowed the enjoyment of their solitude and primitive experiences. One trail would place all riders in the same area on one trail. This would not satisfy their recreation enjoyment, have an impact on trail resources, possibly creating the need for additional trail maintenance.

I would like to suggest a well planned designated and maintained loop system to allow users to navigate without returning back the on same trail. Some of the existing user created trails should be designated to create this trail system.

There is no scientific evidence presented to support your claims of resource damage that could not be mitigated by maintenance of designated trails.

Shawnee Trail Conservancy

I understand that property owners are presently accessing the Refuge over user created trails. This is the same problem that the Forest Service is facing in the National Forests. Property owners have purchased their property with the intent of using the forest/refuge. If this access is denied, property owners will be forced to find other ways to access the trails. If this becomes a problem for them, many will want to sell, thus depleting the economic value of property in this region. Buyer-beware! Horse owners will not want to purchase this property, and this property was not purchased at a cheap rate.

Besides that fact that not a large enough forested area exists around Crab Orchard, there are not enough "scenic areas" that exist in the Eddyville area for horse campground owners to relocate or for anyone to consider building a new campground in the Crab Orchard area. Your concerns lack any hard evidence and are based on hysteria created by anti access people.

Congressman, John Shimkus is quite concerned about this problem and feels that access should be provided to the local landowners.

In your CCP , Objective 7, the plan is to review opportunities for equestrians, within five years. The existing trails should be allowed and not closed, until such a time that your designated trail system is in place.

Equestrians are looking for trail opportunities for areas closer to their own property. Your plan should take this into consideration with establishment of trailhead and parking facilities. Riders using the River-to-River trail may not want to ride from Giant City to Panther Den and back, but would like to enter from Crab Orchard.

I do not feel that seasonal closures would be necessary due to the light equestrian usage and do object to this proposal.

Re camping:

Improving the facilities is certainly a worthwhile objective. The proposed 14 day stay will affect many campers that have been enjoying the season on a semi-permanent basis for many years. In order to satisfy this enjoyment, we suggest you provide some semi-permanent campsites for the people who enjoy camping all season long in southern Illinois.

Thank You,

Linda Granneman
President
Shawnee Trail Conservancy
PO Box 44
Eddyville, IL 62928

Southern Illinois Audubon Society

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SOUTHERN ILLINOIS AUDUBON SOCIETY

P.O. BOX 222 CARBONDALE, ILLINOIS 62903-0222

January 11, 2006

I am enclosing our comments on CONWR's Draft Environmental Impact Statement and Comprehensive Conservation Plan.

Thank you!

Sincerely,

Loraine Wright, Treasurer
196 Peachtree Lane
Carbondale, IL 62902
457-8969



Southern Illinois Audubon Society

Crab Orchard NWR Draft EIS Comment

January 10, 2006

On behalf of its 115 members, the Southern Illinois Audubon Society strongly approves the Comprehensive Conservation Plan proposed by Crab Orchard NWR (with the exceptions and comments noted below).

Specifically, we especially endorse the proposals for conversion to native grasslands and prairies and the consolidation of grassland and forest habitats. Until recently, open land was used primarily for crop rotation, as hay fields, and as pasture land for cattle grazing. A movement away from that heavy emphasis was begun a few years ago, and the results have been dramatic for improving grassland bird habitat. Our observations confirm that breeding birds such as grasshopper sparrows, Henslow's sparrows, Eastern meadowlarks, dickcissils, and other field species are present and successful in mid-summer in the areas where mowing/haying has been halted and/or native grasses and prairies have been established (such as east of Heron Flats and at the new observation platform on South Wolf Creek Road).

We strongly endorse the plans for opening up an extensive grassland along South Wolf Creek Road and converting fescue fields to native grasses and prairie plants. These areas also will benefit winter migratory species and overwintering resident species by providing food and shelter, and they should improve conditions for bobwhite, as well.

We strongly endorse, as well, your changes in the policy of mowing/haying. Previously, those holding grass-removal contracts could begin cutting in May or June and continue throughout the summer. This was in direct violation of national laws for protection of breeding birds. Nests and young sparrows, meadowlarks, quail, and other breeding birds, some of them on the list of threatened species, were destroyed through mowing/haying. We are very pleased at the recent change in your policy, which pushes mowing back to August 1. This policy should be a permanent part of refuge management in the future.

We also especially endorse the proposals to create no-wake zones in Crab Orchard and Devil's Kitchen lakes, to provide alternate recreation options for those who want to canoe and to reduce the noise level and intrusion of power boats.

Further, we are particularly pleased with the changes in camping policies. Although recreation is a major component of Crab Orchard's mandate, campers should not be allowed to treat the refuge as an all-summer retreat or a year-long place to live. Many other options exist in Southern Illinois for those who want a longer camping or even permanent living environment. They should not be allowed in a national wildlife refuge.

We also recognize the tradition of private church and scout camps which are established on refuge land and the difficulties, at this late date, of disturbing those camping and educational facilities. We recognize the longterm good that can come from children's experiences in nature.

Southern Illinois Audubon Society

We are pleased that Crab Orchard will allow the camps to remain, but we also endorse your proposal to begin charging fees for programs to help recover some of the costs that the refuge incurs in the private camp areas.

We are also greatly pleased with the proposal to purchase additional land from willing sellers before that property is lost forever to housing and industrial development. We greatly urge the U.S. Fish and Wildlife Service and Congress to pursue and fund these purchases in the immediate future.

While endorsing the draft Comprehensive Conservation Plan, we do have three specific concerns, however. These are:

(1) **Removal of pine trees.** In the 1990s, the refuge removed many of the pines in the Playport Marina area along Illinois 13 and in other places along the Crab Orchard Lake shoreline. Work on this project, as we understand it, was halted under protest by a local environmental group. The work itself struck us as sloppy and unnecessarily rough, although in subsequent years the woodland, at least in the Playport Marina area, has recovered with greater growth of hardwoods.

Our reaction to your proposal to remove all pine trees from the refuge is thus somewhat tempered by the longterm habitat improvement that can occur when pines are removed. We are not against pine-tree removal in those places where the best generation of hardwoods can occur, but we do object to the removal of all pines. There are places, such as along the Devil's Kitchen shoreline, where the pine stands are narrow, where the pines are older, and where regeneration of hardwoods is already occurring naturally. To remove pines in those areas makes no sense and could be damaging to bird populations that use the trees as food sources and shelter in winter (such as irruptive red-breasted nuthatches and pine warblers that have overwintered for decades at Crab Orchard and that also breed regularly in the refuge) and as breeding sites for species such as Cooper's hawks and owls.

Narrow "rivers" of pines or small pine stands do provide essential shelter, food, and habitat to a number of bird species and, in our view, do not hinder or detract from the overall goal of forest consolidation and improvement.

In those areas where pine stands are thick and wide, and where hardwood regeneration is not occurring, we urge the refuge to adopt pine-removal policies that will be as unintrusive or disruptive as possible. Pine removal in those areas should be planned over along as period of time to allow for bird species to adapt to the habitat changes. We also insist that any habitat changes, including tree removal, not be done during the prime breeding season of mid-March through August.

(2) **Right-of-way management.** Although not mentioned in your draft plan, power company right-of-way land should be written in as part of your 10-year plan. Specifically, we ask you to have a policy in place for power companies to follow regarding breeding birds. Power companies should not be allowed to cut, burn, spray, or otherwise disturb the habitat for breeding birds from mid-March through August.

Southern Illinois Audubon Society

(3) With the exception of established church and scout camps, which are based on refuge land, we would like to see stronger language and policies regarding other exclusive-use sites in the refuge: the boat and yacht club and The Haven. A member-only boat and yacht club at a national wildlife refuge has always struck us as a great anomaly. This is public land, for public use and U.S. Fish and Wildlife regulation, and should not be used for exclusive-use purposes. We encourage you to draft a policy that would result in eventual return of this property to public use or to closure for wildlife conservation purposes.

Thank you for the overall proposals and for what we believe is an excellent and much better balance for your four mandates for land use at Crab Orchard NWR. We believe that most of your proposed policies will benefit wildlife conservation and make recreation experiences more meaningful.

Sincerely,

Board of Directors
Southern Illinois Audubon Society:

Joe Merkelbach, president
Vicki Lang, vice-president
John Utgaard, secretary
Laraine Wright, treasurer
Trevor Hinckley
Greg Kupiec
Richard LaSalle

Southern Illinois Audubon Society
P.O. Box 222
Carbondale, IL 62903-0222

Southern Illinois EDGE

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STAFF
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Carbondale, IL 62903
Phone: (618) 536-4451
Fax: (618) 453-5949
e-mail: lenzi@si-edge.org



November 16, 2005

U.S. Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attention: Draft EIS Comment
8588 Route 148
Marion, IL 62959

Re: Comment on the Crab Orchard NWR Draft EIS and CCP

To Whom It May Concern:

The Enhancing Development, Growth, and Expansion for Southern Illinois (SI-EDGE) organization is a forum that allows area leaders from the business, industry, health, media, education, labor, and public service sectors to unite in an effort to promote economic growth within Southern Illinois. Our organization strives to identify potentials for development in the region, paying particular attention to assets and needs currently in our area. Since the Crab Orchard National Wildlife Refuge is an existing asset that is crucial to the development of Southern Illinois, we would like to make the following comments regarding the draft EIS and CCP:

- **Industry** - We are pleased that the USFWS maintains a commitment to the industries located within the refuge. While we recognize that it is sometimes difficult to balance the existence of industry with the natural setting of the refuge, we feel that the continued existence of these employers is crucial to our regional economy.
- **Agriculture** - SI-EDGE encourages the USFWS to manage its agricultural resources at the Crab Orchard NWR in a manner that not only allows for maximum profitability for farmers, but for effective wildlife management as well. In our opinion, this should include allowing enough food for wintering flocks of geese equal to the maximum population over the past five years.
- **Recreation** - Tourism and recreation is a crucial part of our area's economy. We encourage the USFWS to maintain camping areas that are viable for both campers and concessionaires. In order to accomplish this goal, we encourage the USFWS to make the 14-day limit on camping stays more flexible.
- **Crab Orchard Boat & Yacht Club** - SI-EDGE is particularly concerned with provisions regarding the Crab Orchard Boat & Yacht Club. As you know, this club has been in existence longer than the Crab Orchard NWR itself. It has not only continuously met the needs of the boaters on the lake, but it has availed itself as a "community center" open to the general public. In addition, many members of this organization have proven themselves to be stewards of the lake, giving much of their own time and resources to the betterment of Crab Orchard NWR. We encourage the USFWS to allow the Crab Orchard Boat & Yacht Club to remain in its current form.

SI-EDGE stands ready to assist the leadership of Crab Orchard NWR in any way possible. If we can provide additional assistance or information, please do not hesitate to contact our organization at (618) 536-4451 or me personally at (618) 993-7228.

Sincerely,


Larry D. Woolard
Member
SI-EDGE

Southern Illinois Quota Zone Waterfowl Association

JAN-12-06 11:43 AM TOM BURNS

618 964 1660

P.01 40

FAX COVER SHEET

TO: Dan Frisk
Refuge Manager
CONWR

FROM: Tom Burns
President SIQWA
4062 S. Wolf Creek Rd.
Carbondale, IL 62901
(618) 964-1806 Phone
(618) 964-1660 Fax

COMMENTS:

Total number of pages including cover: 3

Southern Illinois Quota Zone Waterfowl Association

JAN-12-86 11:44 AM TOM BURNS

618 964 1660

P. 02



SOUTHERN ILLINOIS QUOTA ZONE WATERFOWL ASSOCIATION SIQWA

4062 South Wolf Creek Rd.
Carbondale, IL 62901



Tom Burns - President
Ph - (618) 964-1806
Fax (618) 964 1660

John Maginel- Vice President
Ph - (618) 995-1510

Crab Orchard National Wildlife Refuge
Attn: Dan Frisk
8588 Rt. 148
Marion, IL 62959

Dan,

We the members of SIQWA are very concerned about the decisions to be made in the near future concerning the CONWR. As you may know, SIQWA represents hunting clubs from four southern Illinois counties of which one is Williamson County. Again, your CCP creates much concern. As a group we have looked at both your letter sent out by mail and also your book with all options to review. We do want you to realize (and we're sure you do) that you will be making decisions that will have an impact on many hunting clubs and families that are neighbors of the CONWR, and repercussions will be felt for many years after you are gone, but definitely not forgotten. Our livelihoods are at stake with your decisions.

Following are our major issues of concern with both your personal and the USFWS options of choice.

1. Reforestation: SIQWA feels there are more than plenty of trees and wooded areas within the "closed" portion of the refuge. We would suggest any and all reforestation be conducted outside of the "closed" portion of the refuge to minimize the impact felt by migratory waterfowl and surrounding property owners. By planting trees you or the service have no idea which private landowner on the refuge perimeter you will be affecting by changing the flight pattern of the geese leaving the refuge. We offer no option or alternative to tree planting inside the "closed" areas on the refuge.
2. Conversion of pastures to warm or cool season grasses: This is another major concern. Many of these pastures are used for both feeding areas and loafing, resting areas for the Canada goose, probably mostly loafing and resting areas around ponds with some food value. This will create problems much the same as the ones mentioned above with planting of the trees. These grasses for the most part will be mowed "tall" and will not be suitable habitat for the Canada goose. We oppose this act just as strongly and much the same as Reforestation. As we set down and discuss these issues we have a hard time understanding why the USFWS would destroy much of our goose habitat at CONWR.

These two issues are the most controversial, not the only issues of concern just the ones of most concern. We have some things we would like changed or added to your new CCP as follows:

Southern Illinois Quota Zone Waterfowl Association

JAN-12-86 11:44 AM TOM BURNS

618 964 1660

P. 03

1. **ADD MORE WETLANDS:** Whether it is moist soil units or areas that can be farmed and flooded for waterfowl in the "closed" portion of the CONWR we feel we need more habitat for migratory waterfowl (ducks and geese).
2. **MAKE OR ALLOW TO BE MADE ACCOMADATIONS FOR NESTING OF RESIDENT CANADA GEESE:** We do have several hundred resident Canada geese on the refuge, as you know much of the prime nesting habitat on the refuge is disappearing via erosion on the lake. We strongly urge the FWS to allow us to place nest structures on the lakes and ponds in the refuge to accommodate nesting pairs of Canada geese. It should be noted to the FWS the tragedy that occurs each and every spring within sight of Rt. 148 Bridge concerning Canada geese attempting to nest on the "island" just west of the bridge.
3. **DEER HUNTING on the REFUGE:** This has been a hot topic for many years and this seems to be a good time to change this practice. We feel all deer hunting on the refuge should be done prior to waterfowl hunting season or after waterfowl season. The practice of deer hunting as the closed area of the refuge does alter the "normal" migration of not only the Canada goose but also the many ducks and shorebirds. This problem has an easy fix and we feel the FWS should look at this problem in length and come up with a solution immediately.

We the members of SIQWA do thank you for letting us voice our concerns and we do expect the FWS to act accordingly and justly for both the neighbors of the refuge and the migratory waterfowl we all care for so much. Refuge managers come and go, we will live here our entire lives you will be making the decisions then leaving; we'll be left to deal with your decisions and quite possibly suffer the consequences. Please don't make decisions we will regret for lifetimes.

Sincerely,



Tom Burns
President SIQWA

Toluca Sportsman's Club

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Toluca Sportsman's Club
PO Box 447
Toluca, IL 61369

U.S. Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attn: EIS Comment
8588 Route 148
Marion, IL 62959

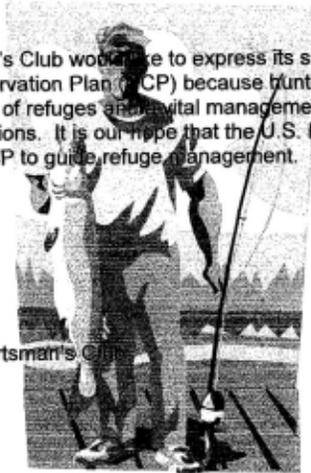
Dear Sirs:

The Toluca Sportsman's Club would like to express its support of the Comprehensive Conservation Plan (CCP) because hunting, fishing, and trapping are priority public uses of refuges and a vital management tool for sustaining healthy wildlife populations. It is our hope that the U.S. Fish & Wildlife Service will continue to use CCP to guide refuge management.

Sincerely,



Jim Clanin
President, Toluca Sportsman's Club



Toluca Sportsman's Club

500



ClaninJim@aol.com
01/15/2006 10:18 AM

To: conwr-ccp@fws.gov
CC:
Subject: Comprehensive Conservation Plan

Dear Sirs:

The Toluca Sportsman's Club would like to express its support of the Comprehensive Conservation Plan (CCP) because hunting, fishing, and trapping are priority public uses of refuges and a vital management tool for sustaining healthy wildlife populations. It is our hope that the U.S. Fish & Wildlife Service will continue to use CCP to guide refuge management.

Sincerely,

Jim Clanin
President, Toluca Sportsman's Club

Touch of Nature

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U.S. Fish and Wildlife Service

Crab Orchard

National Wildlife Refuge

COMMENT FORM

If you wish to comment on the Crab Orchard National Wildlife Refuge *Draft Environmental Impact Statement and Comprehensive Conservation Plan*, use the space provided (attach additional sheets if necessary). Comments must be received by **January 17, 2006**. Please include your name and address to be added to our mailing list.

SEND THIS FORM TO: U.S. Fish & Wildlife Service
Crab Orchard National Wildlife Refuge
Attention: Draft EIS Comment
8588 Route 148
Marion, IL 62959

Having reviewed the draft summary and having participated in a comprehensive overview, explanation and discussion of the plan presented and facilitated by Dan Frisk, the Refuge Manager, at a special meeting of the Friends of Crab Orchard Wildlife Refuge, I find all parts of the proposed plan to be sound. From my perspective, it is clear that this plan is fair, rationale, farsighted and in the best interest of the Refuge and the varied consumers who use this Refuge now and in the future. For these reasons, as a citizen, as a long time recreational consumer, as a member of the Board of Directors for the Friends of Crab Orchard Wildlife Refuge, and also as the Associate Director at Southern Illinois University's "Touch of Nature Environmental Center," which is located adjacent to and highly interdependent with the Refuge, please know that I genuinely appreciate the opportunity to provide input and also that I fully endorse all elements of the *Draft Environmental Impact Statement and Comprehensive Conservation Plan* for Crab Orchard National Wildlife Refuge.

David L. Gename, Ph.D.
Associate Director, Plant and Service Operations for
Touch of Nature Environmental Center

Address: 1206 Touch of Nature Road
Makanda, IL 62958

Date: December 5, 2005

Phone: 618.453.1121 Ext 240

Wilderness Society

298



"Leslie Catherwood"
<leslie_catherwood@tw
s.org>
01/17/2006 03:44 PM

To: <cr3planning@fws.gov>
cc:
Subject: Crab Orchard NWR CCP comments

To Whom It May Concern:

Attached please find The Wilderness Society's comments on the draft CCP for the Crab Orchard NWR. The comment letter is also being sent via first class mail.

Please let me know if you have trouble opening the attachment. Thank you.

Sincerely,
Leslie Catherwood

—
Leslie Catherwood
Wildlife Refuge Program Associate
The Wilderness Society
202-454-2524
www.wilderness.org



Crab Orchard CCP comments 2006.pdf

Wilderness Society



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THE WILDERNESS SOCIETY

January 17, 2005

Crab Orchard National Wildlife Refuge
Attn: CCP Comment
8588 Route 148
Marion, IL 62959

(Sent via first class and electronic mail)

Re: Crab Orchard National Wildlife Refuge Draft Comprehensive Conservation Plan

To Whom It May Concern:

The Wilderness Society appreciates this opportunity to provide comments on behalf of our more than 250,000 members nationwide for consideration in the development of a comprehensive conservation plan for the Crab Orchard National Wildlife Refuge. The Wilderness Society is a not-for-profit conservation organization devoted to preserving wilderness and wildlife, and fostering an American land ethic. We have a long-standing interest in the protection of our nation's outstanding wilderness areas and in the wise management of the National Wildlife Refuge System. The Crab Orchard National Wildlife Refuge (Refuge) is of particular interest and concern to our more than 8,400 members in Illinois.

The Refuge now protects 4,050 acres of wilderness, the first so designated in the state of Illinois. It is one of the largest and most frequented refuges in the National Wildlife Refuge System, providing significant resting areas for migratory birds along Mississippi Flyway. The Refuge protects a total of 700 plant species, 245 bird species, 33 mammal species, 63 fish species, and 44 reptile and amphibian species, as well as federally listed threatened and endangered species, including the bald eagle and the Indiana bat. In addition, 31 state listed threatened and endangered species inhabit the Refuge. For these reasons, it is imperative that the Comprehensive Conservation Plan (CCP) for the Refuge uphold the vision put forth in the National Wildlife Refuge System Improvement Act of 1997 to provide strong protections for wildlife and habitat; the CCP should be thorough, bold and precise.

1615 M Street, NW, Washington, DC 20036

202-833-2300

www.wilderness.org

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Wilderness Designation

Congress passed the Wilderness Act of 1964 in order to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” For this purpose, Congress established a National Wilderness Preservation System of federal lands “where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain (16 U.S.C. §1131(c)).”

The Fish and Wildlife Service’s (Service) final planning policy requires each CCP to examine refuge lands and waters for their potential for designation as wilderness or other special management areas: “Concurrent with the CCP process we will conduct a wilderness review and incorporate a summary of the review into the CCP” (65 Federal Register 33911). Despite this legal mandate, all too frequently CCPs omit this critical component.

Before releasing the draft Crab Orchard Comprehensive Conservation Plan, the Service correctly followed the Wilderness Act by reviewing lands within the legislative boundaries of the Refuge for wilderness suitability; we commend the Service’s conformity to this critical component of the CCP process.

As the CCP states, the wilderness review at the Refuge identified two parcels of land that meet the criteria for wilderness study areas (WSA): an 80-acre tract completely surrounded by the existing Crab Orchard Wilderness and a 40-acre tract surrounded on three sides by Crab Orchard Wilderness. Both of these parcels are currently managed as part of the Crab Orchard Wilderness and should absolutely be recommended for wilderness designation. We enthusiastically support the Service’s objective to “[r]ecommend the designation of two parcels (120 acres) as wilderness within 2 years of approval of the CCP” (CCP, Chapter 2.6, p. 25). The designation of these lands as wilderness is critically important because it would provide innumerable benefits to the species and ecosystems within the Refuge.

The Service is *obligated* to forward to Congress any suitable recommendations in a Wilderness Study Report that moves from the Refuge Director through the Secretary of Interior and the President (Fish and Wildlife Service Manual, chapter 7, part 610). Wilderness designation is an essential step in restoring and preserving the natural conditions of the Crab Orchard Refuge and strengthening the Wilderness Preservation System in its entirety. It is an absolute priority that the Service adheres to their objective to recommend wilderness designation within two years after the approval of the CCP.

In addition, the wilderness review identified a 558-acre tract of land contiguous with the southern boundary of the Crab Orchard Wilderness, which was acquired by a 1979 land exchange with Southern Illinois University. Although this tract does not currently qualify to be designated as a WSA because it does not meet the criteria for naturalness, it does have value as potential wilderness. It is of utmost precedence that the Service allows natural ecological succession to occur and restore the area’s natural wilderness character for the eventual designation of the land as wilderness.

Wilderness Society

Existing Wilderness

When crafting a CCP, it is incumbent upon the Service not only to evaluate new lands for wilderness review, but also to strengthen management policies for existing wilderness. In order to do so, activities that cause wide-spread habitat modification must be viewed as inappropriate in wilderness areas and, therefore, their elimination must be outlined in the CCP. In fact, damaging activities that cause habitat destruction are specifically prohibited under The Wilderness Act, which defines wilderness as "an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements..." (16 U.S.C. § 1131).

To conform to this standard, the CCP correctly recognizes that wilderness management on the Refuge needs updating:

"...prohibited activities have developed inconsistent with the existing Wilderness Management Plan. The plan, which was approved in 1985, is dated and needs to be revised" (CCP, p. 71).

Updating the management plan will also fulfill the requirement by the National Wildlife Refuge System Improvement Act of 1997 that the Secretary of Interior must: "maintain the biological integrity, diversity, and environmental health of the National Wildlife Refuges" (16 U.S.C. § 668dd (a)(4)(B)). The Service has appropriately recognized that such values are best overall maintained by designating certain areas as wilderness. However, unmanaged horseback riding and gas motor usage should be banned within the Refuge's wilderness because they are detrimental to wilderness values and in direct violation of The Wilderness Act.

Horseback Riding

Unfortunately, Crab Orchard Wilderness has been subject to significant habitat damage as a direct result of unmitigated horseback riding. The CCP states that "[i]n the past two decades, probably as a result of lax enforcement, horseback riding in the Wilderness has become increasingly common...[r]ecently there has been a marked increase in the development of unauthorized trails in the Wilderness" (CCP, p. 151).

The absence of forethought when planning trails allowed for poorly regulated horseback riding to be introduced into wilderness, along with invasive species. As stewards of wilderness and the natural resources on the Refuge, the Service must create a Wilderness Management Plan that restricts horseback riding to designated trails and eliminates all other prohibited activities in wilderness.

Invasive Species

Presently, Refuge's designated wilderness areas suffer from invasive species such as autumn-olive, multiflora rose and Japanese honeysuckle, all of which endanger native

Wilderness Society

flora. The CCP recognizes that these plants are all are common throughout the Refuge's wilderness and are likely to become even more problematic in the near future (CCP, p. 155). Exterminating these species and restoring native habitat is a critically important responsibility of the Service. *Fulfilling the Promise*, the vision document written by the Service in March, 1999 states that the Service should: "[r]eview and revise existing policies to strengthen support and action from problem and invasive species management that is biologically justified and consistent with ecosystem and System priorities (wildlife and habitat recommendation #7)." *Fulfilling the Promise* also states that "[wilderness] is a reservoir of biological diversity and natural ecological and evolutionary processes. In the words of Aldo Leopold, wilderness is a laboratory, a base datum or normality, a picture of how healthy land maintains itself" (p. 9). The Service should consider the extermination of invasive species a top priority in the final CCP.

Gas Motors

In addition to restoring native habitat and limiting horseback riding, we support the prohibition of gas boat motors on the southern part of Devils Kitchen Lake, as outlined in Alternative C, in order to allow visitors a quiet experience (CCP, p.153). The Wilderness Act specifically states that wilderness must have outstanding opportunities for solitude. The presence of loud motors makes that impossible in the wilderness areas near and adjacent to Devils Kitchen Lake. The final CCP should uphold the ban on motors.

In summation, the goals and methods set forth in the draft CCP should reflect the primary goal of the 1997 Refuge Improvement Act to protect the biological integrity of the Refuge and the goals of the Wilderness Act to protect all wilderness values. The Service must revise the WMP, as it is of critical importance; the process should not be delayed until five years after the approval of the final CCP, as the CCP currently outlines (Objective 2, chapter 2.6). It is incumbent upon the service to update the WMP within a year after the approval of the CCP.

Refuge Purpose

The four original purposes for which the Crab Orchard National Wildlife Refuge was established are no longer compatible with the mission of the Refuge System. In 1947, Public Law 80-361 was passed, transferring land from the Department of War to the Fish and Wildlife Service through the Secretary of the Interior for "the conservation of wildlife, and for the development of the agricultural, recreational, industrial and related purposes specified in this Act." Since the passage of this law nearly 60 years ago, Congress has passed the 1997 Wildlife Refuge Improvement Act, which is an "organic" act for our nation's Refuge System and reaffirms the Service's commitment to a wildlife-first policy. The 1997 Improvement Act established the mission of the National Wildlife Refuge System: "to administer a national network of lands and waters for the **conservation, management and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats** within the United States for the benefit of present and future generations of Americans" ((16 U.S.C. § 668dd (4)(2)) emphasis

Wilderness Society

added). This law clearly prioritizes conservation of natural resources above all other refuge purposes.

Currently, Crab Orchard National Wildlife Refuge supports activities such as a toxic munitions industry, agriculture and grazing; all of which are incompatible with the 1997 Wildlife Refuge Improvement Act. Furthermore, activities that pollute the Refuge environment with hazardous materials compromise the very purpose of the Refuge that places the "conservation of wildlife" first and foremost.

Industry

The Refuge leases 1.2 million square feet for facilities that are used for manufacturing, cold storage and explosive storage. To support these industrial operations, the Refuge maintains an extensive transportation and utility infrastructure (CCP, section 3.8). It is due to the harmful effects from this industry that Crab Orchard was the first national wildlife refuge added to the U.S. EPA's National Priority List of contaminated sites. The Refuge has 12 contaminated sites, most of which contain high levels of lead and PCBs.

The hazardous waste clean up has been an extensive, multi-stepped procedure. According to Southern Illinois University, the process of ordering individual site clean-ups has spanned 12 years, and incurred costs that exceed \$30 million dollars. The first record of decision (ROD) to initiate clean-up was signed on March 30, 1990; the most recent was signed by the U.S. EPA and DOI in September 2002. Both RODs advocated the excavation of many thousands of cubic yards of soils and sediments that are contaminated with lead, cadmium and chromium.

It was fortuitous that researchers at Southern Illinois University stumbled onto the contamination during a routine deer study. By analyzing the livers of the whitetail deer statewide, the team discovered high levels of lead in Refuge deer. Subsequent research revealed an increased level of egg abandonment and neglect among the starling population. It is clear that the industrial complex and resulting pollution have a negative effect on the species and resources of the Refuge.

In the past, the munitions industry operated in ignorance of their affect on the habitat and wildlife. PCBs were used as heat transfer agents. Prior to the discovery of their toxicity in 1976, and the subsequent ban, 1.5 billion pounds of PCBs were manufactured in the United States alone. We are almost guaranteed that additional discoveries of the harmful effects of industry to our public lands will happen in the future. A national wildlife refuge with the ecological values of Crab Orchard is no place for such a risky gamble with our natural resources.

It is ludicrous to consider perpetuating this ill-considered use of refuge land, given all the new information about the effects of the munitions industry and their landfill waste on human health, wildlife and the condition of the land. If the Service continues to promote the munitions industry, a dangerous precedent could be set that will weaken the

Wilderness Society

spirit of the 1997 Refuge Improvement Act. If there is only one lesson to be learned from the allowance of industry on a refuge, it is that the effects cause severe environmental damage that is costly to clean up. The short-term benefits of industry are far outweighed by the incalculable long-term losses caused by soil and water contaminations.

Clearly, when industry was included in Public Law 80-361, it was done so as a secondary aim, under the misguided belief that healthy wildlife and the munitions industry could co-exist on refuge lands. The harmful ramifications of that decision had not yet been observed. While we encourage the CCP's proposal to relocate non-munitions industry to industrial parks, as outlined in Alternative C, the exclusion of the munitions industry is an unacceptable omission.

We are alarmed and strongly disagree that the Service's preferred alternative (Alternative E) sanctions industry on the Refuge by allowing new tenants to move into vacated facilities and maintain practices that damage the Refuge (CCP, p.54). The language in Public Law 80-361 should be read to promote wildlife conservation first.

The purpose of the Crab Orchard Refuge first and foremost states that the Refuge was established "for the conservation of wildlife" (Public Law 80-361). Although the purpose also includes the development of agricultural, recreation and industry, they are listed *subsequent to* wildlife conservation and can thus be understood as secondary purposes. The language in the purpose of the Refuge clearly delineates conservation as its own distinct value. By upholding industry, while failing its commitment to wildlife conservation, the Refuge is not within the bounds of the law. It can therefore be inferred that any other activity prohibiting wildlife conservation is illegal and inappropriate on Refuge land.

The Service can not allow the operation of facilities that damage natural resources on the Refuge, while simultaneously honoring the Refuge's clear purpose to conserve wildlife. Industry detracts from the Refuge purpose by converting land away from wildlife habitat and emitting hazardous materials in ecologically sensitive lands. By supporting the munitions industry, the Refuge violates the overall mission of the Refuge system and its wildlife first mandate. The final CCP should eliminate all industry on the Refuge.

Given the current state of the infrastructure, it makes more sense to begin to phase out industry than it does to restore the crumbling facilities. To invest in current infrastructure steals Service employee time and funds away from managing the Refuge. In the words of the CCP: "Providing the water and sewer infrastructure has been difficult for the Refuge to accomplish. Most of the manufacturing and storage buildings are reaching the limits of their expected lifetime. The buildings require a lot of maintenance and refurbishing to meet today's standards" (CCP, p.54).

Chapter 2.5 of the CCP lists alternatives that were considered but not analyzed in detail. Among these is the alternative to: "[h]ave the industrial purpose removed from refuge purposes." The CCP explains that the Service did not seriously analyze this

Wilderness Society

alternative because of the potential economic impact such a transition would incur. Specifically, the draft states: "The removal of industry as a purpose would be seen as a threat to the local economy (CCP, p. 21)." We are baffled that the Service reached this sweeping conclusion without an appropriate economic study. National wildlife refuges are to protect and conserve wildlife and natural resources – not to uphold the local industrial economy.

Two compelling reasons confound the argument that economic necessity prompts the retention of industry in the Refuge. First, an agreement to relocate industries to industrial parks would retain their presence within Williamson County and thus avoid any adverse effects to the economy (CCP, p. 160). As the CCP states, there are several nearby industrial parks that are suitable relocation sites for industrial manufacturing (CCP, p. 54). Secondly, the Refuge itself is a stimulant to the local economy. Freed of industry, visitation would most likely increase, as would profits to both the Refuge and to surrounding business.

A report compiled by U.S. Fish and Wildlife Service economists found that the total economic benefit to the local community associated with visitor spending related to Crab Orchard Refuge totaled nearly \$12 million. This revenue then led to \$4.2 million in regional payrolls (*Banking on Nature*: 2002 p. 18-21). The CCP dismisses this contribution, in comparison with industry, noting that the numbers add up to less than one percent of the County's economic revenue.

The Refuge should not be placed in competition with industry or the local economy. Crab Orchard Refuge is a dominant force in the community both because of its economic contribution and because it provides quality of life. In fact, Crab Orchard Refuge is among the most highly visited refuges in the nation. Furthermore, there are ways to compensate for any potential short-term, lost income to the Refuge. After all, in both the 2002 and 2004 *Banking on Nature* reports, the majority of visitors revealed they would have spent more money on their refuge trips. *Banking on Nature* indicates that the greatest stimulus to the local economy is generated by out-of-town visitors. An attractive tourism scheme could help bring additional revenue to the town.

The CCP highlights one additional reason for the munitions industry's presence on the Refuge: national defense. It is not the job of the Service to "contribute to and support national defense" as it claims in the CCP. Rather, it is the mission of the Service to work "with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people" (<http://www.fws.gov/who/>).

Agriculture

Just as industry compromises the purpose of the Refuge and the mission of the Refuge System, agriculture is also entirely inappropriate on refuge lands. Presently, 10% of the Refuge is covered by cropland that requires herbicide and fertilizer. According to the CCP, the original justification for establishing agricultural plots was to provide food for wintering Canadian geese and to "fulfill the agricultural purpose of the Refuge." The

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Service is incorrect to implement such sweeping habitat modifications for the benefit of a single species. The Service should be interested in the best overall plan for maintaining the wild state of the land, rather than constructing artificial habitat. In addition, farming limits the biodiversity of the Refuge's native ecosystem communities by managing for a few select species such as wheat and corn.

Farming on Refuge lands is addressed in *Fulfilling the Promise*: "Rather than farming intensively to provide food for migratory birds, moist soil units could provide abundant natural foods" (p. 13). The document also asserts: "In order to maintain or restore biodiversity, management should mimic, where possible, natural systems" (p. 21). Therefore, in order to comply with the Service's vision document and the Refuge's mission, cropland must be eliminated from the Refuge in order to allow for restoration of native habitat.

In addition, the use of pesticides on farmland is dangerous and potentially lethal to native organisms. The CCP states that "[p]ollutants from agriculture include sediment, nutrients and pesticides" (CCP, p.126). Again, this practice will compromise the conservation of wildlife and therefore negate the primary purpose of the Refuge. Agriculture creates a mosaic of natural lands and artificially crafted lands, allowing no observable tract to witness long term natural processes. While it is encouraging that the smallest slivers of farm land (those less than 5 acres) would be discontinued, the patchwork nature of the agriculture land as a whole causes problems, leading to serious habitat fragmentation.

Grazing

The Refuge currently allocates approximately 1,000 acres of grazing land to support 375 head of cattle. Typically, grazing on a refuge is inappropriate and against the intent of the Refuge Improvement Act, unless it can be demonstrated essential to meet the refuge purpose. Allowing even controlled, prescribed grazing poses numerous adverse environmental impacts to sensitive habitat areas, including the compacting of soils, sedimentation, and the degradation of water quality. The CCP does not sufficiently demonstrate that grazing is a necessary management tool essential to the Refuge's purposes. Therefore, grazing should be prohibited on the Refuge.

Conclusion

Unfortunately, we do not endorse any of the management alternatives in their current form in the draft CCP. As long as the Refuge is stifled by inappropriate mandates to promote the munitions industry, agriculture and grazing, its ability to serve as critically important habitat is compromised. Industry, agriculture and grazing are incompatible with the overall mission of the Refuge System as established in the Improvement Act of 1997. If the Service intends to genuinely follow the vision spelled out in the Improvement Act, then the purpose of the Refuge must be amended and all industry, grazing, and agriculture must be eliminated from the Refuge.

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In the meantime, The Wilderness Society urges adoption of the two management decisions outlined in Alternative D: the prohibition of horseback riding within the Refuge, and the prohibition of motorized boats on Devils Kitchen Lake. Importantly, we fully support the Service's objective to recommend 120 new acres as wilderness. This decision will assure the utmost protection for the special wilderness resources within the Refuge and strengthen the National Wilderness Preservation System in its entirety.

The Wilderness Society appreciates this opportunity to submit comments on the draft Comprehensive Conservation Plan for the Crab Orchard National Wildlife Refuge.

Sincerely,



Leslie Catherwood
National Wildlife Refuge Program Associate

Wilderness Watch

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May 29, 2001

Refuge Manager
Crab Orchard National Wildlife Refuge
Attn: CCP Comment
8588 Route 148
Marion, IL 62959

Dear Refuge Manager,

Wilderness Watch Appreciates this opportunity to provide the following scoping comments regarding the Comprehensive Conservation Plan (CCP) for Crab Orchard National Wildlife Refuge.

Wilderness Watch is a national conservation organization dedicated to the wise stewardship of areas within the National Wilderness Preservation System and Wild and Scenic Rivers System. We strive to monitor the management of every wilderness and wild river in the system. Our purpose is to ensure that the wilderness character of these special places is protected and preserved.

Following are our comments regarding wilderness management at Crab Orchard NWR.

Assess impacts to the wilderness resource:

The CCP needs to include the Crab Orchard Wilderness as a specific resource category when assessing environmental impacts to resources on the refuge. As Fulfilling the Promise points out, the wilderness resource embodies many intangible qualities that cannot be adequately addressed by limiting an impact analysis to individual biophysical resources such as soils, plants, and wildlife. The sum total of these individual components does not comprise nor add up to the full definition or meaning inherent in the *wilderness resource*. In Section 2(a) of the Wilderness Act Congress wrote that "it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring *resource of wilderness*." Congress clearly recognized wilderness as an important and unique entity in its own right, and did not indicate that wilderness should be viewed merely as a composite collection of various other natural resources. Therefore, the CCP needs to assess potential impacts of each alternative *on the wilderness character of the affected environment*. Failure to do so would violate NEPA's mandate that potential impacts to the affected environment be disclosed and assessed.

As part of wilderness character, the CCP analysis should include impacts affecting the area's opportunities for solitude, naturalness, and the untrammelled quality of the wilderness, as described in the Wilderness Act. The analysis should include impacts on natural quiet, including sights and sounds that might occur outside the wilderness boundary.

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Increase public awareness of wilderness:

In Fulfilling the Promise, the Service recognizes the need “to elevate the stature of its 20 million acres of wilderness, both internally and externally.” As part of this goal, Wilderness Watch encourages the refuge to update its website, brochures, and interpretive displays to highlight the Crab Orchard Wilderness as an important refuge resource. We commend the refuge for mentioning the wilderness area in the scoping notice, and note that it is briefly mentioned on the refuge’s web page. We suggest that the wilderness boundaries be added to the refuge map shown on your web page. We also suggest that “wilderness experience” be added to the web page under the existing heading of “public use opportunities.” Perhaps a photo portraying an aspect of the wilderness could also be added.

Updating public materials to include a discussion of wilderness provides the refuge with an opportunity to educate the public about the existence and value of the National Wilderness Preservation System and the unique qualities contributed by the Crab Orchard Wilderness.

Naturalness:

Active manipulation of nature takes place on much of the refuge including agricultural uses, industrial development, resident youth camps, and developed boating facilities. The Crab Orchard Wilderness should remain a place where human imprints and interference are kept to a minimum, and where the area remains “primarily affected by the forces of nature,” according to the intent of the Wilderness Act. Manipulation of plant or animal habitat within the wilderness would contradict the definition of wilderness as “an area where the earth and community of life are untrammelled by man.”

Prescribed fire is a form of manipulation that should be avoided within wilderness except if and when it is necessary to protect survival of a T & E species, or absolutely necessary to protect adjoining private properties. Wilderness Watch supports a let-burn policy for naturally occurring fires, with actions taken outside the wilderness boundary such as fuel removal and fireproof wraps to protect adjoining property. If greater suppression efforts still seem necessary in a particular circumstance to protect survival of a T & E species, or to protect human health and safety or property, then a second-tier effort can consider air drops of water (first) and retardant (second) if water drops are not adequate in controlling the intensity and direction of the fire. The potential impacts of fire retardant on birds and wildlife should be assessed in the CCP.

The CCP should identify the locations and extent of exotic species on the refuge and within the wilderness. Areas of exotics should be monitored to assess trends in their spread and their possible affect on native species. Natural processes should be allowed to prevail within wilderness for exotics that are already present except when survival of a T & E species is jeopardized. If trends and impacts indicate that removal is necessary then hand tools are appropriate for plants but herbicides and mechanized tools should be avoided. Natural processes should be allowed to prevail within wilderness regarding the presence of non-native short-leaf pine. Preventing further introductions of exotic species should be the primary emphasis for management of exotics within the wilderness.

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If removal of exotic animals is absolutely necessary in order to protect the survival of an indigenous species, then the most humane method should be used: live traps and shooting. Snares, leghold traps, and poisons should not be allowed due to non-selectivity and inhumaneness.

Natural processes should prevail in determining the relative abundance and diversity of fish and wildlife in wilderness. Enhancement of certain species for hunting, fishing, viewing or other human purposes should not be a management goal within wilderness because it requires an artificial manipulation of wildlife populations, which is contrary to the Wilderness Act's emphasis on untrammelled conditions and natural processes. The Crab Orchard Wilderness is a relatively small wilderness; therefore, any manipulations of indigenous wildlife species for human purposes can arguably take place outside the wilderness to avoid compromising wilderness character.

Predator control should be addressed in the CCP. Predator control should not be allowed in wilderness except in a temporary emergency situation to protect recovery of an endangered species, but to our knowledge this situation is not present in the Crab Orchard Wilderness. Predators are an integral part of wilderness and natural ecosystems and their numbers should not be manipulated to support artificially high populations of other species. Although turkey and deer hunting take place within the wilderness, the level of these uses should not be manipulated through species and/or population manipulations within the wilderness. The wilderness should be managed as a place where human interference is kept to a minimum, and where the area remains "primarily affected by the forces of nature" as described in the Wilderness Act.

Wheeled game carriers and mountain bikes should not be allowed in the wilderness because the Wilderness Act prohibits all "forms of mechanical transport." A prohibition on game carriers is consistent with agency policy.

Recreation:

The CCP should detail current recreational use by type of activity and provide data on visitor numbers and average range in group size. A strategy for monitoring visitor use should be described. Monitoring should focus on existing conditions and long-term trends of the area's biophysical resources *as well as trends affecting its wilderness character.*

Important factors in maintaining wilderness character involve maintaining a sense of untrammelled wildness and outstanding opportunities for solitude and primitive recreation. Preserving "natural quiet" is a key toward achieving this goal. A sense of solitude and naturalness cannot be preserved if there are noise intrusions from modern technologies and motorized equipment. The CCP should assess impacts on solitude and natural quiet caused by boating on the lakes adjoining the wilderness.

Recreational use is not exempt from a formal compatibility analysis. The EIS should provide a compatibility analysis for recreational activities to identify those forms of recreation that are compatible with refuge purposes *and* with wilderness.

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The CCP should adopt a strong non-degradation policy for the Crab Orchard Wilderness, in accordance with the Wilderness Act's stipulation that such areas be administered in such a manner as to leave them unimpaired *as wilderness*. To accomplish this, the CCP should proactively identify appropriate visitor carrying capacities for the wilderness. A small wilderness like Crab Orchard cannot provide outstanding solitude if visitor numbers are high at certain times. Carrying capacity criteria should emphasize preservation of the area's wilderness character, its opportunities for solitude, opportunities for primitive and unconfined recreation, and protection of T & E species. The CCP should describe management actions that will be taken if visitor use exceeds desirable levels at certain times (such as holidays or weekends) within the wilderness.

Visitor facilities such as signs, interpretive displays, or picnic tables should be located outside the wilderness boundary. No new trails or bridges should be constructed within the wilderness unless an administrative need identifies these as the minimum necessary to protect the wilderness resource.

Minimum Tool Assessment:

In Fulfilling the Promise and in the Service's new Draft Wilderness Management Policies, the Service recognizes that central to the experience of wilderness is humility and restraint, both on the part of visitors as well as managers. The Service's minimum tool requirement is intended to implement this restraint. Wilderness Watch suggests that the Crab Orchard CCP adopt the minimum requirement assessment model that is included in the Service's Draft Wilderness Stewardship policies.

We also suggest that an appendix to the CCP include a detailed discussion of the purpose and intent of minimum requirement and minimum tool analysis, as a useful explanatory guide for managers and the public. We suggest that the discussion incorporate the following ideas:

A tool is a form of technology, and the term "minimum tool" implies that technology for management purposes is to be minimized within wilderness. More primitive technologies such as non-motorized hand tools and rowing craft are to be favored instead of more advanced technologies such as chainsaws and motorized boats. We wish to emphasize our support for an interpretation of minimum tool as the minimum technology and minimum management action that will accomplish management objectives while also preserving an area's wilderness character. The term "minimum tool" does not imply that what is to be emphasized is minimum time, money, or personnel. These concerns should not be weighed until the appropriate minimum action and minimum technology have been identified. Once an appropriate minimum tool has been selected, then it is appropriate to consider how to carry out the action as efficiently and economically as possible.

We suggest that the very first question that should guide a minimum tool assessment is "should this proposed action take place in wilderness?" The answer to this question should be guided by the spirit and definition of wilderness as found in Section 2-c of the Wilderness Act and the prohibited uses listed in Section 4-c. Section 4-c of the Wilderness Act indicates that *necessity* and *minimalism* should be the guiding principles for administrative actions that may affect the

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untrammelled, natural, and primeval qualities of a wilderness. Actions violating the definition of wilderness will undermine the wilderness character of an area. Managers are legally obligated to preserve an area's wilderness character while also managing for other refuge objectives. The FWS' Refuge Manual recognizes that wilderness superimposes constraints on the manner in which refuge lands can be administered in the course of meeting refuge objectives (6 RM 8.7).

If an action does not conflict with the definition of wilderness, then the next question should be "what is the minimum technology available that will accomplish the objective?" On a technology spectrum, minimum technologies are located at the primitive end in the sense that they rely primarily on muscle power and simple hand tools to accomplish a task. Technologies move toward the other end of the spectrum the more that they involve wheels, motors, petroleum products, or other technologically advanced chemicals such as herbicides.

Once a minimum tool has been selected, then the third question should be when to implement the action so as to minimize its impacts. This could mean scheduling around wildlife needs such as nesting times, or waiting for drier or wetter weather, or scheduling the action during a time of expected low visitor use.

After these questions have all been answered, then the fourth and last question should be how to accomplish the action as efficiently and economically as possible. These are important managerial issues, but preserving an area's wilderness character must take precedence as a concern because it is required by federal law.

In conclusion, Wilderness Watch asks that the CCP give particular emphasis to the impacts of all alternatives on the Wilderness resource as a singular category of analysis, and also provide an overall emphasis on the *preservation of wilderness character* within the Crab Orchard Wilderness, as mandated by Congress.

Wilderness Watch appreciates this opportunity to provide our comments on the Crab Orchard CCP and EIS. We look forward to receiving any further planning updates and to reviewing the draft document when it is released. If you have any questions concerning our comments, please don't hesitate to contact us.

Sincerely

TinaMarie Ekker
Policy Director

Wilderness Watch

Wilderness Character Monitoring Indicators *Draft*

Quality of Wilderness Character		Monitoring Variable
Untrammelled - Wilderness is uncontrolled, unhindered, and free from direct human interference or manipulation	Identify the status and trends of direct human manipulation of <i>natural disturbance processes</i>	% of natural fire starts that are allowed to burn
		# management-ignited fire starts
		# acres mechanical fuel reduction
	Identify the status and trends of direct human manipulation of <i>aquatic systems</i>	# acres of insect control activities
		# of chemical treatments of the river (such as if wanted to poison a certain aquatic species)
	Identify the status and trends of direct human manipulation of <i>plants and plant communities</i>	# exotic species intentionally used, i.e. in restoration or weed control activities
	Identify the status and trends of direct human manipulation of <i>animals</i>	# exotic species put into wilderness (includes fish stocking)
		# of food and habitat manipulations, or restorations
# of studies that allow transmitters or marking of wildlife		
# of translocations of wildlife (such as bighorn sheep)		

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Quality of Wilderness Character	Monitoring Goal	Monitoring Variable
Undeveloped and “does not occupy” - Wilderness has minimal evidence of human occupation and presence.	Identify the status and trends of the physical evidence of modern human presence inside wilderness	# miles of constructed trails (Deer Creek, Bass Creek...)
		# structures per “x” acres (bridges, gauging stations, cables...)
		# structures associated with special provision management (research, patrols...)
		# days (% of year) without human presence

Quality of Wilderness character	Monitoring Goal	Monitoring Variable
Natural - Wilderness ecological systems are free from the effects of modern civilization, and natural processes prevail.	Identify the status and trends of changes from the indirect effects of modern civilization on <i>natural disturbance processes</i>	# fires that started outside wilderness that would have run into wilderness had they not been suppressed
		Beach deposition/loss
	Identify the status and trends of changes from the indirect effects of modern civilization on <i>aquatic systems</i>	Water quality measurements (i.e. alkalinity, buffering capacity, turbidity, fecal coliform, algae)
		# native plant species extirpated
	Identify the status and trends of changes from the indirect effects of modern civilization on <i>plants and plant communities</i>	# exotic plant species present
		# acres (or % of total area) occupied by exotic plants
	Identify the status and trends of changes from the indirect effects of modern civilization on <i>animals</i>	# of native vertebrate species extirpated
		# of exotic vertebrate species

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Quality of Wilderness Character	Monitoring Goal	Monitoring Variable
<p>Solitude - Wilderness provides opportunities to experience remoteness from crowds and from modern civilization, its technologies, and contrivances.</p>	<p>Identify the status and trends of opportunities for solitude</p>	<p># of visitor use days/month</p> <p>average number of daily encounters with other parties while on the river</p> <p>average number of daily encounters with other parties while dayhiking from the river</p> <p>average number of times a party could not stop at a popular location due to crowding at the pull-in</p> <p>average and largest group size (guides included)</p>
	<p>Identify the status and trends of remoteness from the sights and sounds of modern human civilization</p>	<p>Do managers discourage the use of cell phones and GPS units?</p>
		<p>% of area with no cell phone service</p>
		<p>(variables could monitor management actions undertaken for visitor comfort and convenience)</p>
		<p>(variables could include management actions undertaken to enhance opportunities for solitude)</p>
		<p>% of area with unimpeded night sky visibility (light pollution)</p>
		<p>% of area free from motorized noise intrusions</p>
		<p>Increase or decrease in geographic place names on maps?</p>
		<p>% of area free from the structures of civilization (buildings, bridges, cables, other structures)</p>

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		# of detailed guide books, virtual tours and in-park availability (makes a place more known, decreases mystery before even entering the wilderness)
	Identify the status and trends of using motorized equipment and mechanical transport as the minimum requirement for the administration of the area as wilderness	# of times mechanized equipment is used for administrative purposes in wilderness
		# of times motorized watercraft are used administratively and total number of motorized craft used
		# of motorized equipment and mechanical transport (air, water) use authorizations issued by special permit or concessions contract
		# of times aircraft land in wilderness for administrative purposes
		average # of daily overflights
		average number of overflights experienced daily by boaters on the river

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Quality of Wilderness Character	Monitoring Goal	Monitoring Variable
<p>Primitive and unconfined recreation - Wilderness offers opportunities for wilderness-dependent visitor experiences, allowing people to experience remoteness, solitude, route-finding, freedom, and risk.</p>	<p>Identify the status and trends of opportunities for primitive and unconfined recreation</p>	<p>% of visitor use that is self-guided</p>
		<p>Are visitor use quotas applied (total people that can launch daily)</p>
		<p>Regulatory presence in wilderness – limits on behaviors or locations (assigned campsites?)</p>
		<p>Management interference or mitigation efforts regarding naturally occurring risks</p>
		<p>Other variables – to what degree are visitor opportunities for challenge, surprise, mystery, and discovery preserved? (what % of visitors have these opportunities available to them during the majority of their visit?)</p>
	<p>Identify the status and trends of freedom to enter and use wilderness</p>	<p>Are wilderness visitor use fees required?</p>
		<p>Length of self-guided waiting list</p>

