

**LOWER MISSISSIPPI RIVER CONSERVATION INITIATIVE
TENNESSEE WILDLIFE RESOURCES AGENCY
REGION I HEADQUARTERS - JACKSON, TENNESSEE
NOVEMBER 6, 2001**

9:00-10:00 am: Meeting Overview

- A. Welcome & Introductions - Robb Todd, Tennessee Wildlife Resources Agency
- B. Overview of Lower Mississippi River Conservation Committee Aquatic Resource Management Plan - Ron Nassar, Lower Mississippi River Conservation Committee Coordinator
- C. Overview of the Tennessee Wildlife Resources Conservation Plan - Robb Todd, Tennessee Wildlife Resources Agency
- D. Objectives of the Lower Mississippi River Conservation Initiative Meeting - Brad Miller, Lower Mississippi River Conservation Committee Geographic Information Specialist

10:00-11:00 am: Potential Riverine-Floodplain Habitat Restoration Mechanisms

The workgroup discussed various federal and state mechanisms to accomplish habitat restoration activities on the Mississippi River and its floodplain and under what circumstances these mechanisms would be most appropriately applied.

A. U. S. Army Corps of Engineers (COE) Continuing Authorities Program

An overview of a proposed project with the State of Missouri to restore habitat within-channel rock dike fields from the I-55 Bridge to Caruthersville, Missouri was provided by personnel of the Memphis District COE. Representatives from the COE also led an in-depth overview of the Continuing Authorities Program (CAP) with an emphasis on Sections 1135 (Environmental Restoration) and 206 (Aquatic Ecosystem Restoration). One provision of Section 1135 requires that restoration projects be conducted where a COE project contributed to the degradation of the environment. COE representatives stated that many, if not most, restoration projects would qualify under the 1135 authority. Maps and information generated from this meeting could potentially serve as part of the required non-federal match.

Minor structural modifications (notching existing dikes, etc.) that can be accomplished at low (or possibly no) cost if they were tied to authorized new construction projects or maintenance projects were also discussed as alternatives to the CAP. It was also noted that projects using non-COE resources can also be undertaken through the permitting process but the organization undertaking the project would be liable for any for damage or loss resulting from the project.

It was noted by the West Tennessee River Basin Authority that, due to programmatic restrictions, small projects (<\$100,000) might be accomplished at less expense and more quickly by avoiding the use of CAP. When working under the CAP, projects costing less than \$500,000 can be 'fast-tracked' through Corps districts. Proposed projects that could potentially impact navigation or flood control would require modeling at the Memphis District micro-modeling lab at an approximate cost of \$100,000 per project.

Corps personnel also made the following recommendations:

1. Provide the COE with a list of habitat restoration priorities to be incorporated into their planning process and work schedules.
2. The Memphis District plans to put their two year Master Plan on their website. Natural resource managers should maintain an awareness of scheduled construction and maintenance projects.
3. When possible, natural resource managers and the general public should address the Mississippi River Commission during the annual high and low water inspection trips.
4. Natural resource managers and the general public should maintain political connections to generate support for habitat restoration projects.

B. Lower Mississippi River Resource Assessment

There was a general discussion about a two-year, \$1.75 million dollar resource needs assessment for the Lower Mississippi River that was authorized in the Water Resources Development Act of 2000 (WRDA 2000). Although funding for implementation of the project has not been appropriated at this time, it is anticipated in the near term. The Memphis District of the Corps of Engineers is taking a lead role in coordinating this effort and some of the products developed as a result of this meeting may qualify as in-kind match for that project.

C. U. S Department of Agriculture Programs

Don Orr (U. S. Fish and Wildlife Service), Jerry Strom (Tennessee Wildlife Resources Agency), and Mike Zeman discussed the intent of the WRP, relative importance of hydrology restoration on tracts selected for enrollment in the program, need for a state ranking process for tracts submitted for enrollment, per acre payment caps, and the need for the state technical committee to consider removing the per acre/payment cap.

Mike Zeman (U. S. Department of Agriculture Natural Resources Conservation Service) discussed the potential role applicability of three NRCS programs (Wetlands Reserve Program [WRP], Conservation Reserve Program [CRP], and Emergency Wetlands Protection Program [EWPP]) in meeting the habitat restoration goals of the workgroup. He noted that there is a

relatively small amount of EWPP - NRCS WRP lands and filter strip/riparian zone contracts located in the West Tennessee floodplain. EWPP contracts are always permanent easements.

There are approximately 6,100 acres, most of which are under permanent easement, under EWPP and WRP contract in West Tennessee. Under these NRCS programs the landowner retains ownership of the property but NRCS controls use of the property. Under the EWPP and WRP practices most sites are reforested but a minority are allowed to revegetate naturally. Any changes in land use practice by either NRCS or the landowner implemented on site after the original WRP contract has take effect must be addressed through compelled use planning. If NRCS is recommending changes in land use, the landowner is typically partnered into the process. Although NRCS has done little hydrology work within the mainline levee system, there is funding available at the Washington level for hydrology restoration projects. NRCS expressed an interest in hydrology restoration in riverine secondary channels and chutes. Small tracts of land typically do not rank well in the WRP process but most large tracts are accepted. There are 2 factors currently limiting WRP: 1. the national cap on the number of acres that can be accepted in the WRP has been achieved, and 2. the current payment cap of \$800/acre for lands accepted in the program is often far too low for the landowner to accept the bid. The affects of this cap are obvious in Lake County where there is substantial interest in the WRP and in Lauderdale County where there are relatively few participants in the program. If WRP is reauthorized, NRCS will consider asking the State Technical Committee to reevaluate the current per acre payment cap on tracts offered to the WRP and consider paying the appraised price for agricultural property. During the 2001 WRP signup there were more funds available than there were buyers but landowners in areas such as Lauderdale County indicate that, if the appraised value of the property were paid, there would likely be considerable interest in the program.

Areas specific interest (high natural resource values) can be targeted through the NRCS state WRP ranking process. Although this ranking process is reevaluated annually, the State Technical Committee generally follows the recommendations of NRCS. Applicability of the USDA Conservation Reserve Program and the Environmental Protection Agency 319 Program in wetland habitat restoration were also discussed at length. Because many of the proposed projects in the floodplain are on privately owned land, requesting assistance from the USDA Farm Services Agency in constructing land ownership maps was discussed.

Boundary coordinates for WRP and EWPP easements are being digitized but 2000-2001 easements have not been recorded. EWPP and WRP tracts in the Mississippi Alluvial Valley can be located on line at data4.ftw.nrcs.usda.gov/website/wrp_status/viewer.html.

Mike Zeman recommended that the following representatives be added to the workgroup: Pat Gibson - NRCS, John McClusky - Tennessee Wildlife Resources Agency 319 Program, U. S. Environmental Protection Agency Region IV, U. S. Geological Survey, and U. S. Forest Service (Gary Young, Forest Service Watershed Coordinator - Jackson, MS).

D. Tennessee Wildlife Resources Agency

Bill Reeves (Chief of Fisheries) addressed several issues that TWRA believes will be critical to the successful development and implementation of the Tennessee Phase of the Lower Mississippi River Conservation Plan. Although economic development precludes restoration of the entire Mississippi River ecosystem, there are numerous instances in which specific aquatic habitat of substantial importance can be restored. Critical components greatly diminished in the riverine ecosystem, but which can be restored, include: 1. shallow floodplain waters (such as backwater areas) during the annual reproductive cycle for spawning and nursery purposes 2. slack water areas to provide resting habitat out of the main channel 3. functioning (actively connected to the river channel) side channels of adequate depth and water quality to provide feeding/resting habitat, and 4. connectivity to the floodplain to facilitate ecosystem nutrient cycling. The Plan should be developed in concert with existing economic development, focus on the utilization of water in excess of that needed to maintain the navigation channel, and not interfere with the Congressionally mandated flood control mission of the U. S. Army Corps of Engineers as defined in the Mississippi River and Tributaries Act. Although there will obviously be secondary benefits from the Plan to terrestrial wildlife, especially migratory birds, the primary focus of the workgroup should be oriented towards restoration of aquatic resources and water quality in the river's leveed floodplain.

Headcutting on Mississippi River tributaries, sand deposition in flood and backwater areas, role of the Plan in water quality restoration, and the relative importance of the Hatchie River were also discussed as important issues affecting aquatic habitat along the entire river. Fish and wildlife habitat restoration potential within the mainline levee system is very high and there is a substantial need for the type of state level planning effort being conducted at this meeting.

E. Ducks Unlimited

Bob Dew (Ducks Unlimited) discussed the Ducks Unlimited Conservation Lands Program and why landowners are seeking conservation easements available through the organization. Landowners transfer, by deed of a permanent conservation easement to Ducks Unlimited, certain rights which will protect the property in the future. The owner initially gives up all development and use rights to the property, but then reserves the rights they specifically desire and need to farm, ranch, hunt, etc. There are 3 tracts totaling approximately 2,400 acres under easement in West Tennessee at this time. The various natural resource management agencies involved in the Tennessee Partners Program was also discussed as was the program's focus.

F. The Nature Conservancy

Alex Wyss discussed TNC's program of matching properties that have significant conservation values with prospective buyers that are willing to enter into a conservation easement. He also discussed the TNC ecoregional planning process in which areas of high ecological value in the Lower Mississippi River floodplain are identified and protected. The identification by TNC and

the Tennessee Wildlife Resources Agency of specific Anderson-Tully Corporation properties with high natural resource values was discussed. The planning process by which the Hatchie River is being restored and its applicability to this planning process was also discussed. Process includes identification of conservation targets, existing and perceived threats to sites, and site importance (fisheries, black bear, waterfowl, etc.) was an integral component of the overall process.

G. U. S. Fish and Wildlife Service

Don Orr (Wildlife Habitat Management Biologist) discussed proposed expansion of the Lower Hatchie National Wildlife Refuge with a specific focus on lands along the Hatchie River and the need to restore water quality in the Lower Mississippi River floodplain. Randy Cook (Reelfoot National Wildlife Refuge Complex Manager) discussed the need to expand Chickasaw National Wildlife Refuge, which is located in the Lower Mississippi River floodplain, and potential impacts to federal trust lands from alluvial deposition. The need for overlaying the acquisition boundaries of Chickasaw and Lower Hatchie National Wildlife Refuges was also discussed. Cook noted that approximately 30,000 acres around Chickasaw NWR and 12,000 acres around Lower Hatchie NWR have been identified as important migratory bird habitat and would be acquired from willing sellers by the Fish and Wildlife Service if funding were available. The Fish and Wildlife Service has utilized approximately \$3 - 4 million for land acquisition during the last few years. He also stated that, if funding were available, the U. S. Fish and Wildlife Service could purchase 9,000 acres immediately. Currently there is a substantial amount of property for sale within the levee system but much of it falls within an appraised value range of \$1,800 - \$2,000. It was noted that sand deposition in flood and backwater areas is an increasingly important issue affecting aquatic habitat along the entire river and previous discussions with the Corps of Engineers indicate that, in some cases, it can potentially be addressed under Section 1135 of the Water Resources Development Act.

H. Tennessee Department of Environment & Conservation

John Leonard (Assistant Commissioner for the Environment) discussed various issues associated with restoring water quality in the Lower Mississippi River floodplain, a master plan for restoring aquatic resources, the need for developing land ownership maps in the Lower Mississippi River batture, unmet mitigation needs, unutilized potential within the U. S . Army Corps of Engineers Section 1135 (Environmental Restoration) & 206 (Aquatic Ecosystem Restoration) Water Resource Development Act programs, and the problems associated with reclassifying the Lower Hatchie River from a Tier 2 to Tier 3 classification.

I. Objectives of the Meeting

Brad Miller (Lower Mississippi River Conservation Committee Geographic Information System Specialist) discussed the primary products that were anticipated from the work group. These included a natural resource conservation plan for the aquatic resources in the West Tennessee

active floodplain of the Lower Mississippi River, periodically updated maps of natural resource conservation activities in the floodplain (public/private conservation easements, public lands, habitat restoration projects designed and constructed by the work group, proposed natural resource conservation activities, etc.), development of a Project Monitoring and Evaluation Plan, and minutes of this and all future meetings.

11:00 - 2:30: Review of Habitat Restoration Projects

The workgroup reviewed 28 specific habitat restoration projects proposed by the Tennessee Wildlife Resources Agency

1. Reconnect Tiptonville Chute : River Miles 879-873

Reconnecting this chute would not be particularly difficult from an engineering standpoint. The closing structure at the head of the chute may need to be notched to maintain flow during low water conditions. There is an access road across the chute which is probably an old dike. Restoring flow would require lowering the dike, installing conduit or other alterations. Some excavation at the lower end of the chute may be necessary. Much of the land between the chute and the river was utilized for agricultural production, until the NRCS recently purchased a permanent easement on approximately 1,249 acres. The landowner is growing timber. The chute can be restored without regard to landowner access under COE authorities. NRCS would like some access to implement restoration activities. This would seem to be a feasible project that could be implemented under a Section 1135 project. Field reconnaissance is required to determine the condition and nature of the access road across the chute. Also it is desirable to gather baseline aquatic species population data from the chute prior to reconnecting the chute.

2. Maintain Flow Through Channels Behind Lee Towhead: River Miles 859-857

Both the inner and especially the outer channel experience low flow during low water conditions. Putting more water through the channels would be difficult and perhaps more expensive than benefits would merit. Problem could be rectified with periodic dredging or perhaps with the construction of new structure to divert more flow into the chutes. In general not much can be done unless a closing structure was placed at the upper end of the chute in the past, that could be modified. Requires additional study. COE will determine whether there is a closing structure. Modification of 2 dikes needs to be assessed.

3. Hathaway Dikes: River Miles 855-850

Notching dikes to maintain flow through sandbar during low water conditions would not be difficult from an engineering stand point. As this is a low maintenance area for the COE and there is no new construction planned for the next 5 years, TWRA may have to submit this a major project under one of the Continuing Authorities and serve as sponsor. The notching of dikes might not be possible due to the possibility of the river shifting course and using the chute

as the main channel.

4. Blaker Towhead: River Mile 846

This secondary channel is in fairly good shape except for the inlet which has become shallow due to sedimentation. Improvement would probably require the placement of new structures which would be expensive and would require micro-modeling. Adding to the difficulty of diverting more water into this channel is the fact that this reach of the river is already experiencing siltation problems requiring dredging in 1998, 1999 and 2000. Furthermore, the State of Missouri has identified the dike fields across the river as a high priority for restoration. COE conducted preliminary reconnaissance earlier this fall. The channel behind Blaker Towhead could be surveyed as part of the restoration activities in Missouri to determine whether minor dredging could rectify problem.

5. Island 18: River Mile: River Miles 838-832

Two possibilities for restoration exist in the Island 18 area. 1. Notching dikes to restore flow through the sand bar during low flow. COE felt that this might be expensive due to the amount of accretion. 2. Reconnecting Everett Lake with the river. This area could provide excellent paddlefish habitat if they had access to it. The lake has been recently sampled and sport fish populations have declined while populations of big headed carp have increased. Restoring flow would require alteration of the closing structure, probably some sort of dike. The closing structure is also used for access to the bar where it appears there is some agricultural activity. Area needs further study.

6. & 7. Island 21: River Miles 829-822

The north end of Island 21 is in private ownership (940 acres in WRP and 1,050 in private ownership). The outer ridge of Island 21 consists of a band of cottonwoods.

8. Acquisition of Lands Between Island 21 and Moss Island WMA: River Miles 820-824

Area has significant value to wading birds (Tennessee state record for wood storks - 700, Fall 2001).

9. Acquisition of Lands Between Open Lake and Mouth of Obion River: River Miles 816-817

Project area consists of land north of Dea Webb Road to Highway 88 and contains the old bed of the Forked Deer River. Apparently Items 8 and 9 can be reconnected via the U. S. Fish and Wildlife Service acquisition boundary for Chickasaw NWR.

10. Nebraska Point: River Miles 815-805

Several opportunities exist for habitat restoration in this area including notching of dikes on the upper part of the point to create flow and diverse habitat through the extensive sandbars that surround the point and cutting through the revetment on the lower part of the point to connect abandoned channel and create a backwater lake. This is a politically sensitive area as there has been a lot of dredging recently leading some local farmers in Arkansas to believe that the dredging is increasing flooding. Restoration efforts suggested for the upper portion of the point are the most feasible from an engineering standpoint and probably would not impact the least tern habitat on the sandbars. Reconnecting the abandoned channel would be more difficult, expensive and would probably require modeling to determine feasibility and benefit. TWRA may have to submit this as a major project and become the sponsor.

11. Acquisition of Lands Between Open Lake - Lower Forked Deer River: River Miles 798-801

Sediment from the Forked Deer River is filling Open Lake. Landowners continue to raise levees at the lake's outlet and structural modifications on the Mississippi River frequently prevent overflow into lake. It has been effectively cut off from the Mississippi River and annual flooding no longer occurs. An active connection to the Mississippi River and dredging will likely be required to sufficiently deepen and maintain the lake. Approximately half of Open Lake is privately owned and there may be significant landowner opposition to this project, unless landowners are fully involved from the beginning. Key to successful completion of the project may be initial acquisition of lands along the Forked Deer and Mississippi Rivers, prior to dealing with the issues at Open Lake. Because landowners desire to restore recreational fishing opportunities in the lake, they may be open to project construction that would restore a connection to the Mississippi River, provided it would not permit public access.

12. Elmot Bar and Kate Aubrey Towhead: River Miles 785-791

Dikes (River Miles 791-797 on Arkansas Bank) have cut off flow in secondary channel TWRA proposes to increase flow in the secondary channel behind Elmot Bar and Kate Aubrey Towhead. Acquisition or easement would also be preferred for this area. Joe Hopper, TWRA, has already constructed much of the land ownership in this area. Bob Ford, U. S. Fish and Wildlife Service, also constructed land ownership maps of this area and they are contained in a bird management plan he developed. Miek Zeman suggested that Farm Services Agency maps might also be useful in identifying landowners in the proposed project area. There is a NRCS permanent easement of approximately 200 acres (1 - WRP, 1- EWP on contiguous tracts) with Dr. Calvin Revere on Kate Aubrey Towhead. Although a definite secondary channel still exists behind the towhead, it is diked at the upper and lower ends and boat access is restricted to high water periods. Project area noted as being a diverse assemblage of aquatic habitat that likely be even better if flow were restored through the secondary channel.

This project may be difficult to accomplish as COE has constructed structures to keep water in the channel, a.k.a. Lake Nark. COE suggested looking at notching dikes upstream on Island 28 (AR side) which would require concurrence by the State of Arkansas.

Note was made of the fact that the Hatchie River is the last unchannelized tributary in Tennessee to the Mississippi River and possesses substantial flood storage capacity. The question was raised as to whether it should be considered an integral component of any effort to restore the aquatic resources of the Lower Mississippi River. Significant fisheries values occur at the lower Hatchie x Mississippi River confluence. Although the Hatchie is currently designated as a scenic river, it should be given a Tier 3 classification by the Tennessee Department of Environment & Conservation to ensure its long-term future. Although this action is not currently feasible, an alternative strategy may be to select a specific scenic reach of the river and work with private landowners to apply for a higher level of protection that reflects their concerns.

13. Acquisition of Lands Between Crutcher Road and Mississippi River: River Miles 782-784

NOT DISCUSSED

14. Plum Point: River Mile 792-780

TWRA proposes notching dikes around Plum Point to increase water flow through the extensive sand bar that surrounds the point. COE states that this may be difficult, though not impossible, as this area requires repeated dredging. Dike work is scheduled from Keys point upstream to the Ashport-Goldust area. Work scheduled to begin soon and a micro-model has been constructed in Memphis. This might be a good opportunity to coordinate efforts at little cost.

15. Reconnecting "The Chute" : River Miles 783-778

TWRA proposes opening up the down river end of the chute. COE feels that this might be a very expensive effort depending on the width of the channel to be cut. Using a backhoe might be cheaper. The Chute and surrounding floodplain lakes are used for both recreational and commercial fishing. There was a good deal of sentiment among the group that this complex of lakes may be functioning well and would be best left alone for the time being. This area might make an ideal natural laboratory. Anecdotal evidence suggests that the lakes are becoming shallower which may revive the restoration proposal. In any event The Chute and surrounding meander scars merit additional monitoring.

16a. Acquisition of Sunrise Towhead and Island 34: River Miles 772-778

Sunrise Towhead has a significant secondary channel and wetland complex that can be restored by reintroducing flow into the north end of the channel. TWRA proposes acquiring the area for public use.

16b. Restore Channels/Hydrology - Sunrise Island Towhead and Island 34: River Miles 778-763

Discussion on this area was inconclusive. The Main secondary channel is in fairly good condition except at the inlet and mouth where it is shallow due to siltation. COE suggested that the outermost channel that diverges from the main secondary channel may be a candidate for

restoration though more field reconnaissance is needed. Most of the discussion on this area centered on a permit application by an Alabama State Senator who recently bought the island, to close the chute to gain access to the island and to construct a fifty acre impoundment for water fowl. The COE river engineering team did not support this structure and the landowner now is considering build a bridging structure over the channel. Again COE engineers believe this would create a maintenance problem. COE promised to advise TWRA Fisheries section and LMRCC so that they could comment on it even though the initial comment period had probably expired.

17. Acquisition of Lands Adjacent to the Mouth of the Hatchie River: River Miles 771-775

Note was made of the fact that, although the mouth of the Hatchie River has not been significantly altered (no dikes or other structures at its mouth), deep headcutting is occurring. Acquire lands south of the Hatchie x Mississippi River confluence to improve water quality values and stabilize Hatchie River mouth.

18. Richardson's Landing: River Miles 768-763

TWRA proposes to notch the two dikes at Richardson's landing to increase flow during low water through the sand bar that has accreted behind them. COE stated that this would not be difficult from an engineering standpoint and would be a project that could be addressed during new construction but would be expensive. Unfortunately no new construction is planned for this area in the foreseeable future. NRCS has a large easement on Island 35 which might affect TWRA's stated plans to acquire the island.

19. Acquisition of Island 35: River Miles 764-768

Substantial opportunity to restore aquatic habitat in several disjunct channels situated between Mississippi River and mainline levee on Arkansas bank. Approximately 1,500 acres of Island 35 Towhead are currently under WRP and EWP contracts and has been replanted (green ash & overcup oak). Land is relatively high and very sandy.

20a. Acquisition of Densford Bar: River Miles 754-759

Highly diverse area with substantial backwater aquatic habitat. Overflow from Mississippi River has been cut off. TWRA sampling indicates large numbers of sauger and sturgeon present in the area.

20b. Reconnect Tweatt Chute: River Miles 759-754

TWRA proposes to reconnect the lower end of Tweatt Chute to the river. From an engineering standpoint this is not particularly difficult. Benefits are questionable as Tweatt Chute would empty out into a side channel that is often dry. A state boat ramp was located on that side channel at one time but moved because the channel was often not navigable. More information needed on side channel but the project may not be worth the effort. Joe Hopper, TWRA, is knowledgeable

about the Densford bar and Tweatt Chute areas. Project might include increasing northern boundary of Meeman-Shelby Forest State Park to include the area east of Tweatt Chute.

21. Acquisition of Corona Lake Complex - Island 37 & Centennial Island: River Miles 752-758

Project would include wetland complex encompassing Corona Lake and Brandywine Chute, including reconnection of Brandywine Chute to the Mississippi River.

22. Acquisition of Willow-Eagle-Grassy Lake Complex: River Miles 746-747

TWRA proposes purchase of this area and restoration of hydrology. State already owns Grassy and Eagle Lakes land and but Willow Lake is privately owned. Private landowner is currently fencing property. Small creek in area is causing drainage problems and needs to be restored. Overall restoration of hydrology may be difficult.

23. Hickman Bar: River Miles 749-743

TWRA proposes notching dikes to restore low water flow through Hickman Bar and the bars adjacent to Randolph Point. COE advised the group that this reach of the river down to the bridge in Memphis is scheduled for major construction in 2-3 years and it is possible that all dikes may be removed. Modeling will be done sometime next year and would be a good opportunity to evaluate what type of habitat restoration can be done between Hickman Bar and the Bridge.

24a. Acquisition of Islands 40 and 41: River Miles 744-748

Area has significant chute along eastern boundary that should be restored and land should be acquired by the state. Corps has constructed low head dike through Mississippi River revetment to allow water flow into and out of area. Area has substantial possibilities for restoration as a wetland ecosystem complex.

24b. Restore chute behind Islands 40 & 41: River Miles 749-743

Area not discussed in depth due to impending major construction in this reach - refer to Item 23 - Hickman Bar.

25a. Acquisition of Mosquito Lake Complex: River Miles 737-740

Rerouting the mouth of Loosahatchie River through Ash Slough is being proposed to the COE. Siltation in docking area prompted project. Permit parameters for removing silt have already been exceeded. Project, as proposed, will create significant negative impacts on the wetland complex at the mouth of the Loosahatchie River. Ducks Unlimited already has an easement on part of this area and acquisition by the state may be unnecessary if permanent protection is provided to the area through the easement. Loosahatchie Bar Secondary Channel has been completely diked off from the Mississippi River and flow should be restored through it. Pools,

especially in the lower end of the dike field, provide significant shorebird habitat at low water.

25b. Reconnect chutes on Robinson Crusoe Island: River Miles 743-737

Because of its size, diversity of habitat and proximity to Memphis, it was agreed that this area should be assigned high priority. A project here would have a great deal of visibility, and could provide a wide range of recreation and educational benefits. Specifics were not discussed as this area falls within the reach scheduled for extensive engineering work over the next few years.

Ducks Unlimited has a permanent conservation easement on this entire area. COE will contact TWRA when they initiate the planning process.

26. Restoration of Secondary Channel through Ensley Bar: River Miles 726-720

This area presents another promising area for restoration that would not be too difficult from an engineering standpoint. Unfortunately COE finished new construction in this area only last year. Much of the required work on the dike field would occur in Arkansas and would require coordination with Arkansas.

27a. Acquisition of Armstrong Bar: River Miles 716-720

Area is very complex and has significant wetland restoration opportunities. Because of its proximity to Memphis, recreation use of this area is relatively high. Shorebird use of the area is significant (12-15,000 birds). Area is also a bird rookery (10-12,000 nests).

27b. Restoration of Channel behind Armstrong Bar: River Miles 720-715

COE engineers felt that reconnecting this channel with the river might be difficult due to the large number of dikes and possible excavation needed. Opening up the lower end of the channel might actually drain it. Area needs further study. Possibility exists for notching dikes as continuation of Ensley Bar restoration.

28. Reconnect Mud Lake: River Miles 725-720

This 28,000 acre area was offered to TWRA in 1958 but the offer was rejected. This would be a monumental project requiring a great deal of engineering and cooperation with Mississippi. TWRA should probably reconsider, if not scrap entirely, this project. Belz Enterprises owns the outlet of Horn lake. Although timber loss on the area is being blamed on a malfunctioning water control structure which drained the area to very low levels, this is not the case. If lake is high, local sportsmen could access Belz Enterprises property. Agreement stipulates that area will be managed as a greentree reservoir during winter months and water levels dropped during summer months. Levee that previously held water on timber and killed it has blown out. If approached properly, the current landowners may be receptive to wetland restoration projects.

ADDITIONAL GROUP COMMENTS:

1. Need to enter Fish and Wildlife Service refuge acquisition boundaries into GIS database
2. Where possible, work cooperatively with private landowners to carefully pursue Tier 3 classification (no impacts to water quality permitted) for scenic sections of the Hatchie River
3. Future obstructions (dirt railroad crossings as opposed to bridges, etc.) to Mississippi River floodplain should not be permitted; the potential role of the permitting process in minimizing future flood damages and the number of obstructions permitted in the river floodplain may need to be expanded
4. All floodplains lakes should be considered for restoration by installing water control structures, if necessary, to maintain minimum depths
5. Site assessment by some agency and prioritization by the planning group will be a necessary component of this planning process
6. Scott Franklin, university of Memphis, agree to develop a draft set of project ranking factors
7. Review Corps of Engineers Mainline Levee Environmental Impact Statement that contains hydrology data for the Lower Mississippi River floodplain
8. Review Ducks Unlimited LANDSAT map of Lower Mississippi River floodplain
9. Because funding for natural resource conservation activities may decrease in response to the terrorist acts committed on September 11, 2001, it is more prudent and imperative than ever for the workgroup cooperatively to develop and implement the Tennessee Phase of the Lower Mississippi River Conservation Plan
10. The need for 2 additional projects was discussed at length:
 - a. degradation of water quality and fisheries resources in Reelfoot Lake dictates a definite need for restoring controlled Mississippi River flow into Reelfoot Lake via installation of a water control structure in the mainline levee north of the lake
 - b. modify rock dikes at Little Cypress Bend to reintroduce flow into Island 13 wetlands which may have historically been the most significant shorebird area in western Tennessee; land acquisition may be necessary to complete this project

CRITICAL TASKS:

1. Site reconnaissance
2. Project prioritization

Revised: February 10, 2002