

May 21, 1993

M E M O R A N D U M
(Draft)

TO: Jim Nissen, /U.S. Fish and Wildlife Service
Randy Urich, Corps of Engineers

FROM: Marc A. Schultz, Resource Agent
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RE: 1992 and 1993 Swamp White Oak Project

Having recently completed planting of nursery stock on designated Pool 7 islands in the upper Mississippi River Refuge it is time to summarize the project so far. Beginning in the Fall of 1991, after consultation with the Corps of Engineers (COE) and Fish and Wildlife Service (FWS), the Brice Prairie Conservation Association (BPCA) gathered acorns from a number of sites in what was a bountiful acorn year. With the assistance of Randy Urich of the COE, the BPCA members, along with the FWS and the COE, prepared a seedbed for fall planting of the swamp white oak acorns. After the acorns were planted in a grid pattern, the seedbed was mulched and covered with a protective screen. In addition, a good supply of acorns was stored in the refrigerator for planting in the spring in quill tubes. The tubes were obtained at no charge on an experimental basis from Tubex Co., Inc.

In the spring of 1992, the FWS and the COE, burned one site, Island A Swamp White Oak Island. Several other sites were also selected, site B, known as No Name Island, site C, known as Blackriver Confluence Island, site D, known as Turtle Island, site E, known as Large Swamp White Oak Forest Island, and site F, which is known as Upper Blackriver Sandbar (see Appendix A). These sites were all planted with acorns in tree shelter quill tubes. For each acorn protected by quill tubes acorns were all planted nearby, without any protection and marked with a flag. The Summer of 1992 brought substantial flow and cool temperatures. Monitoring showed some predation problems on two of the islands. Turtle Island suffered almost complete predation of the acorns and there was partial predation on the Blackriver Confluence Island. In the Fall of 1992, all of the islands were checked to see how growth was proceeding. In over 90% of the quill tubes, the acorn had germinated and the tree was within several inches of the top of the tube or was coming out of the top of the tube. In less than 20% of the unprotected plantings did the acorn germinate and survive. By spring of 1993 only one seedling of the unprotected plantings could be found. In the Fall of 1992 thirty quills remained: On No Name Island there were six, on Swamp White Oak Island there were twelve, on the Blackriver Confluence Island there were five, on Turtle Island there was one, on the Swamp White Oak Forest Island there were none, and on the Blackriver Sandbar there were five.

In the fall of 1991 volunteers from BPCA built a nursery bed frame in preparation for full planting of acorns. The bed featured a removable cover to prevent squirrels from digging the acorns. This way the bed can be reused as planting stock is rotated out.

In the summer and fall of 1992, the nursery was watered and tended by Kim Berg, a girls scout from the Brice Prairie Girl Scouts. Exceptional survival of the acorns was noted with 678 young trees surviving into the Fall of 1992. In midsummer, the protective covering over the nursery was removed to allow the young trees more light and space to grow. A fence with a four foot enclosure of chicken wire was then placed around the nursery to prevent deer and squirrels from entering. The trees went into the Fall in good condition with good soil moistures. The Winter of 1992-93 was snowy and wet and the trees were covered with snow for most of the Winter. In April of 1993, half of the trees were dug and packaged in sphagnum moss and plastic and refrigerated at the National Fishery Research Laboratory in anticipation of planting.

In the Spring of 1993 there was substantial high water for extended period of time, from April through the middle of May. In fact, at the time of the planting of the trees from the nursery, the water was high, with the La Crosse gage at 9.2. Previous to planting, site B, H and G had been burned in Spring 1993. Because of wet conditions a complete burn was not achieved.

On May 19th, 1993, 3 volunteers from the BPCA, myself, Randy Urich and Dan Oles from the COE prepared to plant trees in 180 larger Tubex tubes of three to four foot in height that had been purchased through the BPCA, the FWS and the COE. Each organization contributed \$200 to the purchase. The volunteers from BPCA were Dick Marco, Butch Williams, Dave Thompson and Marc Schultz from La Crosse County University Extension Office. A boat from the COE and two from the volunteers were used to transport the materials and the trees to the islands. In addition, four girls scouts from the Brice Prairie Girl Scouts participated by planting the last twenty of the trees on the last island after school.

The work group departed at noon from the Upper Brice Prairie landing and proceeded to the first planting sight, which was site B or No Name Island. All six of the Tubex quill tubes were still intact and all six contained growing trees. After removing the quill tube, larger Tubex tubes were placed over those six and were lettered from A to F. In addition, thirty-two new trees were planted in areas that were scalped out and were numbered (1) through (31) plus number (159). Each tube was covered with a net provided by Tubex to exclude birds from getting trapped in the tubes. Planting was relatively easy in the moist, easily worked soil. The soil on this sight is somewhat sandy with a bit of a silt layer on top.

Next we proceeded to site A or Swamp White Oak Island where there was substantial erosion that had taken place since the previous year. It was noted that four of the Tubex quills had been washed away. The island had been eroded from the upstream end. Quill tubes were removed and larger Tubex tubes were replaced and these were lettered from G through N. In addition, new trees were planted numbering (32) to (38).

Next we proceeded downstream to Gibbs Chute and to a large burn that was the most complete burn that was done in 1993. When the burn was accomplished some of the flammable materials were still wet and so a very complete burn was not attained. Soil on this site seemed rather silty and were very wet, although not standing water. This is designated site G or Birthday Island. A total of eighty-two trees were planted with the accompanying large tubes and the netting over the top. They numbered from (39) to (118) and numbers (160) and (161).

Just upstream from there is a small island, site H, called Gibbs Island and there twenty trees were planted, numbered (119) through (138). Netting was also installed.

Finally, the girlscouts planted twenty trees on site I or Shelter Island in primarily open, canary grass with a few in a rather open understory and these were numbered (139) through (158). We did not have sufficient netting to do all these tubes. Previously Marc Schultz had substituted four of the large Tubex tree shelters for the quills on site C or the Blackriver Confluence Island and these are lettered O through R. There is one tree that remains in a quill shelter on this site. There is one tree planted in a tall Tubex shelter at the clubhouse. There are three trees remaining at site F or the Upper Blackriver Sandbar, two in quill shelters, one in a short Tubex shelter. There are no trees remaining at site E or Swamp White Oak Forest, and there is one tree remaining on site D or Turtle Island in a quill tube.

The trees and their progress will be monitored through the Summer of 1993 and the Fall of 1993. It is hoped that with a good acorn crop that the direct planting of acorns with quills can be utilized for 1993-94. It is very easy using the quill to replace it with a larger shelter the following year. It appears that this requires much less work than digging trees from a nursery and transplanting them at the appropriate times. The new tree shelter can be placed at any time that's convenient, whereas tree planting must take place under the right conditions. This is limited however by the acorn crop from the following year and it should be attempted to store acorns for several years to see if their viability can be maintained.

MAS/bc/542MS

APPENDIX A

SITE	SPRING 1992 # OF QUILLS PLANTED	FALL 1992 # OF QUILLS	SPRING 1993 # OF QUILLS
A	12	12	8
B	6	6	6
C	8	5	5
D	10	1	1
E	6	0	0
F	6 ⁽¹⁾	6	2
TOTAL	48	30	22

(1) One staked tube also planted

APPENDIX B

SITE	ACORN	STAKED TUBE	(2) QUILL	SUBTOTAL	STAKED TUBE #s
A Swamp White Oak Island	G to N 8	7	0	15	32-38
B No Name	A to F 6	32	0	38	1-31 & 159
C Black River Confluence	O to R 4	0	1	5	-
D Turtle Island	0	0	1	1	-
E Swamp White Forest	0	0	0	0	-
F Upper Black Sandbar	0	(3) 1	2	3	-
G Birthday Island	0	82	0	82	39-118 160,161
H Gibbs Island	0	20	0	20	119-138
I Shelter Island	0	20	0	20	139-158
Clubhouse	0	1	0	1	162
TOTALS	18	163	4	185	1-162

(1) Planted as acorn in quill 1992 - Quill replaced with large staked shelter 1993.

(2) Remaining in quill 1993.

(3) 1992 acorn in staked tube.