STILLWATER WILDLIFE MANAGEMENT AREA
Fallon, Nevada

GRASSLANDS MANAGEMENT PLAN

NORTH MARSH UNIT

I. Introduction

This plan is designed to serve as the initial Fish and Wildlife Service habitat management proposal for the North Marsh grazing unit. After review by the Nevada Department of Wildlife (NDOW) and a joint meeting with the NDOW, the Truckee-Carson Irrigation District (TCID) and permittees, this plan will be finalized and appropriate sections of the 1962 Economic Use Plan ammended as necessary.

As the old Stillwater Wildlife Management Area (SWMA) plan is still viable and usable for management purposes, only essential items will be discussed here and this mini-plan will be relatively brief.

A. Wildlife Objectives

In 1960, to meet the requirements of the 1948 tri-party agreement and achieve a balanced mix of optimum objectives, the SWMA (by a two-party agreement with the NDOW), was split into three main areas of differing purposes and management. There were: 1) the Open Area (where grazing was to have a greater priority than wildlife); 2) the Refuge and 3) the North Marsh (where "wildlife management" was to be the primary purpose). The North Marsh, as specified in the two agreements, remained a "public shooting area". Public use thus was another important purpose of this unit of the SWMA.

Through the FWS planning process, the following objectives in ranking order have been developed for the North Marsh.

1. Production of waterfowl with emphasis on redhead ducks.

2. Production of other migratory birds, with special concern for long-billed curlew, snowy plover, white-faced ibis and other colonial nesting birds.

3. Providing opportunities for wildlife-oriented public use, including hunting, when compatable with other objectives.

4. Maintenance of migrating waterfowl, with emphasis on whistling swans, redhead and canvasback ducks.

5. Maintenance of other migratory birds with special consideration for the welfare of migratory and wintering bald eagles.

B. Achieving Objectives

Vegetation, consisting primarily of saltgrass, cattail, hardstem and alkali bulrush in wetland portions and greasewood, saltbrush and other brushy species in upland sites, need to be managed to provide optimum nesting cover and natural foods to enhance use by wildlife and meet public use objectives. Although the availability, quality and use of water is the key management tool, the use of grazing and some burning can help in the achievement of desired vegetative structures.

C. Background

1. Vegetation

In the past when water was more abundant and of better quality, grazing, as described in the 1962 plan, was utilized in the spring to open up dense stands of emergent marsh vegetation to provide some open water areas along shorelines. Nesting densities were found to be higher in saltgrass areas having open water between the shore and adjacent bulrush (Marshall, 1953).

However, nesting studies conducted in the early 1970's revealed that due to changed conditions the reverse was true (Napier, 1973). Management to encourage the establishment and growth of emergent vegetation along shorelines was needed. Since 1961, due to water quality and quantity changes emergent vegetation has been lost, especially during droughts, in some impoundments and has receeded from shorelines and become less abundant in others. Germination from seeds and even survival of adult plants was found to be much reduced due to changes in water quality, especially increased salinities.

These studies also revealed that close-grazed saltgrass was seldom used for nesting, and if used, predation was high. Ducks preferred sites with saltgrass 7 to 16 inches in height with some older, dead saltgrass present to provide material for cover and nests. Saltgrass areas that had not been grazed for several years containing large accumulations of dead material that were matted and unsuitable for nesting sites and were used less by waterfowl.

2. Grazing Use

In recent years, there were two permittees using the North Marsh Unit of the SWMA. One permittee moved away from Nevada and the other lost privileges in this unit for overgrazing violations in the North Marsh. As a result, the North Marsh Unit is open to new management approaches unencumbered by considerations usually accorded existing users.

Recent records indicate that up to 100 cattle (cow and calf) were permitted in this area from April 1st through February 28th. Total AUMs were limited to 1,032. In 1980, permittees paid for 1,185 AUMs, even with the forced removal of many unauthorized livestock. Actual AUMs were probably in excess of 1,250. Records indicate that excessive grazing, as a result of permit violations, had been a continuing problem with utilized AUM's in excess of 1,100 - 1,500. These violations caused considerable habitat damage, especially during 1976-1977 drought (allowable AUMs were not lowered during this period).

Because of past overgrazing, the Nevada Department of Wildlife and Refuge personnel agreed, despite improved water and habitat conditions during 1980 and 1981, to rest this unit during 1981 and until such time grazing is needed to improve wildlife habitat.

3. Fire Management

During the 1961-1963 drought, the West Marsh was burned. Fires continued in peat areas for some time as water for flooding was not available. The combination of burning and drought eliminated emergent vegetation and lack of prime water has prevented germination and re-establishment. As a result, prescribed burning has not been used again. Properly planned and executed and prescribed burns, however, could possibly be used to manipulate habitat during years of adequate water. Burning will not be depended on if grazing will accomplish objectives. After only one year of non-grazing there appears to be some fire danger from accumulated plant material.

D. Coordination

Several times during the past year, the Refuge Manager has met with NDOW personnel and the Truckee-Carson Irrigation District Board of Directors and discussed the North Marsh grazing and potential management in relation to wildlife objectives. This step was taken to provide input early on, but also to alert cooperators that: 1) spring and summer grazing would be discontinued, 2) cross-fencing was necessary for proper distribution of grazing, and 3) the FWS policy was to perfer a bid system selection of permittees.

Annual water receipts have decreased through time, and more impoundments have been abandoned or only periodically flooded. This has resulted in the creation or availability of more saltgrass in the North Marsh and has created a greater interest among permittees for grazing privileges in this unit. There was not much pressure to allow grazing during the 1981/1982 season, but is mounting to require the Refuge to develop a grazing program for the 1982/1983 permit period.

II. Unit Description

The North Marsh Unit comprises that portion of the primary marsh north of the Refuge. It contains approximately 40,000 acres. On an average, the unit has 6,000 acres of open water, 2,200 acres of marsh (wet saltgrass, bulrush, cattail), 300 acres of annual weeds, 2,200 acres of saltgrass and annuals in the abandoned West Marsh and 26,600 acres of sand dunes, alkali flats and unproductive brushy uplands. Although providing some forage, the latter three habitat types are not included when available AUMs are calculated.

Within this unit are: Goose Lake, Swan Lake, Swan Check, Tule Lake, Lead Lake, Pintail Bay and West Marsh (see attached map). The amount of open water varies considerably depending on water receipts. The amount of saltgrass production, being dependent on water tables, varies considerably. Water spreading and showers produce annual plants such as; Russian thistle and alkali weed. Increased water deliveries stimulates spreading of old stands and the establishment of new growths of cattail and bulrush. These "wetland" areas in the late 1970's varied from 1,600 to 12,000 acres and have averaged about 7,000 acres. The West Marsh has been abandoned most years, but produces thich growths of saltgrass and annual weeds.

The Nutgrass area on the east side of the unit has the most extensive stand of emergent vegetation. Many areas here have not been effectively grazed, except around the west and south shores. In contrast, other units such as, Tule and Swan Check on the west side, have been heavily grazed and the few stands of emergent vegetation present are severely impacted when the unit is grazed.

III. Management Methods to Meet Objectives

A. Tools

There is a need to open up some marsh areas containing extensive stands of cattail and bulrush, such as the Nutgrass Unit. There is also a need to prevent dense saltgrass from becoming matted with dead vegetation and too decadent for nesting. After only one year, enough dead plant material is present to carry wildfires through saltgrass areas. Prescribed burning is not an effective management tool as it could be, when water supplies are unpredictable. Prior to planned fire, water should be available and used to flood an area immediately after burning. On a cautious, experimental basis, burning will be used in both saltgrass and marsh areas. A prescribed burning plan will be prepared. Mowing is not practical due to the cost, wet conditions and uneven terrain. Grazing, as the most practical tool, will be used to manipulate vegetation growth and structure. Light grazing should stimulate some regrowth of saltgrass and prevent the buildup of dead material.

There is a very real danger, as proven by past practices, that too high a stocking rate (especially during droughts) can result in the overgrazing and elimination of emergent vegetation in some areas (particularly the west half of the unit), unless better distribution is achieved.

IV. Grazing Management

A. Season of Use

Grazing of bulrush and cattail in the spring effectively eliminates newly germinated plants and sprouts from rhizomes (an objective of grazing management in the 1960's). To prevent this from occurring, grazing needs to be delayed until fall, when young plants have become relatively dormant and have stored some energy in root systems. As emergent aquatics are present only under conditions marginal for survival rotation of the season of use to periods when plants are more vulnerable is not warranted. The Refuge Unit has been grazed only in the fall since 1978 and most plant species exhibit excellent recovery. Not enough dead plant material remains by spring, however, making most sites unsuitable for nesting cover. The Refuge Unit thus should be rested from grazing most years.

B. Distribution

Lacking interior cross-fencing, a more even distribution of grazing can only be achieved by requiring permittees to periodically move cattle to the more inaccessible, less used portions. When cattle are put in the unit at the start of the grazing period, they need to be placed in the Nutgrass area rather than on the Unit's west side.

C. Frequency of Grazing

The Unit should not be grazed annually, even when restricted to fall use periods, because:

1. Unit objectives are to provide for wildlife and public use of wildlife, not to provide AUM's.

2. The need for grazing is based on its use as a tool (with prescribed burns) to achieve desired vegetative response. The condition and response of vegetation as measured annually will determine whether grazing will be employed, and if used, the intensity. For saltgrass, this would be the amount of new growth and dead material present. For bulrush and cattail, this would be the thinning, spreading or recession of stands in various areas.

3. Based on past experience, grazing at the beginning or during a drought or prior to recovery afterward causes the loss of some stands of emer-

gent vegetation and results in an excessive removal of saltgrass.

4. The Unit lacks interior fencing. Without these, grazing cannot be concentrated where needed or eliminated where harmful. If the area is broken up into subunits by the placement of interior fences, some grazing can be provided in at least one of these smaller units each year, except during severe droughts when all the North Marsh should be rested.

5. Studies at Ruby Lake National Wildlife Refuge indicated that six to seven years of rest before grazing was necessary for saltgrass.

D. Allowable AUM's

An extensive range survey by FWS range personnel in 1955 established a safe grazing rate of 1,345.5 AUM's for the North Marsh Unit. At that time, there were extensive, dense stands of emergent marsh vegetation present in West Marsh and other areas which now are barren of these plants. The total of open water areas was larger, however, and many of these dried-up impoundments now support saltgrass and annual weeds. In an effort to open up dense marsh areas, 3,000 AUM's were recommended in the 1962 plan. However, reduced water receipts resulted in AUM's gradually being reduced to 1,032 (1,250 including trespass). Even at this level, severe grazing impacts on bulrush areas were documented and many shoreline areas of saltgrass were grazed down to one or two inches in height with little dead grass from previous growing seasons present.

Because of the changes wrought on habitat since the mid 1950's by droughts, lack of water and past grazing, total AUM's should be held below the 1,345 AUM's indicated by the 26 year old range survey. Also, delaying use until fall will lower total available AUM's.

V. Plan Amendment Recommendations

Frequency: Periodic grazing as determined by the nees of wildlife habitat and water availability.

Season: November 15th - February 28th (100 days)

Counts: Require a physical count of all cattle entering the unit and a report of all removals.

Initial Grazing Rate: Unfenced - current AUM's (1,000 maximum) or 100 cattle over six months of age to start with and will be adjusted as habitat needs require objectives of 50% utilization. During drought periods, total AUM's to be reduced or eliminated.

Distribution of Livestock: All stock to enter the unit on the east side. Permittees to periodically herd cattle to less used or more inaccessible areas.

Number of Permittees: Unfenced - maximum one; Cross-fenced - maximum two.

Selection of Permittee Alternatives:

1. Competitive bid among existing permittees.
2. Lottery among existing permittees.

Fees: Bid or the established rate for the Marsh.

Transfer of AUM's: Selected permittee's allowable AUM's for the Open Unit or Marsh Unit of the SWMA will be transferred to the North Marsh, so any selected permittee(s) will not receive a net increase in total AUMs. Transfer of AUM's will lessen grazing impacts on other units and provide more forage (often in short supply in the fall) for the cattle of unselected permittees.

Fence Construction: The SWMA in recent years has collected between $19,000 and $20,000 in annual grazing fees. With recent rate increases, TCID should receive approximately $36,000 annually. The District should provide a portion of this for construction of cross-fences in the marsh so that proper livestock distribution and greater utilization of densely vegetated areas can be achieved.

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Grasslands Management Plan Approval Page

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