

APPENDIX N. Terrestrial Species Strategies

Habitat Code*	STRATEGY
	BIRD-RELATED STRATEGIES
ACG	Early Successional Bird Species: Continue to encourage landowners to maintain areas in early successional stage to benefit these species.
ACG CaP ELPS EULPF WLPS WULPF	Northern Bobwhite and Grassland Birds: Support implementation of recommended habitat restoration actions specified in NBCI and by LDWF quail and grassland bird task force.
FM LONLF MHLPHSF VPED	Bald Eagle: Continue with long-term monitoring of active bald eagle territories, successful breeding pairs, and fledged eagles.
B HF LONLF	Identify IBA's or potential IBA's and partner with BRAS, OAS, and the National Audubon Society to implement conservation recommendations from SWG project T27 upon completion.
B BHF CTBS LONLF SPPCHF	Swallow-tailed Kite: Implement conservation and management recommendations of SWG project T9 (Coulson 2004).
	Terns:
BI BM IM SM	· Disturbance and loss of nesting habitat are major threats; develop partnerships to strengthen the protection and restoration of barrier islands.
BI BM IM SM	· Develop a comprehensive survey methodology to determine long term trends in population abundances.
	Shorebirds, Wading Birds:
BI BM CoP FM IM SM VPED	· Provide public education regarding the importance of waterbird nesting colonies and shorebird feeding areas. Reduce the negative effects on these areas from recreational and other uses.
BI BM FM IM SM VPED	· Coordinate with GCJV to implement recommendations of shorebird and wading bird conservation plans.
BM FM IM SM	· Disturbance and loss of nesting habitat are major threats. The continued protection and restoration of coastal marshes are top priorities. Develop new and/or improve existing partnerships to achieve this goal.
ACG	Partner with farmers in ag/aquaculture lands to institute a management strategy to manipulate water levels to benefit Shorebirds during migration.
ACG BM CoP FM IM SM	Work with landowners to implement management and conservation recommendations for waterbirds (especially rails) of SWG project T18 upon completion.
BI BM CDGST VPED	Brown Pelican: Continue with long-term monitoring of nesting colonies.
BILOF	Migratory Birds: Continue efforts to support conservation of remaining habitat.
	Waterfowl:
BM CoP FM IM	· Continue to encourage the creation/enhancement/maintenance of high-quality habitat across Louisiana.
BM CoP FM IM	· Work with DU, DW, and USFWS to assuring that quality habitat, including refuge from hunting and other disturbance, is distributed across the landscape.
BM CoP FM IM	· Encourage maintenance of rice agriculture and discourage conversion to crops with lower value to waterfowl.
BM CoP FM IM	· Continue LDWF partnerships with DU, DW, USFWS, and state wildlife management agencies to conserve habitat on the northern breeding grounds.
BM CoP FM IM	· Accelerate acquisition of wetland and grassland easements from private landowners in the prairie pothole region.

APPENDIX N. Terrestrial Species Strategies cont.

Habitat**Code*****BIRD-RELATED STRATEGIES cont.**

CF	Wood Thrush: Develop a monitoring program (i.e., MAPS) to assess relative abundance in this habitat.
CMMS	Provide public education regarding the importance of waterbird nesting colonies and shorebird feeding areas. Reduce the negative effects on these areas from recreational and other uses.
ACG CoP	Partner with LSU and ULL to develop/update management guidelines/BMP's for species of conservation concern that occur in lands cultivated for rice and sugarcane.
	Red-cockaded Woodpecker:
ELPS EULPF WLPS WULPF	· Continue to support implementation of Statewide RCW Safe Harbor Program.
ELPS EULPF WLPS WULPF	· Support USFWS recovery efforts outlined in the RCW recovery plan.
ELPS EULPF WLPS WULPF	· Encourage the establishment of new RCW populations.
ELPS EULPF WLPS WULPF	· Investigate potential land acquisition of this habitat type to increase and support new populations.
EULPF SPOHF WULPF	Brown-headed Nuthatch: Encourage landowners to use group-selection and single-tree selection harvesting methods and maintain or increase the number of standing snags.
HF LOPMF MHLPHSF SGB SPOHF WXSX	Chuck-Will's-Widow: Work with federal agencies and bird conservation organizations to produce technical pamphlets highlighting the habitat and management requirements of this species and make available to landowners.
IM	Continue to work with USFWS/LSU in efforts to reintroduce Whooping Crane to Louisiana.
AGC BS BHF LOPMF SPOHF SSF SPHF	Rusty Blackbird: Initiate surveys to determine wintering population abundances and habitat use to augment Christmas Bird Counts.
LOPMF	Songbirds:
MHLPHSF	· Continue to encourage landowners to maintain areas in early successional stage to benefit bird species which depend on this habitat.
MHLPHSF	· Work with NRCS, USFWS, USFS to develop and distribute technical pamphlets which contain information about the importance of early successional habitat for species of conservation concern.
MHLPHSF	· Continue to monitor songbird abundance and reproductive success (with emphasis on species of conservation concern) in this habitat through the establishment of MAPS stations.
CF	Develop a monitoring program (i.e., MAPS) to assess relative abundances in this habitat.
MHLPHSF	· Continue to encourage landowners to maintain areas in early successional stage to benefit bird species which depend on this habitat.
	Interior Least Tern:
SB	· Implement conservation recommendations of USFWS recovery plan (USFWS 1990b).
SB	· Work with COE to regulate water levels during breeding season.
SB	· Determine feasibility of using abandoned barges as artificial nesting habitat (Hervey 2001).
SB	· Provide funding to support long term efforts to locate and monitor nest colonies.

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	Henslow's Sparrow, Bachman's Sparrow:
ELPS EULPF SPOHF WLPS WULPF	· Work with landowners to encourage use of BMPs for prescribed fire management and timber harvesting techniques to improve habitat quality.
EHSB ELPS EULPF SPOHF WLPS WULPF	· Implement conservation and management recommendations of SWG projects T22 and T32 upon completion.
ELPS EULPF SPOHF WLPS WULPF	· Monitor reproductive success of Bachman's Sparrows to determine limiting factors.
ELPS EULPF SPOHF WLPS WULPF	· Work with landowners to encourage use of BMPs for prescribed fire management and timber harvesting techniques to improve habitat quality.

HERP-RELATED STRATEGIES

ELPS EULPF	Eastern Slender Glass Lizard, Northern Scarlet Snake, Mole Kingsnake, Scarlet Kingsnake, Southeastern Crowned Snake, Harlequin Coralsnake: Promote increased acreage and natural management of longleaf pine as a timber resource and substitute for loblolly
	Amphibians:
ELPS	· Develop educational information and management techniques to address ephemeral ponds and their importance to all amphibians, with emphasis on species of conservation concern, and make this info available to landowners/land managers through technical
ELPS	· Promote management recommendations developed by PARC.
SPOHF	Southern Crawfish Frog: Locate and buffer potential breeding sites.
SDHF	Louisiana Slimy Salamander: Requires intact, relatively old-growth forest. Encourage timber companies to designate no-cut zones, especially on slopes and riparian borders.
MHLPHSF	Louisiana Slimy Salamander, Southern Red-backed Salamander, Western Worm Snake: This guild of species occurs in isolated slope sites, and appears to be intolerant of habitat alteration. Encourage timber companies to designate no-cut zones (especially on slopes, slope crests, and riparian borders)
SP	Louisiana Slimy Salamander: Requires intact, relatively old-growth forest. Encourage timber companies to designate no-cut zones in riparian bottoms.
SPHF	Four-toed Salamander: Locate gum ponds and buffer from anthropogenic modification to perpetuate reproduction.
	Western Slender Glass Lizard, Louisiana Pine Snake:
WULPF WXS	· Continue to work with timber industry, NFS, and USFWS to promote habitat and species conservation strategies to increase populations on quality sites.
WULPF WXS	· Implement conservation and management recommendations of SWG project T10 upon completion.
	Louisiana Pine Snake:
WXS	· Maintain open canopy pine woodland in xeric sandhill community.
WXS	· Eliminate root chopping at sites under timber management.

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Code* HERP-RELATED STRATEGIES cont.

HF	Timber Rattlesnake: Naturally low-occurring population levels and persecution make persistence in isolated forest blocks untenable. Prohibit killing; retain connectivity of flatwoods.
LONLF	Timber Rattlesnake: Naturally low-occurring population levels and persecution make persistence in isolated forest blocks untenable. Prohibit killing; reduce vehicular travel where possible.
SDHF	Timber Rattlesnake: Naturally low-occurring population levels and persecution make persistence on isolated domes untenable. Prohibit killing or removal from salt domes.
SMF HF	Timber Rattlesnake: Naturally low-occurring population levels and persecution make persistence tenuous. Prohibit killing and removal; reduce vehicular traffic in sensitive areas.
SB	Map Turtles: Sandbars and beaches provide primary nesting sites, and submerged portions are used for foraging on mussels. Eliminate off-road vehicle use on sandbars and beaches during nesting periods.
ACG	Determine current use of agricultural lands by crawfish frogs in Louisiana, and determine which land practices enable persistent use by frogs.

MAMMAL-RELATED STRATEGIES

BHF CTBS HF MHLPHSF SDHF SPOHF	Louisiana Black Bear: Partner with the BBCC, USFWS and continue to support the implementation of recovery efforts for this species.
MHLPHSF	Establish monitoring systems and protocols for target bats species and other mammal species associated with mixed hardwood-loblolly pine/hardwood slope forest.
SPPCHF	Establish monitoring systems and protocols which focus on small mammal population abundances and trends.

MULTI-GROUP SPECIES STRATEGIES

	Promote use of appropriate silvicultural techniques to restore/manage hardwoods flatwoods for wildlife (include importance of tree species diversity, den trees for birds and mammals , leaf litter, etc). Snags should be retained during logging operations to
BHF	Promote use of appropriate silvicultural techniques to restore/manage BLH forests for wildlife (include importance of tree species diversity, den trees for birds and mammals , leaf litter, etc). Snags should be retained during logging operations to increas
WULPF	Promote use of appropriate silvicultural techniques to restore/manage western upland longleaf pine forests for wildlife (include importance of tree species diversity, den trees for birds and mammals , leaf litter, etc). Snags should be retained during logg
ELPS LOPMF	Snags should be retained during logging operations to increase the numbers available for cavity-using wildlife species. Efforts need to be made to maintain sufficient levels of woody debris in stands for reptiles, amphibians and small mammals .
B BHF CLOHF CTBS EHSB EULPF LONLF MHLPHSF SMF SPHF SPOHF SPPCHF SSF WHSB	Work with landowners to initiate or continue the implementation of PIF bird conservation plans, conservation plans developed for amphibians and reptiles , and USFWS endangered and threatened species recovery plans over the next 10 years.

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Code* MULTI-GROUP SPECIES STRATEGIES cont.

SPOHF	Recommend retention of snags during logging operations to increase the numbers available for cavity-using wildlife species. Efforts need to be made to maintain sufficient levels of woody debris in stands for reptiles, amphibians and small mammals.
SPHF	Examine the demographics, habitat-use patterns, and impacts of feral hogs on ground nesting birds, salamanders and small mammals (Warren and Ford 1997).
EULPF WULPF	Promote use of appropriate silvicultural techniques to restore/manage western upland longleaf pine forests for wildlife (include importance of tree species diversity, den trees for birds and mammals , leaf litter, etc). Snags should be retained during logg
WHSB	· Implement conservation and management recommendations of SWG projects T22 and T32 upon completion.
WLPS	· Work with landowners to encourage use of BMPs for prescribed fire management and timber harvesting techniques to improve habitat quality.
WULPF	Document the habitat relationships of species of conservation concern and how dependent they are upon eastern longleaf pine savannah, relative to other habitat types.
	Recommend retention of snags during logging operations to increase the numbers available for cavity-using wildlife species. Efforts need to be made to maintain sufficient levels of woody debris in stands for reptiles, amphibians and small mammals .

APPENDIX N. Terrestrial Species Strategies cont.

***Habitat**

Code	Habitat
ACG	AGRICULTURAL CROPLAND GRASSLAND
B	BATTURE
BHF	BOTTOMLAND HARDWOOD FOREST
BI	BARRIER ISLAND
BILOF	BARRIER ISLAND LIVE OAK FOREST
BM	BRACKISH MARSH
BS	BAYHEAD SWAMP
CaP	CALCAREOUS PRAIRIE
CDGST	COASTAL DUNE GRASSLAND / SHRUB THICKET
CF	CALCAREOUS FOREST
CLOHF	COASTAL LIVE OAK-HACKBERRY FOREST
CMMS	COASTAL MANGROVE-MARSH SHRUBLAND
CoP	COASTAL PRAIRIE
CTBS	CYPRESS TUPELO-BLACKGUM SWAMP
EHSB	EASTERN HILLSIDE SEEPAGE BOG
ELPS	EASTERN LONGLEAF PINE SAVANNAH
EULPF	EASTERN UPLAND LONGLEAF PINE FOREST
FM	FRESHWATER MARSH
HF	HARDWOOD FLATWOODS
IM	INTERMEDIATE MARSH
LONLF	LIVE OAK NATURAL LEVEE FOREST
LOPMF	LIVE OAK-PINE- MAGNOLIA FOREST
MHLPHSF	MIXED HARDWOOD-LOBLOLLY PINE / HARDWOOD SLOPE FOREST
SB	SAND BAR
SDHF	SALT DOME HARDWOOD FOREST
SGB	SANDSTONE GLADE/BARREN
SM	SALT MARSH
SMF	SOUTHERN MESOPHYTIC FOREST
SP	SALINE PRAIRIE
EHSB	STRATEGIES
SPHF	SPRUCE PINE-HARDWOOD FOREST
SPOHF	SHORTLEAF PINE / OAK-HICKORY FOREST
SPPCHF	SLASH PINE-POND CYPRESS / HARDWOOD FOREST
SSF	SMALL STREAM FOREST
VPED	VEGETATED PIONEER EMERGING DELTA
WHSB	WESTERN HILLSIDE SEEPAGE BOG
WLPS	WESTERN LONGLEAF PINE SAVANNAH
WULPF	WESTERN UPLAND LONGLEAF PINE FOREST
WXSW	WESTERN XERIC SANDHILL WOODLAND