

ATTACHMENT 11

PONDBERRY  
MEMORANDUM OF AGREEMENT



# DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS  
4155 CLAY STREET  
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO  
ATTENTION OF:

MAR 16 2007

Planning, Programs, and  
Project Management Division  
Environmental and Economic  
Analysis Branch

Mr. Sam D. Hamilton  
Regional Director  
U.S. Fish and Wildlife Service  
1875 Century Boulevard  
Atlanta, Georgia 30345

Dear Mr. Hamilton:

I refer to your letter of February 28, 2007, transmitting the Memorandum of Agreement (MOA) between the U.S. Army Corps of Engineers, Vicksburg District, and the U.S. Fish and Wildlife Service to implement a conservation and recovery program for the Federally-listed endangered plant pondberry in association with the Yazoo Backwater Area Reformulation Project.

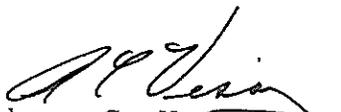
We agree that implementation of this Agreement, in conjunction with the preceding June 2002 MOA, will provide important conservation and recovery measures for pondberry. We would also like to commend you, your staff, and Messrs. Ray Aycock and Will McDearman of the Mississippi Ecological Services Field Office for their efforts in making this Agreement reality. An original copy of the executed Agreement is enclosed (enclosure).

A copy of this letter is being furnished to Mr. Aycock, Jackson Field Office.

*Sam,  
A watershed agreement!  
Thanks to you & your team for  
all their great work here!!!  
J 16/03/07*

If you have any questions, please contact either Mr. Kent Parrish (telephone (601) 631-5006) or Mr. Gary Young (telephone (601) 631-7156) of this office.

Sincerely,



Anthony C. Vesay  
Colonel, Corps of Engineers  
District Engineer

Enclosure

**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
U.S. ARMY CORPS OF ENGINEERS, VICKSBURG DISTRICT,  
AND THE  
U.S. FISH AND WILDLIFE SERVICE**

**1. Purpose.**

This Memorandum of Agreement (MOA) is entered into by and between the U.S. Department of the Army, U.S. Army Corps of Engineers (Corps), Vicksburg District, and the U.S. Fish and Wildlife Service (Service), Region 4, (collectively "parties"). The purpose of this MOA is to establish a framework for, and to implement a conservation and recovery program for the federally listed endangered plant, pondberry, in association with the Yazoo Backwater Area Reformulation Project, Mississippi (the "Project"). Specifically, this program consists of a pondberry propagation and stocking program as described herein. The Corps will also undertake a research project designed to evaluate the effects of flood frequency, sunlight, competition, and pathogens on pondberry.

**2. Authority.**

This MOA is entered into pursuant to Section 1536(a)(1) [generally known as Section 7(a)(1)] of the Endangered Species Act (ESA), 16 U.S.C. 1531, et seq.

**3. Scope.**

The scope of conservation and recovery activities is contained in Attachment A to this MOA.

**4. Responsibilities of the Parties.**

a. Responsibilities of the Corps.

(1) The Corps will be responsible for administering and funding the development, implementation, and monitoring of the conservation and recovery activities detailed in Attachment A.

(2) The Corps may, at its sole discretion, use other agencies, contractors, or other third parties to accomplish the development, implementation, and/or monitoring contained in Attachment A.

(3) By 31 January of each year after execution of this MOA, the Corps will provide an annual report on the status of its ongoing activities to conserve and recover pondberry as provided in Attachment A. The reporting period will be for activities from January through December of the previous year.

(4) The Corps will make available required planting sites on Mahannah Wildlife Management Area in accordance with Attachment A.

b. Responsibilities of the Service.

(1) The Service will provide technical assistance in the development, implementation, and monitoring of the conservation and recovery activities contained in attachment A at no cost to the Corps.

(2) The Service will assist the Corps in obtaining permits issued by the Service and its refuges, including those required by the ESA and its regulations.

(3) The Service may contribute additional funding, at its sole discretion.

(4) The Service will make available required planting sites on Panther Swamp National Wildlife Refuge in accordance with Attachment A and in accordance with a refuge Special Use Permit.

c. Responsibilities of both Parties.

(1) The Parties will work cooperatively to implement this MOA.

(2) In the event a dispute over a material term of this MOA or terms and conditions of a pondberry propagation and stocking plan and implementation of a research project as generally provided in Attachment A, or other issues which may arise, the parties will notify each other in writing the nature of the issue or purported dispute and will seek in good faith to resolve the dispute at the lowest organization level before seeking elevation.

(3) If a successful outcome cannot be reached by negotiation, the parties will elevate an unresolved dispute first to the Service's Assistant Regional Director – Ecological Services and the Commander, Vicksburg District, and if necessary, to the Service's Regional Director and the Commander, Mississippi Valley Division, for resolution.

(4) With respect to other agencies, the parties shall work cooperatively to address any concerns of other agencies.

**5. Funding.**

a. Corps funding to implement and monitor the pondberry propagation and stocking plan and to implement the research project, more specifically described in Attachment A, will be allocated from funding received to construct the Project. Implementation of activities described in Attachment A is subject to project approval and funding.

b. The parties may enter into interagency agreements under the Economy Act (31 U.S.C. §1535) for goods or services for the implementation of these conservation and recovery activities to include additional funding or in-kind work from other Federal agencies.

**6. Interagency Communications.**

Points of contact for the parties are:

a. Corps:

Kent Parrish  
Senior Project Manager  
Vicksburg District, U.S. Army Corps of Engineers  
4155 Clay Street  
Vicksburg, MS 39183-3435  
(601) 631-5006

b. Service:

Ray Aycock  
U.S. Fish and Wildlife Service  
6578 Dogwood View Parkway, Suite A  
Jackson, MS 39213  
(601) 321-1124

**7. Amendment, Modification, and Termination.**

This MOA may be modified, amended, or terminated only by written mutual agreement of the parties prior to the completion and analysis of 10 years of monitoring data from the stocked populations and pondberry research sites.

**8. Miscellaneous.**

- a. The Corps shall reference this MOA in the Record of Decision for the Project.
- b. The Service shall describe in the Biological Opinion (BO) these conservation and recovery activities which were developed by the Corps in response to the Service's conservation recommendations made during the consultation.
- c. This MOA shall not affect the independent obligations of the Corps or the Service, including any preexisting or independent relationships between the Corps and Service.
- d. If any provision of this MOA is determined to be invalid or unenforceable, the remaining provisions shall remain in force and unaffected to the fullest extent permitted by law and regulation.

**9. Effective Date.**

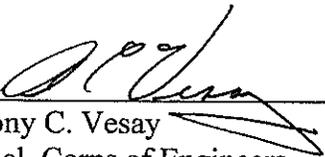
- a. This MOA is effective on the date of the last signature of approval.
- b. This MOA is effective until 10 years from the first planting of pondberry in accordance with Attachment A.

IN WITNESS WHEREOF, the parties have caused this MOA to be executed. Each signatory represents that the signatory has been appropriately authorized to execute this MOA on its behalf.

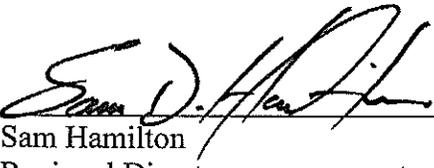
U.S. DEPARTMENT OF THE ARMY

U.S. FISH AND WILDLIFE SERVICE

BY:

  
\_\_\_\_\_  
Anthony C. Vesay  
Colonel, Corps of Engineers  
District Engineer

BY:

  
\_\_\_\_\_  
Sam Hamilton  
Regional Director  
Southeast Region

DATE:

16 MAR 07

DATE:

2/28/07

## ATTACHMENT A

### 1. **Background.**

a. Pondberry (*Lindera melissifolia*) was listed federally as an endangered species on 31 July 1986 (Federal Register 51 (47):27495-27500). It is a low-growing, deciduous shrub ranging in height from 1.5 to 6.5 feet. The plants commonly grow in clumps of numerous scattered stems. The older portions of the stems are dark green to almost black with numerous irregularly spaced, but prominent lenticels, which appear very similar to saplings of young stems of sassafras.

b. There are an estimated 196 pondberry colonies/sites in the Delta region of Mississippi. An estimated 177 of these colonies/sites occur in the Yazoo Backwater Area Reformulation Project Area. In 2001, the U.S. Army Corps of Engineers, Vicksburg District, entered into a 7-year, \$5 million interagency agreement with the U.S. Department of Agriculture (USDA), Forest Service, to investigate pondberry biological and ecological requirements. The Agreement was entered into pursuant to Section 7(a)(1) of the Endangered Species Act (ESA), which allows Federal agencies to utilize their authorities to carry out programs for the conservation and recovery of listed species. These ongoing research activities were specifically designed to address recovery tasks described in the 1993 U. S. Fish and Wildlife Service Pondberry Recovery Plan. The additional activities contained in this Attachment also address tasks in the Recovery Plan and are also being conducted in accordance with Section 7(a)(1) of the ESA.

### 2. **Conservation and Recovery Activities.**

Two additional conservation and recovery activities will be conducted:

(1) Propagation and stocking of pondberry at or below the 1-year Backwater flood frequency.

(2) Establishment of field experiments to evaluate the effects of flood frequency, sunlight, competition, and pathogens on pondberry.

### 3. **Propagation and Restocking.**

#### a. Location:

(1) Stocking of pondberry will be conducted on Mahannah Wildlife Management Area, Issaquena County, MS, and Panther Swamp National Wildlife Refuge, Yazoo County, MS, or other areas, any and all of which must be agreed upon by the parties. Specific planting sites within each property will be jointly selected by the parties.

(2) The selected properties will have adequate conservation and management provisions to maintain suitable forest habitat for pondberry conservation for the duration of the MOA.

b. Restocking Specifications:

(1) Initial restocking will be 40,000 plants: 20,000 plants on Mahannah Wildlife Management Area and 20,000 plants on Panther Swamp National Wildlife Refuge. These stock plants will be derived and propagated by tissue culture from existing selected parental stock maintained by the USDA, Forest Service.

(2) A propagation/stocking plan will be jointly developed by the Corps and the Service within 12 months of the effective date of the MOA. The propagation/stocking plan will establish the following: (a) number of sites to be planted (no less than 4 nor more than 10), (b) planting schedule for each site, and (c) planting spacing and quantities of plants for each site.

(3) Site conditions will meet the following flood frequency and duration guidelines:

(a) At or below 1-year backwater flood frequency.

(b) Below the 5 percent backwater flood duration determined by the Flood Event Simulation Model.

(c) Determined a jurisdictional wetland using the 1987 "Corps of Engineers Wetland Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Research and Development Center.

(4) Forest stand characteristics will be similar to known colonies in the Yazoo Backwater Area's 1-year flood frequency.

(5) Pondberry planting will consist of plants with genetic attributes based on known genetics as established by the USDA, Forest Service, or other mutually agreed upon genetic population parameters.

(6) Within 12 months of the effective date of the MOA, the Corps and Service jointly will develop a plan for monitoring and managing the propagation program. The plan will include the following elements: (a) establishment of measurable performance standards for evaluating the propagation sites; (b) establishment of criteria for reporting on attainment of performance

standards at the propagation sites for a period of 10 years following initial planting, which reports will be included in annual report described in MOA paragraph 4.a.3; and  
(c) establishment of criteria for evaluating possible corrective measures if performance standards are not met. Implementation of corrective measures will be treated as an amendment of the MOA.

(7) The parties will work cooperatively to implement these restocking specifications.

#### 4. Field Experiments.

a. The Corps will conduct field experiments for the purpose of investigating the relationship of pondberry to flood frequency, sunlight, competition, and pathogens under forest conditions.

b. Location: Experimental plots will be established in Delta National Forest, Sharkey County, MS, as approved by the USDA, Forest Service. The plots with artificially propagated pondberry stock will be geographically separated from existing pondberry colonies/sites and clearly identified as research plots.

c. Experimental Design:

(1) The experimental design will contain the following treatments, depending on site availability.

(a) Flood frequencies investigated at 1, 2, 5, 10, and 15 year.

(b) Stand sunlight investigated with light thinning, heavy thinning and control.

(c) Competition investigated with herbicide treatment and control.

(2) The Corps will provide a detailed research plan to the Service within 12 months of the effective date of the MOA.

(3) Data collection and analysis will be conducted annually for 10 years. The Corps will provide annual reports to the Service.

(4) The parties will work cooperatively to develop and implement the field experiment.

**5. Schedule:**

The parties agree to the following general schedule:

Item	Propagation and Restocking		Field Experiment	
	Initiation	Duration	Initiation	Duration
1. Determine Genetics	MOA Execution	3 months	MOA Execution	3 months
2. Determine Required Stand Characteristics	MOA Execution	4 months	MOA Execution	4 months
3. Site Selection (hydrology/stand parameters)	After Item 2	6 months	After Item 2	6 months
4. Determine Planting Specifications	After Item 3	1 month	After Item 3	1 month
5. Pondberry Propagation a/	ROD Execution	12 months/yr	ROD Execution	12 months
6. Pondberry Outplanting	After Item 5	3 months/yr	After Item 5	3 months
7. Monitoring/Data Collection	After Item 6	Annual/10 yrs	After Item 6	Annual/10 yrs
8. Reporting	After Item 7	Annual/10 yrs	After Item 7	Annual/10 yrs

a/ Propagation and outplanting for restocking will be phased in over 4 years.