

LONG LAKE NATIONAL WILDLIFE REFUGE COMPLEX

ANNUAL HABITAT WORK PLAN

2005

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Regional Approval:  Date: 3/2/05
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Annual habitat work plan for Long Lake NWR - 2005

Management Unit	Acres	Resources of Concern (Conservation Targets)	Habitat Objective	Current Condition	Management Prescription	Monitoring Emphasis
Long Lake Unit 2 Marsh	Total 850 acres	-White-faced Ibis and Franklin's Gulls -Shorebirds -Waterfowl	-100 acres of flooded emergents for colonial nesters -60:40 open water to emergent/submergent vegetation	-80 % dry: 20% shallow open water and mudflat	-To extent possible fill unit with water during spring runoff or by pumping from unit 2 to flood emergent vegetation and provide breeding habitat for waterfowl, exposed mudflats and shorelines for shorebirds	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Long Lake Unit 1	1,569 acres	-Western grebe -Waterfowl -Shorebirds	-50 acres of flooded emergents on south east side and creek -80:20 open water to submergent -Late summer/fall shoreline exposure	-Full: mostly open water with some flooded emergents along south end	-Hold water high in spring to provide access to emergent nesting vegetation by western grebes -Summer drawdown to expose shorelines for shorebirds/ migration and to generate emergents	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Long Lake Unit 2	2,184 acres	-Western grebe -Waterfowl -Shorebirds	-25 acres of flooded emergents along west end -80:20 open water to submergent	-Full: mostly open water	-Hold water high in spring to provide access to emergent nesting vegetation by western grebes -Summer drawdown to expose shorelines for shorebirds/ migration and to generate emergents	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Long Lake Unit 3	11,600 acres	-Shorebirds -Waterfowl	-50 % of exposed shoreline develop an emergent "ring", 30 ft wide band of exposed mudflat/sandbar on entire perimeter of unit with shallow water in center 50% through mid-summer	-Substantial drawdown - some bands of emergents developing from 2004. mudflat and sandbars around substantial perimeter and shallow water in center 60% of unit	-Continue drawdown as precipitation allows	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Long Lake G-19	37 acres	-Waterfowl	-Provide freshwater brood rearing habitat -70:30 ratio of open water to emergent and submergent vegetation	-Approximately half full, some exposed mudflat, shallow to deep freshwater	-Capture as much runoff as possible and maintain through early fall then initiate drawdown to expose shoreline for cranes/waterfowl	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys

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Lake George North Unit Dam	47 acres	-Waterfowl	-Freshwater marsh to serve as waterfowl pairing and brood habitat -70:30 ratio of open water to emergent and submergent vegetation	-100+% full	-Dam is eroded out due to flooding and is not functional -Our management is to assess conditions to determine if potential exists to repair and seek agency funding and/or partners to affect repairs	Monitor monthly to determine conditions which would allow repairs
G-19A	34 acres	-Waterfowl -Cranes during fall migration	-Freshwater marsh to serve as waterfowl pairing and brood habitat -70:30 ratio of open water to emergent and submergent vegetation	-85% full, feathered edge	-Fill to capacity in spring as runoff allows. Gradual drawdown achieved primarily through evaporation, or fall manipulation to expose shores for migrants	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
G-12	89 acres	-Waterfowl -Shorebirds & Cranes during fall migration	-Freshwater marsh to serve as waterfowl pairing and brood habitat -70:30 ratio of open water to emergent and submergent vegetation	-Dry	-Fill to capacity in spring as runoff allows. Gradual drawdown achieved primarily through evaporation, or fall manipulation to expose shores for migrants	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Sunburst NWR	31 acres	-Waterfowl	-Freshwater marsh to serve as waterfowl pairing and brood habitat -70:30 ratio of open water to emergent and submergent vegetation	-85% full	-Fill to capacity in spring as runoff allows. Gradual drawdown achieved primarily through evaporation, or fall manipulation to expose shores for migrants	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Rath WPA	79 acres	-Waterfowl	-Freshwater marsh to serve as waterfowl pairing and brood habitat -70:30 ratio of open water to emergent and submergent vegetation	-100+ % full	-Dam is eroded out due to flooding and is not functional -Our management is to assess conditions to determine if potential exists to repair and seek agency funding and/or partners to affect repairs	-Monitor monthly to determine conditions which would allow repairs

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East Lost Lake WDA	Pool 1 11 acres Pool 2 19 acres Pool 3 15 acres	-Waterfowl	-Interspersion and fringe creating 70:30 ratio of open water to emergent/submergent	-Full: the system is flow through 20-40 cfs because of freshening requirements for Painted Woods Creek	-Within the next two years we should request a drawdown of the lower pool to accommodate expansion of emergent vegetation in the pool	-Annual aerial photo interpretation -Weekly water level monitoring during runoff period and monthly thereafter -Conduct bird surveys
Long Lake NWR Crop (A-15, A-12, G-20, A-2) Chemical Fallow (A-6) Seed to Natives (A-3, A-10, A-14, A-15)	470	Waterfowl-primarily northern pintails, blue-winged teal, northern shoveler, gadwall, mallard, Grassland Dependent birds : Sprauge's Pipit, Baird's sparrow, chestnut-collared longspur, grasshopper sparrow Other: Upland sandpiper, Marbled Godwit	Provide quality nesting habitat for grassland dependent birds. Increase native grass species and percentage on Refuge	Cropland, or chemically fallowed invasive (smooth brome, Kentucky bluegrass, crested wheatgrass, and undesirable weeds)	In process of converting old crop fields and seeding back to a native grass mix. This year 75 acres will be seeded to native grass, 66 acres will be chemically fallowed and 329 acres will continue to be cropped. Future management plan includes seeding all cropped fields/acres to native grass within next 3-5 years. Continue targeting areas with high concentrations of undesirable invasive plant species for future native seedings.	A complete vegetation mapping effort was completed in 2003. This assists managers in identifying areas to target habitat rehabilitation. In addition, nest searches and point counts have been conducted on these areas prior to management. After establishment of new grass stands future monitoring and vegetation mapping will take place.
Long Lake NWR G-3	97	Waterfowl-primarily northern pintails, blue-winged teal, northern shoveler, gadwall, mallard, Grassland Dependent birds : Sprauge's Pipit, Baird's sparrow, chestnut-collared longspur, grasshopper sparrow Other: Upland sandpiper, Marbled Godwit	Provide quality native nesting habitat for grassland dependent birds. Increase native plant species and diversity.	Native prairie invaded by invasive species including Kentucky bluegrass, smooth brome and crested wheatgrass. Natives currently only make up 11% of unit.	Early spring graze with cattle. Cattle will begin grazing unit in mid April and will be removed by 1 st of June. Management plan is to set cool season invasive plant species back which peak approx. one to two weeks earlier than native cool season and one month earlier than native warm season grasses.	A complete vegetation mapping effort was completed in 2003. Selected areas have additional vegetation monitoring including VOR, litter depth and vegetation associations. Site will continue to be monitored to document vegetative response.

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Long Lake NWR (G-12c, G-19b, G-9)	522	Waterfowl-primarily northern pintails, blue-winged teal, northern shoveler, gadwall, mallard, Grassland Dependent birds: Sprauge's Pipit, Baird's sparrow, chestnut-collared longspur, grasshopper sparrow Other: Upland sandpiper, Marbled Godwit	Provide quality native nesting habitat for grassland dependent birds. Increase native plant species and diversity.	Native prairie, (unbroken), or seeded native grasses with dominate (90%) invasive plants species, primarily Kentucky bluegrass and smooth brome.	Late spring burn, targeting May 15 to June 1 st burn dates. Kentucky bluegrass and smooth brome peak in mid May to early June. Late spring burn to set back these grasses while promoting native cool and warm season grasses.	A complete vegetation mapping effort was completed in 2003. Selected areas have additional vegetation monitoring including VOR, litter depth and vegetation associations. Site will continue to be monitored to document vegetative response. In addition, nest searches and point counts have been conducted on these areas prior to management.
Long Lake NWR (G-18b)	284	Wetland marsh and meadow birds: Leontes sparrow, Nelson's sharp-tailed sparrow, White-faced Ibis, Franklins gulls, grebes and waterfowl broods.	To enhance native vegetation interspersed within wetland and riverine zones. Decrease decayed vegetative stands (cattails, phragmites) promoting new healthier vegetative growth.	Area is currently dry. Due to lack of moisture area has many old stands of decayed wetland vegetation from high water years.	Early spring burn, prior to flooding vegetation.	Vegetation was mapped in 2003. Area has been monitored for bird use (point counts, colony/waterbird use, and observations), will continue to monitor site.
Slade NWR	362	Waterfowl: Mallard, northern pintail, lesser scaup, gadwall, Canada geese, snow geese. Upland: grasshopper sparrow	Increase diversity of plant species, control invasive leafy spurge, while providing quality native nesting habitat for grassland dependent birds.	Cropland/ or monotypic stand of smooth brome interspersed with patches of leafy spurge	In process of converting old crop fields and seeding back to a native grass mix. This year 110 acres will be seeded to native grass, and 252 acres will continue to be cropped. Future management plan includes seeding all cropped fields/acres to native grass within next 5 years. More options for controlling spurge with native grass species, than smooth brome.	Will do vegetation mapping this year.
Slade NWR	130	Waterfowl: Mallard, northern pintail, lesser scaup, gadwall, Canada geese, snow geese.	Rejuvenate tame grass/alfalfa stands.	DNC and alfalfa	Hay after Aug 1 st	No monitoring at this time. Fields will be cropped in the future as preparation for increasing native plant species.

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Slade NWR	64	Waterfowl: Mallard, northern pintail, gadwall Upland: grasshopper sparrow, Sprauges pipit.	Rejuvenate established native grass stand, providing quality nesting habitat for grassland dependent birds.	Seeded native grass, invaded by smooth brome and Kentucky bluegrass. Patches of leafy spurge scattered throughout unit.	Late spring burn, targeting May 15 to June 1 st burn dates. Kentucky bluegrass and smooth brome peak in mid May to early June. Late spring burn to set back these grasses while promoting native cool and warm season grasses. Decrease litter and warm soil to increases leafy spurge beetle activity.	Area was monitored last spring when small wildfire burned a few acres of unit in middle of May. Excellent vegetation response by natives. Significant decreases in cool season invasive plants on area burned versus area not burned.
Florence Lake	60	Waterfowl-primarily northern pintails, blue-winged teal, northern shoveler, gadwall, mallard, Wigeon Passerines: Sprauge's Pipit, Baird's sparrow, chestnut-collared longspur, grasshopper sparrow	Provide quality native nesting habitat for grassland dependent birds. Increase native plant species and diversity thus increasing the biological integrity of the Refuge.	Chemically fallowed cool season invasive plants, primarily Kentucky bluegrass and Smooth Brome.	Continue to chemically fallow fields for an additional year (2 years total). These fields are between several other fields seeded with natives in 2000 and provide a seed source of cool season invasive plants. Will seed to natives in 2006.	Vegetation on Florence Lake was mapped in 2004. Random vegetation sampling has occurred in previous years on portions of the refuge to include VOR, litter and plant associations. Periodic vegetation mapping will continue.
Long Lake WMD Rath/Ryberg- Wonnenberg/Wonnenberg WPA Management Unit	2,928	Waterfowl: primarily northern pintails, blue-winged teal, gadwall, mallard, Wigeon Passerines: Sprauge's Pipit, chestnut-collared longspur, grasshopper sparrow	Provide quality native prairie nesting habitat by managing utilizing a natural process of this ecosystem. Targeting control of invasive species while managing vegetation for structure and composition.	Native prairie (unbroken) invaded with Kentucky bluegrass and Smooth Brome. Remnant native grasses interspersed throughout grazing unit. Other dominate plants include snowberry and silverberry.	Management unit is divided in to 30 cells. Grazing is rotated on about 25% of the cells each year at approximately 1 AUM/acre. Turn in occurs during the first 2 weeks of May, with cattle being pulled out the last two weeks of Sept. Cells heavily invaded with cool seasons grasses are grazed earlier (May).	Portions of this unit have been mapped for vegetation. The remainder areas will be mapped this year. This will provide baseline information on vegetative composition. Additional vegetation sampling/monitoring is planned for at a later date.
Long Lake WMD Basaraba Crimmins N Crimmins Mckenzie Bertsch Morrison	396	Waterfowl: Mallard, northern pintail, gadwall, blue-winged teal Upland: grasshopper sparrow, Sprauges pipit, chestnut-collared longspur.	Provide quality native nesting habitat for grassland dependent birds. Increase native plant species and diversity thus increasing the biological integrity of the WPA's.	Cropland, or chemically fallowed invasives (smooth brome, Kentucky bluegrass, crested wheatgrass)	In process of converting old crop fields as well as poor quality tame grass fields and seeding back to a native grass mix. This year 140 acres will be seeded to native grass, 333 acres will continue to be cropped and 63 acres will be prepared for a crop next year.	Portions of these units have been mapped for vegetation. The remainder areas will be mapped this year. This will provide baseline information on vegetative composition. Fields seeded this year will be monitored for weed control and grass stand establishment.

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Long Lake WMD East Lost Lake Braun Goldsmith	298	Waterfowl: Mallard, northern pintail, gadwall, blue-winged teal Upland: grasshopper sparrow, Sprauges pipit, chestnut-collared longspur.	Provide quality native prairie nesting habitat by managing utilizing a natural process of this ecosystem. Targeting control of invasive species while managing vegetation for structure and composition.	All units have a native grass component (unbroken and seeded). All are invaded by Kentucky bluegrass and smooth brome.	Early spring graze with cattle. Cattle will begin grazing unit in mid April and will be removed by 1 st of June. Management plan is to set cool season invasive plant species back which peak approx. one to two weeks earlier than native cool season and one month earlier than native warm season grasses.	Portions of this unit have been mapped for vegetation. The remainder areas will be mapped this year. Vegetation sampling including VOR, plant association and litter depth has been recorded on portions of these WPA. Treatment effects will be monitored by duplicating sampling methods after treatment.
Long Lake WMD Whitman Basaraba	82	Waterfowl: Mallard, northern pintail, blue-winged teal, gadwall, Other birds: Bobolink	Rejuvenate tame grass and remove one year's growth reducing future litter accumulation.	DNC and seeded monotypic tame grass fields.(smooth brome)	Hay after Aug 1 st	Portions of this unit have been mapped for vegetation. The remainder areas will be mapped this year.
Long Lake WMD Bernhardt 7 th Day Adventist Albright Kleppe West	180	Waterfowl: Mallard, northern pintail, blue-winged teal, gadwall, Other birds: Bobolink, savannah and grasshopper sparrow	Noxious weed control in dominated tame grass uplands. Rejuvenate tame grass and remove one year's growth reducing future litter accumulation.	Noxious weeds including wormwood, Canada thistle and Leafy Spurge scattered throughout units to be hayed.	Hay after Aug 1 st on areas with wormwood and earlier but not prior to July 15 th on leafy spurge and Canada thistle sites. Reduce seed bed of noxious weeds. Areas will be chemically spot sprayed in the fall.	All leafy spurge locations have been GPSed and mapped. Most of the wormwood and Canada thistle have been mapped. Treated areas are monitored yearly to determine success.
Long Lake WMD	1139* Over two years	Waterfowl-primarily northern pintails, gadwall, mallard, Wigeon Grassland Dependent birds: Sprauge's Pipit, Baird's sparrow, chestnut-collared longspur, grasshopper sparrow	Provide quality native prairie nesting habitat, utilizing a natural process of this ecosystem. Increase native plant species and diversity thus increasing the biological integrity of the Refuge.	Native prairie, (unbroken), or seeded native grasses with dominate (90%or greater) invasive plants species, primarily Kentucky bluegrass and smooth brome.	Late spring burn, targeting May 15 to June 1 st burn dates. Kentucky bluegrass and smooth brome peak in mid May to early June. Late spring burn to set back these grasses while promoting native cool and warm season grasses.	Portions of these units have been mapped for vegetation. The remainder areas will be mapped this year. Vegetation sampling including VOR, plant associations and litter depth will occur on some tracts.
Long Lake WMD and Slade NWR	793	Waterfowl-primarily blue-winged teal, gadwall, mallard, Wigeon, Grassland Dependent birds : Bobolink, savannah sparrow	Provide quality prairie nesting habitat. Reduce litter accumulations, and rejuvenate decadent stands of DNC, wetland vegetation and seeded tame grasses.	DNC, seeded tame grasses and wetland vegetation.	Early spring and fall prescribed burns. Management of litter accumulations and rejuvenating wetland and tame grasses which have not been managed for several years.	Vegetation sampling including VOR, plant associations and litter depth will occur on some tracts.