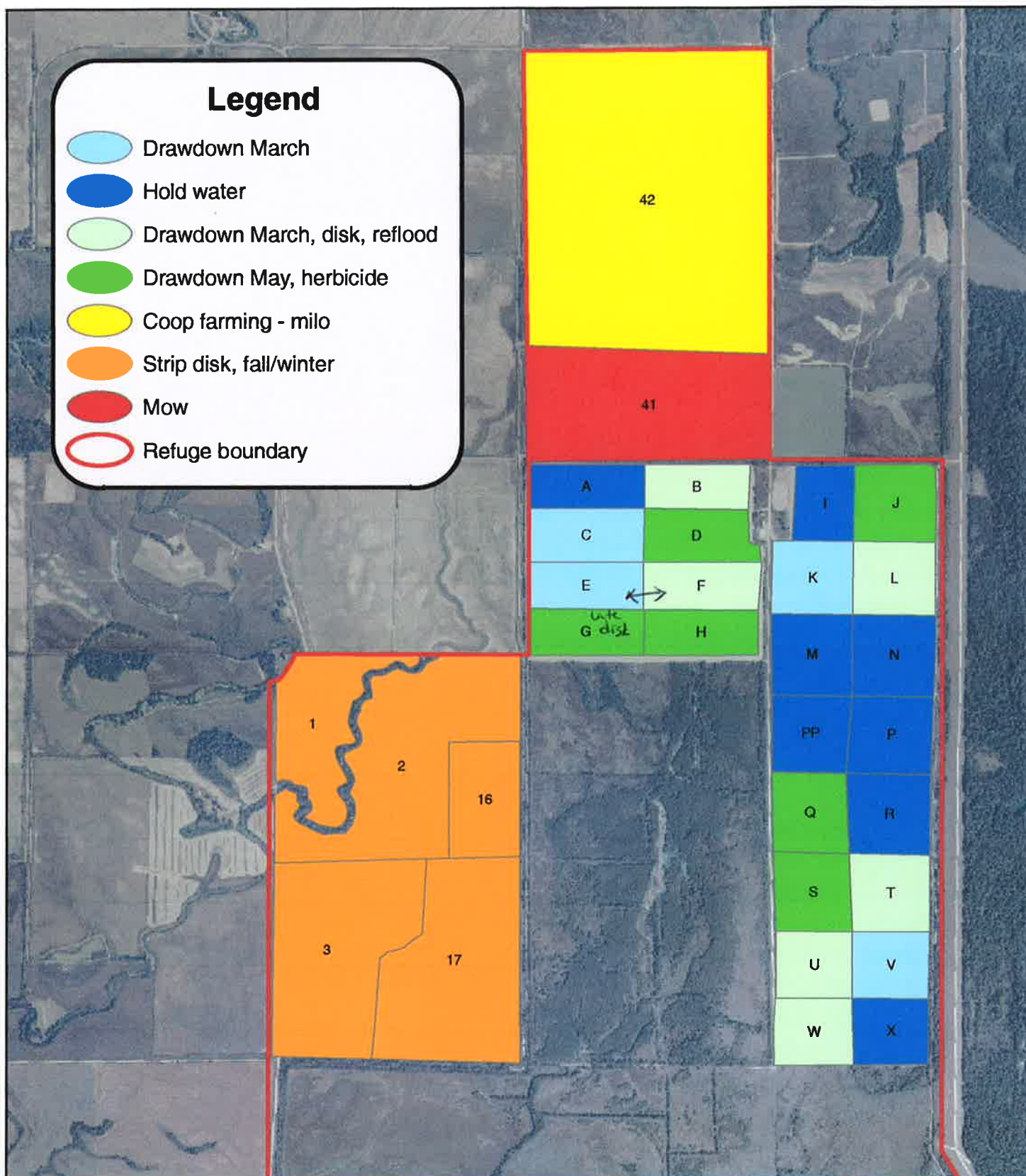


Coldwater River National Wildlife Refuge

Annual Habitat Work Plan - 2008



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North Mississippi Refuges Complex
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 R.L. Rosamond 03/14/2008

Coldwater River NWR
AHWP - 2008

Management Unit	Acres	Conservation Target(s) (Habitat/Wildlife)	Habitat Objective	Current Condition	Management Prescription	Supporting Documentation	Habitat Response	Wildlife Response	Unmet Habitat Needs	Strategies to Achieve Unmet Habitat Needs
Field 1	31	Fallow Fields/ Grassland Birds	Provide 295 acres of old field habitat for grassland birds and other early successional species (i.e. rabbits and quail)	Fallow Field	Need to strip disk on 3 year basis, outside of the growing season (after first frost, before Mar. 1) Strips need to be along contours to allow disking of at least part of the field in wet years. Lay out strips by mowing in August.	N/A	Mowed 45' wide strips along contours, leaving approximately 90' in between strips. Mowed week of Nov. 3.	Not evaluated	Thatch building up from mowing. Due to hydrology/staff difficult to disk on an annual basis.	Look into burning. Until then, continue to try for strip disking one-third annually.
Field 2	85	Fallow Fields/ Grassland Birds	Provide 295 acres of old field habitat for grassland birds and other early successional species (i.e. rabbits and quail)	Fallow Field	Need to strip disk on 3 year basis, outside of the growing season (after first frost, before Mar. 1) Strips need to be along contours to allow disking of at least part of the field in wet years. Lay out strips by mowing in August.	N/A	Mowed 45' wide strips along contours, leaving approximately 90' in between strips. Mowed week of Nov. 3.	Not evaluated	Thatch building up from mowing. Due to hydrology/staff difficult to disk on an annual basis.	Look into burning. Until then, continue to try for strip disking one-third annually.
Field 3	72	Fallow Fields/ Grassland Birds	Provide 295 acres of old field habitat for grassland birds and other early successional species (i.e. rabbits and quail)	Fallow Field	Need to strip disk on 3 year basis, outside of the growing season (after first frost, before Mar. 1) Strips need to be along contours to allow disking of at least part of the field in wet years. Lay out strips by mowing in August.	N/A	Mowed 45' wide strips along contours, leaving approximately 90' in between strips. Mowed week of Nov. 3.	Not evaluated	Thatch building up from mowing. Due to hydrology/staff difficult to disk on an annual basis.	Look into burning. Until then, continue to try for strip disking one-third annually.
Field 16	24	Fallow Fields/ Grassland Birds	Provide 295 acres of old field habitat for grassland birds and other early successional species (i.e. rabbits and quail)	Fallow Field	Need to strip disk on 3 year basis, outside of the growing season (after first frost, before Mar. 1) Strips need to be along contours to allow disking of at least part of the field in wet years. Lay out strips by mowing in August.	N/A	Mowed 45' wide strips along contours, leaving approximately 90' in between strips. Mowed week of Nov. 3.	Not evaluated	Thatch building up from mowing. Due to hydrology/staff difficult to disk on an annual basis.	Look into burning. Until then, continue to try for strip disking one-third annually.
Field 17	82	Fallow Fields/ Grassland Birds	Provide 295 acres of old field habitat for grassland birds and other early successional species (i.e. rabbits and quail)	Fallow Field	Need to strip disk on 3 year basis, outside of the growing season (after first frost, before Mar. 1) Strips need to be along contours to allow disking of at least part of the field in wet years. Lay out strips by mowing in August.	N/A	Mowed 45' wide strips along contours, leaving approximately 90' in between strips. Mowed week of Nov. 3.	Not evaluated	Thatch building up from mowing. Due to hydrology/staff difficult to disk on an annual basis.	Look into burning. Until then, continue to try for strip disking one-third annually.

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Field 41	87	Evaluation	No habitat objective	Agricultural field	Need to repair levee. Mow periodically during summer to maintain early successional state until levee work completed.	N/A	No action taken, not evaluated	Not evaluated	levee work still needed	Cooperatively farm.
Field 42	236	Croplands for waterfowl	No habitat objective	Agricultural field	Cooperative farmer to plant milo. Leave 25% standing and reflood in late fall.	Cooperative farming agreement	Farmer planted milo. Refuge share left along western boundary and with in the southeast corner of unit.	Not evaluated	Need to construct boundary levee at north end.	Cooperatively farm.
Cattfish Ponds	420	Specific targets below	Specific objectives below	See below	Evaluate impacts of disking and herbicide application on amphibians and invertebrates in units. Continue normal management but sample units for amphibians and inverts.	N/A			Bermuda grass moving off levees into units. Willow colonization in some units. Increase in occurrence of chickenspike over previous years in disked and reflood units. Parrotfeather appeared for the first time in a unit (A)	Units not involved the USGS research can be sprayed to control bermuda grass. In passive management units, chemically treat willows once coverage exceeds 50%. In active management units, disking should control willows. Monitor chickenspike and parrotfeather. Remove parrotfeather when detected.
Pond A	16	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash piles present. Standing dead willows on east side.	Hold water to see if any submerged aquatic vegetation responds. Monitor to prevent Canada geese from nesting on slash piles. (Non-experimental)	N/A	Held water fairly well through spring and into summer. Shorebird drawdown delayed slightly due to beaver dams in drainage ditch. Began drawdown 8/15. Sprangletop and sedges colonized edges as evaporation and drawdown progressed. Some joint vetch and chickenspike as well. Removed 4 parrotfeather plants from area around wcs.	Fairly good response by shorebirds and early use by blue-wing teal and early waterfowl migrants.	Parrotfeather attempting to colonize.	Monitor for parrotfeather colonies. Try to prevent any backfill from ditch (probable source of parrotfeather). Hold water as long as possible then drawdown beginning in July for shorebirds.
Pond B	14	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Disked in '06. Willows beginning to encroach.	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	N/A	Began drawdown 3/10. Some backflowing from ditch. Unit nearly dry by 4/24, completely dry by 5/29. Disked 7/8 - 10. Reflooded 7/28 - 30. Vegetation response: <i>Sagittaria montevidensis</i> , some mud plantain, small patch of chickenspike and some spike rush. Overall vegetation very dense.	During initial drawdown used by several hundred dabblers, primarily teal. As dried in April, used occasionally by shorebirds. Nov. 4, had approx. 1000 dabblers, several hundred white-fronted geese, and about 50 snow geese.		Early drawdown in 2009 to take advantage of disking this year.

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Pond C	20	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked In '07	Early drawdown, no treatment. (Control)	N/A	Began drawdown 3/10. Unit backfilled in early April then dried except for large pool by 4/24. Entire unit dry by mid-June. Vegetation survey conducted 9/8; smartweed (50%), cocklebur (14%), coffeeweed (13%), spikerush (12%). Reflooded 10/8 - 10.	Large numbers of ducks, pelicans, and shorebirds using area as dried (mid-March).	Timing of drawdown promoted growth of cocklebur to some extent. May be an issue in subsequent years.	Late drawdown in 2009. Treat with ultrablazer when coffeeweed <12" tall.
Pond D	18	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles present. Portions disked in '07 (MSU study)	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Unit scheduled for late drawdown but MSU researcher pulled 3 boards prior to 3/5. Boards replaced, though water level did not fully recover. Began drawdown 5/20. Majority of unit dry by 7/7. Vegetation survey conducted 7/16; water primrose (18%), smartweed (11%), coffeeweed (4%). Unit sprayed 8/8 with UltraBlazer (17 pts.) Used 20 gallons of water/acre. Coffeeweed approximately 4 - 5' tall when sprayed. Vegetation survey conducted 9/8; fall panicum (30%), smartweed (18%), willow (12%), soft rush (11%). No coffeeweed detected. Boards replaced 10/3. Unit reflooded by rainwater.	Not evaluated	Willows colonizing unit. Has not been disked since 2006.	Drawdown early then disk and reflood unit to control willows.
Pond E	16	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash piles present. Disked in '06	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	N/A	Began drawdown 3/10. Backfilling 4/7, but unit mostly dry by 5/1. Disked 7/10 - 14. Reflooded 7/28 - 8/4. Dominant vegetation after reflooding: chickenspike. Not dense (15% coverage) but present over western 3/4 of unit.		Chickenspike is potential concern, though seems to appear primarily in unit that are reflooded in mid to late summer.	Early drawdown in 2009 to take advantage of disked this year.

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Pond F	17	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Eastern half disked in '07, but reflooded late.	Early drawdown, no treatment. (Control)	N/A	Began drawdown prior to 3/1 (MSU researcher pulled several boards.) Backfilled 4/7 - 4/10 then equalized with ditch. Large pools present through 6/20 at least. Vegetation survey conducted 9/9: panicum (25%), coffeeweed (19%), spike rush (18%), smartweed (18%). Willows also present in clumps throughout unit, although not detected adequately in survey. Unit reflooded 10/8 - 10.	Good mudflats formed during drawdown (3/25). Used by snipe, yellowlegs, and BWTE.	Topography of unit makes it difficult to drain. Willows present and becoming more dense. Unit has not been completely disked since prior to 2004.	Drawdown early then disk and reflood unit to control willows.
Pond G	16	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles still present. Disked in '06. Eastern third disked in '07.	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Began drawdown 5/20. Dry by 6/30. Disked 7/23 - 25 (due to the presence of a large number of willows, management was shifted to treat the willows instead of coffeeweed.) Reflooded 8/11 - 13. Not much regrowth of vegetation, but dense population of aquatic invertebrates, especially backswimmers.	Not evaluated	Some chickenspike was starting to germinate in middle of unit--bears watching in 2009, especially if holding water for fall shorebird habitat.	Hold water as long as possible then drawdown beginning in July for shorebirds. If chickenspike begins to dominate unit, shift to a late waterfowl drawdown and spray for coffeeweed if needed.
Pond H	17	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '07.	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Began drawdown 5/20. Mostly dry by 6/30, though pool remained in center. Vegetation slow-growing/germinated late. Vegetation survey conducted 7/16, but most plants barely past cotyledon stage so % cover is misleading. Dominated by water primrose, coffeeweed, sedges, and cocklebur. Unit sprayed 8/13. Coffeeweed approx. 4' tall. Applied 17 pts of Ultrablazer over unit using 10 gallons of water per acre. Secondary vegetation survey conducted 9/9: sedge (30%), eclipta (18%), coffeeweed (14%), sprangletop (13%), and cocklebur (10%). Boards replaced 10/3 and unit flooded DATE.	Unit used in late March by diving ducks (bufflehead, scaup, ringneck ducks and coots).	Waited too long to spray coffeeweed, so didn't get as good control as desired. Additionally, ultrablazer is probably more effective when sprayed using 20 gallons of water per acre (applying the same total amount of chemical). Cocklebur fairly dense along southern boundary - may be issue, but may be able to control if sprayed when smaller.	Late drawdown in 2009. Treat with ultrablazer when coffeeweed <12" tall.

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Pond I	14	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash piles still in place from levee work. Bottom needs to be smoothed. Disked in '07.	Hold water to see if any submerged aquatic vegetation responds. (Non-experimental)	N/A	Water held well throughout spring and into summer. Began drawdown 8/6. Never pulled all boards - unit equalized with ditch, then dried in front of structure, leaving a pool in middle of unit that never dried. Vegetation colonized dry portions of unit, primarily smartweed, sedges, and sprangletop, covering approximately 1/2 of unit.	Fairly good response by shorebirds in August	Topography of unit makes it difficult to drain. Probably will continue to be well suited for shorebirds.	Hold water as long as possible then drawdown beginning in July for shorebirds.
Pond J	20	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles still in place from levee work. Disked in '07.	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Began drawdown 5/20. Mostly dry by 6/30. Vegetation survey conducted 7/11: coffeeweed (54%), sprangletop (11%), millet (9%). Unit sprayed 8/14. Coffeeweed approx. 5' tall. Applied 20 pints of Ultrablazer over unit using 10 gallons of water per acre. Second vegetation survey conducted 9/10	Not evaluated		Drawdown early then disk and reflood unit to control willows.
Pond K	18	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles still in place from levee work. Disked in '07.	Early drawdown, no treatment. (Control)	N/A	Began drawdown 3/10. Dry by 4/24. Vegetation survey conducted 6/18: millet (65%), smartweed (15%). Survey not repeated but visually smartweed increased to approximately 75%+ after millet shattered. Used for MSU study, 50 m strips mowed (10/17) or rolled (11/6) (1 of each). Unit reflooded shallowly 11/3 - 11/5.	Teal, dowitchers, and yellowlegs using unit as drained in spring.	Willow control in 2007 not 100%. Can probably wait until 2010 to redisk to keep in rotation.	Late drawdown in 2009. Treat with ultrablazer when coffeeweed <12" tall.
Pond L	18	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Disked in '06. Willows beginning to encroach.	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	N/A	Begin drawdown 3/10. Nearly dry by 6/20. Unit disked 6/27 - 7/8. Reflooded 7/21 - 7/25. Vegetation dominated by <i>S. montevidensis</i> , mud plantain, some bacopa, chickenspike, and sprangletop. Unit dried somewhat and flushed again with water 10/14 - 15.	Narrowmouth toads responded when unit first flooded. Waterfowl moved into this unit first in the fall with over 1000 birds (dabblers and WFGO) on unit 11/6.	Chickenspike is potential concern, though should be reduced by early drawdown in 2009. Unit doesn't drain completely through wcs (pools remain) so may be prone to willow colonization as a result of early drawdowns.	Early drawdown in 2009 to take advantage of diskings this year.

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Pond M	21	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash present throughout unit. Disked '06.	Hold water to see if any submerged aquatic vegetation responds. Disk if dries. (Non-experimental)	N/A	No boards pulled but unit dried through evaporation before 7/31. Unit disked 7/31 - 8/4? Unable to reflood. Vegetation stunted by combination of sedge, sprangletop, smartweed, with sparse coffeeweed throughout. As of 11/6, unit still dry.	Wood duck brood of 10 in unit 6/20.	Lack of reflooding may result in incomplete willow control. May need to use selective herbicide on unit to control willow seedlings.	Late drawdown in 2009 to prevent willows from recolonizing.
Pond N/O	20	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Need to smooth bottom and level old levee in center. Some willow encroachment.	Hold water to see if any submerged aquatic vegetation responds. Disk if dries. (Non-experimental)	N/A	No boards pulled. Unit retained some water throughout summer, particularly south end. Willows on 1/3 of unit, grasses on 1/3, potamogeton dominates southern 1/3 of unit (majority of open water).	Wood duck use in summer (particularly willow area). Good early use by waterfowl (11/6).	Willows along eastern and southern edges and beginning to spread into northern 1/2. Less than 50% coverage of willows and other shrubs. May need to treat when reach 50%.	Hold water as long as possible to prevent additional spread by willows and other shrubs.
Pond PP	17	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Bottoms need to be smoothed. Willows prevalent in unit.	Hold water to see if any submerged aquatic vegetation responds. (Non-experimental)	N/A	No boards pulled. Structure completely mudded in. Unit evaporated somewhat throughout the summer, exposing mud flats, then reflooding following hurricanes Gustav and Ike. Patchy vegetation in dried areas, particularly in southern portion of unit with "islands" of sedges and sprangletop.	Unit used as bait site for wood duck trap. At peak had 50+ wood ducks coming into rocket net site - largely a mud flat. (Reflooded before net could be fired.) Appears to have active beaver lodge in northwestern quarter. No beaver seen, though did shoot 2 nutria on unit.	Shrub/willow coverage still at less than 50%. May need to treat when reaches 50%	Hold water as long as possible.
Pond P	20	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Bottoms need to be smoothed. Willow and buttonbush over 50% of unit	Hold water to see if any submerged aquatic vegetation responds. Disk edges if dries enough. (Non-experimental)	N/A	No boards pulled. Unit retained water throughout summer. (Dropped approximately 1' in depth.) Continues to have patchy coverage of buttonbush and willow.	Unit used by coots, sora rail, and a moorhen during the spring and early summer. Good early use by migrating waterfowl (11/6). Nutria present.	Currently good mix of shrubs and willows. Need to maintain.	Hold water as long as possible.

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Pond Q	18	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles present. Disked in '07.	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Began drawdown 5/20. Unit mostly dry by 6/20. Vegetation survey 7/11. (Most vegetation barely past cotyledon stage so coverage may be underestimated.) Burhead (17%), toothcup (11%), coffeeweed (6%), spike rush (5%). Unit sprayed with UltraBlazer 8/13. Applied 17 pints of chemical total over unit with 10 gallons of water/acre. At time of application, coffeeweed was approx. 5' tall so coverage somewhat spotty. Vegetation survey repeated 9/15: fall panicum (38%), toothcup (13%), smartweed (13%). Coffeeweed at 5%. Willows still in unit. Used for MSU study, 50 m strips mowed (10/17) or rolled (11/6) (1 of each). Unit reflooded shallowly 11/3 - 11/5.	Not evaluated	Large willows still present in southeast corner. Willows colonizing debris piles in units.	Drawdown early then disk and/or brush cut willows and reflood unit to control willows.
Pond R	21	Secretive Marshbirds	Emergent marsh	Diverse assemblage of emergent vegetation. Approximately 50% of area covered by willow (<i>Salix nigra</i>) and groundsel-tree (<i>Baccharis halimifolia</i>)	Hold water to see if any submerged aquatic vegetation responds. (Non-experimental)	N/A	No boards pulled. Unit retained water throughout summer. Largely colonized by willow	Not evaluated	Unit at approximately 75% willow coverage. May want to open up slightly to provide better access to unit for waterfowl.	Hold water as long as possible.
Pond S	18	Winter dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '06 and produced growth of sagittaria (<i>montevicensis</i> - not preferred). Slash piles still present.	Late drawdown (begin May 1, dry by June 1). Use UltraBlazer to control/limit coffeeweed. (Treatment - herbicide)	PUP	Began drawdown 5/20. Unit mostly dry by 6/20. Vegetation survey 7/11: water primrose (44%), soft rush (7%), burhead (7%), coffeeweed (6%). Willow saplings throughout unit. Sprayed with UltraBlazer 8/13, coffeeweed approx. 4' tall. Applied 19 pints of chemical total with 10 gallons of water/acre. Vegetation survey conducted 9/15: water primrose (15%), sedge (12%), smartweed (12%), panicum (10%), coffeeweed (3%). Unit reflooded 10/8 - 10. Water added 11/3 - 5 in order to flood Q.	Not evaluated	Willow saplings need disking to prevent from colonizing entire unit. Last disked in 2006.	Drawdown early then disk and reflood unit to control willows.

Coldwater River NWR
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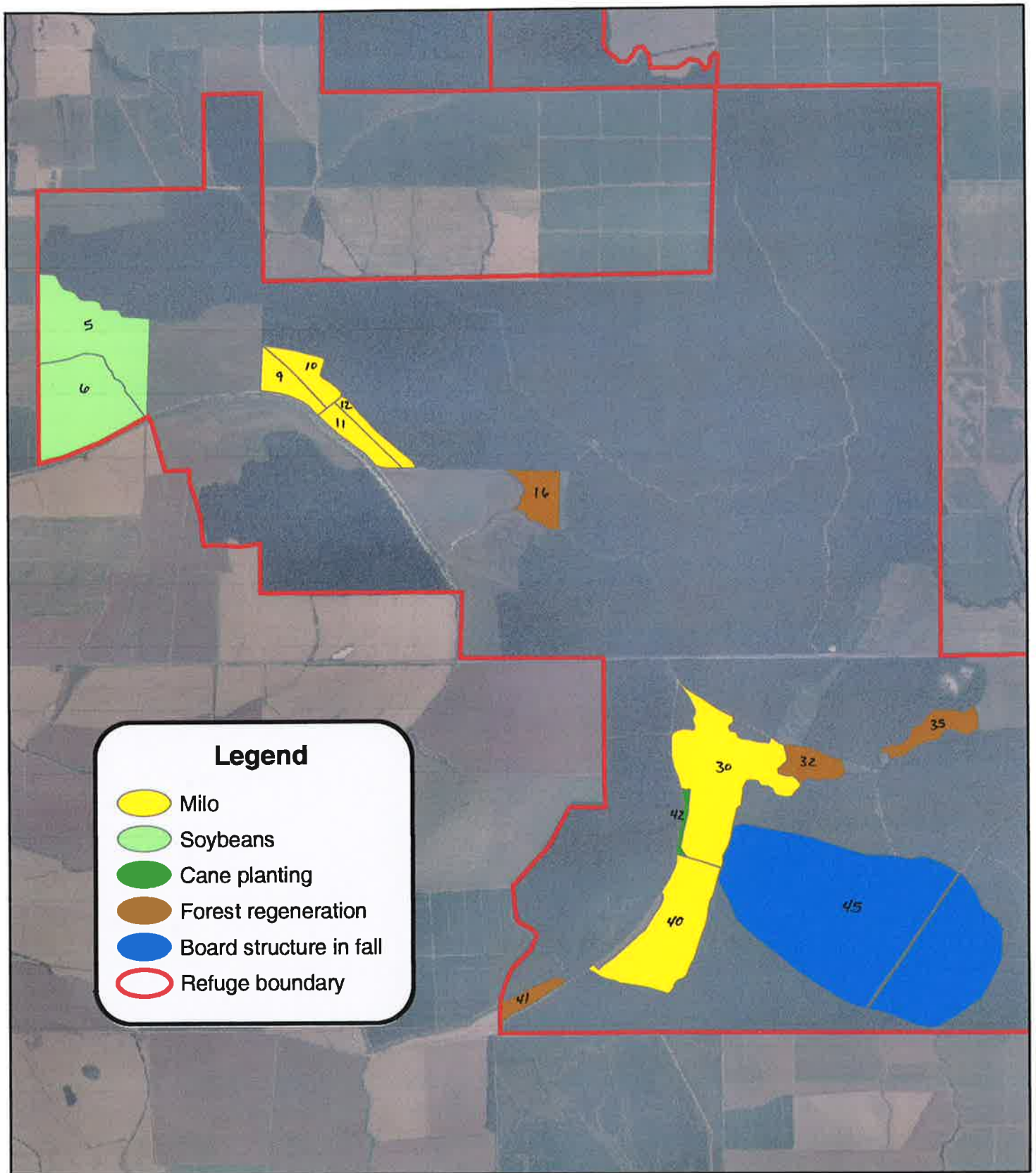
Pond T	19	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash piles present. Willow grove cut in '07. Some resprouting.	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	N/A	Began drawdown 3/10. Unit dry at structure by 4/18, but backfilled from ditch in late May. Nearly dry by 6/20. Disked 6/25 - 27. Some willows and baccharis saplings still standing. Individuals cut and sprayed with 10% Habitat solution. Unit reflooded 7/15 - 7/22. Vegetation over 1/2 of unit (10/3): spikerush, some bacopa, grasses/sedges on west and north portion. By 11/6, approximately 1/2 of unit with no standing water.	High nutria activity after reflooding unit (killed 10, several others seen). Narrowmouth toads began calling with 24 hours of turning on well.	Early drawdown in 2009 to take advantage of diskings this year.
Pond U	16	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Bottoms need to be smoothed. Needs disturbance	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	PUP	Began drawdown 3/17. Unit dry by 4/18. Some backflow 5/1, but very little. Unit disked 7/15 - 17. Unit reflooded 8/4 - 8/13. More water added 8/18 - 22 to fill unit W. Vegetation dominated by <i>S. montevidensis</i> , <i>Echinodorus</i> , mud plantain, bacopa, spike rush.	Many backswimmers in unit after reflooding.	Hold water as long as possible then drawdown early beginning in July for shorebirds.
Pond V	16	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Bottoms need to be smoothed. Needs disturbance	Early drawdown, no treatment. (Control)	N/A	Began drawdown 3/10. Unit mostly dry by 4/18, but backfilled from ditch 5/20. Nearly dry by 6/20. Vegetation survey conducted 6/18: smartweed (26%), water primrose (16%), spike rush (14%), millet (12%). Boards replaced 10/3. Unit flooded by rainwater.	Not evaluated	Late drawdown in 2009. Treat with ultrablazer when coffeeweed <12" tall.
Pond W	15	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Dense willow saplings (<5' tall), slash piles, uneven bottoms.	Drawdown early (begin March 1, dry NLT May 1). Disk then reflood for fall shorebirds and to promote moist soil plants in 2009. (Treatment - Disk)	N/A	Began drawdown 3/10. Unit dry at structure by 5/1. Several large pools still remained until 6/30. Unit disked 7/28 - 31. Reflooded 8/18 - 22. Vegetation sparse, primarily water primrose.	Not evaluated	Hold water as long as possible then drawdown early beginning in July for shorebirds.
Pond X	15	Secretive Marsh birds	Emergent marsh	Diverse assemblage of emergent vegetation. Willows becoming denser.	Hold water to see if any submerged aquatic vegetation responds. (Non-experimental)	N/A	No boards pulled. Unit dried through summer but retained water in southeast corner. Largely colonized by willow with soft rush, perennial smartweed, and bermuda grass in western portion.	Bermuda grass becoming too prevalent in unit. Willow stand may need to be opened slightly and soft rushes/perennial smartweed may need to be set back.	Hold water as long as possible. If staff is available, disk western portion in late summer. Treat bermuda grass as soon as possible.

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Throughout	2374	Invasive control	No measurable objective developed. Need to control nutria	Nutria causing extensive damage to levee system. Seen frequently, particularly in spring and fall	Begin trapping program, particularly on those units with basking mounds.	N/A	Not evaluated	Killed total of 50 nutria on ponds (as of 11/5). Still seeing nutria, but not as regularly	Nutria still present and reproducing.	Need to continue shooting and trapping on an opportunistic basis, particularly in spring and late summer (early in morning) and in newly flooded impoundments.
Throughout	2374	Nesting structures	No measurable objective developed. Maintain and monitor wood duck nest structures.	Seven wood duck nest boxes present	Continue monitoring-- try to visit once a month.	N/A	N/A	Boxes monitored sporadically. Overall success rate 71% - highest of any location.	Need more effective predator deterrent. Woodpeckers exclude wood ducks from box on ponds.	Continue to monitor once a month when possible. Apply tanglefoot to all posts to prevent colonization by ants and to determine if acts as a deterrent for snakes.
Ditches north of ponds and southwest of unit G	?	Invasive control	No measurable objective developed. Need to control parrotfeather.	Present on new property, detected in ditch sw of unit G in Mar. 2008	Spray with Habitat.	PUP	Ditches north of property treated 6/10. No long-term effect. Several plants discovered in unit A and hand-pulled.	Not evaluated	No control achieved.	Survey perimeter ditches and drainages through property. GPS locations of colonies. Begin more intensive treatment with Habitat, starting at northern extent and working south. Monitor unit A to prevent establishment.

Dahomey National Wildlife Refuge

Annual Habitat Work Plan - 2008



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North Mississippi Refuges Complex
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R.L. Rosamond 03/14/2008

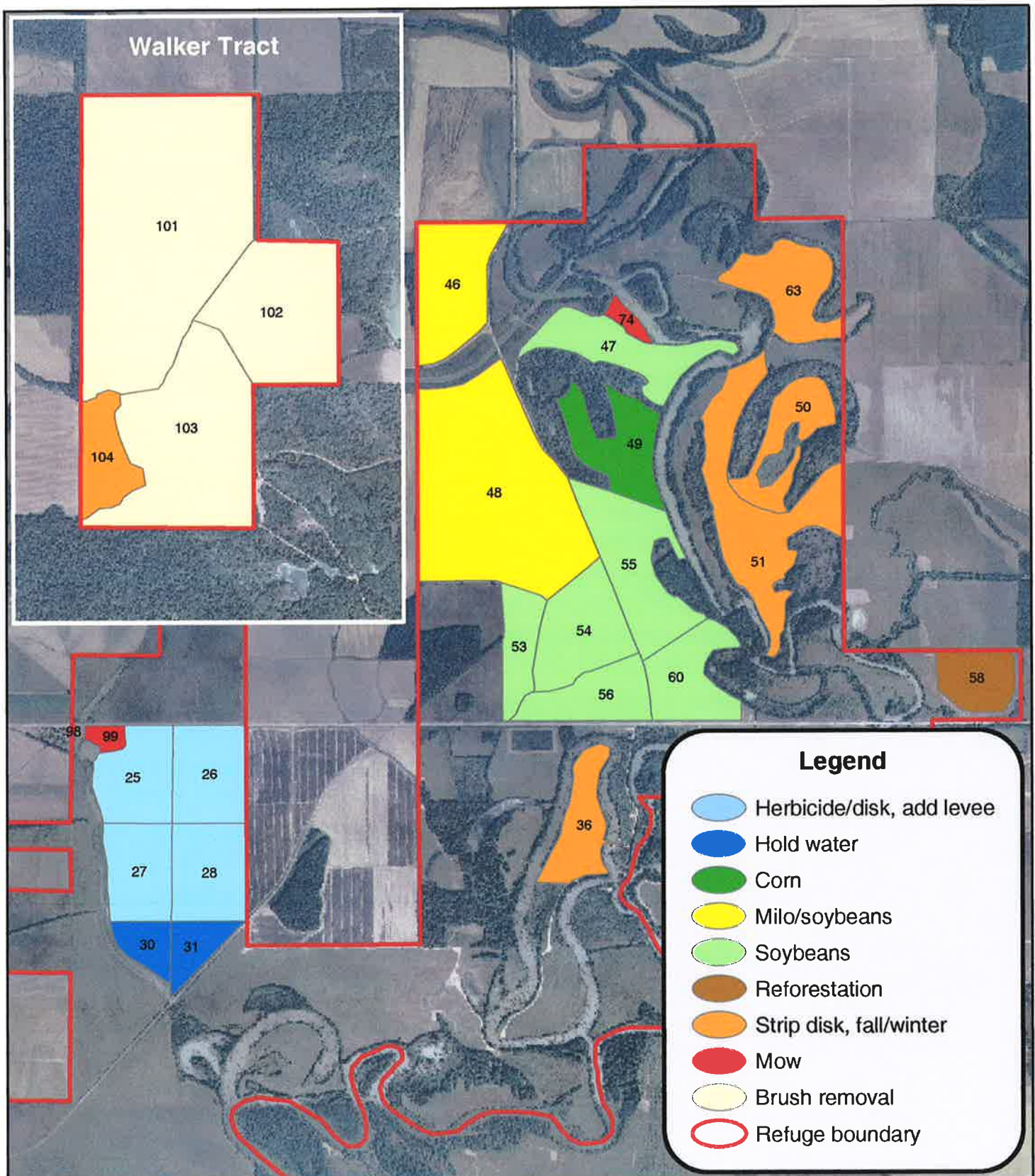
Management Unit	Acres	Conservation Target(s) (Habitat/Wildlife)	Habitat Objective	Current Condition	Management Prescription	Supporting Documentation	Habitat Response	Wildlife Response	Unmet Habitat Needs	Strategies to Achieve Unmet Habitat Needs
Unit 5	117	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Agricultural field	Soybeans	Cooperative farming agreement	Planted in milo. Failed. Disked under. Resprouted. Left 100% of reseeded	Not evaluated	None	Continue farming
Unit 6	121	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Agricultural field	Soybeans	Cooperative farming agreement	Planted in milo. Failed. Disked under. Resprouted. Left 100% of reseeded	Not evaluated	None	Continue farming
Unit 9	23	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Dominated by dry site species.	Plant milo. Pull rice levees in fall and fully flood.	Cooperative farming agreement	Planted in milo. Left 100%. Reflooded beginning 10/29.	Not evaluated	Difficult to flood entire unit.	Also need longitudinal levees to allow entire unit to flood.
Unit 10	27	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Dominated by dry site species.	Plant milo. Pull rice levees in fall and fully flood.	Cooperative farming agreement	Planted in milo. Left 100%. Reflooded beginning 10/29.	Some duck use (several hundred).	Difficult to flood entire unit.	Also need longitudinal levees to allow entire unit to flood.
Unit 11	22	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Dominated by dry site species.	Plant milo. Pull rice levees in fall and fully flood.	Cooperative farming agreement	Planted in milo. Left 100%. Reflooded beginning 10/29.	Not evaluated	Difficult to flood entire unit.	Also need longitudinal levees to allow entire unit to flood.
Unit 12	14	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Dominated by dry site species.	Plant milo. Pull rice levees in fall and fully flood.	Cooperative farming agreement	Planted in milo. Left 100%. Reflooded beginning 10/29.	Not evaluated	Difficult to flood entire unit.	Also need longitudinal levees to allow entire unit to flood.
Unit 16	33	Forest birds	Close gaps in existing forest to provide greater interior forest habitat.	Fallow field	Allow to develop into forested land naturally.	N/A	Not evaluated	Not evaluated	Unit too small to provide much benefit as grassland.	Allow to develop into forested land naturally.
Unit 30	119	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Agricultural field	Plant milo and fully flood early in season.	Cooperative farming agreement	Planted in milo. Developed fungus before harvest and rejected by elevators. 100% left standing. Boards in 10/29. Pumped some, but mostly filled with rainwater.	Some duck use, though not as good as unit 40.	None	Continue to leave refuge share in form of small grains in floodable areas.
Unit 32	26	Forest birds	Close gaps in existing forest to provide greater interior forest habitat.	Fallow field	Allow to develop into forested land naturally.	N/A	Not evaluated	Not evaluated	Unit too small to provide much benefit as grassland.	Allow to develop into forested land naturally.
Unit 35	29	Forest birds	Close gaps in existing forest to provide greater interior forest habitat.	Fallow field	Allow to develop into forested land naturally.	N/A	Not evaluated	Not evaluated	Unit too small to provide much benefit as grassland.	Allow to develop into forested land naturally.
Unit 40	104	Croplands for wintering waterfowl	Provide 218 acres of standing crops for overwintering waterfowl	Agricultural field	Plant milo and fully flood early in season.	Cooperative farming agreement	Planted in milo. Developed fungus before harvest and rejected by elevators. 100% left standing. Boards in 10/29. Pumped some, but mostly filled with rainwater.	Good duck use, especially after hunting season.	None	Continue to leave refuge share in form of small grains in floodable areas.

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Unit 41	13	Forest birds	Close gaps in existing forest to provide greater interior forest habitat.	Fallow field	Allow to develop into forested land naturally. Need to knock down spoil pile to allow access to bayou.		Spoil pile smoothed into access road.	Not evaluated	None	N/A
Unit 42	13	Canebrake reestablishment	No measurable objectives developed. Continue to work with University of Memphis to develop methods of promoting the establishment and expansion of canebrakes.	Fallow field	Mark plots in site.	SUP	Not evaluated	Not evaluated	Need to mark site to insure cane not accidentally mowed down.	Mark plots in site.
Unit 45	596	Greentree Reservoir	Flood greentree reservoir at least once every 3 - 5 years between December 1 and March 15 to mimic natural hydrology	Greentree Reservoir	Board after leaf drop in '08.	N/A	Structure boarded 10/28/08. Area flooded over winter.	Not evaluated	Some concern regarding survival of existing hardwoods and regeneration of oak component.	Flood every other year and evaluate survival of existing hardwoods and oak regeneration.
Throughout	9691	Nesting structures	No measurable objective developed. Maintain and monitor wood duck nest structures.	Thirty-four wood duck nest boxes present.	Monitor once a month. Keep area around boxes clean (8' radius) to reduce the possibility of predation.	N/A	N/A	Monitored sporadically. Lowest success rate of all properties monitored at 29.5%. Problem with dump nesting and predation, especially along Stillwater Bayou and Christmas Lake Branch.	Predation and dump nesting continue to be problems. Lack of staff to monitor regularly.	Reduce number of boxes and restrict to more accessible areas. Use DSU TWS members to monitor. Apply tanglefoot to all posts to test impact on predation and reduce ant colonization.
Throughout	9691	Invasive Control - beaver/nutria	No measurable objective developed	Beaver and nutria are plentiful throughout the ditches and sloughs, making management difficult at times	Continue removal of individuals and dams as needed.	Cooperative agreement	N/A	Not evaluated	Continue to block water flow during drawdowns, particularly when pull water off flooded timber in spring.	Continue to remove individuals and dams as needed.
Throughout	9691	Invasive Control - hogs	No measurable objective developed. Begin removal of feral hogs.	Feral hogs are rapidly increasing in number on Dahomey and damaging trails and roads	Continue trapping when possible. Repeat special hog hunt and continue to encourage hunters to kill hogs when possible. Work with DSU to develop monitoring protocol.	SUP	Destruction throughout the refuge as a result of increasing hog population.	Used cameras to monitor hogs. Several herds photographed. Special hog hunt resulted in harvest of 138 hogs. Regular hunt season resulted in harvest of over 40.	Population continues to increase. Impact on habitat becoming more apparent. Large areas rooted up and wallows in many areas.	Working with local landowners to develop year-round trapping.

Tallahatchie National Wildlife Refuge

Annual Habitat Work Plan - 2008



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North Mississippi Refuges Complex
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 R.L. Rosamond 03/14/2008

Management Unit	Acres	Conservation Target(s) (Habitat/Wildlife)	Habitat Objective	Current Condition	Management Prescription	Supporting Documentation	Habitat Response	Wildlife Response	Unmet Habitat Needs	Strategies to Achieve Unmet Habitat Needs
Unit 25	41	Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Dominated by coffeeweed and non-preferred species.	Add N-S levee. Promote moist soil vegetation and grasses. Control willows, coffeeweed, and drier site species through disking and/or herbicide.	PUP	Drawn down beginning 4/24. Unit disked and planted in millet (7/21). Fair to poor response by millet. Coffeeweed dominated much of unit. Sprayed (9/28), but too tall to be entirely effective. Portion of unit inadvertently disked. Unit flooded 10/1 - 8.	Good waterfowl response initially after flooding. Not evaluated later in year.	Unable to flood entire unit. Coffeeweed dominated unit after planting, millet production not very good.	Need to construct rice levees to flood entire unit. Spray coffeeweed when <6" tall or mow before seed set.
Unit 26	41	Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Dominated by coffeeweed and non-preferred species.	Add N-S levee. Promote moist soil vegetation and grasses. Control willows, coffeeweed, and drier site species through disking and/or herbicide.	PUP	Drawn down beginning 4/24. Unit disked 8/13-8/20. Nine rice levees pulled 10/8. Existing vegetation smartweed and natural millet, small amount of coffeeweed and few willows. Rice gates installed 10/20. Unit filled 10/20 - 10/29. Filling 2 units at once to avoid blowing out levees.	Some duck use initially, not evaluated through the winter.	None	Use rice levees to hold water on whole unit as long as possible.
Unit 27	39	Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Dominated by coffeeweed and non-preferred species.	Add N-S levee. Promote moist soil vegetation and grasses. Control willows, coffeeweed, and drier site species through disking and/or herbicide.	PUP	Drawndown beginning 4/24. Vegetation in July consists of surpweed, forbs, some sedge, nothing particularly good. Strip mowed 10/9 with strips running E-W, 5 mower widths. Reflooded 10/28 - 11/8.	Not evaluated	Vegetation largely perennial or non-beneficial plants.	Need disturbance to promote annual grasses and sedges.
Unit 28	42	Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Dominated by coffeeweed and non-preferred species.	Add N-S levee. Promote moist soil vegetation and grasses. Control willows, coffeeweed, and drier site species through disking and/or herbicide.	PUP	Drawndown beginning 4/24. Vegetation in July consists of soft rush, goldenrod, baccharis, willow, broomsedge, with Vaseygrass beginning to move in. Strip mowed 10/9 with strips running E-W, 5 mower widths. Buffer left along road. Reflooded 10/14 - 10/24.	Not evaluated	Vegetation largely perennial or non-beneficial plants.	Need disturbance to promote annual grasses and sedges.

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Unit 30	14	Marshbirds/Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Vegetation dominated by millet (38%), mud plantain (22%), and spike rush (14%).	Keep flooded and allow to develop into an emergent marsh.	N/A	Boards left in place. Unit allowed to evaporate naturally. Vegetation in July, coffeeweed at north end. Half unit with sedge, some morning glory and reedvine mixed in. Ludwigia to north. Coffeeweed cut 10/8. Unit reflooded 11/4 - 11/7.	Not evaluated	Too much ludwigia on unit.	Need control measure for ludwigia - glyphosate may be best course of action.
Unit 31	14	Marshbirds/Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Vegetation dominated by millet (31%) and morning glory (19%).	Keep flooded and allow to develop into an emergent marsh.	N/A	Boards left in place. Unit allowed to evaporate naturally. Vegetation in July, sumpweed, coffeeweed, ludwigia, beaked rush. Coffeeweed cut 10/8. Sumpweed stripped N-S. Unit reflooded 11/4 - 11/7.	Not evaluated	Has tendency to nearly dry over the course of the summer.	Keep flooded as long as possible. If coffeeweed develops, mow before seed set.
Unit 36	30	Grassland birds	Provide 207 acres of old field habitat for grassland birds and other early successional species.	Strip mowed and disked first week of August '07.	Strip disk. Begin disking after October 1 and complete before March 1.	N/A	Last mowed/disked 8/07. Not evaluated.	Not evaluated	Need to halt succession to prevent conversion to forest.	Disk, strip disk, burn, or cooperatively farm.
Unit 46	51	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	Plant low areas in milo, remainder in soybeans	Cooperative farming agreement	Planted in soybeans and milo. 100% of soybeans harvested, 100% of milo left.	Not evaluated	None	None
Unit 47	42	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None
Unit 48	183	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	Plant low areas in milo, remainder in soybeans	Cooperative farming agreement	Planted in soybeans and milo. 100% of soybeans harvested, 100% of milo left.	Not evaluated	None	None
Unit 49	39	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	corn	Cooperative farming agreement	Planted in corn. Left 100%.	Not evaluated	None	None
Unit 50	35	Grassland birds	Provide 207 acres of old field habitat for grassland birds and other early successional species.	Strip mowed and disked first week of August. Disked again in late December	Strip disk. Begin disking after October 1 and complete before March 1.	N/A	Last disked 12/07. Not evaluated	Not evaluated	Need to halt succession to prevent conversion to forest.	Disk, strip disk, burn, or cooperatively farm.
Unit 51	76	Grassland birds	Provide 207 acres of old field habitat for grassland birds and other early successional species.	Agricultural field	Strip disk. Begin disking after October 1 and complete before March 1.	N/A	Farmed in 2007. No action in 2008	Not evaluated	Need to halt succession to prevent conversion to forest.	Disk, strip disk, burn, or cooperatively farm.
Unit 53	24	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None

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Unit 54	50	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None
Unit 55	60	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None
Unit 56	33	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None
Unit 58 b	29	Wintering waterfowl	Provide 852 acres of moist-soil habitat for overwintering waterfowl	Planted in millet in '07.	Reforest in spring 2008. Once trees established, maintain water in area.	N/A	Began drawdown 2/7. Trees planted 3/12. Additional trees added 3/25. Treated with transline 7/11 to control vines.	Not evaluated	None	None
Unit 60	40	Croplands for wintering waterfowl	Provide 212 acres of standing crops for over wintering waterfowl	Agricultural field	soybeans	Cooperative farming agreement	Planted in soybeans. Harvested 100%	Not evaluated	None	None
Unit 63	43	Grassland birds	Provide 207 acres of old field habitat for grassland birds and other early successional species.	Strip mowed and disked first week of August. Disked again in late December	Strip disk. Begin disking after October 1 and complete before March 1.	N/A	Last disked 12/07. Not evaluated	Not evaluated	Need to halt succession to prevent conversion to forest.	Disk, strip disk, burn, or cooperatively farm.
Unit 101	273	Invasive control	No measurable objective developed. Need to control Lotus (<i>Nelumbo lutea</i>) in unit	Brush on approximately 100 acres cut (primarily high ground). Drought/drying the last 2 summers appear to have knocked the lotus back. Spraying unnecessary	Monitor lotus growth and evaluate regeneration of brush. Cut additional acreage as funds allow.	N/A	Brush cut in 2007. Unit allowed to naturally evaporate. Retained some water throughout summer. Heavy growth of lotus in channel.	Not evaluated	Lotus and brush will continue to be management concerns.	Dry during summer to control lotus. Explore chemical control measures. Disk unit in mid-summer and allow to reseed to set back brush.
Unit 102	103	Invasive control	No measurable objective developed. Need to control willow (<i>Salix nigra</i>) and water primrose (<i>Ludwigia</i> sp.)	Heavy growth of water primrose in shallow areas coupled with young willows.	Evaluate vegetation in units and determine best management scheme. Cut willows on higher sites, as funds allow.	N/A	Unit continues to be converted to willow/buttonbush swamp.	Not evaluated	Encourage buttonbush, and discourage additional willow colonization.	Cut willow on ridges. Hold water past May (after willows release seed). Insure openings exist to provide easy access for ducks.
Unit 103	144	Invasive control	No measurable objective developed. Need to control willow (<i>Salix nigra</i>) and water primrose (<i>Ludwigia</i> sp.)	Heavy growth of water primrose in shallow areas coupled with young willows.	Evaluate vegetation in units and determine best management scheme. Cut willows on higher sites, as funds allow.	N/A	Unit continues to be mosaic of soft rush, willows and plume grass.	Not evaluated	Need to set back succession	Burn or disk if possible, especially areas dominated by soft rush.
Unit 104	27	Grassland birds	Provide 207 acres of old field habitat for grassland birds and other early successional species.	Mowed in 2006. Brush cut in 2007.	Strip mow 30' strips and follow with light disking of mowed strips, after October 1 and before March 1.	N/A	Not evaluated	Not evaluated	Need to halt succession to prevent conversion to forest.	Disk, strip disk, burn, or cooperatively farm.
Walker Tract ditches	?	Invasive control	No measurable objective developed. Need to control parrotfeather on the Walker Tract	Appeared controlled in 2007.	Monitor parrotfeather and spray with Habitat if necessary.	PUP	Sprayed southern boundary ditch June 26. Some at Brushy Creek crossing in fall.	Not evaluated	Continuous source population in Elliot Lake and Brushy Creek.	Continue to treat as encountered. Work with adjacent landowners to achieve control off-refuge.

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Tippo Bayou	?	Invasive control	No measurable objective developed. Need to control parrotfeather and alligatorweed in Tippo Bayou	First detected in 2007, but already throughout banks of Tippo Bayou	Spray with Habitat. Release alligatorweed flea beetles.	PUP	Sprayed portions of banks on 9/10, primarily between boat ramp and highway 8.	Not evaluated	Both parrotfeather and alligatorweed have colonized the shorelines of Tippo Bayou. Dense colonies in some areas.	Continue to treat as encountered. Work with adjacent landowners to achieve control off-refuge.
Walker Tract	557	Invasive control	No measurable objective developed. Need to control nutria and hogs on Walker tract	Nutria and hogs causing extensive damage to levees system with burrows and wallows. Seen frequently.	Trap/shoot nutria, particularly in spring and fall when they are seen more frequently.	Cooperative agreement	Not evaluated	Shot 10 nutria.	Still many nutria on site.	Trap/shoot nutria, particularly target them in spring and fall.
Throughout	4199	Nesting structures	No measurable objective developed. Maintain and monitor wood duck nest structures.	Thirty-one wood duck nest boxes present.	Try to monitor boxes monthly. Insure vegetation is at least 8' from boxes to reduce predation.	N/A	N/A	Boxes monitored sporadically. Overall success rate 44.6%.	Predation and dump nesting still issues.	Refurbish boxes as necessary to maintain predator guards/vegetation. Test use of tanglefoot to deter snake predation.