CRESCENT LAKE/NORTH PLATTE NATIONAL WILDLIFE REFUGE COMPLEX

SCOTTSBLUFF/ELLSWORTH, NEBRASKA

# ANNUAL HABITAT MANAGEMENT PLAN 2005

Prepared 2005,
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Recommended to the Regional Director for final approval:

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Submitted: Crescent Lake NWR Refuge Manager Date

Steven A Kroeker _____ 2/24/05
Crescent Lake/North Platte Complex Project Leader Date

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Approved: Assistant Regional Director NWR Date

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Concur: Refuge Field Supervisor Date

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Reviewed: Chief, Div of Water Resources Date

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Reviewed: Regional Wildlife Biologist Date

UNITED STATES DEPARTMENT OF INTERIOR

FISH AND WILDLIFE SERVICE

Annual Habitat Plan For Crescent Lake NWR 2005 (Grassland Management)

| Management Unit | Sub Unit | Treatment Acres | Current Condition | Resources of Concern (Conservation Targets) | Habitat Objective | Management Prescription | Monitoring Emphasis |
|---|---|---|---|---|---|---|---|
| 1 | 11, 12 | 590 | Grazed 2003 | Nesting Waterfowl (mallard, bw teal, shovler, gadwall) sharptail grouse and nesting grassland passerines. | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. Reduce litter depth to < 2cm. | Remove .2 aums/acre on sands and .7 aums/acre on meadows, between March 1 and May 31. | Monitoring by years since disturbance for vegetation structure (Robel pole and Duabmire frame) and waterfowl nesting success is being measured on 4 units. |
| 2 | 8<br>18 | 269<br>216 | Burned 2004<br>Hayed 2004 | | | | |
| 3 | 16e, 25<br>30, 30a | 718<br>233 | Grazed 2001<br>Grazed 2004 | | | | |
| 4 | 38,<br>40, | 495 | Burn 2004<br>Grazed 1999 | | | | |
| 5 | 49, 50 | 1305 | Grazed 2004 | | | | |
| 2<br><br>5 | 16b<br><br>57 | 945<br><br>1934 | Grazed 2004<br><br>Grazed 2000 | Plant and wildlife diversity | Increase plant and wildlife diversity. Maintain wildlife numbers and nest success > 30%. | Remove .2 aums/acre from May 1 to Oct 10. (With a spring and summer prescribe burn, see below) | Grouse lek survey, Nest drag. Monitoring vegetation structure and composition (Robel pole and Duabmire frame). |
| 2 | 8, 17, 18 | 90 | Area has been hayed the past two years. | Nesting avocets. | Reduced VOR to encourage avocets into nesting farther from alkali ponds to increase apparent nest success to > 30%. | Hay between August 1 and September 10. | Nest search for American avocets. |
| 1 | 1 | 650 | Grazed 2003 | Nesting Waterfowl (mallard, bw teal, shovler, gadwall) sharptail grouse and nesting grassland passerines. | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. Reduce litter depth to < 2cm. | Remove .1 aums/acre from September 1 to October 30. | Monitoring by years since disturbance for vegetation structure (Robel pole and Duabmire frame) and waterfowl nesting success is being measured on these units. |
| | 2 | 380 | Grazed 2003 | | | | |
| | 3, 4 | 328 | Grazed 2003 | | | | |
| 5 | 59 | 2022 | Grazed 2002 | | | Remove .2 aums/acre from September 1 to October 30. | |
| 1 | 14 | 280 | Grazed 2004 | Blowout Penstemon Curlew, Lark sparrow Lizards | Open up sand to wind by removing as much cover as possible | Remove .2 - .5 aums/acre from September 1 to December 30. | Penstemon survey, Lizard Study Monitoring by years since disturbance for vegetation structure (Robel pole and Duabmire frame) |
| 3 | 29, 29a | 815 | Grazed 2003 | | | | |
| 5 | 42a | 1260 | Grazed 2003 | | | | |

| Habitat Plan For Crescent Lake NWR 2005 (Grassland Management) RXburn | | | | | | | |
|---|---|---|---|---|---|---|---|
| Management Unit | Sub Unit | Treatment Acres | Current Condition | Resources of Concern (Conservation Targets) | Habitat Objective | Management Prescription | Monitoring Emphasis |
| Ramelli cattails | 3 | 45 | Unkown years since treatment | Migrating and breeding waterfowl. | Reduce cattail cover. Maintain 50/50 hemi-marsh for pairs. | Rxburn March<br>Fill to maximum pool | None planned |
| Meadows | 1 | 55 | Grazed 2003 | Nesting waterfowl, passerines and upland nesting shorebirds. | Convert from cool season to warm season grasses by 5%. Maximize VOR's.<br><br>Waterfowl nest success >15% Mayfield.<br><br>Other nesters > 30 % apparent nest success. | Rxburn between April 20 and May 15. | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |
| | 1 | 25 | Grazed 2003 | | | | |
| | 6 | 90 | Grazed 2001 | | | | |
| | 10 | 110 | Grazed 2003 | | | | |
| | 16b | 70 | Grazed 2004 | | | | |
| | 32 | 55 | Grazed 2004 | | | | |
| | 34 | 85 | Grazed 2003 | | | | |
| | 36 | 70 | Grazed 2004 | | | | |
| | 42 | 75 | Rest 20+ year | | | | |
| | 59 | 200 | Grazed 2003 | | | | |
| | 24 | 40 | Burned 2002 | Goose foraging | | | |
| | 27 | 35 | Grazed 2004 | Goose foraging | | | |
| | 35 | 35 | Burned 2000 | Goose foraging | | | |
| Sands | 16b | 80 | Grazed 2004 | Plant and wildlife diversity | Increase plant and wildlife diversity. Maintain wildlife numbers and nest success > 30%. | Rxburn between April 1-30. Graze in 2005 (see above). | Grouse lek survey, Nest drag. Monitoring vegetation structure and composition (Robel pole and Duabmire frame). |
| | 57 | 65 | Grazed 2002 | | | | |
| | 16b | 85 | Grazed 2004 | | | Rxburn between August 1 and September 30. Graze in 2005 (see above). | |
| | 57 | 200 | Grazed 2002 | | | | |
| | 44 | 200 | Grazed 2004 | | | | |
| | 31 | 170 | Grazed 2004 | Nesting passerines, prairie grouse and upland nesting shorebirds. | Convert from cool season to warm season grasses by 5%. Maximize VOR's. | Rxburn between April 20 and May 15 | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |
| | 37 | 320 | Grazed 2000 | | | | |
| | 59 | 175 | Grazed 2003 | | | | |
| | Penstemon | 30 | Grazed 2003 or 2004 | Blowout Penstemon | Remove cover to allow sand movement and blowout maintenance. | Rxburn between August 1 and September 30. | |

Annual Habitat Plan For Crescent Lake NWR 2005 (Water Management)

| Management Unit | Resources of Concern (Conservation Targets) | Habitat Objective | Current Condition | Management Prescription | Monitoring Emphasis |
|---|---|---|---|---|---|
| Smith | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | 36.86 feet Gauge reading | Refill until mid-April. Drop 10" from May 1 to May 30. | Pair Count, Invertebrate sweeps |
| Bean Crossing | Breeding waterfowl | Increase water surface for pair ponds. | Drawn down 1.3 ft Gauge reading | Fill to maximum pool 3 ft Gauge reading | Pair Count |
| Perrin | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | 25.5 ft Gauge reading | Fill to 26.5 ft gauge reading by May 10 Lower 4" in late May early June. | Pair Count, Invertebrate sweeps |
| Redhead | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | 2.6 ft Gauge reading | Fill to 3.5 ft in late May Gauge reading | Pair Count, Invertebrate sweeps |
| Upper Harrison | Migrating waterfowl and shorebirds | Increase submergent vegetation – invertebrate production for forage | Drawn down 14 ft Gauge reading | Fill to 15.5-16 ft Gauge reading | Pair Count, Invertebrate sweeps |

Annual Habitat Plan For Crescent Lake NWR 2004 (Water Management Results)

| Management Unit | Resources of Concern (Conservation Targets) | Habitat Objective | Management Treatment | Actual Treatment | Wildlife use |
|---|---|---|---|---|---|
| Martin | Migrating waterfowl and shorebirds, Nesting Terns | Provide forage areas by manipulating shoreline water depth. Provide flooded Rush | Remain at Normal Pool | Half Pool due to drought | Migrating Waterfowl Excellent |
| Ramelli | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | Remain at Normal Pool | Half Pool due to drought | Migrating Waterfowl Excellent |
| Smith | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | Release 6" in Spring to refill Redhead | Released 6" in Spring to refill Redhead, Normal Pool | Migrating Waterfowl Good |
| Bean Crossing | Breeding waterfowl | Increase water surface for pair ponds. | Release in spring to refill redhead, refill and release in fall. | Released in spring to refill redhead, refill and released in fall. | |
| Perrin | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | Release 4" in May then normal pool. | Released 4' in May went below normal pool due to drought. | Migrating Waterfowl and Shorebird Excellent |
| Redhead | Migrating waterfowl and shorebirds | Provide forage areas by manipulating shoreline water depth | Refill in Spring to provide foraging habitat | Refilled Spring Normal pool Fall | Migrating Waterfowl Excellent |
| Upper Harrison | Migrating waterfowl and shorebirds | Increase submergent vegetation – invertebrate production for forage | Remain drawndown to allow for annual vegetation | Drawndown | Migrating Waterfowl Excellent |
| West Jones | Migrating waterfowl and shorebirds | Provide foraging habitat | Leave to Natural Influence | Half pool due to drought | Migrating Waterfowl Excellent |
| Duck Slough | Migrating waterfowl and shorebirds | Provide foraging habitat | Leave to Natural Influence | Half pool due to drought | Migrating Waterfowl Excellent |
| Gimlet Lake | Migrating waterfowl and shorebirds | Provide foraging habitat | Leave to Natural Influence | Half pool due to drought | Migrating Waterfowl Excellent |

Eldred Diversion Flume Readings c.f.s.

| | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flume Readings | 7.48 | 8.74 | 7.34 | 12.5 | 3.53 | 3.19 | 5.11 | 5.48 | 4.39 | 1.33 | 3.39 | 4.68 |

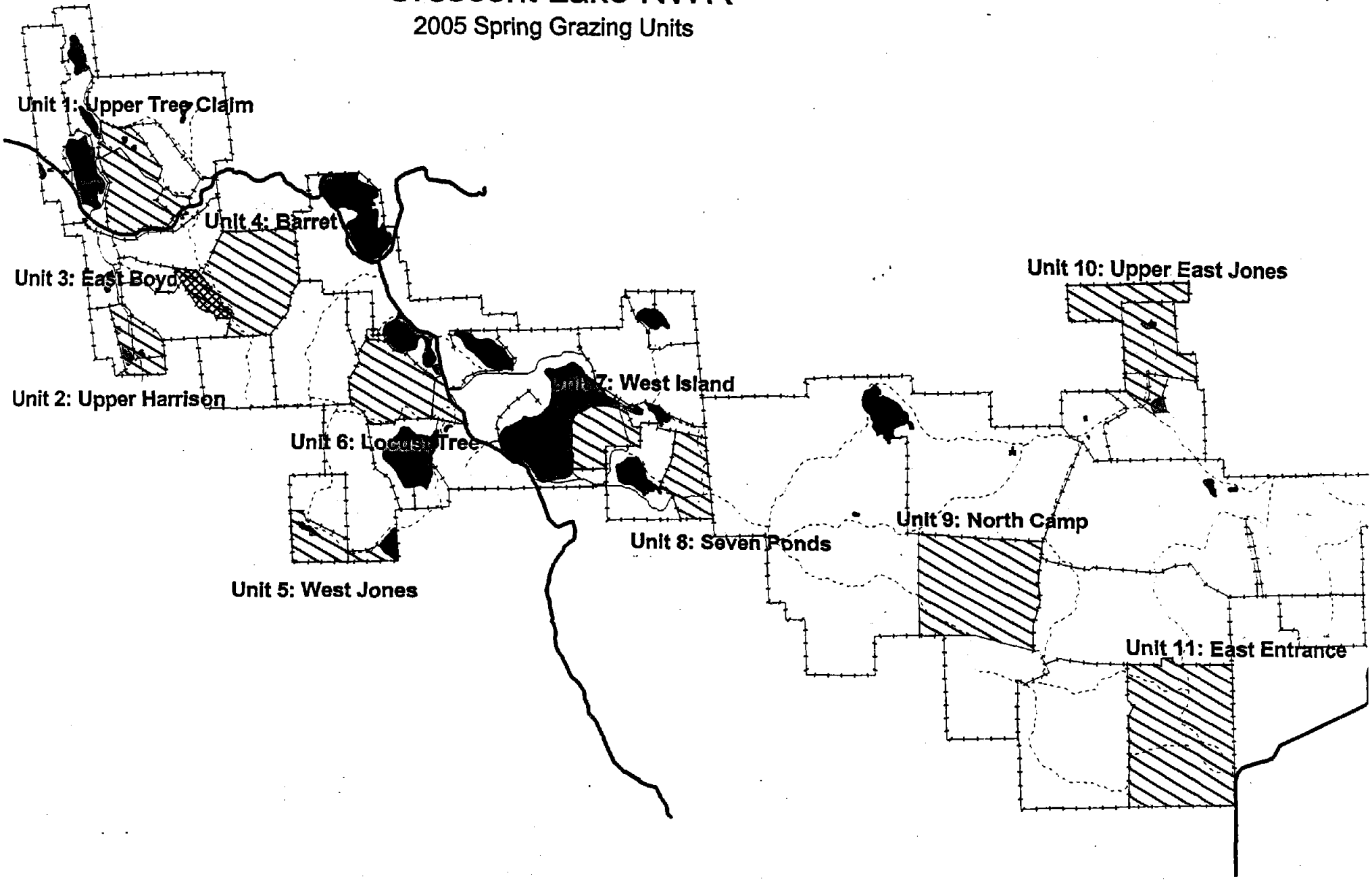
| Habitat Plan For North Platte NWR 2005 Grazing | | | | | | | |
|---|---|---|---|---|---|---|---|
| Management Unit | Sub Unit | Treatment Acres | Current Condition | Resources of Concern (Conservation Targets) | Habitat Objective | Management Prescription | Monitoring Emphasis |
| Lake Alice | 1 | 280 | < 30 % Grass Cover Grazed 2001 | Plant and wildlife diversity and increase grass cover. | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. | Spring Graze April 15 - June 10 | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |

| Habitat Plan For North Platte NWR 2005 RxBurn | | | | | | | |
|---|---|---|---|---|---|---|---|
| Management Unit | Sub Unit | Treatment Acres | Current Condition | Resources of Concern (Conservation Targets) | Habitat Objective | Management Prescription | Monitoring Emphasis |
| Winters Creek | Outlet | 10 | Grazed 2001 | Plant and wildlife diversity | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. | Rxburn April | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |
| Lake Alice | 1 | 80 | < 30 % Grass Cover Grazed 2001 | Plant and wildlife diversity and increase grass cover. | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. | Rxburn April | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |
| State Line Island | East | 50-90 | Down Woody trash from Russian Olive removal treatment. | Russian Olive | Reduce down woody Russian Olive | Rxburn between March 15 May 15 | First Order Fire Effects |
| Lake Minatare | Corral | 30 | | Plant and wildlife diversity | Increase warm season grasses 5%. Invigorate grassland by maximizing VOR's and forbs. | Rxburn April | Vegetation structure/composition surveys before/after burn (Robel pole Duabmire frame). |

| Habitat Plan For North Platte NWR 2005 Seeding | | | | | | | |
|---|---|---|---|---|---|---|---|
| Management Unit | Sub Unit | Treatment Acres | Current Condition | Resources of Concern (Conservation Targets) | Habitat Objective | Management Prescription | Monitoring Emphasis |
| Lake Alice | 1 | 10 - 40 | < 30 % Grass | Plant and wildlife | Increase warm | Seed at 4-6lbs/acre | Vegetation |

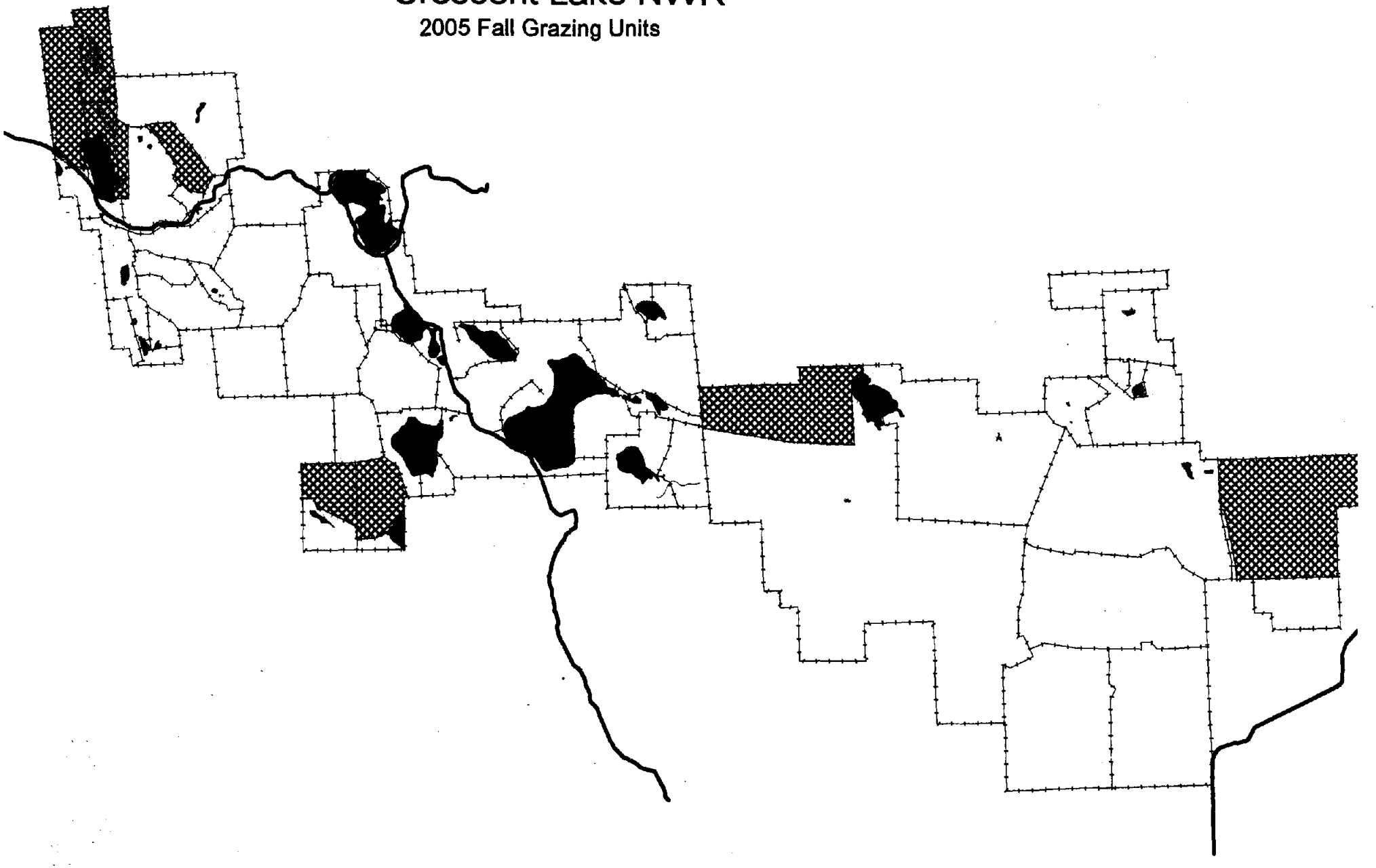
# Crescent Lake NWR

## 2005 Spring Grazing Units



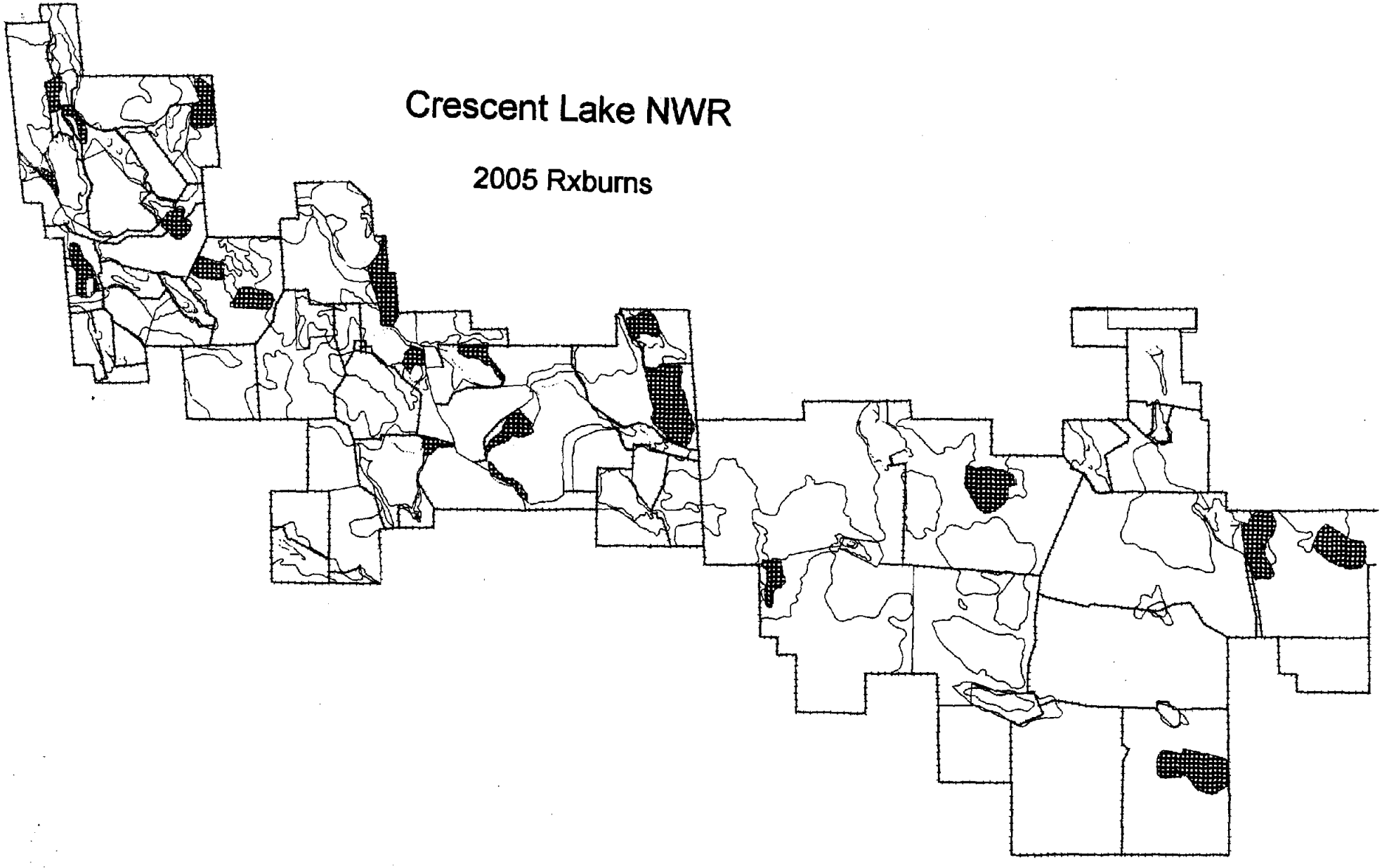
# Crescent Lake NWR

2005 Fall Grazing Units



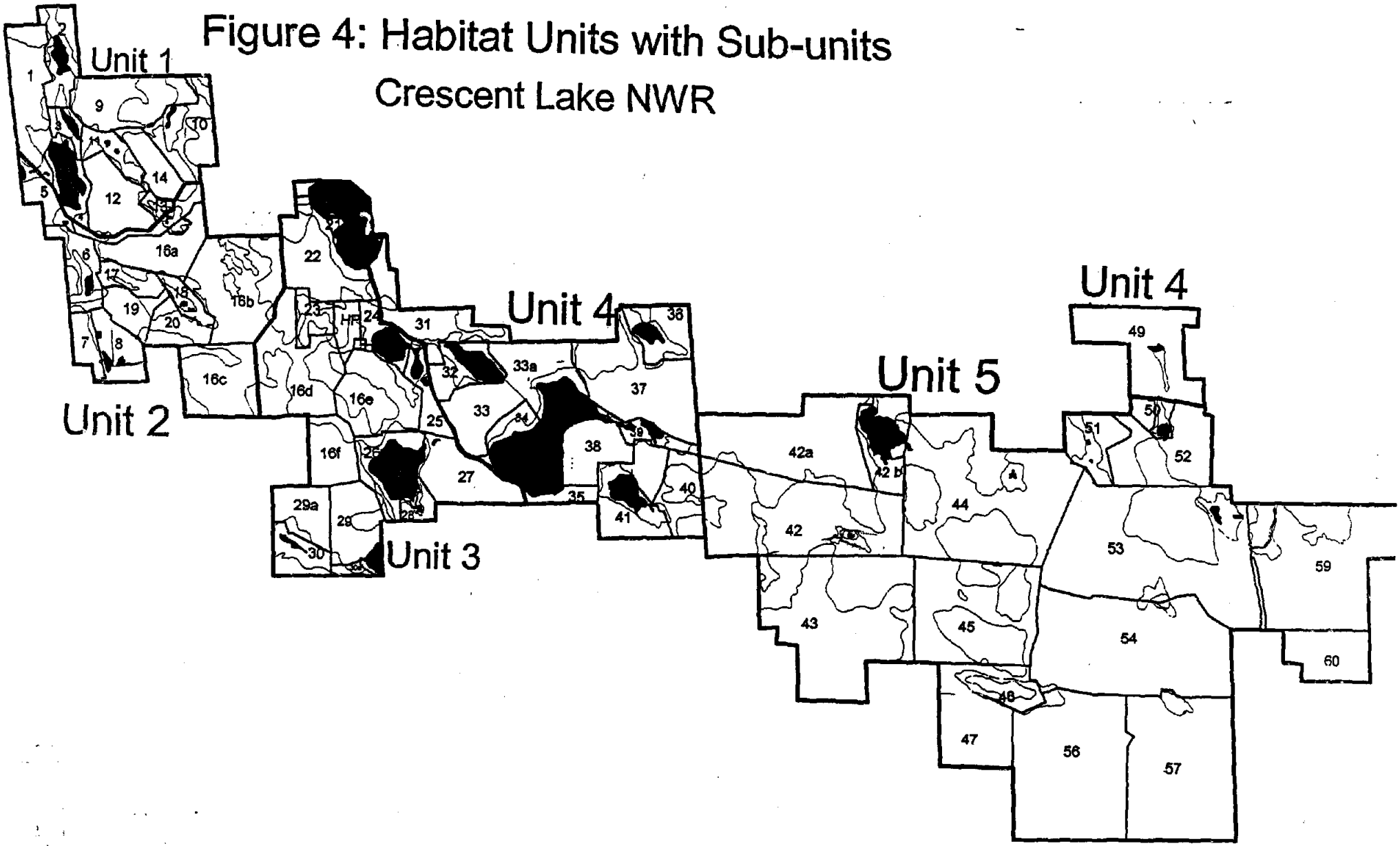
# Crescent Lake NWR

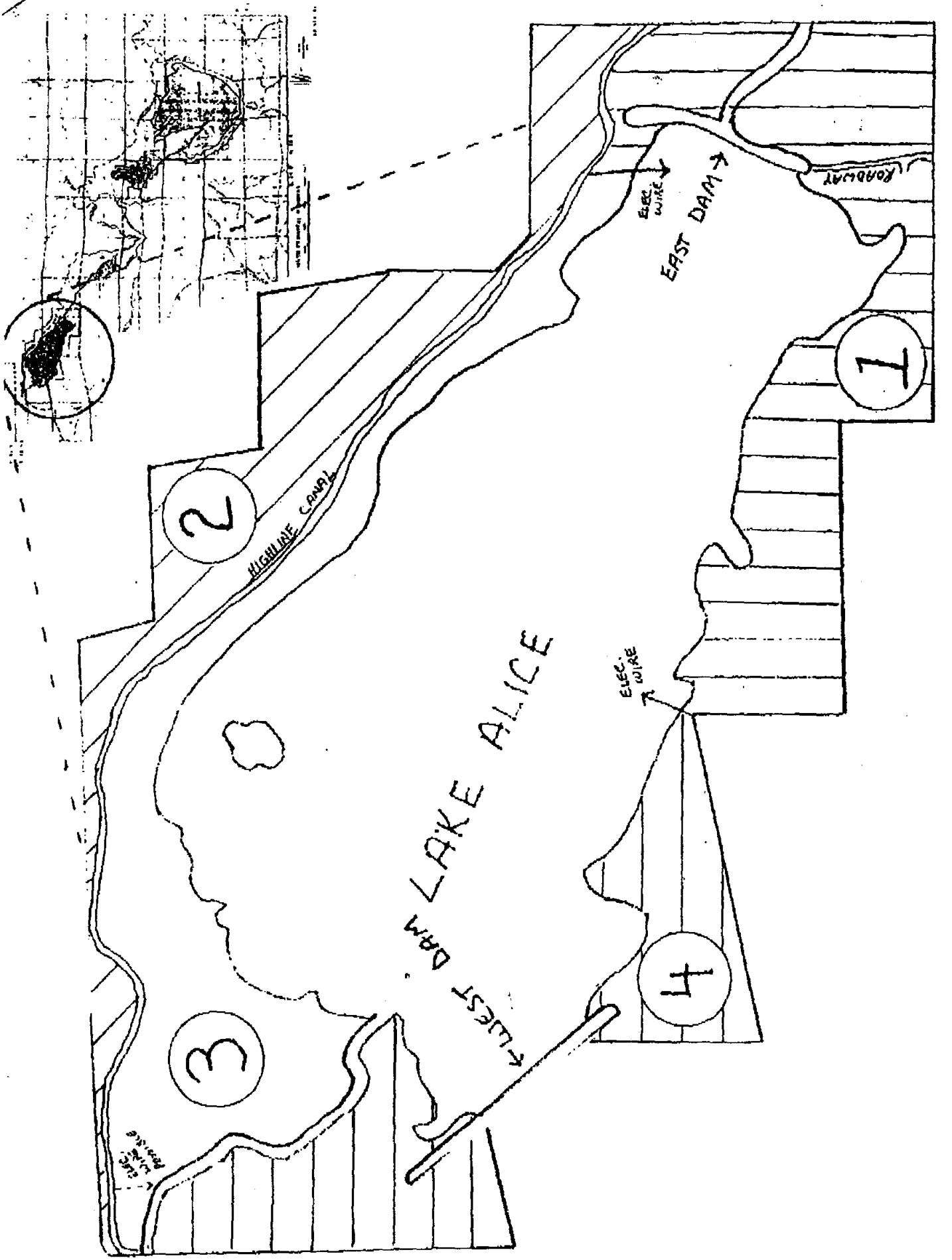
## 2005 Rxburns



# Figure 4: Habitat Units with Sub-units

## Crescent Lake NWR




ROADWAY
ELEC. WIRE
EAST DAM
1
2
HIGHLINE CANAL
ELEC. WIRE
LAKE ALICE
WEST DAM
4
3