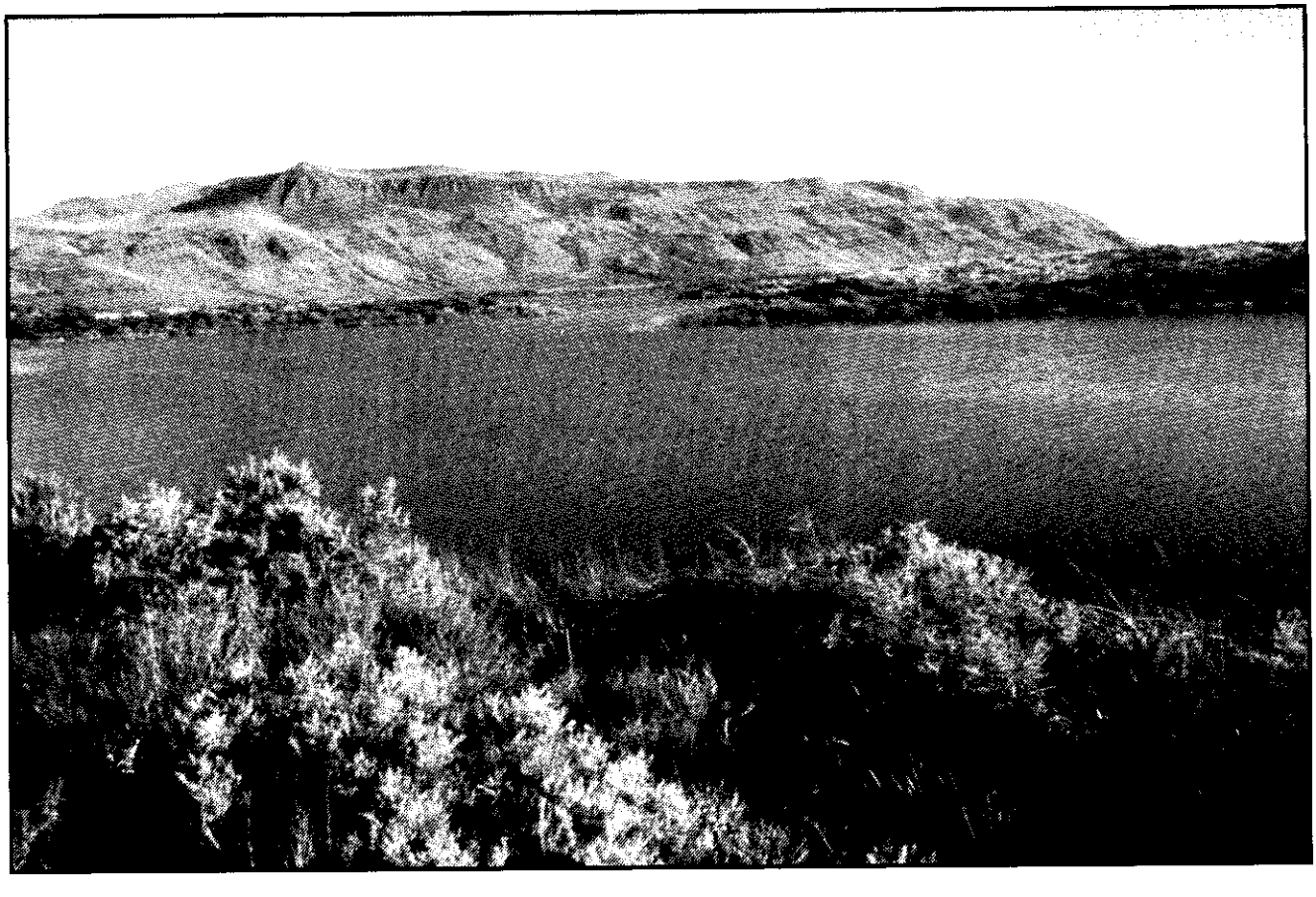
U.S. Department of the Interior
Bureau of Land Management

Lakeview District Office
1000 S. 9th
P.O. Box 151
Lakeview, Oregon 97630

May, 1988

Warner Lakes Plan Amendment for Wetlands and Associated Uplands

Plan Amendment and Environmental Assessment for the Warner Lakes Management Framework Plan and Decision Record



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources. protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major resonsibility for American Indian reservation communities for people who live in Island Territories under U.S. administration.

BLM-OR-ES-89-2-1792

United States Department of Interior

Bureau of Land Management

Lakeview District Office
P.O. Box 151 (1000 S. 9th Street)
Lakeview, Oregon 97630
Telephone: (503) 947-2177

May 1, 1989

Dear Public Land User:

Enclosed for your review is the proposed Warner Lakes Plan Amendment for Wetlands and Associated Uplands and Environmental Assessment. The planning area is a portion of the former Warner Lakes Resource Area (now part of the Lakeview Resource Area) of the Lakeview District. The Bureau of Land Management has prepared this document to address proposed changes in the management of wetlands and associated uplands in the Warner Valley portion of the resource area. The proposed Plan Amendment focuses on broad categories of land and resource uses, and complies with Bureau guidelines for planning and environmental analysis.

The proposed Plan Amendment is based on a draft that was published in May, 1988; and upon which public comments were received until November 22,1988. Three hundred and seventy comments were received during this period from individuals, groups, and governmental agencies, The Lakeview District Multiple-Use Advisory Council and the Grazing Advisory Board were presented with the draft Plan Amendment, and each developed recommendations outlining their concerns and positions on the issues analyzed in the draft. All commentors on the draft were invited to participate in a public working group to further analyze and recommend solutions for the resource issue conflicts in the planning area.

It is from all of the comments and recommendations received during the public comment period that the differences between the draft and this proposed Plan Amendment are based. Even though substantial differences exist between the two documents. these differences have been analyzed and this proposed Plan Amendment is designed to stand as an independent document without reference to the draft The proposed Plan Amendment decisions are based upon the analysis contained in the Environmental Assessment, which considered additional data provided during review of the draft, public comments received, management feasibility, policy, and legal constraints. The approval of the Plan Amendment will be documented in a Decision Record which will be mailed to known interested parties and to the public.

The proposed Plan Amendment cannot be approved and implemented until the Governor of Oregon has had an opportunity to review it. Approval of the Plan Amendment will also be subject to the final action on any protests which may be filed. Any person who participated in the planning process and has an interest which is, or may be, adversely affected by approval of this Plan Amendment may protest such approval A protest may raise only those issues which were submitted for the record during the planning process and should be filed with the Director (760), Bureau of Land Management, 1800 C Street, N.W.. Washington D.C. 20240 within the official protest period ending May 31, 1989. Protests must contain the following information:

-The name, mailing address, telephone number, and interest of the person filing the protest;

-A statement of the issue or issues being protested;

-A statement of the part or parts of the Plan Amendment being protested;

-A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party, or an indication of the date that the issue or issues were discussed for the record;

-A concise statement explaining why the proposed decision is believed to be wrong.

Thank you for your continued participation in the land planning effort.

Sincerely yours,

Judy Ellen Nelson

Judy Ellen Nelson
Lakeview District Manager

U.S. Department of the Interior
Bureau of Land Management
Lakeview District Office
April, 1989

Warner Lakes Plan Amendment for Wetlands and Associated Uplands

Plan Amendment and Environmental Assessment for the Warner Lakes Management Framework Plan and Decision Record

PROPOSED DECISION RECORD AND FINDING OF NO SIGNIFICANT IMPACT FOR WARNER LAKES PLAN AMENDMENT FOR WETLANDS AND ASSOCIATED UPLANDS

Decision:

It is the proposed decision of the Bureau of Land Management to adopt and implement Alternative 6, as described in the accompanying Environmental Assessment. This decision would incorporate by reference all the management guidelines described under that alternative. Alternative 6 (Proposed Action), as presented in the proposed Plan Amendment, differs from Alternative 6 (Preferred Alternative) as presented in the draft Plan Amendment (May 1988). It was modified to reflect new information and public comments received during the public review of the draft document.

Rationale:

The proposed action excludes conflicting uses from the most important and productive wetland habitat areas. It provides most of the potential habitat improvements identified under any alternative for waterfowl, migrating birds and other wildlife. It is expected to improve habitat conditions on 80-85 percent of the planning area wetlands to high-fair or good condition within 10 years.

Opportunities for recreation would be improved by the establishment of facilities. These facilities would allow for projected higher levels of use (about 7,250 visitor days over current levels), while still solving existing public access and sanitation problems. Recreation development would be limited to the extent necessary to ensure it does not cause significant adverse impacts to wildlife uses. If use increases to a point requiring intensive facility development, those facilities would be developed off site, in less sensitive areas nearby.

Cultural resources protection, and scientific utilization of the resource, would be significantly increased on the public lands in Warner Valley. Archeological site protection would be increased through reduced erosion and surface disturbance, and through an increased management presence. Increased interpretation, educational, and scientific use of cultural resources would also occur. The proposed action avoids any serious adverse impacts to livestock permittees in the planning area by offering to mitigate, on an AUM for AUM basis, all existing use affected by the Proposed Action.

The proposed action would benefit Lake County economically. Ranch level financial returns to five operators would increase. Increases in hunting use, wildlife viewing, and other recreation uses would increase local income through recreation-related expenditures for lodging, gasoline, food, and supplies for hunting, camping, clothing, and sightseeing. Some local lifestyle changes would occur with increased recreational use of the valley and the possible involvement of some Warner Valley residents in recreation-related businesses.

The proposed Plan Amendment and Environmental Assessment considered a full range of management alternatives in evaluating the situation in Warner Valley. Retaining present management guidelines would have continued the existing limitations on land tenure adjustment, wildlife habitat improvement, and solving present recreation facility and access concerns. Managing principally for wildlife, while excluding conflicting uses, would require significant unmitigated reductions in livestock use and would cause economic hardship to directly affected permittees. Increasing livestock use would have the effect of eliminating existing exclosures for wildlife and reducing habitat potential. The Area of Critical Environmental Concern (ACEC) designation could occur under any set of conditions which would protect the values identified. Thus the best management alternative is the proposed action because it derives most of the benefits and mitigates most of the adverse impacts.

FINDING OF NO SIGNIFICANT IMPACT

The Bureau of Land Management, Lakeview District, has analyzed various alternatives for managing wetlands in the Warner Valley portion of the Warner Lakes Resource Area. The alternatives and associated analysis are described in the attached proposed Plan Amendment and Environmental Assessment; which was made available for public review as a Draft on March 18, 1988 and in Final on April 14, 1989. The options for management direction identified in the attached environmental assessment, hereby incorporated by reference, would assure that no significant impacts would occur to the human environment.

Under the six alternatives analyzed, significant impacts on the quality of the human environment would not occur based on the following considerations:

- Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality
- Public health or safety would not be significantly affected;
- Wetlands and floodplains would be retained in Federal ownership under all alternatives. Federal ownership of wetlands may improve through land tenure adjustments under some alternatives and wetlands would be protected or enhanced to varying degrees depending on the alternative;
- The alternatives are not a pan of any other action having the potential for cummulatively significant impacts to the important and relevant (ACEC) resource values in the planning area;
- Cultural resources on, or eligible for, the National Register of Historic Places would not be affected, nor would Native American religious sites;
- The alternatives would not significantly affect endangered or threatened species or their habitat determined to be critical under the Endangered Species Act of 1973;
- The alternatives do not violate federal, state, or local legal requirements for environmental protection, nor are there any known inconsistencies with officially approved or adopted federal, state,
- tribal, or local natural resource plans, policies, or programs.
- Adverse impacts identified are minimal. Continued resource monitoring would ensure that no significant

adverse impacts occur. As needed, appropriate management actions would be instituted to protect important natural and cultural resources. Impacts to threatened or endangered species habitat or cultural resources related to potential land tenure adjustments, which could not be mitigated or salvaged, would result in their retention in public ownership.

On the basis of the information contained in the Environmental Assessment and all other information available to me as summarized above. it is the determination of the Bureau that none of the six alternatives constitute a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is unnecessary and will not be prepared. In addition, the amendment to the Warner Lakes Management Framework Plan does not affect the entire resource area and does not substantially affect other resource programs to the extent that the district would initiate a Resource Management Plan/Environmental Impact Statement.

Recommended to the State Director:

Robert G. Bolton 3/21/89

Robert G.Bolton, Manager — Date
Lakeview Resource Area

Judy Ellen Nelson 3/21/89

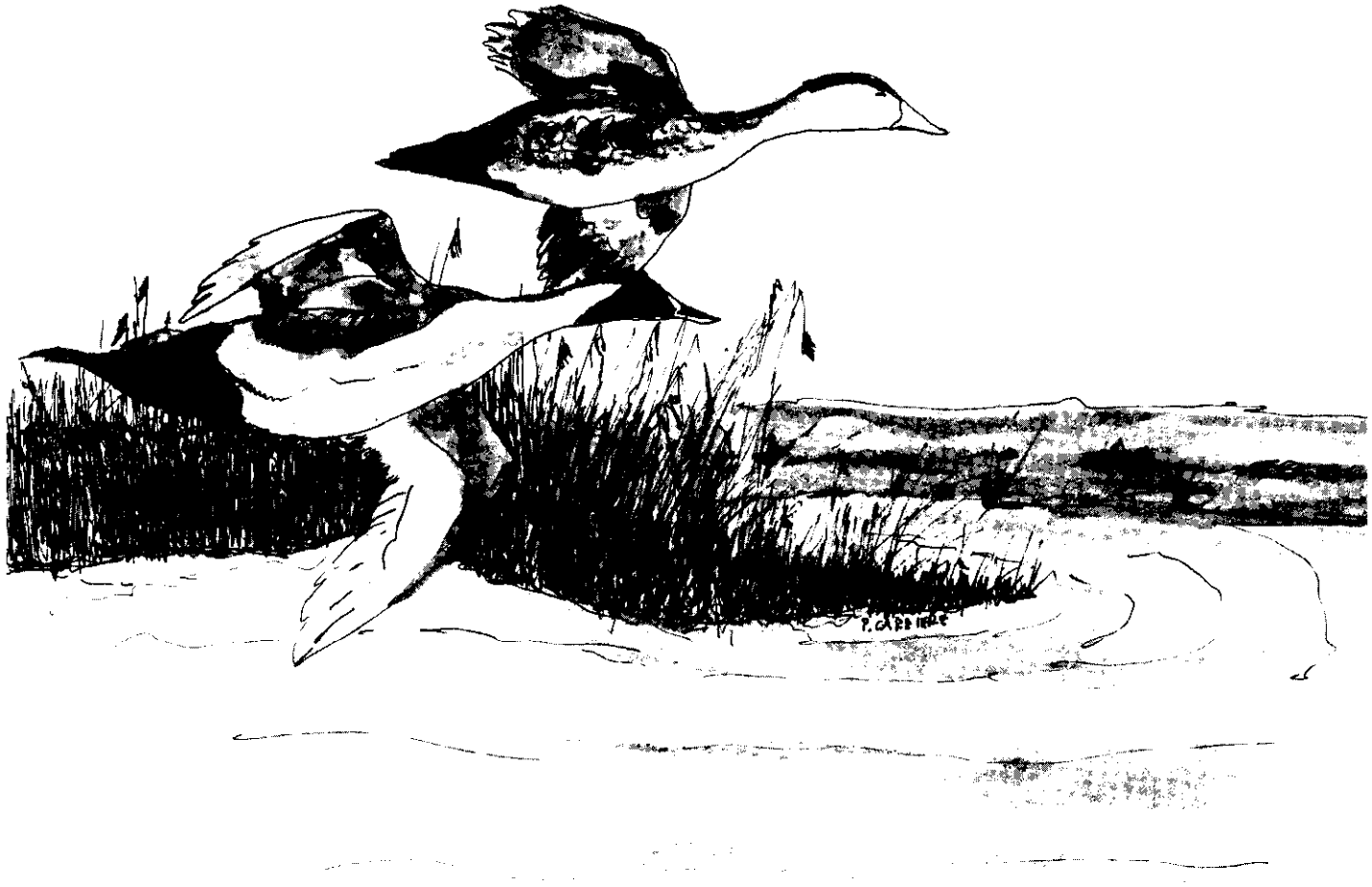
Judy Ellen Nelson — Date
Lakeview District Manager

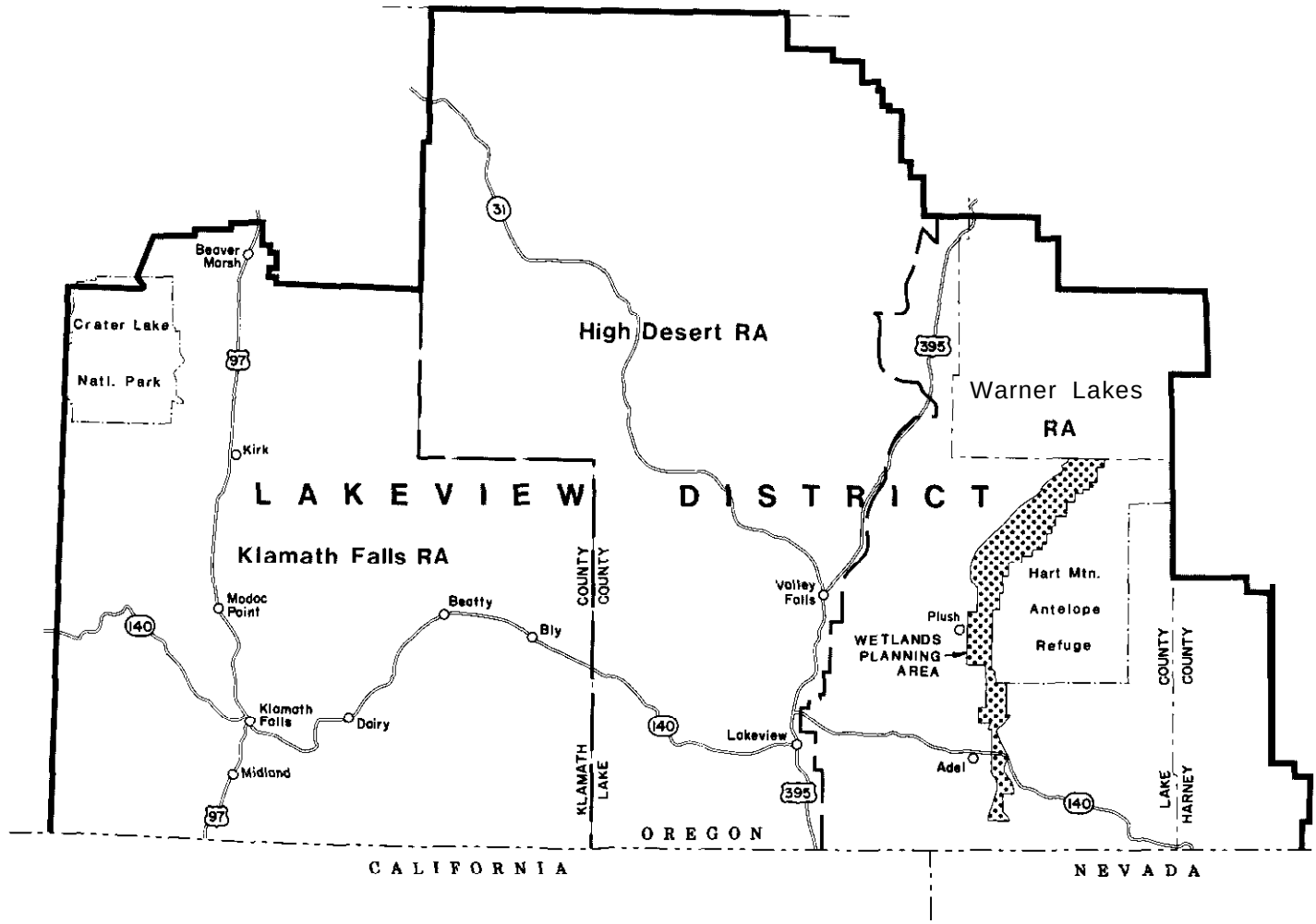
State Director Approval:

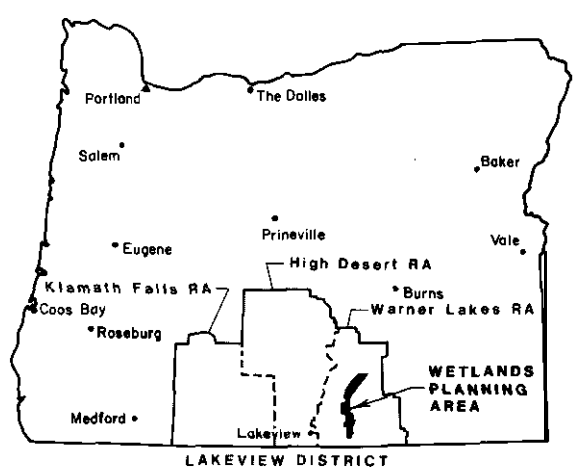
I approve the proposed decision for the Warner Lakes Management Framework Plan Amendment Environmental Assessment and Finding of No Significant Impact. This document meets the requirement for agency decision making as provided in 40 CFR 1505.

Charles W Luscher 3/28/89

Charles W. Luscher — Date
State Director. Oregon







U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

LAKEVIEW DISTRICT

1989

WARNERLAKESRESOURCEAREA

General Location and Wetlands Planning Area

MAP 1

10 0 10 20 30 40 Miles

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CHAPTER I
INTRODUCTION

CHAPTER I INTRODUCTION

Purpose and Need

The Warner Lakes Management Framework Plan (MFP) was approved in 1983. The 1983 plan made land use allocations and provided management direction in the Warner Lakes Resource Area. The existing guidance in the MFP does not accommodate or assess significant program changes addressed in the proposed Plan Amendment and environmental assessment.

The purpose and need for this document is to review potential changes in management in a portion of the Warner Lakes Resource Area. Potential actions addressed in the proposed amendment, not included in the original MFP. include: designation of an Area of Critical Environmental Concern (ACEC), adjustments in livestock grazing, increased emphasis on wildlife habitat protection within wetlands and associated uplands, and new management direction for lands which may be acquired.

Due to initiatives by groups outside the Bureau of Land Management (BLM), Congress has allocated three million dollars of Land and Water Conservation Fund (LWCF) monies for the acquisition of lands in the Warner Valley to be managed for conservation purposes. This document provides the general direction and analysis for management of acquired lands. Site specific management actions may depend upon resolution of final acquisition contract specifications.

This proposed Plan Amendment and associated environmental assessment is required by BLM regulations and provides for public involvement, and State and local government coordination. The Plan Amendment, when completed, will provide guidance for BLM management in the Warner Valley during the next 4-10 years, or until the entire management plan is revised or replaced.

Location

The Plan Amendment specifically addresses BLM administered wetlands and associated uplands in the Warner Valley. For purposes of this amendment, wetland habitat is defined as permanently wet or intermittently flooded areas where the water table is at, near, or above the soil surface for extended intervals. Marshes, meadows, swamps, shallow lakes and bogs are examples of wetlands.

The Warner Wetlands start north of Plush, Oregon, and extend southward to a point southeast of Adel, Oregon. The Warner Valley lies approximately 40 miles east of Lakeview, Oregon. The planning area is generally bordered by Fish Creek Rim and the Rabbit Hills on the west, the Lake-Harney County line on the north, Hart Mountain National Wildlife Refuge and Coleman Rim on the east, and the southern shore of Coleman Lake on the south. Maps 1 and 2, and Table 1 show the location and current land ownership pattern in the planning area.

The planning area boundary, as shown on Map 1, differs from that published with the draft Plan Amendment in May 1988. Changes were made in response to concerns raised by the Oregon Division of State Lands (DSL), whose comment letter of September 1, 1988 addressed planning area boundaries in the draft MFP Amendment. Quoting from that letter:

"We strongly urge that the boundary be revised to exclude as much state land from the planning unit as possible."..."The proposed amendment is to a BLM planning document. It is not a coordinated wetland management plan developed by multiple agencies. By including state and private lands in the planning area, we are concerned that the amendment may convey the impression that it is a coordinated management plan and imply our agreement with the policy recommendations contained in the document."

Boundary changes made in coordination with DSL reduced the amount of State land within the planning area boundary.

Table I: Public Lands in MFP Amendment Area by Allotment

Allotment No.	Allotment Name	Total Acres BLM	Total Acres Other	Acres BLM Wetlands
205	Greaser (Part)	3,264	125	2,224
212	Rahilly-Gravelly (Pan)	4,420	0	1,595
219	Cahill	470	670	257
222	Fisher Lake (Part)	1,430	656	266
501	Fly"" (Pan)	195	1,260	16
502	Fitzgerald (Part)	265	160	202
504	Kiely	390	90	10
507	Laird	2,030	6,650	636
512	N. Bluejoint (Part)	6,160	1,320	299
523	Warner Lakes	39,653	4,765	12,038
Unallotted -	Han Lake	77	N/A	35
Unallotted -	Crump Lake	340	N/A	292
Unallotted	Mugwump Lake	152	N/A	44
Unallotted -	Anderson Lake	50	N/A	27
Unallotted -	Greaser	112	N/A	59
		59,066	17,916	16,004

The above table outlines only that acreage inside grazing allotments where public land grazing permits are issued, excepting the isolated unallotted parcels. This Plan Amendment places management guidelines only on the public lands administered by BLM within the planning area. either current or acquired. It is not intended, nor should it be construed to be, a planning document for lands under the jurisdiction of the Oregon Division of State Lands or under private ownership.

Planning Process

This document presents resource management alternatives and analyzes associated environmental consequences as an amendment to the Warner Lakes MFP for the Lakeview District. The amendment has been prepared using the Bureau Planning System. Initial steps of the planning process included identification of issues and development of planning criteria. Issues were identified through public comments and focused on concerns and needs, as well as on opportunities for resource use, development and protection. Planning criteria were based on BLM's policy and guidance, applicable laws, the results of public participation, interdisciplinary team input, and coordination with other federal, State, and local government agencies.

Issues and planning criteria were identified in a May 15, 1987 planning report, and the public scoping process was conducted from May through July 1987.

In April 1988. a reorganization of the Lakeview District combined the Warner Lakes Resource Area with the High Desert Resource Area, to form the Lakeview Resource Area. Because the planning document being amended predates the reorganization and is specific only to the Warner Lakes Resource Area, the original designations for the resource area and its land use plan (MFP) have been retained throughout this document for clarity and continuity.

A draft Plan Amendment was issued for public review and comment in May 1988, and comments were received until November 30.1988. More than three hundred comments were received from individuals, groups and governmental agencies. During this review period, both the Lakeview District Grazing Advisory Board and the Multiple-Use Advisory Council were presented with the draft Plan Amendment for review, comment, and recommendations. Additionally, all commentors were invited to participate in a multiple-resource working group to provide further recommendations and alternatives to the District Manager. Three meetings of this working group held between September and November, 1988, were attended by 10-15 individuals representing various public land resource management constituencies. Appendix III (Public Involvement) contains a summation of the information received from these different public out-reach efforts. The incorporation of the information and ideas received is the primary element of difference between the draft and final Plan Amendment.

Detailed information on the development of the Plan Amendment is available at the Lakeview District Office.

Conformance Statement

Except for Alternative 1 (No Action), the alternatives analyzed in the Plan Amendment and Environmental Assessment do not conform to the existing Warner Lakes MFP.

Planning Criteria and Issues

Legal Guidelines

Administration of the Bureau of Land Management, Lakeview District, is guided primarily by the Federal Land Policy and Management Act of 1976 (FLPMA) (90 Stat. 2743 USC 1701).

The following are pertinent major provisions of FLPMA:

1. Under the principles of multiple use and sustained yield, BLM has broad management responsibility over Federal lands:
2. Comprehensive land use planning will be accomplished in order to properly utilize the lands and the resources they contain:
3. Management activities will strive to protect scientific, scenic, historical, ecological, environmental, air and atmosphere, water, and archaeological values.
4. Areas having potential for designation and protection as an Area of Critical Environmental Concern (ACEC) shall be identified and considered throughout the resource management planning process.

In addition to this overall policy, the following Federal Laws, Executive Orders and policies also direct and constrain management of specific resources and activities in the Warner Wetlands area:

Antiquities Act of 1908.
Archaeological Resource Protection Act of 1979.
Clean Water Act of 1977.
Endangered Species Act of 1973.
Executive Order 11514, Protection and Enhancement of Environmental Quality.
Executive Order 11593, Protection and Enhancement of the Cultural Environment.
Executive Order 11644, Use of Off-Road Vehicles on the Public Lands
Executive Order 11990, Protection of Wetlands.
Fish and Wildlife Coordination Act of 1958.
Geothermal Steam Act of 1970
Historic Sites Act, 1935.
Land and Water Conservation Fund Act of 1965
Mineral Leasing Act of 1920, as amended.
Mineral Material Sales Act, 1955.
Mining Law of 1872.
Mining and Minerals Policy Act of 1970.
National Environmental Policy Act of 1969.
National Historic Preservation Act of 1986.
Sikes Act of 1974.
Soil and Water Resources Conservation Act of 1977.

Issues

Major issues identified through Bureau review and the public scoping process include:

Allocation of forage use for livestock grazing
Wetland management for wildlife habitat protection or enhancement
Designation of Area of Critical Environmental Concern
Land tenure adjustments to facilitate management

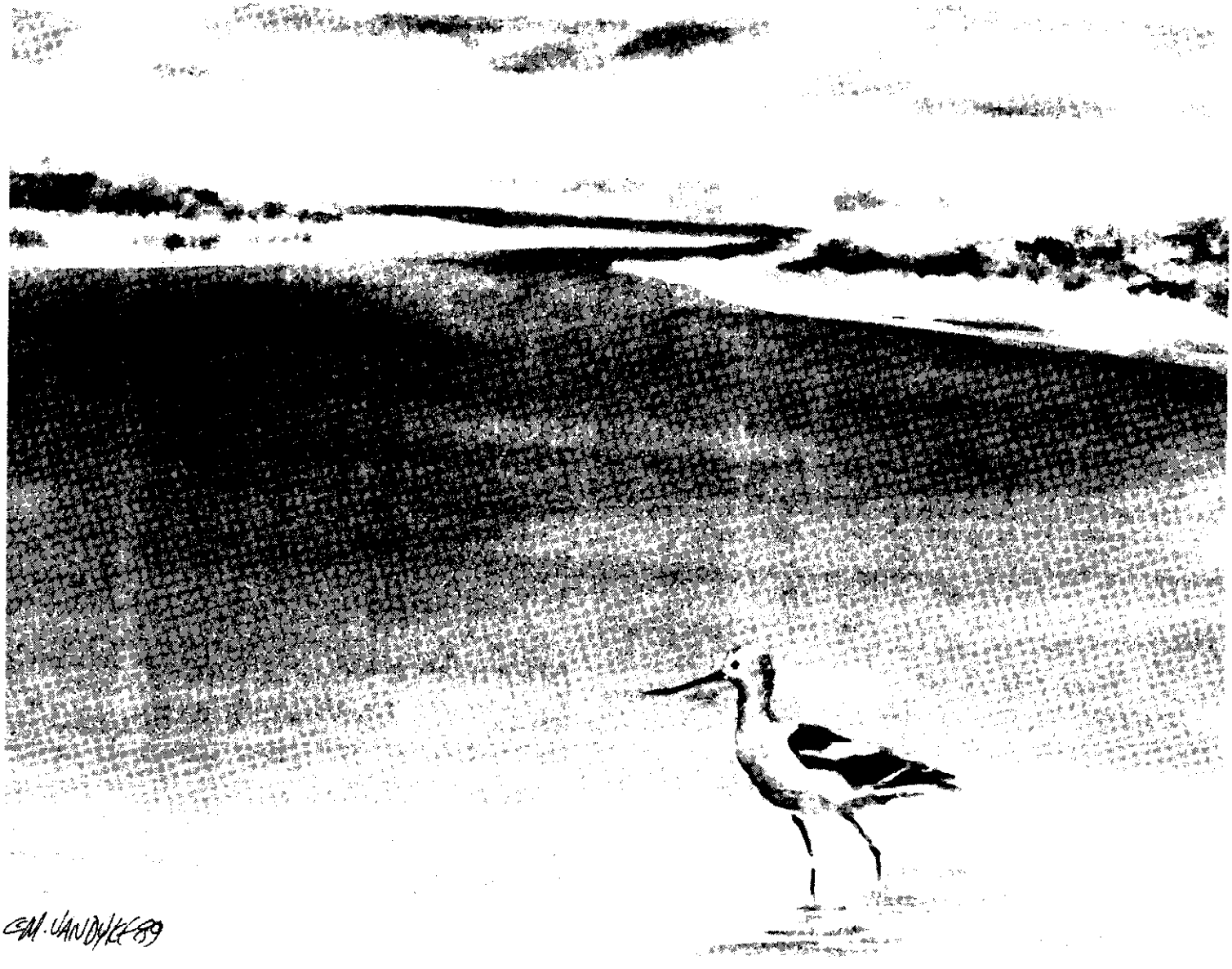
Decision Making

BLM has considered public views and concerns, present and potential uses of public lands administered by the BLM in the Warner Wetlands, long-term benefits to the public as opposed to short-term benefits, and State and local natural resource related programs. plans and policies, in the decision making process. The final decision could adopt any alternative presented in the draft plan, or a combination of the alternatives analyzed.

The proposed decision, when implemented, provides specific management guidelines for each parcel of public land administered by the BLM within the planning area, and for selected parcels of private and State land should they be acquired through purchase or exchange. This Plan Amendment will be implemented through a combination of the broad land use allocations and management directions established by this document. and through a multiple-resource activity plan for a portion of the planning area.

A public review and comment period on the activity plan will provide an additional opportunity for public involvement. Specific projects identified in the activity plan (such as wildlife habitat or livestock forage improvement projects, recreation access sites, etc.) may be subject to environmental assessment or other analytical processes as required.

CHAPTER II
PROPOSED ALTERNATIVES



Chapter II
PROPOSED ALTERNATIVES

The alternatives presented in the Plan Amendment offer a range of management opportunities within the Warner Wetlands. Alternative 1 represents continuation of current management direction. Alternatives 2, 3, and 4 present opportunities to emphasize particular resource elements. Alternative 5 addresses the nomination of a portion of the planning area as an Area of Critical Environmental Concern (ACEC).

Alternative 6, the Proposed Action, represents the resource allocation and management direction for the entire planning area, including specific directions for individual allotments and/or parcels. This alternative constitutes a synthesis of the preferred alternative prepared by the multi-resource team in the draft Plan Amendment, with the public comments received on that draft.

Under the Proposed Action in its most complex form, an allotment may have one portion being managed under directions derived from (or common to) Alternative 1, another under Alternative 3, and still another portion under Alternative 4. The three different portions and alternatives could also be jointly managed under the constraints and objectives of Alternative 5, the ACEC designation. Conversely, in its simplest form, all public land administered by the BLM in one allotment might be managed under direction found in one alternative. The determining factors in the specific selection for an allotment or parcel were the complexity of the resource issues involved, the breadth and scope of the comments received, and the manageability of the final, synthesized alternative.

The activities and uses addressed in the plan are broken into three general categories specific to this plan:

Permitted uses are actions authorized or approved through existing plans, amended plans, regulations, policies or laws over which the manager has little or no discretionary authority, or which require no additional environmental assessment or authorization. Examples would include staking of mining claims, use of existing roads, sport hunting, sightseeing, etc.

Conditional uses represent actions that may or may not be approved within the planning area, depending upon site specific environmental reviews and a determination that the action does not conflict with the management objectives in place. For example, under Alternative 2, a powerline that did not conflict with wildlife, recreation and ACEC objectives could be approved, while one that conflicted with those objectives would be rejected.

Prohibited uses represent actions which would be denied because they are inconsistent with the management goals and objectives selected for a particular allotment or parcel. This is a discretionary management authority being exercised through the planning system in lieu of a multitude of individual actions. For example, the opening of a gravel pit in an area selected for management under Alternative 4 would be a prohibited action, because that action would be directly opposed to the goals and objectives of maximizing wildlife habitat.

Alternative No. 1: No Action, Maintain Present Situation.1

Goal:

Continue to follow the existing Management Framework Plan direction for livestock management, wildlife, recreation, and other resources uses.

Objectives:

1. Maintain current livestock grazing management systems and season of use for those allotments as listed in Table V of this amendment.
2. Maintain current recreation and cultural resources opportunities within the area.
3. Maintain current wildlife habitat opportunities.

Permitted Uses:

1. Maintenance of existing sites, buildings, roads and structures, not requiring additional surface disturbance.
2. Vehicle operations under current "Open' designation.
3. Recreation use of a nature not requiring a permit or special authorization.
4. Maintenance of range improvement projects, such as fences, pipelines and wells, to facilitate livestock grazing.

Conditional Uses:

1. Development of recreation and cultural interpretive facilities.
2. Road, ditch, powerline, or pipeline rights-of-way and easement grants.
3. Recreation use requiring a permit or special authorization.
4. Scientific investigations, collections, and excavations.
5. Development of wildlife habitat protection and enhancement projects.
6. Livestock grazing in accordance with Bureau policy and within multiple use guidelines.
7. Development of range improvement projects to facilitate livestock grazing.
8. Material sales and mineral leases.
9. Grants for rights-of-way, leases and permits.

Prohibited Uses:

The following uses and actions are prohibited under the current Management Framework Plan for the Warner Lakes Resource Area. Some of these elements are prohibited because they are excluded from consideration in the current MFP.

1. Restriction of public access, except in emergency.
2. Acquisition of private or State lands for wildlife management purposes, or wetland protection.
3. Reductions in livestock grazing use levels to enhance wildlife habitat management.

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

Goal:

To place primary emphasis on improving wildlife habitat condition or enhancement while providing opportunities for other uses.

Wetland Objectives:

1. Improve approximately 14,000 acres of poor and fair habitat condition wetland at least one condition class by 1996.
2. Maintain wetland habitat in good condition on approximately 2,000 acres.
3. Determine the habitat condition on approximately 2,000 acres of unsampled wetlands, which would then be managed under objectives 1 or 2 above, depending upon current habitat condition class.

Permitted Uses

1. Maintenance of existing sites, buildings, roads and structures, not requiring additional surface disturbance.
2. Vehicle use of designated roads and trails.
3. Recreation use not requiring a permit or special authorization.

Conditional Uses:

1. Limited site development for recreation and livestock management facilities.
2. Recreation use requiring a permit or special authorization.
3. Scientific investigations, studies, collections and excavations.
4. Development of wildlife habitat protection or enhancement projects.
5. Vegetation removal or manipulation by grazing, mowing or burning to meet specific habitat requirements for certain nesting birds (i.e. cover heights of less than 8" for nesting long-billed curlews; interspersion of open water habitats with dense, emergent vegetation for nesting bitterns and rails; etc.)
6. Land acquisition, exchanges or disposal which would enhance management.

Prohibited Actions

1. Vehicle travel off existing roads and trails.
2. Land disposal, except as part of an exchange that would enhance the attainment of the goals and objectives of this alternative.
3. Surface occupancy of wetland areas.
4. Disposal of salable materials, including but not limited to sand, gravel, rock and vegetation.
5. Granting of permits for rights-of-way or easements for roads, ditches, powerlines and pipelines not specifically required to manage for the purposes identified in this alternative.
6. Grazing of existing wildlife habitat protective exclosure areas.

Upland Objectives:

1. Improve approximately 40,000 acres of fair and poor habitat condition upland one condition class by 1998.
2. Maintain upland habitat in good condition on approximately 1,000 acres.

Permitted Uses:

1. Maintenance of existing sites, buildings, roads and structures not involving new surface disturbance.
2. Vehicle use of designated roads and trails.
3. Recreation use not requiring a permit or special authorization.

Conditional Uses:

1. Development of recreation and cultural interpretive facilities.
2. Granting of permits for road, ditch, powerline, or pipeline rights-of-way or easements.
3. Recreation use requiring a permit or special authorization.
4. Scientific investigations, collections, and excavations.
5. Development of wildlife habitat protection and enhancement projects.
6. Vegetation removal or manipulation by grazing, mowing or burning to meet specific habitat requirements for certain nesting birds (i.e. cover heights of less than 8" for nesting long-billed curlews; interspersion of open water habitats with dense, emergent vegetation for nesting bitterns and rails; etc.].
7. Material sales and mineral leases.
8. Land acquisition, exchanges or disposal which would enhance management.

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

Introduction: The draft Plan Amendment made extensive use of range condition data from the Lakeview Grazing EIS in formulating and quantifying this alternative. Many substantive comments were received questioning the validity and obsolescence of this data, with which the preparers are in agreement. Thus, the alternative has been rewritten based on parameters measuring the range site productivity (i.e. plant vigor, density and community composition) rather than the more arbitrary measures of range condition. An inventory is currently underway [Ecological Site Inventory-ESI) that will provide baseline data on these elements

Goal:

To provide for increased livestock forage production, while improving the composition, vigor, and density of the present range site plant communities.

Objective:

1. Determine the range site productivity, using the ESI method, on the 69.066 acres of public land in the planning area by 1996.
2. Establish an upward or improving trend in range site productivity on all public lands in the planning area by 2008.
3. Make available for livestock grazing the current active preference of 2,752 AUM's until completion of the ESI, and then begin licensing any additional forage (including 412 AUM's of suspended preference) under the provisions and procedures of 43 CFR 4100, as quickly as is consistent with Objective 2, above.

Permitted Uses:

1. Maintenance of existing sites, buildings. roads and structures not requiring additional surface disturbance.
2. Vehicle use of designated roads and trails.
3. Recreation use not requiring a permit or special authorization.
4. Maintenance of range improvements such as fences, pipelines, and wells, to facilitate livestock grazing.

Conditional Uses:

1. Development of recreation and cultural interpretive facilities.
2. Granting of permits for road, ditch, powerline. or pipeline rights-of-way or easements.
3. Recreation use requiring a permit or special authorization.
4. Scientific investigations, collections, and excavations.
5. Development of wildlife habitat protection and enhancement projects.
6. Livestock grazing based upon a grazing system which could include allowing temporary nonrenewable and/or permanent increases as evaluated and approved through Bureau monitoring studies.
7. Development of range improvements to facilitate livestock grazing, such as seedings, fences, pipelines and wells.
8. Material sales and mineral leases.
9. Land acquisition, exchange or disposal which would enhance management.

Alternative No. 4: Maximize Wildlife Habitat; Exclude Conflicting Uses

Goal:

Improve wildlife resource values, eliminating all conflicting uses, demands, and allocations.

Objectives:

1 Protect, maintain, expand and improve wildlife habitats on 16,004 acres of BLM-administered wetlands within the planning area. Manage these wetlands as wildlife habitat, to the exclusion of any conflicting or consumptive use.

2 Protect, maintain, expand and improve wildlife habitats on 41,064 acres of BLM-administered uplands within the planning area. Manage these lands primarily for wildlife habitat, and secondarily for recreation and scientific activities not adversely affecting these wildlife habitats. Other competitiveorconsumptiveusesofthese lands would beexcluded.

Wetlands

Permitted Uses:

1. Maintenance of existing sites, buildings, roads and structures not requiring additional surface disturbance.
2. Recreation use of a nature not requiring a permit or special authorization.
3. Vehicle use of designated roads and trails only.

Conditional Uses:

1. Recreation site developments, such as boat ramps, small campsite areas, or trails, where the primary site development is on the uplands.
2. Development of wildlife habitat protection and enhancement projects.
3. Recreation use requiring a permit or special authorization.
4. Scientific investigations, studies, collections and excavations.
5. Land acquisition, exchange or disposal which would enhance management.

Prohibited Uses:

1. Domestic livestock grazing.
2. Land disposal.
3. Surface occupancy of wetland areas.
4. Disposal of salable materials, including but not limited to sand, gravel, rock and vegetation.
5. Granting of permits for rights-of-way or easements for roads, ditches, powerlines. and pipelines not specifically required to manage for the purposes identified in this alternative.

Uplands

Permitted Uses:

1. Maintenance of existing sites, buildings, roads and structures not requiring additional surface disturbance.
2. Use of designated roads and trails.
3. Recreation use not requiring a permit or special authorization.

Conditional Uses:

1. Development of recreation and cultural interpretive facilities.
2. Development of wildlife habitat protection and enhancement projects.
3. Granting of road, ditch, powerline and/or pipeline rights-of-way.
4. Scientific investigations, collections, and excavations.
5. Materials sales and mineral leases.
6. Land acquisition, exchange or disposal which would enhance management.
7. Recreation use requiring a permit or special authorization.

Prohibited Uses:

1. Domestic livestock grazing.
2. Any project, development, grant, or lease having a cummulative negative impact on the wildlife habitat of the upland or wetland areas.

Alternative No. 5: ACEC Designation

Introduction:

On February 27, 1967. the Lakeview District received a nomination from The Nature Conservancy to create an ACEC in the Warner

Lakes Potholes area, which in general usage refers to the lakes, channels, and sloughs from Flagstaff Lake north to Bluejoint Lake. Values of relevance and importance as outlined in the ACEC guidelines were found to be present.

In order to assess the merits of the nomination, an interdisciplinary team was assembled from the Lakeview District staff. Information was gathered on wildlife, cultural, geologic, and threatened and endangered species values in the nominated area. On March 16, 1967, the Warner Lakes Resource Area Manager concluded that these values had relevance and importance as prescribed in the ACEC guidelines. It was recommended that the nomination continue through the BLM planning process in the Warner Lakes Wetlands Plan Amendment.

The proposed boundary, as outlined on Map 6, differs from that of the Nature Conservancy nomination as well as from that proposed in the draft Plan Amendment. The primary difference is a southward extension of the boundary to encompass private and State lands that could be acquired between Hart and Flagstaff Lakes. This was done because these lands also met the relevance and importance criteria as prescribed in the ACEC guidelines. There are also minor variations along the eastern boundary, where the line was moved to the Lake County road to give a clearly defined, manageable border to the ACEC. As in the draft Plan Amendment. only public lands administered by the BLM lying inside the selected ACEC boundary would be managed under the goal and objective identified for this alternative. The designation carries no management constraint on intermingled private, State, or U.S. Fish and Wildlife Service (USFWS) lands.

All ACECs do not have similar sets of management actions or constraints. Instead management focuses on building a site specific approach to protect the values for which designation is made. The site specific goal, objective, and management guidelines the proposed Warner Potholes ACEC follow.

Goal: Emphasize the preservation and protection of unique wildlife, ecological, cultural and geological values identified within the ACEC area.

Objective:

Preserve ACEC values in the designated area.

Permitted Use:

1. Maintenance of existing sites, buildings, roads and structures not requiring additional surface disturbance.
2. Vehicle use of designated roads and trails,
3. Recreation use not requiring a permit or special authorization.

Conditional Uses:

1. Development of recreation and cultural interpretive facilities, i.e. boat ramps, sanitation facilities, developed campgrounds, interpretive trails, handicapped access facilities, etc. Development would be limited to protect ACEC values.
2. Recreation use requiring a permit or special authorization.
3. Scientific investigations, collections, and excavations.
4. Development of wildlife habitat protection and enhancement projects.
5. Domestic livestock grazing.
6. Land acquisition, exchanges or disposal that would enhance management.

Prohibited Uses:

1. Vehicle travel off existing roads and trails.
2. Rights-of-way grants or mineral leases that are inconsistent with ACEC goals.
3. Material sales.

Alternative No. 6: Proposed Action

The proposed action for the management of public lands administered by the BLM within the Warner Lakes Plan Amendment area identifies an interdisciplinary regimen utilizing a mixture of use allocations identified in the preceding five alternatives. Mitigation of active grazing preference lost through implementation of this alternative is offered as a part of the Proposed Action, on an AUM for AUM/active preference for active preference basis. This offered mitigation is outlined in the Mitigating Measures section of Impacts to Livestock Grazing in Chapter 4, Environmental Consequences.

Management guidance is also presented for lands that are currently being acquired or that may be acquired in the future. This guidance, however, imposes no constraint on the use of those lands until such time as they enter public (BLM) ownership. The proposed action by allotment or area is as follows (see maps 3 through 7, and table II):

Table II: Proposed Action By Allotment

		Selected Alternatives Comprising the Proposed Action				
Allotment	Area	#1 No Action	#2 Emphasis on Wildlife	#3 Emphasis on Livestock	#4 Maximize Wildlife	#5 ACEC
205	Greaser [part)	X(8%)			X(92%)	
212	Rahilly (part)	X(99%)			X(1%)	
219	Cahill		X			
222	Fisher Lake	X(93%)			X(7%)	
501	Flynn (part)	X				
502	Fitzgerald (part)	X			X	X
504	Kiely		X			
507	Laird	X(66%)			X(34%)	X
512	N. Bluejoint	X				
523	Warner Lakes			X(49%)	X(51%)	X
Unallotted	- Hart Lake				X	
Unallotted	Crump Lake				X	
Unallotted	- Mugwump Lake				X	X
Unallotted	- Anderson Lake				X	X
Unallotted	Greaser				X	X
Acquired	- Hart Lake		X(9%)		X	X
Acquired	Mugwump Lake			X(30%)	X(70%)	X

The percentage figures contained in parentheses reflect the relative proportion of the allotment to be managed under the various alternatives, except Alternative 5, which overlays several alternatives and allotments.

Allotment 205 Greaser Drift (portion of allotment)

Those portions of the allotment currently fenced and being managed for wildlife habitat would be managed under the guidance offered in Alternative 4. The remainder of the allotment within the planning area would be managed under the guidelines in Alternative 1 [See Map 3).

Allotment 212 Rahilly-Gravelly (portion)

All portions of this allotment within the planning area, except for existing exclosures at Foskett and Dace Springs, would by managed under the guidelines in Alternative 1. The Foskett and Dace Spring exclosures would remain excluded from this grazing allotment (Alternative 4).

Allotment 219 Cahill

The entire allotment would be managed under the guidelines in Alternative 2.

Allotment 222 Fisher Lake (portion)

That portion of the allotment within the planning area currently fenced and being managed for wildlife habitat would be managed under the guidelines in Alternative 4. The remaining portion of the allotment within the planning area would be managed under guidelines in Alternative 1 (see map 3).

Allotment 501 Flynn (portion)

The portion of this allotment within the planning area would be managed under guidelines in Alternative 1.

Allotment 502 Fitzgerald (portion)

That portion of the allotment within the planning area would be managed under the guidelines in Alternative 4, with additional designation as an ACEC, as addressed in Alternative 5.

Allotment 504 Kiefy

This allotment would be managed under the guidelines of Alternative 2.

Allotment 507 Laird

A portion of this allotment would be managed under Alternative 4 and 5 as a portion of an ACEC. The remaining portion of the allotment adjacent to Bluejoint Lake would be managed under the guidelines in Alternative 1. The discontinuous portion of the allotment near Mugwump and Swamp Lakes would be managed under the guidelines in Alternatives 4 and 5 (see map 4).

Allotment 512 North Bluejoint (portion)

The portion of the allotment within the wetlands planning area would be managed under the guidelines in Alternative 1.

Allotment 523 Warner Lakes

The primary or core wetland habitats within this allotment [see Map 5) would be managed under Alternative 4, and the remainder under the guidelines of Alternative 3. Additionally, the management practices developed to implement these alternatives would be constrained by the guidelines of Alternative 5, as the ACEC designation would encompass the entire allotment.

ACEC Designation

The ACEC includes all of Allotments 502 and 523, portions of Allotment 507, three unallotted parcels, and private and state lands, some of which may be acquired. This area totals 53,116 acres under all ownerships, which are separated as follows: 40,730 acres BLM administered public land, 1.966 acres other federal and state agencies, and 10.416 acres of private (approximately 7,000 acres of which are in the process of being acquired).

Within the ACEC, selected portions would be managed under the guidelines contained in three different alternatives, That managed under Alternative 4 would contain 21,460 acres of BLM administered public land, 850 acres of other federal and state, and 6,545 acres of private in the process of being acquired; for a total of 26,655 acres of all ownerships. Lands being managed under Alternative 3 would include 19,270 acres of BLM administered public land, 1,118 acres of other federal and state, and 2,215 acres of private; for a total of 22,603 acres of all ownerships. Alternative 2 provides the management direction for the proposed use on 420 acres of private land in the process of being acquired. The remaining 1,236 acres are private lands that were included inside the ACEC in order to use clearly definable boundaries (roads, allotment lines, etc.), but upon which no management constraints or acquisition offers are proposed.

Unallotted Parcels

All public land parcels administered by the BLM within the planning area currently unallotted for livestock grazing would be managed under the guidelines of Alternative 4, unless exchanged. Additionally, the 80 acre unallotted parcel northwest of Swamp Lake (see Map 2) would be managed under the constraints of Alternative 5. Parcels where BLM is a minority land owner along Crump Lake are currently being addressed as part of a proposed exchange with DSL for State lands adjacent to Swamp Lake.

Acquisition or Exchange of Lands

Land acquired within existing allotments, as outlined on Map 1, would be managed under the guidelines of the alternative or alternatives comprising the proposed action for that allotment. The proposed action for acquired lands outside of existing allotments is outlined on Map 7.

Lands in the planning area may potentially be available for exchange if:

1. The proposed exchange maintains or improves the quantity or quality of federal ownership and management of wetlands in the planning area, and
2. The selected BLM lands in the proposed exchange are not as suitable for meeting the objectives of this alternative as lands offered by the other party.

In most cases, meeting these criteria would depend upon the wetland habitat quality of the offered lands. Usually, selected BLM lands would be situated so BLM is a minority land owner within an allotment or management area.

Any lands, which are adjacent to the planning area, and which contain wetlands, may be acquired through purchase, exchange. and for donation. These lands that may be acquired would be managed under the provisions of this plan amendment.

Implementation

To implement the proposed action, several projects and/or developments are envisioned, and should be considered a part of the proposed action. All anticipated project and/or development work would be within the boundary of the ACEC. The anticipated work as presented below and outlined on Map 6 is not necessarily segregated by current land ownership, with the understanding that implementation would take place only on land under BLM ownership or jurisdiction.

Fence construction:

Approximately twenty-one miles of fencing would be built to separate the core wetland area of Allotment 523 from the remainder that would be managed under the management direction of Alternative 3. An additional five to six miles of fence may be built to divide this grazed area into more manageable

units. Another three to four miles is anticipated to implement the proposed action on lands that may be acquired.

Water facilities:

Two livestock water wells with associated powerlines, pipelines and troughs, would be developed along the western boundary of Allotment 523, and a third one south of Flagstaff Lake.

Public access:

Approximately ten miles of existing trails would be upgraded (base-rocked, drained, gravelled, etc.) to provide all-weather public access to Turpin Lake. Another two to three miles of trail along the south shore of Campbell and Stone Corral Lakes would be upgraded.

Recreation sites:

Small campgrounds would be constructed, with one at Turpin Lake and another at Campbell Lake. Associated facilities would include boat ramps, parking areas and vault toilets. Recreation facilities may be moved or redesigned in response to changes in the lands acquired (or not acquired), or variations developed through the activity plan.

Disabled access:

A nature trail, view point and interpretive site complex accessible to those with physical disabilities would be developed between Flagstaff and Swamp Lakes. Detailed project layout and design is pending the acquisition of the lands and completion of the activity plan. Alternate or additional sites may be considered.

Other developments:

A signing program would be instituted to provide interpretation of the natural and cultural resources within the ACEC. Canoe and foot trail routes would be marked and self-guiding interpretive literature prepared.

Applicable project design and implementation would be conducted under the stipulations outlined in the Lakeview Grazing EIS and Rangeland Program Summary (Standard Procedures and Design Elements for Range Improvements]. These guidelines provide for multiple resource inventory and analysis of the specific project sites, impact mitigation and/or relocation as appropriate, and minimizing surface disturbances and visual intrusions. Projects other than range improvements would also be constructed under these constraints. All affected resource values would be considered in the development of the specific project designs.

CHAPTER III
AFFECTED ENVIRONMENT

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The environment of the Warner Valley is characterized by broad fluctuations in temperature, precipitation, and water levels. Seasonal temperatures range from 100 degrees Fahrenheit to 20 degrees below zero. Annual precipitation can vary from 6 to 20 inches.

The Warner Lakes are in a closed basin system with no outflow. Within this system the lakes routinely follow a filling cycle and then go through a long period of drying through evaporation or absorption. The entire basin was a large lake during the Pleistocene Epoch, some 10,000 years ago. In the summer of 1988 lake levels were receding from historical highs which occurred in 1983-84. Long-term historic records show that all of the valley's lakes have completely dried at least three times since the 1860's.

VEGETAL COMMUNITIES

The vegetal communities of Warner Valley were investigated under a National Science Foundation Grant (Gilman, et al, 1978) to Oregon State University, and a more detailed investigation specific to the public lands in Warner Valley was conducted by Bureau personnel (Devaurs, et al, 1987). Fifteen major plant communities or associations were identified, six on upland sites and nine in wetland areas. Detailed information on the composition, location, and associated soils for these communities can be found in Appendix 1; scientific names for plants mentioned can be found in Appendix 2.

Upland Associations

The following plant communities are found on upland sites throughout the planning area, often highly intermixed with each other and with the wetland communities. Excepting the Alkali saltgrass community, all have an overall shrub aspect with a herbaceous understory of varying composition and density. Many of the community boundaries are presently in a state of flux in response to the record high water levels of 1983-84. For example, many stands of black greasewood were killed by drowning in 1984 and 1985. The present community is an expression of the original, water tolerant understory. Greasewood seedlings are becoming established again, and should dominate the site aspect once more in five to ten years.

Big sagebrush-Black greasewood

Black greasewood-Shadscale saltbrush/Alkali saltgrass-Basin wildrye

Black greasewood-Shadscale saltbrush-Big sagebrush/Alkali saltgrass

Black greasewood/Alkali saltgrass

Black greasewood/Alkali saltgrass-Nuttall alkaligrass-Creeping wildrye

Alkali saltgrass

Wetland Associations

The following group of plant communities forms a highly complex, often intergrading, mosaic on the permanently moist to saturated soils at the edges of the sloughs, channels, ponds and marshes. Many of the environmental factors and micro-habitat determinants for specific community dominance on a given site have not been determined.

The wetland communities have demonstrated the ability, in a natural state, to migrate remarkable distances annually in response to fluctuating water levels. This contributes to the nearly unmappable complexity of the plant associations. For example, last year's water edge community may be several feet above or below this year's waterline and, as a result, unadaptable community components are partially replaced.

Adding to this complexity is the common occurrence of a rapid drop in water levels over a one or two year period, as occurred in 1987 and 1988. When this happens, the moist or saturated soil zone recedes towards the center of the lake or slough by as much as two hundred feet in a single growing season. The wetland communities are usually unable to make a migration of this magnitude. The band of wetland species (bulrushes, rushes, sedges, etc.) that marks last year's waterline is then separated from the new wet soil zone by dry mudflats or profuse stands of the more aggressive upland species (bottlebrush squirreltail, alkaligrass, meadow barley, etc.).

Natural fluctuations in water also contribute to the recycling of vegetal material. Wetland plant communities are continuously adjusting to the movement of water. As a result, stands of wetland vegetation where water levels are constantly changing rarely become decadent or highly matted.

Alkali saltgrass Baltic rush

Alkali saltgrass Borax weed - Nuttall's alkaligrass

Creeping wildrye - Alkali saltgrass

Creeping wildrye - Baltic rush - Seaside arrowgrass

Baltic rush - Common silverweed - Creeping spike-rush

Baltic rush - Nevada bluegrass

Creeping spike-rush - Narrowleaf water plantain

Creeping spike-rush - Baltic rush - Sedge

In addition to the above listed communities, scattered throughout the study area on suitable habitats, several small (0.1 to 0.5 acre) single-species emergent communities were located. These include Hardstem bulrush, Burreed, Alkali bulrush, Narrow-leaf cattail and Broadleaf cattail. Most appear to be in response to small areas of a more stable water regime, as they are usually found along steeply shelving banks where the annual fluctuations in the saturated soil zone are the least.

Systematic sampling of the aquatic plant communities was not attempted: the following species were identified: Pondweeds (Potamogeton natans and pectinatus), Duckweeds (Lemna and Spirodella) Waterweed (Elodea sp.) and Wigeongrass (Ruppia sp.)

Ecological Relationships

The plant community present on a given site at any point in time is a direct reflection of all environmental factors affecting that site. Within the planning area, the principal factors are: soil productivity, past soil disturbances [fire, farming, draining, etc.), and the original plant community upon which these factors operated. Little information is available on this last factor.

Within the upland communities, the data analyzed shows a low percentage of native forbs and grasses present and elevated percentages of invader and exotic species, This is inferred from generally available data sources (Soil Conservation Service Handbooks, plant ecology texts, comparison areas, etc.).

District trend studies, inventories and range surveys indicate that the species composition of the plant communities has changed little in the past 20 to 30 years. Locations with similar soils, precipitation, and vegetation within the planning area have been excluded from livestock grazing and a progression towards the expected site potential climax community has been observed. For example, six years of livestock exclusion has increased the density (or percent groundcover) of alkali saltgrass and basin wildrye in the Greaser Exclosures. This leads to the conclusion that thecommunities being grazed are a stable, grazing induceddisclimax

A static disclimax is not prevalent in the wetland associated communities. These communities evolved under a set of environmental parameters (long term soil saturation, little root aeration, only occasional moisture stress, etc.) that severely limit the number and types of plants able to invade when the community is under stress. The usual response to stress is an overall decrease in community size. When a community can no longer maintain itself on a site because of some limiting factor, it minimizes the area it occupies, retreating to the most favorable portion of its habitat where survival is most likely. The exception is when the limiting factor is a rapidly dropping water level. In this case, replacement of the wetland community is possible because the site becomes, at least temporarily, upland in its soil moisture regime.

Vehicle use or the punching of soils by livestock has also affected vegetation composition at some localities by creating small hummocks or mounds on the surface of wet soils. These raised pockets are drier and more upland in character. Moisture stress placed on the wetland species can combine with the prolific seed production and broad site adaptability of annuals to allow invading species to colonize perennial plant communities. Although the causes were different, annual cheatgrass brome has similarly displaced native perennial grasses on upland sites when the original community was stressed.

WILDLIFE HABITATS

Introduction

The basic mapping of wetland habitats was done by the US Fish and Wildlife Service's National Wetlands Inventory Team, using the procedures outlined by Cowardin. et al. (1979). In 1987, an inventory of the habitat condition on public lands in Warner Valley was conducted (Devaurs, et al, op cit; Devaurs and Grannis, 1987). The focus of the inventory was the nesting habitat condition of the wetland plant communities and those upland communities immediately adjacent to the wetlands. To do this, techniques and procedures currently in use by the U.S. Fish and Wildlife Service at Malheur National Wildlife Refuge were adopted.

This inventory method uses the vertical structure and density of the vegetation as the prime indicators of habitat condition. As this method measures only the ability of the vegetal community to conceal nesting waterfowl, it can be used through a broad range of plant communities of differing ecological or seral stages (i.e. cover density irrespective of plant community composition). Because of this, an inventory of habitat condition taken during any particular year is a reliable estimator of habitat condition on subsequent years where the total vegetal production and cover removal is approximately equal to that of the inventory year.

The use of waterfowl nesting habitat condition as an indicator of overall habitat condition was based on several factors. First of all, a large body of published wildlife management literature documenting decades of field experience with various waterfowl habitat inventory and classification systems is available for comparison and analysis of the Warner Wetlands inventory data. Secondly, this extensive body of experience does not exist for other wildlife species using the wetland habitats.

Because waterfowl nesting use is a major and integral component of the total wetland habitat and ecosystem functioning, a measurement of its condition gives a reliable indicator of the condition of the total habitat. Analysis using key species or habitat components is a commonly accepted method of assessing complex biological systems.

Presented below, and summarized in Tables III and IV, are the results of the 1987 inventory. Current habitat condition should be viewed as a product of both environmental factors and present land management practices.

Allotment 205 Greaser Drift (Portion of allotment)

The portion of this allotment in the planning area contains 2,224 acres of wetlands and 1,060 acres of uplands, being managed under several different systems. The Twenty-Mile Slough Exclosure (1 ,153 ac. wetlands, 647 ac. uplands) is a "Restricted Use" area, meaning that any authorized livestock use made there would be for habitat enhancement. The Greaser Reservoir/Lake area (789 ac. wetlands, 411 ac. uplands) is in the process of going under similar management, pending completion of mitigation work. An additional 30 acres of wetlands at the north end of the allotment is under total exclusion of livestock, and the remainder is grazed annually.

Based on photo points and monitoring data, the habitat condition in this allotment was predominantly poor prior to 1980, when habitat enhancement work began. Current (1987) habitat conditions for the wetlands are: 40% good, 33% fair, and 27% poor; and for the uplands are: 29% good, 37% fair, and 34% poor.

Allotment 212 Rahilly-Gravelly (portion)

Only that portion of the allotment containing Coleman Lake and associated wetlands is being considered here. Coleman Lake is an alkaline, ephemeral playa of negligible potential habitat value. The associated wetlands of Foskett and Dace Springs are being managed through livestock exclusion as essential habitat for the federally listed threatened species, the Foskett Springs Speckled Dace. Based on photographs and field examinations, these wetlands were in poor to low-fair habitat condition prior to 1980. The 1987 inventory rated habitat condition as being 67% good, 24% fair, and 9% poor. Upland habitat conditions were not inventoried.

Allotment 219 Cahill

This small, custodial management allotment contains some very productive wetlands. No data is available prior to the 1987 inventory which rated wetland habitat conditions as being 57% good, 14% fair, and 29% poor. The adjacent upland habitat condition was measured at 43% good, 43% fair, and 14% poor.

Allotment 222 Fisher Lake (Portion)

Based on photo points and monitoring studies, both the wetland and upland habitat conditions in the allotment were poor prior to 1981, when an exclosure was built protecting approximately two thirds of the wetland habitat. The 1987 inventory rated habitat conditions in the wetlands at 42% good, 29% fair, and 29% poor. All upland habitats were found to be in fair condition.

Allotment 501 Flynn (portion)

Only a small portion of this allotment, bordering the Narrows between Crump and Hart Lakes, lies inside the planning area. It contains a thin band of highly productive wetlands. No data on habitat condition prior to the 1987 inventory is available. This inventory rated wetland habitat condition at 100% good, and upland habitat condition at 17% good, 50% fair, and 33% poor.

Allotment 502 Fitzgerald (portion)

The portion of this allotment being considered is a small pasture on the south shore of Upper Campbell Lake, containing 202 acres of very productive emergent wetlands. Current habitat ratings are 100% good condition. A physical barrier to livestock created by high water levels existed between 1983 and the 1987 inventory

Allotment 504 Kiely

This small, custodial management allotment contains a 10 acre parcel of wetlands on the shore of Hart Lake and is immediately adjacent to a 35 acre parcel of unallotted wetlands. No data on habitat condition is available except through the 1987 inventory, which rated the habitat condition on both wetlands and uplands at 100% poor.

Allotment 507 Laird

This fragmented allotment contains wetlands associated with Bluejoint, Mugwump and Swamp Lakes. The only data available on habitat condition is the 1967 inventory, which rated wetland habitat condition at 10% good, 20% fair, and 70% poor; and upland habitat condition at 20% good, 40% fair, and 40% poor.

Table III: Public Land Wetland Types in Warner Valley by Allotment

Allotment No.	Allotment Name	Acres of Wetland Type *				Total Wetlands
		Lacustrine	Emergent	Scrub/Shrub	Other	
205	Greaser [part)	1,119	1,077	0	28	2,224
212	Rahilly (part)	1,575	20	0	0	1,595
219	Cahill	0	249	8	0	257
222	Fisher Lake [part)	60	169	34	3	266
501	Flynn (part)	0	18	0	0	18
502	Fitzgerald (part)	0	202	0	0	202
504	Kiely	0	8	0	2	10
507	Laird	0	636	0	0	638
512	N. Bluejoint [part]	0	289	8	2	299
523	Warner Lakes	3,515	7,905	18	600	12,038
Unallotted	- Hart Lake	8	27	0	0	35
Unallotted	- Crump Lake	182	110	0	0	292
Unallotted	Mugwump Lake	0	44	0	0	44
Unallotted	- Anderson Lake	0	27	0	0	27
Unallotted	- Greaser	0	59	0	0	59
		6,459	10,842	68	635	18,004

* From National Wetland Inventory

Table IV: Public Land Wetland Habitat Condition in Warner Valley by Allotment

Allotment No.	Allotment Name	Acres of Condition Class				Total Acres
		Poor	Fair	Good	Unsampled	
205	Greaser (part)	597	742	885	0	2,224
212	Rahilly (part)	11	29	81	1,474 *	1,595
219	Cahill	74	37	146	0	257
222	Fisher Lake (part)	77	77	112	0	266
501	Flynn (pat)	0	0	18	0	18
502	Fitzgerald (part)	0	0	202	0	202
504	Kiely	10	0	0	0	10
507	Laird	297	65	42	214	638
512	N. Bluejoint (part)	239	60	0	0	299
523	Warner Lakes	9,484	1,778	593	183	12,036
Unallotted	- Hart Lake	10	15	10	0	35
Unallotted	- Crump Lake	5	20	85	182	292
Unallotted	Mugwump Lake	7	9	5	23	44
Unallotted	- Anderson Lake	15	0	0	12	27
Unallotted	Greaser	59	0	0	0	59
		10,685	2,852	2,179	2,088	18,004

* Ephemeral alkali playa of Coleman Lake.

Allotment 512 North Bluejoint (Portion)

This allotment is located at the northern, or lower end of the Warner basin, and contains wetlands of marginal productive potential. Major water level fluctuations, even during wet cycle years, appear more limiting to productivity than current land use practices. Current wetland habitat conditions are: 0% good, 20% fair, and 80% poor. No data is available on upland habitat conditions.

Allotment 523 Warner Lakes

This allotment contains the largest single block (12,036 acres) of BLM-administered public wetlands in Oregon. Data prior to 1987 is too limited for analysis of habitat condition. The 1987 inventory rates the wetland habitat condition at 5% good, 15% fair, and 80% poor; and upland habitat condition at 28% good, 21% fair, and 51% poor. Areas rating in good and high fair condition have an average waterfowl nesting density of 4.1 nests/mile of shoreline. The remaining fair condition habitat has an average density of 1.5 nests/mile of shoreline. No successful nests were found along shorelines in poor habitat condition. In addition to their value as production habitat, the aquatic beds of pondweeds and wigeongrass in the larger lakes and ponds provide feeding grounds for tens of thousands of migrating waterfowl and water birds.

Unallotted - Hart Lake, Crump Lake, Mugwump and Swamp Lakes, Greaser Reservoir

The ten isolated parcels comprising the unallotted public lands contain, in total, 457 acres of wetlands and 274 acres of associated uplands. While unallotted for livestock grazing, some of these parcels are being grazed. The only data available on habitat condition is the 1987 inventory, which rated wetland habitat condition at 21% good, 6% fair, 30% poor, and 41% unsampled (underwater). The upland habitat condition was measured at 10% good, 30% fair, and 60% poor.

WILDLIFE POPULATIONS

The wetland/upland mosaic of habitats within the planning area has created a complex interplay of resident, breeding and migratory wildlife populations. The planning documents for the Warner Lakes Resource Area list 320 wildlife species as being known or suspected to occur within the area. Of these, 245 species are known or suspected to occur within the Warner Wetlands Plan Amendment area. This is presented as an indicator of the relative importance of Warner Valley when compared to the entire resource ares, as more than three-quarters of the wildlife species possibly found in the resource area are likely to be seen in Warner Valley. A listing of species confirmed in Warner Valley can be found in Appendix 4.

Resident Populations

The resident mammalian population is a rather typical Great Basin association of species. Coyotes, badgers and bobcats fill the top-carnivore niche, followed by red fox, raccoon, skunks and weasels. Various rabbits, hares, ground squirrels, mice, voles and kangaroo rats provide the primary prey base. Beavers and muskrats can be found in most of the aquatic habitats, with the latter being far more common. Pronghorn antelope and bighorn sheep make occasional use of the area. Both resident and migrant mule deer also use the area.

The resident avifauna is associated primarily with upland habitats, and varies somewhat with the severity of winter weather. Quail, chukars, pheasants, flickers, robins, mountain bluebirds, Townsend's solitaires, golden eagles and prairie falcons are commonly seen yearround. During milder winters, mourning doves, American kestrels and several species of blackbirds and sparrows remain.

The aquatic habitats within the planning area support a resident fish population comprised of ten species. Native redband trout and introduced rainbow trout reside in Hart and Crump Lakes, as well as in the perennial tributaries to these lakes. Tui chub, speckled dace and Warner Sucker are native species that can be found throughout the valley. Large mouth bass, white and black crappie, and brown bullhead are exotic species widely distributed in the lakes, channels and ponds. The springs at Coleman Lake contain the Foskett Spring speckled dace.

Migratory Populations

Migrating flocks of waterfowl. shorebirds and other water-related species, numbering in the tens of thousands, comprise the most visible element of the migratory population. Nearly any species of this type occurring in the western U.S. has been observed at one time or another in the planning area. Actual population numbers using the planning area in any year vary with total populations along the Pacific Flyway, available habitat, and other factors.

Less noticeable are smaller flocks of various sparrows, warblers and flycatchers passing through to montane habitats on nearby National Forest and Wildlife Refuge lands in the spring. The onset of winter brings these flocks back to the valley floor for a short period just prior to their southward migration to wintering areas.

Breeding Populations

Beyond those species identified as resident, a large number of species migrate into Warner Valley to use the available breeding habitats Approximately one hundred bird species are known to breed in the planning area: waterfowl-14 species; shorebirds and gulls-15 species; grebes, herons, cranes, etc.-18 species; raptors-9 species; passerines-44 species.

ENDANGERED,THREATENED AND CANDIDATE SPECIES

Peregrine Falcon (Endangered)

Peregrine falcons are occasionally seen in Warner Valley during the spring and fall waterfowl migrations [district files). Inventories were conducted to locate any nesting birds in the valley, and to assess the potential for reintroduction (Boyce and White, 1962). No active eyries have been located to date.

Bald Eagle (Threatened)

A variable population of 5 to 20 adult and juvenile bald eagles has been observed in Warner Valley during the fall and winter. Their primary diet appears to be crippled waterfowl, roadside carrion, and dead livestock. While no bald eagles are known to have nested in the planning area, three nest sites have been documented (district files] in the valley: a cliff nest on Fish Creek Rim, another cliff nest at the mouth of Deep Creek Canyon, and a third atop a beaver lodge in the Honey Creek marshes.

Warner Sucker (Threatened)

This species, endemic to Warner Valley, has been found at various times (Gilman, op cit; Coombs and Bond, 1979 & 1980; Swenson, 1978; district files) in most aquatic habitats of the planning area except Coleman Valley. Two miles of channel immediately north of the Halt Lake bar have been designated as critical habitat.

Foskett Springs Speckled Dace (Threatened)

This species is known only from Foskett and Dace Springs on the shore of Coleman Lake. Coordinated with the U.S. Fish and Wildlife Service under provisions of the Endangered Species Act, these habitats are currently protected. The population appears to be stable.

Candidate Species

This amendment also considers those species identified by the U.S. Fish and Wildlife Service as candidates for listing [Federal Register Vol. 50, No. 161).
Current (9116166 BLM Manual 6640) policy for candidate species is to ensure actions authorized, funded, or carried out by the Bureau do not contribute to the need to list any of these species as threatened or endangered.

White-faced Ibis
A breeding population (15-20) of this species exists on private lands within the planning area. Individuals and small groups of ibis have been reported feeding at several locations on public land.

Western Snowy Plover
Migratory use throughout Warner Valley has been observed, with a small (3-5 pair) breeding population intermittently using Coleman Lake.

Long-billed Curlew
Small breeding populations exist at various locations throughout Warner Valley. Eight to twelve breeding pairs are known to use the lands currently being acquired north of Hart Lake.

LIVESTOCK GRAZING

The planning area encompasses all or part of ten grazing allotments (see Map 2). The allotments are all cow/calf operations with cattle supported on private, State or other federal lands when not on Bureau-administered rangelands. The present livestock grazing for each of these allotments is presented below, and summarized in Tables V and VI.

Allotment 205 Greaser Drift (Portion)

This allotment is used by the MC Ranch as a trailing corridor in the spring to move 4,000 to 5,000 head of cattle from its base property near Adel, Oregon, to summer rangelands to the east. In the fall and early winter the allotment is used as a gathering area for cattle coming back from the higher summer ranges. The active preference within the planning area portion of the allotment is 73 AUM's of the 306 AUM total for the allotment. MC Ranch's total active preference is 25,549 AUM's and this use is made on 550,020 acres of public land located in three grazing allotments. The portion of this within the planning area amounts to 3,264 acres of public land.

Allotment 212 Rahilly-Gravelly (Portion)

The portion of the allotment within the planning area is used by Cahill Ranches as a spring turnout pasture for approximately 375 head of cattle, which are later moved to nearby higher summer ranges. The active preference within the planning area portion of the allotment is 87 AUM's of the 1.761 AUM total for the allotment. Cahill Ranches' total active preference is 4,454 AUM's and this use is made on 66,375 acres of public land located in five grazing allotments. The portion of this allotment within the planning area totals 4,420 acres.

Allotment 219 Cahill

This is a small, Federal Range Fenced (FRF) allotment used by Cahill Ranches. As described in the Lakeview Grazing EIS, FRF "... consists of small tracts of public land fenced into pastures usually with large amounts of private land. These tracts are usually licensed for the grazing capacity of the public lands only. Livestock numbers, kind of animals and period of use are most often not restricted. However, actual grazing use is usually after the growing season . .." Use in this allotment amounts to 260 AUM's of Cahill Ranches' 4,454 AUM total active preference, and involves 470 of the 66,375 acres of public land on which this preference use is made.

Table V: Current Livestock Grazing Management Systems by Allotment

Allotment No.	Allotment Name	Operator	Grazing System	Authorized Use Period	Usual Number of Livestock
205	Greaser	MC Ranch	Deferred	9/1-11/15	600
212	Rahilly-Gravelly	Cahill Ranches	Rest-Rotation	3/15-9/15	375
219	Cahill	Cahill Ranches	FRF	Yearlong	FRF
222	Fisher Lake	W.A. Hickey	Winter Use	11/15-3/15	250
501	Flynn	Flynn Bros.	FRF	Yearlong	FRF
502	Fitzgerald	Fitzgerald Bros.	FRF	Yearlong	FRF
504	Kiely	Kiely Bros.	FRF	Yearlong	FRF
507	Laird	W.C. Laird	FRF	Yearlong	FRF
512	N. Bluejoint	W.C. Laird	Winter Use	10/1-12/31	160
523	Warner Lakes	Kiely Bros.	Spring/Summer	4/1-10-15	340
		W.C. Laird	Spring/Summer	4/1-10-15	200
		McKee Ranch	Spring/Summer	4/1-10-15	190
		M. Anderson	Spring/Summer	4/1-10-15	70

Table VI: Planning **Area and Total Active Preference, by Operator and Allotment**

Allotment No.	Allotment Name	Operator	Active Preference in AUMs: Planning Area	Allotment Total	District Total	Percent of Total Active Preference In Planning Area
205	Greaser	MC Ranch	73	306	25,549	0.3
212	Rahilly-Gravelly	Cahill Ranches	87	1,781	4,454	2.0
219	Cahill	Cahill Ranches	280	280	4,454	6.3
222	Fisher Lake	W.A. Hickey	366	529	1,370	26.8
501	Flynn	Flynn Bros.	6	120	4,709	0.1
502	Fitzgerald	Fitzgerald Bros.	17	348	7,709	0.2
504	Kiely	Kiely Bros.	23	23	3,378	0.7
507	Laird	W.C. Laird	184	184	1,114	14.7
512	N. Bluejoint	WC. Laird	80	289	1,114	7.2
523	Warner Lakes	Kiely Bros.	861	661	3,376	19.6
		W.C. Laird	328	326	1,114	29.3
		McKee Ranch	304	304	314	96.8
		M. Anderson	365	365	385	100.0

Allotment 222 Fisher Lake

This allotment is used by William A. Hickey under a winter use grazing system for approximately 250 cattle. The active preference within the planning area portion of the allotment is 366 AUM's of the 529 AUM total for the allotment. William A. Hickey's total active preference is 1,376 AUM's and this use is made on 19,368 acres of public land located in four allotments. The portion of this within the planning area amounts to 1,430 **acres.**

Allotment 501 Flynn (Portion)

This is another FRF allotment and is used by the Flynn Brothers. The active preference within the planning area portion of the allotment is 6 AUM's of the 120 AUM total for the allotment. Flynn Brothers total active preference is 4,709 AUM's and this use is made on 159,020 acres of public land located in four grazing allotments. The portion of this within the planning area amounts to 195 acres.

Allotment 502 Fitzgerald (Portion)

This is an FRF allotment used by the Fitzgerald Brothers. The active preference within the planning area portion of the allotment is 17 AUM's of the 346 AUM total for the allotment. Fitzgerald Brothers total active preference is 7,709 AUM's and this use is made on 280,266 acres of public land located in four grazing allotments. The portion of this within the planning area amounts to 195 acres.

Allotment 504 Kiely

This is an FRF allotment used by the Kiely Brothers and lies entirely within the planning area. Current active preference is 23 AUM's. The Kiely Brothers total active preference is 3,378 AUM's and this use is made on 159,082 acres of public land located in four grazing allotments. This allotment accounts for 390 acres of that total.

Allotment 507 Laird

This is a fragmented FRF allotment, with parcels associated with Bluejoint, Mugwump and Swamp Lakes. It is licensed for grazing to Warren C. Laird, with an active preference of 164 AUM's. Laird's total active preference is 1 ,114 AUM's and this use is made on 121,018 acres of public land in four grazing allotments. This allotment accounts for 2,030 acres of that total.

Allotment 512 North Bluejoint

This allotment is used by Warren C. Laird with approximately 180 canle in the spring and summer. The active preference within the planning area portion of the allotment is 80 AUM's of the 289 AUM total for the allotment. Laird's total preference and area of use is described above (Allotment 507).

Allotment 523 Warner Lakes

This allotment, which falls entirely within the planning area, is currently being used by four separate livestock operators. The Kiely Brothers have an active preference of 881 AUM's in this allotment, providing summer use for approximately 340 canle. The remainder of Kiely's preference and areas of use is described above (Allotment 504). Warren C. Laird has an active preference here of 326 AUM's, being used by a maximum of 200 cattle in the summer and early fall. The remainder of this operation is described above (Allotment 507). McKee Ranch has an active preference of 304 AUM's in this allotment, using it in late spring with approximately 190 cattle. McKee's only other active preference is for 10 AUM's in a small (100 acre) FRF allotment outside the planning area. The final operator is Martin Anderson and Son, whose active preference of 385 AUM's is used with approximately 70 cattle in the late spring and summer. This is Anderson's only preference on public lands. The total active preference recognized in this allotment is 1,856 AUM's, used by approximately 800 canle at various times during the spring, summer, and early fall.

Unalloted-Crump Lake, Mugwump, and Swamp Lakes, and Greaser Reservoir

The ten unallotted parcels contain a total of 731 acres of public land, upon which there currently is no authorized grazing use. These parcels are intermingled with private and State lease lands, some separated by fences and others not. There is evidence that some level of livestock use is being made on each parcel.

CULTURAL RESOURCES

The Warner Valley area has been the focus of archeological interest and investigations for many years. One of the earliest efforts was made by Luther Cressman of the University of Oregon in 1934. He searched the area for rock art and "early man" sites as part of his overall study of Oregon archeology (Cressman, 1937 and 1942). Cressman was the first archeologist to propose that the desert West had been occupied for at least 7,500 years. The purpose of his work in the region was to find sites to support his theory; in Warner Valley he did find Plush Cave, which contained much evidence of early inhabitants.

Following this early work, Ph.D. dissertations were completed by Weide (1968) and Fagan (1974) on the area's prehistory. Both proposed that there were distinct land use and settlement patterns which changed through the centuries in response to changing moisture regimes and lake levels in the valley.

In the mid-1970s federal agencies, such as BLM, began systematic site inventories and evaluations within the areas of proposed projects that would disturb the surface. There have been more than 100 such surveys in and around the planning area in Warner Valley.

These studies have shown that Warner Valley has been occupied by Native Americans for at least the last 10,000 years. The Early Period of occupation, when sites were centered around lakes and marshes on the valley floor, extended from about 10,000 to 7,500 years ago. The people of the Archaic Period, from 7,500 to 1,500 years ago, ranged more widely using the surrounding lands at higher elevations as well as the valley floor.

A third period is defined between 1,500 and 500 years ago by the changes brought by the introduction of the bow and arrow, although many of the traits from the Early Period still persisted. From 500 years ago to historic contact the valley was occupied by the Northern Paiute Indians. Some use by the Paiutes continues today for hunting, plant gathering, visiting graves, and religious activities.

Recently BLM has supported field work by the University of Nevada (Reno; UNR). During the summers of 1987 and 1988, UNR conducted investigations into the prehistory of the proposed ACEC area. They completed survey work to identify new sites, describe the condition, content, and density of the surface sites, and test the subsurface content of sites. The work located, described, or indicated an impressive number and variety of artifacts.

Warner Valley sites provided charcoal for radiocarbon dating that spans at least 10,000 years of occupation. Also revealed was the heavy reliance of prehistoric people on the aquatic resources of the valley, the most interesting being the use of mussels. Sites have been located in a wide variety of vegetation communities and environmental zones.

Site density in the wetlands ranges up to nearly 35 sites per square mile. Site size is variable ranging from about 1 acre to more than 1/2 square mile in size. Artifact density also varies from less than one to more than 100 per square foot. The majority of the artifacts are flakes of obsidian glass remaining from the manufacture and use of stone tools. Site types include rock art. lithic scatters, lithic quarries, temporary campsites, semi-permanent housepit villages, stone house rings, stone walls, rock cairns, middens, plant gathering and processing sites, hunting blinds, and burials.

RECREATION

The Warner Valley has long been a focal point for diverse recreational opportunities, including hunting, fishing, sightseeing, bird watching, boating and camping. The mixed private, State and federal land ownership, coupled with poorly defined property boundaries, makes it difficult to quantify public land use in some parts of the planning area. However, nearly all recreation visitors use public land, at least in part.

The recreational setting is characterized by high scenic quality. The planning area is bordered by the sheer fault scarps of Hart Mountain and Fish Creek Rim and further enhanced by the lakes, ponds, channels and sloughs. The variations between the wetland and upland vegetation also add texture and color to the setting. Visual Resource Management (VRM--Class II) guidelines for the area indicate contrasts caused by management activities may be visible in the characteristic landscape, but must not attract attention.

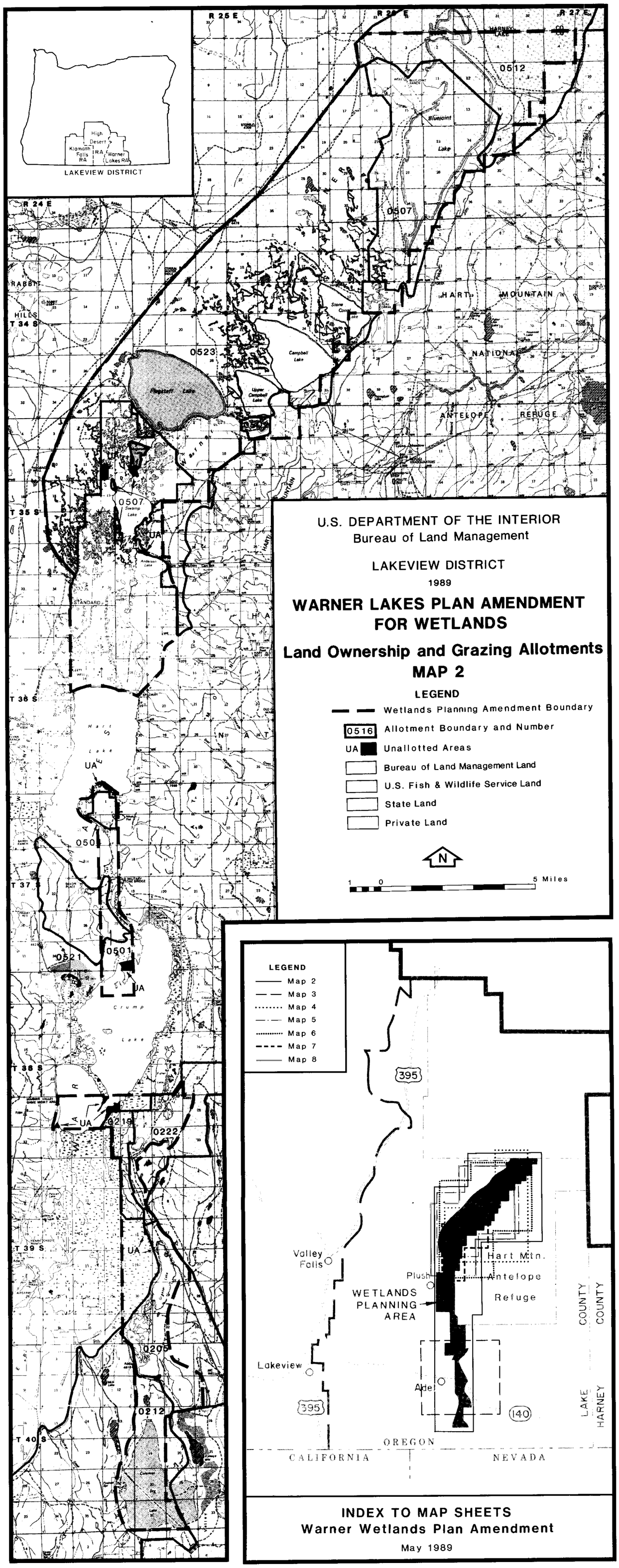
The Warner Wetlands receive visitation both from enroute travelers and destination visitors. The heart of the area is viewed by the 29,000 visitors enroute to Hart Mountain National Antelope Refuge each year. These visitors will often stop at various points and engage in day use activities like picnicking or sightseeing before proceeding to Hart Mountain.

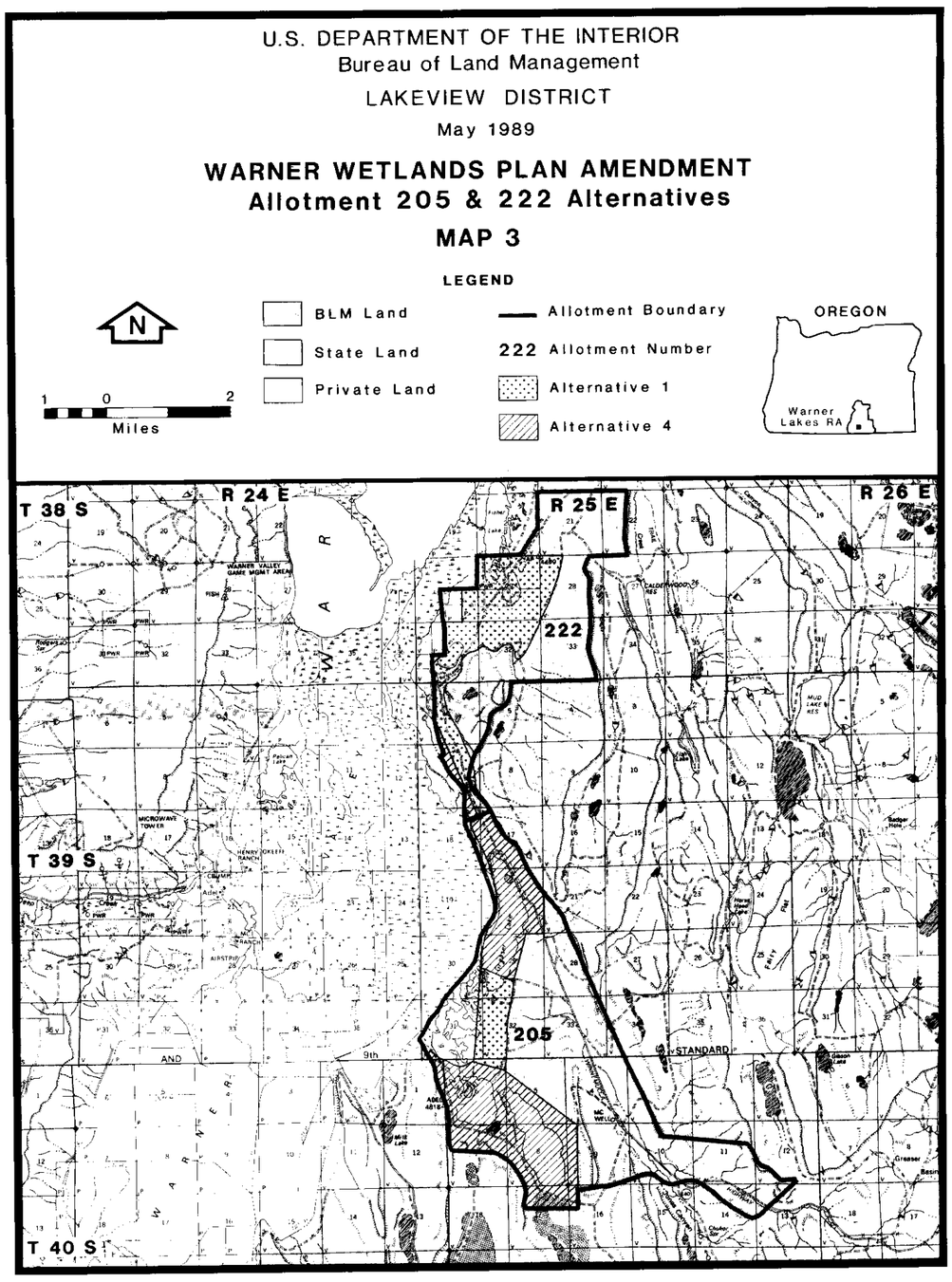
Visitors who plan to come to the Warner Wetlands for specific activities generally center their visits around fishing, hunting, and sightseeing. Fishing for crappie is the most concentrated use with as many as 300 people per day along roughly four miles of lake shore, based on 1987 data for the north shores of Anderson Lake. Use occurs in the spring and summer months and has been made mainly by Lake County residents. However, interviews disclosed that users were also from Idaho, central California, the Portland metropolitan area, and Willamette Valley. Annual fishing use varies with lake levels which affect success, but has been estimated to average between 6,000 and 7,000 user days (one visitor for one day).

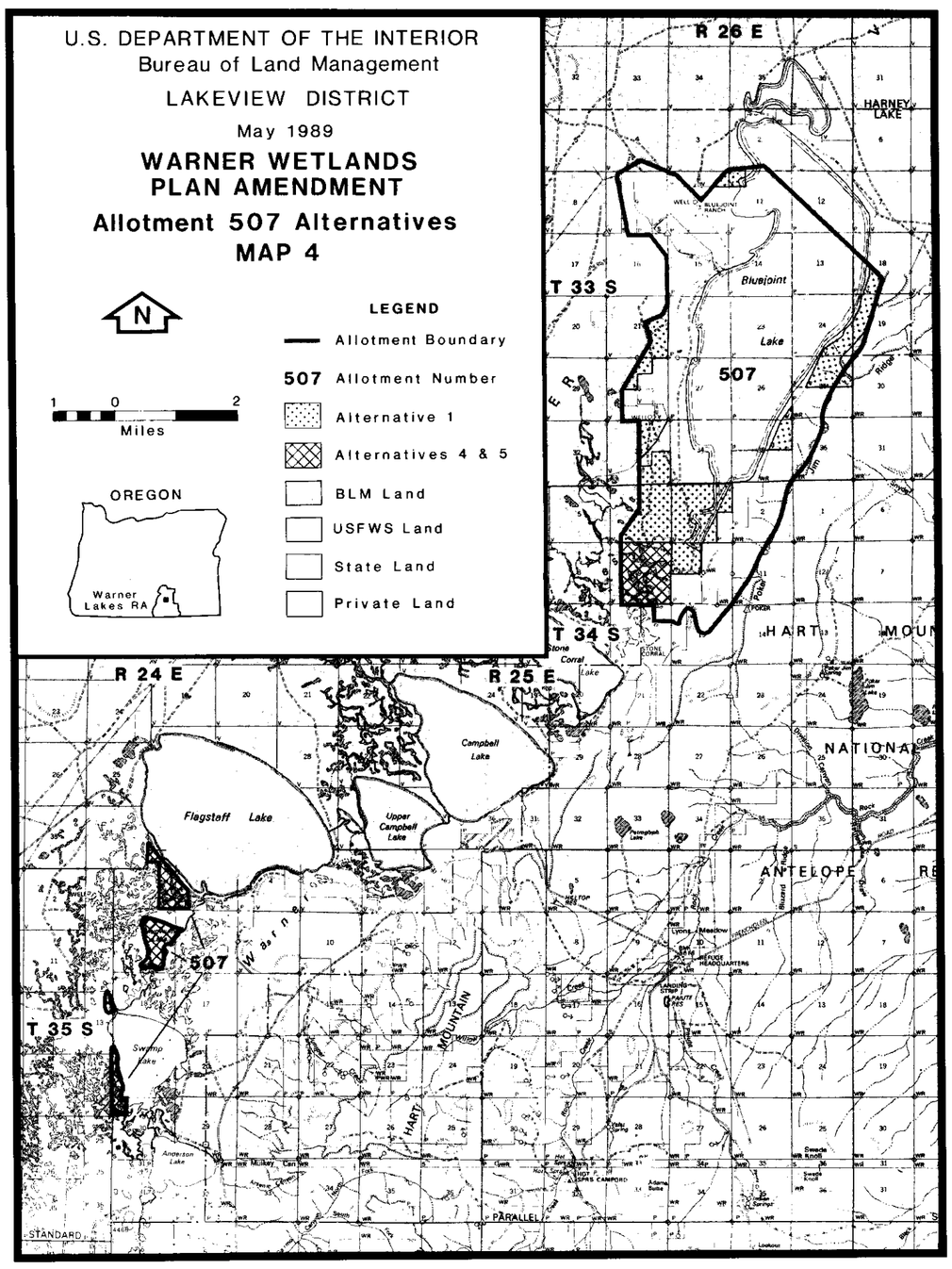
Limited hunter counts made during the 1986, 1987 and 1988 waterfowl hunting seasons indicate opening day draws as many as 360 hunters to the Warner Pothole portion of the planning area. Another forty hunters were counted on the Greaser portion of the planning area. Field interviews indicate that almost half of the users are from the Willamette Valley, 15 percent from California, another 15 percent from northeast Oregon, and the remainder from a widely dispersed area including Idaho, central California, and southern Washington. The total public land waterfowl hunting use is estimated to be 5,000 to 6,000 visits annually. An additional 250-300 user days are estimated for upland bird hunting (California quail and chukar).

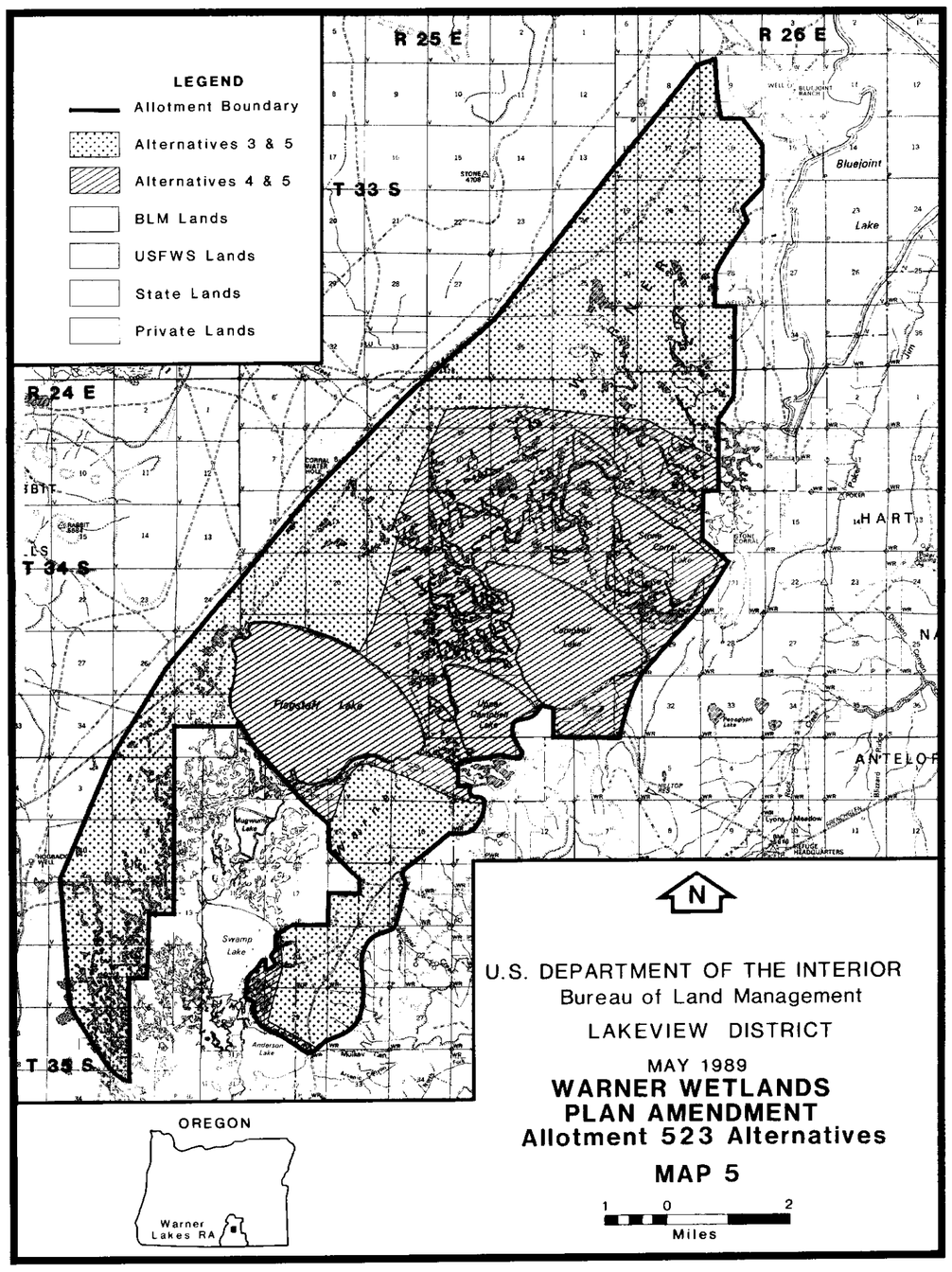
The diverse avifauna has long drawn bird watching enthusiasts to the Warner Valley. During 1987 and 1988, organized bird watching and natural sciences tours of the Potholes were sponsored by colleges and universities, and various Audubon Society Chapters. The national significance of the Warner Wetlands to migratory birds has been featured by conservation groups and publications with national membership and distribution. Annual visitation is currently estimated between 800 and 1,000 user days (mainly for birdwatching), but use appears to be increasing.

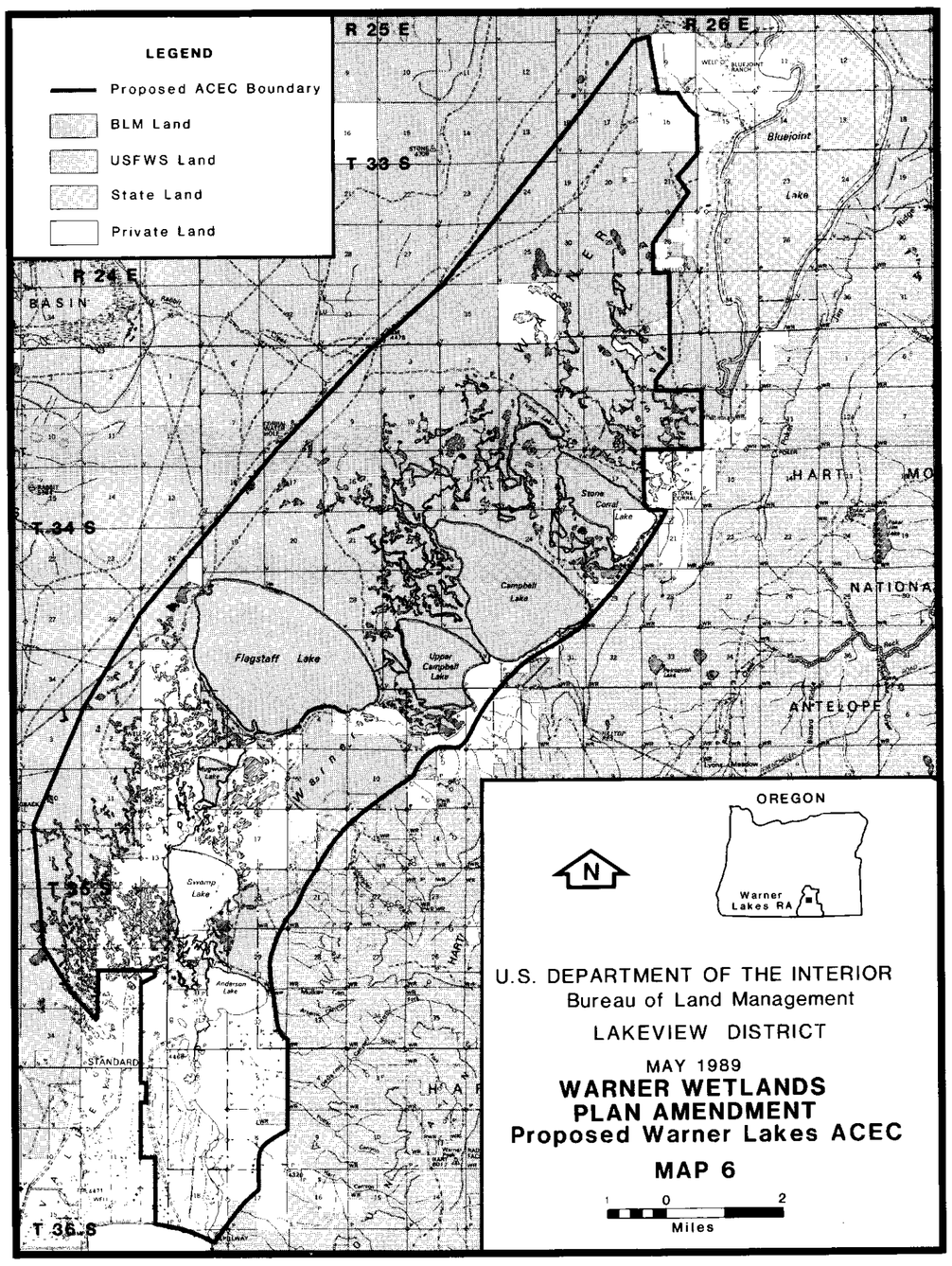
There are presently no developed recreation facilities (campgrounds, boat ramps, toilet facilities, etc.) on public lands within the planning area, nor are any but the Lake County roads surfaced for all-weather travel. Lack of facilities and improved roads has coupled with the increasing visitor use to create a sanitation problem. People are wading, washing, and fishing in water directly downslope from these areas without facilities.

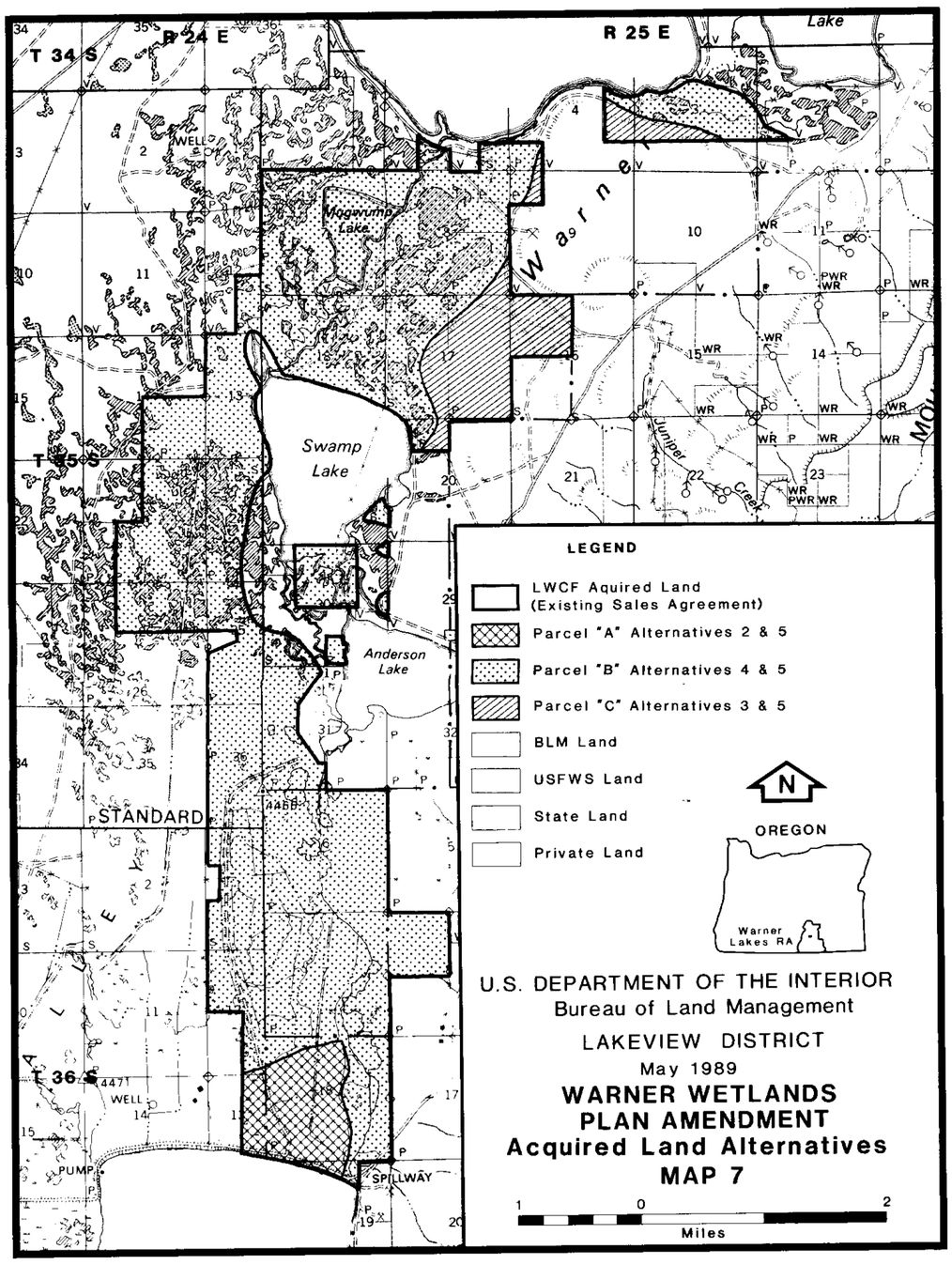

High Desert RA
Klamath Falls RA
Warner Lakes RA
LAKEVIEW DISTRICT
R 25 E
R 26 E
R 27 E
R 24 E
HARNEY LAKE
0512
Bluejoint Lake
0507
HART MOUNTAIN
NATIONAL
ANTELOPE REFUGE
RABBIT HILLS
T 34 S
0523
Campbell Lake
Flagstaff Lake
Upper Campbell Lake
0505
Warner
0507
Swamp Lake
UA
T 35 S
HART MOUNTAIN
STANDARD
T 36 S
Hart Lake
050
T 37 S
052 1
0501
Crump Lake
T 38 S
0219
0222
T 39 S
0205
0212
T 40 S
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
1989
WARNER LAKES PLAN AMENDMENT FOR WETLANDS
Land Ownership and Grazing Allotments
MAP 2
LEGEND
Wetlands Planning Amendment Boundary
0516 Allotment Boundary and Number
UA Unallotted Areas
Bureau of Land Management Land
U.S. Fish & Wildlife Service Land
State Land
Private Land
N
1 0 5 Miles
LEGEND
Map 2
Map 3
Map 4
Map 5
Map 6
Map 7
Map 8
395
Valley Falls
Plush
Lakeview
Alde
WETLANDS PLANNING AREA
Hart Mtn.
Antelope Refuge
140
LAKE COUNTY
HARNEY COUNTY
OREGON
CALIFORNIA
NEVADA
INDEX TO MAP SHEETS
Warner Wetlands Plan Amendment
May 1989

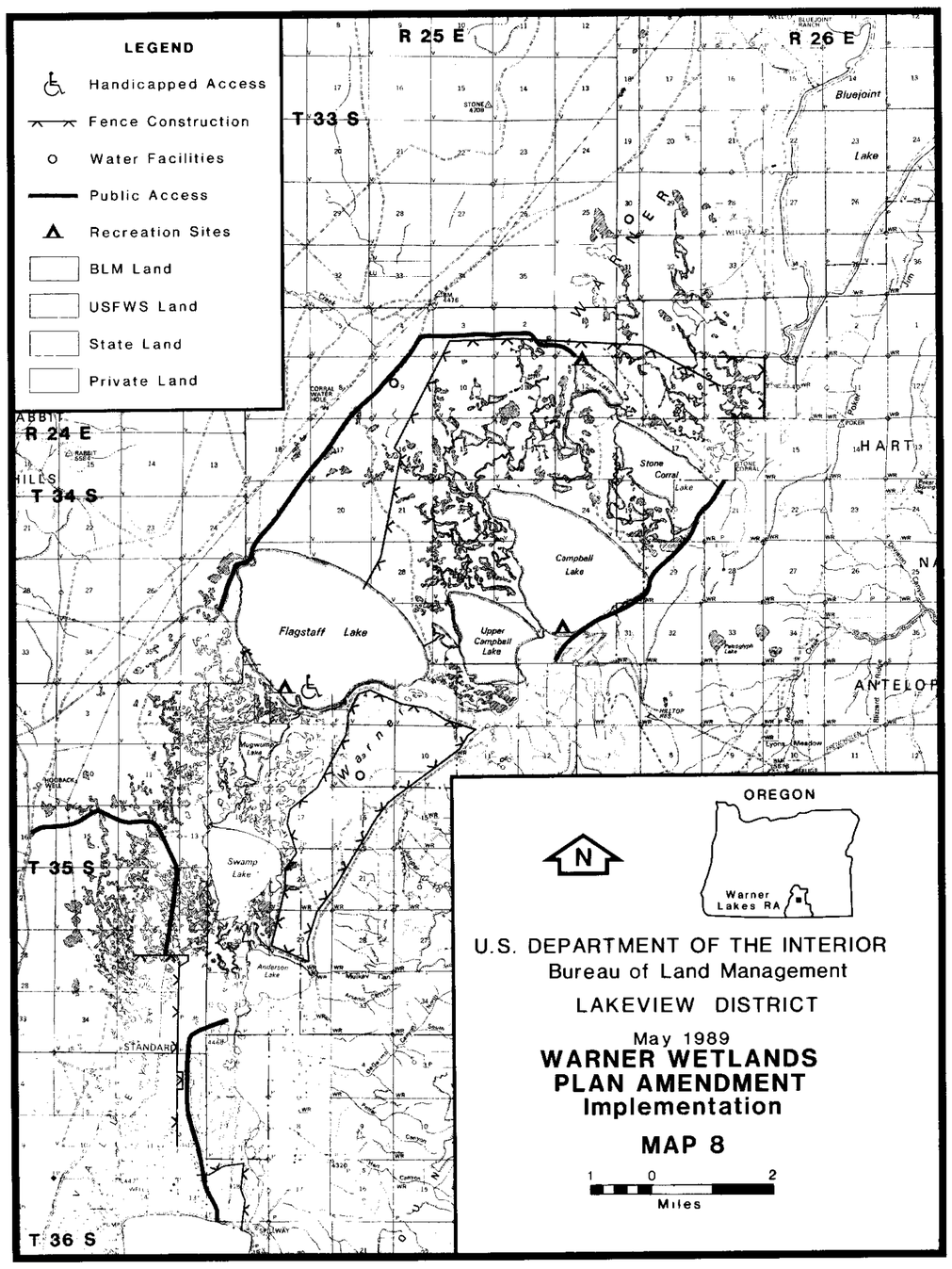

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
May 1989
WARNER WETLANDS PLAN AMENDMENT
Allotment 205 & 222 Alternatives
MAP 3
LEGEND
BLM Land
State Land
Private Land
Allotment Boundary
222 Allotment Number
Alternative 1
Alternative 4
N
1 0 2 Miles
OREGON
Warner Lakes RA
T 38 S
R 24 E
R 25 E
R 26 E
WARNER WETLANDS
WARNER VALLEY GAME MGMT AREA
222
205
T 39 S
T 40 S
AND
9th
STANDARD


U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
May 1989
WARNER WETLANDS PLAN AMENDMENT
Allotment 507 Alternatives
MAP 4
LEGEND
Allotment Boundary
507 Allotment Number
Alternative 1
Alternatives 4 & 5
BLM Land
USFWS Land
State Land
Private Land
N
1 0 2 Miles
OREGON
Warner Lakes RA
R 24 E
R 25 E
R 26 E
T 33 S
T 34 S
T 35 S
HARNEY LAKE
Bluejoint Lake
507
HART MOUNTAIN
NATIONAL
ANTELOPE
Flagstaff Lake
Campbell Lake
Upper Campbell Lake
Swamp Lake
Anderson Lake
STANDARD
PARALLEL


LEGEND
Allotment Boundary
Alternatives 3 & 5
Alternatives 4 & 5
BLM Lands
USFWS Lands
State Lands
Private Lands
R 25 E
R 26 E
R 24 E
T 33 S
T 34 S
T 35 S
Bluejoint
Lake
Flagstaff Lake
Upper Campbell Lake
Campbell Lake
Stone Corral Lake
Swamp Lake
Anderson Lake
Mugwump Lake
HART
ANTELOPE
OREGON
Warner Lakes RA
N
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
MAY 1989
WARNER WETLANDS
PLAN AMENDMENT
Allotment 523 Alternatives
MAP 5
1 0 2
Miles


LEGEND
Proposed ACEC Boundary
BLM Land
USFWS Land
State Land
Private Land
R 25 E
R 26 E
R 24 E
T 33 S
T 34 S
T 35 S
Bluejoint
Lake
Flagstaff Lake
Upper Campbell Lake
Campbell Lake
Stone Corral Lake
Swamp Lake
Anderson Lake
HART
ANTELOPE
OREGON
Warner Lakes RA
N
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
MAY 1989
WARNER WETLANDS
PLAN AMENDMENT
Proposed Warner Lakes ACEC
MAP 6
1 0 2
Miles


LEGEND
LWCF Aquired Land
(Existing Sales Agreement)
Parcel "A" Alternatives 2 & 5
Parcel "B" Alternatives 4 & 5
Parcel "C" Alternatives 3 & 5
BLM Land
USFWS Land
State Land
Private Land
R 24 E
R 25 E
T 34 S
T 35 S
T 36 S
Lake
Warner
Mugwump Lake
Swamp Lake
Anderson Lake
Juniper Creek
STANDARD
WELL
PUMP
SPILLWAY
OREGON
Warner Lakes RA
N
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
May 1989
WARNER WETLANDS
PLAN AMENDMENT
Acquired Land Alternatives
MAP 7
1 0 2
Miles


LEGEND
Handicapped Access
Fence Construction
Water Facilities
Public Access
Recreation Sites
BLM Land
USFWS Land
State Land
Private Land
R 25 E
R 26 E
R 24 E
T 33 S
T 34 S
T 35 S
T 36 S
Bluejoint
Lake
Flagstaff Lake
Upper Campbell Lake
Campbell Lake
Stone Corral Lake
Swamp Lake
Anderson Lake
HART
ANTELOPE
STANDARD
OREGON
Warner Lakes RA
N
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
LAKEVIEW DISTRICT
May 1989
WARNER WETLANDS
PLAN AMENDMENT
Implementation
MAP 8
1 0 2
Miles

Surface damage is being caused by motor vehicles launching boats and negotiating unimproved roads during wet weather. Lakeshore meadows in heavily used areas have been disturbed by rutting, churning and cratering associated with off road vehicle traffic in wet conditions. These use problems are most evident along the east side of the lakes in the Potholes portion of the planning area.

The planning area was evaluated in the Wilderness Inventory for Oregon, with the final decision issued November, 1980. This decision did not recommend the area for further study. Poker Jim Rim, immediately to the east on USFWS lands, has been administratively endorsed for wilderness. Fish Creek Rim, a BLM Wilderness Study Area (WSA) to the west, has been recommended in the Oregon Wilderness EIS as suitable in part for designation as wilderness. No lands within the planning area itself remain under wilderness review.

LANDS AND MINERALS

Disposal of wetland areas in the planning area is constrained. Generally, BLM administration and ownership of wetlands cannot be diminished except through transfer to agencies or organizations with a similar mission to manage for wetland habitat. Under provisions of Executive Order 11990, as implemented by guidelines published in the Federal Register (Vol. 45, No. 25; 2/5/80), it is Bureau policy to "...Retain under BLM administration and ownership all wetland and riparian habitats except: if Federal, State, public and private institutions, and parties have demonstrated the ability to maintain, restore, and protect wetlands and riparian habitats on a continuous basis."

At the request of the current landowners, 17,471.70 acres of private land were appraised within the planning area and north of Hart Lake. These lands are being considered for acquisition by the Bureau of Land Management through purchase or exchange, in coordination with outside interest groups. Congress has appropriated three million dollars for acquisition of lands in the Warner Basin for conservation purposes. Negotiations to complete sales or exchanges on the appraised lands are currently ongoing and in varying stages of completion.

There are no substantial mineral values for rock, sand, or gravel in the wetlands areas. The uplands have a low to moderate potential for these types of mineral materials. There are currently no mining claims in the planning area.

Warner Valley is considered to be prospectively valuable for sodium, oil and gas, and geothermal resources. That portion of the valley lying south of the north end of Crump Lake is classified as a Known Geothermal Resource Area (KGRA). There are no active leases in the planning area at the current time.

Listed below are the lands and minerals notations specific to the public lands in the planning area:

T. 38 S., R. 24 E.
Sec. 22 and 27: OR 3569, Irrigation facility; OR 24443, buried telephone cable; OR 02062, powerline; OR 28897, County Road 3-10 along west side of Warner Valley.

Sections 13, 22-27 incl., 36: KGRA

T. 40 S., R. 24 E.
Sections 1, 12, 13, 24, 25; KGRA

T. 35 S., R. 25 EW.
Section 9: NW1 /4SW1/4; authorized gravel pit

T. 38 S., R. 25 E.
Section 29; Public Water Reserve Withdrawal

Sections 5-8 incl., 17-20 incl., 28-32 incl.; KGRA

T. 39 S., R. 25 E.
Section 20 and 21: OR 010564: State highway right-of-way and material site

Sections 6, 7. 17-21 incl., 29-31 incl.: KGRA

County roads authorized under RS 2477 also exist in the following areas:

1. Across Warner Valley between Mugwump and Flagstaff Lakes (County Road 3-l 1).
2. Across Warner Valley at the north end of Hart Lake, and up the east side of the valley (County Road 3-l 2).
3. Along the west side of Coleman Valley (County Road 3-15).

SOCIOECONOMICS

The 1988 Lake County population was 7,300, about 0.3 percent of the state's total. There are two incorporated towns in Lake County: Lakeview (1988 pop.-2,750) and Paisley (1988 pop.-320). The remaining 4,230 residents are spread into the unincorporated areas in the county around small rural centers. Warner Valley has two of these small communities adjacent to the planning area, Plush and Adel. Based on the number of registered voters, total Warner Valley population is about 240.

Population in the county declined from 1960 to 1970, but has increased since 1970. The population remains sparsely distributed with a population density of 0.9 persons per square mile. Northern portions of the county around Paisley, Silver Lake, and Fort Rock show the most growth. Lakeview (the county seat) remains the principal trading center in the county The population of Lakeview has remained relatively stable for the last 20 years.

The county contains about 8,231 square miles, or 5,299,789 acres. Land ownership is about 69.8 percent federal, 23.1 percent private, 4.4 percent Stale of Oregon, and 2.8 percent local government. Federal land administration within the county is spread among three agencies: 48.0 percent BLM, 19.3 Forest Service, and 4.5 percent Fish and Wildlife Service.

Employment and earnings in Lake County are linked with government, timber manufacturing, agriculture, and the retail trades. Tables VII and VIII depict economic activity in the county. The primary sectors of the local (county) economy which potentially could be affected by the proposed action or alternatives are the farm (agricultural), retail, and service businesses in Lakeview and the Warner Valley. Average personal income in Lake County is about 512,400, slightly under the average for Oregon.

Table VII: Lake County Personal Income (1996) in Thousands of Dollars

Income by Place of Residence	
Total Personal Income	90,534
Nonfarm Personal Income	79.360
Farm Income	11,154
Earnings by Place of Work	
Farm	11,154
Nonfarm	53,575
Private Industries	35,621
Ag Services, Forestry, Fisheries	371
Mining	None
Construction	3,505
Manufacturing	14,645
Transportation & Utilities	3,211
Wholesale Trade	None
Retail Trade	5,799
Finance, Insurance, Real Estate	990
Services	5,517
Government and Government Enterprises	17,754
Federal Civilian	6,363
Military	169
State and Local	9,202

Source: Bureau of Economic Analysis, Local Area Personal Income 1981-86, Volume 5

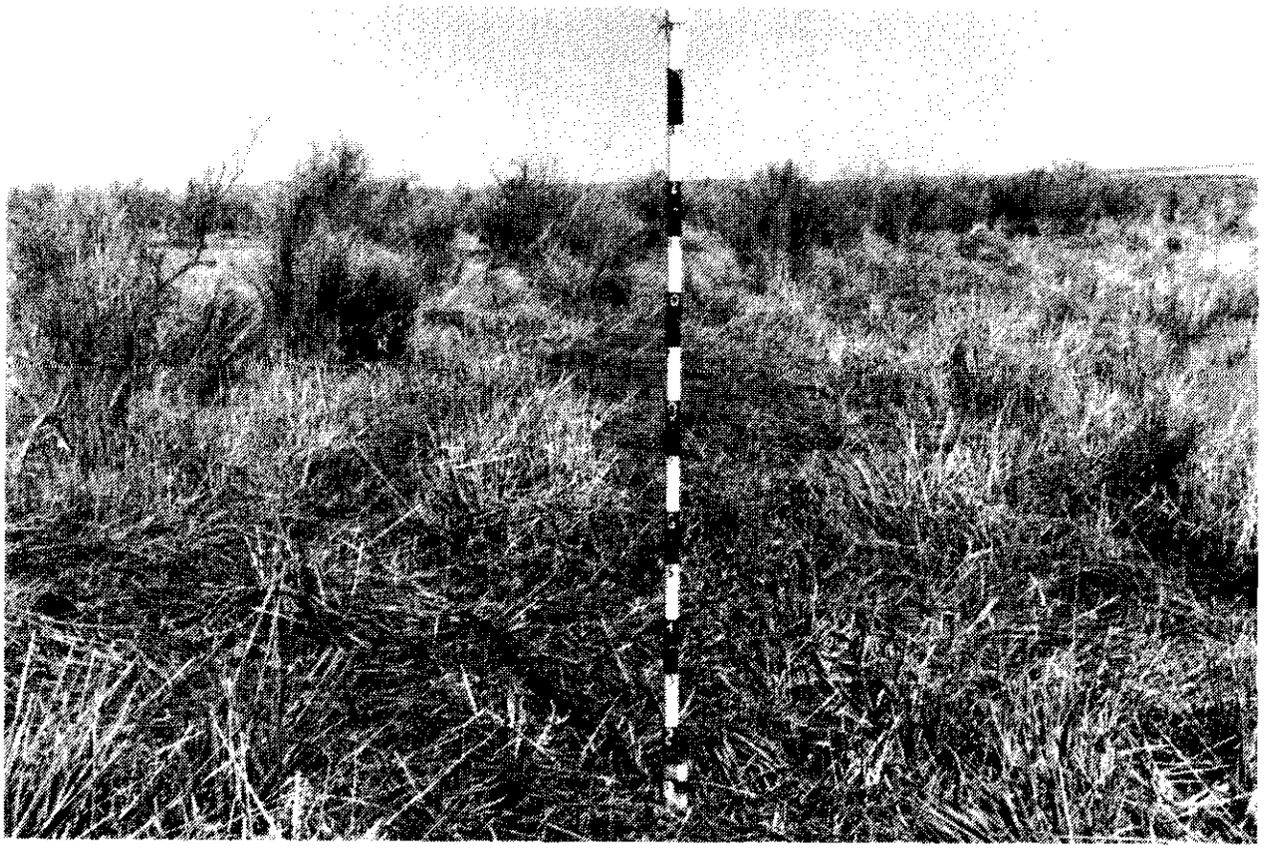
TABLE VIII: 1997 Annual Average Lake County Resident Labor Force

	Number
Total Employment	3,960
Total Wage and Salary Positions	2,540
sector	
Manufacturing, Total	610
Lumber and Wood	590
Other Durable Goods	20
Nonmanufacturing Total	1,920
Construction	60
Transportation, Communications, Utilities	90
Trade	490
Finance, Insurance, Real Estate	60
Services and Miscellaneous	260
Government	960

Source: Oregon Department of Human Resources, Employment Division, April 1966 Statistics, March 1967 Benchmark

CHAPTER IV
ENVIRONMENTAL CONSEQUENCES

Good condition nesting habitat with 7.5 decimeter 100 % visual obscurity (BLM photo)



Poor condition nesting habitat with 0.5 decimeter 100 % visual obscurity (BLM photo)

Chapter IV ENVIRONMENTAL CONSEQUENCES IMPACTS TO VEGETAL COMMUNITIES

Introduction

For purposes of this analysis, species composition of the vegetal community and density of plants within the community are the primary indicators of change in response to implementation of various alternatives. Similarly, the amount and timing of the livestock grazing allowed under the alternatives are the main factors influencing that change. Elements of change beyond management control, such as weather and fluctuating water levels, are considered here as modifiers to the above.

During the public review of the draft Plan Amendment, comments were received citing allotment specific exceptions to the generalized consequences outlined by alternative in the draft These exceptions. as appropriate, have been incorporated into the analysis presented below.

Alternative No. 1: No Action, Maintain Present Situation

Upland Communities:

No substantive changes in the composition and density of the upland communities are expected in allotments where a substantial portion of the grazing occurs during the growing season (Allotments 502, 507. and 512), or where that use occurs in small FRF allotments and is largely unregulated as to season and numbers (Allotments 502 and 504). Long term improvement in species composition (i.e. replacement of exotic annuals by native perennials) and increased plant density is expected in allotments not grazed during the growing season (Allotments 205, 212, 219. 222,501, and 523).

There are two basic reasons behind these expectations. First, continued removal of herbaceous material during the growing season does not allow an accumulation of stored energy much above maintenance needs, reducing or eliminating the energy available for increasing plant vigor, seed production and competitive expansion. By contrast. this energy would be available to plants given the entire growing season to store carbohydrate reserves. Second. mechanical damage to vegetation and soils can occur in the small, unregulated (no season or number stipulations) allotments because their use is generally more intensive and concentrated.

Wetland Communities:

A longer growing period in wetland communities causes the wetland portions of more allotments to be grazed during the growing season, even though the season of use is the same as that for the uplands. While no major changes in the composition and density of the wetland communities are expected in allotments with grazing during the growing season (Allotments 205. 502, 507. 512, and 523), a gradual, overall decrease in the size of the community is expected. Where the current use is outside of the growing season (Allotments 212. 219, 222. and 501), improvements in the composition, density and size of the wetland communities have occurred and are expected to continue. Mechanical damage, soil compaction, and hummocking are expected to promote a decline in community composition. density and size in the small, FRF allotments (502 and 504).

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

The condition of wildlife habitats present is the principal management concern of this alternative, and that condition is measured by the height and density of the vegetation remaining (residual cover) for use by nesting waterfowl after livestock grazing. There are two basic strategies by which to reach this objective: (1) A single pasture system where livestock are removed when utilization reaches critical levels: or (2) a multi-pasture, rest-rotation system in which some pastures would exceed, others meet, and some fail to meet the residual cover requirements in any given year.

Either of these systems would lead to major improvements in the composition and density of the upland and wetland vegetal communities. Through a much reduced level of herbage removal, both systems would tend to push the ecological succession to a higher, or more near climax, seral stage. Over time, invader and exotic species would be reduced or eliminated from the communities. Plant vigor would increase, and native perennial associations would expand over sites now dominated by annuals and exotics. Where succession would again stop in a grazing disclimax is not known. but it would be much closer to site potential,

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

Until the required baseline data has been collected and grazing systems developed to implement the objectives, this alternative would have impacts on the vegetal communities as discussed for Alternative 1. Once implemented, however, the impacts would be of the same type and direction as described for Alternative 2, but would occur at a much slower rate. The slower rate of change would be a function of greater vegetation removal, but ecological progression towards site potential would occur. Grazing disclimax would be n-established at a lower seral stage (further from site potential) because there would be higher levels of energy transport (i.e. forage into beef) out of the system. The upward successional trend would be expected on both the upland and wetland communities.

Alternative No. 4: Maximize Wildlife Habitat; Exclude Other Conflicting Uses

Without livestock grazing. both the upland and wetland communities would trend towards. or achieve, site potential climax conditions within 10 years. The rate of change would depend upon how far below site potential each community is at implementation of the alternative. The further a community is from potential, the more rapid would be the initial change. Wetland communities would also progress towards site potential faster than upland communities. Plant density, species composition, and species diversity would increase as the higher ser.3 stages are reached, leading to a decline in exotic, invader. and annual species. Complexity and natural stability of the communities would increase. becoming more pronounced as site potential climax is approached.

Alternative No. 5: ACEC Designation

This alternative, by itself, would have no impacts on any aspect of the vegetal communities present. What would determine vegetal changes would be the alternative or alternatives selected in addition to the ACEC designation.

For example, selection of Alternatives 4 and 5 for an allotment would have vegetal impacts as discussed for Alternative 4. The ACEC designation would provide general management direction within which the other alternatives must operate.

Alternative No. 6: Proposed Alternative

The proposed action was developed by selecting among the alternatives presented to find the best mix of management directions for an allotment or specific portions of an allotment, Thus. the impacts to the vegetal communities would be the summation of those impacts discussed above for the alternative or alternatives selected for any particular allotment. For additional clarity, the anticipated impacts. by allotment and alternative, are presented below:

Allotment 205 Excluded and restricted use areas	= impacts per Alt. No. 4.
Grazed areas	= impacts per Alt. No. 1.
Allotment 212 Excluded areas	= impacts per Alt. No. 4.
Grazed areas	= Impacts per Alt. No. 1.
Allotment 219 Entire allotment	= impacts per Alt. No. 2.
Allotment 222 Excluded & Restricted use areas	= impacts per Alt. No. 4.
Grazed areas	=impacts per Alt. No. 1.
Allotment 501 Entire allotment	= impacts per Alt. No. 1.
Allotment 504 Entire Allotment	= impacts per Alt. No. 2.
Allotment 507 Ungrazed portion	= Impacts per Alt. No. 4.
Grazed portion	= Impacts per Alt. No. 1.
Allotment 512 Entire allotment	= Impacts per Alt. No. 1.
Allotment 523 Ungrazed portion	= Impacts per Alt. No. 4.
Grazed portion	= impacts per Alt. No. 3.
Acquired Lands (see Map 7)	
Parcel “A” Meadow Mgmt Area (Acquired)	= impacts per Alt. No. 2.
Parcel "B" Core Wetlnd.Area (Acquired)	= impacts per Alt. No. 4.
Parcel “C” Flagstaff Bench (Acquired)	= impacts per Alt. No. 3.

Other lands acquired within existing allotments would have impacts as discussed for the public lands currently within the allotment.

IMPACTS TO WILDLIFE HABITAT AND POPULATIONS

Alternative No. 1: No Action

Under this alternative the wildlife habitat condition described in the Affected Environment would remain essentially unchanged at 61% poor, 16% fair. 12% good, and 11% unsampled. The wildlife populations should remain static in the planning area.

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

As discussed in the vegetal communities impacts section, two management strategies are available to attain objectives; single pasture with predetermined utilization levels. or multi-pasture rest-rotation systems. Even though wildlife habitat condition is used to set management direction, there would still be adverse impacts to wildlife habitat and populations under these grazing systems.

Single pasture systems: With a season of use that permits livestock grazing only after waterfowl nesting has been completed (July 1 - August 15),

destruction and/or abandonment of nests due to trampling and disturbance would be avoided. However, selective grazing of shoreline and in-shore emergent communities would impact nesting populations by removing or limiting the extent and quality of brood rearing habitats. The dry and relatively unpalatable condition of upland forage in August increases impacts to over-water nests by concentrating livestock use more along the shorelines and shallows. Concentrated grazing on the green, succulent, and highly palatable wetland forage late in the season limits nesting habitat for the next season for over-water nesting species, such as canvasbacks and redheads. These species require tall, dense stands of emergent vegetation of a height well in excess of the residual cover height (3 decimeter) considered good condition habitat for ground nesting species.

Multi-pasture rest-rotation systems: To achieve the cover height and density required for good condition nesting habitat, the minimum usable grazing system would be one of four pastures. where only two are used per year. Several variations of the four pasture theme were reviewed for impacts. Rotation through these variations would allow one growing season's residual cover to be available for nesting on 25-50% of an allotment annually. Twenty-five to 50% of the allotment would be grazed to less than 6 inches of residual cover. making it generally unavailable for nesting habitat. A larger number of pastures could be used, but the basic principle of the rotation system would remain the same.

An additional, if unquantifiable, impact would be associated with nesting area fidelity, or the tendency of waterfowl to return for nesting to the same locale at which they were reared or had previously nested. This tendency varies in intensity between species as well as between individuals of the same species. It is a real and powerful factor in an area's attractiveness to nesting waterfowl. Constantly moving the available habitat within which nesting is expected to occur could have impacts on early nest site selection, renesting attempts, brood survival, or the number of non-nesting adults present. The magnitude and final significance of those impacts are not presently quantifiable.

As with the single pasture system, any multi-pasture system would likely preclude nesting by over-water species, due to a lack of dense, ungrazed emergent stands of bulrush or cattails. The more Intensive the grazing system. the greater the likelihood of livestock concentrating on shoreline and shallow water emergent communities.

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

Grazing systems instituted to implement this alternative would improve range site productivity through improved plant vigor, density, and community composition. These intensive grazing systems would also have an overall negative impact on wildlife habitat and populations. The magnitude of that impact would depend on the particular grazing system selected.

The Lakeview Grazing EIS (pages 1-20 and I-21) identifies four grazing systems which could meet the objectives of this alternative, in that their use would improve plant vigor, seed production, and range site condition. The analysis of the impacts to wildlife habitat and populations of these grazing systems is presented below and the systems are defined in the Glossary.

Deferred Grazing Except for late- or re-nesting birds, this system does not usually cause substantial trampling or disturbance of nests. Livestock use is heavily concentrated. however, along shorelines and in wetland communities because the forage there provides moisture and protein lacking in upland vegetation. Little residual cover is left for nesting habitat for the next spring.

Winter Grazing -This is the least detrimental grazing system to wildlife habitat. As all plants are dormant at this lime, heavy concentrations along shorelines and in wetland communities do not normally occur. With the use more evenly spread over the allotment, the residual cover available to nesting birds in the spring is usually taller than under the deferred system. Trampling, soil compaction and hummocking are seldom a problem,

Deferred Rotation Grazing Little residual cover is left under this system. Trampling and nest disturbance is common in the early use pastures, and heavy use concentration on shoreline and wetland communities occurs throughout. In grazing every pasture every year, little structural diversity can develop in the herbaceous vegetation, which limits the number of niches available for wildlife species.

Rest-Rotation Grazing If established with habitat considerations in mind, this system can provide at least one growing season's residual cover on 25.50% of the allotment annually. The remainder of the allotment would be to less than 6 inches of residual cover grazed and generally unavailable as nesting habitat, Heavy concentrations of use would occur along shorelines and in wetland communities, allowing little structural diversity or development. Problems with nesting area fidelity would be as discussed for Alternative 2.

Under any of the above systems, the range improvement projects [seedings. brush removal, wells, pipelines, etc.) and establishment of new watering, salting and/or supplemental feeding areas would alter natural habitats. Suitability for some species would be diminished, while it would be enhanced for others so that partial replacement of the existing wildlife population by one more tolerant or adapted to the new site conditions would occur (i.e. Brewer's and sage sparrows, sagebrush voles, least chipmunks, leopard lizards and striped whipsnakes replaced by horned larks, western meadowlarks, deer and pocket mice, fence lizards and gopher snakes).

Alternative No. 4: Maximize Wildlife Habitat; Exclude Other Conflicting Uses

This alternative would provide major beneficial changes in productivity for both wetland and upland habitats. Within six years of implementation, it is estimated that habitat condition would improve from 12% good condition to approximately 70% good condition. Shoreline communities are dominated by highly rhizomatous species which, if left undisturbed, could double or triple the acres of emergent and shoreline habitats, increasing usable nesting habitat and improving habitat structure. Even during the short dry periods, the improved habitat structure and diversity with increased residual vegetation would increase the diversity of non-wetland related species. Present nesting populations could be expected to at least double during this same period. Species presently precluded by a lack of diversity and structure or by disturbance (herons, egrets, ibis, sandhill cranes, etc.) could be expected to begin nesting in the improved habitats

Alternative No. 5: ACEC Designation

As discussed under Vegetal Communities, the impacts of this alternative would depend upon which other alternative was adopted in defining the management direction for an allotment. In and of itself, this alternative would have no impacts on wildlife habitats or populations.

Alternative No. 6: Proposed Action

Allotment 205 - Greaser (portion)

Management on this allotment would combine Alternatives 1 and 4. which represents no substantive change from the present situation. The highly productive wetlands in the allotment (approximately 1,900 acres) would remain excluded from livestock use. Those wetlands remaining open to grazing (approximately 300 acres] are of much lower habitat potential and are severely influenced by annual and cyclic water level fluctuations.

The upward trend in wetland habitat condition, 0% good (1982) to 40% good (1987), is expected to continue and should approach 80% good condition by 1993. A similar upward trend in the numbers and species diversity of nesting waterfowl/water birds has been observed and should continue. This trend would likely accelerate as the willow thickets protected in 1981 begin to provide greater vertical structure to the habitats.

Allotment 212 - Rahilly-Gravelly (portion)

The Proposed Action would not change the wildlife habitats present. as the majority of the highly productive emergent wetlands at Foskett and Dace Springs would remain excluded from livestock grazing. The habitat trend from 0% good condition in 1980, to 67% good condition in 1987, should continue.

Wetlands open to grazing are within the ephemeral alkali playa of Coleman Lake and have little habitat potential other than limited resting and feeding habitat when water is present. There should be no substantive changes in wildlife populations.

Allotment 219 -Cahill

Alternative 2 would result in a slight improvements in habitat condition, and population density and diversity, as the majority Of the allotment's wetlands are already in good condition. Slight modifications of existing practices could result in less than 10% of the wetlands remaining in poor and low fair condition by 1993. Further improvement is limited by site potential.

Allotment 222 - Fisher Lake (portion)

Management on this allotment would combine Alternatives 1 & 4. This represents no change from the present situation. The high potential wetlands are excluded from livestock use, improving greatly in habitat condition since 1981. This upward trend is expected to continue. Slower improvement throughout the allotment is expected under the existing grazing system. Wildlife populations should show no major changes beyond those already observed in the excluded areas,

Allotment 501 - Flynn (portion)

No change to existing management is proposed and no change in habitat condition is expected.

Allotment 502 - Fitzgerald

Alternatives 4 and 5 would result in only slight improvements over existing good wildlife habitat and population conditions on this allotment. These wetlands remain physically and ecologically integral to the Warner Potholes wetlands complex. The physical barrier to livestock created by high water
levels since 1983 has led to good condition habitats. Loss of the high water barrier without management constraints would lead to habitat decline due to removal of cover and vegetation by livestock.

Allotment 504 - Laird

Alternative 2 would result in a substantial improvement in habitat condition, population density and species diversity. All wetland and most upland habitats are expected to be in good habitat condition by 1996.

Allotment 507 - Laird

A combination of three alternatives (1, 4, and 5) is proposed for this highly fragmented allotment. For the low potential, alkaline. playa zone of the northern portions of Bluejoint Lake, no action change would lead to static environmental conditions. Little improvement could be expected under any alternative.

The remaining portion of the allotment would be managed under Alternatives 4 and 5. Major improvements to both wildlife habitat condition and populations are anticipated. Inventory data indicates that habitat condition would improve from the current 0% good to 60% good within six years of implementation: approaching 80% good condition within twelve years. Beneficial impacts to nesting populations of a similar magnitude are expected, especially for wet-water nesting species (canvasbacks. redheads, grebes, coots, etc.) requiring sturdy. emergent stands of bulrush and cattails

Allotment 512 - North **Bluejoint** (portion)

The Proposed Action (Alt. 1) would cause no change in habitat condition. population diversity, or numbers. Extreme water fluctuations and soil alkalinity severely limit the productive potential of the 299 acres of wetlands in this allotment.

Allotment 523 - Warner Lakes

The Proposed Action separates the allotment into two management areas. one to be managed for wildlife habitat under Alternative 4. and the other for livestock grazing under Alternative 3. The Impacts of implementation follow this division.

Core Wetland Area (Potholes):

This area contains 86% of the wetland habitat found in the allotment, Intensive inventories conducted in 1987, indicate that the Proposed Action would result in major beneficial impacts to wetland habitat condition. From the present 5% good habitat condition. an increase to 67% good habitat condition is expected within six years. This improvement would be from approximately 520 acres to nearly 7,000 acres in good habitat condition. Within 10 years, it is estimated that 80-85% of the wetlands would be in the high fair to good habitat condition range preferred by nesting waterfowl.

This habitat condition improvement would result in a major increase in the density and numbers of nesting waterfowl and other water-related species. Current waterfowl nesting densities over most of the allotment were found to be 1.5 nests per mile Of shoreline. Under the Proposed Action, this would improve to 4.1 nests per mile within six years of implementation on 67% of the wetlands, and to 80-85% within 10 years.

Another expected major benefit is an increase in the survival rates of the broods produced. Elimination of the direct nest losses due lo livestock trampling; coupled with the indirect nest losses to predators caused by cover removal, would increase the number of successful nests. The survival rate of the young coming from these nests would also be increased by having higher quality brooding, feeding, and escape cover present. The shallow water emergent plant communities favored by livestock are also critical to early survival of young broods. A 75 percent increase in brood survival rates (four young per brood currently to seven young per brood in six years] is expected as a result of undisturbed plant growth.

The Proposed Action would increase the species diversity of the breeding populations present. Current practices preclude over-water nesting species, such as canvasbacks and redheads, because emergent vegetation is removed. Species requiring heavy ground cover for nesting (northern harrier, short-eared owls, etc.), are severely limited, as are species requiring a clumping of vertical structure for nesting substrates (herons, egrets, etc.). Major improvement of the first two habitat deficiencies could be expected short-term upon implementation, and of the third over a longer period.

Grazed Area (Potholes):

The impacts of the Proposed Action in this area would be as described for Alternative 3 above. Fourteen percent of the wetlands in the allotment are included in this predominately upland portion.

Unallotted Parcels

Elimination of unauthorized livestock grazing from the unallotted parcels under the Proposed Action would result in improvements to habitat condition. Because of their high potential, these wetlands are largely (50%) in good habitat condition. Within six years, the poor condition habitat (12%) and the fair condition areas (38%) should be in good habitat condition.

Acquired Lands (See Map 7 for location of parcels)

Parcel "A" Meadow Management Area (Acquired):

The intent of the Proposed Action is to use vegetation manipulation [mowing, burning, and/or grazing] to maintain or expand the breeding population of long-billed curlews presently using the meadows. Light use of the manipulative tools would be used to retain a 6-8" residual cover height for nesting habitat. Use at this level should have no negative impacts on the emergent habitats along the ditches, channels and lake shorelines. Because of low bottom contour relief, some manipulation may be necessary to maintain an interspersion of emergent and open water habitats, which would have a beneficial impact on species numbers and diversity.

Parcel **"B"** Core Wetland Area (Acquired):

This area. upon acquisition, would be managed under Alternative 4. There is no reason to expect impacts here as being any different than those discussed for Alternative 4 in the Core Wetland Habitat Area of Allotment 523, above.

Parcel "C" Flagstaff Bench (Acquired):

Impacts here would be as described for Alternative 3. above. These lands are entirely uplands. except for 25 acres of wetland,

IMPACTS TO ENDANGERED, THREATENED AND CANDIDATE SPECIES.

Except as noted below. the impacts of the Proposed Action upon threatened. endangered and candidate species would be inconsequential

Allotments 205, 212, 219, and 222

Slight to moderate improvements over existing conditions are anticipated for these allotments, primarily due lo habitat protection and enhancement work already completed, The species benefiting Include two federally listed threatened species (Warner Sucker, Foskett Springs Speckled Dace), and four sensitive species (Long-billed Curlew. Western Snowy Plover. Greater Sandhill Crane. White-faced Ibis). These beneficial impacts are associated with the Improved quality and quantity of breeding. rearing, and feeding habitats evidenced to date and projected for the future.

Allotments 502,507, and 523

These allotments should show the same types of improvement for the same species as discussed above. Habitat improvements envisioned over the broad expanse of the Warner Wetlands should produce major improvements in population densities and composition. Increased and more diverse prey populations should also make the reintroduction of peregrine falcons (federal endangered) into historical habitats much more viable

Acquired Lands

Two miles of listed critical habitat for the Warner Sucker is being acquired north of Hart Lake in the LWCF purchase. This habitat would receive an increased level of protection and management, with a beneficial impact to the threatened species. Nesting. rearing and feeding habitats for the long-billed curlew and while-faced ibis may also be acquired, The management practices to be set in place by the Proposed Action are designed to have beneficial impacts on these habitats and populations.

IMPACTS TO LIVESTOCK GRAZING

The environmental consequences for each of the six alternatives to livestock grazing within the wetland planning area are as follows:

Alternative No. 1: No action, Maintain Present Situation

The present livestock grazing situation and management would remain in effect with no impact to active grazing preference. Existing exclosures currently being managed for wildlife habitat would continue to be managed in this fashion.

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

The condition of the wildlife habitats present is the principal management concern of this alternative. Habitat condition is a direct function of the height and density of the remaining herbaceous vegetation (residual cover) for use by nesting waterfowl after livestock grazing. There are two basic strategies for livestock grazing to reach the stated habitat objectives: (1) A single pasture system where livestock are removed when utilization reaches critical levels: and (2) a multi-pasture, rest-rotation system in which some pastures would exceed, others meet, and some fail lo meet the residual cover requirements in any given year. The impacts of the two alternative systems are:

(1)Single pasture systems:

The primary impact would be reduced levels of allowable livestock utilization compared to present use. To achieve good condition habitat, livestock would have to be removed when a stubble height of 3 decimeters (approximately 12 inches) of residual cover is reached. This would require a reduction in licensed AUM's estimated at 50 to 75 percent of current use, The differing palatabilities of the wetland and upland species, along with the physical configuration of the wetlands (long, narrow borders along the meandering sloughs and channels) would lead to heavy concentrations of livestock use in the wetlands. This could cause the critical stubble height to be reached in wetland areas long before the uplands. producing a further reduction in allowable use as a consequence. Constant and intensive monitoring of the utilization levels would be required. Because of differing total yearly forage production. based primarily on precipitation and soil moisture. permittees would not know from year to year what their licensed levels of use would be.

(2) Multi-pasture rest-rotation systems:

The primary impacts are again associated with an initial reduction in licensed use necessary to implement a grazing system in which one or more pastures of an allotment are not used each year. This is done in order lo balance the stocking rates to the vegetative production and objectives for the use pastures. The exact reduction in AUM's licensed would depend upon the specific system adopted, but could be expected to be in the 50-75% range.

Either permanent or temporary electric fencing needed to implement such a system would be difficult and expensive to build and maintain within the complex mosaic of sloughs, channels. potholes and lakes. Major problems have been experienced in maintaining the limited fencing currently in use in the area. This problem would be expected to increase as the amount of fencing required to implement the grazing system increases.

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

The emphasis is on increased livestock forage production, while improving the present range site productivity through the use of grazing systems and/or range improvement projects.

As discussed in the Impacts to Wildlife Habitat and Populations section for this alternative, four general types of grazing systems could be implemented that would achieve the objectives of the alternative (deferred, winter. deferred rotation, and rest rotation grazing). They would. however, improve range site productivity at different relative rates. Rest rotation grazing, as a very active and manipulative form of management. would cause the quickest improvement in site productivity and available forage. With a properly designed and implemented rest rotation system, noticeable improvements would be evident after the second or third cycle through the rotation. which could be 6 to 12 years depending on the number of pastures. The more passive winier grazing system would effect the same changes. but could require 8 to 15 years. The two remaining systems would be roughly equal in rate of change, and could lake as long as 20 to 25 years to demonstrate marked improvements. Except on the very worst or least productive sites, the rate of change for all systems would be greatest at the lower end of the range site productivity spectrum; decreasing as site potential is neared.

By allotments. the anticipated impacts of implementing one of these grazing systems are as follows:

Allotment 205 Greaser:

No significant increase in licensed AUM's is expected due to implementation of a grazing system, because the planning area covers only a third of the total allotment. This alternative does, however. apply to all planning area portions of the allotment, Including existing livestock exclosure areas. In removing this restriction to livestock use, another 150-200 AUM's would be available for licensing.

Allotment 212 Rahilly-Gravelly:

The planning area portion of the allotment amounts to only 13% of the total allotment, so no substantive increase in licensed AUM's is anticipated through a grazing system. Provisions of the Endangered Species Act preclude opening the exclosures at Foskett and Dace Springs, so no increase in licensed AUM's is available here either.

Allotments 219 Cahill and 222 Fisher Lake:

As these allotments are already under a winter grazing system, no major increase in licensed AUM's would accrue due to Implementation of this alternative. By opening the livestock exclosures in Allotment 222, however, an increase of 75 - 125 AUM's could be licensed there,

Allotments 501 Flynn and 502 Fitzgerald:

Only small portions of these allotments lie inside the planning area (7% and 6% respectively) and it is unlikely that a substantive increase in licensed AUM's would follow implementation of a grazing system.

Allotment 504 Kiely:

Because of the small size of this allotment (390 acres/ and the current license (23 AUM's], no substantial change under a grazing system is anticipated.

Allotments 507 Laird and 512 North **Bluejoint**:

Slight to moderate increases (30.60 AUM's) in licensed AUM's are likely in these allotments under this alternative.

Allotment 523 Warner Lakes:

A moderate (300.400 AUM's) increase in the licensed use of this allotment is possible with implementation of this alternative. Extensive interior fencing would be required, as would nearly constant maintenance of these fences.

Unallotted Parcels:

These parcels would be administered as FRF allotments, with a slight (100-125 AUM) increase in available livestock forage within the planning area.

Alternative No. 4: Maximize Wildlife Habitat; Exclude Other Conflicting Uses

This alternative requires total exclusion of any livestock grazing within the wetland amendment area. This would result in a direct decrease in active preference for the existing livestock permittees on any portion of an allotment within the planning area.

The removal of livestock grazing would eliminate grazing as a management tool for rejuvenation of vegetation. Other means would still be available, however, to manipulate vegetation, such as burning or mowing.

This alternative would lead lo a slight loss of active preference to the permittees' overall operations in Allotments 205, 212, 219, and 512. There would be a moderate loss in Allotment 507, and a major loss to users of Allotments 222 and 523.

Alternative No. 5: ACEC Designation

Of itself, this alternative would have no impact on livestock grazing, Where the designation is proposed, the impacts would be as discussed for the other alternative proposed as a part of the designation.

Alternative No. 6: Proposed Action

Allotment 205 - Greaser Drift (portion)

This alternative is a combination of Alternative 1, and Alternative 4. The present livestock grazing situation would remain the same with no change to the active grazing preference. Existing exclosures would continue to be managed for wildlife habitat.

Allotment 212 - **Rahilly** - Gravelly (portion)

The Proposed Action far this allotment is Alternative 1, which would have no impact to the present livestock grazing situation.

Allotment 219 - Cahill

This allotment would be managed under Alternative 2. It is anticipated that no change would occur from the present livestock grazing situation.

Allotment 222 - Fisher Lake

The Proposed Action is a combination of Alternatives 1 and 4. Livestock active preference would remain unchanged. Existing exclosures would be maintained and managed for wildlife habitat.

Allotment 501 - Flynn (portion)

The portion of the allotment within the wetland planning area would be managed under Alternative 1. There would be no change in the present livestock grazing situation.

Allotment 502 Fitzgerald

The Proposed Action for this allotment is a combination of Alternatives 4 and 5, which would exclude livestock grazing (17 AUM's) from the allotment. Replacement of this loss is a part of the Proposed Action [see Mitigating Measures below].

Allotment 504 - Kiely

The proposed action for this allotment is alternative 2. which would result in the loss of 50-75% of the use (12-i 7 AUM) currently licensed in this allotment. Replacement of this loss is a part of the proposed action (see Mitigating Measures below).

Allotment SO? - Laird

The Proposed Action for this fragmented allotment is a combination of Alternatives 1, 4. and 5 (see Map 4). All but the southern lip of the Bluejoint Lake portion of the allotment would continue under the present livestock operation and situation, i.e. Alternative 1. The remaining portions of the allotment would be managed under Alternatives 4 and 5, which would result in the loss of 54 AUM's currently licensed there. Replacement of this loss is a part of the Proposed Action (see Mitigating Measures, below).

Allotment 523 - Warner Lakes

The Proposed Action separates the allotment into two management areas, the Core Wetland Area (Potholes) to be managed under Alternatives 4 and 5, and a grazed area to be managed under Alternatives 3 and 5. The net result of this division is a loss of 734 AUM's that would no longer be licensed in this allotment, with 922 AUM's of licensed use remaining. Replacement of this loss is a part of the Proposed Action (see Mitigating Measures below].

Mitigating Measures

The Proposed Action would result in a loss of 622 AUM's of active preference in four allotments:

502	Fitzgerald	17 AUM's
504	Kiely	17 AUM's
507	Laird	54 AUM's
523	Warner Lakes	734 AUM's
		822 AUM's

The necessary forage to mitigate the permits of the affected livestock operators would be provided partially from the existing forage base within the resource area. The proposed date for implementation of grazing changes would be 1991. Because any location change is of key importance to the livestock operator's needs, this would be a factor in any grazing decisions.

Mitigation offered to replace this loss is as follows:

Allotment 502 - Fitzgerald

Seventeen AUM's of active preference would be offered within the existing Big Rock Seeding of the Coyote-Calvin Allotment 517, or into another allotment having available forage in which the permittee has current active preference.

Allotment 504 - Kiely

The 17 AUM's of active preference lost here would be added to that lost in Allotment 523 and mitigated as described below for that allotment.

Allotment 507 - Laird

The 54 AUM's of active preference lost here would be added to that lost in Allotment 523 and mitigated as described below for that allotment.

Allotment, 523 - Warner Lakes

Under the Proposed Action, 922 AUM's of active preference would remain in this allotment, leaving 605 AUM's (734 Allot. 523 54 Allot. 507 17 Allot. 504) of active preference to mitigate. Rather than stipulate any one plan by which to mitigate this loss, several alternative options have been developed. Consultations would continue with the affected permittees once this document is made available to the public. The final resolution of the mitigation issue would be after these BLM/permit& meetings, and the actions taken may be any combination of all, or pans, of any of the options presented.

The principal locations planned for use in forage mitigation are the planning area itself and Alkali Winter allotment. Offered forage in Alkali Winter allotment already exists and is in excess of the preference of the present operators. New public investment would not be required with possible exception of fencing and this approach would take advantage of existing public investment in fire rehabilitation.

A number of variations on the basic mitigation proposed above would be considered in consultation with the affected permittees. Examples of some options that may be considered include:

1. Temporary interim moves until other forms of mitigation are ready for livestock use;
2. Inter-district agreements whereby some current use in the Lakeview District is moved to the another district;
3. Moving some of the Allotment 523 preference into allotments having production in excess of preference (i.e. Alkali Winter Allotment 001) and mitigating the remainder with small seedings;
4. Acquisition of base properties and the retirement of active preference;
5. Moving preference to a seeding/upland area (i.e. Flagstaff Bench area) which may be acquired through exchange or Land and Water Conservation Fund purchase; and
6. Any option or idea that is mutually agreeable to the affected permittees and the Bureau, and that is consistent with this Plan Amendment and other land use plans, may be considered during consultations and adopted.

Due to the amount of existing crested wheatgrass seeding done for fire rehabilitation. no significant increase in crested wheatgrass seedings in the planning area is proposed for mitigation.

BLM would prefer to employ the mitigation option outlined above, but if the proposed mitigation after consultation with the affected permittees cannot meet the criteria outlined above, two other options exist.

1. The reduction in active preference would be pro-rated among the permittees based on their current active preference. This would amount to a 44% reduction across the board.

Permittee	Preference AUM's Reduced
Kiely	310 (29317 from Allot.504)
Laird	196 (14454 from Allot. 507)
Anderson	162
McKee	135
	605

2. Any preference which cannot be moved under the provisions above would be cancelled.

These last two options would only be employed if the affected permittees were unwilling to accept mitigation which fit the criteria outlined above.

IMPACTS TO CULTURAL RESOURCES

Alternative No. 1: No Action, Maintain Present Situation

This alternative would lead to no change in the current situation affecting archeological resources in the planning area. Archeological resources would continue to be studied and protected by existing laws and management practices. Proposed actions would continue to be evaluated to ensure significant impacts would not occur to cultural resources. Some disturbance by vehicles, livestock, or vandals of archeological material at or near the surface would continue. Some sites would be exposed more rapidly in locations where vegetation removal accelerates erosion.

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

Two basic strategies to implement this alternative are being analyzed, a single pasture system with predetermined utilization levels and a multi-pasture rest-rotation system. As described in the Livestock Grazing impacts section, a 50-75 % reduction in livestock use would be required to implement either system.

(1) **Single pasture systems:** The primary impact would come from increased residual vegetation. To meet the wildlife habitat objectives of this alternative, at least 3 decimeters [approximately 12 inches) of residual cover must remain. This would substantially increase the vegetal ground cover, decrease the trampling of surface sites, and reduce the rate of erosion in exposing and scattering sub-surface sites. Taller and thicker vegetal cover would help conceal sites from illegal artifact collectors.

(2) Multi-pasture Rest-rotation Systems: The primary impacts are again associated with increased residual vegetation resulting from a system in which one or more pastures of an allotment are not used each year. The unused pasture(s) would have even taller residual vegetation than that resulting from the single-pasture system, increasing the level of beneficial impacts described for that system. Areas grazed in the rest-rotation system would have a level of utilization similar to Alternative 1, so no change in protection to cultural sites is expected. Use would be sequentially rotated through all pastures of the rest-rotation system alternating levels of protection. Due to fluctuation between static and increased protection to cultural resources, the long term benefit would be similar to the single-pasture system.

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

Four grazing systems are being analyzed for implementing this alternative (see Impacts to Vegetal Communities), and each would have a slightly different impact on the cultural resources of the planning area.

Winter Grazing: Only two of the ten allotments in the planning area are currently licensed for winter grazing (see Table V). Implementation of this system on the remainder would decrease the amount of disturbance to surface sites by livestock trampling because the soils would normally be frozen at the time of use. A more uniform utilization pattern would reduce livestock concentrations along shorelines, reducing the erosion damage to sub-surface sites along the banks. This system would make illegal collection of surface artifacts easier in the spring because there would be little vegetal concealment of the artifacts between the end of the grazing period and the onset of rapid plant growth (mid-May to mid-June). Overall, however, winter grazing would have beneficial impacts to the preservation and protection of cultural resources. By individual allotments, the anticipated impacts are as follows:

Allotments 222 **and 512** = no change

FRF Allotments (219,501,502,504,507) = slight to moderate beneficial changes, depending on the size of the allotment and the stocking rates, and also upon the degree to which the allotment is already being used after the growing season.

Allotment 212 = no change to a slight beneficial change in going from a rest-rotation to a winter grazing system.

Allotments 205 and 523 = moderate to major beneficial changes in going from deferred or season-long to winter grazing.

Rest-Rotation Grazing: Where the current grazing system is not winter grazing or rest-rotation, conversion to rest-rotation would increase vegetal cover in at least one pasture, increasing protection from erosion and illegal collection. The other pastures would have less residual vegetation and more intensive livestock use along banks and dunes. Again rotating use through the pastures would alternately provide increased protection and increased erosion compared to the present situation. Range improvement projects (seedings, wells, pipelines, etc.) that may be built to facilitate grazing systems would be subject to cultural clearances, but could affect cultural sites if there were unanticipated impacts.

Implementation of this system would lead to little, if any, additional protection of cultural resources in allotments already under winter or rest-rotation grazing (Allotments 219. 222, and 512). The practicality of this system may be questionable on FRF allotments, but if implemented would increase protection of cultural resource sites. This beneficial impact would also occur on Allotments 205 and 523.

Deferred and Deferred Rotation Grazing: Under these systems each pasture in an allotment is grazed every year, normally during or just after the growing season. For all allotments except those currently under winter or rest-rotation systems (212, 222, and 512), adoption of these systems constitutes no substantive change over current conditions with respect to the protection of cultural resources. Reduced residual vegetation would increase exposure to illegal collection. For Allotments 212, 222, and 512, these systems would decrease the level of protection for those resources. Livestock concentrations along shorelines would increase, leading to accelerated bank erosion and the resulting acceleration in exposure, trampling, and scattering of sub-surface sites.

Alternative No. 4: Maximize Wildlife Habitat; Exclude Conflicting Uses

This alternative would remove livestock grazing from the area and allow the maximum vegetal growth. This would eliminate trampling damage to surface and subsurface site components, reduce erosion rates at sites, and provide as much natural concealment of the sites as possible. Increased site concealment would make illegal artifact collection more difficult

Alternative No. 5: ACEC Designation

In focusing national attention on the designated area and the values it contains, designation could cause increased scientific investigation, interpretation, and understanding of local and regional pre-history.

Alternative No. 6: Proposed Action

The proposed action was developed by selecting among the alternatives presented to find the best mix of management directions for an allotment or portion of an allotment. Thus, the impacts to cultural resources would be the summation of those impacts discussed above for the alternative or alternatives selected. For additional clarity, the anticipated impacts, by allotment and alternative, are identified below:

Allotment 205	Excluded and restricted use areas	= impacts per Alt. 4.
	Grazed areas	= impacts per Alt. 1.
Allotment 212	Excluded areas	= impacts per Alt. 4.
	Grazed areas	=impacts per Alt. 1.
Allotment 219	Entire allotment	= impacts per Alt. 2.
Allotment 222	Excluded and restricted use areas	= impacts per Alt. 4.
	Grazed areas	= impacts per Alt. 1.
Allotment 501	Entire allotment	= impacts per Alt. 1.
Allotment 504	Entire allotment	= impacts per Alt. 2.
Allotment 507	Grazed portion	= impacts per Alt. 1.
	Ungrazed portion	= impacts per Alt. 4.
Allotment 512	Entire allotment	= impacts per Alt. 1.
Allotment 523	- Grazed portion	= impacts per Alt. 3.
	Ungrazed portion	= impacts per Alt. 4.
Unallotted	All parcels	= impacts per Alt. 4.
Acquired Lands (see Map 7)		
Parcel "A" Meadow Mgmt.Area (Acquired)		= impacts per Alt. 2.
Parcel "B" Core Wetland Area (Acquired)		= impacts per Alt. 4.
Parcel "C" Flagstaff Bench (Acquired)		= impacts per Alt. 3.

Other lands acquired within existing allotments would have impacts as discussed for the public lands currently within the allotment.

IMPACTS TO RECREATION

Alternative No. 1: No Action (Maintain Present Situation)

Adoption of this alternative would continue a downward trend in recreation activity quality in the areas surrounding the lakes in Allotments 523, 502 and 504. Increased levels of use are leading to sanitation problems on public and private lands and access denial to the public across private parcels is probable in the future Approval for easement acquisitions and/or cooperative management agreements with private landowners is not provided in the current land use plan. For analysis, current use is used as a baseline for comparison with changes resulting from the management alternatives (see Table IX).

TABLE IX: Annual **Recreation Use by Type and Alternative**

Alternative Number	Fishing	Hunting	Other	Total
1	6,000	5,200	800	12,000
2	6,000	6,700	3,800	16,500
3	6,000	3,500	500	10,000
4	6,000	7,200	5,300	18,500
5	6,000	7,200	5,300	18,500
6	6,750	7,200	5,300	19,250

Alternative No. 2: Primary Emphasis on Wildlife wtih Provisions for Other Uses

Easement acquisitions, cooperative management agreements, and land acquisitions would be allowable under this alternative, providing solutions to the recreation access problems, increasing recreation opportunities, and increasing available sites for needed facilities. Vegetation changes and increased wildlife populations, would improve scenic quality and sightseeing opportunities.

Hunting use would increase by 1,000 2,000 user days per year; individual and organized wildlife watching by 1,000 3,000; and other uses (educational, sightseeing, etc.) would increase by 1,000. With development of recreation management facilities, increased levels of use could be managed and accommodated white maintaining or improving recreational opportunities.

Alternative: No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

Recreation use management and facilities development could occur as discussed for Alternative 2. However, the area would not be suitable for intensive management for recreation. Increased livestock use would require additional livestock management facilities and would lead to a more grazed appearance with less vertical structure in the vegetation. Other resource projects could also contribute to altering the appearance of the area. These changes would reduce scenic quality and alter the aspects of recreation setting which are attractive to sightseeing and hunting users.Waterfowl numbers, concentration, and diversity would also be reduced as addressed in the wildlife section. The combination of changes would reduce the value of the area for birdwatching and waterfowl hunting.

It is estimated that these reductions in the quality of recreational opportunities would result in an overall reduction of 1,500 2,500 user days per year. This loss would come primarily in the hunting category of use. but declines in birdwatching, educational use, and general sightseeing also would occur.

Alternative No. 4: Maximize Wildlife Exclude Conlicting Uses

This alternative would have the same general consequences as discussed for Alternative 2. The principal difference between the two alternatives is the expected increases in recreational use. This alternative is expected to provide for an increase of 1,000 3,000 user days for hunting, 3,000 4,000 user days for bird and wildlife watching, and 1,000 user days for other recreational uses. Increases in hunting use are based on projected changes in waterfowl habitat. Similarly, bird and wildlife watching would improve with improved species diversity and numbers. The suitability of the area for recreational uses associated with educational pursuits would also be improved.

Alternative No 5: ACEC Designation

ACEC designation would increase visibility for the area, but no significant increase in use was projected based on this factor alone.

Alternative No. 6: Proposed Action

The impacts to recreation in any particular allotment through implementation of the Proposed Action would be as discussed above for the various alternatives, as selected for this alternative.

Easement acquisitions, cooperative management agreements, and land acquisitions would be allowable under the alternative, providing solutions to the recreation access problems, increasing

recreation opportunities, and increasing available sites for needed facilities. Vegetation changes and increased wildlife populations, would improve scenic quality and sightseeing opportunities.

Recreation use for hunting and sightseeing is expected to increase most under this alternative, due to the combination of facilities, increased wildlife use. and increased visibility through ACEC designation. Conservative estimates of changes in use were developed for this alternative. Hunter days would increase 1,000 - 3,000 user days for hunting, while fishing would increase about 750 (averaged for fluctuations in water level). Increases of about 3,000 4,000 user days for bird and wildlife watching, and 1,000 user days for other recreational uses are also expected.

Increases in hunting use are based on projected changes in waterfowl habitat, while increases in fishing would be based on improved facilities. Similarly, bird and wildlife watching would improve with improved species diversity and numbers. The suitability of the area for recreational uses associated with educational pursuits would also be improved.

This alternative is expected to have the most intensive facilities development of the alternatives. Development would only occur in a manner consistent with wildlife management objectives, and after cultural and botanical clearances. These facilities would allow for projected higher levels of use, while still solving existing public access and sanitation problems. They may also increase use by those who prefer the presence of some facilities.

The quality of vehicle access would be improved to interpretive sites, campsites, and boat launch areas. Random or duplicative vehicle tracks would be rehabilitated as use is established on improved routes. Trail access improvements would be designed and established in selected areas to facilitate use, consistent with other resource objectives of the alternative.

Facilities would be established at boat launch and campsite areas to handle human waste and harden the sites for more intensive use. Boat ramps would be established to reduce rutting and the use of multiple entry points as water levels and weather change. If use increases to a point requiring intensive facility development, those facilities would be developed off site, in less sensitive areas near the planning area.

IMPACTS TO LANDS AND MINERALS

Alternatives 1 and 3.

These alternatives would have no impact upon the lands or minerals programs.

Alternatives 2 & 4

These Alternatives would preclude land disposal, granting of rights-of-way for roads, pipelines and powerlines, mineral material sales, and surface occupancy for mineral leasing operations within wetland areas. The impact on the land disposal and right-of-way programs would be slight based on the lack of historical demand.

Impacts to possible future mineral lessees would be moderate due to no surface occupancy requirements on wetland areas. Some adjacent upland areas could also be inaccessible to the lessee. Given the lack of historical development and mixed pattern of uplands with the wetlands having no surface occupancy stipulations in leases, this is not a significant constraint.

Impacts to mineral material disposals in wetlands would be slight. Historical demand for these materials within the wetland areas has been low. If mineral leasing, exploration, and development were to take place, mineral materials from the planning area would be unavailable for road and drill pad construction. Other sites in the area would need to be used, possibly increasing haul distances.

Alternative 4 states that any operation having a cumulative net negative impact on the wildlife habitat of the upland or wetland areas would be prohibited. This could have a moderate negative impact upon mineral material disposal, as most deposits are located in the uplands. This element could also preclude rights-of-way, land disposal, and mineral leasing on uplands as well as wetlands if there is found to be a cumulative impact to wildlife resources.

Alternative 5

ACEC designation would have little direct impact upon the lands program. The demand for new roads and other rights-of-way in this area is low. Mineral leasing activities would be moderately impacted by an ACEC management plan that would implement the designation. Access would be limited by the "use of existing roads and ways only" requirement, and new road construction would be prohibited. Associated pipelines and powerlines necessary for development of the resource would also be restricted or prohibited. Impacts upon mineral material sales and mining would be slight.

Alternative 6: Proposed Action

Any impacts to the Lands and Minerals programs associated with the adoption of the Proposed Action would be as described above for the particular alternative chosen. The preceeding analysis indicated that any alternative chosen would have only a slight to moderate impact on selected portions of these programs.

IMPACTS TO THE SOCIOECONOMIC ENVIRONMENT

This section addresses those impacts which can be directly measured or estimated by economic activity. Social values which are not implied in economic transactions are not always reflected directly or completely in the economic data. Examples might include the impact of change on lifestyles, the value of habitat improvements along the Pacific Flyway, and the educational and scientific value tied to potential studies. The primary focus here is on the most direct and quantifiable socioeconomic impacts.

The primary sectors of the local (county) economy which potentially could be affected by the Proposed Action or alternatives are the farm (agricultural). retail, and service businesses in Lakeview and the Warner Valley. These impacts are reflected in the changes in household and business incomes. Changes in local government revenues also would occur.

The primary source used for the analysis is "Warner Lakes Plan Amendment Economic Analysis" by Frederick W. Obermiller and Alan R. Collins (unpublished, 1989). The paper is available at the Lakeview BLM office for review. Conservative assumptions were used for projected changes in recreation to derive expenditure amounts.

Impacts to livestock operations were evaluated based on projected changes in herd size, type of operation, number of stockers, and use of owned or purchased hay. A stocker is a cow or calf bought to utilize seasonally available forage above that which would be used by the base herd. Stockers are generally sold after the additional seasonally available forage is used. All livestock operations were assumed to operate based on existing preference.

Alternative No. 1: No Action (Maintain Present Situation)

Adoption of this alternative would maintain the present livestock grazing and recreation situation with no anticipated change in active grazing preference or recreation use. This alternative serves as a baseline to which the others may be compared. No significant economic changes from the present situation have been projected. Sea Tables VII and VIII.

Alternative No. 2: Primary Emphasis on Wildlife with Provisions for Other Uses

This alternative would require a reduction in licensed AUM's estimated at 50 to 75 percent of current use. A reduction in forage of 1720 AUM's was used for analysis. A total ranch level decline in financial return of $45,650 would be spread to nine operators in 10 allotments. The largest share of this impact would be borne by the five operators with the heaviest dependence on allotments in the planning area. Four of these five operators are permittees in the Warner Lakes Allotment (523).

The operations of some ranchers would be affected. One permittee is expected to go out of business and a second would reduce herd size. Total herd size would be reduced by an estimated 106 cattle and the second operator would convert hayland to irrigated pasture. Two permittees are expected to substitute purchased or owned hay to replace forage. The use of stockers is expected to drop by 86.

Hunting use, wildlife watching, and other recreation uses, would increase by a total of about 4,500 visitor days *over* use projected under Alternative 1. Based on expenditure patterns for similar uses in the State of Colorado and Douglas County, Oregon, an increase of $61.345 in recreation-related expenditures would occur.

Recreation expenditures in Lake County would increase by 67 percent. Increased local income would be derived mainly by businesses providing lodging, gasoline, food, and supplies for hunting, camping, and sightseeing. Businesses offering clothing related to the various uses would also be positively affected.

Government expenditures could increase by as much as 5100,000 per year as wildlife and recreation improvements are installed and maintained.

Social conditions would be affected in the Warner Valley by a shift in lifestyle The population in the valley is small enough that even though the number of permittees affected is small, the change would be noticable. Some operators would supplement their agricultural income by becoming involved with recreation use. Others may seek to relocate, or sell, all or parts of their operation because the impact is too large to absorb, or because they are not comfortable with the change.

The impacts projected are not significant to the economy of the county as a whole, although benefits or adverse impacts could occur to individuals, individual businesses, and some ranch operations. The farm sector of the local economy would decline slightly while other affected sectors of the local economy would be expected to benefit as shown in Table X. The greatest benefits would be derived by the recreation related businesses mentioned above.

TABLE X: Projected Increases in Annual Gross Income and Revenues Resulting from Changes in Expenditures under Alternative 2

sector	Value ($000)	Percent of Total Personal Income
Ranch Households	-26.9	-0.24
Other Households	+53.9	+0.07
Local Businesses	+104.8	
Local Government	+29.2	
Total: Lake County	+161.0	+0.17

Alternative No. 3: Primary Emphasis on Range Site Productivity for Livestock Grazing

This alternative would increase licensed AUM's by 735 over current use. A total ranch level increase in financial return of $4,420 would be spread to six operators in five allotments. Ranch operations would would maintain the same herd size but would increase the number of stockers by a total of about 122 animals to take advantage of increased forage availability Although revenues increase by about 543,050 under this alternative, increased costs would absorb almost 90 percent of the new revenues.

Declines in hunting use and other recreation uses would total about 2,000 visitor days compared with use projected under Alternative 1. A decline of $59,765 in recreation-related expenditures would occur. Recreation expenditures in Lake County would decrease by as much as 45 percent. Decreased local sales would mainly be incurred by businesses providing lodging, gasoline, food, hunter clothing, and supplies for hunting and camping.

Social conditions would not be significantly affected in the Warner Valley as no lifestyle changes are expected. No new government expenditures are projected.

The impacts projected are not significant to the economy of the county as a whole, although benefits or adverse impacts could occur to individuals, individual businesses, and ranch some operations. All affected sectors of the local economy would improve slightly as shown in Table XI. The greatest benefits would be to businesses serving agriculture.

TABLE XI: Projected Increases in Annual Gross Income and Revenues Resulting from Changes in Expenditures under Alternative 3

sector	Value (5000)	Percent of Total Personal Income
Ranch Households	3.1	0.02
Other Households	1.4	0.00
Local Businesses	**38.1**	
Local Government	**1.3**	
Total: Lake County	**43.9**	**0.04**

Typical potholes and channels adjacent to the Warner Lakes (photo by G. Baetjer).

Alternative No. 4: Maximize Wildlife Habitat; Exclude Other Conflicting Uses

This alternative requires total exclusion of all livestock grazing within the wetland amendment area, resulting in a direct decrease in active preference for the existing livestock permittees on any portion of an allotment within the planning area. The total forage loss would be 2,752 AUM's of BLM use, plus exchange of use.

A ranch level decline in financial return of $76,450 would be spread to nine operators in 10 allotments. The largest share of this impact would be borne by the five operators with the heaviest dependence on allotments in the planning area. Four of these five operators are permittees in the Warner Lakes Allotment (523).

Ranch operations would be affected. Total herd size would decline by 167. One permittee is expected to go out of business. Another would reduce herd size and convert hayland to irrigated pasture. One permittee would shift from a cow yearling to a split cow-calf/ cow-yearling operation and would truck to another location at an increased cost of $2.500. The remaining permittees would reduce herd size, reduce use of stockers, or substitute purchased or owned hay to replace forage. Total use of stockers would decline by 138.

Hunting use, wildlife watching, and other recreation uses, would increase by a total of 7,500 visitor days over use projected under Alternative 1. An increase of $113,690 in recreation related expenditures would occur.

Recreation expenditures in Lake County would increase by 95 percent. Increased local income would be derived mainly by businesses providing lodging, gasoline, food, and supplies for hunting, camping, and sightseeing. Businesses offering clothing related to the various uses would also be positively affected.

Government expenditures could increase by as much as $100,000 per year as wildlife and recreation improvements are installed and maintained.

Social conditions would be affected in the Warner Valley by a strong shift in lifestyle. Some operators would supplement their agricultural income by becoming involved with recreation use. In some cases the necessity to shift into a recreation-related business would be compelling due to declines in agricultural income. Some livestock operators would seek to relocate, or sell, all or parts of their operation because the impact is too large to absorb, or because they are not comfortable with the change.

The impacts projected are not significant to the economy of the county as a whole, although significant benefits or adverse impacts could occur to individuals, individual businesses, and some ranch operations. The farm sector of the local economy would decline slightly while other affected sectors would be expected to benefit (as shown in Table XII). This alternative causes the greatest adverse impacts to the ranch households affected. Benefits are fairly evenly spread to other households, recreation related businesses, and local government.

TABLE XII: Projected Increases in Annual Gross Income and Revenues Resulting from Changes in Expenditures under Alternative 4

Sector	Value ($000)	Percent of Total Personal Income
Ranch Households	-56.7	-0.51
Other Households	+44.9	+0.05
Local Businesses	+38.3	
Local Government	+26.9	
Total: Lake County	• 3.4	**+0.06**

Alternative No. 5: ACEC Designation

By itself, this alternative would have no impact on the socioeconomic environment, other than it would increase the management emphasis placed on the area. This could increase recreation demand over the long term. Where the designation is proposed, the impacts would otherwise be as discussed for the other alternative proposed as a part of the designation.

Alternative No. 6: Proposed Action

This alternative would not change licensed AUM's from current use, although it would move AUM's outside the planning area. For analysis purposes, no change in use is assumed but a" increase in transportation costs is implied. A range of ranch level impacts is expressed to reflect variable outcomes in finalizing the proposed mitigation with livestock operators.

A ranch level increase in financial return of up to $8,261 would be spread to five operators in five allotments. Four of these five operators are permittees in the Warner Lakes Allotment (523).

Changes in ranch operations would occur with conversion of summer forage to winter forage, when mitigated. Herd sizes and the use of stockers would remain at current levels while fed hay requirements would be reduced. Trucking costs could increase by about $2,500 in one operation. One permittee is likely to convert to a cow-calf operation. Overall revenue declines would be smaller than cost declines, so financial return to the ranchers would improve.

Increases in hunting use, wildlife watching. and other recreation uses, total about 8,250 visitor days over use projected under Alternative 1. An increase of $113,690 in recreation-related expenditures would occur. Recreation expenditures in Lake County would increase by 95 percent. Increased local income would be derived mainly by businesses providing lodging, gasoline, food, and supplies for hunting, camping, and sightseeing. Businesses offering clothing related to the various uses would also be positively affected.

Government expenditures could increase by as much as $100,000 per year as wildlife and recreation improvements are installed and maintained.

Social conditions would be affected in the Warner Valley by a shift in lifestyle. with increased use of the valley by others. Some operators would supplement their agricultural income by becoming involved with recreation use. Others may seek to relocate, or sell, all or parts of their operation because they are not comfortable with the change.

The impacts projected are not significant to the economy of the county as a whole, although benefits could occur to individuals, individual businesses, and some ranch operations. All affected sectors of the local economy would be expected to benefit as shown in Table XIII. This alternative is the most beneficial to ranch households, other households, local government, local businesses, and Lake County as a whole.

TABLE XIII: Projected Increases in Annual Gross Income and Revenues Resulting from Changes in Expenditures under Alternative 6

sector	Value ($000)	Percent of Total Personal Income
Ranch Households	+27.1	+0.24
Other Households	+80.0	+0.10
Local Businesses	+269.3	
Local Government	+33.4	
Total: Lake County	**+351.6**	**+0.38**

CHAPTER V

List of Preparers

Name	Primary Responsibility	Discipline
Rick Breckel	Range	Range Management
Bill Cannon	ACEC. Cultural	Archeology
Walt Devaurs	Team Leader, Wildlife	Wildlife Biology
Jim Kenna	Editor, Economics	Multiple Resources
Virginia King	Vegetation	Botany
Joe Kraayenbrink	Range	Range Management
Ala" Munhall	Soils, Water, Wildlife	Wildlife Biology
Clint Oke	Range	Range Management
Dennis Simontacchi	Land, Minerals	Geology
Renee Snyder	NEPA Compliance	Environmental Coord.
Doug Troutman	Recreation	Recreation Management

AGENCIES AND ORGANIZATIONS CONTACTED OR CONSULTED

The Plan Amendment team contacted or received input from the following organizations during the development of the Plan Amendment:

Audubon Society of Portland
Oregon Department of Fish and Wildlife
Oregon State University
Oregon Division of State Lands
U.S. Fish and Wildlife Service
Oregon State University Extension Service
Lakeview District Grazing Advisory Board
Lakeview District Multiple-Use Advisory Council
The Nature Conservancy
Lake County Commissioners
Lake County Chamber of Commerce
Lake County Clerk
Lake County Planning Department
Grazing permittees in the planning area
The Warner Valley Association

CHAPTER VI

List of Agencies, Organizations and Persons to Whom Copies of This Document Are Sent

FEDERAL AGENCIES

U.S. Army Corps of Engineers
U.S.Environmental Protection Agency
U.S.D.A. Forest Service
U.S.D.A. Soil Conservation Service
U.S.D.E. Bonneville Power Administration
U.S.D.I. Bureau of Mines
U.S.D.I. Bureau of Reclamation
U.S.D.I. Fish and Wildlife Service
U.S.D.I. Geological Survey
U.S.D.I. National Park Service

STATE and LOCAL GOVERNMENT

Lake County Commissioners
Lake County Planning Department
Oregon
- Clearinghouse, Executive Department A-95, Intergovernmental Relations Division
- Department of Agriculture
- Department of Economic Development
- Department of Energy
- Department of Environmental Quality
- Department of Fish and Wildlife
- Department of Forestry
- Department of Geology and Mineral Industries
- Department of Land Conservation and Development
- Department of Transportation
- Department of Water Resources
- Division of State Lands
- Historic Preservation Officer
- State Library

Suprise Valley Northern Paiute Tribal Committee

INTEREST GROUPS and ORGANIZATIONS

1000 Friends of Oregon
Advisory Council on Historic Preservation
American Fisheries Society
AMOCO Production Company
Association of Oregon Archeologists
Association of Oregon Counties
Cascade Holistic Economic Consultants
Defenders of Wildlife
Desert Trail Association
Friends of the Earth
High Desert Museum
Izaak Walton League
League of Oregon Cities
League of Women Voters
Mazamas
Natural Resources Defense Council
National Wildlife Federation
Native Plant Society of Oregon
Northwest Environmental Defense Center
Northwest Federation of Mineralogical Societies
Northwest Mineral Prospectors Club
Northwest Mining Association
Northwest Petroleum Association
Northwest Power Planning Council
Oregon Cattlemen's Association
Oregon Council of Rock and Mineral Clubs
Oregon Duck Hunter's Association
Oregon Farm Bureau Federation
Oregon Environmental Council
Oregon Hunter's Association
Oregon Natural Heritage Program
Oregon Natural Resources Council
Oregon Sportsman and Conservationist
Oregon Trout
Oregon Sheep Growers
Oregon Wildlife Federation
Pacific NW 4 Wheel Drive Association
Public Lands Restoration Task Force
Sierra Club
Society for Range Management
The Nature Conservancy
The Warner Valley Association
The Wilderness Society
The Wildlife Society
Wildlife Management Institute

Approximately 200 additional individuals and organizations who have expressed an interest in use and management in the planning area were also sent copies of the proposed Plan Amendment. Included in this group are all grazing permittees within the Resource Area, members of the Oregon legislature. U.S. Congressional delegation, various educational institutions, and the local and state news media.

In addition, this document will be available for public inspection at all BLM offices in Oregon. It will also be sent to the Lake County Library in Lakeview, Oregon, and the Klamath County Library in Klamath Falls, Oregon.

GLOSSARY

Active Preference:
Portion of the grazing preference that is available for use. Active preference combined with suspended non-use equals total preference.

Allotment: An area of land designated and managed for grazing of livestock.

Animal Unit Month(AUM): The amount of forage necessary for the sustenance of one cow or its equivalent for a period of one month.

Association: (as plant or vegetal association]- a major unit in ecological community organization characterized by essential uniformity and usually by two or more dominant species.

Authorized Use: The total number of animal unit months of livestock authorized by permit or license to graze on public lands for each permittee.

Base Property: Land that has the capability to produce crops or forage that can be used to support authorized livstock for a specified period of the year.

Class of Livestock: Age and/or sex groups of a kind of livestock.

Climax: A relatively stable stage or community, especially of plants, that is achieved through successful adjustment to an environment.

Common Allotment: A grazing allotment which is used by more than one permittee.

Community: (as a plant community)- An interacting population of various species in a common location.

Disclimax: A relatively stable ecological community often including kind?. of organisms foreign to the region and displacing the climax because of disturbance, especially by man.

Deferred Grazing: Postponement of grazing for a stated period of time, usually until after seed ripening of the primary forage species; utilization does not normally exceed 60%

Deferred Rotation Grazing: Deferral of grazing in a particular pasture rotating through a sequence whereby it would be grazesd early one year, after seed ripe the next, during the growing season the third year, etc.: this differs from Rest Rotation in that there is no year-long rest provided for any pasture; utilization does not normally exceed 60%

Emergent Communities: Plant communities characterized by species rooted in soils usually submerged by water, with vegetative andior reproductive plant parts growing through the water into the air. Examples: cattails, bulrush, bur-reed.

Exotic Species: Non-native species, introduced into a community by some direct or indirect human action. Examples: cheatgrass brome, tumble mustard, Russian knapweed.

Federal Range **Fenced (FRF):** Small tracts of public land fenced into pastures, usually with large amounts of private land; usually licensed for the grazing capacity of the public land without regard to livestock numbers, class, or season of use.

Forage: All browse and herbaceous foods that are available to grazing animals.

Grazing Preference: The total number of animal unit months of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee.

Grazing System: A systematic sequence of grazing treatments applied to an allotment to reach identified multiple-use goals or objectives by improving the quality and quantity of the vegetation.

Invader Species: Native species colonizing a disturbed community of which they are not a natural component.

Licensed Use: Active use AUM's that a permittee has paid for during a given grazing period.

Livestock or Kind of Livestock: Species of domestic livestock - cattle, sheep, horses, burros and goats.

Livestock Grazing Capacity: The estimated number of animal unit months of forage available for livestock grazing on a sustained yield basis.

Monitoring: The orderly collection of data to evaluate: (1) Effects of management actions; and (2) Effectiveness of actions in meeting management objectives.

Multiple Use: The management of public lands and their various resource values so that they are utilized in a combination that will best meet the present and future needs of the American people: making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic ajustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

One-hundred Percent Visual Obscurity: The height at which all portions of a reference or measuring rod (Robel Pole] is totally hidden by vegetation, usually measured in decimeters.

Permittee: One who holds a permit to graze livestock on public lands.

Public lands: Any land and interest in land outside of Alaska owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, except lands held for the benefit of Indians.

Range Site: A distinctive kind of rangeland that differs from other kinds in its ability to produce a characteristic natural plant community

Rest Rotation Grazing: Each pasture in an allotment sequentially receives a full year of rest from grazing: utilization does not normally exceed 60%.

Seral Stage: One of a series of biotic communities that follow one another in time on any given area. Seral community is synonymous with seral stage, successional community, and successional stage.

Site Potential Climax Community: That climax community which could develop in a specific area under existing natural ecological parameters; i.e. without direct or indirect human disturbance.

Structural Diversity: Differing spatial elements or components of a community aligned vertically.

Succession: The orderly process of community change; it is the sequence of communities which replace one another in a given area.

Temporary Nonrenewable License: Authorization for forage which is temporarily available, above active preference, on an allotment basis. Use is authorized provided it is consistent with multiple use objectives for the allotment.

Trailing: Moving livestock from one destination to another on public lands within a specific time frame.

Utilization: The proportion or degree of currant years forage or browse production that is consumed or destroyed by animals (including insects). May refer either to a single plant species, a group of species, or to the vegetation as a whole. Utilization is synonymous with use.

Vegetation: Plants in general, or the sum total of the plant life above and below ground in an area.

Vegetation Community: A plant community with distinguishable characteristics.

Vegetation Manipulation: Alteration of vegetation by fire, mechanical, chemical or biological means to meet management objectives.

Vigor: Relates to the relative robustness of a plant in comparison to other individuals of the same species. It is reflected primarily by the size of a plant and its parts in relation to its age and the environment in which it is growing.

Winter Grazing: A form of deferred grazing in which all use occurs after plant dormancy in the winter; utilization does not normally exceed 65%.

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Appendix I: PLANT COMMUNITIES

1. Big sagebrush-Black greasewood

This community is located on pediments and terraces having soils of the Loftus Series. The terrain is gently hilly and the soil surface is dry and covered with numerous small rocks. The major components of this community and the constancy (% frequency) of their occurrance in sample plots are as follows: Big sagebrush (17%), Black greasewood (9%), Gray rabbitbrush (3%), Shadscale saltbush (1%). Bottlebrush squirreltail (2%), Cheatgrass brome (36%). Clasping pepperweed (15%), Tansymustard (11%). Pahute weed (2%).

2. Black greasewood-Shadscale saltbush/Alkali saltgrass-Basin wildrye

This community covers the higher ground surrounding internally drained basins and playas. Soils are of the Lofftus Series, with nearly level to slightly rolling topography and a dry slightly cracked ground surface. The major components and sample plot constancy (% frequency) are as follows: Black greasewood (95), Shadscale saltbush (15%). Big sagebrush (7%), Green rabbitbrush (4%), Alkali saltgrass (33%), Basin wildrye (13%), Bottlebrush squirreltail (24%), Cheatgrass brome (17%), Clasping pepperweed (44%), and Tansymustard (11%).

3. Black greasewood-Shadscale saltbrush-Big sagebrush/ Alkali saltgrass

This community was also found on the higher ground surrounding internally drained basins and playas. Soils are of the Lofftus Series, with numerous small and large surface rocks and a gently rolling terrain. The major components and sample plot constancy (% frequency] are as follows: Black greasewood (15%), Shadscale saltbush (13%), Big sagebrush (9%), Gray rabbitbrush (10%), Alkali saltgrass (28%), Bottlebrush squirreltail (14%). Cheatgrass brome (6%).

4. Black greasewood/Alkali saltgrass

This community is located on the high ground surrounding playas, with soils of the more alkaline Scherrard Series. The topography is nearly level and the ground surface heavily cracked. Several seral stages of this community were found, intergrading into the Alkali saltgrass community described below, apparently in response to fluctuating soil saturation levels during the growing season. Major components as follows: Black greasewood (12%), Alkali saltgrass (56%). Meadow barley (16%). Cheatgrass brome (2%). Rabbitfoot polypogon (2%), Borax weed (18%), clasping pepperweed (23%), Red goosefoot (2%), and Tansymustard (7%).

5.Black greasewood/Alkali saltgrass-Nuttall alkaligrass-Creeping wildrye

This community was found on nearly level lands surrounding some of the larger lakes and ponds of the internally drained basin. Soils are of the Sherrard Series, but the sites were more mesic than the Black greasewood/Alkali saltgrass communities due to the proximity to water. Major components as follows: Black greasewood (7%), Alkali saltgrass (48%), Bottlebrush squirreltail (28%), Nuttall's alkaligrass (7%). Creeping wildrye (16%), Clasping pepperweed (69%), red goosefoot (28%). Pahute weed (11%) and Tansymustard (7%).

6. Alkali saltgrass

This community occupies the land adjoining and surrounding many of the playas and shallower ponds of the internally draining basin system. Soils are of the Crump-Pitt Series. with a nearly level topography containing many shallow depressions. The component elements of this community, excepting Alkali saltgrass, were variable site-to-site. reflecting ecological adjustments to constantly varying environmental conditions. Study averages for major components as follows: Alkali saltgrass (95%), Foxtail barley (27%), Bottlebrush squirreltail (3%), Plagiobothrys (10%) Spikerush (2%), and Goosefoot (2%).

The following group of plant communities form a highly complex, often intergrading, vegetal mosaic on the permanently moist to saturated soils at the edges of the sloughs, channels, ponds and marshes. Many of the environmental factors and micro-habitat determinents for specific community dominance on a given site have not been determined as yet. They do, however, in a natural state, have a commonality in being able to migrate remarkable distances year to year in response to fluctuating water levels. Which, in large part leads to the nearly w-mappable complexity of the associations (i.e., last years water edge community may be several feet above or below this years waterline with resultant partial replacement of unadaptable community components).

7. Alkali saltgrass - Baltic rush

Major components and sample plot constancy (% frequency) as follows: Alkali saltgrass (95%), Baltic rush (56%), Seacoast bulrush (1 1%), Foxtail barley (33%). alkali bluegrass (19%), and up to twelve additional grass and forb species ranging from 0.2 to 2.5 percent frequency.

9. Alkali saltgrass-Borax weed-Nuttal's alkaligrass

A minor community which may, or may not, be an intermediate form of another described association, with major components as follows: Alkali saltgrass (100%) Borax weed (83%), Nuttall's alkaligrass (37%), Pahute weed (63%), Deeproot (37%), Saltwort (32%), and Creeping wildrye (19%).

9. reeping wildrye - Alkali saltgrass

Major components: Creeping wildrye (88%), Alkali saltgrass (53%) and a highly variable array of up to twenty additional grass, sedge and forb species.

10. Creeping wildrye - Baltic rush

Major components: Creeping wildrye (88%). Baltic rush (80%),. saltwort (45%), and as many as thirty-five additional grass, sedge, and forb species.

11. Creeping wildrye - Baltic rush - Seaside arrowgrass

Major components: Creeping wildrye (95%), Baltic rush (79%) Seaside arrowgrass (69%), Saltwort (50%), meadow barley (81%), and up to fifteen additional grass, sedge and forb species.

12. Baltic rush - Common silverweed - Creeping spike-rush

Major components: Baltic rush (99%), Common silverweed (81%), Creeping spikerush (59%), Common bur-reed (4%), and an additional eighteen grass sedge and forb species.

13. Baltic rush - Nevada bluegrass

Found on constantly wet sites, such as Foskett and Dace Springs marshes of Coleman Lake. Major components: Baltic rush (96%). Nevada bluegrass (51%). Creeping spikerush (61%), sedge species (18%), and twelve additional grass and forb species of minor importance.

14. Creeping spikerush-Narrowleaf water plantain

Found on areas regularly flooded during most of growing season, as in the unchannelled overflow zone between Greaser Reservoir and Crump Lake. Major components: Creeping spikerush (100%) Narrowleaf water plantain (29%), Dock (18%), and several Goosefoot species (9%).

15. Creeping spikerush - Baltic rush - Sedge

Major components: Creeping spikerush (97%) Baltic rush (90%), and two sedge species (99%).

Appendix II: Scientific Names of Plant Species Referred to in Text

(GRASSES)	
Alkali bluegrass	Poa juncifolia
Alkali saltgrass	Distichlis stricta
Basin wildrye	Elymus cinereus
Bottlebrush squirreltail	Sitanion hystix
Creeping wildrye	Elymus triticoides
Foxtail barley	Hordeum jubatum
Meadow barley	Hordeum pusillum
Nevada bluegrass	Poa nevadensis
Nuttall's alkaligrass	Puccinellia nuttalliana
Rabbitfoot polypogon	Polypogon monspeliensis
(RUSHES AND SEDGES)	
Baltic rush	Juncus balticus
Broadleaf cattail	Typha latifolia
Common bur-reed	Sparganium sp.
Creeping spikerush	Eleocharis palustris
Hardstem bulrush	Scirpus acutus
Narrowleaf cattail	Typha anqustifolia
Seacoast bulrush	Scirpus maritimus
Sedge	Carex sp.
Spikerush	Eleocharis sp.
(FORES)	
Borax weed	Nitrophila occidentalis
Clasping pepperweed	Lepidium perfoliatum
Deeproot povertyweed	Iva axillaris
Dock	Rumex sp.
Goosefoot	Chenopodium sp.
Narrowleaf water plantain	Alisma gramineum
Pahute weed	Suaeda depressa
Plagiobothrys	Plagiobothrys sp.
Red Goosefoot	Chenopodium rubram
Saltwort	Glaux maritima
Seaside arrowgrass	Triglochin maritima
Tansymustard	Descrurainia sp.
Waterweed	Elodea sp.
Wigeongrass	Ruppia sp.
(SHRUBS)	
Big sagebrush	Artemisia tridentata
Black greasewood	Sarcobatus vermiculatus
Gray rabbitbrush	Chrysothamnus nauseosus
Green rabbitbrush	Chrysothamnus viscidiflorus
Shadscale saltbush	Atriplex confertifolia

Appendix III: PUBLIC INVOLVEMENT

A notice was published in the Federal Register and local news media in May 1987 to announce the formal start of the MFP Amendment/EA process. At that time a brochure was sent to the public to ask for assistance in further identification of issues within the planning area.

On May 26, 1988 a notice of document availability was published in the Federal Register and in the local news media for the Draft Warner Lakes Plan Amendment/EA for Wetlands and Associated Uplands. Approximately 600 copies of the Draft MFP Amendment/EA were mailed to interested agencies, organizations and individuals. A total of 297 comment letters and 73 copies of a form letter were received.

Public meetings were held in Lakeview and Portland on July 19 and 21, 1966. Informal presentations were made upon request to local organizations such as the Lake County Chamber of Commerce, the Lakeview District Multiple-Use Advisory Council and Grazing Advisory Board, Oregon Hunter's Association and the National Audubon Society. etc.

A. Public Comment Review

In preparing this review, all comment letters were read to determine if there were any major groupings that could be made for analysis, and then they were reread for specific details and content. Only two themes occurred with regularity: support for the Plan Amendment and/or its objectives, or opposition to the proposal. There did not seem to be any middle ground.

The complexity of the preferred alternative, with respect to the number of allotments involved and the array of alternatives presented, seems to have confused a number of readers. For example, many comments voiced support for adopting Alternatives 4 and 5 for a particular allotment, apparently not realizing that this is exactly what Alternative 6 (Preferred Alternative) stated. Similarly, a number of comments were opposed to changing the current MFP or were against any Bureau action that would impact the local livestock interests or economy. This, in essence, is Alternative 1 (No Action). To compensate for this apparent confusion, comments in support of Alternative 4, Alternatives 4 and 5. and the Preferred Alternative were combined for analysis, as these alternatives provide essentially the same management guidance. Conversely, comments opposed to management changes or in favor of Alternative 1 were combined for analysis because they too provide like management guidance.

1. Public Comment Content Analysis

Of the individuals commenting, 70% (236) expressed support for Alternative 4, Alternative 4 and 5, the Preferred Alternative, or for the objectives of those alternatives without reference to a specific alternative number. One hundred and thirty of these commentors cited a specific reason or reasons why they supported this management scheme: 88 supported protecting and/or enhancing public wetlands because of the general loss and degredation of wetlands throughout the country; 72 mentioned livestock impacts as a contributing factor to productivity losses in wetlands; and 39 considered the Warner Valley wetlands to have national or regional significance.

Ninety-three individual commentors (28%) expressed opposition to any change in the existing MFP, support for Alternative 1, and/or generalized opposition to any Bureau action impacting grazing permittees. Seventy of these comments were received on a form letter, 43 of which carried no return address, and 32 of which had comments in addition to those pre-printed on the form. Concern that the Plan Amendment would have adverse economic impacts to Lake County schools, the community in general, public land users, and the local livestock industry was cited by all of these commentors as their reason for opposing the Plan Amendment. Additionally, eight commentors, either directly or by reference to other submitted comments, considered the Plan Amendment to be flawed by erroneous data, improper interpretation of that data, and/or personal and professional bias on the part of those preparing the plan.

The remaining nine comments (2%) had no particular commonality of focus. Three were a series of questions, two were editorial reviews of the document without stating an opinion, two offered suggestions on how the planning process should have been conducted, and the final two were undecipherable.

A total of 25 individual commentors presented opinions on the future management of lands acquired with LWCF monies. All were opposed to allowing livestock grazing on those lands.

Of the 30 comments received from groups. organizations, and governmental agencies, 73% (23) expressed support for Alternative 4, Alternatives 4 and 5, or the Preferred Alternative. Eighteen commentors provided a specific reason or reasons for this: 11 supported protecting or enhancing public wetlands because of their value as wildlife habitat, aquifer recharge

areas, and/or the general decline in quantity and quality of wetlands throughout the country; 8 mentioned livestock impacts as a contributing factor in the loss of natural productivity in wetlands; and 14 considered the wetlands of Warner Valley to have national or regional significance. Seven commentors were opposed to grazing lands that might be acquired with LWCF monies.

Three comments (10%) received from groups and organizations were opposed to changing the existing MFP or taking any action adversely impacting livestock interests. Concern that the Plan Amendment would impact the local economy, other public land users, and that the amendment was unnecessary and seriously flawed were the main reasons given for their opposition.

Two of the agency comments delt with editorial and content problems with the Plan Amendment, without making comments specific to any particular alternative. One commentor requested additional information and the final commentor stated that the preferred alternative would have no impacts on water resources.

2. Demographic Analysis of Public Comments

Only the comments received from individuals were analyzed for demographic distribution. The main or headquarters office location of the groups, organizations and agencies commenting has little relationship to the distribution of their various memberships. Of the individual comments received, 80 had no return address or an unreadable return address and could not be used in determining the distribution.

Two hundred and sixty usable comments were received from 57 Oregon cities and towns. Fifty-eight percent (145) of these came from northwestern Oregon, 16% from central Oregon, 13% from southeastern Oregon, 8% from southwestern Oregon, and the remaining 3% from northeastern Oregon. Comments were also received from four states other than Oregon; 5 from Washington, 4 from California, 2 from Utah, and 1 from Colorado.

B. Public Comment Issues

Based on the comment analysis described above, the following issues were w-evaluated by the preparing multiple resource team, with results as described as follows:

1. **Management Emphasis**

Summary: The majority of the commentors felt the area needed to be managed with primary emphasis placed on enhancement of the wetland habitat for wildlife.

Response: The proposed action includes this management for most of the planning area. Particular attention was directed to ensure the most important and productive habitat areas would be managed with enhancement of wildlife habitat as the primary objective.

2. Management of Acquired Lands

Summary A number of commentors wanted clarification on management of any private lands which are purchased with Land and Water Conservation Funds. Most of these were also opposed to grazing any of those lands.

Response: Lands acquired within an area which has been identified for management under the guidelines of one of the Plan Amendment alternatives, would be managed under those same guidelines.

3. Range and Habitat Condition

Summary: Some felt no grazing should be allowed on lands in poor or fair condition. Others felt range condition was improperly used in the Draft Plan Amendment.

Response: Range condition is not always a direct reflection of use. It is also affected by ecological potential and the ability to produce forage. There was apparent confusion between range and habitat condition among commentors. Range condition has been dropped as an element of the plan amendment. Habitat condition was retained, but is not directly related to range condition.

4. Economic Effects

Summary The economic effects of implementing the Plan Amendment were another concern. Several individuals expressed the opinion that Lake County could not afford the loss of the property tax base which would occur upon acquisition of private lands by the federal government. Others were of the opinion that the changes proposed in the grazing permit&es operations would force them out of business. Another viewpoint expressed was that there would be substantial benefits to the local economy due to an increase in recreation activity and tourism once the plan is implemented.

Response: A study by Oregon State University was prepared to address these concerns. Analysis has been added to show how social and economic concerns relate to each of the alternatives.

5. Grazing Mitigation

Summary The lack of specificity of the grazing mitigation measures was a large point of concern for a number of individuals

Response: Additional information was added to explain the available options for mitigation of existing livestock use.

6. Livestock as a Tool for Wildlife Habitat Objectives

Summary: Some felt the use of livestock grazing for wildlife habitat manipulation and improvement should not be dismissed.

Response: Livestock were identified as an appropriate tool where BLM expected it could meet the identified wildlife objective for a specified area. However, it is not expected to be an applicable tool to meet wildlife habitat objectives in all areas.

7. Map 2, Land Ownership and Grazing Allotments

Summary: Map 2 was difficult to interpret for some readers and some mistakes were found in the land status.

Response: Map 2 has been changed to improve clarity and readability

6. Division of State Lands Concerns

Summary: The Division of State Lands (DSL) expressed concern about planning area boundaries and the effect of proposed management on the State land use program. DSL proposed boundary changes and an exchange to solve management conflicts in areas of mixed ownership.

Response: Map 2 has been modified in response to DSL concerns, without effect to BLM administered areas. Language was added to clarify that the Plan Amendment applied to BLM administered lands. BLM has identified federal lands for consideration during exchange negotiations, providing such an exchange would improve the quantity or quality of federal wetlands ownership and can meet the Plan Amendment objectives which apply.

9. Recreation permitting

Summary: There was a request to clarify when a permit was needed for recreational use.

Response: Special recreation permits are required for commercial use, competitive use. special areas, and off-road vehicle events involving 50 or more vehicles.

Commercial use is recreation use of public lands for financial gain. Competitive use is any formally organized use or event involving two or more competitors. Special permit areas are designated by BLM in the Federal Register. More information is available at BLM offices. Permitted recreation has generally not occurred in the planning area in the past, but may in the future.

C. Lakeview District Grazing Advisory Board
The September 12,1988, meeting of the Lakeview District Grazing Advisory Board discussed and considered the issues involved in the proposed Plan Amendment At this meeting, the following resolution was drafted and adopted:

"Whereas the Warner Valley wetlands are good wildlife habitat; and,

Whereas livestock have et times had a negative impact on this habitat; and,

Whereas properly managed grazing systems have been proven to enhance wildlife habitat;

Therefore, the Grazing Board recommends that grazing not be excluded from the Warner Valley Wetlands.

Further, the Board urges the continuation of the coordinated meetings to bring all interested parties together and arrive at a solution."

D. Lakeview District Multiple-Use Advisory Council
At their September 29.1998 meeting, the Lakeview District Multiple-Use Advisory Council discussed the issues of concern for the Plan Amendment and passed the following resolution:

"Whereas, the Warner Valley Wetlands encompass many desirable natural resources, including wildlife habitat,

"Whereas, previous management plans have at times had a negative impact on this habitat; and

"Whereas, properly managed grazing systems have been proven to enhance wildlife habitat;

"Therefore, the Multiple-Use Advisory Council recommends that grazing management not be excluded from the Warner Valley Wetlands.

"Further, the Council urges the continuation of the coordinated meetings to bring all interested parties together and arrive at a recommendation for the Lakeview BLM District Manager."

E. Warner Valley Working Group
The third and final meeting of this informal working group was held on November 28, 1988, at which time a goal and a series of three objectives for consideration by the District Manager were adopted. The group was composed of State and local goverment representatives. university representatives, ranchers, and some conservation representatives. The goal and objectives were:

"Goal Statement: Public lands in the Plan Amendment area are to be managed with primary emphasis on wildlife, with consideration for other uses.

Working Group Objectives
"1. Appropriate to subdivide planning area into ecological subunits using a 'rule-of-thumb' approach.

2. BLM to manage for the complexities utilizing the expertise of Federal, State, and interested parties.

3. BLM will make a major effort to provide appropriate AUM mitigation without en adverse impact on dependent livestock operators."

Ongoing Public Participation
The public will have a continuing opportunity to participate in the amendment process. Records of public involvement activities, correspondence and results are located in the files at the Lakeview District Office and are available for public inspection during normal working hours.

Appendix IV: WILDLIFE SPECIES SEASONAL USE AND ABUNDANCE

(BIRDS)	Seasonal Use&Abundance *				Breed/ Nest
Species	Spring	Summer	Fall	Winter	in area
Common Loon	R	X	X	X	NO
Western Grebe	C	C	C	C	Yes
Eared Grebe	C	U	U	R	Yes
Pied-Billed Grebe	U	U	U	R	Yes
American White Pelican	C	C	C	X	Yes
Double-crested Cormorant	C	C	C	X	Yes
Tundra Swan	C	X	C	U	NO
Canada Goose	C	C	C	C	Yes
White-Fonted Goose	U	X	U	X	NO
Snow Goose	c	X	C	C	NO
Ross' Goose	R	X	R	X	NO
Mallard	C	C	C	C	Yes
Northern Pintail	C	U	C	U	Yes
Gadwall	C	C	C	C	Yes
American Widgeon	C	U	C	U	Yes
Northern Shoveler	U	U	U	U	Yes
Blue-winged Teal	U	U	U	U	Yes
Cinnamon Teal	c	C	U	X	Yes
Green-winged Teal	U	U	U	U	Yes
Wood Duck	R	X	R	X	NO
Redhead	U	U	U	U	Yes
Canvasback	C	U	U	U	Yes
Ring-necked Duck	C	R	R	X	NO
Lesser Scaup	U	U	U	U	Yes
Common Goldeneye	C	R	R	X	NO
Barrow's Goldeneye	U	X	U	X	NO
Bufflehead	c	C	C	X	No
Ruddy Duck	C	C	C	X	Yes
Common Merganser	C	U	U	X	Yes
Hooded Merganser	R	X	R	X	NO
Turkey Vulture	U	C	C	X	Yes
Cooper's Hawk	U	U	U	U	Yes
Sharp-shinned Hawk	U	U	U	U	Yes
Northern Harrier	c	C	C	C	Yes
Rough-legged Hawk	U	X	U	C	No
Ferruginous Hawk	R	R	R	R	NO
Red-Tailed Hawk	C	C	C	C	Yes
Swainson's Hawk	U	U	U	X	Yes
Golden Eagle	C	C	C	C	Yes
Bald Eagle	U	R	U	C	NO
osprey	R	R	R	X	NO
Peregrine Falcon	R	R	R	R	NO
Prairie Falcon	U	C	C	U	Yes
Kestrel	C	C	C	C	Yes
California Quail	c	C	C	C	Yes
Chukar	c	C	C	c	Yes
Gray Partridge	R	R	R	R	Yes
Ring-necked Pheasant	U	U	U	U	Yes
Great Egret	U	U	U	X	Yes
Snowy Egret	U	U	U	X	Yes
Great Blue Heron	C	C	C	R	Yes
Black-Crowned Night Heron	c	C	C	R	Yes

Species	Seasonal Use & Abundance *				Breed/ Nest in area
	Spring	Summer	Fall	Winter	
American Bittern	U	U	R	X	Yes
Least Bittern	R	A	R	X	Yes
White-faced Ibis	R	R	R	X	Yes
Sandhill Crane	C	U	C	R	Yes
Virginia Rail	U	U	U	X	Yes
Sora	U	U	U	X	Yes
American Coot	C	C	C	R	Yes
American Avocet	C	C	C	X	Yes
Black-necked Stilt	U	U	U	X	Yes
Snowy Plover	R	R	R	X	Yes
Killdeer	C	C	C	X	Yes
Long-billed Curlew	U	U	U	R	Yes
Spotted Sandpiper	C	C	C	X	Yes
Willet	C	C	C	X	Yes
Lesser Yellowlegs	U	R	U	X	No
Long-billed Dowitcher	U	U	U	X	No
Least Sandpiper	C	C	U	X	No
Western Sandpiper	C	c	U	X	No
Wilson's Phalarope	U	C	U	X	Yes
Common Snipe	U	C	C	R	Yes
California Gull	U	C	C	R	Yes
Ring-billed Gull	U	C	C	R	Yes
Forster's Tern	U	C	C	X	Yes
Caspian Tern	U	U	U	X	Yes
Black Tern	U	C	U	X	Yes
Mourning Dove	C	C	C	U	Yes
Rock Dove	C	C	C	c	Yes
Great Horned Owl	C	C	C	C	Yes
Long-eared Owl	U	U	U	U	Yes
Short-eared Owl	U	U	U	U	Yes
Barn Owl	C	C	C	U	Yes
Burrowing Owl	U	U	U	R	Yes
Common Nighthawk	U	C	C	X	Yes
Common Poorwill	U	U	U	X	Yes
Belted Kingfisher	U	U	U	R	Yes
Common Flicker	C	C	C	C	Yes
Yellow-bellied Sapsucker	C	C	C	R	Yes
Western Kingbird	U	C	C	X	Yes
Say's Phoebe	U	U	U	X	Yes
Dusky Flycatcher	U	U	U	X	Yes
Willow Flycatcher	U	U	U	X	Yes
Horned Lark	C	c	C	C	Yes
Barn Swallow	C	c	C	X	Yes
Cliff Swallow	U	U	U	X	Yes
Violet-green Swallow	U	U	U	X	Yes
Bank Swallow	C	C	C	X	Yes
Tree Swallow	U	U	U	X	Yes
Scrub Jay	C	C	C	R	Yes
Pinyon Jay	U	R	U	X	No
Black-billed Magpie	C	C	C	R	Yes
Common Raven	C	C	C	C	Yes
Common Crow	U	U	U	U	Yes
Plain Titmouse	C	C	U	X	Yes
House Wren	C	C	C	C	Yes
Marsh Wren	C	C	C	c	Yes
Sage Thrasher	U	U	U	U	Yes
Robin	C	C	C	C	Yes
Townsend's Solitaire	U	U	C	C	Yes
Mountain Bluebird	C	C	C	C	Yes
Western Bluebird	R	R	R	X	No
Loggerhead Shrike	U	U	U	U	Yes
Cedar Waxwing	U	X	U	X	NO
European Starling	C	C	C	R	Yes
Orange-crowned Warbler	R	U	U	X	Yes
Yellow Warbler	R	U	U	X	Yes
Yellowthroat	R	U	U	X	Yes
Wilson's Warbler	R	U	U	X	Yes
House Sparrow	C	C	C	C	Yes
Western Meadowlark	C	C	C	R	Yes
Yellow-heeded Blackbird	C	C	C	X	Yes
Red-winged Blackbird	C	C	C	X	Yes
Brewer's Blackbrid	C	C	C	U	Yes
Brown-headed Cowbird	C	C	C	U	Yes
Northern Oriole	U	U	U	R	Yes
Lazuli Bunting	U	U	U	X	Yes
Lesser Goldfinch	C	U	C	X	Yes
Rufous-sided Towhee	U	U	U	R	Yes
Savannah Sparrow	C	C	C	R	Yes
Vesper Sparrow	C	C	C	R	Yes
Sage Sparrow	U	U	U	X	Yes
Chipping Sparrow	U	U	U	U	Yes
Brewer's Sparrow	U	U	U	X	Yes
Lincoln's Sparrow	U	U	U	R	Yes
White-crowned Sparrow	C	C	C	R	Yes
Song Sparrow	C	C	C	R	Yes

*C = Common, U = Uncommon, R = Rare, X = Absent

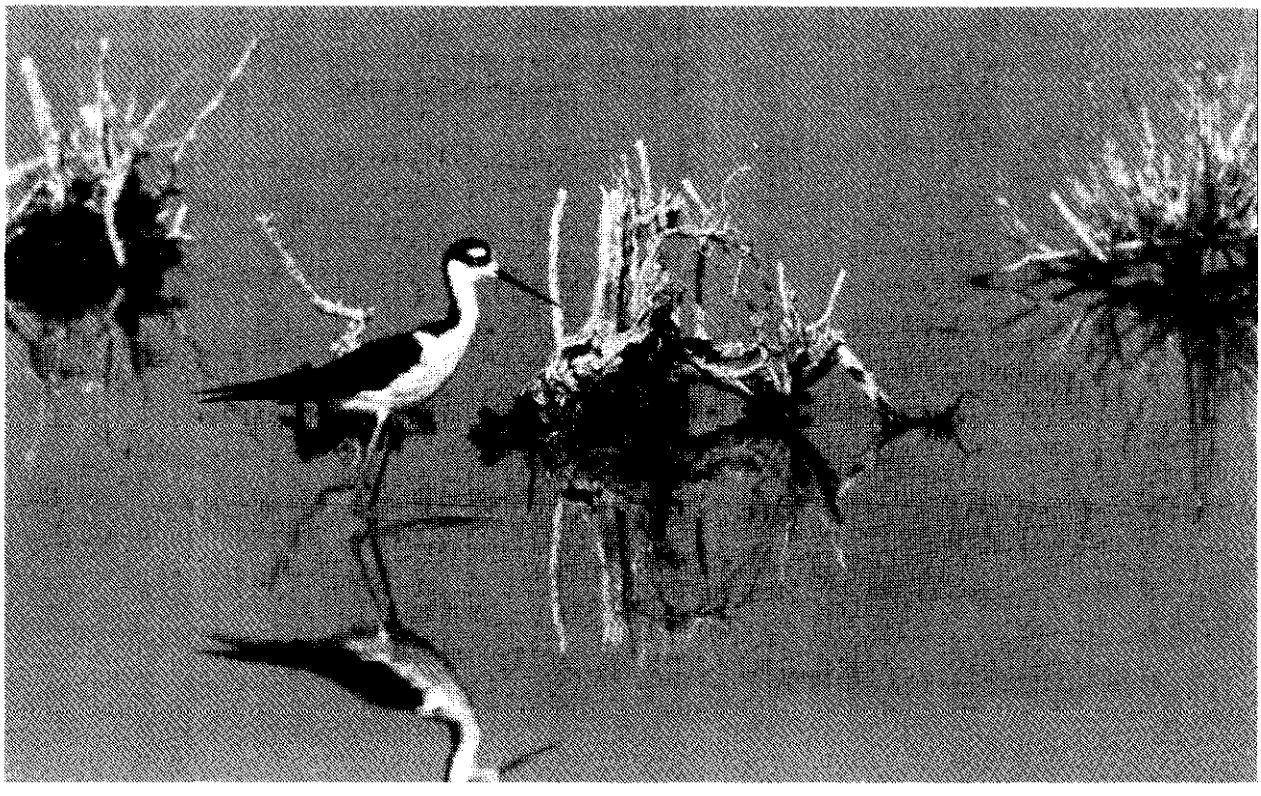
MAMMALS

Species	Seasonal Use**	Abundance**
Vagrant Shrew	S	U
Merriam's Shrew	S	U
Long-eared Myotis	M	R
Little Brown Myotis	M	R
Fringed Myotis	M	U
California Myotis	M	U
Small-footed Myotis	M	R
Hairy-winged Myotis	M	R
Arizona Myotis	M	R
Hoary Bat	M	U
Big brown Bat	M	U
Pallid Bat	M	U
Black-tailed Hare	S	C
White-tailed Hare	S	C
Nuttall's Cottontail	S	C
Pygmy Rabbit	S	R
Yellow-bellied Marmot	S	U
Belding Ground Squirrel	S	C
Golden-mantled Ground Squirrel	S	C
California Ground Squirrel	S	C
Least Chipmunk	S	C
Northern Pocket Gopher	S	C
Great Basin Pocket Mouse	S	C
Ord Kangaroo Rat	S	C
G. Basin Kangaroo Rat	S	C
Beaver	S	U
W. Harvest Mouse	S	U
Canyon mouse	S	C
Deer Mouse	S	C
N. Grasshopper Mouse	S	R
Bushy-tailed Woodrat	S	C
Sagebrush Vole	S	C
Long-tailed Vole	S	C
Muskrat	S	C
Western Jumping Mouse	S	C
Porcupine	M	C
Red Fox	M	R
coyote	M	C
Raccoon	M	C
Long-tailed Weasel	M	C
Badger	M	C
Striped skunk	M	C
Spotted Skunk	M	U
Spotted skunk	M	C
Bobcat	M	U
Bighorn Sheep	M	U
Mule Deer	M	C
Pronghorn	M	U

** M = migratory and/or nomadic, S = sedentary, C = common, U = uncommon, R = rare

Reptiles, Amphibians and Fish

Spadefoot Toad
Western Toad
Pacific Treefrog
Leopard Lizard
Western Fence Lizard
Sagebrush Lizard
Side-blotched Lizard
Desert Horned Lizard
Short-horned Lizard
Western Skink
Western Whiptail
Rubber Boa
Striped Whipsnake
Gopher Snake
Garter Snake
G. Basin Rattlesnake
Rainbow Trout
Red-band Trout
Black Bass
White Crappie
Black Crappie
Brown Bullhead
Warner Sucker
Speckled Dace
Roach



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