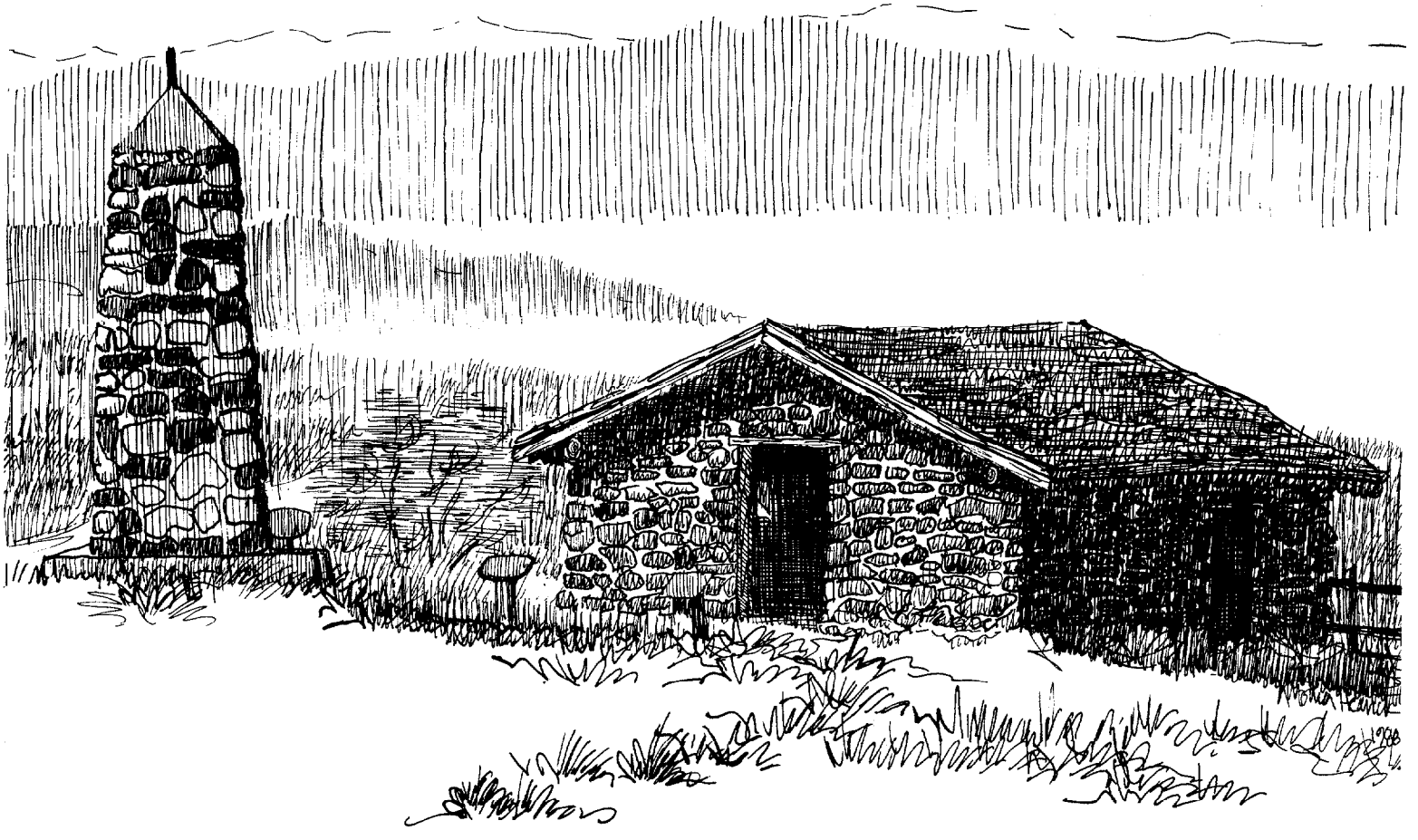
DRAFT PONY EXPRESS RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT



SALT LAKE DISTRICT

BUREAU OF LAND MANAGEMENT

U.S DEPARTMENT OF THE INTERIOR

MAY, 1988

IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALT LAKE DISTRICT OFFICE
2370 South 2300 West
Salt Lake City, Utah 84119

1792 (U-020)
Pony Express RMP

Dear Reviewer:

This Draft Environmental Impact Statement (DEIS) on the preliminary Pony Express Resource Management Plan is submitted for your review and comment. It assesses the impacts of implementing four possible alternatives to be used in the future management of all natural resources on the public lands in the Pony Express Resource Area.

We invite your comments on the content of this document. Those comments addressing the adequacy of the scope of the draft EIS or the impact analyses will be responded to in the EIS. Specific comments will be the most useful. Comments may be submitted in writing at any time within the May 16 - August 15 review period. In order to be considered in the final EIS, all comments must be received by August 15, 1988.

Please keep this copy of the draft EIS, as an abbreviated final EIS may be issued in accordance with the Council on Environmental Quality (CEQ) regulations. Copies of the final EIS will be sent to all those who provide comments on the draft EIS or request a copy.

All written comments should be sent to:

Mr. Howard Hedrick
Pony Express Resource Area Manager
Bureau of Land Management
2370 South 2300 West
Salt Lake City, Utah 84119

Sincerely yours,

Deane H. Zeller

Deane H. Zeller
Salt Lake District Manager

Enclosure
DEIS

DRAFT

PONY EXPRESS RESOURCE MANAGEMENT PLAN

AND

ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Department of the Interior
Bureau of Land Management
Salt Lake District

Kemp Conrad, Acting

State Director
Utah State Office

Abstract: This Draft Resource Management Plan/Environmental Impact Statement discusses resource management on approximately 2 million acres of public land administered by the Bureau of Land Management in the Salt Lake District. This RMP/EIS analyzes the consequences of implementing the various components of four alternatives. The alternatives address three resource issues: (1) landownership conflicts, (2) vegetation managment, and (3) off-road vehicle use. The document focuses on impacts to minerals, vegetation, livestock grazing, water and watershed, soils, wildlife, forest products, recreation, cultural resources, and socio-economics. A detailed description of the affected environment and the analysis of impacts which would result from each alternative are included.

For more information contact: Dennis Oaks, Team Leader
Salt Lake District Office
2370 South 2300 West
Salt Lake City, Utah 84119
(801) 524-6767

Comments on the Draft RMP/EIS are due by August 15, 1988.

Cover Illustration by Tandy Hedrick

Text Illustrations by Tandy Hedrick and Kirk Gardner

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

TABLE OF CONTENTS

LIST OF FIGURES

TABLE OF CONTENTS

Summary

Four multiple use alternatives for management of the public lands in the Pony Express Resource Area have been developed and analyzed in accordance with the Bureau's planning regulations issued under the authority of the Federal Land Policy and Management Act of 1976. The purpose of the alternatives is to present and evaluate options for managing, protecting, and enhancing resources associated with the public lands. Each alternative is a complete plan within which future, more site-specific decisions would be made to direct resource management.

The four alternatives cover all aspects of resource management that apply in the Resource Area. Features common to all alternatives are portrayed. Each alternative then addresses three major issues: landownership conflicts, vegetation management, and off-road vehicle (ORV) use.

The issue of vegetation management is addressed only for the Utah County portion of the Resource Area. The Tooele County portion was addressed in the Tooele Grazing EIS (1983). Vegetation management decisions were included in the Tooele MFP and no changes are proposed.

Many features of the RMP are common to all alternatives. These are listed below and discussed in detail in the section of Chapter 2 titled "Features Common To All Alternatives."

- Transportation and utility corridors,
- Hazardous waste management,
- Forestry program,
- Land exchange and acquisition criteria,
- Military applications for use of public land,
- Wild horse management,
- Land withdrawals to other agencies,
- Air quality,
- Water quality,
- Water rights,
- Erosion identification and evaluation,
- Riparian area management,
- Floodplain and wetlands management,
- Livestock grazing program for Tooele EIS allotments,
- Wildlife habitat management plans,
- Wildlife reintroductions,
- Seasonal and geographic restriction on disturbance of wildlife habitats,
- Special recreation management areas,
- Visual resource management designations,
- Cultural clearances and inventories, and
- Bonneville Salt Flats ACEC.

The four alternatives, as they vary, follow.

Alternative 1

This alternative describes the current managment in the Resource Area. Since it does not include any changes in current management, it is the "no action" alternative.

Disposal of 85,161 acres in Tooele County would be recommended. All public lands in Utah County would remain in public ownership.

The current level of livestock use would continue on all allotments in the PERA, except on allotments that would be partially or totally eliminated by land disposal.

Big game use would also continue at current levels. No changes in management of Tooele County grazing allotments would occur. In Utah County forage distribution would include 1,962 animal unit months (AUMs) for livestock and 259 AUMs for wildlife. No range improvements or changes in livestock season-of-use would occur.

The following seven areas in Tooele County are identified for acquisition of legal access as outlined in the Tooele Management Framework Plan: Barlow Creek, Clifton Flat, Rocky Canyon, Farnsworth Peak, Onaqui Mountains, Sheep Rock/ Simpson Mountains, and Knolls Recreation Area.

A total of 37,000 acres would be withdrawn from locatable mineral entry.

The following oil and gas leasing categories would be maintained: open: 1,872,013 acres, open with special stipulations: 132,810 acres, open with no surface occupancy: 28,637 acres, and closed to leasing: 40,137 acres. A total of 30,682 acres would be closed to geothermal leasing and 30,311 acres would be open to leasing with special stipulations.

Public lands in Utah County would be designated open for ORV use. In Tooele County, lands would remain designated as follows: open to ORV use-1,725,655 acres, limited for ORV use-275,191 acres, and closed to ORV use-31,860 acres.

Alternative 2

This alternative would provide for development of resources while protecting or enhancing envi-

ronmental values. This alternative seeks to resolve issues in the most balanced manner and is BLM's preferred alternative.

Of the 2,032,899 acres of public land in the Resource Area, 9,088 acres would be identified for disposal, 442,780 acres would be retained in public ownership unless exchanged, and 1,580,554 acres would be retained in public ownership.

In addition to the access identified in Alternative 1, BLM would acquire legal access in Utah County to Kyune and Reservation Ridge, and in Tooele County to the east side of the Stansbury Mountains, Bates Canyon, and Stansbury Island gravel pit. Private lands at Rush Lake would be acquired.

Livestock would graze at active preference levels on six allotments. Grazing permits on the remaining six small, isolated allotments with minimal or no actual livestock use would be cancelled. These allotments are Iso-tract Cook, Iso-tract Ludlow, Iso-tract Willis, Cherry Creek, Scofield, and Genola Hill. Big game use would be at current levels as determined by BLM and UDWR. No season-of-use for livestock would be changed. No new rangeland improvements would be implemented. Forage distribution would include 2,487 AUMs for livestock and 299 AUMs for wildlife.

In addition to the Bonneville Salt Flats, the following three areas are proposed as ACECs under this alternative: Horseshoe Springs (760 acres), North Stansbury Mountains (10,000 acres), and North Deep Creek Mountains (28,260 acres).

Fluid mineral leasing categories would be established as follows: open-1,898,075 acres, open-with special stipulations-143,492 acres, open with no surface occupancy-32,028 acres, and closed to leasing-0 acres.

Approximately 121,231 acres would be withdrawn from mineral entry.

As much land as possible would be made available to off-road vehicle use while protecting areas where damage to resources values would be unacceptable. The Resource Area would be categorized as follows: open to ORV use-1,669,267 acres and limited to ORV use-363,439 acres. No acreage would be closed to ORV use.

All public land would be managed as a conditional suppression area for wildlife.

Alternative 3

This alternative gives priority to resource use and commodity production (mineral development, livestock grazing, motorized recreation, etc.). Other resources would be protected to the extent required by laws, executive orders, and other mandates.

Under this alternative 162,979 acres would be recommended for disposal, leaving 1,869,727 acres of public land to be retained in public ownership subject to land exchanges.

Livestock would graze at active preference levels on 12 allotments in Utah County. No seasons-of-use for livestock would be changed. No new rangeland alternatives would be implemented. Forage distribution would include 2,646 animal unit months (AUMs) for livestock and 259 AUMs for wildlife.

Mineral resources would receive preference in designating fluid mineral (including geothermal resources) leasing categories. Categories would be established as follows: open-1,905,110 acres, open with special stipulations-149,720 acres and open with no surface occupancy-18,765 acres. No acreage would be closed to fluid mineral leasing.

All areas not mandated to be closed by legislation, executive order, or BLM policy would be open to ORV use. The Resource Area would be categorized as follows: open to ORV use-1,957,656 acres and limited for ORV use-75,050 acres. No acreage would be closed to ORV use.

Alternative 4

This alternative gives priority to protection or enhancement of environmental values (e.g. wildlife, watershed, aesthetics, non-motorized recreation). Resource use and commodity production would be allowed to the extent they would be compatible with the non development uses.

This alternative would emphasize retaining public lands in public ownership. Therefore, no lands are recommended for disposal. A total of 441,820 acres are identified for retention with no ownership adjustments, and 1,590,886 acres would be retained except for land exchanges.

Proposed access acquisition and land acquisition would be the same as described in Alternative 2.

Livestock grazing management would be the same as described in Alternative 2.

Environmental values would receive preference in designating fluid mineral (including geothermal resource) leasing categories. Categories would be established as follows: open-1,718,845 acres, open with special stipulations; 238,717 acres, and open with no surface occupancy-

116,033 acres. No acreage would be placed in the closed to leasing category.

Off-road vehicle use would be prohibited in areas where it would conflict with environmental values including wildlife habitat, water resources, and scenic values. The Resource Area would be categorized as follows: open to ORV use-1,669,287 acres, limited for ORV use-245,899 acres, and closed to ORV use-117,520 acres.

Environmental Consequences

Alternative 1

Minerals

Fluid mineral exploration and development would be controlled by standard stipulations on 1,872,011 acres, subject to special stipulations which could increase costs on 132,810 acres, and no surface occupancy which would increase costs on 28,637 acres. No development would be allowed on 40,137 acres in Category 4, closed to further leasing.

New potash leases would not be given on 104,000 acres closed to further leasing, precluding mineral recovery.

Withdrawal and closure of 37,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.

Watershed

Disposal of 6,949 acres for agricultural use could result in a low to moderate erosion potential due to plowing, burning or spraying. Disposal of 16,600 acres for mineral development could result in increased runoff and erosion from surface disturbance.

Fluid mineral exploration and development activities would cause erosion and soil loss on up to 1,872,011 acres in Category 1 and 132,810 acres in Category 2. Watershed values would be protected on 28,637 acres in Category 3 and 40,137 acres in Category 4.

ORV use would cause erosion and vegetation loss on up to 1,725,655 acres open to ORV use. A total of 275,191 acres with a limited ORV designation would have significant protection from erosion, but minor erosion could occur in isolated locations. On 31,860 acres closed to ORV use, erosion and vegetation loss from ORV use would be eliminated.

Wildlife

Disposal of 6,949 acres for agricultural use would reduce the bald eagle prey base and disturb crucial sage grouse strutting and nesting area. Pheasant populations could increase with agricultural development. Disposal of Tract 12 would result in removal of a wildlife guzzler and loss of golden eagle nests. Chuker and antelope habitat would be lost with disposal of Tracts 12 and 17.

Under existing fluid mineral categories the following crucial wildlife habitats would not have adequate protection: mule deer winter range-12,470 acres, summer range-1,660 acres, fawning area-3,530 acres; sage grouse strutting grounds-580 acres; raptor habitat-79,390 acres. A total of 120 acres at Clover Reservoir would not be fully protected.

Present ORV categories would not adequately protect the following acreages of crucial and critical wildlife habitat: mule deer winter range-22,791 acres, summer range-1,540 acres, fawning area-1,070 acres, elk winter range-1,920 acres; antelope fawning area-8,285 acres; sage grouse strutting grounds-10,654 acres; bald eagle use areas-13,575 acres; waterfowl habitat-9,501 acres.

Present levels of grazing on Lake Mountain Northeast allotment would allow wildlife habitat to improve in the long term.

Recreation

New roads associated with fluid mineral exploration could increase access for ORV users in Category 1 and 2 areas. A Category 3 designation would protect recreation opportunities at Simpson Springs and Middle Canyon. Category 3 and 4 designations would protect recreation values in the North Deep Creek Mountains, Stansbury Mountains and Bonneville Salt Flats.

ORVs would be allowed open travel on 1,725,655 acres, limited travel on 275,191 acres, and no travel on 31,860 acres.

Visual Resources

Fluid mineral leasing categories would leave 27,780 acres of VRM Class II areas and 94,600 acres of VRM Class III areas unprotected.

Most ORV impacts would occur in VRM Class IV areas, but some Class III mountainous areas could be impacted. These are: Silver Island Mountains, Cedar Mountains, Onaqui Mountains, Simpson Mountains, Dutch Mountain. Broad Canyon, Clover Creek, Deep Creek, and Ibapah vicinity. ORV use could affect Class II values at the Bonnevile Salt Flats.

Forest Resources

Disposal of two parcels of public land would remove 500 acres of forest resources from public ownership.

Livestock Grazing

Disposals would eliminate the Vernon allotment and portion of the Rush Lake, South Clover, Skunk Ridge, and Lakeside allotments. A loss of 2,799 AUMs would occur.

Fluid mineral exploration could slightly decrease areas of livestock forage. Water wells constructed in association with fluid mineral activity could improve livestock distribution.

ORV use in grazing areas could decrease vegetation, resulting in increased erosion and invasion of undesirable plants. Unrestricted ORV use would harass livestock, particularly in the following areas: Five Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and Horseshoe Springs. Vandalism could occur in areas open to ORV use. Areas limited or closed to ORVs would be less affected.

The grazing level on Lake Mountain Northeast Allotment would allow seral stage to improve.

Cultural Resources

Disposal of 12 tracts could result in the loss of cultural resources.

Category 1 and 2 fluid mineral areas could experience cultural resource losses. Category 3 and 4 areas would have better protection of cultural resource values.

On 1,725,655 acres open to ORV use, cultural resource damages could occur. Better protection would be afforded on 275,191 acres where ORV use would be limited. Cultural resource values would be protected on 31,860 acres closed to ORV use.

Socioeconomics

Disposals would reduce in-lieu-of tax payments to Tooele County by about $30,000. This impact would be offset by taxation on disposed properties. Disposals would affect four grazing allotments, economicaly impacting individual operators.

Alternative 2

Minerals

Fluid mineral exploration and development would be controlled by standard stipulations on 1,898,075 acres, subject to special stipulations which could increase costs on 143,492 acres, and no surface occupancy which would increase costs on 32,028 acres. No land would be closed to fluid mineral development.

New potash leases would not be given on 104,00 acres closed to further leasing, precluding mineral recovery.

Withdrawal and closure of 127,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.

Watershed

The disposal of 1,520 acres for agricultural use would cause a short-term increase in erosion. Up to 927 acres would be disturbed for military uses near Camp Williams, causing an increase in erosion. A total of 906 acres disturbed for community needs would eliminate these lands as watershed. Soil and vegetation would be permanently lost where facilities would be developed. On 786 acres developed for mineral extraction or processing, erosion would increase. Some soil and vegetation would be permanently lost.

Retention of 441,820 acres would enhance long-term watershed management.

Mineral exploration and development activities would cause erosion and soil loss on 1,898,075 acres in Category 1 and 143,492 acres in Category 2. Watershed values would be protected on 32,028 acres in Category 3.

ORV use could cause erosion and vegetation loss on 1,669,267 open acres. A total of 363,439 acres with a limited ORV designation would have significant protection from erosion, but minor erosion could still occur.

Watershed condition would improve on 1,388 acres where six grazing allotments would be elimated.

Wildlife

Land disposals would remove from Federal ownership 285 acres of crucial mule deer winter range and 355 acres of historical sage grouse strutting area. A total of 1,990 acres of pheasant habitat could be improved with the disposal of Tracts 31, 33 and 34. Chukar and antelope habitat would be lost with the disposal of Tract 17. On 442,780 acres that would be retained as public land with no land ownership adjustments, wildlife habitats would be preserved.

All crucial wildlife habitats would be adequately protected through Category 2 and 3 fluid mineral designations.

All crucial wildlife habitats would be adequately protected from ORV-related impacts through limited designations.

Recreation

Retention of the following areas with high recreation opportunities would assure that these opportunities continue: Bonneville Salt Flats, Deep Creek Mountains, Knolls, White Rocks, Horseshoe Springs, Simpson Springs, Rush Lake, and Ophir Canyon.

Roads associated with fluid mineral exploration could increase access for ORV users in Category 1 and 2 areas. A Category 3 designation would protect recreation opportunities at Simpson Springs and Middle Canyon. Category 3 and 4 designations would protect recreation values in the North Deep Creek Mountains, Stansbury Mountains, and Bonneville Salt Flats. ORVs would be allowed open travel on 1,669,267 acres and limited travel on 363,439 acres.

Visual Resources

Retention of the following areas in public ownership would protect their significant visual resources: Bonneville Salt Flats, Deep Creek Mountains, Horseshoe Springs, Stansbury Mountains, Tintic Mountains, and Ophir Mountains.

Fluid mineral leasing categories would protect all VRM Class II and III areas by preventing surface alteration. Class IV areas would not be protected.

Limiting ORV us on 363,439 acres would reduce impacts to visual resources.

Forest Resources

Approximately 3,400 acres of forest resource would be lost through land disposals.

Livestock Grazing

A total of 428 AUMs would be lost through disposals affecting 19 allotments.

Fluid mineral exploration could slightly decrease acres of livestock forage. Water wells constructed in association with fluid mineral activity could improve livestock distribution.

ORV use in grazing areas could decrease vegetation, resulting in increased erosion and invasion of undesirable plants. Unrestricted ORV use could harass livestock, particularly in the following areas: Five Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and Horseshoe Springs. Vandalism could occur in areas open to ORV use. Areas limited or closed to ORVs would be less affected.

Livestock grazing levels would not affect seral stage.

Cultural Resources

Disposal of 50 tracts could result in the loss of cultural resources. Retention of 442,772 acres would protect cultural values.

Exploration and development of fluid minerals could damage cultural resources on 1,898,075 acres in Category 1 and 143,492 acres in Category 2. Disturbance of cultural resources would be reduced on 32,028 acres in Category 3.

Cultural resources on 1,669,267 acres open to ORV use would be subject to ORV related impacts. Better protection would be afforded on 363,439 acres where ORV use would be limited.

Socioeconomics

Disposals would reduce in-lieu-of-tax payments to Tooele County by about $1,900 and to Utah County by about $1,250. This impact would be offset by taxation on disposed properties. Disposals would affect 19 grazing allotments, including six which would be eliminated. Individual operators could be economically impacted.

Alternative 3

Minerals

Fluid mineral exploration and development would be controlled by standard stipulations on 1,905,110 acres, subject to special stipulations which could increase costs on 149,720 acres, and no surface occupancy which would increase costs on 18,765 acres. No development would be allowed on 40,137 acres in Category 4, closed to further leasing, precluding recovery of minerals.

New potash leases would not be given on 104,00 acres closed to further leasing, precluding mineral recovery.

Withdrawal and closure of 37,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.

Watershed

The disposal of 14,620 acres for agricultural uses, 927 acres for military activity at Camp Williams, 1,066 acres for community needs, and 18,355 acres for mineral extraction or processing would result in the types of impacts discussed in Alternative 2.

The same type of impacts to watershed from fluid mineral leasing categories described in Alternative 2 would occur on 1,905,110 acres in Category

1; 149,720 acres in Category 2 and 18,765 acres in Category 3.

ORV use would cause erosion and vegetation loss on 1,957,656 acres open to ORV use. A total of 75,050 acres with a limited ORV designation would have significant protection from erosion, but minor erosion could still occur.

Mineral exploration and development activities would cause erosion and soil loss on 1,898,075 acres in Category 1 and 143,492 acres in Category 2. Watershed values would be protected on 32,028 acres in Category 3.

Wildlife

Impacts would be the same as in Alternative 2. In addition, another 985 acres of pheasant habitat could be improved with the disposal of Tracts 5 and 32. Sage grouse strutting and nesting area would be lost with the disposal of Tract 7.

Under proposed fluid mineral categories, the following crucial wildlife habitats would not be protected by special stipulations: mule deer winter range 2,320 acres, summer range 1,660 acres, fawning area 3,530 acres; elk winter range 6,930 acres; raptor habitat 77,180 acres, and riparian/wetland habitat 120 acres. All remaining acreages of crucial habitat would be covered by special stipulations.

A total of 13,575 acres of bald eagle habitat around roost sites would be protected from disturbance by ORV users. No other crucial habitat would be protected.

Recreation

ORVs would have unrestricted travel on all but 75,050 acres of public land that would be limited for ORV use.

Visual Resources

Disposal Tracts 53 and 81 have Class III VRM values that could be affected by surface disturbance.

There would be no protection for visual resources from fluid mineral exploration, except for 18,529 acres on the Bonneville Salt Flats.

ORVs would have unrestricted travel and could affect visual resources on all but 75,050 acres of public land that would be limited for ORV use.

Forest Resources

A total of 7,700 acres of forest resources would be lost as a result of disposal of 40 tracts.

Livestock Grazing

Disposals would affect 21 allotments and 4,059 AUMs in Tooele County, and seven allotments and 276 AUMs in Utah County. Livestock grazing would be eliminated on eight allotments. Disposals would increase management efficiency on two allotments and decrease management efficiency on three allotments.

Fluid mineral exploration could slightly decrease areas of livestock forage. Water wells constructed in association with fluid mineral activity could improve livestock distribution.

ORV use in grazing areas could decrease vegetation, resulting in increased erosion and invasion of undesirable plants. Unrestricted ORV use would harass livestock, particularly in the following areas: Five Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and Horseshoe Springs. Vandalism could occur in areas open to ORV use. Areas limited or closed to ORVs would be less affected.

Livestock grazing levels would not affect seral stage.

Cultural Resources

Disposal of 109 tracts would result in the loss of cultural resources.

Exploration and development of fluid minerals could damage cultural resources on 1,905,110 acres in Category 1 and 149,720 acres in Category 2. Disturbance of cultural resources would be reduced on 18,765 acres in Category 3.

Cultural resources on 1,957,656 acres open to ORV use would be subject to ORV related impacts. Better protection would be afforded on 75,050 acres where ORV use would be limited.

Socioeconomics

Disposals would reduce in-lieu-of-tax payments to Tooele County by about $53,400 and to Utah County by about $3,600. This impact would be offset by taxation on disposed properties. Disposals would affect 26 grazing allotments, including eight which would be eliminated. Individual operators could be economically impacted.

Alternative 4

Minerals

Fluid mineral exploration and development would be controlled by standard stipulations on 1,872,011 acres, subject to special stipulations

which could increase costs on 132,810 acres, and no surface occupancy which would increase costs on 28,637 acres. No development would be allowed on 40,137 acres in Category 4, closed to further leasing, precluding recovery of minerals.

New potash leases would not be given on 104,00 acres closed to further leasing, precluding mineral recovery.

Withdrawal and closure of 37,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.

Watershed

Retention of 441,820 acres would provide long-term watershed management opportunities.

The same types of impacts from fluid mineral leasing categories described in Alternative 2 would occur on 1,718,845 acres in Category 1, 238,717 acres in Category 2, and 116,033 acres in Category 3.

ORV use could cause erosion and vegetation loss on 1,669,287 acres open to ORV use. A total of 245,899 acres with a limited ORV designation would have significant protection from erosion, but minor erosion could still occur.

Watershed condition would improve on 1,388 acres where six grazing allotments would be eliminated.

Wildlife

On 442,780 acres that would be retained as public land with no ownership adjustment, wildlife habitats would be preserved.

All crucial wildlife habitats would be adequately protected through Category 2 and 3 fluid mineral designation.

All crucial wildlife habitats would be adequately protected from ORV-related impacts through limited designations.

Recreation

ORVs would be allowed open travel on 1,669,287 acres, limited travel on 245,899 acres and no travel on 117,520 acres.

Fluid mineral exploration would increase access for ORV users in Category 1 and 2 areas. A Category 3 designation would protect recreation opportunities at Simpson Springs and Middle Canyon. Category 3 and 4 designations would protect recreation values in the North Deep Creek Mountains, Stansbury Mountains, and Bonneville Salt Flats.

Retention of the following areas with high recreation opportunities would assure that these opportunities continue: Bonneville Salt Flats, Deep Creek Mountains, Knolls, White Rocks, Horseshoe Springs, Simpson Springs, Rush Lake, and Ophir Canyon.

Visual Resources

Limiting ORV use on 245,899 acres and closing 117,520 acres would reduce impacts to visual resources.

Forest Resources

No effects would occur.

Livestock Grazing

A total of 1559 AUMs would be lost through the elimination of six allotments in Utah County.

Fluid mineral exploration could slightly decrease livestock forage. Water wells constructed in association with fluid mineral activity could improve livestock distribution.

ORV use in grazing areas could decrease vegetation, resulting in increased erosion and invasion of undesirable plants. Unrestricted ORV use would harass livestock, particularly in the following areas: Five Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and Horseshoe Springs. Vandalism could occur in areas open to ORV use. Areas limited or closed to ORVs would be less affected.

Livestock grazing levels would not affect seral stage.

Cultural Resources

Retention of 442,772 acres would protect cultural resources.

Exploration and development of fluid minerals could damage cultural resources on 1,718,845 acres in Category 1 and 238,717 acres in Category 2. Disturbance of cultural resources would be reduced on 116,033 acres in Category 3.

Cultural resources on 1,669,287 acres open to ORV use would be subject to ORV-related impacts. Better protection would be afforded on 245,899 acres limited to ORV use. Resources would be protected from ORV-related impacts on 117,520 acres closed to ORV use.

Socioeconomics

No impacts would occur.

CHAPTER 1 - PURPOSE AND NEED

Chapter 1
Purpose And Need

Introduction

NOTE TO READER: All figures except 1-1 and 2-1 are located at the back of the document. Figures A and B are inserted in an envelope in the back cover.

This Resource Management Plan/Environmental Impact Statement (RMP/EIS) is designed to provide a comprehensive framework for managing public lands in the Pony Express Resource Area (PERA). Administered by the Bureau of Land Management (BLM), the PERA comprises the southern half of the Salt Lake District and contains Tooele, Utah, and Salt Lake Counties (see Figure 1-1). The PERA contains 6,188,158 acres of land, including 2,032,899 acres of public land under BLM administration. Table 1-1 shows landownership for each county by acreage, percent of the PERA, and percent of the county. Figure A in the back cover of this document shows land status in the Resource Area.

BLM also manages Federal mineral estate within the PERA. This includes extensive acreage within the Uinta, Manti-LaSal, and Wasatch National Forests, public lands withdrawn for specific uses, Department of Defense lands, private lands underlain with Federal mineral estate, mineral estate under Indian reservations, and public lands administered by BLM.

Section 202 of the Federal Land Policy and Management Act of 1976 (FLPMA) states "The Secretary shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands." The guidance for preparing this RMP is contained in 43 CFR Part 1600, Public Lands and Resources; Planning, Programming, and Budgeting.

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to prepare statements documenting environmental consequences of Federal actions significantly affecting the human environment. Resource management plans qualify as significant actions and thus require the preparation of an environmental impact statement (EIS). The Council on Environmental Quality's regulations for implementation of the procedural provisions of the National Environmental Policy Act (40 CFR Part 1500) provide guidance for the preparation of environmental impact statements. This document combines the alternative resource management plans, including the preferred alternative, and the environmental impact statement into one package.

Planning Process

The BLM resource management planning process consists of nine basic steps and requires the use of an interdisciplinary team. The planning steps described in the regulations and used in preparing this plan are described below.

Step 1: Identification of Issues

This step is intended to identify resource management problems or conflicts that can be resolved through the planning process.

Step 2: Development of Planning Criteria

During this step, preliminary decisions are made regarding the kinds of information needed to clarify the issues, the kinds of alternatives to be developed, and the factors to be considered in evaluating alternatives and selecting a preferred resource management plan.

Step 3: Inventory Data and Information Collection

This step involves the collection of resource, social, economic, or institutional data needed for completion of the process.

Step 4: Analysis of the Management Situation

This step calls for an assessment of the current situation. It includes a description of current BLM management guidance, a discussion of existing problems and opportunities for solving them, and a consolidation of existing data that is needed to analyze and resolve the identified issues.

Step 5: Formulation of Alternatives

During this step several complete, reasonable resource management alternatives are prepared, including one for no action and several that strive to resolve the issues while placing emphasis on either environmental protection or resource production.

Step 6: Estimation of Effects of Alternatives

The physical, biological, economic, and social effects of implementing each alternative are estimated in order to allow for a comparative evaluation of impacts.

FIGURE 1-1
The Pony Express Resource Area
SALT LAKE DISTRICT

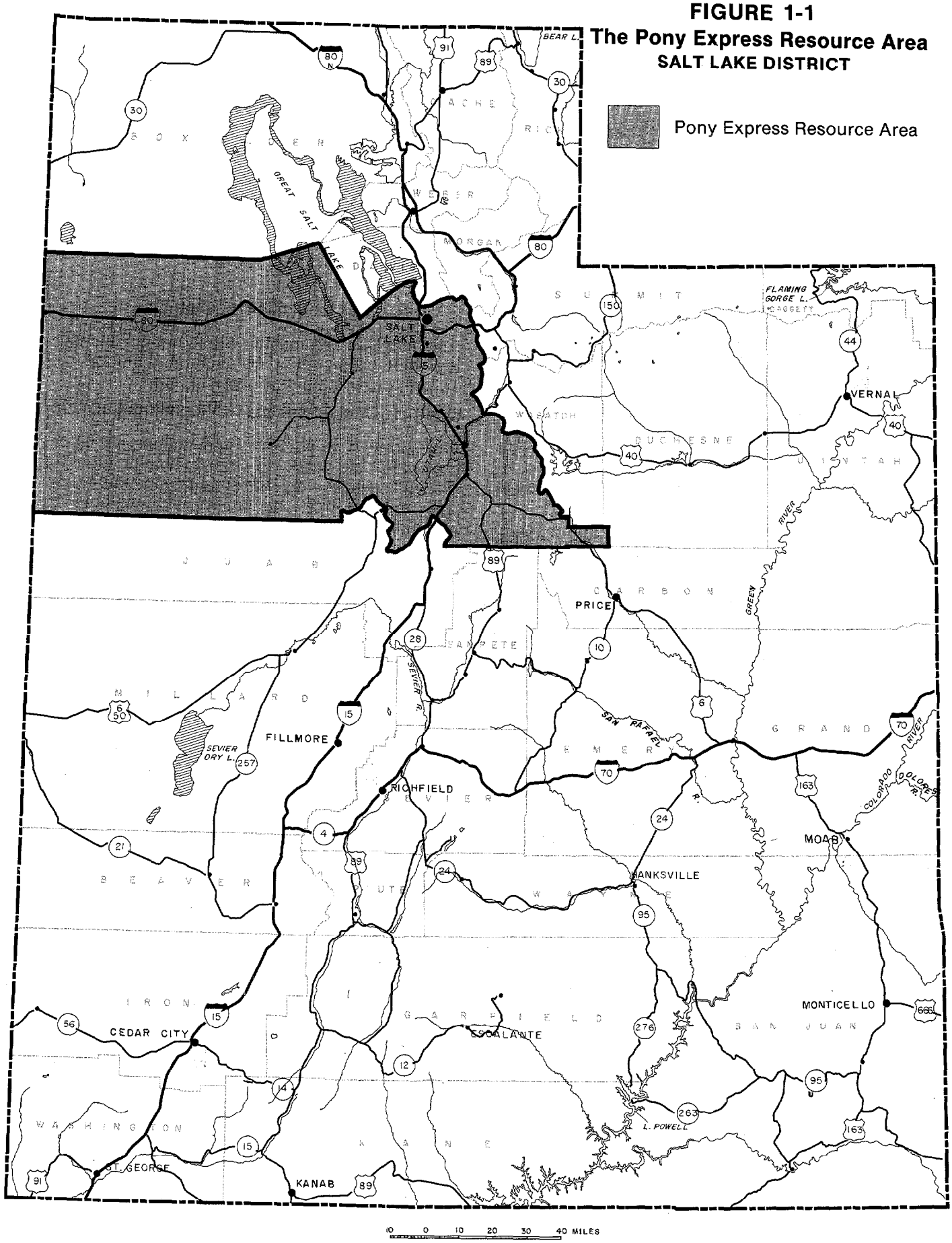


TABLE 1-1
LAND OWNERSHIP BY COUNTY

Tooele County

Land Ownership	Acres Owned	Percent of Planning Area	Percent of County
BLM	1,952,852	31	44
Other Federal	1,700,581	27	38
State	256,277	4	6
Private	513,330	8	12
Totals	4,423,040	70	100

Utah County

Land Ownership	Acres Owned	Percent of Planning Area	Percent of County
BLM	79,854	1	6
Withdrawn BLM*	45,434	10	46
Forest Service	463,025		
State	39,433	1 (0.7)	4
Private	554,624	9	14
Totals	1,182,370	20	100

*Includes acres withdrawn by other Federal agencies.

Salt Lake County

Land Ownership	Acres Owned	Percent of Planning Area	Percent of County
BLM	193	0 (.016)	0
Other Federal	115,870	2	24
State	42,086	1	9
Private	329,993	5	67
Totals	488,142	8	100

Step 7: Selection of the Preferred Alternative

Based on the information generated during Step 6, the District Manager identifies a preferred alternative. The draft RMP/EIS document is then prepared and distributed for public review.

Step 8: Selection of the Resource Management Plan

Based on the results of public review and comment, the District Manager will select a proposed resource management plan and publish it along with a final EIS. A final decision is made after a 30-day protest period on the proposed RMP.

Step 9: Monitoring and Evaluation

This step involves the collection and analysis of long-term resource condition and trend data to determine the effectiveness of the plan in resolving the identified issues, and to assure that implementation of the plan is achieving the desired results. Monitoring continues from the time the RMP is adopted until changing conditions require a revision of the whole plan or any portion of it.

Issues

The Pony Express RMP/EIS will consolidate all planning for the Resource Area into one document. The description and analysis is divided by county as follows:

Utah County,for which no previous planning has been done by BLM.

Tooele County,for which BLM completed a Management Framework Plan in 1984. Several management changes have been identified.

Salt Lake County,for which BLM conducted a planning analysis on 48 isolated acres of public land in 1985. The analysis has been brought forward with no recommended changes. Another three isolated land parcels comprising a total of 145 acres will be included in the plan and analyzed in the alternatives.

Resource management plans deal with all resource programs in a resource area. Those aspects of current resource management which are felt to be issues are examined through the formulation and evaluation of alternatives. An issue may be defined as an opportunity, conflict, or problem regarding the use or management of public lands and resources. Topics of interest to the BLM, other agencies, or the public which do not qualify as planning issues are addressed as specific management concerns.

Four major issues will be addressed in the Pony Express Resource Management Plan. These issues were identified based on input from the public, BLM resource specialists and managers, and other government agencies. The issues identify which counties are affected.

Issue 1: Landownership Adjustments (Tooele and Utah Counties)

Adjustments in landownership are appropriate in parts of the Resource Area to achieve more efficient management and utilization of public resources. A demand exists for certain public lands to be made available for disposal or exchange.

Needed decisions include:

- What public lands should be retained in public ownership?
- What public lands should be disposed?
- Where is access needed to improve resource management?

Issue 2: Off-Road Vehicle Use (Tooele and Utah Counties)

The public land in the PERA provides an opportunity for off-road vehicle (ORV) use for individuals and organized groups. The Resource Area is becoming more popular with ORV users. BLM must analyze the demand for ORV use in relation to its accessibility and its effects on the land and other resource values. Appropriate levels of motorized recreation use in known or potential conflict areas must be determined.

Needed decisions include:

- What portions of the planning area should be designated as closed, limited, or open to ORV use?

Issue 3: Vegetation Management in Utah County

As a result of a suit filed in federal court in 1973 by the Natural Resources Defense Council, et. al., BLM must site-specifically analyze the impacts of livestock grazing on public lands. A Grazing Environmental Impact Statement was prepared for Tooele County and a small portion of Utah County in 1983. This RMP/EIS meets the court requirement for analysis of livestock grazing in the remainder of Utah County.

Needed decisions include:

- How should the grazing allotments be managed?
- How should forage be distributed?

The following topic has been identified as a management concern for the Pony Express Resource Area:

Mineral Development (Tooele and Utah Counties)

It is BLM's continuing mineral resource policy to "foster and encourage...the orderly and economic development of domestic mineral resources." Opportunities exist within the PERA to develop these minerals under the principles of balanced, multiple-use management while protecting other resources.

Needed decisions include:

- Which areas should be open for mineral exploration and development?
- Which areas should be withdrawn from mineral entry, or can impacts be mitigated by other, less restrictive means?
- How should the area be categorized for fluid mineral leasing?

Planning Criteria

1. The overall objective of land-use planning for the Pony Express Resource Area will be sustained multiple-use of the public land.

2. The RMP will be consistent to the maximum extent with the plans and management programs of local and State governments, consistent with Federal laws and regulations, and coordinated with other Federal agencies.

3. Participation by the public will be a key factor in decision-making.

4. Social and economic impacts to local communities resulting from public land management will be considered.

5. The effect of public land management on neighboring land will be considered.

6. The planning process will identify those lands which will best serve public needs by being retained in Federal ownership, and those lands which are difficult or uneconomical to manage or would best serve important public objectives by their disposal.

7. Exploration and development of minerals will continue to be a priority, subject to those measures necessary to adequately protect other values and uses.

8. A decision will be made for each allotment and will include:

- Allotment boundaries,
- Permittees in the allotment,
- Class of livestock,
- An identification of authorized forage for livestock wildlife, watershed, or other necessary purposes, and
- Season-of-use.

More detailed parts of the grazing program will be made in the allotment management plans.

9. Decisions about specific range, wildlife, or watershed improvements will not be made in the RMP, but rather will be made in the activity plans.

10. Decisions will be made for the designation of:

- Areas of critical environmental concern,
- Off-road vehicle use areas,
- Fluid mineral leasing categories,
- Visual Resource Management classes.

11. The management, use, and protection of water sources, water, riparian zones, and other related values will be given a high priority.

Interrelationships With Other Agencies, Groups, and Individuals

Public land in the Pony Express Resource Area is interspersed with other Federal, State, and private land. This landownership pattern makes close coordination necessary to accomplish goals and avoid resource use conflicts. Table 1-2 identifies interrelationships between BLM's resource management programs and other groups and government agencies.

Table 1-2
BLM Planning and Resource Management Interrelationships

Agency/Group	
Federal Agencies	
U.S. Fish and Wildlife Service (FWS)	FWS issues a biological opinion on the effects of this RMP on endangered species. BLM authorizes predator control on grazing allotments. The actual control work is done by FWS under an ongoing predator control program.
U.S. Forest Service (USFS)	USFS administers adjacent lands in Uinta and Wasatch National Forests.
Bureau of Indian Affairs (BIA)	BIA administers federal services for the Goshute and Skull Valley Indian Reservations.
Department of Defense (DOD)	DOD administers Tooele Army Depot, Fort Douglas, Dugway Proving Grounds, and Hill Air Force Base Bombing and Gunnery Range.
State Agencies	
Department of Natural Resources	UDNR administers resource management programs on adjacent State of Utah lands.
Division of Wildlife Resources	
Division of Water Rights	
Division of State Lands and Forestry	
Division of Oil, Gas and Mining	
Office of Planning and Budget	State Office of Planning and Budget verifies consistency of uses on non-State lands with State plans and programs.
Division of Environmental Health	State Division of Environmental Health administers solid wastes, water quality and air quality programs.
Local Government	
Utah County Tooele County	Utah and Tooele Counties administer zoning and implement county master plans.

CHAPTER 2 - DESCRIPTION OF THE ALTERNATIVES

Chapter 2

Description of the Alternatives

Alternative Formulation Overview

Four alternative resource management plans, including BLM's preferred alternative, are detailed in this chapter. Each of the four alternatives represents a complete plan to guide future management of public lands and resources. One alternative represents no action, which is a continuation of present levels of resource use. The other alternatives provide a range of choices from favoring protection or enhancement of environmental values such as wildlife habitat, watershed, and aesthetics, to favoring resource development or commodity production such as mining, livestock grazing, and motorized recreation.

The issues and management concerns dictated the way in which alternatives were formulated. The description of each alternative contains guidelines for resolving the issues and concerns based on the objective of the particular alternative. In some cases, BLM has proposed to make management changes for resources or uses not related to the issues or concerns. These changes are included in the description of Alternative 2, the Preferred Alternative, in the section titled Other Proposed Actions. BLM's management of those resource programs not affected by the resolution of any issue, concern or other action will not change under any alternative. These programs are included in the section titled Features Common to All Alternatives. Figure 2-1 graphically depicts the information found under the alternatives.

Alternatives Eliminated From Detailed Study

All of the alternatives analyzed in this document are reasonable and implementable resource management programs. No extreme or unreasonable options were considered for any resources, and no proposals were made for alternatives that could not be realistically implemented, even though they may have been raised as issues at the outset of the planning process.

The no grazing alternative was considered, but eliminated from further study for the following reasons:

(1) Resource conditions, including vegetation, watershed, and wildlife habitat, do not warrant a Resource Area-wide prohibition of livestock grazing.

(2) The elimination of livestock grazing on public lands would seriously affect the ability of current livestock operators to maintain their operations and earn a livelihood from ranching.

(3) The checkerboard pattern of public land-ownership would necessitate extensive fence construction, at public expense, if livestock are to be excluded from public lands. Such fencing would also be likely to disrupt estalished patterns of wildlife movement and could affect public access.

(4) Public comments received during the planning process do not indicate a desire for the removal of livestock from the public lands.

Features Common to All Alternatives

In cases where the current management program is the Tooele Management Framework Plan, those decisions can be found in Appendix 1a. Decisions made in the 1985 planning analysis for Salt Lake County are common to all alternatives and are found in Appendix 1b.

The following features comprise a part of all alternatives. These features are those parts of BLM's current management program which would continue regardless of which alternative is chosen for the final RMP. The information is presented here to avoid repetition.

Lands Program

Lands Actions. The alternatives will identify specific public land parcels available for disposal. The parcels included for disposal in each alternative range from none to all of 109 separate parcels.

The 109 parcels are listed by number and legal description in Table 2-1. Most parcels could be disposed under all available authorities, including FLPMA Section 203. The criteria identified in Section 203 are (1) such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or (3) disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved

Figure 2–1

ALTERNATIVE FORMULATION

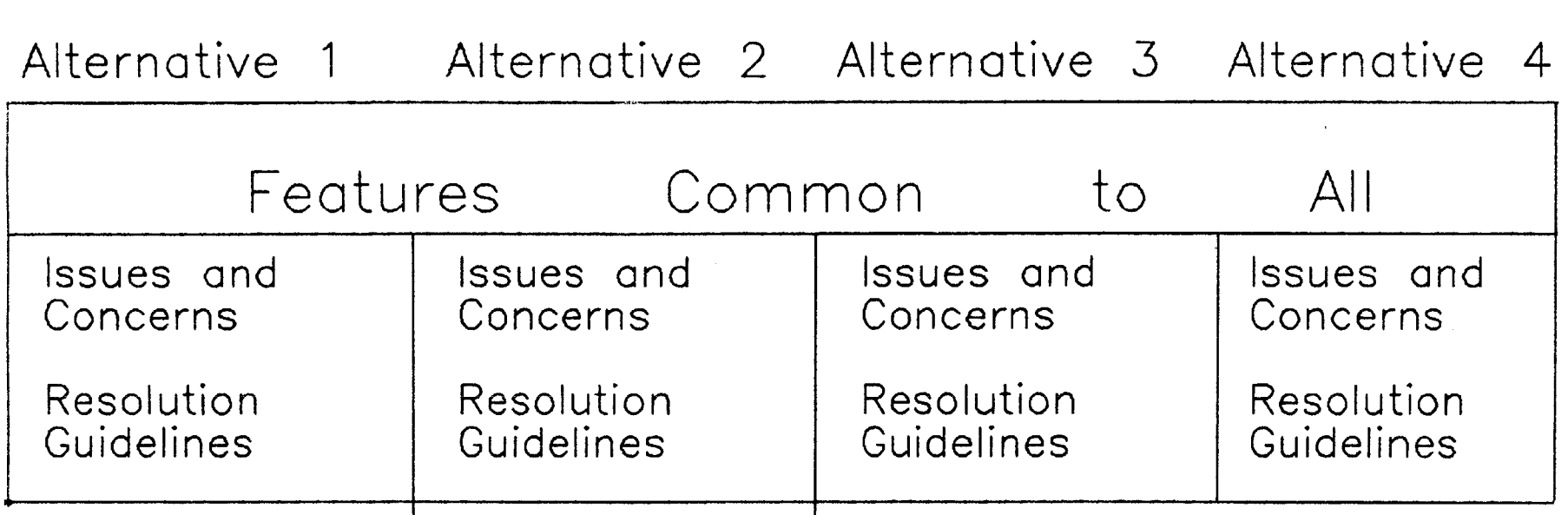


Table 2-1 Lands Identified for Disposal

Parcel No.	Alternatives	Legal Description	Acres
1.	3	T. 1S., R. 19W.,	
		Section 4, Lot 4: W½SW¼, SW¼NW¼	160.9
		Section 5, Lots 1 & 2: S½NE¼, SE¼	322.0
		Section 8, E½NE¼	800.0
		Section 9, NW¼NW¼	40.0
		T. 1N., R. 19W., Section 33, E½SW¼, W½SE¼	160.0
			762.9
2.	2, 3	T. 1S., R. 19W.,	
		Section 3, Lots 1 & 2	81.2
3.	3	T. 8S., R. 19W.,	
		Section 15, SW¼	160.0
		Section 22, N½NW¼	80.0
			240.0
4.	2, 3	T. 9S., R. 19W.,	
		Section 10, S½SW¼SW¼NE¼	5.0
5.	3	T. 9S., R. 19W.,	
		Section 21, SE¼SE¼	40.0
		Section 27, W½W½	160.0
		Section 28, E½E½	160.0
		Section 33, NE¼NE¼	40.0
			400.0
6.	2, 3	T. 10S., R. 19W.,	
		Section 3, N½SW¼ of Lot 2	5.0
7.	3	T. 9S., R. 19W.,	
		Section 21, E½W½W¼, E½W¼, W¼E¼, E½SE¼	480.0
		Section 28, E½W½NW¼, E½NW¼, NE¼	280.0
			760.0
8.	2, 3	T. 6S., R. 18W.,	
		Section 7, SE¼NE¼	40.0
		Section 8, S½N½, NE¼NE¼	200.0
		Section 9, W½NW¼	80.0
			320.0
9.	1, 3	T. 1S., R. 15W.	
		Section 19, Lots 5-8: E½SW¼	358.2
		Section 20, S½	320.0
		Section 21, S½	320.0
		Section 22, S½	320.0
		Section 23, S½	320.0
		Section 24, S½	320.0
		Section 25, All	640.0
		Section 26, E½	320.0
		Section 27, All	640.0
		Section 28, All	640.0
		Section 29, All	640.0
		Section 30, Lots 1-8: E½W½, E½	716.8
		Section 31, Lots 1-8: E½W½, E½	717.4
		Section 33, All	640.0
		Section 34, All	640.0
		Section 35, E½	320.0
		T. 1½S., R. 15W.	
		Section 31, Lots 1-6: E½SW¼, SE¼	481.5
		Section 33, Lots 1-4: S½	444.5
		Section 34, Lots 1-4: S½	444.5
		Section 35, Lots 1-4: S½	444.4
		T. 2S., R. 15W.	
		Section 1, Lots 1-4: S½N½, S½	639.1
		Section 3, Lots 1-4: S½N½, S½	638.6
		Section 4, Lots 1-4: S½N½, S½	638.9
		Section 5, Lots 1-4: S½N½, S½	639.3
		Section 6, Lots 1-11: E½SW¼, SE¼NW¼, S½NE¼, SE¼	693.6
		Section 7, Lots 1-6: E½NW¼, NE¼SW¼, E½	600.8
		Section 8, N½N½S½, S½SE¼	560.0
		Section 9, All	640.0
		Section 10, All	640.0
		Section 11, E½	320.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, E½	320.0
		Section 15, All	640.0
		Section 17, W½	320.0
		Section 18, Lots 1-8: E½W½, E½	695.3
		T. 1S., R. 16W.	
		Section 19, Lots 1-4: E½W½E½	620.0
		Section 20, All	640.0
		Section 22, All	640.0
		Section 23, All	640.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
		T. 1S., R. 16W.	
		Section 24, All	640.0
		Section 25, All	640.0
		Section 26, All	640.0
		Section 27, All	640.0
		Section 28, All	640.0
		Section 29, All	640.0
		Section 30, Lots 1-4: E½W½, E½	620.1
		Section 31, Lots 1-4: E½W½, E½	620.1
		Section 33, All	640.0
		Section 34, All	640.0
		Section 35, All	640.0
		T. 2S., R. 16W.	
		Section 1, Lots 1-4: S½N½, S½	645.7
		Section 3, Lots 1-4: S½N½, S½	643.7
		Section 4, Lots 1-4: S½N½, S½	642.9
		Section 5, Lots 1-4: SW¼, S½NW¼	401.9
		Section 6, Lots 1-7: E½SW¼, SE¼NW¼, S½NE¼, SE¼	646.9
		Section 7, LOts 1-4: E½W½, E½	647.0
		Section 8, W½	320.0
		Section 9, N½	320.0
		Section 10, N½	320.0
		Section 11, N½	320.0
		Section 12, N½	320.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 17, W½	320.0
		Section 18, Lots 1-4, E½W½, E½	647.9
		T. 1S., R. 17W.,	
		Section 19, SE¼SW¼, E½NE¼SW¼, E½SE¼NW¼, E½	400.0
		Section 20, W½	320.0
		Section 29, W½	320.0
		Section 30, Lot 4: E½NW¼SW¼, E½SW¼NW¼, E½W½, E½	554.2
		Section 31, Lots 1-4: E½W½, E½	618.7
		T. 2S., R. 17W.,	
		Section 5, Lots 3-4: SW¼, S½NW¼	319.9
		Section 6, Lots 1-7: E½SW¼, SE¼NW¼, S½NE¼, SE¼	621.3
		Section 7, Lots 1-4: E½W½, E½	623.1
		Section 8, W½	320.0
		Section 17, W½	320.0
		Section 18, Lots 1-4: E½W½, E½	624.2
		T. 2S., R. 18W.,	
		Section 1, Lots 1-2: S½SW¼, E½NW¼SW¼, NE¼SW¼, SE¼NW¼, S½NE¼, SE¼	500.0
		Section 11, SE¼SW¼, E½SW¼SW¼, E½NE¼SW¼, E½SW¼NE¼, SE¼, NE¼, E½NE¼NE¼, SE¼	320.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 15, E½NE¼NE¼, E½SW¼NE¼, SE¼NE¼, S½	400.0
			44,096.5
10.	3	T. 1N., R. 12W.	
		Section 4, All	684.0
		Section 5, All	683.0
		Section 6, All	675.0
		Section 7, All	635.0
		Section 8, All	640.0
		Section 9, All	640.0
		Section 17, All	640.0
		Section 18, All	636.0
		Section 19, All	637.0
		Section 20, All	640.0
		Section 21, All	640.0
		Section 28, All	640.0
		Section 29, All	640.0
		Section 30, All	638.0
		Section 31, All	639.0
		Section 33, All	640.0
		T. 1S., R. 12W.	
		Section 4, All	632.0
		Section 5, All	631.0
		Section 6, All	611.0
		Section 7, All	622.0
		Section 8, All	640.0
		Section 9, All	640.0
		Section 17, All	640.0
		Section 18, All	622.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
		T. 1N, R. 13W.	
		Section 1, All	681.0
		Section 3, All	681.0
		Section 4, All	681.0
		Section 5, All	681.0
		Section 6, All	675.0
		Section 7, All	635.0
		Section 8, All	640.0
		Section 9, All	640.0
		Section 10, All	640.0
		Section 11, All	640.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 15, All	640.0
		Section 17, All	640.0
		Section 18, All	636.0
		Section 19, All	637.0
		Section 20, All	640.0
		Section 21, All	640.0
		Section 22, All	640.0
		Section 23, All	640.0
		Section 24, All	640.0
		Section 25, All	640.0
		Section 26, All	640.0
		Section 27, All	640.0
		Section 28, All	640.0
		Section 29, All	640.0
		Section 30, All	638.0
		Section 31, All	639.0
		Section 33, All	640.0
		Section 34, All	640.0
		Section 35, All	640.0
		T. 1S., R. 13W.,	
		Section 1, All	630.0
		Section 3, All	628.0
		Section 4, All	628.0
		Section 5, All	628.0
		Section 6, All	612.0
		Section 7, All	625.0
		Section 8, All	640.0
		Section 9, All	640.0
		Section 10, All	640.0
		Section 11, All	640.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 15, All	640.0
		Section 17, All	640.0
		Section 18, All	625.0
		T. 1N., R. 14W.	
		Section 1, All	681.0
		Section 3, All	681.0
		Section 4, All	681.0
		Section 9, All	640.0
		Section 10, All	640.0
		Section 11, All	640.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 15, All	640.0
		Section 23, All	640.0
		Section 24, All	640.0
		Section 25, All	640.0
		Section 26, All	640.0
		T. 1S., R. 14W.,	
		Section 1, All	677.0
			55,945.0
11.	2, 3	T. 1S., R. 13W.,	
		Section 13, E½SE¼, E½W½SE¼	160.0
		Section 24, N½N½NE¼	
12.	1	T. 1N., R. 7W.,	
		Section 5, Lot 1	22.9
		Section 6, Lots 1-7, 9	326.5
		Section 7, Lots 1-4	94.6
		Section 18, Lots 1-7	170.9
		Section 19, Lots 1-3: W½, SW¼NE¼, SE¼	591.8
		Section 20, Lots 1-4: SW¼, SW¼SE¼	321.7
		Section 21, Lot 1	4.7
		Section 28, Lots 1-5: W½SW¼	214.6

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
		Section 29, All	640.0
		Section 30, All	640.0
		Section 31, All	640.0
		Section 33, Lots 1-3: W½, SW¼NE¼, W½SE¼SE¼SE¼	578.2
		Section 34, Lots 1-3: SW¼SW¼	105.6
		T. 1N., R. 8W.,	
		Section 1, Lots 1-4: S½N½, S½	675.4
		Section 3, Lots 1-4: S½N½, S½	678.2
		Section 10, All	640.0
		Section 11, All	640.0
		Section 12, All	640.0
		Section 13, All	640.0
		Section 14, All	640.0
		Section 15, All	640.0
		Section 22, All	640.0
		Section 23, All	640.0
		Section 24, All	640.0
		Section 25, All	640.0
		Section 26, All	640.0
		Section 27, All	640.0
		Section 28, All	640.0
		Section 33, All	640.0
		Section 34, All	640.0
		Section 35, All	640.0
		T. 2N., R. 7W.,	
		Section 30, Lots 1-4	77.4
		Section 31, Lot 1: W½, W½E½, SE¼NE¼, E½SE¼	626.4
		Section 32, Lots 1-3	114.6
		T. 2N., R. 8W.,	
		Section 4, Lots 1-4: S½N½	327.3
		Section 5, Lots 1-4: S½, S½N½	647.9
		Section 6, SE¼	160.0
		Section 7, Lots 1-4: E½NW¼, NE¼, NE¼SE¼	397.3
		Section 8, N½, N½S½, S½SW¼	560.0
		Section 17, S½SE¼, N½SW¼, NW¼, SE¼SW¼	360.0
		Section 18, E½W½, NE¼NE¼, NE¼SE¼	240.0
		Section 19, Lots 1-3: SE¼NW¼, SW¼NE¼, NE¼SE¼S½NE¼	290.6
		Section 20, N½NW¼, NE¼, N½SE¼	320.0
		Section 21, N½, N½S½, SE¼SW¼, S½SE¼	600.0
		Section 22, All	640.0
		Section 23, All	640.0
		Section 24, Lots 1-5	207.2
		Section 25, Lots 1-5: SW¼, W½NW¼, W½SE¼	498.2
		Section 26, All	640.0
		Section 27, All	640.0
		Section 28, All	480.0
		Section 33, All	640.0
		Section 34, All	640.0
		Section 35, All	640.0
		T. 3N., R. 8W.	
		Section 19, Lot 1	.5
		Section 28, Lot	39.8
		Section 29, Lots 1-4: S½SW¼	190.7
		Section 30, Lots 1-7: E½SW¼, W½SE¼, SE¼SE¼	448.5
		Section 31, Lots 1-4: E½W½, E½	629.5
		Section 33, Lots 1-4: S½, S½NW¼, SW¼NE¼	571.9
		Section 34, Lots 1-4: SW¼, W½SE¼	378.5
		T. 3N., R. 9W.	
		Section 24, Lots 1-3	116.3
		Section 25, All	640.0
			29,347.5
13.	2, 3	T. 3S., R. 8W.,	
		Section 22, NW¼NW¼SE¼	10.0
14.	2, 3	T. 6S., R. 8W., Section 34, NE¼NE¼, N½	360.0
15.	3	T. 6S., R. 8W.,	
		Section 3, Lots 1-4: S½N½, S½	640.4
		Section 10, W½, N½NE¼	400.0
		Section 11, NW¼, N½SW¼, SE¼SW¼	280.0
		Section 15, N½NW¼	80.0
		T. 5S., R. 8W.,	
		Section 34, SW¼, SW¼SE¼	200.0
			1600.4
16.	3	T. 8S., R. 7W.,	
		Section 1, Lots 1-4: S½N½	328.2
		Section 2, Lots 1-4: S½N½	322.6
		Section 3, Lots 1 & 5	75.2
			726.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
17.	1, 2, 3	T. 6S., R. 7W.,	
		Section 3, S½N½, SE¼	320.0
		Section 4, SE¼NE¼	40.0
		Section 10, NE¼NE¼	40.0
			400.0
18.	3	T. 1S., R. 7W.,	
		Section 25, W½SW¼, W½E½SW¼, W½SE¼NW¼	140.0
19.	3	T. 1N., R. 6W.,	
		Section 5, Lots 3, 11, 12, 17 & 18	95.8
		Section 8, Lots 2-4, 6	140.0
		Section 17, Lots 1, 5, 8 & 9	151.7
		Section 20, Lots 1-4, 6: SE¼NE¼, E½SE¼, SW¼SE¼	317.6
		Section 29, Lots 1-3: SE¼, E½SW¼, SW¼SW¼, SE¼NW¼, W½NE¼, W½NE¼NE¼, W½E½NE¼NE¼, W½NW¼SE¼NE¼, NE¼NW¼SE¼NE¼, SE¼SE¼SE¼NE¼, NW¼SW¼SE¼NE¼	542.0
		Section 30, Lots 1 & 2	28.5
		Section 31, Lots 1-4: SE¼NE¼, S½SE¼, NE¼SE¼	280.0
			1555.6
20.	2, 3	T. 1S., R. 6W.,	
		Section 29, SW¼SW¼	40.0
21.	2, 3	T. 2S., R. 6W.,	
		Section 7, Lot 6	37.3
		Section 18, Lot 11	26.8
			64.1
22.	2, 3	T. 2S., R. 6W.,	
		Section 14, NE¼SW¼	40.0
23.	3	T. 3S., R. 6W.,	
		Section 10, E½NE¼, E½SW¼, NW¼SE¼	200.0
		Section 11, SE¼	160.0
		Section 14, E½, E½W½, W½SW¼, NW¼NW¼	600.0
		Section 15, N½N½	160.0
		Section 23, E½W½, N½NE¼, S½NE¼	280.0
			1400.0
24.	3	T. 3S., R. 6W.,	
		Section 21, S½S½	160.0
		Section 27, S½, S½NW¼, S½SE¼	320.0
		Section 28, A 1	640.0
			1120.0
25.	3	T. 3S., R. 6W.,	
		Section 34, NE¼SW¼	40.0
26.	1, 3	T. 8S., R. 5W.,	
		Section 18, Lots 1-4: E½W½, SW¼NE¼	363.7
		Section 19, Lots 1, 2, & 4 and all of Lot 3 except E½NE¼, E½W½	317.2
		T. 8S., R. 6W.,	
		Section 10, SE¼	160.0
		Section 11, S½	320.0
		Section 12, SE¼	160.0
		Section 13, E½, E½W½, NW¼NW¼, SW¼SW¼	560.0
		Section 14, W½, N½NE¼	400.0
		Section 15, E½	320.0
		Section 22, N½N½	160.0
		Section 23, NW¼, W½NE¼, NW¼SE¼	280.0
		Section 24, S½SE¼	80.0
		Section 25, N½NE¼	80.0
			3200.9
26A.	1, 2, 3	T. 8S., R. 5W.,	
		Section 19, Lot 3: E½NE¼	5.0
27.	1, 3	T. 8S., R. 6W.,	
		Section 27, W½NE¼, SE¼NE¼	120.0
28.	3	T. 8S., R. 6W.,	
		Section 31, Lots 5-7, NE¼SW¼, NW¼SE¼	202.4
29.	2, 3	T. 6S., R. 5W.,	
		Section 27, NE¼SW¼	40.0
30.	1, 3	T. 6S., R. 5W.,	
		Section 7, SE¼, S½NE¼	240.0
		Section 8, W½NW¼, SW¼SW¼, E½SW¼, SE¼	360.0
		Section 18, Lots 2-4: E½SW¼, SE¼NW¼, E½	557.9
		Section 19, Lots 1, 2: NE¼	238.9
		Section 20, N½	320.0
			1716.8

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
31.	1, 2, 3	T. 6S., R. 5W.,	
		Section 5, NE¼SW¼, SW¼NW¼, W½SW¼, NW¼SE¼	200.0
		Section 6, E½SW¼, SE¼	240.0
			440.0
32.	3	T. 5S., R. 5W.,	
		Section 3, Lot 8	33.8
		Section 9, Lots 8 & 9: E½NE¼, NE¼SE¼	190.9
		Section 10, Lots 1, 2, 9 & 10: NW¼NE¼, W½NW¼, NE¼NW¼	280.0
		Section 11, SW¼NW¼, NW¼SW¼	80.0
			584.7
33.	1, 3	T. 5S., R. 5W.,	
		Section 5, Lot 4: S½SW¼, NW¼SW¼, SW¼NW¼	200.1
		Section 6, Lots 1-7: E½SW¼, SE¼NW¼, S½NE¼, SE¼	630.9
		Section 7, E½	320.0
		Section 8, NW¼, S½NE¼, NE¼SW¼	280.0
		Section 18, NW¼NE¼	40.0
			1471.0
34.	1, 3	T. 5S., R. 5W.,	
		Section 5, E½SE¼	80.0
35.	1, 2, 3	T. 4S., R. 5W.,	
		Section 31, Lots 3 & 4: SE¼, E½SW¼	315.0
		Section 32, SW¼SW¼	40.0
			355.0
36.	2, 3	T. 4S., R. 5W.,	
		Section 7, S½NE¼	
		Section 8, NW¼	240.0
37.	2, 3	T. 4S., R. 5W.,	
		Section 7, Lots 1 & 2	71.8
38.	3	T. 2S., R. 5W.,	
		Section 6, Lots 3-5: SE¼NW¼	149.1
		T. 2S., R. 6E.,	
		Section 1, Lot 1: SE¼NE¼	80.0
			229.1
39.	3	T. 1S., R. 5W.,	
		Section 28, Lots 1-5: NW¼SW¼	238.0
		Section 29, Lots 1-3, 5-7: NE¼, E½NW¼, N½SE¼, NE¼SW¼	600.1
		Section 30, Lots 1, 2: E½NW¼, NE¼, N½SE¼	390.8
		Section 33, Lots 1-4: W½, W½SE¼	546.1
			1775.0
40.	1, 3	T. 1S., R. 5W.,	
		Section 5, Lots, 1-3	51.9
		Section 6, Lots 1-7: SE¼NW¼, SW¼NE¼, SE¼, E½SW¼	593.6
		Section 7, Lots 1-4: E½W½, E½	621.3
		Section 8, Lots 1-7: SW¼NW¼, SW¼SW¼SE¼	426.9
		Section 9, Lot 1	10.0
		Section 17, Lots 1-4: W½E½, W½	650.1
		Section 18, Lots 1-4: E½W½, E½	621.3
		Section 19, Lots 1-3: NE¼, N½SE¼, NE¼SW¼, E½NW¼	465.5
		Section 20, Lots 1-3: NW¼, W½NE¼, NW¼SE¼, N½SW¼	487.5
			3928.1
41.	3	T. 3S., R. 4W.,	
		Section 25, Lots 6 & 7	81.5
42.	3	T. 6S., R. 4W.,	
		Section 4, Lots 5 & 6	70.6
		T. 5S., R. 4W.,	
		Section 33, Lots 18-20	84.4
			155.0
43.	2, 3	T. 6S., R. 4W.,	
		Section 10, Lots 3, 9 & 10	117.9
44.	2, 3	T. 9S., R. 4W.,	
		Section 15, NW¼SW¼	40.0
45.	2, 3	T. 9S., R. 4W.,	
		Section 21, N½SW¼, SE¼NW¼	120.0
46.	2, 3	T. 9S., R. 4W.,	
		Section 21, E½E½	160.0
47.	3	T. 9S., R. 4W.,	
		Section 27, E½SW¼, W½SE¼	160.0
		Section 34, NW¼NE¼	40.0
			200.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
48.	3	T. 9S., R. 4W., Section 26, N½SW¼, SE¼SW¼	120.0
49.	2, 3	T. 8S., R. 3W., Section 25, SW¼SW¼	40.0
50.	3	T. 8S., R. 3W., Section 10, Lots 9 & 10	23.4
51.	2, 3	T. 8S., R. 3W., Section 9, Lots 5-7	81.1
52.	2, 3	T. 6S., R. 3W., Section 35, Lot 4	15.9
53.	2, 3	All public lands within these sections.	
		T. 5S., R. 3W., Section 31, Lots 1-26	243.6
		T. 6S., R. 3W., Section 4, Lots 1-4, 7-12 Section 5, Lots 1, 3-5, 7, 10-21 Section 6, Lots 1, 4-7, 17-25 Section 7, Lots 1-4, 8, 11-16, 20 Section 8, Lots 2, 7, 10-12, 14-17 Section 9, Lots 2-7, 9-21 Section 16, Parts of Lots 3, 8 & 18 Section 17, Parts of Lots 1-4, 6-8, 10, 11, 13: W½SW¼, SW¼NW¼ Section 20, Parts of Lots 1-16: W½W½ Section 21, Parts of Lots 2, 4, 6-16	203.2 42.2 142.8 221.5 16.1 74.4 77.0 349.0 444.0 214.0 2027.8
54.	3	T. 5S., R. 3W., Section 21, Lots 1-4, 8	212.1
55.	3	T. 5S., R. 3W., Section 5, Lots 4 & 5: SW¼NW¼, W½SW¼ Section 6, Lots 1-5, 9-11: E½SW¼, SE¼	172.6 480.8 653.4
56.	3	T. 5S., R. 3W., Section 4, Lots 3-10 Section 5, Lots 1, 8 & 9	331.2 87.3 418.5
57.	3	T. 5S., R. 3W., Section 12, S½SW¼, W½NW¼, E½NE¼, SE¼ Section 11, W½NW¼, NE¼, SW¼, W½SE¼ Section 13, W½W½ Section 14, S½NW¼, N½SW¼, SE¼SW¼, NE¼, N½SE¼	400.0 480.0 160.0 440.0 1480.0
58.	3	T. 5S., R. 3W., Section 3, N½S½	160.0
59.	3	T. 4S., R. 3W., Section 29, W½NW¼	80.0
60.	3	T. 4S., R. 3W., Section 7, W½W¼ Section 18, N½NW¼, SW¼NW¼	160.0 120.0
		T. 4S., R. 4W., Section 13, Lot 4: SW¼NE¼	63.3 343.3
61.	3	T. 3S., R. 3W., Section 21, Lots 1-6, 10-13, 21 & 21 Section 29, Lots 1, 2, 5-8	438.8 134.2 573.0
62.	3	T. 3S., R. 3W., Section 10, SW¼SW¼ Section 15, NW¼NW¼	40.0 40.0 80.0
63.	3	T. 3S., R. 3W., Section 12, S½W½	160.0
64.	3	T. 3S., R. 3W. Section 9, E½NE¼	80.0
65.	3	T. 3S., R. 3W., Section 5, S½SW¼, SW¼SE¼ Section 7, Lot 5 Section 8, Lot 4	120.0 30.7 37.4 188.1

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description		Acres
66.	3	T. 3S., R. 3W. Section 5, Lots 2, 3, 4: S½N½ Section 6, Lot 1: SE¼NE¼		133.1 82.1 215.2
67.	3	T. 2S., R. 3W. Section 33, E½SE¼ T. 3S., R. 3W. Section 1, 2, SE¼NE¼		80.0 131.5 211.5
68.	3	T. 2S., R. 3W., Section 5, Lots 3, 4: S½NW¼, N½SW¼, SW¼SW¼ Section 6: Lots 1, 2, 9: S½NE¼, N½SE¼, SE¼SE¼		273.2 353.3 626.5
69.	2, 3	T. 6S., R. 2W., Section 7, NE¼NW¼, N½NE¼, N½S½NE¼		100.0
70.	2, 3	T. 4S., R. 1W., Section 19, Lot 20 Section 20, NW¼SW¼ Section 29, N½SW¼, S½NW¼ Section 30, Lots 1-4, E½W½, E½ T. 4S., R. 2W., Section 25, Lots 1, 4-6: N½SW¼, NW¼, NW¼SE¼ Section 26, Lots 5-7 Section 29, Lot 3 Section 33, NW¼NW¼		39.7 40.0 160.0 138.9 385.1 71.7 52.6 40.0 927.4
71.	2, 3	T. 10S., R. 2W., All public lands within the township. T. 10S., R. 3W., Sections 1, 12, 13, 24-26, All public lands within these sections.	Approx. Approx.	800.0 100.0 900.0
72.	2, 3	T. 7S., R. 1W., Section 28		640.0
73.	2, 3	T. 7S., R. 1W., Section 26, N½NW¼, NW¼NE¼		120.0
74.	2, 3	T. 7S., R. 1W., Section 17, NE¼SE¼		40.0
75.	2, 3	T. 7S., R. 1W., Section 6, SE¼SW¼		40.0
76.	2, 3	T. 6S., R. 1W., Section 25, SW¼NW¼		40.0
77.	2, 3	T. 6S., R. 1W., Section 20, SW¼NW¼		40.0
78.	2, 3	T. 5S., R. 1W., Section 29 SE¼SE¼		40.0
79.	2, 3	T. 4S., R. 1E., Section 15, Lots 3 & 4		14.2
80.	2, 3	T. 8S., R. 1E., Section 15, NW¼		160.0
81.	2, 3	T. 9S., R. 1E., Section 8, E½SE¼NW¼		20.0
82.	2, 3	T. 9S., R. 1E., Section 22	Approx.	5.0
83.	2, 3	T. 9S., R. 1E. Section 27, E½SW¼SW¼, SE¼SW¼, NE¼SE¼, S½SE¼ Section 34, N½NE¼, W½SW¼NE¼, W½E½SW¼NE¼		180.0 110.0 290.0
84.	3	T. 7S., R. 3E., Section 19, Tract A (Unsurveyed)		20.0
85.	3	T. 9S., R. 3E., Section 3, SE¼, S½SW¼		240.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description		Acres
86.	3	T. 9S., R. 3E., Section 5, E½SE¼ Section 8, Lots 1-12		 80.0 469.8 549.8
87.	3	T. 9S., R. 3E. Section 11, Lots 2-13: SW¼, W½SE¼ Section 12, Lot 4		 664.3 56.1 720.4
88.	3	T. 9S., R. 3E., Section 30, NE¼NE¼		 40.0
89.	3	T. 10S., R. 3E., Section 33, NE¼NW¼		 40.0
90.	3	T. 9S., R. 3E., Section 13, SE¼NE¼		 40.0
		T. 9S., R. 4E., Section 18, S½NW¼		 120.0 160.0
91.	3	T. 9S., R. 4E., Section 18, NE¼SE¼		 40.0
92.	2, 3	T. 10S., R. 3E., Section 1, Lot 1		 8.7
93.	3	T. 10S., R. 3E., Section 6, Lot 4: SE¼SE¼ Section 7, Lots 1 & 2, NE¼NE¼ Section 8, NW¼NW¼		 71.6 103.8 40.0 215.4
94.	2, 3	T. 10S., R. 4E., Sections 4 & 9, All public lands within these sections.	Approx.	 30.0
95.	2, 3	T. 11S., R. 4E., Section 18, NW¼SE¼		 40.0
96.	3	T. 10S., R. 5E., Section 4, Lot 4: W½SW¼ Section 9, NW¼NW¼, S½NW¼		 121.4 120.0 241.4
97.	3	T. 10S., R. 5E., Section 10, NE¼SW¼W½SE¼, SE¼SE¼ Section 15, NE¼NE¼, SW¼NE¼		 160.0 80.0 240.0
98.	2, 3	T. 10S., R. 6E., Section 34, SW¼SE¼		 40.0
99.	3	T. 10S., R. 6E., Section 35, SE¼SE¼		 40.0
		T. 11S., R. 6E., Section 1, Lots 1-3: E½SW¼, SE¼NW¼, S½NE¼, SE¼ Section 12, NE¼NW¼, NE¼, N½SE¼, SE¼SE¼		 479.6 320.0
		T. 11S., R. 7E., Section 7, Lots 1-4: E½NW¼, N½NE¼		 296.9 1096.5
100.	3	T. 11S., R. 7E., Section 19, NW¼NE¼		 40.0
101.	2, 3	T. 11S., R. 7E., Section 27, Lot 3		 37.4
102.	2, 3	T. 11S., R. 8E., Section 6, SW¼NW¼		 40.0
103.	3	T. 11S., R. 8E., Section 14, SW¼		 160.0
104.	3	T. 11S., R. 8E., Section 12, NE¼		 160.0
105.	2, 3	T. 11S., R. 9E., Section 30, NW¼SE¼		 40.0
106.	3	T. 11S., R. 9E., Section 28, NW¼SE¼		 40.0

Table 2-1 (Continued)

Parcel No.	Alternatives	Legal Description	Acres
107.	2,3	T. 1S., R. 1E., Section 24, NE¼SE¼, E½E½NW¼SE¼	50.0
108.	2, 3	T. 1S., R. 1E., Section 13, N½SW¼SW¼	20.0
109.	2, 3	T. 1S., R. 1E., Section 24, SW¼SW¼NE¼, All Public Land in the NW¼SW¼NE¼, W½W½NW¼SE¼, NE¼SW¼, NW¼SE¼SW¼	75.0
		GRAND TOTAL	162,979.0

prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in Federal ownership.

Table 2-2 shows whether each of the parcels meets the FLPMA 203 criteria. Those parcels which do not meet the FLPMA 203 criteria could be disposed under all other available authorities. To ensure that the Section 203 criteria are met, BLM will offer any parcels adjacent to national forest land to the U.S. Forest Service. If the U.S. Forest Service does not state in writing that it wishes to acquire specific parcels within two years after the RMP is completed, the parcels will then be available for disposal under all authorities. Any other limitations on disposal purposes and parties are discussed later in this chapter in the description of each alternative.

Certain public lands will not be available for disposal or any other transfer from Federal ownership and BLM management. These have high public value and include crucial wildlife habitat, wilderness study areas, existing and proposed Areas of Critical Environmental Concern (ACECs), significant water resources, recreation areas, highly scenic areas, and areas with facilities and improvements. These lands are identified in Table 2-3 and shown in Figure 2-2. A complete description of the areas is found in Appendix 2. BLM would be required to amend the RMP before any of the areas could be disposed, transferred to another agency, or exchanged.

All remaining public lands in the Pony Express Resource Area would be available for exchange. During the last ten years the number of land exchanges completed in the Resource Area has been low, averaging less than one per year. These exchanges have ranged from small exchanges (40 to 80 acres) to large exchanges involving several thousand acres and have been located primarily in Tooele County.

Three currently proposed exchanges are in various stages of completion and range from approximately 700 acres to almost 20,000 acres. Current BLM policy favors large exchanges that result in a significant benefit to the public. In the next five to ten years, only one or two exchanges likely would occur annually, but they would probably affect large acreages (a thousand acres or more).

In order to be considered, exchanges of public land in the Pony Express Resource Area must accomplish one or more of the following criteria:

(1) Increase public ownership within those areas not available for disposal or any other transfer from Federal ownership and BLM management (see Table 2-3 and Figure 2-2).

(2) Result in a net gain of significant resource values on public land such as important wildlife habitat, cultural sites, riparian zones, live water, and threatened and endangered species.

(3) Improve the accessibility of the public lands.

(4) Contribute toward more efficient management of public lands through consolidation of ownership.

(5) Remove from Federal ownership public lands inundated by the West Desert Pumping Project (West Pond).

Land exchanges will continue to be analyzed on a case-by-case basis. Resource values may be incorporated into the fair market value of the land. BLM will not make decisions in this RMP to exchange specific tracts.

Public lands can be conveyed to non-profit corporations and associations and to the State or any of its political subdivisions for recreation or public purposes (R&PP).

Rights-of-way, easements, permits, licenses, or other nonexclusive use authorizations could continue on all other public lands.

Because of the proximity of public lands to military reservations, BLM receives requests intermittently from various state and federal organizations to use public land for military exercises. As a general policy, military exercises are discouraged because they tend to preclude multiple use activities and public access.

Some military requests are considered to be casual use for which no formal authorization is required. Casual use is defined in 43 CFR 2800 as any activity that involves practices which do not ordinarily cause any appreciable disturbance or damage to the public lands, resources, or improvements, and therefore does not require a right-of-way grant or temporary-use permit. Examples of these types of requests are temporary placement of communication equipment along existing roads, search and rescue training involving helicopters and foot patrols, and temporary observation posts. Since these uses are casual, BLM will continue to approve them.

BLM will continue to consider requests for long-term military uses involving construction or development of facilities. These uses are appropriately authorized under 43 CFR 2800 and include radar or microwave communications sites, and linear facilities, such as roads, powerlines, and

TABLE 2-2
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE
PART 1: AVAILABLE DISPOSAL AUTHORITIES

PARCEL NUMBER	MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES, INCLUDING FLPMA SEC. 203 SALES				MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES EXCEPT FLPMA SEC. 203 SALES			
	ALTERNATIVE				ALTERNATIVE			
	1	2	3	4	1	2	3	4
1			X					
2		X	X					
3			X					
4		X	X					
5			X					
6		X	X					
7			X					
8		X	X					
9	X		X					
10			X					
11		X	X					
12	X		X					
13						X	X	
14		X	X					
15			X					
16			X					
17	X	X	X					
18		X	X					
19			X					
20		X	X					
21		X	X					
22		X	X					
23							X	
24							X	
25							X	
26	X		X					
26a	X	X	X					
27		X	X					
28			X					
29		X	X					
30	X		X					
31	X	X	X					
32			X					
33	X		X					
34	X		X					
35	X	X	X					

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE
PART 1: AVAILABLE DISPOSAL AUTHORITIES

PARCEL NUMBER	MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES, INCLUDING FLPMA SEC. 203 SALES				MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES EXCEPT FLPMA SEC. 203 SALES			
	ALTERNATIVE				ALTERNATIVE			
	1	2	3	4	1	2	3	4
36		X	X					
37		X	X					
38			X					
39			X					
40	X		X					
41			X					
42			X					
43		X	X					
44		X	X					
45		X	X					
46		X	X					
47							X	
48			X					
49		X	X					
50			X					
51		X	X					
52		X	X					
53		X	X					
54			X					
55			X					
56							X	
57							X	
58			X					
59			X					
60			X					
61			X					
62			X					
63			X					
64			X					
65			X					
66			X					
67			X					
68			X					
69						X	X	
70						X	X	

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE
PART 1: AVAILABLE DISPOSAL AUTHORITIES

PARCEL NUMBER	MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES, INCLUDING FLPMA SEC. 203 SALES				MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES EXCEPT FLPMA SEC. 203 SALES			
	ALTERNATIVE				ALTERNATIVE			
	1	2	3	4	1	2	3	4
71		X	X					
72		X	X					
73			X					
74		X	X					
75		X	X					
76		X	X					
77		X	X					
78		X	X					
79		X	X					
80		X	X					
81		X	X					
82		X	X					
83		X	X					
84							X	
85			X					
86			X					
87			X					
88			X					
89			X					
90			X					
91			X					
92		X	X					
93			X					
94		X	X					
95		X	X					
96			X					
97			X					
98		X	X					
99			X					
100			X					
101		X	X					
102		X	X					
103			X					
104			X					
105		X	X					

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE
PART 1: AVAILABLE DISPOSAL AUTHORITIES

PARCEL NUMBER	MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES, INCLUDING FLPMA SEC. 203 SALES				MANAGE FOR DISPOSAL UNDER ALL AVAILABLE AUTHORITIES EXCEPT FLPMA SEC. 203 SALES			
	ALTERNATIVE				ALTERNATIVE			
	1	2	3	4	1	2	3	4
106			X					
107		X	X					
108		X	X					
109		X	X					

TABLE 2-2
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE

PART 2: SURFACE - USE ASSUMPTIONS

PARCEL NUMBER	AGRICULTURE			MINERAL DEVELOPMENT			COMMUNITY/ PUBLIC PURPOSE			INDUSTRIAL DEVELOPMENT			NO SURFACE CHANGE		
	ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1									X						X
2								X	X						
3			X												
4								X	X						
5			X						X						X
6								X	X						
7			X						X						
8		X	X												
9				X		X				X		X			
10						X									
11								X	X						
12				X		X				X		X			
13								X	X					X	X
14		X	X												
15			X						X						
16															X
17							X	X	X						
18														X	X
19						X									
20														X	X
21														X	X
22														X	X
23									X						X
24									X						X
25									X						X
26	X		X						X						X
26a								X	X					X	X
27	X		X												
28														X	X
29								X	X						X
30	X		X						X						
31	X	X	X											X	X

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE

PART 2: SURFACE - USE ASSUMPTIONS

PARCEL NUMBER	AGRICULTURE			MINERAL DEVELOPMENT			COMMUNITY/ PUBLIC PURPOSE			INDUSTRIAL DEVELOPMENT			NO SURFACE CHANGE		
	ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
32			X						X						X
33	X		X						X				X		X
34	X		X										X		X
35	X	X	X											X	X
36														X	X
37								X	X					X	X
38									X						X
39						X						X			
40				X		X				X		X			
41															X
42			X						X						X
43								X	X					X	X
44								X	X					X	X
45														X	X
46														X	X
47									X						X
48															X
49														X	X
50															X
51														X	X
52					X	X								X	X
53					X	X									
54															X
55															X
56															X
57															X
58															X
59															X
60									X						X
61															X
62															X
63															X
64															X

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE

PART 2: SURFACE - USE ASSUMPTIONS

PARCEL NUMBER	AGRICULTURE			MINERAL DEVELOPMENT			COMMUNITY/ PUBLIC PURPOSE			INDUSTRIAL DEVELOPMENT			NO SURFACE CHANGE		
	ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
65															X
66															X
67															X
68															X
69								X	X						
70														X	X
71					X	X									
72								X	X					X	X
73															X
74														X	X
75															X
76															X
77														X	X
78														X	X
79														X	X
80		X	X												
81		X	X												
82		X	X												
83								X	X					X	X
84									X						X
85															X
86															X
87															X
88															X
89															X
90															X
91															X
92															X
93															X
94					X	X									
95														X	X
96															X
97															X

TABLE 2-2 (Continued)
AVAILABLE DISPOSAL AUTHORITIES
AND SURFACE-USE ASSUMPTIONS
FOR DISPOSAL PARCELS
BY ALTERNATIVE

PART 2: SURFACE - USE ASSUMPTIONS

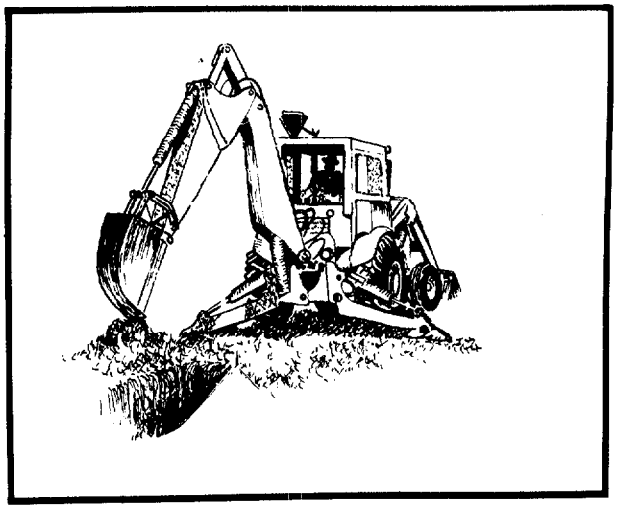
PARCEL NUMBER	AGRICULTURE			MINERAL DEVELOPMENT			COMMUNITY/ PUBLIC PURPOSE			INDUSTRIAL DEVELOPMENT			NO SURFACE CHANGE		
	ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE			ALTERNATIVE		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
98														X	X
99															X
100															X
101								X	X					X	X
102														X	X
103															X
104															X
105								X	X					X	X
106															X
107								X	X						
108								X	X						
109								X	X						

TABLE 2-3
LANDS NOT AVAILABLE FOR OWNERSHIP ADJUSTMENT
IN
ALTERNATIVES 2 AND 4

	Area	Acreage
1.	Bonneville Salt Flats	30,680 acres
2.	Deep Creek Area	28,260 acres
3.	Knolls Area	36,160 acres
4.	Cedar Mountains Area	74,680 acres
5.	Dugway/Riverbed	132,000 acres
6.	Simpson Springs	640 acres
7.	Simpson Mt./Onaqui Mt./Big Hollow	114,560 acres
8.	White Rocks	640 acres
9.	Salt Mountain	6,480 acres
10.	Horseshoe Springs	760 acres
11.	North Stansbury Mountains	12,000 acres
12.	Rush Lake Area	1,120 acres
13.	Clover Reservoir Area	1,280 acres
14.	Ophir Canyon Area	2,560 acres
	TOTAL	441,820 acres

communication lines.

BLM has received requests for other military uses for which neither a right-of-way nor a casual use determination is appropriate. For requests made by the Utah National Guard, BLM can issue a permit under 43 CFR 2920. For uses such as a bivouac of troops and off-road travel, requests would be considered through the environmental assessment process to determine the significance of impacts. Historically these requests have been made for small groups and considered on a case-by-case basis. Public land will not be made available for those uses not appropriate under 43 CFR 2920. These uses include storage or use of hazardous materials (munitions, fuel, chemicals, etc.), live artillery firing, and use of tracked vehicles.



In 1986, BLM granted a right-of-way to the State of Utah's Division of Water Resources to construct, operate, and maintain the West Desert Pumping Project in Box Elder and Tooele Counties, Utah. The purpose of the project was to meet the immediate need for flood control caused by the rising waters of the Great Salt Lake. The project includes a pumping plant, intake canal and dike, retention dike, and evaporation pond of which approximately 150,000 acres are located north of Knolls in central Tooele County. The 50-year grant can be renewed if found to be in the public interest.

Pending legislation in the U.S. Congress would increase the lands within the Goshute Indian Reservation in western Tooele County by approximately 1,753 acres. All valid rights-of-way, leases, permits and other land-use rights or authorizations except mining claims would become the responsibility of the Goshute tribe, who would continue to manage these interests under the same terms and conditions as were maintained by BLM.

Withdrawal. A review of other agencies' withdrawals of public land in the Resource Area will be completed by 1991. These withdrawals will be continued, modified, or revoked. Upon revocation or modification, part or all of the withdrawn land will revert to BLM management. Current BLM policy is to minimize the acreage of public land withdrawn from mining and mineral leasing, and, where applicable, to replace existing withdrawals with rights-of-way, leases, permits, or cooperative agreements.

In the Pony Express Resource Area, BLM withdrawals will continue for public water reserves and power sites under all alternatives. BLM will also continue to pursue withdrawal action on 30,682 acres within the Bonneville Salt Flats and 709 acres at Simpson Springs Recreation Area. If not designated wilderness by Congress, the North Deep Creek Mountains will be evaluated for possible withdrawal action.

BLM recommends that revocation action be pursued for the Federal Aviation Agency's withdrawal of 339 acres of public land in Tooele County, subject to FAA's request for relinquishment. Following revocation, the agency's two navigation sites would be authorized by rights-of-way.

Acquisition. BLM's acquisition of private lands would be subject to the same criteria as those discussed under lands actions for exchanges.

Access. Access will be addressed in all alternatives. Locations and extent of each will vary according to the objectives of each alternative.

Minerals Program

In the Pony Express Resource Area, BLM administers over 2 million acres of subsurface minerals. Included in the program are locatable and leasable minerals and mineral materials such as sand and gravel.

Locatable Minerals. Mining claims may be located on unreserved, unappropriated public land. Exploration and development of minerals are regulated under 43 CFR 3800 to prevent unnecessary and undue degradation of the land. Public land will be opened to mineral entry where mineral withdrawals are revoked through the withdrawal review process. The approximately 5,000 acres under withdrawal for oil shale could be opened to mineral location when existing legal encumbrances are removed.

Common Variety Mineral Materials. Applications for the removal of common variety mineral materials, including sand and gravel, will continue to be processed on a case-by-case basis as regulated under 43 CFR 3600. Stipulations to protect surface values will be required based on review of each proposal.

Leasable Fluid Minerals. Both public lands and other lands with underlying Federal minerals will be categorized for fluid mineral leasing. Fluid minerals include oil and gas and geothermal resources. Development and exploration of these minerals is regulated under 43 CFR 3100 and 3200 respectively. The following categories will be considered:

Category 1: Open Lease Areas. This category includes lands with resource values which would not seriously conflict with fluid mineral exploration and development. Leases on these lands are subject to terms and conditions which provide for the protection of the resource values. The stipulations in Category 1 do not impose major restrictions but provide for operations under controlled conditions.

Category 2: Open Lease Areas Subject to Special Stipulations. This category includes lands on which conflicts with fluid mineral exploration and development might occur. Leasing in this category is subject to special stipulations that provide additional protection to such values as watersheds, crucial wildlife habitat, unique archeological and historical sites, and scenic values. The special stipulations may limit exploration to various times of the year, prescribe special construction techniques, or limit the location of developments. These stipulations are described in Appendix 3.

Category 3: Open Lease Areas Subject to No Surface Occupancy. This category contains areas of more than 40 acres where BLM has determined that highly restrictive lease stipulations are required to mitigate impacts. This category is also used for those areas where a number of seasonal or other minor constraints, when taken together, would severely restrict development of fluid mineral resources.

This category could include scenic areas, R&PP patents and leases, significant historical and archaeological areas, or ACECs. Exploratory drilling is permitted but limited to whipstocking or slant drilling from off-site locations.

Category 4: No Lease Areas. This category includes areas which are excluded from mineral leasing by (1) law or regulation, (2) formal withdrawal or eligibility for withdrawal, (3) formal policy, or (4) existing commitments made to the public through planning or other documents. Lands would be closed to fluid mineral leasing only when other available alternatives would not adequately protect the resources.

Due to the West Desert Pumping Project (Right-of-Way U-54155) major areas of public land will be subject to intermittent flooding. Therefore, all leasing of both solid and fluid minerals will be subject to this right-of-way as delineated on the Master Title Plats. Lessees should be aware that exploration and development may include specific mitigation to protect the Lake Pumping Project's integrity. This mitigation could greatly increase the lessee's cost.

Other Leasable Minerals. The closure of 104,814 acres of Federal mineral estate within the Bonneville Salt Flat Recreation Area will continue. This closure affects further mineral leasing for potash, salts, and other similar brines. If any additional public lands with minerals are acquired within the area they will automatically be closed to leasing of the same minerals to protect the hydrologic balance critical to maintaining the Bonneville Salt Flats. This closure does not affect *existing* leases, including Kaiser's leases, so long as they remain in effect and all lease requirements are met. The reason the area described for this closure is somewhat larger than those recommended for similar mineral closures in the area is that this form of mineral extraction has the potential to disrupt the natural hydrologic processes of the entire basin north of I-80.

Applications to remove other types of leasable minerals, such as phosphate, tar sands, and oil shale will continue to be processed on a case-by-case basis. Stipulations to protect important surface values will be required based on review of each proposal. Coal exploration and development, if any, would be regulated under 43 CFR 3400.

Hazardous Waste Management

BLM will evaluate the known or potential hazardous waste sites and take the necessary actions as required by law. BLM will not authorize the placement or processing of hazardous wastes on public lands. As sites are identified and accidental or intentional dumping or spills occur, BLM will repond as required by law and pursue clean-up by the responsible party. Public health and safety and the environment will continue to be BLM's priority in this program.

Soil, Water, and Air Program

General. Soil, water, and air resources will continue to be evaluated on a case-by-case basis. Evaluations will consider the impacts of any proposed projects to soil, water, and air resources in the affected area. Stipulations will be attached as appropriate to ensure compatibility of projects with soil, water, and air resource management and compliance with applicable Federal and State soil, water or air implementation plans.

Soils. Soil will be managed to maintain productivity and tolerable erosion levels.

Water. Water quality will be maintained or improved in accordance with State and Federal standards, including consultation with State agencies on proposed projects that may significantly affect water quality.

BLM will acquire and protect water rights for use on public land as directed by the Regional Solicitor and maintain them in cooperation with the State Engineer. Existing water rights will be evaluated to determine whether they are adequate in quantity and location to meet resource management requirements. Water right records will be placed in a computer program for rapid access and update. Future resource management requirements may result in the need to change existing water rights and acquire additional water rights. Private water rights on public lands will be evaluated on a case-by-case basis to assure that water not needed for public use is available for private use.

Selected perennial streams will be monitored for water quality trend to insure that management activities on public lands comply with existing State water quality standards. BLM management activities need to be coordinated with the Utah State Water Engineer, the Utah Division of Environmental Health, and the U.S. Environmental Protection Agency for proper water management.

Areas of erosion on public land will be identified and evaluated to meet the following objectives:

- Identify the erosion source(s) on public land.
- Evaluate improvement potential and prioritize areas for improvement.
- Identify methods which will maintain or improve the water and vegetative resources while providing for livestock and wildlife.
- Identify and implement management practices which will reduce or eliminate erosion that accelerates soil loss over that occurring naturally.
- Monitor vegetation and water conditions on the watershed.

BLM will manage riparian areas, wetlands, and other water sources for multiple use purposes such as wildlife, range, watershed and recreation. These areas will be managed to meet the following objectives:

- Each area will be identified and classified for present condition.
- Management intensity levels will be determined and objectives developed for each area based on desired condition.
- The areas will be prioritized for funding and preparation of activity plans. These could include watershed, allotment, habitat and multiple resource management plans.
- Cooperative efforts will be sought with adjoining landowners and other resource management agencies.

Management actions within floodplains and wetlands will include measures to preserve, protect, and if necessary, restore their natural functions (as required by Executive Orders 11988 and 11990). Management techniques will be used to minimize the degradation of stream banks and the loss of riparian vegetation. Bridges, culverts, and fences and/or other necessary structures will be designed and installed to meet and maintain management objectives.

Records verify that Rush Lake periodically fluctuates from being a sizeable lake to being almost dry. Such fluctuations have occurred over a period as short as four years; therefore, BLM will manage the portions occurring on public land as a wetland over the long term.

Air. Air quality will be maintained or improved in accordance with State and Federal standards, including consultation with State agencies on proposed projects that may significantly affect air quality. Management actions on public land will be designed to protect against significant air quality deterioration.

Close coordination will be maintained with the State in the development or modification of air quality implementation plans to assure that BLM management options such as prescribed fire and smoke management are maintained. Coordination with the State will be continued on appropriate air quality classifications whenever BLM-managed areas of special concern (e.g. ACECs, wilderness study areas, and scenic areas) have

been identified as significant features or characters.

Range Program

The grazing allotments in the Pony Express Resource Area are shown on Figure B in the back cover of this statement. Grazing on allotments in the area covered by the Tooele MFP would continue as outlined in the MFP. (See Appendix 1a, Issues 3 and 4.) The Tooele Grazing EIS analyzed the environmental consequences of four alternative vegetation management programs. The decisions in the MFP were selected from the alternatives. Because no changes are proposed in the range program in Tooele County, no additional analysis is required in this document. Therefore, the EIS portion of this document addresses vegetation management actions in Utah County only.

Total forage use by all grazing users on public land in Tooele County is:

Cattle	39,173 AUMs
Sheep	67,001 AUMs
Domestic Horses	125 AUMs
Wild Horses	1,560 AUMs
Mule Deer	29,853 AUMs
Elk	470 AUMs
Antelope	1,518 AUMs
Bighorn Sheep	298 AUMs

This distribution of AUMs will continue unless reduced by disposal of lands under the various alternatives. The Tooele Rangeland Program Summary Update identifies these actions which have been implemented in the rangeland program since the MFP was completed (See Appendix 4).

Twelve grazing allotments in Utah County will be analyzed under varying alternatives to evaluate reasonable vegetation management programs for those allotments.

Details of the selected grazing management program for Utah County will be identified in a subsequent document called the Rangeland Program Summary. BLM personnel will work with affected permittees to implement the grazing management program. Livestock grazing levels, recommended patterns of use, responsibilities for maintenance of improvements and monitoring will be specified.

The twelve allotments in Utah County have been grouped into the Custodial (C) category. Allotments in this management category have limited or no potential for improvement or return on investment. Present management is satisfactory or the most logical practice for the resource involved. Permittees will be encouraged to invest in rangeland improvement projects. Categorization is done in consultation with the permittees on the specific allotments. The twelve Utah County allotments have been tentatively categorized in the C category for the following reasons:

- a lack of major conflicts,
- many of the allotments are in good to excellent condition and present management is satisfactory,
- potential for range improvements is very limited, and
- cost effectiveness of projects would be low due to small amounts of BLM land.

BLM investment for range projects on C category allotments will be minimal and management priority and intensity will be low.

No new rangeland improvements would occur under any alternative. Improvements identified in the future would be subject to site-specific environmental assessments prior to construction.

Livestock Conversions. BLM will consider conversions from cattle to sheep or sheep to cattle on an individual basis. Policy set forth in BLM Salt Lake District Manual 4120 will be followed for both permittee and BLM proposals. Each proposed conversion will be analyzed in an environmental assessment to insure that the change in kind of livestock will be consistent with the resource objectives for the area.

Allotment Monitoring. After implementation of the range program, all allotments will be monitored to determine if management objectives are being met. Additional studies will be established to monitor wildlife habitat, and riparian, aquatic and watershed areas.

Wild Horse Program

Herd Unit Management Plans have been developed for the Cedar Mountain and Onaqui Mountain Horse Herd Units as a result of the Tooele Management Framework Plan. The management objectives as outlined in the MFP are to continue to work toward the limiting the herd size of the Cedar Mountain Unit to 85 animals (1,020 AUMs) and the Onaqui Mountain Unit to 45 animals (540 AUMs). These objectives will be carried forward in the RMP. Wild horses in the Ibapah area are part of the Antelope Wild Horse Herd managed by the Ely BLM District in Nevada.

Wildlife and Fisheries Program

General. Fish and wildlife habitat will continue to be evaluated on a case-by-case basis. Habitat improvement projects will be implemented where necessary to stabilize and/or improve unsatisfactory or declining condition of wildlife habitat areas (WHAs). Such projects will be identified through activity plans and analyzed in environmental assessments.

Habitat Management Plans. BLM personnel will develop Habitat Management Plans (HMPs) to protect, improve and maintain all important wildlife habitat. An HMP is prepared and implemented for a specific geographic area which is a biological unit for important wildlife species and their habitats. BLM places priority on developing HMPs for habitat of endangered, threatened or sensitive species; species of high economic or recreation value; species highly sensitive to land use changes; or aquatic and riparian habitats. HMPs are prepared cooperatively with UDWR to assure that the State's wildlife management objectives are met.

All important public land habitat areas within the Pony Express Resource Area shall be covered by an HMP. These areas are:

(1) **Stansbury/Onaqui WHA.** BLM will revise the existing Stansbury Mountain HMP to include all important public land habitat within the Stansbury and Onaqui Mountains. Interstate 80 and the Lookout Pass roads will form the north and south boundaries, respectively. The Skull Valley road will be the west boundary, and the Grantsville road and foothills of the Stansbury and Onaqui Mountains will be the east boundary.

(2) **Horseshoe Springs WHA.** This WHA will consist of the spring/riparian/mud flat area in northern Skull Valley between Interstate 80 and Iosepa. It will extend west from the Skull Valley road to the edge of the mud flat.

(3) **Puddle Valley WHA.** BLM will revise the existing Puddle Valley HMP to include all important public land habitat north of I-80 and between the Great Salt Lake on the east and the mud flats on the west.

(4) **Simpson/Sheeprock WHA.** This WHA will include Simpson, Sheeprock, Dugway and Davis Mountains and connecting valleys. Judd/Aspen, Indian and Sheeprock Creeks and riparian areas are also within this WHA. It is bound on the north and west by the military reservation, on the south by the Resource Area boundary, and on the east by the Vernon Division/Wasatch National Forest.

(5) **Tintic R/A WHA.** This WHA encompasses the East Tintic Mountains. The boundaries follow the Resource Area boundaries on the south and east, Twelve Mile Pass road on the north, and the Tintic foothills on the west.

(6) **Gold Hill WHA.** BLM will revise the existing Deep Creek Mountain HMP to include the former Gold Hill Planning Unit. It is bounded by the military reservation on the north and east and by the Resource Area boundary on the south and west. Rocky Canyon Creek/riparian area will also be contained within the WHA.

(7) **Oquirrh Mountain WHA.** This WHA will consist of the Oquirrh Mountains and foothills.

(8) **Cedar Mountains WHA.** This WHA will include the Cedar Mountains, the portion of Skull Valley not included in another WHA, and the valley west of the Cedar Mountains. The military reservation forms the west and south boundary, I-80 forms the north boundary, and Skull Valley road and the mud flats form the east boundary.

(9) **Stansbury Island and Silver Island WHAs** (tentative). HMPs may be written for these areas if important wildlife values are found.

HMPs will be done based upon the annual work plan and the area manager's decision. Only one possible HMP is anticipated in Utah County. Lands around Utah Lake presently withdrawn by the Bureau of Reclamation may be returned to BLM. An HMP covering some or all of these wetland-related lands may subsequently be prepared.

Wildlife reintroductions and fish stocking proposals will be evaluated and recommendations will be made to UDWR. BLM policy requires that an HMP and a cooperative agreement be prepared prior to any wildlife reintroduction.

BLM will continue to cooperate fully with the UDWR's reintroduction of bighorn sheep into the Deep Creek and Stansbury Mountains. To date 16 animals have been reintroduced to the Deep Creek Mountains. It is estimated that 85 animals could eventually inhabit public lands in the Tooele County portion of the Deep Creek Mountains, and 120 animals could eventually inhabit public lands in the Stansbury Mountains.

At maximum population the bighorn sheep would require 298 AUMs annually (See Table 2-4). Bighorn sheep forage and livestock forage appear to be noncompetitive because the bighorn sheep are expected to utilize upper mountain areas that are generally inaccessible to sheep and cattle. Range surveys indicate that there is sufficient

TABLE 2-4

PROPOSED BIGHORN SHEEP USE
BY
ALLOTMENT

DEEP CREEK MOUNTAINS

ALLOTMENT Name	Acreage	ACRES OF BIGHORN RANGE Summer	Winter	AUMS REQUIRED Summer	Winter
Ibapah	56,425	5,100	6,800	59	28
Overland Canyon/ Sixmile	71,509	4,300	8,600	49	35
	TOTALS	9,400	15,400	108	63

STANSBURY MOUNTAINS

ALLOTMENT Name	Acreage	ACRES OF BIGHORN RANGE Summer	Winter	AUMS REQUIRED Summer	Winter
Skull Valley	326,720		6,500		38
Timpie Cove	4,570		4,500		26
Stansbury/ Broad Canyon	1,170		1,200		7
Stansbury Mtn.	4,800	1,800	3,000	20	17
Onaqui Mtn. West	24,450		2,200		13
Onaqui Mtn. East	34,920		1,000		6
	TOTALS	1,800	18,400	20	107

forage to support bighorn sheep without affecting livestock forage. BLM does not know exactly what areas the sheep will use or if they will increase to estimated population numbers. No conflicts between bighorn sheep and livestock are expected; if conflicts occur, forage allocation will be reevaluated.

These reintroductions shall be implemented incrementally with monitoring until UDWR herd objectives are met or carrying capacity is reached, whichever occurs first. Additional specifics for implementation shall be developed through the HMP process.

BLM will continue to monitor the reintroduced herd of antelope (150 animals) in southern Rush Valley, Tooele County, to determine if the herd conflicts with any other uses.

BLM will agree to future reintroductions of big game species on the public lands within the Resource Area if the following criteria are met:

- BLM policy requirements as stated in manual 6820 must be followed.
- The species to be established must meet the definition of a reestablishment (reintroduction) as defined in manual section 6820.05c.
- The reintroduction must be approved or sponsored by the Utah Division of Wildlife Resources (UDWR).
- An Environmental Assessment (EA) and Habitat Management Plan (HMP) must determine:

(1) that the reintroduction will not negatively affect any native endangered, threatened or sensitive species, either plant or animal; (2) that land use conflicts which cannot or have not been resolved will not result from the reintroduction. In cases where the release may be for greater benefit than the competing use, the release may take precedence. Forage allocation for the proposed population will be based upon non-competitive forage availability, and UDWR will seek agreement with adjoining landowners; and (3) what studies are necessary to monitor the reintroduction.

- Effective quarantine procedures must be implemented to insure that the release stock is disease-free.

Following the completion of the HMP, a Cooperative Agreement between BLM and UDWR must be prepared to authorize the big game reintroduction.

The above procedure applies only to big game species. Federally-threatened, endangered, and sensitive species will be subject to similar procedures but will be handled on a case-by-case basis. Fisheries and upland game species are not affected by this decision but must meet the criteria outlined in the Master Memorandum of Understanding (MOU) between UDWR and the BLM.

The recent introduction of Rocky Mountain elk onto the Goshute Indian Reservation was not coordinated through BLM. No forage has been allocated in the Deep Creek Mountains for elk; however, it is likely that these animals will summer and potentially become established on BLM lands. Conflicts could arise between livestock, bighorn sheep, and elk. Conflict resolution will be coordinated through all affected agencies.

BLM will continue to encourage UDWR's proposed reintroduction/transplants of upland game birds (chukar partridge, sage grouse, sharp-tailed grouse, ring-necked pheasants, etc.) onto suitable habitat within the Resource Area. Specifics for implementing any such proposed reintroduction/transplants shall be developed in the HMP for the habitat area.

BLM proposes to cooperate fully with peregrine falcon reintroductions into the Timpie Springs and Blue Lake areas. Surface disturbing activities on public lands adjacent to these reintroduction sites will not be permitted to disturb birds or destroy important habitat. BLM will develop specifics for further management actions in the HMP for the habitat area.

BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities in the following areas during the stated time periods:

(1) within mule deer winter range December 1 to April 15.

(2) within 0.5 mile of active raptor nest sites March I to July 15.

(3) within 0.5 mile of sage grouse strutting grounds (leks) and crucial sage grouse nesting habitat between February 15 and June 15 each year and within winter crucial habitat areas December 1 through March 1.

(4) within 1200 feet of riparian/aquatic habitats.

(5) within bighorn sheep crucial winter and lambing areas. Once these ranges have been established by the reintroduced animals, ap-

propriate dates and crucial habitats will be delineated.

(6) within antelope fawning areas April 15 to July 1.

(7) within crucial mule deer summer/ fawning habitats April 15 to July 31.

(8) within crucial elk winter range December 1 to April 30 and calving areas May 1 to June 30.

(9) within waterfowl habitat, i.e. marsh and wetland areas.

Specific exceptions may be granted by BLM if the proposed activity will not seriously disturb the wildlife habitat values being protected.

BLM will improve, maintain and expand those areas suitable for waterfowl and shorebird habitat. Measures could include: (1) implementation of appropriate marsh and wetland maintenance and protection through grazing systems, use restrictions, and fencing if appropriate; (2) expansion through appropriate land and water right acquisitions, habitat management plan development and implementation; (3) waterfowl improvement through construction of new reservoirs and modification of suitable range or watershed reservoir projects, vegetation plantings, protected nesting area construction; and (4) open water and loafing area construction through such measures as pothole blasting and dike construction.

BLM will use cooperative management plans to provide an opportunity for wildlife habitat development and improvement. Habitat could be expanded on public lands by converting isolated tracts of rangeland within pheasant range to cropland or irrigated pasture. Cooperative agreements between BLM, UDWR and a lessee who farms the land work effectively. Under such an agreement, the lessee would employ farming practices which provide pheasant habitat and allow public hunting in exchange for farm production values received on the harvested portion. Only areas with suitable soil and adequate water near existing agricultural areas should be considered. Several locations in Tooele County would be appropriate.

All threatened and endangered species are provided for under the Endangered Species Act; however, due to the unusual resource that exists within the Resource Area, additional measures will be made to improve and encourage the propagation of these important species. These measures include:

- maintenance and improvement of bald eagle roosting and high winter use areas.
- installation of natural and artificial roosts to replace dead trees, maintenance of prey base habitat, i.e. jackrabbit populations.
- protection and improvement of peregrine falcon historic eyres and habitat.

BLM will also protect candidate species during critical nesting periods. These species include ferruginous hawks and swainson's hawks.

Rangeland watering facilities will also allow for wildlife use. When possible, the overflow ponds at water developments will be at least 100 yards from livestock watering sources to allow for a cleaner water source for wildlife. Location of future water developments should minimize conflicts between livestock and wildlife.

All livestock fencing projects will allow for natural migration of wildlife. Design and specifications will be dictated by terrain, class of livestock and species to be managed.

BLM will improve crucial habitats of present wildlife populations where condition and trend indicate a decline of desirable plant communities. An appropriate wildlife habitat study will be conducted to determine the condition of these areas. This information will help guide BLM in planning improvement projects. Some of the crucial habitats that warrant further study include:

(1) crucial mule deer winter range,

(2) crucial mule deer summer/fawning range,

(3) sage grouse crucial strutting and associated nesting habitat,

(4) sage grouse crucial winter range,

(5) antelope fawning areas,

(6) bighorn sheep ranges.

Grazing use could be changed to allow for reduced conflict of livestock class and wildlife, e.g., domestic and bighorn sheep would be incompatible as disease transmission potential is high. Change of livestock class could help alleviate riparian damage when coupled with other measures.

Vegetation treatments such as burning, chaining, reseeding and all other manipulations within crucial ranges of wildlife species will be designed to maintain habitat for those wildlife species most threatened by the practice.

Recreation Program

BLM will continue to evaluate the impacts of any proposed project to recreation resources. Stipulations will be attached as appropriate to assure

compatibility of projects with recreation management objectives.

Public land will be categorized as open, closed, and limited for off-road vehicle (ORV) use. Public land within areas designated as open to ORV use will remain available for such use without restrictions within the requirements of the Utah Off-Highway Vehicle Act of 1987.

Within public land areas identified as limited for ORV use, specific roads, trails, or portions of such areas may be closed seasonally or yearlong to all or specified types of vehicles.

All public land within areas identified as closed will be closed yearlong to all vehicles.

Areas not designated as restricted or closed will be designated open for motorized vehicle use.

From 1983 to 1988 the following public lands have been managed as Recreation Management Areas (RMAs) in the Resource Area:

Extensive RMAs

(1) **Tooele Extensive RMA.** This area includes 968,060 acres of BLM land in Salt Lake, Utah, and Tooele Counties representing comprehensive recreation use areas.

(2) **Gold Hill Extensive RMA.** This area includes 298,880 acres of BLM land in the former Gold Hill Planning Unit.

Special RMAs

(1) **Salt Flats Special RMA.** This area includes 128,700 acres of mud flats and lands north of Interstate 80.

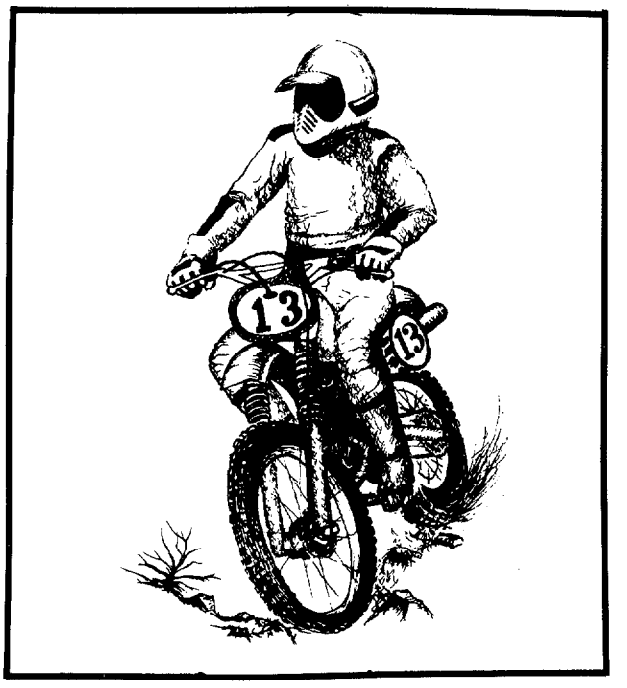
(2) **Pony Express Special RMA.** This area includes 53,320 acres of public land along the Pony Express route and incorporates three interpretive sites (Faust, Simpson Springs and Canyon Station) and Simpson Springs campground.

(3) **Deep Creek Special RMA.** This area includes 24,960 acres of public land in the range with high scenic qualities, bristlecone pine, sensitive watershed, soils and botanical resources, and wildlife habitat.

BLM proposes to update and introduce new Special RMAs to better manage new recreation trends. The two new RMAs will be managed more intensively for off-road vehicle management objectives. The following changes and additions to the RMAs are also recommended: (see Figure 2-3):

(1) **Bonneville Salt Flats Special RMA.** BLM proposes to reduce the acreage from 128,700 to 30,203 acres to conform with the 1985 Recreation Area Management Plan and ACEC. The Salt Flats are highly scenic and are used as a setting for filming movies and commercials from all around the world. The area is also managed and promoted for high-speed, timed automobile trials.

(2) **Knolls Off-Road Vehicle (ORV) Area Special RMA.** The rising popularity of all-terrain vehicles and ORVs has resulted in a high public demand for use of Knolls. A total of 37,760 acres of sand dunes, mud flats and knolls are identified for the increasing use by ORV enthusiasts and permitted races (averaging 100 mile courses).



(3) **Pony Express Route Special RMA.** This area includes 84 miles of the 1860-61 Pony Express Route span between Fairfield and the Nevada state line in Tooele County. A portion not included lies in Juab County between Dugway Mountains and Callao, Utah. Approximately 21,120 acres of public land fall into this historic trail's setting. Three interpretive sites and one campground lie along this trail.

(4) **North Deep Creek Mountain Special RMA.** No change is recommended.

(5) **Payson Motocross Track Special RMA.** This area includes twenty acres of developed motorcycle riding area used by Utah County recreationists. BLM issues special recreation permits for competitive events to clubs of the Utah Sportsman Riders Association.

(6) **Pony Express Resource Area Extensive**

RMA. All public lands in Salt Lake, Utah, and Tooele Counties with exception of the five special RMAs will comprise this comprehensive area of 1,918,836 acres.

Table 2-5 shows a comparison of the existing and proposed recreation management areas. The areas are shown in Figure 2-5.

Visual Resource Management

Visual resource management (VRM) classes were identified for Tooele County in the MFP. In addition, VRM classes for Utah County have been identified based on inventory work done for the RMP process. The VRM designations are shown in Figure 2-4 and will be common to all alternatives. Table 2-6 shows the number of acres in each class in the resource area.

The VRM classes provide managers with objectives that can be applied to actions taking place on the public land. These objectives are discussed in Chapter 3. Land use proposals are reviewed individually to determine whether visual impacts can be adequately mitigated to meet the objectives of the existing VRM class.

Cultural Resource Program

Cultural resources (which include historic and prehistoric sites, artifacts, structures or locales) will continue to be inventoried and evaluated on a case-by-case basis. Such evaluation will consider the impacts of any proposed project to cultural resources in the affected area. Stipulations will be attached as appropriate to assure compatibility of projects with management objectives for cultural resources.

For existing cultural properties, a determination of significance would be made prior to any project being implemented (this may include rerecordation and/or testing of a site). In project areas where resource knowledge is limited or unknown, both examinations of existing data and field inventories would be done to identify the resources and evaluate the significance of each (whether they meet the criteria of eligibility of the National Historic Preservation Act for nomination to the National Register of Historic Places). In all cases, new sites will be recorded using Intermountain Antiquities Computer System (IMACs) forms, and include maps and photo documentation.

TABLE 2-5

PROPOSED CHANGES
RECREATION MANAGEMENT AREAS

NAME	TYPE	CURRENT ACRES	PROPOSED ACRES
Bonneville Salt Flats	Special	128,700	30,203
Pony Express Route	Special	53,320	21,120
North Deep Creek	Special	24,960	24,960
Knolls ORV Area	Special	0	37,760
Payson Motocross Track	Special	0	20
Pony Express Resource Area	Extensive	1,266,940	1,918,836
TOTAL ACREAGE		1,473,920	2,032,899

TABLE 2-6

VRM CLASS ACREAGE

VRM CLASSES	ACRES OF BLM LAND
I	0
II	70,520
III	133,600
IV	1,827,126
Rehabilitation Areas	1,460

Prior to the implementation of any activity plan or project that may adversely affect any cultural resources, the Utah State Historic Preservation Office (SHPO), and if necessary, the Advisory Council on Historic Preservation (ACHP), will be consulted in the determination of effect upon the property. Appropriate mitigation measures would be undertaken for any sites determined to be adversely affected by the proposed project or plan. These measures may include, but are not limited to, the following:

(1) Adjusting of the project boundaries to avoid impacting the sites.

(2) Adopting methods or techniques that would minimize disturbance to the site and its environmental setting.

(3) Additional testing and evaluation of the site.

(4) Removing and relocating the cultural property to another appropriate location after documentation of the property and the development of a management plan to maintain the historic value of the property.

(5) Excavating archaeological properties with a goal of recovering the research values of the properties.

Efforts will be undertaken on a regular and systematic basis to educate the public on the values of preserving their historic and prehistoric heritage. These efforts will include informing the public of archaeological data collection needs and methods and the federal laws which protect cultural resources. These efforts will include, but not be limited to, working with the public schools to enhance their curriculum, providing training to local school teachers, providing training to members of the Utah State-wide Archaeological Society (USAS), and working with students and faculty from interested colleges and universities.

A sensitivity map will be developed for the Resource Area which will depict the geological formations and areas with known potential to contain important paleontological resources. Should a proposed surface-disturbing project be within an area of high sensitivity for paleontological resources, the state paleontologist will be consulted prior to the issuance of a decision.

Wilderness Study Area Management

The Pony Express Resource Area contains three wilderness study areas (WSAs) as shown in Figure 2-5. These WSAs were identified through the wilderness inventory process, conducted from 1978 through 1980 under the authority of Section 603(a) of FLPMA.

In Utah, recommendations as to the suitability or non-suitability for wilderness designation of areas under wilderness review will be made through the statewide wilderness EIS. Wilderness designations are made by Congress. *The Interim Management Policy and Guidelines for Lands Under Wilderness Review* (IMP) dictates management of these areas while under wilderness review, and the *Wilderness Management Policy* describes how they will be managed if Congress designates them as wilderness. The Pony Express RMP/EIS

will address how these three areas will be managed if they are released from wilderness review without designation to the national wilderness preservation system.

Areas of Critical Environmental Concern

Approximately 30,203 acres of the Bonneville Salt Flats in Tooele County will continue to be managed as an ACEC under all alternatives. Other proposed ACECs are identified under Alternative 2.

Forestry Program

No harvest of saw timber for commercial or individual use shall be allowed anywhere on public land within the Pony Express Resource Area except for maintenance practices such as thinning, disease control, wildlife improvements, and watershed enhancement.

The harvest of pinyon pine for use as Christmas trees, either commercially or individually, shall be at the discretion of the Authorized Officer. These stands will be managed as outlined in the Utah Supplemental Guidance: Management of Woodland Resources.

No wood products of any kind may be harvested from public land within the areas recommended for designation as wilderness. This decision will not prohibit thinning of trees for management purposes, i.e., habitat improvement, watershed, or riparian zone protection, as approved by the State Director on a case-by-case basis.

Harvest of firewood, fence posts and Christmas trees shall not be authorized in crucial deer winter range during the period of December 1 to April 30.

All other areas of juniper forest on public land within the Pony Express Resource Area shall remain open to harvesting of firewood, fence posts, Christmas trees or any other juniper products as defined in the Tooele County Woodland Management Plan and the Utah Supplemental Guidance: Management of Woodland Resources.

Transportation and Utility Corridors

Figure 2-6 identifies existing and proposed major rights-of-way for transportation and utility corridors. Future proposals for major rights-of-way such as pipelines, large powerlines and permanent, improved roads must utilize identified corridors. Otherwise, a planning amendment and appropriate environmental analysis will be required. Proposals that are not considered major may be sited outside corridors after demonstrating that locating within a corridor is not viable. In all cases, the utilization of rights-of-way in common shall be considered whenever possible. Rights-of-way, whether within or outside a corridor, will avoid the following areas to the maximum extent possible:

(1) lands within 0.5 mile of sage grouse strutting grounds if the disturbance would adversely impact the effectiveness of the lek.

(2) lands within 1200 feet of riparian/aquatic habitats.

(3) lands within VRM Class II and III areas.

(4) lands within WSAs.

(5) lands where an above-ground right-of-way would be an obvious visual or physical intrusion such as ridge tops or narrow drainages.

(6) lands with slopes greater than 30 percent.

(7) lands with known or suspected hazardous materials.

In addition, construction activities would not be allowed within the crucial seasons and habitats for mule deer, elk, pronghorn, bald eagles, and other raptors.

Exceptions may be permitted based on consideration of the following criteria:

- type and need for facility proposed and economic impact of facility,
- conflicts with other resource values and uses, and
- availability of alternative routes and/or mitigation measures.

Description of the Alternatives

Alternative 1

Objective. This is the no action, or no change alternative. It is a continuation of the current management situation. This alternative provides a baseline for the analysis of other alternatives and is required by the Council on Environmental Quality.

For Tooele County, the current management situation would be a continuation of those decisions found in the 1984 Tooele Management Framework Plan, as amended. A summary of these decisions is found in Appendix 1a. Utah County is not covered by an existing land-use plan; therefore, the current management situation for this area was determined by projecting from past management actions.

A planning analysis was prepared for 48 acres of isolated public land in Salt Lake County in 1985. Because BLM does not propose to change the current management for these isolated parcels, no additional analysis is required in this document. The decisions resulting from the planning analysis for Salt Lake County are found in Appendix 1b.

Issue Resolution Guidelines

Issue 1: Landownership Adjustments

For analysis purposes, it is assumed that all public lands in Utah County would be retained in public ownership under this alternative.

Public Lands in Tooele County would be managed for ownership adjustments as outlined in the MFP. (See Appendix 1a, Issue 1.) Under this alternative lands would be identified as follows:

	Acres
Unavailable for disposal or other adjustment	0
Available for exchange only	1,947,545
Disposal	85,161

The area identified for disposal includes twelve tracts in Tooele County. These are numbers 9, 12, 17, 26, 26a, 27, 30, 31, 33, 34, 35, and 40. These parcels would be managed under all available disposal authorities including FLPMA Section 203 sales (See Table 2-1 and 2-2 and Figure 2-7). Parcel 26a would be disposed only to the county of Tooele. There would be no other limits on persons or purposes in disposing the 12 parcels.

BLM would acquire and/or legalize access as outlined in the Tooele MFP to the following areas (also see Figure 2-8).

Barlow Creek	T. 5 S., R. 7 W. Section 31 and 32 (through) T. 6 S., R. 7 W. Section 6 (through)
Clifton Flat	T. 8 S., R. 17 W. Sections 16 and 17 (through) T. 8 S., R. 18 W. Sections 23 and 24 (through)
Rocky Canyon	T. 10 S., R. 9 W. Sections 17 and 22 (through)
Farnsworth Peak	T. 2 S., R. 4 W. Sections 13 and 14 (through)
Onaqui Mountains	T. 6 S., R. 6 W. Section 16 (through) T. 7 S., R. 6 W. Section 2 (through) T. 6 S., R. 7 W. Sections 35 and 36 (through)
Sheep Rock/ Simpson Mountains	T. 9 S., R. 7 W. Sections 7, 18, 19, and 30 (through) T. 9 S., R. 8 W. Sections 32-34 and 36 (through) T. 10 S., R. 7 W. Sections 5, 17, 18, and 20 (through)
Knolls Recreation Area	T. 15 S., R. 13 W. Sections 14 and 23

Issue 2: Off-Road Vehicle Use.

Public lands in Utah County would be designated as open to ORV use. In Tooele County, lands would remain designated as identified in the Tooele MFP. (See Appendix 1a, Issue 10.) Therefore, under this alternative, the Resource Area would be categorized as follows:

	Acres
Open to ORV use	1,725,655
Limited for ORV use	275,191
Closed to ORV use	31,860

Appendix 5 describes the specific areas resources included in the ORV designations under Alternative 1. The areas in each designation are shown in Figure 2-9.

Issue 3: Vegetation Management in Utah County

Under this alternative, the current level of livestock use would continue on 12 allotments in Utah County. The current level of livestock use is based on average annual licensed use since 1980. Big game use would continue at current levels as determined by UDWR and BLM. No seasons-of-use would be changed for livestock under this alternative. No new rangeland improvements would be implemented.

Under this alternative, forage would be distributed as follows:

Cattle	485 AUMs
Sheep	1,405 AUMs
Mule Deer	235 AUMs
Elk	14 AUMs
Moose	10 AUMs
TOTAL	2,149 AUMs

Forage use by allotment is shown in Appendix 6a.

Management Concern Actions

Mineral Development

Fluid mineral leasing categories would be maintained as follows for oil and gas exploration and development:

	Acres
Category 1 (open)	1,872,011
Category 2 (open with special stipulations)	132,810
Category 3 (no surface occupancy)	28,637
Category 4 (closed)	40,137

Appendix 7 described the areas and/or resources included in the oil and gas leasing categories under Alternative 1. These areas are shown in Figure 2-10.

Under this alternative 30,682 acres within the Bonneville Salt Flats in Tooele County would be closed to further leasing for geothermal resources. A total of 30,311 acres at Horseshoe Springs and Rush Lake would be open to leasing for geothermal resources with restrictions to prevent disturbance of live water and crucial waterfowl habitat.

Alternative 2

Objective. This alternative would provide for development of resources while protecting or enhancing environmental values. This alternative seeks to resolve issues in the most balanced manner

Issue Resolution Guidelines

Issue 1: Landownership Adjustments.

Under this alternative, lands would be identified as follows:

	Acres
Unavailable for disposal or other adjustment	441,820
Available for exchange only	1,581,878
Disposal	9,008

A total of 50 tracts would be available for disposal. These are listed in Table 2-1 and 2-2 and shown in Figure 2-11. All parcels would be managed for disposal under all available authorities except tracts 13, 69, and 70, which would not be available for Section 203 sales.

Fifteen parcels would be available for disposal subject to certain restrictions on persons or purposes under which a disposal would occur. Table 2-7 identifies these parcels and applicable limitations.

In addition to the access acquisitions identified in Alternative 1, BLM would acquire and/or legalize access to the following areas (also see Figure 2-8):

Utah County	
West Mountain	T. 9 S., R. 1 E. Section 14 NW ¼
Kyune Reservation Ridge	T. 11 S., R. 9 E. Section 23, Section 26, (through) Section 35
Tooele County	
Broad Canyon (East side of Stansbury Mountains)	T. 2 S., R. 6 W. Sections 7-9 (through)
Bates Canyon	T. 2 S., R. 4 W. Sections 25 and 26 (through)
Stansbury Island Gravel Pit	T. 1 N., R. 6 W. Section 28

BLM would acquire the following private lands in the vicinity of Rush Lake:

T. 4 S., R. 5 W.	
Section 27, Lots 6, 9, 10 and 13	(155 Acres)
Section 34, S½SE¼, NE¼SE¼	(120 Acres)
Section 35, W½W½, NE¼SW¼	(200 Acres)
T. 5 S., R. 5 W.	
Section 2, W½NW¼	(80 Acres)
Section 3, E½,E½W½	(480 Acres)

Issue 2: Off-Road Vehicle Use.

As much land as possible would be made available to off-road vehicle use while protecting areas where damage to resource values would be unacceptable. The Resource Area would be categorized as follows:

	Acres
Open to ORV use	1,669,267
Limited for ORV use	363,439
Closed to ORV use	0

Also see Appendix 5 and Figure 2-12 for specific resource values and areas designated.

Issue 3: Vegetation Management in Utah County

Under this alternative, livestock would graze at active preference levels on six allotments. Grazing permits on the remaining six small, isolated allotments with minimal or no actual livestock use would be cancelled. These allotments are Iso-tract Cook, Iso-tract Ludlow, Iso-tract Willis, Cherry Creek, Scofield, and Genola Hill. Mule

TABLE 2-7
ALTERNATIVE 2
PARCELS AVAILABLE FOR DISPOSAL
SUBJECT TO LIMITATIONS
ON
PERSONS AND/OR PURPOSES

Parcel	Persons To	Purposes For
2	Wendover City	Landfill
4	Tooele County	Landfill
6	Tooele County	Landfill
8	Adjacent Landowner	Any
13	Iosepa Historical Association	Historic Site
26a	Tooele County	Landfill
53	Adjacent Landowners or Mining Claimants	Any
69	City of Cedar Fort	Watershed and Recreation
70	Dept. of Defense	Military Reservation
71	Adjacent Landowners or Mining Claimants	Any
94	Adjacent Landowners or Mining Claimants	Any
98	Forest Service	National Forest Land
107	Salt Lake City or Forest Service	Municipal Watershed
108	Salt Lake City or Forest Service	Municipal Watershed
109	Salt Lake City or Forest Service	Municipal Watershed

deer and elk use would be at current levels as determined by BLM and UDWR. No seasons-of-use for livestock would be changed. No new rangeland improvements would be implemented. Total forage distribution on public land would be as follows:

Cattle	495 AUMs
Sheep	1,832 AUMs
Mule Deer	236 AUMs
Elk	14 AUMs
Moose	50 AUMs
TOTAL	2,627 AUMs

Forage use by allotment is shown in Appendix 6b.

Management Concern Actions

Mineral Development.

Under this alternative, fluid mineral leasing categories include oil and gas and geothermal resources and would be established as follows:

	Acres
Category 1 (open)	1,898,075
Category 2 (open with special stipulations)	143,492
Category 3 (no surface occupancy)	32,028
Category 4 (closed)	0

Appendix 7 describes the areas and/or resources included in the fluid mineral leasing categories under Alternative 2. These areas are shown in Figure 2-13.

Under this alternative, approximately 89,840 additional acres would be withdrawn from locatable mineral entry to facilitate future industrial activity and for protection of the Knolls off-road vehicle area which is planned to be developed for recreation use. See Figure 2-14.

Areas of Critical Environmental Concern.

The Federal Land Policy and Management Act of 1976 provided that designation of Areas of Critical Environmental Concern (ACECs) be given priority in the development of land-use plans. The Act defines ACECs as follows: "Places within public lands where special management attention is needed (when such areas are developed or where no development is required) to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes or to protect life and safety from natural hazards."

Twenty-three areas were initially nominated to be considered for ACEC designation. See Appendix 8 for a discussion of the ACEC evaluation process. An interdisciplinary team, including the Area Manager and the District Manager, concluded that three of the nominated areas met the criteria to qualify as potential ACECs and therefore proposed them for ACEC designation under this alternative. These areas would be in addition to the existing Bonneville Salt Flats ACEC.

Horseshoe Springs (760 acres) were nominated for protection of wetland values, including fish, waterfowl, and other wildlife habitat and potential habitat for peregrine falcons.

North Stansbury Mountains (10,000 acres) were nominated for protection of scenic and natural values, potential bighorn sheep habitat, geologic uniqueness, and vegetative diversity. This area would be designated as an ACEC only if Congress does not designate the area for wilderness.

North Deep Creek Mountains (28,260 acres) were nominated for protection of the unique combination of resource values, including diverse and unique vegetation, primitive recreation opportunities, crucial wildlife habitat, cultural values, watershed and riparian values, and outstanding scenic values. This area would be designated as an ACEC only if Congress does not designate the area for wilderness.

Figure 2-15 shows the proposed ACECs and the Bonneville Salt Flats ACEC.

Fire Management

All public land in the Resource Area would be managed as a conditional suppression area for wildfire. All facilities, structures, or developments that are susceptible to fire damage would be considered full suppression areas and protected to a degree compatible with their value. The following objectives are tied to vegetation types within Tooele County and are common for all periods of the year:

(1) In the desert shrub/saltbush vegetation type, confine fires to 100 acres.

(2) In the sagebrush/perennial grass vegetation type, including areas of juniper invasion, confine fires to 300 acres.

(3) In the juniper vegetation type, confine fires to 200 acres.

(4) In the annual vegetation type, confine fires to 300 acres.

(5) Under burning conditions which would threaten to sterilize soil, confine all fires in all vegetation types to 50 acres.

(6) Where threatened and endangered plants are present, design wildfire control measures to protect the species.

Five additional vegetation types are not covered by these objectives. Fire occurrence within these types has been minimal and should be evaluated on an individual basis by the resource advisor. Objective 5 would apply to these vegetation types.

Prescribed fire will be used as a resource management tool. Figure 2-16 indicates the fire management and use areas in Tooele County. Prescribed burns within the areas will be used to alter vegetation for the benefit of watershed, livestock grazing and/or wildlife habitat. The areas selected for prescribed burning will have the potential for natural revegetation.

Alternative 3

Objective. This alternative gives priority to resource use and commodity production (e.g. mineral development, livestock grazing, motorized recreation). Other resources would be protected to the extent required by laws, executive orders, and other mandates.

Issue Resolution Guidelines

Issue 1: Landownership Adjustments.

Under this alternative, lands would be categorized as follows:

	Acres
Unavailable for disposal or other adjustment	0
Available for exchange only	1,869,727
Disposal	162,979

A total of 109 tracts would be available for disposal. These are listed in Table 2-1 and 2-2 and shown in Figure 2-17. All parcels would be available for disposal under all authorities, except numbers 13, 23, 24, 25, 47, 56, 57, 69, 70, and 84, which would not be available for Section 203 sales.

Sixteen of the disposal parcels would have limitations on the persons or purposes for which disposal could occur. These include the parcels identified in Table 2-7 plus parcel 84, which would be disposed only to the City of Provo and only for the purpose of maintaining it as a wetland. Proposed access would be the same as described under Alternative 2.

Issue 2: Off-Road Vehicle Use.

All areas not mandated to be closed by legislation, executive order, or BLM policy would be open to ORV use. The Resource Area would be categorized as follows:

	Acres
Open to ORV use	1,957,656
Limited for ORV use	75,050
Closed to ORV use	0

See Appendix 5 and Figure 2-18 for specific resource values and areas.

Issue 3: Vegetation Management in Utah County.

Under this alternative, livestock would graze at active preference levels on six allotments. All or part of the remaining allotment would be disposed (see Issue 1) and livestock grazing would be discontinued. No seasons-of-use for livestock would be changed. No new rangeland projects would be implemented. Total forage distribution on public land would be as follows:

Cattle	513 AUMs
Sheep	1,820 AUMs
Mule Deer	235 AUMs
Elk	14 AUMs
Moose	10 AUMs
TOTAL	2,592 AUMs

Forage use by allotment is shown in Appendix 6C.

Management Concern Actions

Mineral Development.

Mineral resources would receive preference in designating fluid mineral leasing categories, which include oil and gas and geothermal resources. Categories would be established as follows:

Category 1 (open)	1,905,110
Category 2 (open with special stipulations)	149,720
Category 3 (no surface occupancy)	18,765
Category 4 (closed)	0

See Appendix 7 and Figure 2-19 for specific resource values and areas.

Alternative 4

Objective. This alternative gives priority to protection or enhancement of environmental values (e.g. wildlife, watershed, aesthetics, non-motorized recreation). Resource use and commodity production would be allowed to the extent they would be compatible with other programs.

Issue Resolution Guidelines

Issue 1: Landownership Adjustments.

Under this alternative, lands would be characterized as follows:

Unavailable for disposal or other adjustment	441,820
Available for exchange only	1,590,886
Disposal	0

Lands unavailable for disposal or other adjustments are listed in Table 2-3 and shown in Figure 2-2. All remaining public lands would be available only for exchange. No lands are identified for disposal.

Proposed access and land acquisition would be the same as described under Alternative 2.

Issue 2: Off-Road Vehicle Use.

Off-road vehicle use would be prohibited in areas where it would conflict with environmental values such as wildlife habitat, water resources and scenic values. The Resource Area would be categorized as follows:

Open to ORV use	1,669,287
Limited for ORV use	245,899
Closed to ORV use	117,520

See Appendix 5 and Figure 2-20 for a description of specific resource values and areas.

Issue 3: Vegetation Management in Utah County.

Under this alternative, livestock would graze at active preference levels on six allotments in Utah County. Grazing on the remaining six allotments would be eliminated. No seasons-of-use for livestock would be changed. No new rangeland projects would be implemented. Total forage distribution on public land would be as follows:

Cattle	498 AUMs
Sheep	1,912 AUMs
Mule Deer	236 AUMs
Elk	14 AUMs
Moose	50 AUMs
TOTAL	2,710 AUMs

Management Concern Actions

Mineral Development.

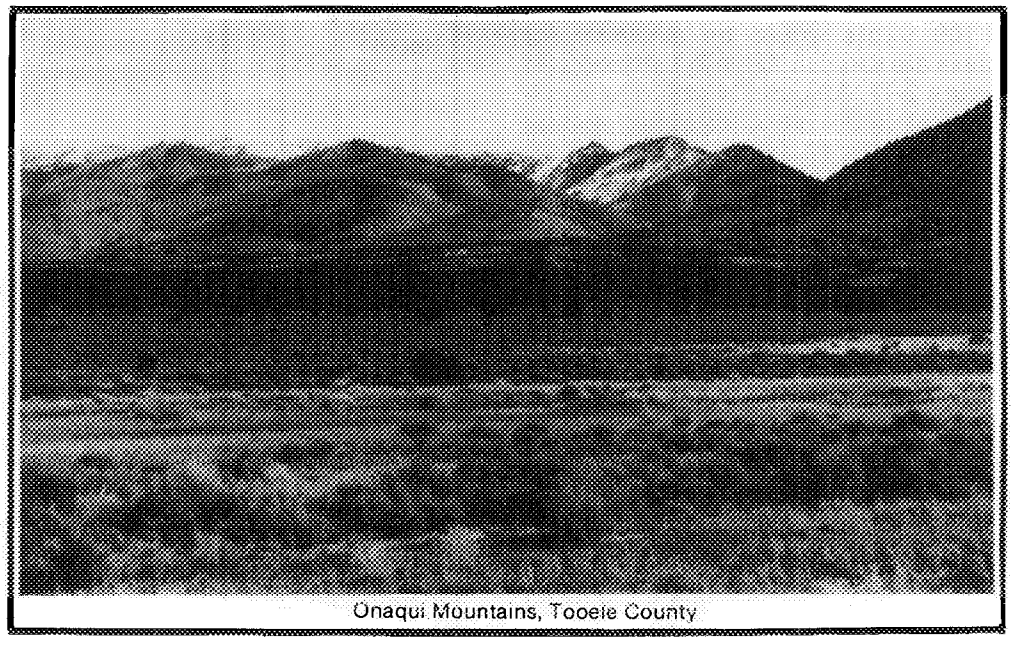
Environmental values would receive preference in designating fluid mineral leasing categories, which include oil and gas and geothermal resources. Categories would be established as follows:

Category 1 (open)	1,718,845
Category 2 (open with special stipulations)	238,717
Category 3 (no surface occupancy)	116,033
Category 4 (closed)	0

See Appendix 7 and Figure 2-21 for specific resource values and areas.

Comparison of the Alternatives

Table 2-8 summarizes the actions which would be taken under each alternative. Table 2-9 summarizes the environmental consequences of each alternative. For more detailed information, refer to Chapter 4.



Onaqui Mountains, Tooele County

TABLE 2-8
COMPARISON OF THE ALTERNATIVES

ISSUE OR CONCERN	ALLOCATION	UNIT OF MEASURE	ALTERNATIVE 1 NO ACTION	ALTERNATIVE 2 PREFERRED	ALTERNATIVE 3	ALTERNATIVE 4
1. Landownership Conflicts						
Ownership Adjustments	Unavailable for Disposal or other Adjustments	Acres Fed. Surface	0	441,820	0	441,820
	Available for Exchange Only	Acres Fed. Surface	1,947,985	1,581,878	1,869,727	1,590,886
	Disposal	Acres Fed. Surface	85,162	9,008	162,979	0
Access						
Legal	Obtain Easements	Miles of Private Surface	24	31	31	31
2. Vegetation Management (in Utah County)						
Forage Allocation						
Livestock	Initial Use	AUMs	2,149	2,627	2,592	2,710
Wildlife	Initial Use	AUMs	259	300	259	300
3. Mineral Development						
Fluid Mineral Leasing	Category 1 - Open	Acres	1,872,011	1,898,075	1,905,110	1,718,845
	Category 2 - Open w/Spec.Stips.	Acres	132,810	143,492	149,720	238,717
	Category 3 - No Surface Occup.	Acres	28,637	32,028	18,765	116,033
	Category 4 - Closed	Acres	40,137	0	0	0
4. Off-road Vehicle Use	Open	Acres	1,725,655	1,669,267	1,957,656	1,669,287
	Limited	Acres	275,191	363,439	75,050	245,899
	Closed	Acres	31,860	0	0	117,520
5. ACEC Designation	Horseshoe Springs	Acres	0	760	0	0
	North Stansbury Mts.*	Acres	0	10,000	0	10,000
	North Deep Creek Mts.*	Acres	21,860	28,260	21,860	28,260
	Bonneville Salt Flats	Acres	30,680	30,680	30,680	30,680

*If not designated wilderness.

TABLE 2-9
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
1. Lands	No effects.	No effects.	No effects.	No effects.
2. Minerals	Fluid mineral exploration and development would be unhindered on 1,872,011 acres of Category 1 area, Category 2 subject to special stipulations, on 132,810 acres, and to no surface occupancy, Category 3, on 28,637 acres. No development would be allowed on 40,137 acres in Category 4, closed to further leasing.	Fluid mineral exploration and development would be unhindered on 1,898,075 acres, subject to special stipulations on 143,492 acres and no surface occupancy on 32,028 acres. No land would be closed to fluid mineral development.	Fluid mineral exploration and development would be unhindered on 1,905,110 acres, subject to special stipulations on 149,720 acres and no surface occupancy on 18,765 acres. No land would be closed to fluid mineral development.	Fluid mineral exploration and development would be unhindered on 1,718,845 acres, subject to special stipulations on 238,717 acres and no surface occupancy on 116,033 acres. No land would be closed to fluid mineral development.
	New potash leases would not be given on 104,000 acres closed to further potash leasing, precluding increased recovery.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
	Withdrawal and closure of 37,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.	Withdrawal and closure of 127,000 acres to locatable mineral entry would prevent recovery of minerals from these areas.	Same as Alternative 1.	Same as Alternative 1.
3. Watershed	Disposal of 6,949 acres for agricultural use could result in a low to moderate erosion potential due to plowing, burning or spraying. Disposal of 16,600 acres for mineral development could result in increased run-off and erosion.	Retention of 441,820 acres would afford long-term watershed management. The disposal of 1,520 acres for agricultural use would cause a short-term increase in erosion. Up to 927 acres would be disturbed for military uses at Camp Williams causing an increase in erosion.	The disposal of 14,620 acres for agricultural uses, 927 acres for military activity at Camp Williams, 1,066 acres for community needs, 18,355 acres for mineral extraction or processing would result in the types of impacts discussed in Alternative 2.	Retention of 441,820 acres would afford long-term watershed management.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
3. Watershed (Continued)		906 acres disturbed for community needs would eliminate these lands as watershed. Soil and vegetation would be permanently lost where facilities would be developed. On 786 acres developed for mineral extraction or processing erosion would increase. Some soil and vegetation would be permanently lost.		
	Mineral exploration and development activities would cause erosion and soil loss on 1,872,011 acres in Category 1 (open) and 132,810 acres in Category 2 (open with special stipulations). Watershed values would be protected on 28,637 acres in Category 3 and 40,137 acres in Category 4.	Mineral exploration and development activities would cause erosion and soil loss on 1,898,075 acres in Category 1 and 143,492 acres in Category 2. Watershed values would be protected on 32,028 acres in in Category 3.	Some types of impacts from fluid mineral leasing categories as described in Alternative 2 would occur on 1,905,110 acres in Category 1, 149,720 acres in Category 2 and 18,765 acres in Category 3.	Some types of impacts from fluid mineral leasing categories as described in Alternative 2 would occur on 1,718,845 acres in Category 1, 238,717 acres in Category 2, and 116,033 acres in Category 3.
	ORV use would cause erosion and vegetation loss on 1,725,655 acres open to ORV use. 275,191 acres with a limited ORV designation would have significant protection from erosion, but erosion could still occur. On 31,860 acres closed to ORV use, erosion and vegetation loss from ORV use would be eliminated.	ORV use would cause erosion and vegetation loss on 1,669,267 acres open to ORV use. 363,439 acres with a limited ORV designation would have significant protection from erosion, but erosion could still occur.	ORV use would cause erosion and vegetation loss on 1,957,656 acres open to ORV use. 75,050 acres with a limited ORV designation would have significant protection from erosion, but erosion could still occur.	ORV use would cause erosion and vegetation loss on 1,669,287 acres open to ORV use. 245,899 acres with a limited ORV designation would have significant protection from erosion, but erosion could still occur.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
3. Watershed (Continued)	Grazing levels would improve watershed conditions in Utah County in the long-term.	Watershed condition would improve on 1,388 acres where six grazing allotments would be eliminated.	Same as Alternative 2.	Same as Alternative 2.
4. Wildlife	Disposal of 6,949 acres for agricultural use, would reduce habitat for bald eagle prey base, disturb crucial sage grouse strutting and nesting area. Pheasant population could increase with agricultural development. Disposal of Tract 12 would result in removal of a wildlife guzzler. Loss of golden eagle nests. Chukar and antelope habitat would be lost with disposal of Tracts 12 & 17.	Land disposals would remove 285 acres of crucial mule deer winter range, 355 acres of historical sage grouse strutting area. 1,990 acres of pheasant habitat could be improved with the disposal of Tracts 31, 33, and 34. Chukar and antelope habitat would be lost with the disposal of Tract 17. On 442,780 acres that would be retained as public land with no land tenure adjustments wildlife habitats would be preserved.	Impacts would be the same as in Alternative 2. In addition, another 985 acres of pheasant habitat could be improved with the disposal of Tracts 5 and 32. Sage grouse strutting and nesting area would be lost with the disposal of Tract 7.	No effects.
	Under existing fluid mineral categories the following acres of crucial wildlife habitats would not have adequate protection: mule deer winter range 12,470, summer range 1,660, fawning area 3,530; sage grouse strutting grounds 580; raptor habitats 79,390. 120 acres at Clover Reservoir would not be fully protected.	All crucial wildlife habitats would be adequately protected through Category 2 and 3 fluid mineral designations.	Under proposed fluid mineral categories the following acres of crucial wildlife habitats would not be protected by special stipulations: mule deer winter range 2,320, summer range 1,660, fawning area 3,530; elk winter range 6,930; raptor habitat 77,180; riparian/wetland habitat 120. All remaining acreages of crucial habitat would be covered by special stipulations.	Same as Alternative 2.

TABLE 2-9 Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
4. Wildlife (Continued)	Present ORV categories would not adequately protect the following acreages of crucial and critical wildlife habitat: mule deer winter range 22,791, summer range 1,540, fawning area 1,070; elk winter range 1,920; antelope fawning area 8,285; sage grouse strutting grounds 10,654; bald eagle use areas 13,575; waterfowl habitat 9,501.	All crucial wildlife habitats would be adequately protected from ORV related impacts through ORV limited designations.	13,575 acres of bald eagle habitat around roost sites would be protected from disturbance by ORV users. No other crucial habitat would be protected.	Same as Alternative 2.
	Present levels of grazing on Lake Mountain Northeast Allotment would allow wildlife habitat to improve.	No effects.	No effects.	No effects.
5. Recreation	No effects.	Retention of the following areas with high recreation opportunites would assure these opportunities continued: Bonneville Salt Flats, Deep Creek Mountains, Knolls, White Rocks, Horseshoe Springs, Simpson Springs, Rush Lake, and Ophir Canyon.	No effects.	Same as Alternative 2.
	Fluid mineral exploration would increase access for ORV users in Category 1 and 2 areas. A Category 3 designation would protect recreation opportunities at Simpson Springs and Middle Canyon. Category 3 and 4 designations would protect	Same as Alternative 1.	No effects.	Same as Alternative 1.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
5. Recreation (Continued)	recreation values in the North Deep Creek Mountains, Stansbury Mountains and Bonneville Salt Flats.			
	ORVs would be allowed open travel on 1,725,655 acres, limited travel on 275,191 acres and no access on 31,860 acres.	ORVs would be allowed open travel on 1,669,267 acres, limited travel designation on 363,439 acres.	ORVs would have unrestricted travel on all but 75,050 acres of public land that would be limited for ORV use.	ORVs would be allowed open travel on 1,669,287 acres, limited travel on 245,899 acres and closed to off-road travel on 117,520 acres.
6. Visual Resources	No effects.	Retention of the following areas would protect their significant visual resources: Bonneville Salt Flats, Deep Creek Mountains, Horseshoe Springs, Stansbury Mountains, Tintic Mountains, and Ophir Canyon.	Tracts 53 and 81 have Class III VRM values that could be affected by surface disturbance.	Same as Alternative 2.
	Fluid mineral leasing categories would lease 27,780 acres of VRM Class II areas and 94,600 acres of VRM Class III areas unprotected.	Fluid mineral leasing categories would protect all VRM Class II and III areas by preventing surface alterations. Class IV would not be protected.	There would be no protection for visual resources from fluid mineral exploration, except for 18,529 acres on the Bonneville Salt Flats.	Same as Alternative 2.
	Most ORV impacts would occur in VRM Class IV areas. Some Class III mountainous areas could be impacted. These are: Silver Island, Cedar, Onaqui, Simpson, and Dutch. Also, Broad Canyon, Clover Creek, Deep Creek, and Ibapah. ORV use could affect Class II values at Bonneville Salt Flats.	Limiting ORV use on 363,439 acres would reduce impacts to visual resources.	ORVs would have unrestricted travel on all but 75,050 acres of public land, that would be limited for ORV use.	Limiting ORV use on 245,899 acres and closing 117,520 acres to ORV use would reduce impacts to visual resources.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
7. Forest Resources	Disposal of two parcels of public land would remove 500 acres of forest resources from public ownership.	3,400 acres of forest resources would be lost through land disposals.	40 tracts with 7,700 acres of forest resources would be disposed of.	No effects.
8. Livestock Grazing	Disposals would eliminate the Vernon Allotment and portions of the Rush Lake, South Clover Skunk Ridge, and Lakeside Allotments. A loss of 2,799 AUMs would occur.	428 AUMs would be lost through disposals affecting nineteen allotments.	Disposals would affect 21 allotments and 4,059 AUMs in Tooele County, 7 allotments 276 AUMs in Utah County. Livestock grazing would be eliminated on 8 allotments and reduced on 9 allotments. Disposals would increase management efficiency on 2 allotments and decrease management efficiency on 3 allotments.	No effects.
	Fluid mineral exploration could slightly decrease livestock forage. Water wells constructed in association with fluid mineral activity could improve livestock distribution.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
	ORV use in grazing areas could decrease vegetation, resulting in increased erosion and invasion of undesirable plants. Unrestricted ORV use would harass livestock particularly in the following areas: 5-Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
8. Livestock Grazing (Continued)	Horseshoe Springs. Vandalism could occur in areas open to ORV use. Areas limited or closed to ORVs would be less effected.			
	Grazing level on Lake Mountain Northeast Allotment would allow seral stage to improve.	Livestock grazing levels would not affect seral stage.	Same as Alternative 2.	Same as Alternative 2.
9. Cultural Resources	Disposal of 12 tracts would result in the loss of cultural resources.	Disposal of 50 tracts would result in the loss of cultural resources. Retention of 441,820 acres would protect cultural values.	Disposal of 109 tracts would result in the loss of cultural resources.	Retention of 441,820 acres would protect cultural resources.
	Category 1 and 2 fluid mineral areas could experience cultural resource losses. Category 3 and 4 areas would better protect cultural resource values.	Exploration and development of fluid minerals could damage cultural resources on 1,898,075 acres in Category 1 and 143,492 acres in Category 2. Disturbance of cultural resources would be reduced on 32,028 acres in Category 3.	Exploration and development of fluid minerals could damage cultural resources on 1,905,110 acres in Category 1 and 149,720 acres in Category 2. Disturbance of cultural resources would be reduced on 18,765 acres in Category 3.	Exploration and development of fluid minerals could damage cultural resources on 1,718,845 acres in Category 1 and 238,717 acres in Category 2. Disturbance of cultural resources would be reduced on 116,033 acres in Category 3.
	On 1,725,655 acres open to ORV use cultural resource damages could occur. Better protection would be afforded on 275,191 acres where ORV use would be limited. Cultural resource values would be protected on 31,860 acres closed to ORV use.	Cultural resources on 1,669,267 acres open to ORV use would be subject to ORV related impacts. Better protection would be afforded on 363,439 acres where ORV use would be limited.	Cultural resource on 1,957,656 acres open to ORV use would be subject to ORV related impacts. Better protection would be afforded on 75,050 acres where ORV use would be limited.	Cultural resources on 1,669,287 acres open to ORV use would be subject to ORV related impacts. Better protection would be afforded on 245,899 acres limited to ORV use. Resources would be protected from ORV related impacts on 117,520 acres closed to ORV use.

TABLE 2-9 (Continued)
SUMMARY OF ACTIONS AND ENVIRONMENTAL CONSEQUENCES

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
10. Social and Economic Considerations	Disposals would reduce in-lieu-of-tax payments to Tooele County by about $30,000. This impact would be offset by taxation on disposed properties. Disposals would affect four grazing allotments, economically impacting individual operators.	Disposals would reduce in-lieu-of-tax payments to Tooele County by about $19,000 and to Utah County by about $12,050. This impact would be offset by taxation on disposed properties. Disposals would affect nineteen grazing allotments including six which would be eliminated. Individual operators could be economically impacted.	Disposals would reduce in-lieu-of-tax payments to Tooele County by about $53,600 and to Utah County by about $3,400. This impact would be offset by taxation on disposed properties. Disposals would affect twenty-six grazing allotments including which would be eliminated. Individual operators could be economically impacted.	No effects.

CHAPTER 3 - AFFECTED ENVIRONMENT

Chapter 3

Affected Environment

Lands

Tooele County

Public landownership in Tooele County is generally in large blocks with interspersed state and private parcels (see Figure A in the back cover). The larger blocks of private land are concentrated around the small communities and in the mining districts.

Other lands in the county have been withdrawn for management by other agencies or for a specific purpose. Eleven different public land orders and executive orders set aside approximately 1.5 million acres, which include the Wendover Bombing Range, Dugway Proving Grounds, Tooele Ordnance Depot, Tooele Ordnance South Area and Hill Air Force Base (HAFB) Bombing Range. These withdrawals segregate the lands from the operation of the public land laws, mining claim location and mineral leasing. The military uses these areas exclusively for such purposes as aircraft use, maneuvers, and bombing practice.

Approximately 150,000 acres of national forest withdrawals are contained in the Stansbury and Vernon units of the Wasatch National Forest. These areas receive use from local residents as well as the nearby Wasatch Front communities.

Approximately 17,000 acres of Indian reservation withdrawals have been made by executive order or by acts of Congress setting aside land in Skull Valley and in Deep Creek Valley for the Goshutes.

Public Water Reserve (PWR) withdrawals were made to preclude settlement, location, sale, or entry on public land containing springs and water holes.

Several types of withdrawals were created for power development under different authorities subject to Section 24 of the Federal Power Act. Lands involved in a power project application were withdrawn from entry or location. Specific projects and rights-of-way are in use in conjunction with some of these withdrawals, while others are no longer being used for the original purpose. In the latter case, many of these withdrawals have recently been revoked.

Additional withdrawals exist for FAA communication sites, often jointly used with other parties. Table 1-1 in Chapter 1 outlines the surface ownership by county.

Inquiries and proposals concerning power lines, roads, railroad, pipeline, telephone/telegraph, ditch/canal, communication sites, material sites, and other rights-of-way involving public lands in Tooele County occur on a regular basis.

There are several types of Recreation and Public Purpose Leases (R&PPs) in Tooele County. The R&PPs in the county have been issued for sanitary landfills, community purposes, watershed protection, historic sites, and recreation.

Access to some isolated parcels is a problem. Access needs are addressed under each alternative in Chapter 2.

Within the Resource Area, approximately two exchanges involving about 2,000 acres are completed each year.

Short-term permits are issued as needed for such activities as mineral inventory and exploration and recreation. These activities are of short duration with limited surface disturbance.

In 1970, 1,910,000 acres of public land in Tooele County were classified under the authority of the Classification and Multiple Use (C&MU) Act. The classification segregated 240 acres against mineral location and appropriation under the agricultural land laws and disposal under RS 2455. The remaining 1,909,760 acres are segregated against appropriation under the agricultural land laws and disposal under RS 2455.

Three site-specific classifications are currently in effect in Tooele County.

A firearms closure covering 800 acres is in effect in the area of the Simpson Springs Campground. This is an unusual classification in that it has no segregative effect, i.e. does not affect public land laws or mining laws. This closure was put into effect to eliminate potential problems involving the use of firearms around the campground.

A determination area based on PL 167, the Surface Protection Act of 1955, covers approximately 215,520 acres in the south Oquirrh Mountains. This classification gives BLM surface management responsibilities for unpatented mining claims in these areas.

A third classification is in effect in the Rush Lake area and involves 1,709.59 acres.

Utah County

Landownership in the Utah County portion of the Resource Area is outlined in Table 1-1 in Chapter 1 (also see Figure A).

BLM lands in Utah County provide areas for livestock grazing, wildlife habitat, recreational uses, access roads, and other uses.

The public lands in the county can be divided into the following five general geographic areas:

Lake Mountain Area. Approximately 15,000 acres of BLM-administered lands are situated on the northern end of the Lake Mountains. This is a fairly tight concentration of public land with some intermingled state lands. The southern half of the Lake Mountains is almost entirely owned by the State. Land use authorizations issued for this area include a communication site right-of-way and a business lease. Several tracts of public land along the shores of Utah Lake are under Bureau of Reclamation withdrawal.

West Mountain Area. This area consists of approximately 8,000 acres which nearly comprise a solid block of public land. Land use authorizations issued for West Mountain include a communication site right-of-way and an R&PP for an observatory site on top of the mountain. On the south end of the mountain there is a small commercial trespass. Several tracts of public land around the south end of Utah Lake are under Bureau of Reclamation withdrawal.

Southwestern Utah County. In the southwestern corner of Utah County are approximately 14,000 acres of public land. These lands lie along a ridge separating Utah County from Juab County. This area has historic and some present mining activity. One major power line right-of-way crosses the northern end of this area.

Just north of this block are about 600 acres of public land broken up in small, irregularly shaped tracts. This area is east of Eureka on the east slope of the Tintic Mountains. Because most of these tracts are covered by mining claims, very few other land uses occur.

Southeastern Utah County. About 7,000 acres of public land lie in the extreme southeast corner of Utah County. Most of this land is partially blocked with several scattered tracts clustered around the edge. Not many land uses occur in this area because of a 5,000-acre oil shale withdrawal which segregates the area from the agricultural land laws and disposal. A state highway and a major power line run through the southern portion of this block, which is bordered on the north by the Uinta National Forest.

Spanish Fork Canyon Area. Approximately 3,000 acres of public land are situated in three general areas in Spanish Fork Canyon. About 1,500 acres are located near the mouth of the canyon. In Dairy Fork Canyon, which is about half way up the main canyon, 480 acres form an isolated block. The third area includes about 1,100 acres in Starvation Canyon. The Starvation Canyon tract is also under consideration for an exchange with the Utah Division of Wildlife Resources (UDWR). The tracts at the mouth of Spanish Fork Canyon are either under BOR withdrawal or R&PP lease to UDWR.

Legal access is generally good to most blocks of public land in Utah County. Some areas have either no public access or poor access (i.e. no roads into the area, etc.). The largest area with no public access is in southeastern Utah County. A few of the small, isolated tracts in the Spanish Fork Canyon area have either no roads or no legal access to them.

A small number of R&PPs, exchanges and sales have occurred in response to requests and applications. Rights-of-way have been addressed and granted on a case-by-case basis.

BLM has one current State exchange application and five proposals for purchase or exchange of lands from private parties.

In 1970, 56,109 acres of public lands in Utah County were classified under the authority of the Classification and Multiple Use (C&MU) Act. The lands are segregated against appropriation under the agricultural land laws and disposal under RS 2455.

Salt Lake County

Three public land parcels (107, 108, 109) totalling 145 acres are presently withdrawn for Salt Lake City municipal watershed.

Minerals

Fluid Minerals

Oil and Gas. There are presently no producing fields or wells within the Pony Express Resource Area. Exploration within the Basin and Range Province, which includes most of the Pony Express Resource Area, has been sporadic with approximately twenty test holes drilled to date. The structural complexity, in addition to the low rate of success, has discouraged industry exploration. The eastern edge of the Pony Express Resource Area along the Wasatch line is considered by some to be the western edge of the thrust belt, where significant exploration and development has occurred in the past decade.

Most of the Pony Express Resource Area is under oil and gas lease. With the passage of the Federal Onshore Oil and Gas Leasing Reform Act of 1987, past leasing methods (non-competitive, simultaneous, and competitive) will be modified. New leasing policy is being developed in accordance with the new law and is expected to be finalized in the near future. Leasing levels and lease activities are expected to remain at about the same level in the Pony Express Resource Area unless signifj-cant oil and gas finds are made.

Geothermal. There are no Known Geothermal Resource Areas (KGRAs) within the Pony Express Resource Area. Eight areas are prospectively valuable for geothermal resources. Exploration would be needed to determine if commercial resources exist.

Fluid Mineral Leasing Categories

The current leasing policy for fluid minerals uses a system of land categorization designed to protect natural and human resources, while providing the maximum opportunity for exploration and development. The four categories utilized include: (1) open with standard stipulations, Category 1; (2) open with special stipulations, Category 2; (3) open with no surface occupancy, Category 3; and (4) closed or suspended to leasing, Category 4. Ninety percent of the land in the Pony Express Resource Area is currently in Category 1 (90 percent). The current leasing categories are shown in Table 3-1.

Solid Leasable Minerals

Most of the areas classified as prospectively valuable for solid leasable minerals lie within national forest boundaries. BLM administers leasing and lease development on these areas through coordination with the appropriate Forest Service Office.

Potash. Potash leases held by Kaiser near Wendover are the only active leases on public lands in the Pony Express Resource Area.

Phosphate. One phosphate mine exists in the PERA in the Diamond Fork Canyon area of the Uinta National Forest. The mine is currently inactive.

Coal. No Known Recoverable Coal Resource Areas (KRCRAs) exist in the Pony Express Resource Area. The majority of the prospectively valuable coal areas are within national forest boundaries. Twelve parcels of public land, located near Soldier Summit, lie within the prospectively valuable zone.

Oil Shale. Five BLM parcels located near Soldier Summit are prospectively valuable for oil shale in the Pony Express Resource Area. All other prospectively valuable areas lie within the national forest boundaries.

Tar Sand. Four parcels in the Argyle Canyon area of Utah County are prospectively valuable for tar sands. All other prospectively valuable areas lie within the Forest Service boundaries.

Locatable Minerals

All public land is open to mineral entry and development unless previously withdrawn. Mineral exploration and development on public land will be regulated under 43 CFR 3800 to prevent unnecessary or undue degradation of the land. Validity examinations may be requested under the following conditions:

- Where a mineral patent application has been filed and a field examination is required to verify the validity of the claim(s),
- Where there is a conflict with a disposal application, it is deemed in the public interest to do so, or where the statute authorizing the disposal requires clearance of any encumbrance,
- Where the land is needed for a Federal program, or
- Where a mining claim is located under the guise of the mining law, and flagrant unauthorized use of the land or mineral resource is occurring.

Public Water Reserves (PWRs) are still being delineated. PWRs withdraw non-metalliferous locatable minerals only.

Public land would be open to mineral entry where mineral withdrawals are revoked through the withdrawal review process.

Potential locatable mineral deposits in the Pony Express Resource Area include antimony, arsenic, bismuth, barite, beryllium, copper, fluorine, gold, gypsum, halloysite, iron, lead, zinc, silver, manganese, tungsten, and a variety of gemstones. Locatable minerals are those "valuable mineral deposits" which do not fall under the purview of the mineral leasing acts and do not include common varieties of sand, stone, gravel, pumice, pumicite, and clay. Mining claims are staked for locatable minerals, under either placer or lode claims.

The Pony Express Resource Area has an extensive mining history. Thirty-one mining districts are located in the area; the Tintic, Mercur and Gold Hill districts remain active. With the advent of disseminated gold technology, activity on the ground has slowly increased. As long as precious

TABLE 3-1

Current Fluid Mineral Leasing Categories

		Acres
Category 01	Open to Leasing	1,872,011
Category 02	Special Stipulations	132,810
Category 03	No Surface Occupancy	28,637
Category 04	Closed to Leasing	40,137

metals remain within current economic ranges, it is anticipated that mineral exploration will steadily increase in the foreseeable future.

Saleable Minerals

Saleable minerals in the Resource Area include common varieties of sand, gravel, stone, and clay. Their importance continues today, especially for road building and other activities associated with maintenance of State and Federal highways, and lakeside industry dike construction and maintenance. Sand and gravel, sandstone, and clays are commonly used.

Sand and gravel are generally confined to terraces and elevations along streams, rivers and ancient shorelines. Building stone and fill material are found in many of the more resistant ridges. Presently, sufficient volumes of these materials exist to meet foreseeable demands. New quarry sites may be developed as needed, consistent with protection of other sensitive resources.

Range Resources

Vegetation

Major Vegetation Zones. Seven vegetation zones exist within the Resource Area's diverse elevation and precipitation: desert shrub/saltbush, greasewood, sagebrush, mountain shrub, juniper/pinyon woodland, riparian/wetland habitats and conifer/aspen. These zones can be divided into ten vegetation types.

With less than 5 percent vegetative cover, the barren type is mostly unsuitable for livestock grazing. Much of the barren type is outside the grazing allotments.

The greasewood type occurs at elevations directly above the barren type and in areas with a high water table.

Desert shrub/saltbush is the most common vegetative type in Tooele County. Removal of vegetative cover within this type sometimes causes an invasion of pure stands of halogeton, which is poisonous to sheep. Cheatgrass, an introduced annual grass, is a major component of these areas and dominates large areas.

Areas of both big sagebrush and black sagebrush occur within the sagebrush type. Big sagebrush grows on lower benches with deep soils. These sites often have high potential for land treatment. Sites with black sagebrush are located higher in the mountains on coarse, shallow soils. These areas have low treatment potential.

In recent years (1984-1986) a die-off of shrubs has occurred in both the Desert shrub/saltbush and sagebrush vegetation types. High precipitation levels, insect damage including high grasshopper densities in 1984 and 1985, and disease have all been discussed as causes for this die-off. BLM in cooperation with Utah State University has contracted to do several related studies. At this time a cause for the die-off cannot be pin-pointed. It may be that a combination of all the environmental

factors together resulted in the die-off. Shrub die-off has occurred independent of the degree of livestock and wildlife use in the area. Use by grazing animals can increase stress on the plant and may have contributed to the shrub die-off in some locations. The shrubs that have died have been replaced by both annual and perennial grasses.

Juniper without the pinyon association comprises the majority of the pinyon-juniper type in Tooele County. The juniper type has significantly invaded the sagebrush type; these invaded areas have the best treatment potential in Tooele County (Vallentine, 1971). Pinyon pine areas are found on the south end of the Oquirrh and Sheeprock Mountains and on the Deep Creek, Simpson, Tintic Mountains, and throughout Utah County.

The mountain shrub type is found in scattered patches in mountainous areas in the Pony Express Resource Area. This type is very important because of its high productivity. It also provides essential forage and cover for wildlife and livestock.

The conifer-aspen type is limited to the north-facing slopes of the mountain tops which are very steep and mostly unsuitable for livestock grazing. This type is used by big game for cover and minimal grazing.

The riparian type occupies a relatively small but important part of the county. Twenty perennial streams have been identified to have riparian characteristics. Springs throughout the Resource Area also have small amounts of associated riparian habitat. Rush Lake, wet meadows along the west bench of the Deep Creek Mountains, Clover Reservoir, Horseshoe Springs and wetlands around Utah Lake are included in this type. Figure 3-1 show the significant riparian and wetland areas in the Resource Area.

The perennial grass type includes several small areas on the mountain benches dominated by species such as bluebunch wheatgrass and Indian ricegrass.

The annual type primarily includes cheatgrass, with lesser amounts of halogeton, peppergrass and Russian thistle. This type has invaded disturbed areas mostly within the desert shrub/saltbush type.

Croplands within the Resource Area occur on private land and primarily produce alfalfa hay, which is fed to livestock during the winter months.

Table 3-2 indicates the major vegetation types, along with a plant list, acreages, elevations and locations in which the types are normally found.

Threatened, Endangered, and Sensitive Plant Species. There is one officially listed endangered plant species in the Pony Express Resource Area. The clay phacelia (*Phacelia argillacea*) was designated as endangered in 1978. This plant is known from only two small populations in Spanish Fork Canyon in Utah County. There are no known locations on public lands.

Four plant species, *Astragalus desereticus* (deseret milkvetch), *Spiranthes diluvialis* (no common name), *Cryptantha compacta* (mound catseye), and *Hackelia ibapensis* (Deep Creek stickseed), are candidates for listing as threatened or endangered in the Pony Express Resource Area.

Astragalus desereticus grows in sagebrush and juniper communities near the town of Birdseye along Highway 89 in Utah County. The known populations of deseret milkvetch are on private land.

Spiranthes diluvialis grows in wet meadows and riparian communities. In 1963 and 1978 this orchid was collected on the east side of Utah Lake, but has not subsequently been located in this area. Its existence and distribution are not fully understood at this time.

Cryptantha compacta, a candidate species for listing as threatened or endangered, has been collected on public land north of the town of Vernon in Tooele County. It is likely to be found elsewhere in the area.

Hackelia ibapensis, another candidate species for listing, has been collected from the Deep Creek

TABLE 3-2
VEGETATION TYPES

Type/Sub Type	COMMON PLANT TYPES		Acres[1]	Elevation	Locations
	Common Name	Scientific Name			
Barren/ Rock Outcrops (5% Cover)	Pickleweed	Allenrolfea occidentalis	575,124(T) 1,000(U)	Below 4,300	Valley Bottom and Playas
	Saltgrass	Distichlis stricta			
	Alkali Sacaton	Sporobolus airoides			
Greasewood	Greasewood	Sarcobatus vermiculatus	149,639(T)	4,300-4,500	Along Fringes of Playas
	Bud Sagebrush	Artemisia spinescens			
	Shadscale	Atriplex confertifolia			
	Saltgrass	Distichlis stricta			
	Halogeton	Halogeton glomeratus			
	Gray Molly	Kochia americana			
	Russian Thistle	Salsola kali			
	Alkali Sacaton	Sporobolus airoides			
Desert Shrub/ Saltbush	Shadscale	Atriplex confertifolia	1,090,964(T) 1,360(U)	4,500-5,500	Area Wide
	Nuttall's Saltbush	Atriplex nuttallii			
	Little Rabbitbrush	Chrysothamnus viscidiflorus			
	Mormon Tea	Ephedra nevadensis			
	Winterfat	Ceratoides lanata			
	Indian Ricegrass	Oryzopsis hymenoides			
	Squirreltail	Sitanion hystrix			
	Cheatgrass	Bromus tectorum			
	Spineless Horsebrush	Tetradymia sp.			
	Halogeton	Halogeton glomeratus			
Sagebrush	Big Sagebrush	Artemisia tridentata	468,752(T) 20,062(U)	5,000-6,000	Area Wide
	Black Sagebrush	Artemisia nova			
	Big Rabbitbrush	Chrysothamnus nauseosus			
	Little Rabbitbrush	Chrysothamnus viscidiflorus			
	Bitterbrush	Purshia tridentata			
	Cliffrose	Cowania mexicana			
	Spineless horsebrush	Tetradymia canescens			
	Nevada bluegrass	Poa nevadensis			
	Bluebunch Wheatgrass	Agropyron spicatum			
	Crested Wheatgrass	Agropyron cristatum			
	Cheatgrass	Bromus tectorum			
	Sandberg Bluegrass	Poa secunda			
Perennial Grass	Bluebunch Wheatgrass	Agropyron spicatum	63,393(T)	5,800-8,000	Scattered Throughout Area
	Indian Ricegrass	Orysopsis hymenoides			
	Crested Wheatgrass	Agropyron cristatum			
	Squirreltail	Sitanion hystrix			
	Needle and Thread	Stipa comata			
	Salina Wildrye	Elymus salina			

TABLE 3-2

VEGETATION TYPES

Type/Sub Type	COMMON PLANT TYPES		Acres[1]	Elevation	Locations
	Common Name	Scientific Name			
Annuals	Cheatgrass	Bromus tectorum	69,142(T)	Various	Bottomlands
	Halogeton	Halogeton glomeratus			Benches
	Peppergrass	Lepidium perfoliatum			
	Russian Thistle	Salsola kali			
Pinyon-Juniper	Utah Juniper	Juniperus osteosperma	302,009(T)	4,700-7,500	Foothills-
	Pinyon Pine	Pinus edulis	19,000(U)		Benches
	Pinyon Pine	Pinus monophylla			
	Serviceberry	Amelanchier alnifolia			
	Bitterbrush	Purshia tridentata			
	Cliffrose	Cowania stansburiana			
	Big Sagebrush	Artemisia tridentata			
	Black Sagebrush	Artemisia nova			
	Bluebunch Wheatgrass	Agropyron spicatum			
Mountain Shrub	Mountain Maple	Acer glabrum	51,893(T)	5,000-8,500	Mountains
	Serviceberry	Amelanchier alnifolia	4,900(U)		
	Curlleaf Mahogany	Cercocarpus ledifolius			
	Chokecherry	Prunus virginiana			
	Bitterbrush	Purshia tridentata			
	Snowberry	Symphoricarpos oreophilus			
	Big Sagebrush	Artemisia tridentata			
	Gamble Oak	Quercus gambelii			
	Nevada bluegrass	Poa nevadensis			
	Bluebunch Wheatgrass	Agropyron spicatum			
	Kentucky Bluegrass	Poa pratensis			
Conifer-Aspen	Aspen	Populus tremuloides	72,017(T)	7,200 & above	North-facing
	Douglas Fir	Pseudotsuga taxifolia	1,355(U)		slopes (30-
	Englemann Spruce	Picea engelmannii			70%) of the
	White Fir	Abies concolor			High Mountains
	Subalpine Fir	Abies lasiocarpa			
	Columbine	Aquilegia sp.			
	Larkspur	Delphinium sp.			
	Geranium	Geranium fremontii			
	Bluebunch Wheatgrass	Agropyron spicatum			
	Kentucky Bluegrass	Poa pratensis			
	Mountain Brome	Bromus carinatus			

TABLE 3-2

VEGETATION TYPES

Type/Sub Type	COMMON PLANT TYPES		Acres[1]	Elevation	Locations
	Common Name	Scientific Name			
Riparian/Wetland	Box Elder	Acer negunda	22,200(T)	Various	Near streams,
	Narrrowleaf cottonwood	Populus angustifolia	3,455(U)		springs, &
	Riverbirch	Betula occidentalis			other waters
	Redosier dogwood	Cornus stolonifora			
	Alder	Alnus tenufolia			
	Sandbar willow	Salix exigua			
	Willow	Salix sp.			
	Squawbush	Rhus trilobata			
	Bentgrass	Agrostis sp.			
	Sedges	Carex sp.			
	Rush	Juncus sp.			
	Dropseed	Sporobolus airoides			
	Saltgrass	Distichlis spicata			
	Bullrush	Scirpus sp.			
	Spikerush	Eleocharis sp.			
	Marshfire	Salicornia rubra			
	Povertyweed	Iva axillaris			
Cropland			11,645(T)	4,300-6,000	Bottomlands

1 For Tooele County (T) the acreage includes all lands in the county.
For Utah County (U) the acreage is BLM administered lands only.

SOURCE: U.S Department of the Interior (USDI), Bureau of Land Management (BLM), 1982.

TABLE 3-3

STATUS OF PROTECTED, CANDIDATE, AND SENSITIVE PLANT SPECIES

Common Name	Scientific Name	Status[1]
Clay Phacelia	Phacelia argillacea	Endangered
Mound Catseye	Cryptantha compacta	Category 1
Deseret Milkvetch	Astragalus desereticus	Category 2
No Common Name	Spiranthes diluvialis	Category 2
Deep Creek Stickseed	Hackelia ibapensis	Category 2
Basin Fishhook Cactus	Sclerocactus pubispinus	Category 3c
Pohl Milkvetch	Astragalus lentiginosus var. pohlii	Category 3c
Kass Rockcress	Draba kassii	Sensitive

(Source: USDI, FWS, 1985, 1987)

[1]Endangered - Species which is in danger of extinction throughout all or a significant portion of its range. Federally listed as endangered with accompanying protection.

Category 1 - Taxa that currently have substantial information on hand to support the biological appropriateness of proposing to list as endangered or threatened.

Category 2 - Taxa for which information now in possession of the FWS indicated that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data is not currently available to support proposed rules.

Category 3c - Taxa that are now considered to be more abundant or widespread, and/or substantially less subject to identifiable threats than previously thought.

Sensitive - Plants who populations are small or whose ranges are restricted to a few localities.

Mountains in Juab County. The rock type and plant community that this plant is known from also occurs across the county line in Tooele County.

There are three sensitive plant species that occur in Tooele County. The species are *Sclerocactus pubispinus* (Basin fishhook cactus), *Astragalus lentiginosus* var. *pohlii* (Pohl milkvetch), and *Draba kassii* (Kass rockcress). These species are not presently candidates for federal protection, but with their low population numbers and/or limited distribution their populations warrant some protection. (U.S. Department of the Interior (USDI), Fish and Wildlife Service (FWS), 1987).

The status of these species is outlined in Table 3-3.

Poisonous Plants and Noxious Weeds. The following poisonous plants could be a threat to livestock on poor condition ranges where they may sometimes be eaten in toxic quantities:

Death camas	(*Zigadenus paniculatus*)
Milkvetch	(*Astragalus sp.*)
Lupine	(*Delphinium sp.*)
Halogeton	(*Halogeton glomeratus*)
Horsebrush	(*Tetradymia sp.*)
Poison Hemlock	(*Conium maculatum*)
	(Whitson, 1987)

Halogeton and horsebrush are both likely to occur and are a threat to sheep that graze them. At this time, no concentration or problem areas have been identified in Utah County. Death camas, larkspur, milkvetch, and poison hemlock are all considered toxic to livestock. These species have potential to exist in Utah County but have not been identified as a problem on BLM land. Knapweed has been identified along the entire length of the sheep trail in Tooele County and has been identified in several allotments along the trail. Currently no knapweed has been reported on BLM land in Utah County, but current indications are that it could become a problem. Localized treatment on specific allotments may be required by the BLM in the future to help reduce the spread of knapweed.

Thistle and cocklebur are noxious weeds which occur primarily along roadways and other disturbed areas in both Tooele and Utah Counties.

Noxious weed control in the Resource Area is the responsibility of Tooele and Utah Counties. BLM will continue to work with the counties in efforts to resolve any noxious weed problems. The poisonous plant specialists from Utah State University should be involved in these cooperative efforts. The Salt Lake District, BLM, is currently working with Tooele County to control known areas of knapweed.

Condition, Trend and Forage Production

Two types of range conditions are used in this EIS, range forage condition and ecological condition.

Ecological condition is a direct comparison of a range site's present plant composition and its potential plant community. It is categorized as a percent of similarity between potential and present composition and is divided into four stages: early seral (0-25 percent), mid-seral (26-50 percent), late seral (51-75 percent) and potential natural community (PNC) (76-100 percent).

The range forage condition used in the Tooele Grazing EIS was based on estimates by BLM range conservationists of the availability and variety of desirable forage species for a given range site. The range forage condition has been categorized as poor, fair and good/excellent.

The ecological condition of a site may not always correspond to a site's range forage condition. A site may be in an ecological condition of late seral, containing up to 75 percent of the plants which the site is potentially able to produce. This site may also contain plants such as juniper, which are not desirable livestock or big game forage. In this instance, BLM range conservationists may have given the site a poor forage condition rating. Often the desired range condition for multiple-use management is a mixture of all ecological conditions with the majority in the mid and late seral stages. Table 3-4 indicates the 1984 range forage condition of each allotment in Tooele County.

Trend in range condition is an interpretation of the direction of change based on multiple observations. Trend studies have been established on all I and M Category allotments and most C Category allotments in Tooele and Utah Counties. Different areas within an allotment may have different trends; therefore, the trend identified is an estimate for the allotment as a whole. Although the condition of an allotment is in an upward trend, there may be areas within the allotment that need better management.

Table 3-4 indicates the trend of each allotment as determined for the 1983 Tooele Grazing EIS. Since that time, management has been focused on the I category allotments in an effort to reverse the downward trend. Allotment Management Plans (AMPs) have been developed and implemented on the Onaqui Mountain East and West, Skull Valley, Skunk Ridge, Hill Spring and South Clover Allotments. Projects including fences,

TABLE 3-4
Range Condition and Trend
Tooele County

ALLOTMENT	CONDITION: GOOD/EXCELLENT Acres[a]	GOOD/EXCELLENT Percent	CONDITION: FAIR Acres[a]	FAIR Percent	CONDITION: POOR Acres[a]	POOR Percent	CONDITION: UNDETERMINED Acres	TREND: Improving	TREND: Not Apparent	TREND: Declining	TREND: Undetermined
CATEGORY I											
Aragonite	3,210	20	9,630	60	3,210	20			X		
Broad Canyon	7,030	62	3,589	31	751	7				X	
Clifton	5,488	22	13,033	53	6,197	25		X			
Cottonwood East	1,732	20	6,062	70	866	10			X		
Cottonwood West	3,472	35	5,952	60	496	5			X		
Deep Creek	9,034	22	22,169	52	11,131	26				X	
Government Creek	13,251	35	15,145	40	9,465	25			X		
Hill Spring	980	35	1,340	48	460	17					X
Ibapah	12,519	26	25,378	53	9,931	21			X		
Indian Spring	4,929	20	14,788	60	4,929	20			X		
Mercur Canyon/W. Ophir	11,988	32	23,974	63	1,960	5			X		
North Cedar Mountain	19,678	35	25,300	45	11,224	20			X		
North Puddle Valley	984	5	8,899	45	9,888	50				X	
Ochre	5,471	26	6,744	32	9,088	43				X	
Onaqui Mountain East	2,872	10	15,222	53	10,626	37				X	
Onaqui Mountain West	3,360	14	11,876	49	9,194	37				X	
Ophir Canyon							8,980				X
Overland Canyon	16,348	26	27,768	43	21,068	32		X			
Pinyon Flat	4,379	2	10,391	50	5,831	28		X			
Rush Lake	657	10	4,877	77	825	13					X
Saint John	1,950	30	1,310	20	3,240	50			X		
Skull Valley	34,080	15	113,680	50	79,520	35				X	
Skunk Ridge	9,529	15	28,587	45	25,411	40				X	
Soldier Canyon							5,220				X
South Clover	2,580	14	11,620	63	4,300	23				X	
South Skull Valley	16,251	15	54,172	50	37,920	35				X	
West Ibapah	1,130	9	2,840	22	8,936	69				X	
West Lookout Pass	3,494	20	10,482	60	3,494	20			X		

TABLE 3-4

Range Condition and Trend

ALLOTMENT	CONDITION GOOD/EXCELLENT Acres[a]	CONDITION GOOD/EXCELLENT Percent	CONDITION FAIR Acres[a]	CONDITION FAIR Percent	CONDITION POOR Acres[a]	CONDITION POOR Percent	CONDITION UNDETERMINED Acres	TREND Improving	TREND Not Apparent	TREND Declining	TREND Undetermined
CATEGORY M											
Allen Basin/Wanless							9,545				X
Black Rock	7,250	20	19,939	55	9,063	25			X		
Boulter Wash	43,804	85	5,153	10	2,577	5		X			
Deseret/Rush Valley	10,926	45	12,140	50	1,214	5		X			
Dutch Mountain	23,107	37	18,364	30	20,743	33			X		
East Grassy	5,405	28	10,232	53	3,668	19			X		
East Onaqui RCA	4,308	40	5,924	55	538	5		X			
Elephant Knoll	14,259	44	12,435	38	5,810	18			X		
Fandangle	8,834	30	14,724	50	5,890	20			X		
Fivemile Pass	960	55	787	45				X			
German Valley	2,896	15	11,583	60	4,826	25			X		
Grantsville SCS							2,560				X
North Grassy	11,479	45	10,204	40	3,826	15		X			
Riverbed (Stewart)	1,026	15	4,106	60	1,711	25			X		
Roadside	104	20	312	60	104	20			X		
Six Mile	2,600	26	4,300	43	3,200	32			X		
South Deseret							2,420				X
Spotted Fawn	8,216	21	11,707	30	18,515	48			X		
Toplift	40,868	75	10,898	20	2,724	5			X		
Triangle	1,131	5	14,705	65	6,787	30			X		
West Grassy	9,055	20	29,431	65	6,792	15		X			
Lone Rock	9,984	40	7,448	30	7,448	30		X			

TABLE 3-4

Range Condition and Trend

ALLOTMENT	CONDITION GOOD/EXCELLENT Acres[a]	CONDITION GOOD/EXCELLENT Percent	CONDITION FAIR Acres[a]	CONDITION FAIR Percent	CONDITION POOR Acres[a]	CONDITION POOR Percent	CONDITION UNDETERMINED Acres	TREND Improving	TREND Not Apparent	TREND Declining	TREND Undetermined
CATEGORY C											
Ajax							4,830				X
Cedar Fort							500				X
Chimney Rock							4,065				X
Dead Creek Creek	52	5	312	30	676	65			X		
Elberta West							3,530				X
Faust Rest Area			20	100					X		
Lakeside	2,551	10	11,480	45	11,480	45				X	
Lost Creek	182	5	2,184	60	1,274	35			X		
Middle Canyon							3,080				X
Oquirrh Mtn. North							3,620				X
Pole Canyon							3,600				X
Stansbury/Broad Canyon							4,000				X
Stansbury Island Cent.							3,960				X
Stansbury Island NE							1,120				X
Stansbury Island NW							2,320				X
Stansbury Island SE							700				X
Stansbury Island S							4,740				X
Stansbury Mountain							3,400				X
Stockton							5,710				X
Tenmile							6,240		X		
Timpie/NW Grantsville							3,930				X
West Canyon							2,610				X
Vernon	117	4	1,113	38	1,700	58			X		
Total	390,910	26	694,329	47	403,735	27	90,680				

[a]State and Private Lands Included

pipelines, wells and vegetative treatments have been completed on these allotments.

AMPs for the Ibapah and South Skull Valley Allotments are currently being implemented. A reduction in livestock grazing on the Skunk Ridge Allotment is in its final year of implementation, and management of the West Ibapah Allotment has been transferred to BLM's Ely District. AMPs have been drafted for the Indian Springs, Government Creek, Saint John, Broad Canyon and Salt Mountain Allotments.

Twelve allotments that were designated for monitoring in the Tooele Grazing EIS are scheduled for evaluation of their trend and forage allocation in 1988.

The total estimated forage production for livestock and big game use in Tooele County is 139,998 AUMs. Because forage production fluctuates dramatically in the area's semidesert environment, production estimates are based on all available data for each allotment, including actual use information, utilization and trend studies, grazing records, and UDWR/BLM estimates of big game use.

The ecological development of vegetation on public lands in Utah County is shown in Table 3-5. The four states of ecological development are early, middle, late, and potential natural community (PNC).

Estimated trend has been determined by the comparison of data from both the 1964 range surveys and the 1986 ocular reconnaissance to the range site descriptions from the soil surveys that were completed in 1970, 1972, and 1980.

No trend density plots have been established in any of the twelve allotments in Utah County. Photo points have been established on six Utah County allotments and are scheduled to be re-evaluated on a 10 year cycle.

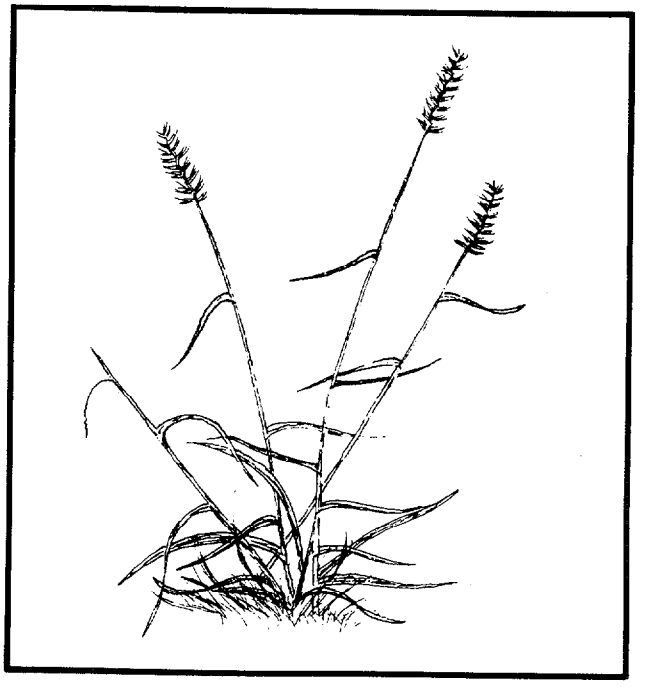
Present forage production has not been inventoried. Ocular reconnaissance inventories were done in 1955 and 1961 for the original forage allocation on these allotments. Range condition was estimated through ocular reconnaissance in 1986. The general good condition and static or upward trend of these allotments indicate the present forage production is adequate to meet the current forage allocation.

Livestock Grazing

Number of Livestock Operations. Presently, 117 operators or companies hold permits to graze livestock on 73 allotments in Tooele County. Twenty-nine operations hold sheep permits, 82 hold cattle permits and six hold a combination of both sheep and cattle permits. Three cattle operators also hold small permits for domestic horses. The active preference is 106,299 AUMs.

In Utah County 20 operators hold permits to graze livestock on public land. Seven of these hold cattle permits and thirteen hold sheep permits. These permits total 2,569 AUMs. Table 3-6 outlines the season-of-use, active and total preference, kind of livestock, and percent federal land for each allotment.

The grazing allotment boundaries are outlined on Figure B in the back cover of this document.



Size and Kind of Livestock Operations. Permits for livestock grazing in Tooele County range from 4 to 15,000 AUMs. Approximately 70 percent of the operations have permits for less than 500 AUMs; therefore, 40 operators control 80 percent of the permitted forage. All of the sheep operations are ewe/lamb operations. Lambing generally takes place in April and May, while some of the herds are still on public land. Weighing between 80 and 95 pounds, lambs are usually cut out of the band and sold in October or November. Approximately 95 percent of the cattle operations are cow/calf; calving takes place from March to May. Calves are generally sold around October at weights between 350 and 450 pounds. The other 5 percent of the cattle operations are cow/calf/

TABLE 3-5
ECOLOGICAL
CONDITION AND TREND

UTAH COUNTY

ALLOTMENT Category C	EARLY Acres[d]/Percent	MIDDLE Acres[d]/Percent	LATE Acres[d]/Percent	PNC[a] Acres[d]/Percent	TREND
Cherry Creek (4021)		75(16%)		397(84%)	Static
Chipman (4079)	0	37(1%)	2,205(97%)	283(11%)	Upward
Lake Mtn. Smith (4080)	0	1,806(26%)	3,126(45%)	2,014(29%)	Upward
Genola Hill (4091)	40(14%)		250(86%)		Static
Iso-tract Cook (4087)		80(100%)			Static
Iso-tract Willis (4085)	28[b](100%)				Static
Lake Mtn. Davis (4078)	129(4%)	192(6%)	705(22%)	2,180(68%)	Static[c]
Lake Mtn. Northeast (4077)	0	1,288(21%)	2,943(43%)	1,901(31%)	Upward
Lake Mtn. Monte Vista (4081)	0	0	1,678(37%)	2,858(63%)	Upward
West Mtn. (4076)	0	1,718(21%)	3,517(43%)	2,945(36%)	Upward
Iso-tract Ludlow (4095)			240(50%)	241(50%)	Static
Scofield (4126)				37(100%)	Upward
TOTAL	197(1%)	5,196(16%)	14,664(44%)	12,856(39%)	

[a] Potential Natural Community

[b] Flooded

[c] Trend since 1955 has been upward, but excellent condition of this allotment has resulted in static trend.

[d] All acreages for BLM Lands

TABLE 3-6

UTAH COUNTY GRAZING ALLOTMENTS

ALLOTMENT	LIVESTOCK NO. KIND	% FED. LAND	SEASON-OF-USE	ACTIVE PREF. AUMS	TOTAL PREF. AUMS
Cherry Creek	1,000 sheep	10	05/16 - 06/16 09/16 - 10/15	40	40
Chipman	2,000 sheep	10	03/01 - 05/31 11/01 - 02/28	276	276
Lake Mtn. Smith	975 sheep	10	11/01 - 04/30	117	117
Genola Hill	10 cattle	100	04/01 - 06/30 10/20 - 12/19	50	50
Iso-Tract Cook	20 cattle	20	09/01 - 11/30	12	12
Iso-Tract Willes	6 cattle	100	07/01 - 07/31	6	6
Lake Mtn. Davis	1,000 sheep	50	03/15 - 04/29 05/01 - 06/01	348	348
Lake Mtn. Northeast	2,650 sheep	45	04/25 - 06/16	445	445
Lake Mtn. Monte Vista	266 cattle	60	01/10 - 02/28	320	320
West Mountain	88 cattle	100	03/16 - 06/01	178	178
	1,446 sheep	100	04/01 - 06/01 10/01 - 10/31 12/01 - 02/28	726	726
Iso-Tract Ludlow	1,500 sheep	10	05/01 - 05/31 10/01 - 10/15	45	45
Scofield	1,000 sheep	1	05/20 - 06/30 09/20 - 10/31	6	6
	11,571 sheep 390 cattle			2,569	2,569

yearling, in which the rancher has the option of selling calves or holding them over the winter and selling them as yearlings.

Permits for livestock grazing in Utah County range from 6 AUMs to 445 AUMs, with an average of 203 AUMs per permit. All of the sheep permits are ewe/lamb operations. The majority of the cattle operations are cow/calf.

Seasons-of-Use. Most sheep operators enter their allotments during the month of November and leave between the first of April and the last of May. These operators rely on public land for wintering their sheep after snow accumulates on higher elevation ranges. Use at this time generally occurs on the valley floors and, to some extent, on the lower mountain benches. These remaining operators graze sheep on public land during the spring and summer on higher mountain areas.

The seasons-of-use for cattle vary more significantly. Cattle graze some portions of Tooele County during the entire year. Summer permits generally run from May 15 through October 15 in the higher elevations of the mountain ranges. Winter cattle permits run for the remaining months on the mountain benches and valley floors. Other combinations of fall, winter, spring and summer grazing also occur. When not on public land, livestock are generally grazed on Forest Service land or are fed hay on private land.

Level of Management. Allotment Management Plans (AMPs) have been developed for the following 18 allotments: West Grassy, East Grassy, Deseret/Rush Valley, Dutch Mountain, Deep Creek, Pinyon Flats, Spotted Fawn, Cottonwood East, Cottonwood West, West Lookout, Skunk Ridge, South Clover, South Skull Valley, Onaqui Mountain East, Onaqui Mountain West, Skull Valley, Ibapah, and Hill Spring.

The allotments in Utah County have historically been low priority for BLM management due to limited public land, lack of conflicts and low cost-effectiveness for intensive management. Therefore, trend studies were not established until 1986 and utilization studies have rarely been done. The PERA Monitoring Plan is presently being modified and will require a 10-year cycle on trend and a 5-year cycle on utilization.

Livestock distribution within the remaining allotments has not been managed under grazing systems. Cattle grazing has generally been season long; livestock have been put on the allotments with no subsequent control of movement other than fencing and some salting practices. Sheep distribution has been more controlled by herding, water hauling and snow cover.

Land treatments in Tooele County have generally consisted of juniper and sagebrush removal with subsequent seeding of more desirable species. Mostly done during the 1960s, these seedings have been very successful in increasing forage for both livestock and wildlife. Condition-class ratings for these seedings range from poor to excellent depending on the severity of grazing and seasons-of-use (USDI, BLM, 1982).

Increases in forage production in Utah County are not expected as a result of vegetation treatments because suitable areas for such practices are limited. Vegetation treatments appear to be impractical because of limited potential and low cost-benefit ratio.

Water developments in Tooele County include wells, springs, pipelines, and reservoirs. Livestock control features include fences, cattleguards and corrals.

There are presently no water developments associated with public land on any BLM-administered allotment in Utah County. The livestock control features such as fences and cattle guards that are associated with public land in Utah County generally define landownership boundaries. These fences are constructed and maintained by the private landowners at their expense. No water or other developments are now proposed due to limited potential and a low cost-benefit ratio.

Suitability. Not all land in the county is suitable for livestock grazing. Range is suitable if livestock can physically graze it without permanently damaging the soil and vegetation. Including non-suitable ranges in estimates of grazing capacity can lead to overutilization of vegetation and resource damage. The following criteria were used to determine suitability for the PERA:

(1) Distance from water: generally, areas less than 4 miles from water were considered suitable. The distance from water for proper utilization by livestock decreases with increased slope of the area. Therefore, field inspections may show that modification of the 4-mile criterion is required.

(2) Slope or other physical barriers: slopes over 50 percent were considered unsuitable.

(3) Forage production: areas with forage production with less than 25 pounds per acre were considered suitable or unsuitable, depending on the area's potential.

(4) Soil surface factor: areas with a present soil surface factor less than 60 were considered suitable. Suitability of areas with a present soil surface factor greater than 60 depends on the areas' potential for stabilization.

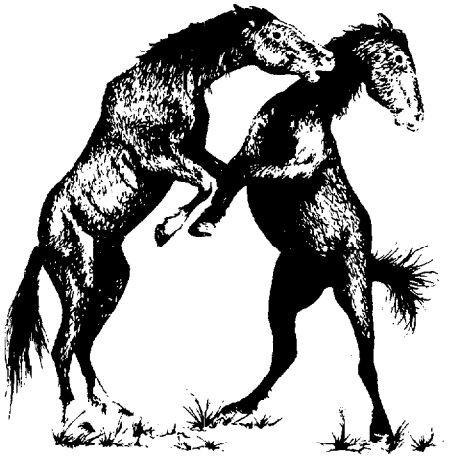
Wild Horses

Tooele County provides forage for two wild horse herds, which both existed at the time the Wild and Free Roaming Horse and Burro Act was passed in 1971. These herds are located on the Cedar and Onaqui Mountain ranges as shown in Figure 3-2.

Cedar Mountain Herd. The Cedar Mountains are located 35 miles west of the town of Tooele and extend in a north-south direction. The Cedar Mountain herd contains an estimated 125 horses which range from 4 miles north of Eight Mile Spring to the south tip of the Cedar Mountains. Approximately 80 of these horses range on public land (117,540 acres) in the county. The remaining horses use about 55,234 acres of Department of Defense (DOD) land, 3,140 acres of State land and 6,720 acres of private land.

BLM has conducted aerial inventories annually since 1971 to monitor herd size. The results of these inventories are shown in Table 3-7.

Wild horses have occupied this area since the late 1800s; past population numbers have been reported to be much higher than they are now. This herd's periodic occupation of portions of DOD's Dugway Proving Grounds has conflicted with military testing and the landing of aircraft. Therefore, BLM has removed horses from the conflict area. These animals have been adopted by the public under BLM's Adopt-a-Horse Program.



Onaqui Mountain Herd. The Onaqui Mountains are located approximately 20 miles southwest of the town of Tooele. The range for the Onaqui Mountain horse herd extends from Johnson's Pass on the north to Lookout Pass on the south, and encompasses the entire width of the Onaqui Mountain Range.

BLM manages about 79 percent (34,495 acres) of the range used by the herd. The remaining 9,385 acres are State and private land. The Onaqui Mountain herd has about 63 horses. BLM has conducted aerial inventories annually since 1974 to monitor the herd size (see Table 3-8).

Both wild horse herds establish seasonal home ranges. Use of these ranges is dictated by weather conditions and water availability. These ranges are interconnected by migratory routes. Presently, the lack of fencing in herd use areas allows unimpaired movement of the wild horses. This movement is essential to the maintenance of these horses in a wild and free roaming state.

Air, Soils, and Water Resources

Air Quality

The majority of the Pony Express Resource Area is within the attainment category for the National Ambient Air Quality Standards and is classified as Class II under the Prevention of Significant Deterioration (PSD) of Air Quality regulations. Class II air quality allows for moderate, well controlled growth and development. The eastern edge of Tooele County along the Oquirrh Mountains above the 5,600 foot elevation is a non-attainment area for sulfur dioxide. Within Utah County, the area within the limits of Provo City is a non-attainment area for carbon monoxide . Another area around Provo City is a non-attainment area for particulate matter. Small parcels of BLM lands are within the non-attainment area for particulate matter (Utah Bureau of Air Quality, 1979). A portion of the allowable PSD increment in Tooele County has been taken by the West Desert Pumping Project associated with emissions from the pump engines. There are presently no Class I areas within or adjacent to the Pony Express Resource Area (Dalley, 1987).

The State of Utah has no air monitoring stations in Tooele County at the present time. Kennecott Copper is monitoring for sulfur dioxide and particulates in the county (Dalley, 1987).

The state has four air monitoring stations in Utah County. These stations are associated with the urban areas in the county. There has been no monitoring outside the urban areas (Dalley, 1987).

TABLE 3-7

Aerial Inventories:
Cedar Mountain Wild Horse Herd

Date	Adults	Yearlings	Foals	Total
1971	75			75
1972	83			83
1973	91			91
1974	100			100
Jan. 75	142	31	20	173
Aug. 75	132	13		165
Jan. 76	110	24		134
June 76	162	16	41	219
Feb. 77	102	22		124
July 77	109	8	29	146
Feb. 78	137	32		169
July 78	116	17	31	164
Feb. 79	105	27		132
July 79	-	-	-	-
Feb. 80	146	39		185
June 80	No inventory - removed 13 horses			
Feb. 81	137	28		165
Aug. 81	66	3	13	82
Apr. 82	129	11	15	155
Aug. 83	134	46	18	198
1984	126	29	12	167
1985	112	12	30	154
1986	92	22	45	159
1987	71	30	24	125

Source: USDI, BLM, 1987.

TABLE 3-8

Aerial Inventories:
Onaqui Mountain Wild Horse Herd

Date	Adults	Yearlings	Foals	Total
Aug. 74	57	3	17	77
Aug. 76	67	10	26	103
July 77	85	10	20	115
July 78	85	12	17	114
Aug. 79	61	7	13	81
Aug. 80	62	11	17	90
Mar. 81	70	18	-	88
Apr. 82	* 32	4	5	41
Aug. 83	50	13	7	70
1984	31	10	5	46
1985	37	10	12	59
1986	39	10	21	70
1987	42	12	9	63

* Due to time of year, topography and dense juniper vegetation, it is estimated that a minimum to 50 percent of the population was missed.

Source: USDI, BLM, 1987.

Emissions from process industries and fugitive dust associated with population and limited industrial activities are the greatest sources of air pollution in Tooele County.

The greatest sources of air pollution within Utah County are from vehicles and fugitive dust, associated with population and industrial activities, primarily in the Provo area.

The only air quality regulation directly related to BLM management activities at the present time is the requirement to obtain an agricultural open burning permit for controlled rangeland burns (Wagner, 1987). The permit is either issued or denied on the basis of a pollution dispersion index. The permits are issued on a day-to-day basis. The State of Utah is presently revising the State Visibility Implementation Plan and associated regulations which will require close coordination between BLM and the State on smoke management related to prescribed burning.

Soils

Tooele County

Wind erosion is a significant factor in soil movement, primarily around the salt flats, playas and oolitic sand dune areas. Neither present actions nor anticipated actions should significantly increase soil loss. Should projects be planned in these areas, appropriate mitigation will be identified and implemented.

Some soils in the Resource Area show a higher salinity level than other soils found in the State; however, this salinity is natural on public lands and is not affected by present or anticipated actions.

The data generated by the interagency Shambip Committee has not been evaluated regarding the impact to public lands. The material generated by the committee will be incorporated into project planning for site-specific actions. Future projects will correlate soil loss data with ecological condition to establish minimal watershed conditions needed to maintain soil stability.

From 1978 to 1982, the Soil Conservation Service (SCS) in cooperation with BLM collected soil information for about 1.9 million acres in Tooele

County. The county was divided into three soil groups based on natural landscape and topography. These three groups were further divided into 15 soil mapping units based on the major soil components (see Table 3-9). More specific information on soil characteristics such as texture, depth, slope, and salinity is found in the SCS report (U.S. Department of Agriculture USDA , Soil Conservation Service SCS , 1980).

The survey estimated the soil's susceptibility to erosion. The primary factor in erosion susceptibility is slope, tempered by vegetation type and density. Some steep slopes with favorable vegetation characteristics are of only moderate susceptibility, while some milder slopes with unfavorable vegetation characteristics have potential for significant erosion. Lands of slight to no water erosion susceptibility consist of relatively flat lake plains, basin floors, and floodplains. However, these areas are moderately susceptible to wind erosion.

The survey identified two-thirds of the survey area to have slight to moderate erosion susceptibility. The remaining one-third consists of very steep mountainous areas which are rated as moderate to severe erosion potential. Due to limited forage, steep and rocky terrain, and lack of water, livestock grazing in these areas is light and does not contribute significantly to erosion.

Utah County

Three soil surveys covering portions of Utah County have been completed by the Soil Conservation Service (USDA, SCS, 1972). The first, completed in 1970, covers the area in Spanish Fork Canyon in the proximity of Thistle Junction. Several small, scattered parcels of public land were covered in this survey. The second survey, completed in 1972, covers the central portion of Utah Valley that is east of Utah Lake and west of the Wasatch Mountains, and from the Salt Lake County line to the Juab County line. These lands are mainly cropland or pasture lands. The third survey, completed in 1980, covers the bulk of public land in Utah County. Included in this survey are the Lake Mountains, West Mountain, the east Tintic Mountains, and wetland areas on the south end of Utah Lake. These surveys provide specific information on soil characteristics such as texture, depth, slope, salinity, potential ecological condition, and erosion susceptibility.

Thistle Junction east to the Utah County border in Spanish Fork Canyon has not been surveyed by the Soil Conservation Service. No soils information is available for several parcels of public land in this area.

Most of the soils on West and Lake Mountain are well drained stony/cobbly loams. These soils are intricately intermingled with bedrock. Run-off is rapid and the hazard of water erosion is low to moderate. The hazard for wind erosion is slight.

Soils in the headwaters of Goshen Valley in the Tintic Mountains are similar to those associated with Lake and West Mountains. Some of the major soils are shallow because of a hard, cemented pan. Other major soil complexes contain deeper soils. These soils provide a more productive vegetation potential than the shallow soils. The hazard for water and wind erosion is mostly low in shallow soils and slight in deeper soils. The soils in the wetland areas around Utah Lake are very poorly drained silty loams or silty clay loams. These soils are moderately permeable. The water table is at or near the surface and run-off often forms ponds.

Small acreages of potential farmland occur along the northern end of Lake Mountain and along the lower slopes of West Mountain. These soils are highly suited for farming if irrigation water is available.

No prime and unique farmlands or soils of statewide importance are located on public land in the Utah County (Utah Agriculture Experiment Station, 1980).

Watershed conditions were rated using Pacific Southwest Inter-Agency Committee procedures. This analysis indicates that soil erosion is minimal, and in some situations is very close to the level which would be classed as natural, i.e., without man's influence (see Table 3-10).

Sediment yields did not exceed 0.39 acre-feet per square mile (moderate classification). Over half of the rangelands (64+ percent) were classified as moderate (0.2-0.5 acre foot/square mile). The remaining Utah County BLM rangelands were given a low sediment-yield rating. Rangelands in moderate watershed condition exhibit minor gullying and terracing. Most gullies are stable or only eroding on a small part of their channel. The limestone derivative geologic strata are fairly resistant to weathering and are situated in upright angles, thereby reducing soil erosion. Surface soil textures (generally loamy) are conducive for good infiltration. Infiltration and percolation are enhanced with a rock/vegetation/litter cover of approximately 50 percent or greater.

Watershed conditions in the Lott Canyon area have mostly a cheatgrass understory and some exposed shale formations (increased weathering). These conditions are the primary reasons for the increased sediment yield.

TABLE 3-9

GENERAL SOIL DESCRIPTIONS
TOOELE COUNTY

	% Total Survey Area	Elevation (Feet-Sea Level)	Slope (%)	Soil-Erosion Hazard	Range Reseeding Potential	Representative Vegetation	Uses*
I. DOMINANTLY LEVEL TO GENTLY SLOPING, POORLY DRAINED TO WELL DRAINED SOILS ON LAKE PLAINS, BASIN FLOORS, AND FLOODPLAINS.	50	4,200 - 5,700	0-3	None-Moderate	None-Good	Barren-Salt Tolerant Species	Rangeland Wildlife Habitat Recreation Pasture-Hayland
1. Playas-Salt Flats-Saltair	37	4,200 - 4,400	0-1	Slight-None	Poor-None	Barren-Pickleweed-Greasewood	Some Recreation
2. Iosepa-Swingler-Uffens	12	4,200 - 5,300	0-3	Slight-Moderate	Poor	Greasewood-Shadscale-Halogeton	Rangeland Wildlife Habitat Recreation Pasture-Hayland
3. Fluvaquents-Haploxerolls	1	5,000 - 5,700	0-2	Slight-Moderate	Good	Sedge-Foxtail-Blue grass-rubber rabbit brush	Rangeland Wildlife Habitat Recreation Pasture-Hayland
II. DOMINANTLY LEVEL TO STEEP, WELL DRAINED SOILS ON BASIN FLOORS ALLUVIAL FANS AND LAKE TERRACES.	25	4,200 - 6,900	0-50	Slight-Moderate	Very Poor-Fair	Drought Tolerant Shrubs and Grasses	Rangeland Wildlife Habitat Recreation Irrigated Crops
4. Dera-Topliff	2	4,500 - 5,500	0-3	Slight-Moderate	Poor	Winterfat-Shadscale-Ricegrass-Rabbitbrush	Rangeland Recreation Wildlife-Habitat
5. Cliffdown-Norland	9	4,200 - 6,000	0-30	Slight-Moderate	Poor	Shadscale-Indian Ricegrass-Black Sage	Recreation Rangeland Wildlife Habitat

TABLE 3-9

GENERAL SOIL DESCRIPTIONS
TOOELE COUNTY

	% Total Survey Area	Elevation (Feet-Sea Level)	Slope (%)	Soil-Erosion Hazard	Range Reseeding Potential	Representative Vegetation	Uses*
6. Kessler-Sasman	2	5,000 - 5,600	0-30	Moderate-Severe	Fair-Poor	Bluebunch Wheatgrass Shadscale-Greasewood	Rangeland Wildlife Habitat Recreation Pastureland Irrigated Crops
7. Sasman-Linoyer	3	5,000 - 5,700	1-10	Slight-Moderate	Poor	Winterfat-Ricegrass	Recreation Rangeland Wildlife Habitat
8. Hiko Peak-Taylorsflat-Sasman	5	5,000 - 6,000	0-20	Slight-Moderate	Fair-Poor	Big Sage-Greasewood-Black Sage-Indian Ricegrass-Squirreltail	Recreation Rangeland Wildlife Habitat
9. Pavant-Spager	3	5,000 - 6,900	3-50	Moderate	Very Poor	Black Sage-Bluebunch Wheatgrass-Rabbitbrush-Juniper-Cliffrose-Galeta	Recreation Rangeland Wildlife Habitat
10. Abela-Pleasant Grove-Hyrum	1	5,000 - 6,500	3-15	Moderate-Slight	Fair	Big Sage-Rabbitbrush-Snakeweed-Indian Ricegrass	Rangeland Wildlife Habitat Recreation Irrigated Crops Homesites
III. DOMINANTLY STEEP TO VERY STEEP, WELL DRAINED SOILS ON MOUNTAINS, FOOTHILLS, AND KNOLLS.	25	4,500 - 10,500	15-70	Severe-Moderate	Very Poor	Mixed Conifers-Shrubs	Rangeland Wildlife Habitat Recreation
11. Torriorthents-Rock Outcrop	8	4,500 - 7,000	20-60	Severe	Very Poor	Black Sage-Horsebrush-Juniper	Recreation Rangeland Wildlife Habitat

TABLE 3-9

GENERAL SOIL DESCRIPTIONS

	% Total Survey Area	Elevation (Feet-Sea Level)	Slope (%)	Soil-Erosion Hazard	Range Reseeding Potential	Representative Vegetation	Uses*
12. Amtoft-Lundy-Rock Outcrop	9	5,200 - 8,500	20-60	Severe-Moderate	Very Poor	Big Sage Bluebunch Wheatgrass- Juniper	Recreation Wildlife Habitat Rangeland
13. Paunsaugunt-Everwhite-Clavicon	4	6,100 - 8,500	30-70	Severe	Very Poor	Cheatgrass-Big Sage- Juniper-Cliffrose- Pinyon	Wildlife Habitat Recreation Woodland Rangeland
14. Hoskin-Vicking-Clavicon	2	5,500 - 8,300	30-70	Severe	Very Poor	Big Sage-Bluebunch- Juniper-Pinyon-Oak- Snowberry-Lupine- Mountain Mahogany	Woodland Wildlife Habitat Recreation Rangeland
15. Pahic Cryobololls-Pachic Cryobarolls-North Pachic Haploborolls	2	6,500 - 10,500	15-70	Severe	Very Poor	Big Sage-Grasses- Conifers	Woodland Wildlife Habitat Recreation Rangeland

*Listed in descending order of suitability

TABLE 3-10

SEDIMENT YIELD FACTOR RATINGS

UTAH COUNTY

Location	Surface Geology (a)	Soil (b)	Climate (c)	Run-off (d)	Topography (e)	Ground Cover (f)	Land Use (g)	Upland Erosion (h)	Channel Erosion Sediment Transport (i)	Subtotals (a)(g),(h)(i)		Total Rating	Estimated Sediment Yield Ac. Ft./ Sq. Mi.	Classification
West Mountain Area	4	5	3	4	18	-5	-7	7	5	22	12	34	0.28	Moderate
Lake Mountain Area														
Lower West Slopes	4	4	3	2	7	-2	-8	8	0	10	8	18	0.16	Low
Upper West Slopes	2	4	3	0	18	-6	-8	5	5	13	10	23	0.19	Low
Easterly Combination Slopes-N&E Aspects	2	3	3	0	20	-9	-7	5	1	12	6	18	0.15	Low
Easterly Combination Slopes S & W Aspects and Lower Slopes	3	3	3	2	20	-5	-5	10	2	21	12	33	0.27	Moderate
Lott Canyon Area	3	5	3	4	8	-3	6	12	5	26	17	43	0.39	Moderate
Goshen Valley Area														
West of Kimball Ck.	4	2	3	5	15	-2	-7	11	5	20	16	36	0.3	Moderate
Cobbly-Stony Area														
West of Kimball Cr.	4	2	3	4	3	-7	-6	4	3	3	7	10	0.14	Low
East of Kimball Cr.	5	5	3	5	10	-3	-5	10	7	20	17	37	0.32	Moderate

Rangelands in the low sediment yield class have lower slopes, and good ground cover with minimal amount of overland flow.

Water Resources

Tooele County

Water is scarce and unevenly distributed in Tooele County. Most surface flow and groundwater recharge result from winter precipitation in the area's mountain ranges. Summer thunderstorms can produce intense rainfall of short duration, but little precipitation escapes rapid evapotranspiration in the dry desert climate.

Surface water and groundwater are estimated to be of good quality on mountain flanks and foothills, but are often hard and/or brackish on valley floors.

BLM has identified 122 springs, 109 reservoirs, 54 wells and 9 perennial streams on public land in the county. Fifty-eight springs have suitable flow and location to be used by livestock. Most of the 109 reservoirs are small entrapments constructed on intermittent stream drainages and are dry most of each year. Ten wells are abandoned and another 15 lack development for livestock or wildlife watering; the remaining 29 wells serve livestock and wildlife. The nine perennial streams are small and have a combined total flow length of 26 miles.

Utah County

Utah County is located within the Jordan River drainage and is part of the Great Basin Hydrologic Unit. There are twelve perennial streams that cross 8.3 miles of public land. Several small springs and seeps are scattered throughout the Tintic Mountains and in the Spanish Fork Canyon area. Water quality data have not been collected for most springs and perennial streams located on public lands.

BLM currently has 26 known water filings covering 13 springs and 13 streams or creeks. One of these creeks is perennial and the remainder are ephemeral. Water right status for six additional perennial streams on public land is not clear and is currently being researched. These streams are all located in the eastern portion of the county.

Water rights on most public lands in Utah County were inventoried to insure that sufficient quantities are available for management purposes. These water rights are currently in the process of adjudication.

Major non-point source pollution problems in the state occur as a result of sediment, nutrients and salinity (Department of Health, 1987). Due to the landownership pattern, the minority landowner status of the BLM, and the levels and types of land use, it is doubtful that a significant contribution to non-point pollution sources is made from public land in Utah County (Loveless, 1986).

No known polluted groundwater systems or erosion or water control structures are located on public land (Loveless, 1987).

Wildlife Habitat

Mule Deer

The following nine mule deer (*Odocoileus hemionus*) herd units are contained either partially or entirely within the Pony Express Resource Area: Heaston Deer Herd Unit 11, Stansbury Deer Herd Unit 12, Vernon Deer Herd Unit 13, East Tintic Deer Herd Unit 14, Price-White River Herd Unit 32, Lake Fork-Mill Fork Herd Unit 37, North Nebo Herd Unit 41, West Desert North Deer Herd Unit 62A, and Box Elder Deer Herd Unit 1. Figure 3-3 shows the deer herd unit boundaries and crucial deer habitat locations. Estimated current deer numbers by herd unit for Tooele County are listed in Table 3-11.

The current population level on BLM allotments in Utah County is 130 animals. This number includes summer, winter, and yearlong use. The current mule deer population in these herd units is considered to be at the optimum population level for management.

Crucial deer range occurs within each of the deer herd units except Box Elder Deer Herd Unit 1. Within Tooele County there are 86,144 acres of crucial winter range and 20,992 acres of crucial summer range of which 18,880 acres are important fawning grounds (USDI, BLM, 1982). For most of Tooele County, a lack of deer summer range is a more significant limiting factor to the deer populations than a shortage of deer winter range. Several small parcels of public land near the mouth of Spanish Fork Canyon are considered crucial mule deer winter range.

The crucial summer ranges on public land are spotty in distribution, often around springs or other sources of water. These areas occur in the East Tintic Mountains and in the Lake Mountains. These small acreages of public land with crucial habitats are locally important to mule deer, although these acreages are insignificant when compared to the available crucial summer and winter habitats on national forest and private lands in Utah County. Average seasonal diets for mule deer are shown in Table 3-12. Deer habitat

TABLE 3-11

Estimated Mule Deer Numbers by Herd Unit[a]

HERD UNIT	NUMBER
Box Elder Deer Herd Unit 1	200
Heaston Deer Herd Unit 11	15,358
Stansbury Deer Herd Unit 12	13,400
Vernon Deer Herd Unit 13	10,345
East Tintic Deer Herd Unit 14	3,458
West Desert North Deer Herd Unit 62A	850
Total	43,611

[a] Includes only portions of herd units found within Tooele County.

Source: USDI, BLM, 1982

TABLE 3-12

Average Seasonal Diets for Mule Deer

	Winter	Summer	Spring	Fall
Shrubs and trees	74%	49%	49%	60%
Forbs	15%	46%	25%	30%
Grass	11%	3%	26%	9%

Source: USDI, BLM, 1982

condition and trend for the Pony Express Resource Area are summarized by herd unit in Table 3-13 (USDI, BLM, 1982)

Elk

In 1913, 10 elk (*Cervus canadensis*) were transplanted from Yellowstone National Park to the Oquirrh Mountains. The elk herd has increased to an estimated current population of 370 elk (Nelson, 1987). This is the only elk herd in Tooele County and is managed as the Heaston Elk Herd Unit 4. Portions of three elk herd units are found in Utah County: Nebo Herd Unit 11, Manti Herd Unit 12, and Avintaquin-White River Herd Unit 22. The Avintaquin-White River Herd Unit contains the Cherry Creek grazing allotment. A total of 11 elk utilize this allotment. The current elk population for the above mentioned herd unit is considered to be at the optimum level for management.

There are 58,254 acres of suitable elk habitat within the Heaston Herd Unit; 14,461 acres or 25 percent are within public land (UDWR, 1981). Because this public land is widely scattered and access is very limited, management of this habitat is difficult.

The preferred habitats elk use as summer range are generally at higher elevations and are administered primarily by the U.S. Forest Service. Small parcels of BLM administered lands in the Tintic Mountains, Oquirrh Mountains and in the Kyune area are categorized as summer range.

Grasses are the most important food source for elk throughout the year; forbs and browse play a lesser role in the diet (Murie, 1979).

Crucial habitat areas in Tooele County consist of calving grounds (2,112 acres) and winter concentration areas (14,114 acres). All calving grounds currently identified occur on private land (Nelson,

TABLE 3-13

Mule Deer Habitat Condition and Trend

	Range Condition		Range Trend	
Herd Unit	Summer	Winter	Summer	Winter
Box Elder Herd Unit 1	a	a	a	a
Heaston Herd Unit 11	poor	poor	stable	downward
Stansbury Herd Unit 12	good	fair-poor	stable	downward
Vernon Herd Unit 13	fair-good	fair-good	stable	stable
Price River-White River Herd Unit 32	fair-good	fair-good	stable	stable
Lake Fork-Mill Fork Herd Unit 37	fair	fair	stable	stable
North Nebo Herd Unit 41	fair	fair	stable	may be deteriorating
East Tintic Herd Unit 14	good	good	downward	downward
West Desert North Herd Unit 62A	fair	fair	stable	stable

a Information not available.

Source: USDI, BLM, 1982
UDWR, 1975, 1976, 1980, 1982, 1985

1987). Of the three major winter concentration areas in the Heaston Herd Unit, only one occurs on public land.

Elk crucial winter range on BLM administered land in Utah County, totalling 1,500 acres, includes many of the scattered parcels in the Spanish Fork Canyon area. Figure 3-4 outlines the herd unit boundaries and shows the crucial winter and summer ranges on public lands in the Resource Area.

No open-bull harvests have been held in the Heaston Herd Unit. However, an annual restricted harvest has occurred since 1971. Aerial count and hunter harvest data suggest that this herd's population is increasing (UDWR, 1981).

A UDWR-proposed elk reintroduction for the Stansbury Mountains will depend upon transplant stock availability, assessment of the bighorn sheep transplant, and the completion of agreements between UDWR, BLM and the Forest Service (UDWR, 1982).

Pronghorn Antelope

Two antelope (*Antilocapra americana*) herd units are located within Tooele County as shown in Figure 3-4. Puddle Valley Herd Unit 15, contained entirely within Tooele County, was created in 1975 with the reintroduction of 70 antelope. Four years later, 72 additional antelope were transplanted. A total of 218,778 acres of suitable habitat currently supports a population of 150 antelope in the Puddle Valley herd (USDI, BLM, 1982). Of the total suitable habitat, 1,984 acres are considered to be crucial summer range. Some antelope in the Puddle Valley herd have dispersed to an area west of the Cedar Mountains.

Approximately 33 percent of the West Desert Herd Unit 2 is also contained in Tooele County. This unit is divided into two parts: Riverbed(2A) and Snake Valley(2B).

Riverbed(2A) consists of 231,252 acres of suitable habitat which support a current population of 134 antelope. No crucial habitats have been identified for this unit; however, important use areas are clustered around water sources. Snake Valley (2B) contains 309,500 acres of suitable habitat, of which 7,744 acres have been identified as crucial summer range and support a current population of 149 antelope (USDI, BLM, 1982).

Major antelope use areas occur in vegetation types consisting of sagebrush and/or desert shrub communities. Suitability of the present plant community composition of these areas has not been determined for antelope populations in the Riverbed and Snake Valley portions of the West Desert Herd Unit or the Puddle Valley Herd Unit.

In December of 1986, 75 antelope were reintroduced into the Rush Valley area. An additional 75 animals were reintroduced in late 1987.

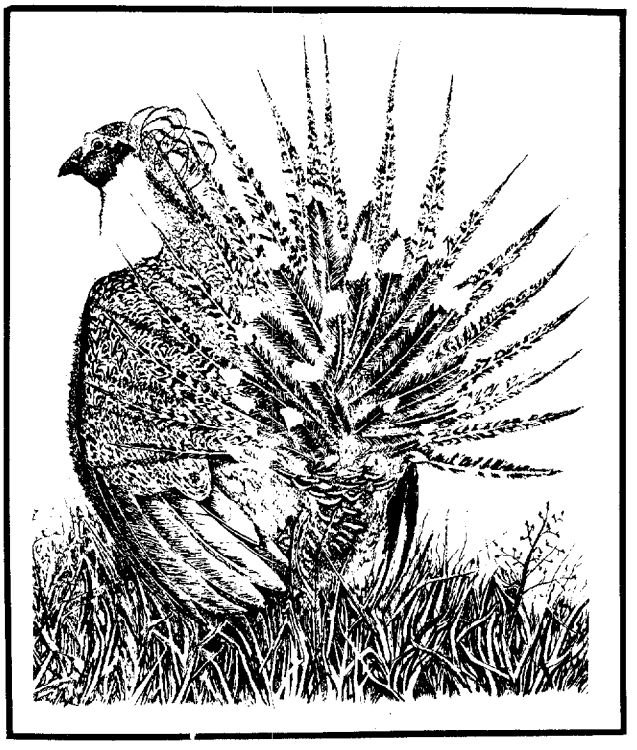
Rocky Mountain Bighorn Sheep

In January of 1984, 16 Rocky Mountain Bighorn Sheep (*Ovis canadensis*) were reintroduced into the Deep Creek Mountains in western Tooele County. Additional sheep will be reintroduced into the Deep Creeks when animals become available.

UDWR is proposing to reintroduce 20 to 40 bighorn sheep into the Stansbury Mountains during the winter of 1988-89. These animals will mainly utilize winter habitats on BLM lands and summer habitats on Forest Service lands. These areas are excellent reintroduction sites with the suitable forage condition, water, distribution, and remoteness. See Figure 3-5 for bighorn sheep habitat in the Resource Area.

Sage Grouse

Sage grouse (*Centrocercus urophasianus*) populations occur in suitable habitat throughout the PERA. Important use areas are big sagebrush communities with a diversity of grass, forbs and



shrubs closely associated with riparian zones. Within the Resource Area, sage grouse nesting and wintering areas are both closely associated with known-strutting grounds (USDI, BLM, 1982). Considered crucial habitat, these areas include approximately 26,000 acres within the Tooele and Rush Valley areas and 3,200 acres south of Ibapah in Tooele County (USDI, BLM, 1982).

One known lek occurs on public land in the Tintic Mountains. BLM-adminstered lands are included in two other strutting and breeding complexes in Utah County. Public lands in Starvation Canyon are part of a sage grouse winter use area. Figure 3-5 shows the crucial habitat areas in the PERA.

Population reductions are believed to be influenced by past conversions of sagebrush vegetation communities to grass monocultures and reduced availability of water.

Sage grouse breeding complexes (leks and associated nesting habitat) and winter use areas are the most crucial habitat. Disturbance, destruction or disposal of these areas would conflict with sage grouse populations.

Waterfowl and Shore Birds

The following waterfowl habitat areas have been identified in the PERA: Rush Lake, Horseshoe/Muskrat/Delle Springs Complex, Clover Reservoir, Great Salt Lake, Utah Lake, Deep Creek, and several stock ponds, reservoirs and streams (USDI, BLM, 1982). Many of these water sources are undependable. Rush Lake and the Horseshoe/Muskrat/Delle Springs complex are wetlands which offer the greatest potential for waterfowl production in Tooele County. Factors that affect these wetlands include precipitation, water consumption by agricultural and domestic users, and ground water recharge. In spite of water level fluctuation and periodic dehydration, some of these bodies of water include suitable habitat for nesting and all are utilized as resting and feeding areas during spring and fall migrations. In Tooele County the limited quantity and lack of food source diversity, along with the undependable water supply and lack of nesting and escape cover, contribute to the limited waterfowl productivity.

In Utah County the largest waterfowl areas are around Provo Bay and at the south end of Utah Lake. Most of these parcels are now withdrawn by the Bureau of Reclamation. The shorebirds using these areas all or part of the year are Canada goose, white pelican, double-crested cormorant, great blue heron, cattle and snowy egret, white-faced ibis, black-crowned night heron, and California gull (UDWR, 1978). Numerous species of waterfowl also utilize these areas.

Raptors

The following species of raptors are known to occur in the PERA: turkey vulture, red-tail hawk, marsh hawk, sharp-shinned hawk, Coopers hawk, American kestrel, golden eagle, prairie falcon, short-eared owl, barn owl, screech owl, great-horned owl, pygmy owl, long-eared owl, and burrowing owl. Two candidate species for Federal protection, Swainson's and ferruginous hawks, also occur in the PERA. The Federally protected bald eagle and peregrine falcon are also known from the Resource Area.

These raptor species utilize many types of habitats. They may use public lands for nesting, roosting, or feeding. They also utilize the national forest lands or private agricultural lands that may provide a water source, large trees for nesting or roosting, or available prey.

The most sensitive habitats for raptors are their nest sites. A .5-mile zone around each nest will help to protect these areas from disturbance. Nest sites may be on a cliff, in a tree, in or on man-made structures, on the ground, or in a burrow in the ground. Habitat conflicts occur when these nest sites or associated buffer zones are disturbed during the breeding season.

Riparian areas are considered to be crucial to raptors. These areas usually contain cottonwood or aspen trees which are used for nesting and roosting. Small mammals, birds, and reptiles, which are important food sources for birds of prey, concentrate in riparian habitat areas.

Fisheries

No streams in Tooele County presently support fish. However, the following streams are potentially suitable for providing essential habitat components for fish: Aspen, Judd, and Indian Creeks in the Simpson Mountains, Sheeprock Creek in the Sheeprock Mountains, and Rocky Creek in the Deep Creek Mountains.

Ten game species and eight nongame species inhabit streams that cross public lands in Utah County. Game species include rainbow trout, brown trout, cutthroat trout, channel catfish, black bullhead, yellow perch, walleye, white bass, large-mouth bass, and black crappie. The known nongame species include mountain sucker, mottled sculpin, carp, green sunfish, spottail shiner, mosquitofish, Utah sucker, and the Federally endangered June Sucker.

UDWR classifies fisheries habitat using four criteria: physical inventory, aesthetics, availability, and productivity. They assign a class value of I to VI; Class I is the highest quality fishing habitat. Aspen, Judd, Indian, and Rocky Creek are classified as Class IV streams. Sheeprock Creek has not been inventoried but would probably also be a Class IV stream (Thompson, 1982). All five of the above mentioned streams are considered to have good overall water quality (USDI, BLM, 1982).

Utah Lake and six of the twelve streams associated with public land in Utah County are considered fisheries habitat. The other six streams have either not been surveyed or contain no fish. Utah Lake and Benjamin Creek are warm water fisheries associated with public lands in Utah County. The other streams are considered cold water fisheries.

Horseshoe Springs, a small body of water located in Skull Valley, is classified as a Class III fishing water. Fish species present in Horseshoe Springs include largemouth bass, bluegill, carp, and the Utah chub.

The least chub (*Iotichthys phlegethoritis*), a candidate for listing as a Federally threatened or endangered species, is found in ponds in western Tooele County. No populations of the least chub have been identified on public land in the county. Utah Lake, its tributaries and bays are essential to the lifecycle of the Federally endangered June sucker, which inhabits only Utah Lake.

Furbearers

The three major fur bearing species within the Resource Area are beaver, mink, and muskrat. These animals are tied to aquatic and riparian habitats. The quality and quantity of preferred habitat are limiting to these animals and available habitats are considered crucial.

Other Wildlife Species

Small, scattered parcels of public land in the Resource Area receive some use by other wildlife species. Minimal moose use occurs on public land on the Cherry Creek Allotment in Utah County. Cougar and black bear also occur within the Resource Area, although their use of BLM lands is insignificant.

Threatened, Endangered, and Sensitive Wildlife Species

The Federally listed endangered bald eagle (*Haliaeetus leucocephalus*) is a winter resident found from October through March in the PERA. Bald eagles generally utilize habitats associated with water (Hayward, 1976). Several critical roost areas occur in the Oquirrh, Tintic, Sheeprock and Stansbury Mountains. Other important use areas include Cedar, Rush and South Skull Valleys. The bald eagle population wintering in these areas fluctuates according to weather, food supply and time of year; peak numbers occur in late January and early February. The black-tailed jackrabbit is the main food source used by the bald eagles. Lead shot was found in 71 percent of the bald eagle pellets studied in the county, indicating that the eagles had been scavenging jackrabbits killed by hunters (Platt, 1976).

The peregrine falcon (*Falco peregrinus*), listed as Federally endangered in the PERA. Bald eagles generally utilize habitats associated with water (Hayward, 1976). Several critical roost areas occur in the Oquirrh, Tintic, Sheeprock and Stansbury Mountains. Other important use areas include Cedar, Rush and South Skull Valleys. 1970, is a historic resident of the PERA. Several historic eyries are located in Utah County. One historical nesting site of the peregrine falcon is located within Tooele County near Timpie Springs at the north end of the Stansbury Mountains. The nest site is believed to have become inactive shortly after the area was disturbed by the construction of I-80 in the late 1960s (Benton, 1987).

In 1983 UDWR, USFWS, and the Peregrine Fund began a cooperative effort to reintroduce peregrine falcons into Tooele County. A hacking tower was constructed and two peregrine falcons were reintroduced into the Timpie Springs area.

Other potentially suitable areas in Tooele County for nesting or hunting occur at the northwest tip of the Oquirrh Mountains, the southeast end of Stansbury Island, the Horseshoe Spring wetland complex, the ledges on the east side of the Deep Creek Mountains, and the area around Blue Lake near the Utah-Nevada border. Sightings of peregrine falcons have occurred in recent years near the Benjamin Slough area at the south end of Utah Lake. There is a possibility of future reintroductions of peregrine falcons in Utah County.

UDWR is currently working in cooperation with the Peregrine Fund to restore peregrine falcon populations in Utah. Peregrines released along the Wasatch Front during this project could eventually move into historical use areas in the Resource Area. Peregrine falcon habitat requirements include high cliff nesting sites located close to riparian habitats and associated prey species.

The June sucker (*Chasmistes liorus*), a Federally endangered fish listed in 1986, is found only in Utah Lake. The lake, Provo Bay and the Provo River are critical for reproduction, maintenance and survival of the June sucker.

Seven candidate wildlife species for threatened or endangered status identified by the USFWS occur in the PERA. They are the least chub, white-faced ibis, western snowy plover, long-billed curlew, western yellow-billed cuckoo, Swainson's hawk, and ferruginous hawk. According to BLM policy, these species must be treated as a threatened or endangered species until they have been formally dropped as candidate species by the USFWS. These species and their status are outlined in Table 3-14.

Riparian Areas

Riparian areas in the PERA are associated with perennial streams, wetlands, and springs. The riparian and wetland areas are outlined in (Table 3-15). The perennial streams and wetland areas are shown on Figure 3-1.

Twenty-one perennial streams cross 34 miles of BLM-administered land. The streams in Utah County are located in Spanish Fork Canyon or associated with Utah Lake. In Tooele County the streams or wetland areas are located on the west side of the Deep Creeks, around Rush Lake, the south end of the Sheep Rock Mountains, west of the north end of the Stansbury Mountains and in the Simpson Mountains. Wetland areas are concentrated around Utah Lake, Horseshoe Springs, Clover Reservoir and Rush Lake. There are several small springs scattered throughout the mountains and foothills in the Resource Area.

The plant diversity and soil stabilizing properties of riparian areas are very important to both wildlife and livestock, as well as the water source. Riparian areas are considered crucial habitat for wildlife. These areas provide the four important components (food, cover, water and living space) necessary for wildlife diversity. Livestock prefer riparian habitats for four major reasons. The reasons are vegetation palatability, water availability, gentle terrain and availability of shade and shelter.

The wetland habitats around Utah Lake, Horseshoe Springs, and Rush Lake support a variety of waterfowl and shorebirds. The small springs in the Resource Area are important sources of water for wildlife, birds, and livestock.

Riparian areas in good condition can help to protect water quality and quantity. These areas are fragile and must be managed properly. Elimination of streamside vegetation by overgrazing or erosion can degrade the important values and characteristics.

Recreation

Dispersed camping, hunting and off-road vehicle use are the primary recreation activities in the PERA. Other uses include sightseeing, photography, rock hounding, horseback riding, nature study, backpacking and hiking. BLM estimates total recreational use of the Resource Area at approximately 218,870 visits per year.

The recreation base on public land in Utah County consists of many isolated parcels. Four large tracts comprise the majority of recreation lands in Utah County: (1) Lake Mountain (2) West Mountain (3) Long Ridge (south of Goshen Valley) and (4) Spanish Fork Canyon. Several other parcels of public lands are scattered throughout the county. Along with State, private and national forest lands, these parcels contribute to the overall recreational opportunities in Utah County.

Simpson Springs Campground, the Bonneville Salt Flats, and the Pony Express Historic Sites at Faust, Simpson Springs and Overland Canyon are the only maintained BLM recreational facilities in the area. Other sites used for recreation purposes in Tooele County include White Rocks,

TABLE 3-14

STATUS OF PROTECTED AND CANDIDATE WILDLIFE SPECIES

COMMON NAME	SCIENTIFIC NAME	TYPE OF WILDLIFE	STATUS[1]
Peregrine Falcon	Falco peregrinus	Raptor	Endangered
American Bald Eagle	Haliaeetus leucocephalus	Raptor	Endangered
June Sucker	Chasmistes liorus	Fish	Endangered
White-Faced Ibis	Plegadis chihi	Bird	Category 2
Swainson's Hawk	Buteo swainsoni	Raptor	Category 2
Ferruginous Hawk	Buteo regalis	Raptor	Category 2
Western Snowy Plover	Charadrius alexandrinus var. nivosus	Bird	Category 2
Long-billed Curlew	Nemenius americanus	Bird	Category 2
Western Yellow-Billed Cuckoo	Cucyzus americanus var. occidentalis	Bird	Category 2
Least Chub	Iotichthys phlegethontis	Fish	Category 2

USFWS, 1987

[1]Endangered - Species which is in danger of extinction throughout all or a significant portion of its range. Federally listed as endangered with accompanying protection.

Category 2 - Taxa for which information now in possession of the FWS indicated that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data is not currently available to support proposed rules.

TABLE 3-15

RIPARIAN AND WETLAND AREAS CONDITION AND LOCATION

Name	General Location on BLM Administered Lands	Present Condition	Miles/Acres On BLM
Starvation Creek (Soldier Creek)	T. 11S., R. 6E., S 1 & 12	Good	2.0
Thistle Creek	T. 10S., R. 4E., S 8	Poor-fair[1]	0.2
Spanish Fork River	T. 9S., R. 3E., S 11 & 12	No data	0.5
Crab Creek	T. 10S., R. 4E., S 6 & 8	Good	0.6
Right Fork Kyune Cr.	T. 11S., R. 9E., S 10, 11, 17, & 21	No data	0.7
Kyune Creek	T. 11S., R. 9E., S 4, 8, & 9	No data	0.7
Bear Creek	T. 11S., R. 9E., S 9	No data	0.3
Horse Creek	T. 11S., R. 9E., S 34	No data	0.9
Benjamin Creek (Slough)	T. 8S., R. 1E., S 11	Good	0.2
Hobble Creek	T. 7S., R. 3E., S 19	No data [2]	0.2
Mill Race	T. 7S., R. 3E., S 18	No data [2]	0.5
Utah Lake	T. 5S., R. 1E., S 29 & 36 T. 6S., R. 2E., S 18-20, 28, 29, 33 T. 7S., R. 1E., S 5 & 7 T. 7S., R. 2E., S 11, 15, 25-27, 36 T. 7S., R. 3E., S 19 & 30 T. 9S., R. 1W., S 2, 11, 13-15, 22-24, 26, 27 T. 9S., R. 1E. S 17-20	No data	11.1 Miles Shoreline

TABLE 3-15

RIPARIAN AND WETLAND AREAS CONDITION AND LOCATION (Continued)

Name	General Location on BLM Administered Lands	Present Condition	Miles/Acres On BLM
Kimball Creek	T. 11S. R. 2W., S 26 & 34 T. 12S., R. 2W, S 4	No data	2.0
Judd & Aspen Creek	T. 10S., R. 7W., S 19, 29, 30	No data	2.5
Sheeprock Canyon Creek	T. 10S., R. 8W., S 27, 34	No data	1.0
Indian Creek	T. 10S., R. 8W., S 4, 5	No data	1.8
Rocky Creek	T. 10S., R 18W., S 31	No data	1.0
Government Creek	T. 10S., R. 7W., S 3, 10, 11	No data	3.0
Pole Canyon	T. 10S., R. 5W., S 31, 32	No data	1.0
Spring Creek	T. 9S., R. 19W., S 30	No data	0.5
Deep Creek	T. 8S., R. 19W., S 4 T. 7S., R. 19W., Section 3, 9, 21, 28, 33 T. 6S., R. 19W., Sections 12, 13, 23, 24, 26, 34, 35 T. 6S., R. 18W., Sections 6, 7	No data	15.0
Rush Lake	T. 4S., R. 5W., S 23, 26, 27, 33, 34 T. 5S., R. 5W., S 3, 4	No data[2]	1,200 ac.

TABLE 3-15

RIPARIAN AND WETLAND AREAS CONDITION AND LOCATION (Continued)

Name	General Location on BLM Administered Lands	Present Condition	Miles/Acres On BLM
Horseshoe Springs	T. 1S., R. 8W., S 11, 14, 15, 22, 23, 26-28,33-35 T. 2S., R. 8W., S 3-5, 8-11, 14, 15, 17, 20-23, 26-29, 33-35 T. 3S., R. 8W., S 5-10, 15	Fair	22,000 ac.
Clover Reservoir	T. 5S., R. 5W., S 33	Fair	200 ac.

[1]The riparian habitat had fairly extensive flood damage in the spring of 1983 & 1984.
[2]Areas have been under water since the spring of 1983.

Horseshoe Springs, Lookout Pass and Five Mile Pass.

Rush Lake is another popular recreation area. However, use of the area depends upon the fluctuating lake level. Before 1983 the Rush Lake area was a wetland area with a small, shallow body of water that would evaporate during drought years. The main receational activities consisted of bird watching and hunting. Since 1983, the rising water level has allowed the following new activities: water skiing, motor boating, windsurfing, and fishing.

ORV use has been increasing rapidly within Tooele County. About 99 percent of the use is unorganized; the remaining 1 percent consists of organized permitted events sponsored by local clubs. Most activity occurs from March to November.

A unique sightseeing opportunity occurs each winter when approximately 200 migrant bald eagles roost in south Rush Valley. Sightseers also visit the Cedar Mountains and the Onaqui Mountains to view wild horses.

Visual Resources

The visual resources in the PERA were inventoried for scenic quality, visual sensitivity, and distance zone in accordance with BLM Manual 8410-1. Based on these factors, visual resource management (VRM) classes and related management objectives were proposed.

Scenic Quality

The scenic character of the Resource Area is one of isolation, remoteness, open space, and variation in landform, vegetation, and color, with only scattered evidence of human development. The landscape includes broad, semiarid and arid valleys separated by mountain ranges and interspersed with "islands" of mountains and tableland.

Visible human developments include roads, transmission lines, fences, structures, agricultural lands and community sites; these developments are moderately apparent in Rush Valley, along the Skull Valley highway, and in the vicinity of Dug-

way, Callao, and Ibapah, and very apparent along the Wasatch Front in Utah County.

Three mountainous areas have been designated Wilderness Study Areas (WSAs). Two of these areas, the Deep Creek Mountains and the North Stansbury Mountains, are being proposed for designation as Areas of Critical Environmental Concern (ACECs) if they are not designated wilderness. Their scenic qualities are an important component of these designations.

VRM Classes

The VRM classifications proposed for the PERA are shown in Figure 2-1 in Chapter 2. Management objectives for each class are:

Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV. The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention; however, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Rehabilitation Areas. Areas in need of rehabilitation from a visual standpoint should be flagged during the inventory process. The level of rehabilitation will be determined through the RMP process by assigning the VRM class approved for that particular area.

Cultural Resources, Natural History, Paleontology

This management program as administered by the BLM covers natural history resources, paleontological resources, and cultural resources, both historic and prehistoric.

Natural history resources are ecologic or geologic features significant to the nation's natural heritage.

Paleontological resources are the fossil remains of plants and vertebrate and invertebrate animals, or traces and tracks thereof, that lived in former geologic periods. They may be found in a great many different geological formations. Relatively little work has been done in Tooele County. Based upon geological maps, some of the geological formations studied elsewhere in the state are also found in Tooele County. However, those represented appear to have little potential for containing important fossil remains. Utah County contains a number of geological formations well known in other parts of the state for important paleontological finds. However, these formations are primarily on private or Forest Service lands.

Cultural resources are those fragile and nonrenewable remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that were important in human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred, even though evidence of the event no longer remains, and (3) the environment immediately surrounding the actual resource. Cultural resources, including both prehistoric and historic remains, represent a part of the continuum of events from the earliest evidences of man to the near present.

Tooele County has both historic and prehistoric cultural resources. Seventeen sites are listed on the National Register of Historic Places. Most of these are historic buildings located on private property. National Register sites on public lands include the Bonneville Salt Flats Race Track and the GAPA Launch Site and Blockhouse. Other sites of historic interest on public lands are the Pony Express and Overland Mail routes and their attendant structures, the Hastings Cutoff (used by the Donner Party), the Lincoln Highway, and a few mining and homestead sites. Prehistoric sites include lithic scatters and open camps, a few dry caves, and a few pithouses.

Utah County, due to its favorable environmental setting, is rich in both historic and prehistoric cultural resources. At last count, 83 sites were listed on the National Register of Historic Places. The majority of these are historic structures in and around the towns along the Wasatch Mountains, i.e., American Fork, Provo and Spanish

Fork. Only one listed site might contain a small bit of public land, the Tintic Mining Multiple Resource Area in and around the town of Eureka. As most of the lands along the Wasatch Front and around Utah Lake are in private ownership, the majority of the historic and significant prehistoric sites are privately owned. Typical sites on public lands include prehistoric lithic scatters and remains of historic mining operations.

As of January 1988, almost 1100 historic and prehistoric sites have been recorded within the Pony Express Resource Area. It is estimated that about one-half of those sites are on public lands. It is also estimated that less than 10 percent of the public lands within the Resource Area have been inventoried for cultural resources. Based upon this past work, there are an estimated 1000 to 2000 unrecorded sites on public lands within the Resource Area.

Forest Resources

Forest resources on public land in the PERA consist of timber species such as Douglas fir, Engelman spruce, and aspen on approximately 24,000 acres and pinyon/juniper on 250,000 acres. Timber stands are isolated, generally occurring in steep upland canyons with limited access. Due to the limited quantity and difficult access to the timber areas, it is not practical to harvest these stands. The pinyon/juniper areas have potential value for Christmas trees, posts and firewood.

Fence posts and firewood have been harvested in the Resource Area since the 1950s. The demand for these products has risen in recent years with increasing populations and energy demands.

Juniper is currently the only forest product offered for sale in the Resource Area on public land. Both individual and commercial sales have been conducted. Permits for cutting juniper firewood are offered for several areas within Tooele County. No timber sales have been conducted on or are planned for public land.

Fire Management

Tooele County is subject to many fires during the summer months of June through September. This results from a combination of drying vegetation, low afternoon humidity, frequent afternoon dry lightning, and human activity. Fire on the scattered BLM-administered land in Utah County is generally an infrequent occurrence. The two larger blocks of public land on the drier, western side of the county, West Mountain and Lake Mountain, have a slightly higher rate of fire activity.

The average annual occurrence of fire on public land over the period 1981 to 1986 has been 78 fires. Two-thirds of these fires started from lightning strikes with the remainder caused by people. Ninety percent of the annual average of 70,000 acres burned result from lightning-caused fires and 10 percent from human-caused fires. The chief explanation for this disparity is that fires started by man tend to be located in more accessible areas, are reported quicker, and have some degree of immediate suppression effort by people in the area when the fire starts. Fire suppression on West and Lake Mountain is the responsibility of agencies other than the BLM. The U.S. Forest Service is responsible for West Mountain and the State of Utah for Lake Mountain. BLM has responsibility for fire suppression on other public lands in the county.

Present fire management is directed by a fire management plan developed to guide the use and control of fire as a management tool.

Social and Economic Considerations

The public lands of the Pony Express Resource Area (PERA) have a very modest influence on the regional economy of the three-county area. Social values are more significant as the public lands offer a wide variety of activities viewed as desirable by society.

Salt Lake County

Salt Lake County has only 193 acres of unwithdrawn public land. The public lands in the County are of neither social nor economic significance and will not be discussed any further.

Utah County

Utah County has 79,854 acres of public land. In-lieu-of-tax payment on this land for 1987 was $497,771. Livestock grazing permits produce about $5,100 annually of which about 50 percent recirculates through the regional economy. The remainder goes into the Federal treasury.

By court mandate BLM must analyze its livestock management program for public lands in Utah County. In social and economic terms, the importance of livestock grazing on public lands to the future of livestock production in Utah County is very minimal. This fact is substantiated by a ranch budget analysis done for Utah County allotments. A summary of the budgets is found in Tables 3-16, with the revenues and expenses for the "average ranch" in each category of operation. The complete budgets are shown in Appen-

TABLE 3-16

PARTIAL RANCH BUDGETS

UTAH COUNTY

	Cattle	Sheep
Average Herd Size [a]	60	827
Gross Ranch Income	$13,510.72	$81,564.70
Total Cash Costs	12,276.69	19,428.05
Net Cash Income	1,234.03	60,629.45

[a]Herd size is defined as the number of brood cows or breeding ewes.

Source: Appendix 9

dix 9. The averages used in ranch budget analysis were based on the assumption that average information would be representative of individual operations. However, significant differences in individual ranches could exist. The budgets are also based in large part on the following factors about the 20 cattle and sheep operations using public lands in the county:

Cattle Operations. Seven operations have grazing permits ranging from six to 320 AUMs. The average permit is 85 AUMs for 60 head of cattle. The average dependence on public land for forage is 13 percent.

Sheep Operations. Thirteen operations have grazing permits ranging from six to 445 AUMs. The average permit size is 143 AUMs for 827 animals. The average dependence on public land for forage is five percent.

The 20 operations hold grazing permits ranging from six to 445 AUMs, and thus have some degree of economic and social tie to the public lands. Three of these operators took nonuse (did not graze livestock) for each of the past three years.

Public lands in Utah County are so limited and scattered that they are not believed to have any significant influence on expenditures related to hunting or other recreational pursuits. The social value of activities on these lands is also minimal.

Tooele County

Public lands in Tooele County have local (county) and regional social significance, local economic significance, but minimal influence on the regional (three-county area) economy. In-lieu-of-tax payment to Tooele County for 1987 totalled $710,308. This amounted to 11 percent of the County's annual operating budget. Livestock grazing permits in Tooele County produce about $118,000 annually, of which about one-half recirculates through the regional economy. The remainder goes into the Federal treasury. A total of 111 livestock operators or companies who hold grazing permits have direct economic and social ties to the public lands.

Public lands in Tooele County hold a significant share of the resources upon which current and future levels of hunting and non developed outdoor recreation in the County depend.

District residents from along the populated Wasatch Front are highly outdoor oriented and spend a great deal of money in pursuit of satisfying recreational experiences. Hunting, camping and off-road vehicle use result in revenue to many

local service-oriented businesses.

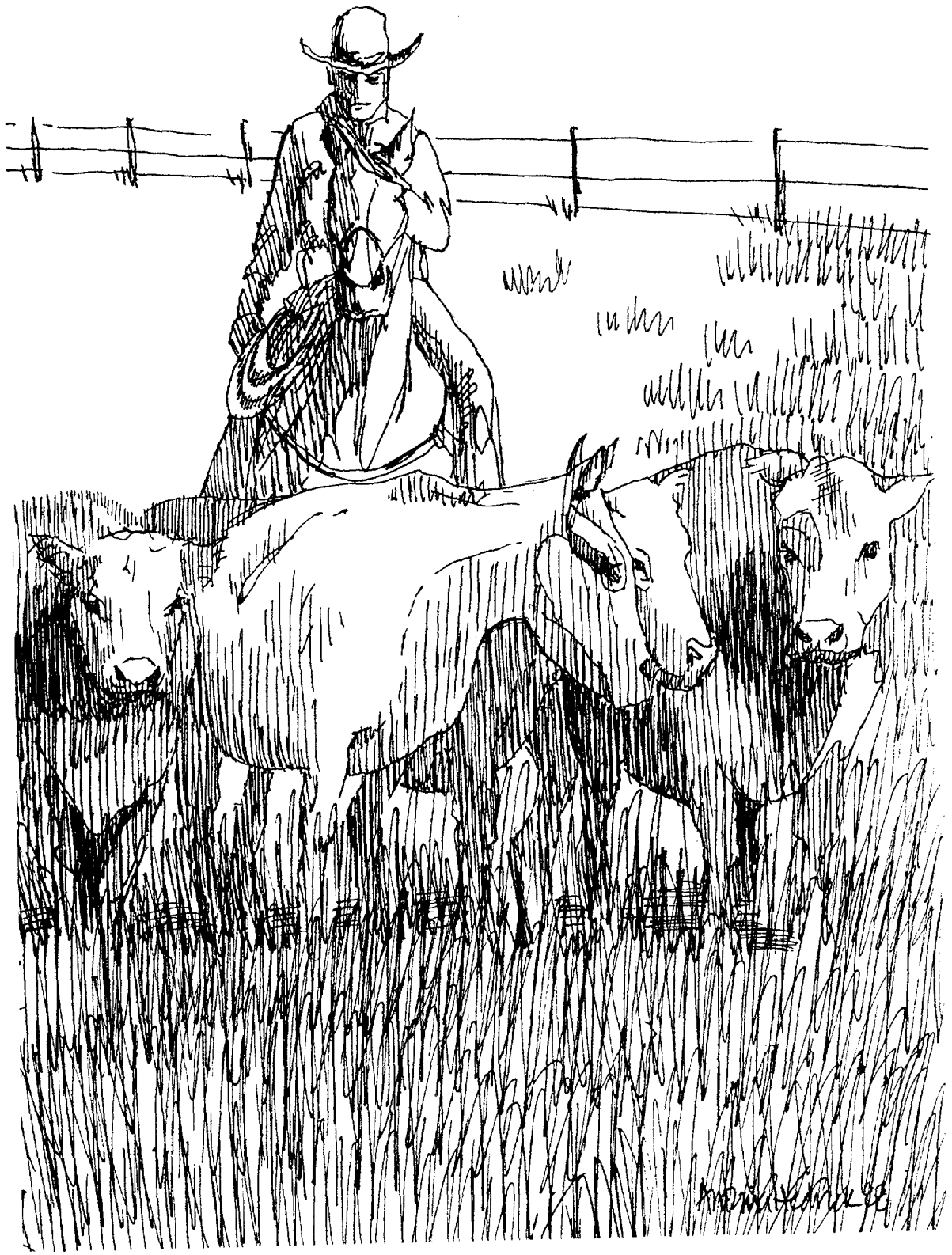
Mining and mineral industries are important to Tooele County, but the value of mineral production from public lands is presently low. There are no producing oil, gas, or geothermal fields or wells anywhere within the county, although most of the area is under oil and gas lease. Limited exploration for locatable minerals is occurring, with one active mining operation now in existence on public lands in Tooele County. The greatest contributions to the economy come from potash production near Wendover and the free use of sand and gravel by local governments.

Public lands in Tooele County provide areas for permitted land uses such as transportation and utility rights-of-way, extraction of saleable minerals, recreation and public purpose leases, and numerous temporary uses such as organized recreation events and motion picture filming. Firewood and Christmas tree sales are popular with the public but of little economic significance.

The remote and unpopulated areas of western Tooele County are being sought by private businesses specializing in hazardous waste incineration and disposal. By policy, BLM would not allow placement of such facilities on public land, but public land may be involved in access and utility needs for facilities.

Cumulatively, these public land uses influence the local economy and also provide social values. Social values are also added by such things as wildhorse herds, a wide variety of wildlife, scenic areas, recreational areas and resulting opportunities, remote areas, unique ecosystems, and cultural and historical remains.

CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES



Chapter 4

Environmental Consequences

Introduction

This chapter describes the significant environmental consequences that would result from implementing each of the alternatives. These environmental consequences (impacts) are compared to the existing situation. The impacts to each resource are grouped by alternative.

Knowledge of the area and professional judgement, based on observation and analysis of conditions and responses in similar areas, have been used to estimate environmental impacts where data is limited.

Analysis Assumptions

Any planning effort is to some degree an attempt to foresee the future. Such an attempt involves assumptions about the extent to which social, economic, political, or technological circumstances will change or whether they will remain the same as they were at the time of planning. In this RMP, the following assumptions were made in order to estimate environmental impacts of the different alternatives presented:

(1) Throughout this chapter the words "short term" and "long term" are used to mean, respectively, up to 5 years and more than 5 years after an action within the plan is fully implemented.

(2) Economic conditions would remain stable, with no changes that would stimulate great differences in exploration and prospecting for minerals, or would cause major changes in demands for other marketable products produced on public land, such as timber and livestock.

(3) Based upon existing data and professional judgement, the currently authorized livestock grazing levels (i.e. livestock active preferences) in Utah County are proper. For analysis purposes, it is therefore assumed that no appreciable environmental impacts would result from grazing under Alternative 2 because grazing occurs at proper levels equal to the rangeland's capacity.

(4) Unless a producing oil and gas field were discovered, only one or two wildcat wells per year would be drilled during the short and long term. Seismic work throughout the Resource Area is expected to be minimal.

(5) Potash leasing in the Resource Area is expected to continue at existing trends, i.e. few to no prospecting permits will be issued and producing leases will be readjusted as necessary.

(6) Notices and Plans of Operations for locatable mineral explorations and development will continue at the current rate of approximately 20 per year and 2 per year, respectively. The biggest increase in locatable mineral activity is expected from disseminated gold potential. Because of the success in exploration and development of gold within similar geology in the Basin and Range geologic province, increased activity in Utah is anticipated.

(7) Mineral material (e.g. sand and gravel) needs depend heavily on the level of the Great Salt Lake and further industrial and military growth in the Resource Area. Based upon current trends and known projects, sales and free use permits should average approximately one-half million cubic yards per year.

(8) Future activity in land exchanges will continue at the 10-year average, two exchanges involving about 21,000 acres annually.

(9) Lands disposed for agriculture purposes would be used for irrigated cropland, dryfarm cropland, and pasture in proportions of one-third each.

(10) Approximately 20 percent of lands disposed and subsequently developed for mineral development would be disturbed.

The following section describes, where applicable, the general types of impacts which would result from the actions proposed in each of the alternatives. The discussion under each alternative reflects the variations in these general impacts.

General Impacts

Impacts on Geology and Minerals

Specific impacts to geology and minerals are described under each alternative.

Impacts on Vegetation

All impacts to vegetation except those caused by wildfire are discussed under watershed, livestock grazing and wildlife.

Wildfires can occur in any vegetated area but generally cause significant impacts only in areas dominated by one or more of the following vegetation types: annual grass, desert shrub/ saltbush, perennial grass/sagebrush, and juniper.

Annual grass invades areas where preceding vegetation has been severely damaged or destroyed. Fire is the main cause of annual grass

invasion and occurs most often in areas of desert shrub/saltbush.

Once annual grasses invade an area, the area becomes increasingly susceptible to additional fires. The annual grasses dry in the late spring and early summer and provide a fuel base for ignition sources. In areas of desert shrub and saltbush, repetitive fires destroy the native species and allow almost pure stands of annual grass to establish.

Desert shrub and saltbush cannot compete with annual grass and so they do not naturally reestablish. The cycle of fire, annual grass invasion and resulting fire susceptibility assures the domination of annual grass in burned areas. This cycle is normally broken only by human intervention in the form of rehabilitation efforts (i.e. green stripping).

BLM estimates that between 500 and 1,000 acres of the desert shrub/salt shrub vegetation type in the Resource Area will be lost each year. Natural revegetation of these sites is very slow due to low precipitation levels and high soil salinity. Establishment of and/or seeding of introduced native grasses may eventually reduce annual grass competition. This reduced competition and subsequent wildfire reduction could gradually allow for the reestablishment of the desirable desert shrub/salt bush vegetation.

Wildfire in the perennial grass/sagebrush vegetation type reduces sagebrush cover and increases grass cover. Wildfires of 300 acres or less in this type generally burn at lower intensity levels and would improve vegetation condition and trend in the long-term. Wildfires larger than 300 acres may also be beneficial but sometimes include areas with insufficient grass understory to revegetate the site. Fires larger than 300 acres often burn at at higher intensities and damage or destroy the native vegetation and soil properties. Under these conditions, artificial seeding of the site with perennial grasses would be necessary.

Much of the perennial grass/sagebrush type has been invaded by juniper. Wildfire in these juniper invasion areas can have the same beneficial effects as in the perennial grass/sagebrush type. These areas generally have insufficient understory to revegetate the burned area and often experience high intensity fires that damage the soil. Therefore, rehabilitation of the site with perennial grasses and shrubs is often necessary to prevent or minimize degradation.

Wildfire in the juniper vegetation type is expected to occur on less than 400 acres each year. These sites generally lack understory vegetation and most wildfires burn less than five acres. Larger acreages will burn only during very high intensity fires. Such fires severely damage soils and any understory grasses that may be present. When high intensity fires burn a juniper area, it will be many years before juniper reoccupy the site.

Other vegetation types within the Resource Area do not have a history of frequent or large wildfires. Fires in these areas are generally insignificant in size and impact. If large fires occur on the sites, rehabilitation efforts may be required.

Impacts on Watershed

Impacts to watersheds, whether adverse or beneficial, occur as a result of natural or human-caused changes to the land surface. The significance of the impacts resulting from surface change depend on the amount and duration of change. When surface disturbance such as compaction and tillage is sufficient to alter vegetative density and composition, erosion by wind and water will occur at an accelerated rate and moisture retention and infiltration will decrease.

The amount of increased erosion is subject to factors including wind patterns, precipitation, topography, soil characteristics, and vegetation types and densities. Decreased surface litter and ground cover and increased soil compaction or tillage increase wind transport of suspended soil and reduce water infiltration into soil, increasing surface runoff. Increased wind erosion results in blowouts, surface pavement (a high density of surface rock fragments), sand dunes, loess deposits, and altered soil depths. The results of increased water runoff are gullying, rilling, sheet movement of soil downslope, outwashes, alluvial fans, and altered soil depths.

Activities that occur on watersheds in the PERA which may cause surface disturbance include agricultural development, livestock and wildlife grazing, mineral exploration and extraction, off-road vehicle travel, community expansion and developments for public purposes, industrial development, and rights-of-way for transportation and utility developments.

Table 2-1 lists 109 tracts of public land that have been identified for potential disposal under one or more of Alternatives 1, 2, and 3. For purposes of analysis, assumptions have been made for probable surface use on each parcel after removal from public ownership. The common impacts that would result from these assumed uses are analyzed below. Each alternative will include any

changes in type or amount of impacts.

Disposal of tracts for agricultural development would occur in Alternatives 1, 2, and 3, causing those lands to change from sagebrush and grassland surface to cropland or pasture. Vegetative change would be accomplished through one or more actions, such as burning, plowing, spraying, and seeding, depending on the site and the desired change. Factors such as slope, soil type, and availability of water make it unlikely that under any alternative more than one-third of the acreage would be plowed and converted to irrigated cropland, and another one-third to dryfarm crops. Erosion would increase for a period of two or three years in which surface cover would be disturbed while conversion to cropland could be fully accomplished. Thereafter the effects of the change in land use on rates of erosion would not be significant and, in some areas, erosion protection would improve over the long term.

The remaining one-third of lands disposed for agricultural use would be converted to pasture. Lands converted to pasture through spraying or burning and seeding would experience little surface disturbance and a short-term, moderate erosion increase would occur. Erosion conditions would improve in the long-term.

Some disposed lands would be involved in community expansion, mineral and industrial development, and public purposes. Surface disturbance for these purposes would be significant. In most cases this disturbance would include removal of vegetative cover and topsoil. Structures would be erected and such features as rail spurs, roads, spoils sites, and utility lines would be constructed. On disturbed areas, erosion would increase as a result of exposure of disturbed surfaces to sediment transport by wind and water. A significant increase in erosion would occur in the timeframe within which construction of structures, roads, spoils sites, and utility lines would occur. Within two years following construction, erosion rates should return to pre-disturbance levels.

On lands disposed and subsequently used for purposes other than those discussed above, existing surface uses will continue. No impacts would be generated by the disposal action because existing surface conditions would be maintained.

Exploration for and development of minerals could require roads and facilities in previously undisturbed areas. Access roads and trails built or pioneered while conducting exploration would increase vehicular traffic, causing loss of soil and vegetation on newly developed roads. With a 30 foot-wide graveled road needed to support heavy equipment travel, this loss would occur on 3.64 acres per mile of road and would be permanent on roads not reclaimed.

On unimproved roads and trails the compaction of soils, removal of vegetation, and possible channeling of surface water flows during storms would occur. This would cause runoff to increase and accelerated erosion to occur. With a 20 foot wide road, 2.4 acres would be affected per mile of road. Changes in vegetation would include replacement of a perennial grass/shrub plant community with an annual grass/forb community. Annuals are poor soil builders and provide less surface protection than perennials. In addition, these communities are highly susceptible to wildfire, often providing the fuels base from which fire spreads onto other parts of the watershed. Where this would occur, the land surface would be subject to increased surface runoff and erosion. Accelerated erosion would continue without rehabilitation of the burned area. Successful rehabilitation would limit the period of accelerated erosion to about two years.

Water is sometimes found when exploratory wells are drilled. Stipulations are often written in drilling permits to relinquish ownership of the water to the BLM. This water may then be developed for livestock and wildlife use. Increased available water should cause better distribution of animals, resulting in improved watershed conditions by reducing overgrazing and trampling of vegetation. The improved vegetative conditions would provide better surface protection against erosion.

Designation of areas as open, limited, or closed for off-road vehicle use would affect watersheds. Areas designated as closed would be protected against surface disturbance by ORVs. Areas designated as limited would have reduced surface disturbance. Areas designated as open would be subject to surface disturbance wherever accessible to ORVs. The typical surface disturbances caused by ORV travel on watershed areas are soil compaction, vegetation removal, disruption and rearrangement of protective surface cover, and wheel indentations. These in turn allow wind and water erosion to increase on disturbed surface areas as soil is transported away and erosional features (gullies, blowouts, etc) develop.

Winter sheep grazing results in the consumption of shrubs, reducing the competition of shrubs with perennial grass and causing the latter to increase in proportion. This enhances retention of soil and moisture. Erosion is slowed by the increased grass cover and siltation and runoff is reduced, improving water quality as well as quan-

tity. Overgrazing or trampling in the early spring when plant green-up is occurring would cause opposite impacts to occur in any locations overgrazed or trampled during this critical time for plant development.

Impacts to watershed from fire result from changes in vegetation and the subsequent effects on soil movement and water infiltration. Small fires may result in reduced erosion due to increased native grasses. Large fires often burn at higher temperatures, destroying the soil's potential to sustain native vegetation. Annual grasses can invade at lower elevations, shortening the fire occurrence cycle and increasing the invasion of these annual species into the seasonal sagebrush/grass areas. Higher soil loss results.

In closed stands of juniper, fire will mineralize the soil and significant soil loss can occur. In areas where juniper comprise 50 percent or less of the vegetative cover, fire can retard the juniper invasion and result in increased perennial grasses.

Impacts on Wildlife

Disposal of public lands containing significant wildlife habitat results in a loss of this habitat from public ownership, unless transferred to another Federal agency. Impacts to the habitat and animals following disposal depends on the proposed use of the land. (See Table 2-2).

Human activities and associated surface disturbance from fluid mineral exploration and development and off-road vehicles use will impact wildlife and habitat in areas or during time periods not covered by special stipulations. The animals are affected by removal of habitat and increased disturbance and/or harassment. Activities on crucial winter ranges could endanger individual and herd survival. In addition, if native crucial winter ranges continue to dwindle because of destruction of vegetation, deer damage to cropland, urban landscaping, and other conflicts will increase proportionately.

Crucial mule deer summer ranges are a limiting factor for all herds in the Resource Area; deterioration of these ranges due to surface disturbance and subsequent loss of native vegetation could decrease productivity in terms of animal numbers and health.

Activity in big game fawning and calving areas could result in loss of young and females, as the animals are already stressed from a long winter and have depleted energy levels as a consequence of lactation, gestation, and birth. Because fawning and calving areas are located near water, early spring use of these sites could damage the vegetation as wet conditions increase the potential for surface disturbance.

Fluid mineral and ORV activities in riparian areas could impact breeding and nesting migratory waterfowl by disrupting and destroying nests and nest habitat. Increased sedimentation and bank erosion could also occur.

Disturbance during the breeding season may also impact sage grouse, raptors, and other birds by causing disturbance to mating areas, abandonment of nests, or mortality of young by interrupting parental care.

Wildfire is a prominent source of destruction to wildlife habitat in the Resource Area. However, approximately 90 percent of the wildfires that occur in areas of crucial or critical wildlife habitat can be controlled before significant damage occurs. However, those wild fires which exceed tolerable loss of crucial/criticial habitat would have adverse short and long-term impacts. Also, numerous small fires could also reduce habitats. The impacts that result from significant burned acreage in specific habitats are described below.

Mule Deer and Elk Habitat

Losses exceeding the prescribed acreage for crucial mule deer habitat and crucial elk habitat would reduce these big game species' forage and cover. These losses would cause an immediate increase in competition for already limited forage between wildlife species and possible overutilization of the vegetative resource.

	Acreage (Greater than)
Mule deer	
crucial summer range and fawning area	50
crucial winter range (critical and severe)	100
juniper summer and winter yearlong range	200
shrub/grass summer, winter, and yearlong range	300
Elk	
crucial calving areas	100
all other elk habitat	200

Cover and forage would be reduced on most crucial ranges for 5 to 50 years due to the recovery limitations. Competition for limited forage would continue to stress the fully utilized vegetative resource and slow recovery from the fire damage.

Antelope and Desert Shrub Hatitat

Due to the occurrence of wildfire in the majority of antelope habitat, 300 acres is the maximum tolerable loss to a single fire. One hundred acres

would be the maximum tolerable loss in antelope habitat within the salt desert shrub communities. Plant communities in these habitats have neither responded to rehabilitation nor naturally succeeded to a climax plant community when burned uncontrolled under dry hot conditions. Salt desert shrub communities have been invaded by cheatgrass, a highly competitive annual grass that precludes or deters natural succession.

Present competition among grazing animals for forage in these areas is high. Short-term impacts would result in increased pressure on the fully utilized vegetative resource. Rehabilitation efforts in these plant communities have not been successful. Restoration of the climax vegetative resource could take 100 years or more.

Sage Grouse Habitat

Sage grouse crucial habitat consists of leks, breeding complexes and crucial ranges.

Established lek sites range from 10 to 100 acres and are generally barren or have low-growing sagebrush. The burning of 50 acres or less may displace the birds temporarily, but the birds would most likely return. If a wildfire exceeds 50 acres, valuable escape cover and daytime feeding and loafing areas would be destroyed, and a lek could be abandoned. Loss of a lek site would drastically affect future sage grouse populations in the area; a loss of these traditional sites appears to disorient the birds and reduce successful mating and nesting.

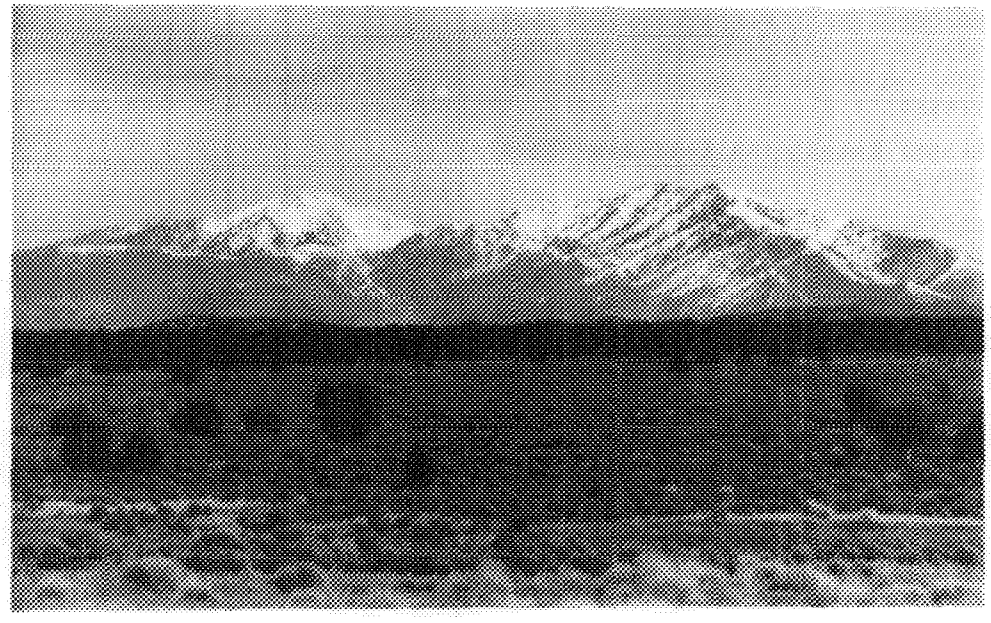
Closely associated with breeding complexes are sage grouse nesting/brood rearing areas. The importance of sagebrush at this portion of the life cycle is primarily as cover, as the diet of the young grouse consists of insects and succulent forbs. Large fires could reduce bird populations due to increased predation and loss of forage in brood rearing areas.

The cumulative loss of sagebrush on 50 or more acres in crucial winter range would limit or eliminate the primary dietary component of the sage grouse during this season. Such impacts would continue up to a 50 year period until the vegetation is reestablished.

Waterfowl/Shorebird Habitat

Wildfire losses in excess of 100 acres of waterfowl/shorebird habitat during April 15 through August 31 would impact the nesting of a substantial portion of the populations. Nests and young that have not yet fledged would be lost. Loss of cover in these areas would increase the potential for predation. If the fire adversely affects aquatic insect populations due to increased particulate matter in the water, food sources would be reduced.

Wildfire impacts on waterfowl/shorebird habitat would be short-term. Recovery should be sufficient the following growing season to replace the lost cover. Fire suppression measures in wetland areas could increase soil disturbance and lengthen the recovery time of the ecosystem.



Stansbury Mountains, Tooele County

Bald Eagle Habitat

A loss of bald eagle roost sites due to fire could cause displacement of this endangered species from historical use areas. The roost sites are critical to the eagles' winter feeding habits. The loss would have a continued impact over a 20 to 50 year period, until replacement trees could be established. Artificial roosting sites have not been proven to be a replacement for the natural roosts, although they have enhanced some roost areas.

Loss of vegetation to fire in high use/feeding areas for the bald eagles should be no more than 100 acres. Any loss greater than this could reduce the jackrabbit prey base of the bald eagles in this region. Natural fluctuations in the prey base affect bald eagle use of the area. Should this natural fluctuation at a low sequence be coupled with a loss of prey base habitat due to fire, an adverse impact would be expected on the wintering bald eagle populations. These areas are typically sagebrush/grassland type.

Mule Deer Fawning Areas and Associated Riparian Habitat

Excessive loss of mule deer fawning habitat could increase the loss of young and adults due to predation and lower fawning success, particularly if the fire occurred during the fawning season. Generally, a wildfire in this habitat type would reduce important cover. Recovery of fawning areas and associated riparian habitat would increase if excessive erosion does not occur within this reestablishment period. If excessive erosion occurs, loss could be permanent. Surface disturbing measures to control fire should be minimized to limit the possibility of contributing to excessive erosion.

Threatened and Endangered Candidate Plant Species

Full fire suppression without surface disturbing activities should be applied to known and probable threatened and endangered plant locations to minimize damage to sites and the potential loss of these species.

Impacts on Air Quality

Under all of the alternatives, impacts to air quality would occur from particulate matter and visible smoke resulting from such things as mineral development and off-road vehicle use. Because the impacts would be of short duration, they are not considered significant.

Impacts on Livestock Grazing

Disposal of lands within grazing allotments will reduce available livestock forage within these areas. Based on current data, the twelve allotments in Utah County have been determined to be in generally good condition with a static to upward trend. Because information on present forage production is not available, this document assumes that the currently authorized grazing levels (active preference for livestock and current numbers for big game) are proper. This level of grazing is found in Alternative 2 (for those allotments not eliminated or disposed) and Alternative 4 (for those allotments not eliminated).

Proper rates of vegetation utilization are basic to range management. Continued overutilization results in the loss of plant vigor and death of desirable plants due to reduced carbohydrate reserves, loss of live root mass, and a general reduction of plant growth and reproduction (Heady, 1975). As shrubs, grasses and forbs are lost from the plant community, less palatable species such as bottlebrush squirreltail, big sagebrush, and greasewood increase. Eventually, the most undesirable species such as juniper, rabbitbrush, halogeton, horsebrush, Russian thistle, and snakeweed invade and spread throughout the plant community.

On an area-wide basis, plant utilization of greater than 50 percent of the current year's growth constitutes overutilization, also called overgrazing (Workman, 1979). Generally, the 50 percent utilization rule holds true for summer use allotments.

Allotments and/or areas used in the spring require a lower utilization level to maintain the vigor and reproduction of the desirable forage species, while winter use areas can withstand levels of utilization above 50 percent. Grazing systems which provide for rest and/or deferment of spring grazing can allow higher utilization levels to occur while providing for the recovery of the grazed plants during the rest or deferment period. Such grazing plans may, in fact, improve range conditions faster and more area-wide than reduction in livestock numbers intended to reduce overall utilization levels.

Other factors that influence a species' ability to withstand the effects of grazing at more than 50 percent include livestock type and distribution, duration of use, plant community composition, weather patterns and soil conditions.

Distribution refers to the degree to which livestock will graze throughout the entire allotment and is controlled by factors such as availability of

water, type of livestock, and topography. Poor distribution results in the overutilization of parts of an allotment with little or no utilization of other areas. Therefore, utilization levels, distribution of livestock, and timing of use must be monitored and grazing use designed to lessen impact to susceptible plants during these critical growth periods.

Wildfires result in increased perennial and annual grass production. This increase usually improves forage for livestock; however, loss of brush in the desert shrub/saltbush vegetation type due to wildfire adversely impacts the range resource. Heavy winter snow may cover grasses, especially annual grasses, in these burned areas, making them unavailable for livestock. Annual grasses are also less dependable than perennial grasses since their production fluctuates dramatically with moisture conditions.

Wildfires result in a direct loss of livestock forage during the following grazing season. Forage is also unavailable in the subsequent season as a result of resting the area to assure proper revegetation.

Impacts on Cultural Resources

Impacts to cultural resources result from surface disturbance or subsurface disturbances that either destroy or damage a site's integrity. These disturbances may be intentional or unintentional, resulting from a number of human activities.

While an activity might not directly impact a site, later impacts may result. If sites are identified prior to disturbance, they can either be avoided or the impacts can be mitigated. Where lands leave public ownership, cultural resources on those lands become the property of the new owner and may thereby be lost to future public use.

BLM usually requires that a cultural inventory be completed on public lands prior to any surface disturbing activity. If limited acreage is involved, a 100 percent survey is conducted. If large acreage is to be disturbed, the survey may be either a 100 percent or a statistical sample, depending upon the likelihood of the area containing significant sites. In all cases, consideration is given to possible effects upon cultural resources prior to any ground disturbing activity on public lands.

Impacts on Social and Economic Considerations

Disposal of public lands would result in reduced in-lieu-of-tax payments to Utah and Tooele Counties. This would be offset by taxation of property, company profits, and worker incomes produced by subsequent land uses. Little beneficial or adverse impact would occur tc Utah County because of limited acreage involved and few opportunities for private development on the disposed lands.

Impacts to Tooele County are potentially greater. Several tracts of public land that are proposed for disposal under the alternatives have good potential for agricultural, mineral, community, and industrial development. Such developments would result in greater income to the county than would be realized from in-lieu payments on the disposal tracts.

BLM management of grazing on allotments in the area covered by the Tooele MFP will continue as outlined in the MFP (see Appendix 1a, Issues 3 and 4). The impacts of such management were identified in the Tooele Grazing EIS. The only new impacts to livestock grazing in Tooele County would result from certain lands disposals that would eliminate or significantly reduce the size of some allotments under Alternatives 1, 2, and 3.

Neither regional nor county economies would be impacted significantly by adjustments in BLM management of livestock grazing allotments or by elimination or reduction in size of allotments where land disposals would occur. Impacts to individual operators could result, however. Individual ranch values and ability of operators to borrow money could be affected by the levels of use in the alternatives, the methods by which adjustments would be administered, and the capability of operators to mitigate adverse impacts. The value of a BLM grazing permit is normally incorporated into total ranch capital value. In addition, livestock grazing permits that exceed the operator's ability to use all AUMs may have speculative or market value. Consequently, any adjustment from active preference on any allotment could impact the ranch value and the ability of the operator to borrow money.

Differing fluid mineral categories and mineral withdrawal under the alternatives could affect where and how much mineral production would occur in the future, thus affecting the county economy. Based on present and anticipated conditions, the likelihood of significant impacts is low and potential impacts cannot be quantified.

Differing emphasis on wildlife habitat management under the alternatives would affect populations. This could result in varying levels of hunter activity on public lands in the PERA and a corresponding increase or decrease in hunting related expenditures locally and regionally.

Impacts to Human Health and Safety

Disposal of parcels containing sanitary landfills now leased by communities under the R&PP act would likely result in more controlled access to these sites (e.g. enforced hours, guard on duty, fees for dumping, etc.). This controlled access may result in increased indiscriminate dumping of hazardous materials on adjacent public lands. However, by disposing of these areas, BLM's liability for unauthorized disposal of hazardous materials at these sites is reduced for those sites areas already containing the material and eliminated in areas planned for waste disposal.

Alternative 1

Impacts on Minerals

Fluid Minerals

Fluid mineral development costs would be increased on approximately 132,810 acres subject to Category 2 stipulations and approximately 28,637 acres subject to the no surface occupancy stipulation in Category 3. No fluid mineral development would be allowed on 40,137 acres closed to further leasing.

Under this alternative, 96 percent of the area considered prospectively valuable for fluid minerals would be in leasing Categories 1 and 2. The remaining prospectively valuable areas are in Category 3 and 4. Table 4-1 shows how prospectively and not prospectively valuable areas would be categorized under each alternative.

Non-Energy Leasable Minerals

As shown in Table 4-2, 599,000 acres (85 percent) of the 703,000 acres considered prospectively valuable for non-energy leasable minerals would be open for leasing. The remaining 104,000 acres would be closed to new leasing only, and existing leases in the closed area would not be affected.

A total of 104,000 acres would continue to be closed to further leasing for potash to protect the Bonneville Salt Flats. Because no new interest has been expressed for leases in this area, impacts would be minimal.

Locatable Minerals

Two percent of the available lands would have slightly increased administrative costs to the operator (Also see Table 4-3). The increase would be due to required Plans of Operation for disturbances of less than 5 acres in ACECs and off-road vehicle closures. Approximately 2 percent or 37,000 acres are withdrawn from location under the mining laws.

Mineral Materials

Because sand and gravel development would continue to be permitted on a case-by-case basis with standard stipulations, no significant impacts are expected. Availability of material could be restricted and/or development costs could be increased due to restrictions on related uses such as off-road vehicles.

Impacts on Watershed

Tracts 26, 27, 30, 33, 34, and 35 would be disposed and subsequently developed for agriculture. A total of 6,949 acres would be converted from sagebrush and grass to irrigated cropland, dry-farm cropland, and pasture. The effects of this action would be as described above under general impacts. These tracts are situated in valley bottoms and have slopes ranging from 3 to 10 percent. Erosion potential on 4,600 acres subject to plowing would be moderate for water and high for wind for about two years. Erosion potential on 2,300 acres subject to either burning or spraying, with or without subsequent seeding, would be low to moderate by either water or wind.

Tracts 9, 12, 17, 31, and 40 would be disposed and subsequently developed for mineral extraction/processing and/or industrial development. Approximately 16,600 acres would be disturbed. Surface disturbance would be severe and surface change would be long term. Disturbed areas would be subject to increased runoff and wind erosion in the short term. Soil and vegetation on acreage covered by facilities would be permanently lost unless rehabilitated through reclamation efforts at the termination of mineral/industrial activity.

A Category 1 (open) fluid mineral leasing designation would apply to 1,872,011 acres of the Resource Area. The majority of this acreage is comprised of mud flats and other flatlands having high salinity and very low watershed values. Where lands possess significant watershed values and fall within the above category, impacts described above under general impacts from fluid mineral exploration and development could be expected to occur wherever standard lease stipulations would not offer adequate protection.

A 120-acre area including Clover Reservoir would be open to fluid mineral leasing. This important wetland area would be vulnerable to mineral development activity with only standard stipulations for protection. Surface disturbance would reduce the watershed quality of the area as soil and vegetation are destroyed during the disturbance period. Water quality would decline as a result of increased sedimentation. Rehabilitation of the

TABLE 4-1
FLUID MINERALS [1]

Alternative	Leasing Categories	Prospectively Valuable	Not Prospectively Valuable
1	1 & 2	1,926,000	78,000
	3	27,000	2,000
	4	39,000	1,000
2	1 & 2	1,967,000	78,000
	3	25,000	3,000
	4	0	0
3	1 & 2	1,992,000	81,000
	3	0	0
	4	0	0
4	1 & 2	1,967,000	78,000
	3	25,000	3,000
	4	0	0

[1]Approximate acreages

See Chapter 2 for leasing category definitions.

TABLE 4-2
NON-ENERGY LEASABLES[1]

	PROSPECTIVELY VALUABLE (PV)				NOT PROSPECTIVELY VALUABLE
	OPEN	TOTAL PV OPEN	TOTAL PV CLOSED	TOTAL PV	TOTAL NPV
Alternative	Standard Limitation				
1	599,000	599,000 (85%)	104,000[2] (15%)	703,000 (34%)	1,371,000 (66%)
2	599,000	599,000 (85%)	104,000[2] (15%)	703,000 (34%)	1,371,000 (66%)
3	599,000	599,000 (85%)	104,000[2] (15%)	703,000 (34%)	1,371,000 (66%)
4	596,000 ac.	599,000 (85%)	104,000[2] (15%)	703,000 (34%)	1,371,000 (66%)

[1]Approximate Acreages
[2]Bonneville Salt Flats

TABLE 4-3
LOCATABLE MINERALS[1]

ALTERNATIVE	OPEN		CLOSED	TOTAL
	Standard Limitation	Year-Round Limitation		
1	2,037,000 (98%)	0 (0%)	37,000[2] (2)	2,074,00
2	1,939,000 (93%)	8,000 (-)	127,000[3] (6%)	2,074,000
3	2,037,000 (98%)	0 (-)	37,000[2] (2%)	2,074,000
4	1,948,000 (94%)	89,000 (4%)	37,000[2] (2%)	2,074,000

[1]Approximate acres
[2]Oil shale withdrawal,Bonneville Salt Flats Withdrawal, Simpson Springs Withdrawal
[3]Oil shale withdrawal, Bonneville Salt Flats, Simpson Springs,and Knolls.

area would be unusually expensive because of the combination of resource values that would require restoration.

A Category 2 designation (open with special stipulations) would apply to 132,810 acres. The special stipulations associated with this category provide additional safeguards against serious environmental impacts to watersheds. However, surface disturbance would still occur and impacts described above under general impacts could result. Placement of 47,048 acres of wetland/ riparian lands and 5,347 acres of watershed into Category 2 for fluid mineral exploration and development would reduce the chance that significant impacts would occur. Watershed values would not be affected on the 28,637 acres designated in Category 3 and the 40,137 acres designated in Category 4.

ORV travel would be unrestricted on 1,725,655 acres of public land designated open to ORV use. Where significant watershed values are present, impacts could occur and would be as described above under general impacts. ORV travel would be limited to existing roads, trails, or specific use areas on 275,191 acres. Some of this acreage would also have seasonal closures to ORV use. These factors would provide a significant degree of protection to the affected watershed, but impacts as described earlier could still occur. Areas totalling 31,860 acres would be closed to ORV use and watershed values would not be affected. Appendix 5 identifies areas open, limited, and closed to ORV use.

Impacts on Wildlife

Disposal of Tracts 26, 27, 30, 33, 34, and 35 and subsequent agricultural development would remove sagebrush and grassland habitat on 6,949 acres. Reduced habitat would result in decreased rabbit populations, thereby decreasing the prey base for bald eagles which roost on adjacent private land. Removal of the existing vegetation on Tract 30 would disturb a crucial sage grouse strutting and nesting area along with cover for the species. A historical sage grouse strutting ground and associated crucial nesting habitat exists on Tract 35. Disposal and subsequent agricultural use would preclude a reintroduction into this area. However, at the present time, a reintroduction is not considered viable and no significant impact would result.

Disposal of Tract 12 would result in the loss of a wildlife guzzler which supplies water to antelope and small game species within the tract and in surrounding ranges. Disposal of Tract 12 would also result in a loss of golden eagle nests from public ownership. These nests could be eliminated as a result of subsequent mineral development on the tract. Disposal of Tracts 12 and 17 would result in disturbance and loss of chukar partidge and antelope yearlong habitat.

Pheasant populations could increase substantially on Tracts 26, 27, 30, 33, 34, and 35 if practices to maintain or improve habitat are undertaken as part of agricultural development. However, clean farming practices could reduce pheasant numbers.

Disposal of Tract 12 would result in the loss of a wildlife guzzler which supplies water to antelope and small game species within the tract and in surrounding ranges. Disposal of Tract 12 would also result in a loss of golden eagle nests from public ownership. These nests could be eliminated as a result of subsequent mineral development on the tract. Disposal of Tracts 12 and 17 would result in disturbance and loss of chukar and antelope yearlong habitat.

The continuation of the existing categories for fluid mineral leasing (see Appendix 5) would leave 12,470 acres crucial mule deer winter range, 1,660 acres of crucial mule deer summer range, 79,390 acres (assuming .5 mile buffer zone) of raptor nests, and 580 acres of sage grouse strutting grounds without adequate safeguards. Approximately 3,530 acres of mule deer fawning areas in Tooele County would also remain unprotected. This lack of protection and subsequent disturbance could increase mortality and reduce reproduction. An additional 120 acres at Clover Reservoir are also not fully protected. Exploration activities in this area could disrupt and destroy nests and nest habitat for migratory waterfowl if adult birds are kept away from the nest and young during critical periods in their life cycles.

A continuation of the present ORV categories would leave 37,975 acres of crucial and critical wildlife habitat without protection. This lack of protection could result in wildlife disturbance at critical periods on 22,791 acres of crucial mule deer winter range, 1,070 acres of mule deer fawning areas, 1,540 acres of mule deer crucial summer range, 1,920 acres of elk crucial winter range, 8,285 acres of antelope fawning areas, and 10,654 acres of sage grouse strutting grounds. In addition, approximately 13,575 acres of bald eagle roost and high use areas in Tooele County could remain unprotected during winter months. Possible consequences include loss of habitat, harassment, and surface disturbance, which could subsequently reduce the bald eagle's primary prey base, the black tailed jackrabbit. Approximately 9,501 acres of waterfowl and wetland habitat at Rush Lake would not be adequately protected under this alternative.

Continued levels of grazing would increase the vegetative resource in the long term on Lake Mountain Northeast Allotment, thereby improving wildlife habitat conditions. On Lake Mountain Northeast, livestock would graze at 9 percent of active preference. On the remaining 11 allotments, continued grazing levels would not make a significant change in vegetative condition and affected wildlife habitat.

Impacts on Recreation

As a result of fluid mineral exploration, new roads would also provide access for off-road vehicle users, hunters, campers, and sightseers in Category 1 and 2 areas. Category 3 designation will continue to prevent disturbance of recreation opportunities at Simpson Springs campground and Middle Canyon. Recreation values at the Bonneville Salt Flats would be protected by the Category 4 (18,529 acres) and Category 3 (12,153 acres) designations. If not designated wilderness, portions of the North Deep Creek Mountains would be in Category 3 (7,001 acres) and Category 4 (14,997 acres) and portions of the Stansbury Mountains would be in Category 3 (4,307 acres) and Category 4 (5,902 acres). These designations would prevent degradation of the opportunities for primitive types of recreation.

Off-road vehicle designations under this alternative would allow open travel on 1,725,655 acres in the Resource Area. Off-road vehicles would be limited to designated seasons and/or roads and trails on 275,191 acres. (Also see Appendix 5, Alternative 1). Approximately 21,860 acres in the North Deep Creek Mountains and 10,000 acres in the North Stansbury Mountains would continue to be closed to recreational vehicle use.

Impacts on Visual Resources

No VRM Class II or III areas would be disposed of under Alternative 1. Impacts to visual resources within Class IV areas identified for disposal would result from development of the areas for industrial or agricultural use; however, the changes would not be significant.

Fluid mineral leasing categories under this alternative would leave 27,780 acres of VRM Class II

areas and 94,600 acres of VRM Class III areas unprotected.

The majority of impacts to visual resources as a result of off-road vehicle use would occur in VRM Class IV areas. Impacts to Class III areas could occur in isolated locations in the Silver Island Mountains, Cedar Mountain ridge top, Clover Creek, Onaqui Mountains, Simpson Mountains, Broad Canyon in the east Tintic Mountains, Dutch Mountain, Deep Creek and near Ibapah. ORV use could also affect Class II values on the Bonneville Salt Flats.

No impacts are expected to visual resources as a result of continuing the current livestock grazing program in Utah County.

Impacts on Forest Resources

Under this alternative, two parcels of public land with forest resources totalling 500 acres would be disposed. Tract 12 has small areas with widely scattered junipers along the upper slopes of the Lakeside Mountains, and Tract 17 consists of areas with widely scattered juniper forests. The resources that would be lost comprise less than one percent of the total forest on public land in the Resource Area.

Impacts on Livestock Grazing

Disposal of lands under this alternative would result in the elimination of the Vernon Allotment and portions of the Rush Lake, South Clover, Skunk Ridge and Lakeside Allotments, resulting in a total forage loss of 2,799 AUMs from public ownership. Ten livestock permittees would be affected. The most significant reduction involves Lakeside Allotment, where six permittees would lose 2,271 AUMs, 90 percent of the permitted forage.

Surface disturbance as a result of fluid mineral exploration and development in Category 1 and 2 areas could result in a slight decrease in available livestock forage. Depending on locations, water wells constructed in association with fluid mineral activity could improve livestock distribution, help implement allotment management plans, and improve range condition in the long term.

Continued ORV use on 1,725,655 acres and the associated surface disturbance would result in a short and long-term decrease in vegetation, both in the immediately impacted sites and other areas surrounding the sites because of erosion. Removing either soil-holding or desirable plant species would result in a significant invasion of undesirable plants such as halogeton, cheatgrass and rabbitbrush. This not only diminishes site potential, but increases the probability of fire due to increased cheatgrass and the loss of livestock by poisoning from halogeton.

Unrestricted cross-country ORV use would continue to result in harassment of livestock during the critical calving and lambing periods and in winter when livestock are subject to environmental stress. Affected areas include Five Mile Pass, Lake Mountain, Simpson Springs, White Rocks, Faust Canyon, Ophir Canyon, and some areas around Horseshoe Springs.

Continued vehicle use in open areas during times of adverse weather would result in deterioration of access roads needed for livestock management. Vandalism to facilities and maintenance costs for both BLM and affected livestock operators would increase.

Under this alternative, all allotments in Utah County will be grazed at or below active preference. The total current use (based on a 5-year average) is 1,962 AUMs or 76 percent of preference. This level of grazing could result in a change of seral stage on Lake Mountain Northeast Allotment, where grazing would be 9 percent of active preference. As a result of this continued grazing level and the upward trend on the allotment, a 20 percent improvement in seral stage could be expected in the long term. Seral stages on the remaining allotments would not change due to insignificant reductions from preference and/or static trends.

The limited (275,191 acres) and closed (31,860 acres) ORV use areas would benefit livestock by helping to maintain vegetation condition and reducing the chances of wildfire. Livestock harassment by ORVs would continue to be reduced in areas that are closed to ORV use.

Under this alternative, all allotments in Utah County will be grazed at or below active preference. The total current use (based on a 5-year average) is 1,962 AUMs or 76 percent of preference. This level of grazing could result in a change of seral stage on Lake Mountain Northeast Allotment, where grazing would be 9 percent of active preference. As a result of this continued grazing level and the upward trend on the allotment, a 20 percent improvement in seral stage could be expected in the long term. Seral stages on the remaining allotments would not change due to insignificant reductions from preference and/or static trends.

Impacts on Cultural Resources

Twelve tracts are proposed for disposal. Most of these have low potential for significant cultural values. Three of the tracts proposed for disposal (12, 17, and 30) have higher potential for containing significant cultural sites. Because all tracts would be evaluated for cultural resources prior to disposal, any loss of cultural resources would be prevented or mitigated.

The placement of 1,872,011 acres in Category 1 and 132,810 acres in Category 2 for fluid minerals leasing would leave these areas open for exploration and development of fluid minerals. Cultural clearances would be required prior to any surface disturbing activities. Impacts to cultural resources could still occur as described under general impacts.

The inclusion of 28,637 acres in Category 3 and 40,137 acres in Category 4 would prevent surface disturbing activity and thus afford protection to cultural resources. However, vehicles could still pass over Category 3 lands for exploration purposes, resulting in ORV-related effects as described under general impacts. Areas included in the four categories are identified in Appendix 5, Alternative 1.

The designation of 1,725,655 acres as open to ORV use would leave these areas susceptible to the effects described under general impacts. ORV use would be limited on 275,191 acres, eliminating cross-country travel and/or closing some areas to ORV use on a seasonal basis. This would reduce the opportunity for and frequency of impacts to cultural resources. ORV use would not be allowed on 31,860 acres at any time. This would reduce accessibility, vandalism and theft of cultural resources. Inadvertent damage by vehicle travel would be eliminated. Limiting or closing areas to ORVs would increase use in other areas. Although not presently significant, the impact could increase over time.

Impacts on Social and Economic Considerations

The disposal of 12 parcels of public land, about 84,721 acres, would cause a reduction in in-lieu-of-tax payments from the Federal Government to Tooele County by about $30,300. This impact to the county economy would be offset by taxation on those properties. This alternative assumes agricultural development would occur on Tracts 26, 27, 30, 33, 34, and 35, and mineral/industrial development on Tracts 9, 12, 17, 31, and 40. These developments would produce more County revenue than in-lieu payments would produce, but the amount of the increase is not quantifiable.

Four grazing allotments would be affected by the above mentioned disposals. Vernon Allotment would be eliminated, Rush Lake Allotment reduced by 70 percent, South Clover Allotment reduced by 21 percent, and Lakeside Allotment reduced by 90 percent. These changes would not affect the local economy, but individual operators would be significantly impacted on all four allotments. No disposals would occur in Salt Lake or Utah Counties.

Alternative 2

Impacts on Minerals

Fluid Minerals

Time delays and costs for fluid mineral development would be slightly increased over Alternative 1 due to new stipulations or conditions on leases in Category 2 areas. Increased acreage in Category 3 will decrease the actual acres available for leasing in this alternative. However, under this alternative, 99 percent of the area considered prospectively valuable for fluid minerals would be in leasing Categories 1 and 2 (also see Table 4-1).

Non-Energy Leasable Minerals

Impacts would be the same as described under Alternative 1.

Locatable Minerals

Impacts would be the same as described under Alternative 1 on 127,000 acres (6 percent of the area) which would be withdrawn (see Table 4-3).

Mineral Materials

Impacts would be the same as described under Alternative 1.

Impacts on Watershed

Fifteen geographical areas totalling 441,820 acres would not be available for disposal or other ownership adjustments. Long-term public ownership of these lands would afford BLM the opportunity to implement and maintain management that is conducive to production of water and protection of water quality. Areas included are the Deep Creek, Stansbury, Onaqui, Sheeprock, Cedar, and Oquirrh Mountains, and several lowland areas, all in Tooele County.

Tracts 8, 14, 31, 35, 69, 80, and 82 would be disposed and then developed for agricultural uses. The surface area on 1,520 acres would be converted from sagebrush and grass to irrigated cropland, dryfarm cropland, and pasture. The effects of this action would be as described under

general impacts. All of these tracts are situated in valley bottoms and have slopes ranging from 3 to 10 percent except Tract 80, of which a significant portion is between 10 and 15 percent. Erosion potential on 853 acres subject to plowing would be moderate for water and high for wind for about two years. Erosion potential on another 160 plowed acres (Tract 80) assumed to be developed as a fruit orchard would be moderate to high for water and high for wind for up to four years. Erosion potential from wind and water would be low to moderate on 507 acres subject to either burning or spraying, with or without subsequent seeding. Tract 70 would be disposed and then used for military activities at Camp Williams State Military Reservation. Up to 927 acres would be disturbed by construction and use of roads, trails, buildings, gunnery ranges, artillery impact areas and staging areas. Disturbed areas would be subject to increased runoff and wind erosion until rehabilitated. Soil and vegetation on acreage covered by facilities would be lost for the life of the facilities.

Tracts 2, 4, 6, 11, 13, 17, and 26a would be disposed and then used for community needs or public purposes. Surface disturbance would be severe and surface change would be long term on 906 acres. Disturbed areas would be subject to increased runoff and wind erosion until facilities were in place. Soil and vegetation on acreage covered by facilities would be permanently lost.

Tracts 52, 53, 71, and 94 would be disposed and then developed for mineral extraction and/or processing. Surface disturbance would be severe and surface change would be long term on about 786 acres. Disturbed areas would be subject to increased runoff and wind erosion until facilities for which disturbance occurred were in place. Soil and vegetation on acreage covered by facilities would be permanently lost unless rehabilitated through reclamation efforts at the termination of mineral recovery activity.

Use on all other tracts included for disposal, including three parcels that would be offered to the Forest Service, would not change. Therefore, no impacts would result to watersheds.

A Category 1 (open) fluid mineral leasing designation would apply to 1,898,075 acres of the Resource Area. Impacts would be the same as described in Alternative 1 for open areas.

A Category 2 designation (open with special stipulations) would apply to 143,492 acres. The special stipulations associated with this category provide additional safeguards against serious environmental impacts to watersheds. Of particular importance to watershed and water quality protection would be the placement of 49,635 acres of wetland/riparian lands into Category 2 and 6,228 acres of land withdrawn by the Bureau of Reclamation in Category 3. No impacts would occur to watersheds on 32,028 acres in Category 3 (no surface occupancy).

ORV travel would be unrestricted on 1,669,267 acres of public land designated open. ORV travel would be limited to existing roads and trails and/or seasons on 363,439 acres. Where significant watersheds are present, effects would be the same as described under general impacts.

A modest improvement of watershed condition would occur on 1,388 acres with the elimination of cattle grazing on six allotments. Improvement in watershed condition would result from increased vegetative cover and decreased trampling of soil and vegetation by animals.

Both beneficial and adverse affects to watershed would probably result from continuing grazing on the remaining six allotments.

Impacts on Wildlife

Agricultural development on Tracts 69, 80, 81, and 82 following disposal would result in a loss of non-crucial mule deer winter range as sagebrush habitat is converted to orchards or dryland farming. Disposal of Tract 35 and subsequent agricultural use could affect historical crucial sage grouse strutting areas through disruption of birds and loss of sagebrush for food and cover; however, this lek has been abandoned for approximately 12 years. Impacts would be similar for ring-necked pheasants on Tract 31 as described in Alternative 1.

Impacts from disposal of Tracts 17, 33 and 34 would be the same as discussed under Alternative 1.

Retention of 441,820 acres will assure that wildlife habitat on these areas remains in public ownership.

Under this alternative, all crucial wildlife habitats would be adequately protected from fluid mineral exploration (Category 2 and 3) and off-road vehicle use (Limited and Closed). Wildlife habitat within areas open for fluid mineral activities and off-road vehicles would not be significantly affected.

Wildlife habitat conditions would not change as a result of livestock grazing levels under Alternative 2. Mule deer would continue to graze at UDWR's

optimum levels on those seven allotments with mule deer habitat. Moose use would increase from 10 to 50 AUMs (approximately 5 animals) on Cherry Creek Allotment. Elk use on Cherry Creek Allotment would not change.

Impacts on Recreation

Retention of lands under this alternative would assure that the following areas with high recreation opportunities remain in public ownership: Bonneville Salt Flats, Deep Creek Mountains, Knolls, White Rocks, Horseshoe Springs, Simpsons Springs campground, Rush Lake, and Ophir Canyon.

Impacts of fluid mineral leasing would be the same as under Alternative 1.

On 363,439 acres with seasonal and/or other limitations for organized, permitted events, there would be a slight reduction in competitive motorcycle races. Hunting and casual ORV use would not be affected. ORV travel in the North Deep Creek and Stansbury Mountains would be limited to designated roads and trails.

Impacts on Visual Resources

No impacts to visual resources are expected on any parcels identified for disposal under this alternative except West Mountain (No. 80) in Utah County. Depending on degree of change from agricultural development, visual objectives could be violated by changing form, texture, line, and color of area. However, the site is not visible to a high-use scenic corridor and is hidden up on the bench of the mountain range. Based upon location and the moderate rating of scenic values, impacts on the 160 acres would not be considered significant.

The significant visual resource values on the Bonneville Salt Flats, Deep Creek Mountains, Horseshoe Springs, Stansbury Mountains, Tintic Mountains, and Ophir Canyon totalling 441,820 acres, would remain in public ownership.

Fluid mineral leasing categories would protect all VRM Class II and III areas under this alternative. Long-term impacts in Class IV areas would result primarily from new, permanent access roads associated with exploration.

Under this alternative, impacts to visual resources would be reduced by limiting off-road vehicle use on an additional 88,248 acres.

No impacts to visual resources would occur as a result of the livestock grazing program in Utah County under this alternative.

Impacts on Forest Resources

Under this alternative, eleven parcels of public land with forest resources amounting to approximately 3,400 acres would be disposed. The majority of the forest resources on these lands are juniper stands with occasional scattered pinyon pine. A few isolated areas of conifer/aspen areas at higher elevations and on north-facing slopes would also be lost from public ownership. The resources that would be lost comprise less than one percent of the total forest resources on public land in the Resource Area.

Impacts on Livestock Grazing

A total of 428 AUMs would be reduced under this alternative, affecting 19 allotments.

The elimination of six Utah County allotments would result in the reduction of 159 AUMs. Land disposals would reduce an additional 83 AUMs on three allotments in Utah County and 186 AUMs on 10 allotments in Tooele County. Reductions are considered insignificant (less than 5 percent) on all Tooele County allotments except Rush Lake, which has a 13 percent reduction or 24 AUMs. In Utah County all reductions are 5 percent or less except the Lake Mountain Allotment (45 percent reduction), which is mostly private land, and the six allotments that are eliminated. The AUMs on the eliminated allotments range from 6 to 50 AUMs.

Surface disturbance as a result of fluid mineral exploration and development in Category 1 areas (1,898,075 acres) and Category 2 areas (143,492 acres) would result in the same impacts as described in Alternative 1.

Continued ORV use on 1,669,267 acres and the associated surface disturbance would result in the same impacts as described in Alternative 1. Impacts on the 363,439 acres limited to ORV use would also be as described in Alternative 1.

Under this alternative, livestock grazing in Utah County would occur at or below preference levels; therefore, existing seral stages of vegetation would remain the same.

Impacts on Cultural Resources

A total of 15 areas containing 441,820 acres would not be disposed or transfered from BLM management. This would eliminate the possibility of loss of cultural values from public ownership on those parcels.

Fifty tracts are proposed for disposal. Most of these have low potential for containing significant cultural values. While all of the tracts may contain cultural resources, nine have higher potential for containing significant sites. These are Tracts 14, 17, 18, 43, 44, 74, 76, 79, and 101. Disposal of tracts without evaluation for cultural values, particularly those with higher potential, could result in the loss of valuable cultural remnants through destruction or lost public ownership.

The placement of 1,898,075 acres in Category 1 and 143,492 acres in Category 2 for fluid minerals leasing would leave these areas open for exploration and development of fluid minerals. For any activities that would involve surface disturbance, cultural clearances would be required prior to disturbance. Impacts to cultural resources could still occur in isolated incidences as described under general impacts.

The inclusion of 32,028 acres in Category 3 would prevent surface disturbing activity and thus afford protection to cultural resources on those lands; however, vehicles could still pass over Category 3 lands for exploration purposes, resulting in ORV related impacts as described under general impacts.

The effects of designating 1,667,267 acres and 363,439 acres as open and limited for ORV use, respectively, would be the same as described under Alternative 1.

Impacts on Social and Economic Considerations

The disposal of 50 parcels of public land (9,008 acres) would cause a reduction of in-lieu-of-tax payments from the Federal Government to Tooele County of about $1,900 and to Utah County of about $1,250. The effects of lost in-lieu payments on the two counties' budgets would be negligible.

The reduced in-lieu payments to the two counties would be offset by taxation on the disposed properties. Under this alternative, agricultural development would occur on Tracts 8, 14, 31, 35, 69, 80, and 82; mineral/industrial development on Tracts 52, 53, 70, and 94; and community needs or public purposes on Tracts 2, 4, 6, 11, 13, 17, and 26a. These developments would produce more county revenue than in-lieu payments would produce, but the amount of increase is not quantifiable.

Land disposals would affect 19 grazing allotments, including six allotments in Utah County which would be eliminated. These are all small allotments with 50 or fewer AUMs per allotment. The operators using three of the six allotments have taken non-use in recent years. No significant regional or county economic impacts would result from the loss or reduction of authorized livestock grazing , but individual operators could experience modest economic impacts.

Alternative 3

Impacts on Minerals

Fluid Minerals

This alternative would maximize the acreage available for fluid mineral leasing and minimize leasing restrictions, thereby reducing costs for mineral operators and increasing exploration and development throughout the Resource Area. Increased acreage open to ORV use would improve access for exploration. Under this alternative, all areas identified as prospectively valuable for fluid minerals would be in Categories 1 and 2 for leasing.

Non-Energy Leasable Minerals

Impacts under this alternative would be the same as Alternative 1.

Locatable Minerals

Impacts would be the same as described under Alternative 1.

Mineral Materials

Impacts would be the same as described under Alternative 1.

Impacts on Watershed

A total of 170,439 acres would be identified for disposal. This includes 14,620 acres developed for agricultural use. The tracts involved would be 3, 5, 7 ,8, 15, 26, 27, 30, 32, 33, 34, 35, 42, 69, 80, 81, and 82. The surface area would be converted from sagebrush and grass to irrigated cropland, dry-farm cropland, and pasture. The effects of this action would be as described under general impacts. Most of these tracts are situated in valley bottoms and have slopes ranging from 3 to 10 percent. Tracts 80 and 81 are bench lands with significant slopes between 10 and 15 percent. Erosion potential on 9,672 acres subject to plowing would be moderate for water and high for wind for about two years. Erosion potential on another 180 plowed acres (Tracts 80 and 81) assumed to be developed as fruit orchard would be moderate to high for water and high for wind for up to four years. Erosion potential would be

low to moderate from wind and water on 4,868 acres subject to either burning or spraying, with or without subsequent seeding.

Tract 70 would be disposed and then used for military activities at Camp Williams State Military Reservation. Up to 927 acres would be disturbed by construction and use of roads, trails, buildings, gunnery ranges, artillery impact areas and staging areas. Impacts would be as described in Alternative 2.

Tracts 2, 4, 6, 13, 14, and 31 would be disposed and then used for community needs or public purposes. About 1066 acres would be disturbed. Impacts would be as described in Alternative 2.

Tracts 9, 12, 19, 39, 40, 52, 53, 71, and 94 would be disposed and then developed for mineral extraction and/or processing. About 18,355 acres would be disturbed. The impacts would be as described in Alternative 2.

Existing uses would continue on all other tracts identified for disposal including the six tracts that would be offered to the U.S. Forest Service. Therefore, no impacts would result to watersheds.

Impacts of designating 1,905,110 acres in Category 1 (open) for fluid mineral leasing designation would be as described under Alternative 1.

A Category 2 designation (open with special stipulations) would apply to 149,720 acres. The special stipulations associated with this category provide additional safeguards against serious environmental impacts to watersheds. Of particular importance to watershed and water quality protection would be the placement of 55,743 acres of wetland/riparian lands into Category 2.

A Category 3 (no surface occupancy) designation would apply to 18,765 acres. Since no surface disturbance would occur on these lands, watershed values would not be impacted.

ORV travel would be unrestricted on 1,957,656 acres of public land designated open to ORV use. ORV travel would be limited to existing roads, trails, or specific use areas on 75,050 acres. Where significant watershed are present, effects would be as described under general impacts.

Livestock grazing at active preference on 12 allotments in Utah County would use 2,569 AUMs. Winter sheep would use 76 percent of the forage. The effects on watershed would be the same as described in the general impacts section.

Impacts on Wildlife

Impacts to wildlife habitat would be the same as described under Alternative 1 and 2, with the following additions:

Disturbance of vegetation on Tract 7 would also disrupt a crucial sage grouse strutting and nesting area and winter habitat for the species. Impacts to ring-neck pheasant as described under Alternative 1 would also occur on Tracts 5 and 32. Disposal of remaining tracts would have no impact on wildlife habitat.

Under the proposed fulid mineral leasing categories the following acres of crucial wildlife habitat would not be protected by special stipulations: mule deer crucial winter range-2,320 acres, elk winter range-6,930 acres and raptor habitat-77,180 acres. Impacts to the following crucial habitats are the same as outlined in Alternative 1: mule deer crucial summer range, mule deer fawning areas and riparian/wetland areas. All of the remaining acreages of crucial habitat would be covered by special stipulations.
Under this alternative, 13,575 acres of bald eagle roosts would be protected from off-road vehicle disturbance. Other crucial habitats would not be adequately protected and would be subject to disturbances as described under general impacts.

No impacts would occur to wildlife habitat as a result of livestock grazing levels in Utah County under this alternative.

Impacts from fluid mineral leasing would be the same as described under Alternative 1.

Impacts on Recreation

This alternative is the least restrictive for off-road vehicle use. All areas would be open for ORV use except 75,050 acres in the limited category.

Impacts on Visual Resources

Impacts as a result of land disposal under this alternative would be the same as described under Alternative 2 with the addition of possible slight impacts to VRM Class III values on Parcel 81 in Utah County (20 acres) due to agricultural development and a small portion of Tract 53 (20 percent or 405 acres) in Tooele County due to mineral development.

This alternative would offer the least protection for visual resources from fluid mineral exploration. No special stipulations are identified for protection of visual resources under Category 2, and no Category 3 (no surface occupancy) areas would be designated except for 18,529 acres in the Bonneville Salt Flats.

This alternative would also offer the least protec-

tion to visual resources from off-road vehicle use, as all areas would be open except 75,050 acres designated as limited.

No impacts would be expected from the livestock grazing management program in Utah County under this alternative.

Impacts on Forest Resources

Under this alternative, 40 parcels of public land with forest resources totalling approximately 7700 acres would be disposed. The majority of these lands with forest resources are covered with juniper stands, with scattered pinyon pine on the south end of the Oquirrh Mountains and in Utah County. A few isolated areas of conifer/aspen at higher elevations and on north facing slopes would also be lost from public ownership. The areas lost comprise less than 2 percent of the total forest resources.

Impacts on Livestock Grazing

Disposal of lands under this alternative would result in the reduction of 4,295 AUMs including 4,059 AUMs on 21 allotments in Tooele County and 236 AUMs on 7 allotments in Utah County. Livestock grazing would be totally eliminated on 8 allotments, four in Tooele County and four in Utah County. Eleven allotments would have reductions of less than 5 percent. Nine allotments in Tooele County would have reductions ranging from 65 to 2,150 AUMs.

The disposal of the isolated tracts in South Clover and Deadman Creek allotments would increase management efficiency. Management efficiency would be decreased with the disposal of land in Ibapah, West Mountain (Pasture 8) and Lakeside Allotments.

Surface disturbance as a result of fluid mineral exploration and development in Category 1 areas on 1,905,110 acres and in Category 2 areas on 149,720 acres would result in the same impacts as described in Alternative 1.

Continued ORV use on 1,957,656 acres and the associated surface disturbance would result in the same impacts as described in Alternative 1. The 75,050 acres that are limited to ORV use in this alternative would have the same impacts as the limited areas described in Alternative 1.

Impacts on Cultural Resources

A total of 109 tracts are proposed for disposal under Alternative 3. While all of the tracts may contain cultural resources, twelve have higher potential for containing significant cultural sites. These are Tracts 12, 14, 17, 18, 29, 30, 43, 44, 74, 76, 79, and 101. Because these tracts would be evaluated prior to disposal, any loss of cultural resources would be prevented or mitigated.

The placement of 1,905,110 acres in Category 1 and 149,720 acres in Category 2 for fluid minerals leasing would leave these areas open for exploration and development of fluid minerals. For any activities that would involve surface disturbance, cultural clearances would be required prior to disturbance. Impacts to cultural resources could still occur in isolated incidences as described under general impacts.

The inclusion of 18,765 acres in Category 3 would prevent surface disturbing activity and thus afford protection to cultural resources on those lands; however, vehicles could still pass over Category 3 lands for exploration purposes, resulting in ORV related impacts as described under general impacts.

The effects of designating 1,957,656 acres and 75,050 acres as open and limited for ORV use, respectively, would be the same as described under Alternative 1

Impacts on Social and Economic Considerations

The disposal of 109 parcels of public land, about 162,979 acres, would cause a reduction in in-lieu-of-tax payments by the Federal Government to Tooele County of about $53,600, and to Utah County of about $3,400.

The impact of reduced in-lieu payments on the economies of the two counties would be offset by taxation on the disposed properties. This alternative assumes agricultural development would occur on Tracts 8, 14, 31, 35, 69, 80, and 82 and mineral/industrial development on Tracts 52, 53, 71, and 94; and community needs or public purposes on 2, 4, 6, 11, 13, 17, and 26a. These developments would produce much more county revenue than in-lieu payments would produce, but the amount of increase is not quantifiable.

The impacts to livestock operators would be the same as described in Alternative 2 except that more individual operators could experience modest economic impacts.

Alternative 4

Impacts on Minerals

Fluid Minerals

Impacts of Alternative 4 would be the same as for Alternative 2, except that mineral operators' costs

would increase for 6,228 acres of riparian/wetland area around Utah Lake and 8,720 acres of VRM Class II in the Oquirrh Mountains. These areas would be placed in Category 3, No Surface Occupancy.

Approximately 99 percent of the area identified as prospectively valuable for fluid minerals would be in Categories 1 and 2 for leasing.

Non-Energy Leasable Minerals

Impacts under this alternative would be the same as under Alternative 1.

Locatable Minerals

Impacts would be the same as discussed under Alternative 1.

Mineral Materials

Impacts would be the same as described under Alternative 1.

Impacts on Watershed

Fifteen geographical areas totalling 441,820 acres would not be disposed or transferred from BLM management. The impacts to watersheds would be the same as identified in Alternative 2.

Impacts of designating 1,718,845 acres in Category 1 (open) for fluid mineral leasing would be the same as described under Alternative 1.

A Category 2 designation (open with special stipulations) would apply to 238,717 acres. The special stipulations associated with this category provide additional safeguards against serious environmental impacts to watersheds. Of particular importance to watershed and water quality protection would be the placement of 49,635 acres of wetland/riparian lands into Category 2. A Category 3 (no surface occupancy) designation would apply to 116,033 acres, including 6,548 acres of wetlands and riparian areas.

Watershed on 28,260 acres of the Deep Creek Mountains; 10,209 acres of the Stansbury Mountains; 2,173 acres at Simpson Springs; 2,155 acres in the vicinity of Wendover City; 560 acres at Danger Cave State Park; 360 acres in Terra Town vicinity; 320 acres near Spanish Fork; 124 acres in Ophir Canyon; and 112 acres in Middle Canyon would also be included in Category 3 and thereby protected from surface disturbing fluid mineral activities.

ORV travel would be unrestricted on 1,669,287 acres of public land designated open to ORV use. ORV travel would be limited to existing roads, trails, or specific use areas on 245,899 acres. Where significant watersheds are present, effects would be as described under general impacts. Lands closed to ORV use would amount to 117,520 acres. No impacts would occur on these areas.

Grazing of livestock at presently permitted levels would continue on six of twelve allotments in Utah County under this alternative. Permits would be terminated on the other six allotments. A modest improvement of watershed condition on 1,388 acres would occur with the elimination of cattle grazing. Improvement in watershed condition would result from increased vegetative cover and decreased trampling of soil and vegetation by animals.

Both beneficial and adverse effects to watershed could result from continuing grazing on the remaining six allotments. Impacts would be as described in Alternative 2.

Impacts on Wildlife

No tracts would be disposed under this alternative. The landownership adjustments resulting from exchanges under this alternative would increase or improve wildlife habitat, including forage, cover, water, and living space.

Impacts from fluid mineral activities would be the same as discussed under Alternative 2. Impacts from off-road vehicle use would also be the same as described under Alternative 2, but additional protection would be provided in areas where crucial habitats are limited or closed to all use instead of organized, permitted events (see Appendix 6).

Impacts on Recreation

Impacts of retaining 441,920 acres in public ownership with no landownership adjustments would be the same as discussed under Alternative 2.

Impacts of fluid mineral leasing would be the same as discussed under Alternative 1. Approximately 117,520 acres would be closed to ORV use under this alternative, eliminating all use in these areas year-round.

In addition, seasonal and distance restrictions in the limited areas would apply to all ORV users, rather than competitive, organized events as in Alternative 2.

Impacts on Visual Resources

Overall visual quality would be maintained or improved most under this alternative. No tracts

are identified for disposal. All VRM Class II and III areas would be protected from fluid mineral exploration. This alternative includes the most acreage identified as limited (245,899 acres) and closed (117,520 acreage) to ORV use. No impacts to visual resources would be expected from the livestock grazing program under this alternative. Impacts of retaining 441,820 acres in public ownership would be the same as identified under Alternative 2.

Impacts on Forest Resources

No impacts would occur to forest resources under this alternative.

Impacts on Livestock Grazing

The elimination of six allotments in Utah County in this alternative would result in the reduction of 159 AUMs. Reductions on the eliminated allotments range from 6 to 50 AUMs.

Surface disturbance as a result of fluid mineral exploration and development in Category 1 areas on 1,718,845 acres and Category 2 on 238,717 acres would result in the same impacts as described in Alternative 1.

Continued ORV use on 1,669,287 acres and the associated surface disturbance would result in the same impacts as outlined in Alternative 1. The 245,899 acres that are limited to ORV use in this alternative would have the same impacts as described in Alternative 1.

Under this alternative, livestock grazing in Utah County would occur at proper levels for the six remaining allotments; therefore, existing seral stages of vegetation would remain the same.

Impacts on Cultural Resources

The impacts of not allowing landownership adjustments on 441,820 acres would be the same as identified in Alternative 2.

The placement of 1,718,845 acres in Category 1 and 238,717 acres in Category 2 for fluid minerals leasing would leave these areas open for exploration and development of fluid minerals. For any activities that would involve surface disturbance cultural clearances would be required prior to disturbance. Impacts to cultural resources could still occur in isolated incidences as described under general impacts.

The inclusion of 116,033 acres in Category 3 would prevent surface disturbing activity and thus afford protection to cultural resources on those lands; however, vehicles could still pass over Category 3 lands for exploration purposes, resulting in ORV-related impacts as described under general impacts.

The effects of designating 1,669,287 acres and 245,899 acres as open and limited for ORV use, respectively, would be the same as described under Alternative 1. ORV use would not be allowed on 117,520 acres at any time. This would reduce accessibility to these lands and reduce vandalism and theft of cultural resources. Inadvertent damage by vehicle travel would be eliminated. Limiting or closing areas to ORVs would increase use in other areas. It is questionable if this is presently a significant impact but over time, as ORV use continues to increase, the impact would become greater.

Impacts to Socioeconomic Considerations

No significant social or economic changes would occur under this alternative.

Unavoidable Adverse Impacts

Land disposals in Alternatives 1, 2 and 3 would cause the permanent loss 85, 161, 9008 and 162,979 acres, respectively. Public access and any resource values other than minerals would be lost.

Fluid minerals, if present, would not be recovered on 40,137 acres closed to leasing in Alternative 1. Recovery of fluid minerals by directional drilling would increase operation costs on lands included in the no surface occupancy category. This increase would affect 28,637 acres in Alternative 1; 32,028 acres in Alternative 2; 18,765 acres in Alternative 3; and 116,033 acres in Alternative 4. Withdrawal of 37,000 acres in Alternative 1, 3 and 4 and 127,000 acres in Alternative 2 would preclude recovery of locatable minerals. Closure of 104,814 acres to potash leasing in all alternatives would prevent new leases on these lands, but existing leases would not be affected.

Public lands closed or limited to ORVs would reduce access for mineral exploration and development. No land would be designated closed in Alternatives 2 and 3, but 31,860 acres would be closed in Alternative 1 and 117,520 acres in Alternative 4. ORV travel would be limited to existing roads and trails on 275,191 acres in Alternative 1; 363,439 acres in Alternative 2; 75,050 acres in Alternative 3; and 245,899 acres in Alternative 4. Access would be less restricted than on closed lands.

Up to 1,000 acres of desert shrub and salt brush vegetation would continue to be lost each year

under all alternatives. This vegetation type would be replaced by invading annual grass. The likelihood of wildfire would increase proportionately since annual grasses are highly flammable when dry.

Natural erosion would remain at slight to moderate rates, but activities that disturb the land surface would cause increased erosion in some areas under all alternatives. Wherever mitigation and rehabilitation are not employed or not successful, permanent soil loss would result.

Crucial and critical wildlife habitats would be subject to damage in those areas open to ORV use, mineral development, and other forms of surface disturbance. Human activities in habitats during wildlife breeding, nesting, birthing, and rearing of young would reduce the level of success of these wildlife processes.

Some wildfires would not be containable at a size that would prevent significant resource damage to wildlife values under all alternatives. Loss of habitat acreage would result.

Some cultural or historical sites would be damaged or destroyed by surface disturbing activities in all alternatives. In areas open to ORV use and mineral development, artifacts would be susceptible to collection.

Designation of areas as limited or closed to ORV use would reduce recreation opportunities on 307,051 acres in Alternative 1, 363,439 acres in Alternative 2,75,050 acres in Alternative 3 and 363,419 acres in Alternative 4.

Irreversible and Irretrievable Commitment of Resources

Disposal of public lands would result in an irreversible and irretrievable loss of the disposed lands and their resources, except minerals. The exchange of public lands would be irreversible and the lands irretrievable.

Any minerals extracted would be irreversibly and irretrievably lost.

Lands within designated corridors that would be committed to major ROWS would be irreversibly and irretrievably committed. Should a ROW require intrusion into an avoidance area, resources would be irreversibly and irretrievably damaged.

Soil and vegetation lost through surface disturbances would be irretrievable as would harvested woodland products. If losses were permanent, the losses would be irreversible. Any irreversible or irretrievable loss of vegetation in areas grazed by livestock, wildlife habitats or watersheds would cause irreversible damage to these resources.

Recreation opportunities lost as a result of limitations or closures to ORVs would be irretrievable.

Damage to or destruction of cultural resources from any cause would be an irreversible and irretrievable loss.

Short-term Use Versus Long-term Productivity

Disposals of public land would increase land management efficiency in both the short and long term. Any resource productivity of these lands could be permanently lost. Any acquisitions through exchanges that meet the exchange criteria would result in increased long-term productivity.

Short-term and long-term productivity would increase as a result of improved access. This would facilitate resource management and increase public use of some areas.

The designation of four areas as ACECs would eliminate or modify some short term uses while enhancing the long-term productivity of resource values.

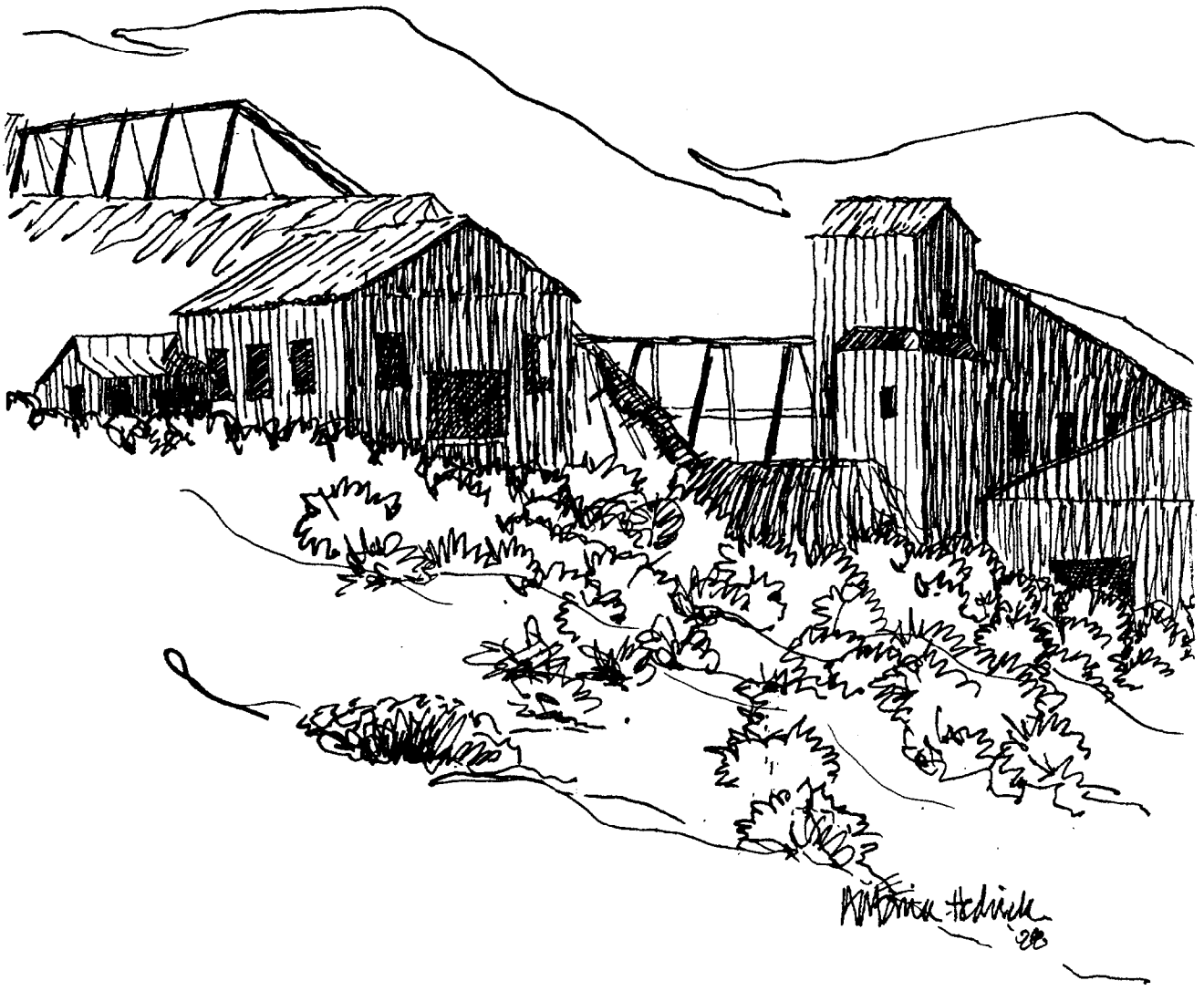
Designation of lands in Categories 2, 3, or 4 for fluid minerals leasing would reduce or eliminate both wildlife disturbance and soil erosion in the short and long term. In areas covered by Category 1, adverse impacts to wildlife and erosion would continue into the long term.

Withdrawals and closures of areas to some mineral activities would prevent mineral recovery in the short term.

Confinement of major right-of-ways to designated corridors would prevent placement of transportation or utility developments in other areas. This would prevent damage to resources and environmental values outside the corridor and enhance long-term productivity of those resources and values.

Elimination of six small livestock grazing allotments in Alternative 2 and 4 would terminate permitted grazing in the short and long term. Long-term productivity on these areas for values such as watershed and wildlife habitat would increase.

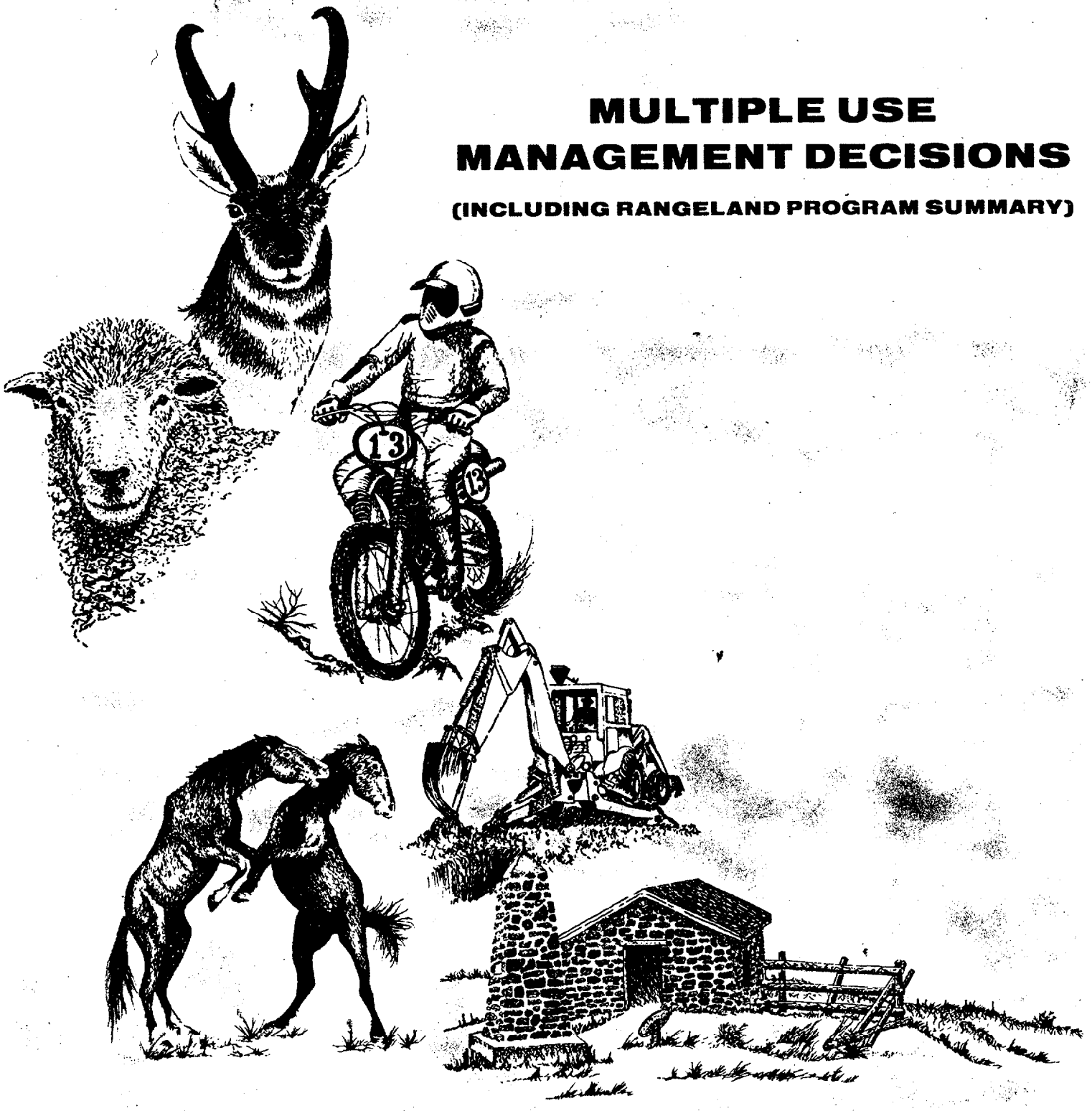
APPENDICES



TOOELE PLANNING AREA

MULTIPLE USE MANAGEMENT DECISIONS

(INCLUDING RANGELAND PROGRAM SUMMARY)



SALT LAKE DISTRICT
BUREAU OF LAND MANAGEMENT
U.S. DEPARTMENT OF THE INTERIOR

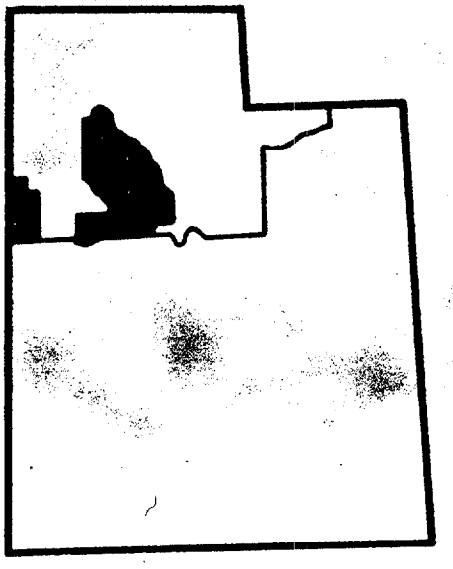
MAY, 198

A WORD FROM THE DISTRICT MANAGER

This brochure summarizes the major decisions that have been made for managing the public lands in the Tooele Planning Area. It includes the summary of the rangeland program, which is the group of land-use decisions affecting livestock grazing. All of the decisions described in this brochure are the culmination of a 3-year planning effort by BLM. The planning process involved concerned citizens, organizations, and government officials and agencies. I appreciate their time and effort and believe that their help has assisted us in preparing the best plan that is possible.

The complete planning documents and detailed maps are available for public inspection at the Salt Lake District Office. They provide a thorough analysis which supports the allocations of resources that have been made. My staff and I will be pleased to assist anyone who wishes to review these documents.

Frank W. Snell
District Manager



TOOELE PLANNING AREA

For more information about the Tooele Planning Area, contact:

Bureau of Land Management
Salt Lake District Office
2370 South 2300 West
Salt Lake City, Utah 84119
telephone (801) 524-5348

APPENDIX 1A

TABLE OF CONTENTS

List of Tables

AREA DESCRIPTION

The Tooele Planning Area is located in northwestern Utah. The area includes Tooele County and small portions of Salt Lake, Utah, Juab, and Box Elder Counties.

Land ownership within the area includes 2,001,166 acres of BLM administered public land, which is 44 percent of the land in the planning area. The public land within the planning area is administered by the Pony Express Resource Area of BLM's Salt Lake District.

Livestock grazing and wildlife habitat are the most widespread uses of public lands in the Tooele Planning Area. Other resources and uses include rights-of-way, mineral development, recreation, scenery, watershed, forestry and wilderness values.

The northeast portion of the planning area is covered by the Great Salt Lake, which at 4,200 feet is the area's lowest elevation. Rising abruptly to 10,000 feet from Tooele and Rush Valleys, the Oquirrh and East Tintic Mountains form the area's eastern boundary. Other major features include the Deep Creek Mountains (12,000 feet) in the western corner, the Bonneville Salt Flats near Wendover, and the Great Salt Lake Desert.

ISSUES AND DECISIONS

The following section describes the issues which were identified during the land-use planning process for the Tooele Planning Area. BLM's multiple-use decisions follow each issue. The figures inserted in the back cover of this brochure graphically depict many of the issue areas and decisions.

Issue 1: Identify those areas of public land suitable for agricultural, commercial-industrial, community expansion, public and other purposes. Identify those areas of public land which should be designated for retention and blocked for resource management.

Decisions

1. Retain 1.3 million acres (63 percent) of public land in federal ownership. Attempt to acquire non-federal inholdings within the retention areas.

2. Make 9,017 acres (.5 percent) of public land in the planning area available for transfer from federal ownership. Potential methods of disposal would include: exchange, indemnity selection or quantity school grant by the State of Utah, recreation and public purpose lease or sale, or public sale.

3. Manage and/or dispose the following three areas totalling 96,973 acres (5 percent) of public land for the identified purposes:

Salduro Area (59,401 acres): Manage or dispose to promote the protection and management of the Bonneville Salt Flats north of Highway I-80 and to produce potash south of Highway I-80.

Lakeside Area (29,752 acres): Dispose to promote large industrial or mineral development.

Burmester Area (7,820 acres): Dispose to promote large industrial or mineral development.

4. Do not designate 637,206 acres (32 percent) of public land for retention or disposal, but make them available for use or disposal on a case-by-case basis.

5. Designate approximately 30,680 acres of the Bonneville Salt Flats as an Area of Critical Environmental Concern (ACEC) to protect the unique geological and recreation features.

Issue 2: Identify areas of public land which are suitable or unsuitable for mineral exploration and development.

Decisions

1. Recommend mineral withdrawal of 30,682 acres of public land in the vicinity of the Bonneville Salt Flats from further location of mining claims to protect the unique geologic and recreation values.

2. Continue mineral withdrawal action for 709 acres of public land in the Simpson Springs Campground Area, which is important for both recreation and cultural values.

3. Designate 40,137 acres (2 percent) of public land and/or federal mineral estate in Category 4 - No Leasing for Oil and Gas. Areas and acreages included are: North Deep Creek Mountains (14,997 acres); Bonneville Salt Flats (18,529 acres) and Simpson Springs (709 acres). In addition, designate 5,902 acres in the Nortn Stansbury Wilderness Study Area (WSA) in Category 4. However, if this area is not designated wilderness, place the area in Category 2 -Open With Special Stipulations - to protect mule deer fawning grounds, watershed, and scenic values.

4. Designate 28,236 acres (1 percent) of public land and/or federal mineral estate in the planning area in Category 3 - Leasing With No Surface Occupancy for Oil and Gas. Areas and acreages included are: North Deep Creek Mountains (7,001 acres), Bonneville Salt Flats (12,153 acres), Danger Cave State Park (560 acres), Wendover vicinity (2,155 acres), Simpson Springs(1,464 acres), Terra vicinity (360 acres), Middle Canyon Recreation Area (112 acres), and Ophir Canyon Watershed-Recreation Area (124 acres). In addition, designate 4,307 acres of federal mineral estate in the North Stansbury WSA in Category 3. However, if this area is not designated wilderness, place this area in Category 2 - Open Leasing With Special Stipulations - to protect crucial mule deer winter range, scenic and watershed values.

5. Designate 122,263 acres (6 percent) of public land and/or federal mineral estate in Category 2 - Open for Leasing With Special Stipulations for Oil and Gas.

The following table shows the acreages included in this category and the resources and uses being protected.

RESOURCES AND USES	ACRES
critical mule deer winter range	41,643
antelope fawning areas	9,965
wetland and riparian areas	44,168
sage grouse strutting grounds	10,474
bald eagle roosts	15,188
elk calving areas	825

6. Designate the remaining 1.8 million acres (91 percent) of public land and/or federal mineral estate in Category 1 - Open For Leasing for Oil and Gas.

7. Close 104,814 acres within the Bonneville Salt Flats to further mineral leasing for potash, salts, and other similar salines. Close 30,682 acres to further leasing for geothermal resources. These decisions support the ACEC designation for protection of unique geologic and recreation values.

8. Open 30,311 acres in the planning area to leasing for geothermal resources but restrict disturbance of live water and crucial waterfowl habitat.

9. Continue to allow leasing for other minerals and geothermal resources on all other areas.

Issues 3 and 4 - The Rangeland Program

Note to Reader: Issues 3 and 4 comprise what is called the Rangeland Program. These issues differ from other issues in that BLM was required to prepare a Grazing Environmental Impact Statement (EIS) to analyze them. The EIS was required as a result of a 1975 Federal Court Order. The Final Tooele Grazing EIS was published in September, 1983. The decisions for the Rangeland Program were selected from the range of alternatives analyzed in the EIS.

The following alternative rangeland programs were analyzed:

Alternative 1: Proposed Action - No Action

This alternative would continue use at the current levels for livestock, big game, and wild horses. No new rangeland improvements would be implemented.

Alternative 2: Emphasize Wildlife Habitat

This alternative would resolve issues to the benefit of wildlife habitat. Resource uses other than livestock grazing would be given priority for management and use of vegetation. Big game would have priority for use of additional forage from land treatments.

Alternative 3: Emphasize Livestock Forage

This alternative would resolve issues to the benefit of livestock forage. Livestock would be given priority for management and use of vegetation. Livestock would have priority for use of additional forage from land treatments.

Alternative 4: Preferred Alternative - Balanced Use

This alternative resolves issues through a compromise between all grazing uses. Long-term forage increases from land treatments would be shared among grazing animals.

Issue 3: Allocate forage based upon carrying capacity and season-of-use for each class of livestock, wildlife, wild horses, and watershed protection.

Decisions

1. Divide the 71 grazing allotments into the following management categories:

I - Improve Management
M - Maintain Management
C - Custodial Management

Tables 1a, 1b, 1c indicate the category of each allotment. The purpose of the category is to make the rangeland program more effective for management and cost.

Allotments in the (I) improve category were placed in this category because they have the most significant grazing management problems, the most substantial conflicts between grazing and other resource uses, and/or the highest potential for improved productivity through proper management with good potential for positive return on investments.

Allotments placed in the (M) maintain category are generally in satisfactory condition and have no major conflicts between grazing and other resource uses. These allotments may have potential for positive return on investments.

Allotments placed in the (C) custodial category generally have little or no potential to increase productivity through management and show little potential for positive return on investments.

2. Allocate forage in Animal Unit Months (AUMs) for grazing users as follows:

cattle	39,173 AUMs
sheep	67,001 AUMs
domestic horses	125 AUMs
wild horses	1,560 AUMs
mule deer	29,853 AUMs
elk	470 AUMs
antelope	1,518 AUMs
bighorn sheep	0 AUMs

Tables 1a, 1b, 1c indicate the forage use decisions for each allotment.

Grazing preference will be maintained on 49 allotments where BLM has sufficient information to show that current forage allocation is in line with grazing capacity. BLM will monitor these allotments to assure that forage use continues at proper levels.

Grazing preference will be adjusted on four allotments where BLM now has sufficient information to show that the adjustment is necessary. BLM will monitor these allotments to assure that the new forage use levels are proper.

On 18 allotments for which information is not available to adequately determine grazing capacity, the BLM will conduct a monitoring program for 5 years before forage use decisions are made. The monitoring program will include utilization, actual use and trend studies.

3. Development Allotment Management Plans (AMPs) for all Category M and I allotments.

4. Designate the Cedar Mountain-Dugway area as Cedar Mountain Wild Horse Area. Limit the herd size to about 85 animals including those on the Dugway Proving Grounds. Designate the Onaqui Mountain as the Onaqui Mountain Wild Horse Area and limit the herd size to approximately 45 animals. Prepare management plans for both areas.

TABLE 1 a
FORAGE USE DECISIONS
CATEGORY I ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	ALLOTMENT ACTION: MONITOR 5 YEARS	ALLOTMENT ACTION: REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	PRIORITY FOR AMP (1-21)	MANAGEMENT CATEGORY
Aragonite		x		1,582	1,582	0	19	I
Broad Canyon			x	995	543	452	2	I
Clifton	x			1,894	1,894	0	17	I
Cottonwood East	x			562	562	0	**	I
Cottonwood West	x			848	848	0	**	I
Deep Creek	x			2,046	2,046	0	**	I
Government Creek	X			3,745	3,745	0	12	I
Hill Creek	x			144	144	0	15	I
Ibapah		x		2,887	2,887	0	10	I
Indian Springs	x			2,220	2,220	0	18	I
Mercur Canyon/West Ophir		x		1,598	1,598	0	14	I
North Cedar Mountain		x		5,916	5,916	0	20	I
North Puddle Valley		x		1,925	1,925	0	21	I
Ochre	x			1,472	1,472	0	11	I
Onaqui Mountain East		x		1,757	1,757	0	6	I
Onaqui Mountain West			x	1,118	725	393*	7	I
Ophir		- x		1,426	1,426	0	9	I
Overland Canyon	x			2,396	2,396	0	16	I
Pinyon Flat	x			2,153	2,153	0	**	I
Rush Lake	x			182	182	0	23	I
Saint John		x		406	406	0	13	I
Skull Valley		x		18,887	18,887	0	8	I
Skunk Ridge			x	4,680	3,650	1,030	1	I
Soldier Canyon		x		160	160	0	22	I
South Clover			x	1,062	754	308	3	I
South Skull Valley		x		10,742	10,742	0	5	I
West Ibapah		x		2,522	2,522	0	4	I
West Lookout Pass	x			1,867	1,867	0	**	I

* Reduction will be mitigated with increased use in the East Onaqui RCA Allotment.

** This allotment is being managed under an existing Allotment Management Plan.

TABLE 1 b
FORAGE USE DECISIONS
CATEGORY M ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	MONITOR 5 YEARS	REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	EXISTING AMPs **	MANAGEMENT CATEGORY
Allen Basin/Wanless	x			575	575	0		M
Black Rock		x		3,320	3,320	0		M
Boulter Wash		x		4,330	2,561	1,769*		M
Deseret/Rush Valley	x			1,400	1,400	0	x	M
Dutch Mountain	x			1,746	1,746	0	x	M
East Grassy	x			1,558	1,558	0	x	M
East Onaqui RCA	x			770	770	0		M
Elephant Knoll	x			1,925	1,925	0		M
Fandangle		x		2,900	2,900	0		M
Fivemile Pass	x			775	775	0		M
German Valley		x		2,942	1,937	0		M
Grantsville SCS	x			594	594	0		M
North Grassy	x	x		1,350	1,350	0		M
Riverbed	x			667	667	0		M
Six Mile	x			260	286	0		M
South Deseret	x			166	166	0		M
Spotted Fawn	x			1,580	1,580	0	x	M
Toplift	x			4,002	4,002	0		M
Triangle		x		1,470	1,470	0		M
West Grassy	x			4,140	3,440	0	x	M

* *Reduction is the result of sheep to cattle conversion.*

** *AMPs will be prepared during 1986-1988 for those category M allotments without existing AMPs after category I allotment AMPs are completed.*

TABLE 1 c
FORAGE USE DECISIONS
CATEGORY C ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	MONITOR 5 YEARS	REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	EXISTING AMPs *	MANAGEMENT CATEGORY
Ajax	x			*160*	*160*	*0*		C
Cedar Fort	x			*72*	*72*	*0*		C
Chimney Rock/Ten Mile	x			*674*	*6741*	*0*		C
Dead Man Creek	x			*90*	*90*	*0*	x	C
Elberta West	x			*320*	*320*	*0*	x	C
Faust Rest Area	x			*4*	*4*	*0*	x	C
Lakeside	x			*2,389*	*2,389*	*0*		C
Lost Creek	x			*180*	*180*	*0*		C
Middle Canyon	x			*420*	*420*	*0*		C
Oquirrh Mountain North	x			*250*	*250*	*0*		C
Pole Canyon	x			*320*	*320*	*0*		C
Roadside	x			*45*	*45*	*0*		C
Stansbury/Broad Canyon				*401*	*401*	*0*		C
Stansbury/Island Central	x			*516*	*516*	*0*		C
Stansbury Island NE	x			*130*	*130*	*0*		C
Stansbury Island NW	x			*271*	*271*	*0*		C
Stansbury Island SE	x			*93*	*93*	*0*		C
Stansbury Island South	x			*422*	*422*	*0*		C
Stansbury Mountain	x			*646*	*646*	*0*	x	C
Stockton	x			*338*	*338*	*0*		C
Timpie/NW Grantsville	x			*417*	*417*	*0*		C
Vernon	x			*178*	*178*	*0*	x	C
West Canyon	x			*142*	*142*	*0*		C

* *New AMPs will be prepared as needed for category C allotments after AMPs are completed for category I and M allotments.*

Issue 4 - Identify areas suitable for habitat/range/watershed improvement.

Decision

1. Implement rangeland improvements according to Salt Lake District Policy using protective measures to prevent damage to significant resources. The improvements will be identified in AMPs. Although no specific projects are now identified for completion, an estimated 38,000 acres have the potential for land treatment. The methods of treatment (e.g. chaining, burning, seeding, etc.) would be determined in the AMPs.

Implementation of Rangeland Program

Depending upon availability of funding and personnel, decisions will be issued and implemented according to the schedule in Table 2. Availability of funding is critical to the timely implementation of the rangeland program. If the funding is not available, the implementation of the rangeland decisions could be delayed.

The expected results of the rangeland program are shown in Table 3.

Issue 5 - Identify water sources and riparian zones and determine proper multiple use allocation of those resources.

Decisions

1. Give the following water sources/riparian areas priority for protection and possible improvement of quality for habitat/wildlife uses: Rush Lake, Horseshoe/Muskrat/Timpie Springs Complex, Judd/Aspen Creeks, Sheeprock Canyon Creek, Rocky Canyon Creek, and Indian Creek.

2. Provide water for wildlife at wells, developed springs, catchments and along pipelines where needed by wildlife. Improve water quality and enhance wildlife food and cover around all existing springs by constructing exclosures to protect the spring source and associated vegetation.

3. Increase water supplies for wildlife in areas where the lack of dependable water is a limiting factor.

Issue6 - Identify and determine proper management of critical habitat for important wildife species.

Decision

1. Prepare a Habitat Management Plan (HMP) for the following important habitat areas in order of priority: Puddle Valley, Rush Valley, Stansbury / Onaqui, Horseshoe Springs, Simpson/Sheeprock, Tintic, Gold Hill, Oquirrh Mountain, Cedar Mountains, Stansbury Island and Silver Island.

Issue 7 - Identify areas suitable for reintroduction of wildlife into historic ranges.

Decisions

1. Allow and cooperate fully with the Utah Division of Wildlife Resources (UDWR) - proposed reintroduction of bighorn sheep into the Deep Creek and Stansbury Mountains.

2. Do not allow UDWR's proposal to reintroduce elk into the Stansbury Mountains.

3. Allow UDWR's proposal to reintroduce a small population (not to exceed 150 head) of antelope in southern Rush Valley on a trial basis.

4. Encourage UDWR's proposed reintroduction and transplants of upland game birds (chukar partridge, sage grouse, sharptailed grouse, ring-neck pheasant, etc.) within the planning area.

Issue 8 - Determine suitability of wilderness study areas for inclusion in the wilderness system.

Decisions

1. Recommend 21,860 acres of the 38,170 acres within the North Deep Creek WSA for inclusion in the National Wilderness Preservation System (NWPS). If Congress decides against wilderness designation, identify the North Deep Creek Mountains as an ACEC and develop a special management plan.

2. Recommend 10,000 acres of the 10,480 acres in the North Stansbury Mountains WSA for inclusion in the NWPS.

APPENDIX 1A

TABLE 2

PROPOSED IMPLEMENTATION SCHEDULE

ADMINISTRATIVE ACTION	TIME FRAMES	ALLOTMENTS
Negotiate agreements or issue decisions for livestock class, forage allocation, and seasons-of-use for all allotments.	1984-1985	All
Establish additional monitoring studies on allotments which presently need additional studies for forage allocations.	1984	14
Continue consultation with livestock operators and Utah Division of Wildlife Resources.	Ongoing	All
Develop AMPs on (I) category allotments	1984-1985	13
Continue monitoring studies.	1984-1988	All
Develop AMPs on remaining allotments.	1986-1988	As needed
Issue Interim Rangeland Program Summary Updates.	Annually	All
Update rangeland program summary and issue final decisions based on five years of monitoring information.	1989	All

TABLE 3

SUMMARY OF EXPECTED RESULTS

Livestock Grazing	Provide 106,299 AUMs on 71 allotments and develop additional livestock forage through land treatment and improved management.
Big Game Grazing	Provide 31,841 AUMs for big game on 66 allotments. Provide forage for deer at or above prior stable levels on 62 allotments. Increase forage for elk and antelope. Provide AUMs for bighorn sheep when needs are determined.
Wild Horse Grazing	Provide 1,560 AUMs for wild horses on 3 allotments.

3. Recommend none of the public land within the Cedar Mountains WSA for wilderness designation.

Issue 9 - Inventory and manage cultural resources to maintain significant prehistoric and historic sites.

Decision

1. Develop a predictive model for cultural resource sites to provide the basis for protection of cultural resources in the planning area. The model will allow BLM to concentrate on areas where resource values are known or likely to exist and help give adequate protection to these areas.

Issue 10 - Identify areas suitable for off-road vehicles (ORV) use and areas where such use should be limited or eliminated.

Decisions

1. Close 31,860 acres (1.5 percent) of the planning area to any motorized vehicle use during the entire year. The closed area includes 21,860 acres in the Deep Creek Mountains WSA and 10,000 acres in the North Stansbury Mountain WSA. If these areas are not designated wilderness, redesignate to limit ORV use to certain types and seasons.

2. Limit ORV use on 275,191 acres (14 percent) of the planning area to certain types of vehicles and seasons of use. The limited area includes 23,897 acres of waterfowl/riparian habitat at Horseshoe/Muskrat Springs and Rush Lake; 14,207 acres of crucial mule deer winter range in the Stansbury Mountains; 9,029 acres of crucial mule deer winter range in the Onaqui Mountains; 40 acres in the vicinity of Simpson Springs Campground; 34,904 acres in the Oquirrh Mountains needed for community watersheds; 192,854 acres in Puddle Valley used for antelope fawning; and 260 acres of waterfowl/riparian habitat in the Horseshoe Springs area.

3. Designate the remaining 1.7 million acres (84.5 percent) of the planning area as open to ORV use.

Issue 11 - Identify areas suitable to help meet citizen demand and proper levels of harvest for firewood, fence posts, and Christmas trees.

Decisions

1. No harvest of saw timber for commercial or individual use shall be allowed within the planning area.

2. Harvest of pinyon pine for use as Christmas trees shall be discontinued as long as funding is limited.

3. No harvest of wood products will be allowed within areas recommended for wilderness designation.

4. Leave juniper forest areas open for harvesting of firewood, fenceposts, Christmas trees or other products. However, no harvest will be authorized in crucial deer winter range from December 1 through April 30.

Issue 12 - Determine types and degrees of fire control needed to protect valuable resources.

Decisions

1. Continue to manage fire protection on a limited basis through a limited suppression plan. Implement full suppression action whenever human life and/or substantial property are threatened. Implement full suppression action on all fires within the salt desert shrub, black sage, or annual grass types. Implement only minimal fire suppression for fires on Stansbury Island.

2. Use fire as a management tool through prescribed burns to improve resource values in all areas except the salt desert shrub type.

APPENDIX 1B

PLANNING DECISIONS
SALT LAKE COUNTY
SOURCE (USDI, BLM, 1985)

DECISION

PARCEL NO.: 18 (Wasatch) ACREAGE: 7.78

LOCATION: T. 3S., R. 1E., Section 1: Lot 16

COUNTY: Salt Lake

ACCESS: Legal: No
Physical: Good dirt road across SLC owned property

EXISTING USES: R/W buried water tank

MINING CLAIMS: No

WILDLIFE VALUES: CRUCIAL WINTER RANGE: Mule Deer
NORMAL RANGE: Bear, cougar, chukar, blue grouse, ruffed grouse, mourning dove

10 YEAR DEVELOPMENT POTENTIAL: Entire parcel has development potential as a nature park which would include restrooms and nature trails. Three acres/7.78 acres have potential for residential development.

DECISION: This parcel will be disposed of to a state or local government entity in a manner that would protect the watershed, wildlife, recreation and aesthetic values. If this cannot be done, it will be retained in Federal ownership.

RATIONALE: The disposal of this parcel to a private owner would adversely affect its wildlife, watershed, recreation and other public values. Salt Lake County has expressed an interest in developing a nature park on the parcel and there has been some interest by the Forest Service for inclusion of it into their adjoining ownership.

APPENDIX 1B

DECISION

PARCEL NO.: 19 (Draper) ACREAGE: 40

LOCATION: T. 3S., R. 1E., Section 27, SE¼NE¼

COUNTY: Salt Lake

ACCESS: Legal: No
Physical: Good dirt roads

EXISTING USES: ORV

MINING CLAIMS: No

WILDLIFE VALUES: CRUCIAL WINTER RANGE: Mule Deer
NORMAL RANGE: Cougar, chukar, ruffed grouse, mourning dove

10 YEAR DEVELOPMENT POTENTIAL: Two acres/40 acres for a municipal water tank. Five acres/40 acres have potential for residential development.

DECISION: This parcel will be disposed of in a manner that would protect the parcel's wildlife, watershed and aesthetic values. Prior to disposal, there will be a cultural clearance done.

RATIONALE: There are significant wildlife, watershed and aesthetic values on the parcel which would be adversely affected if after disposal it was improperly developed.

Appendix 2

Lands Unavailable for Ownership Adjustment

Bonneville Salt Flats

During the last stages of the ice age, some 70,000 to 100,000 years ago, melting glaciers flowed into the Great Basin and the huge Lake Bonneville was formed. Lake Bonneville's minerals and salts were contained in solution. As the lake evaporated, these concentrations were eventually deposited in the lowest areas, the Bonneville Salt Flats and the Great Salt Lake. The salt flats are unique for their size, so flat that one can observe the actual curvature of the earth. Mirages and reflections through the summer heat waves create a vivid contrast between the blinding reflection of the salt and rugged mountain peaks in the background.

The salt plain has proven to be a barrier to man from the first American explorers and traders to the travelers of today. Early explorers described the saline plain as a vast expanse of nothingness and a flat piece of ice floating in a sea of soft mud.

The Bonneville Salt Flats figure prominently in the settling of the western United States. The Donner-Reed party elected to take a shortcut to California by routing their wagon train across the salt desert to save time. Their party suffered four days of pushing through the barren mud and salt flats, losing valuable time, animals, and wagons. These losses contributed significantly to their subsequent disaster in the snowy passes of the Sierra Nevada Mountains the following winter.

The flats were finally penetrated in the early 1900's. A railroad, linking Salt Lake City with San Francisco, was constructed through the heart of the salt flats. This railroad, which became the Western Pacific, was the first permanent route across the flats.

In 1914, the telephone started to replace the telegraph. The last link in a coast-to-coast hookup was a 600-mile stretch between Wyoming and western Nevada. The most direct route was across the flats. This segment was eventually completed and the Wedding of the Wires was held in Wendover, Utah, allowing the human voice to be transmitted from the Atlantic to the Pacific.

A segment of the famed Lincoln Highway was completed across the flats in 1925, but not without difficulties. The road, built on top of the salt, acted as a dike and allowed water to accumulate against the side and undermine the roadbed. The problem was eventually solved with cutoff ditches to channel water away from the road. The Lincoln Highway was the forerunner of Interstate 80.

Since 1914, the Bonneville Salt Flats have been the site for the world's land speed records as well as the testing grounds for almost every class of automobile and racing machine imaginable. The salt flats have been recognized nationally and internationally as the world's best racing surface.

Deep Creek Mountains

The Deep Creek Mountains are one of the most spectacular Great Basin mountain ranges. The Deep Creeks rise 8,000 feet above the valley floor to an elevation of over 12,000 feet above sea level, forming an island ecosystem in the Great Salt Lake Desert. It is the only mountain range in Utah's Great Basin with an abundance of water. These streams have been identified as habitat capable of supporting the Snake Valley strain of the Bonneville Cutthroat trout (*Salmo clarki utah*). There are approximately 1,500 fish inhabiting 13 miles of suitable streams. There is another 24 miles of suitable habitat which is administered by BLM. The BLM recognizes the Snake Valley strain of the Bonneville Cutthroat trout as a sensitive species and maintenance of this habitat is essential to its survival.

The giant stonefly (*Pteronarcys princeps*), a native to the Sierra Nevada of California and the Cascade Mountains of Oregon, has been found in many of the streams of the Deep Creeks. The significance of the giant stonefly in this area is that it occurs outside its recognized distribution and its presence supports established geologic theories for drainage patterns of the ancient Lake Bonneville.

An archaeologic survey throughout the Deep Creeks revealed semi-permanent occupancy of the area over an 8,500 year sequence representing Archaic, Sevier, and Piute-Shoshoni cultures. This information provides evidence of a prehistoric sequence of habitation in a previously unknown area. The Deep Creeks may be a key link in the question of the eastern Great Basin cultural relationships.

Bristlecone pine (*Pinus longaeva*) have been found at two locations within the Deep Creek Range. This tree, unique in Utah, is thought to be the oldest living thing in existence. The species is of limited distribution in the West and is considered significant because of its longevity and uncommon occurrence.

Historically, bighorn sheep were found in most of the mountainous areas of Utah. Around the turn of the century the bighorn sheep practically disappeared from the state. Overhunting and habitat deterioration and disease associated with intensive livestock grazing are thought to be the two major reasons most responsible for the sheep's decline. Bighorn sheep have been re-introduced onto public lands in the Deep Creek Mountains. This public land is recognized as a bighorn sheep range and given priority recognition for the benefit of bighorn sheep.

Knolls Sand Dunes

These sand dunes are 75 miles west of Salt Lake City near the Knolls crossing. This dune area contains a vast expanse of sand dunes, plus some rocky terrain and mud flats. The rising popularity of all-terrain vehicles (ATV's) has increased the demand for areas accessible and open to ATV use. The Knolls area has seen a dramatic increase in motorized vehicle users over the past ten years. Family camping trips, ATV use, and organized motorcycle racing have occurred in moderate to heavy numbers during nine months of the year.

The Knolls sand dune and the adjacent area is ideal for all types of ATV use for both the weekend recreationist and the serious motorcycle enthusiast. BLM and public land users have identified this area as a preferred site for ATV's and will promote and develop this area in the future.

Cedar Mountains

This range extends 45 miles from north to south, but only about 6 miles from east to west. It rises nearly 5,000 feet off the surrounding valley floor. The vegetation is typical of the Great Basin region, primarily a sagebrush-grass community with an intermix of juniper trees. The area only has one perennial stream.

There are a number of wildlife species which inhabit the area, the more notable ones being mule deer, mountain lion, bobcat, and both golden and bald eagles. This area is also home to over 200 wild horses. The Cedar Mountains provide both summer and winter range to these animals. This area is critical to the survival of these horses, by providing a home which has little outside influence.

Dugway-Riverbed

At first glance, this area seems to have little to offer a traveler. But upon closer inspection, one finds a variety of uses in this area making it important to numerous users. The area is bisected by the historic Pony Express Trail, which from 1860 to 1861, served to provide communication across the country. Every ten miles or so, a marker notes the location of a Pony Express station which provided the riders a fresh mount and food and water. In several places there is evidence of remnants of the original stations. The Pony Express Trail is a focal point for many people across the United States and this particular segment is very popular with many folks wishing to relive a bit of history by riding the Trail.

This area provides vivid evidence of the shorelines of prehistoric Lake Bonneville near Table Mountain. The Riverbed area also shows the visitor the course of waters which flowed from Lake Sevier into Lake Bonneville, some 100,000 years ago. The shores along this prehistoric river later became campsites for the early inhabitants of the regions. Today, these shorelines are rich in cultural sites.

The Riverbed-Dugway area provides important habitat for antelope. The area is, however, lacking in available water during the dry season. BLM and UDWR have identified creating additional water as a number one priority in this area and expect that more water will drastically increase antelope numbers.

This area is important to the livestock industry. It provides a great deal of winter range to both sheep and cattle and is, therefore, valuable to many ranchers. It also provides the only trail from northern Utah to central Utah and eastern Nevada. Moving into winter ranges in these areas is critical to the survival of the herder and his sheep and the Riverbed-Dugway area provides the only direct trail to many winter sheep ranges.

Simpson Springs

The Simpson Springs have always been a favorite watering place for desert travelers. In fact, it is one of the most dependable watering spots in this desert region. Early inhabitants of the area most likely used the springs, but little evidence remains. In 1852, Uncle Dick Wootton was the first recorded pioneer to use the area, while trailing a band of sheep from Utah to California. In 1858, Captain James Simpson stopped at the springs while on patrol and, because it was the last stop for water for travelers heading west, renamed it.

A mail station was established here in 1858 and the buildings were later used by the famed Pony Express riders. A number of structures have been

built and destroyed in the vicinity of Simpson Springs over the years. It is not known for sure which served as the station for both the mail route and the Pony Express. BLM, in cooperation with the Tooele Chapter of the Future Farmers of America, reconstructed these ruins in 1974. The restored structure is located on a building site which dates to the 1860's and closely resembles the original station. A BLM campground is located just east of the station with drinking water, toilets, and 14 developed camping sites.

Big Hollow/Onaqui and Simpson Mountains

The Big Hollow area is located on the southern end of the Stansbury Mountain Range, adjacent to the Deseret Peak Wilderness Area administered by the Forest Service. This area serves an important function by providing the only readily accessible public trailhead into the designated wilderness area. This gives recreationists the opportunity to hike into the southern end of the Stansbury Range and not have to be concerned about crossing private land to enter the wilderness area.

This area has a large number of wildlife species, including mule deer, mountain lion, and bobcat. The bald eagle, an endangered species, also inhabits this area. BLM and UDWR have proposed transplants of two big game species on the North Stansbury Mountains. Within the near future, visitors to this area might expect to see Rocky Mountain bighorn sheep and Rocky Mountain elk. There is perennial water found in Rock Spring at the head of Rock Canyon. This water will be beneficial in the improvement of any trailhead in the area.

The Onaqui Mountains are home to many wildlife species, including mule deer, mountain lion, bobcat, and an occasional Rocky Mountain elk. Bald and golden eagles can be seen above the hills, as well as many other raptors. These mountains also provide year-long range to some 100 wild horses, the second largest herd in northwestern Utah. Livestock roam the mountains during the summer and fall, travelling into the lower elevations for the winter. The BLM and livestock operators have made substantial investments in range improvements here. Projects include seedings, chainings, prescribed fire, water developments, and fences. These mountains are important to wild horses, livestock, and many wildlife species and should be managed for the benefit of all.

These mountains are heavily used by recreationists throughout the year. Hikers and campers explore the wooded slopes during the spring and summer, as do wood cutters. In the fall, the area is used primarily by hunters, searching for mule deer, sage grouse, and mourning doves.

The Simpson Mountains provide what is probably the finest wildlife habitat and livestock forage in the entire Resource Area. BLM, in cooperation with UDWR and the Forest Service, have made substantial investments in improving the the available forage. Pinyon-juniper stands have been thinned through the use of prescribed fire and chaining, and has been developed in numerous areas, and vast acreages have been reseeded. A wide variety of big game, small game, upland game, and non-game flourish in these mountains.

Recreationists visit this area throughout the year. They return time and time again to hike, ride ORV's, or just explore. The Simpsons are pocketed with old cabins, reminders of dreams from the earlier days. Today, one can still expect to see a mining company reworking an old mine or trying to discover a new ore body. Whether it's snowmobilers or hunters in the winter or hikers and explorers in the summer, these mountains tend to attract large numbers of recreationists.

White Rocks

The area is a very popular site for camping and off-road vehicle enthusiasts. It receives a great deal of use during the summer months as a camping and picnicking area for the local population and has the potential for future development.

This area also has a large concentration of archaeological sites and was heavily used by early inhabitants of the region. A wide variety of uses are represented by the many sites and the area has excellent research potential. Based upon the known sites in White Rocks, this area has regional and possibly national significance and must be protected from vandalism and unauthorized excavations.

Salt Mountain

This area is on the western slope of the Stansbury Mountains, near the north end. It is the primary winter range for the Stansbury Mountain mule deer herd. This area has received a great deal of attention in the past through various projects and range improvements. The BLM, in cooperation with UDWR and various wildlife groups, has attempted to improve deer forage. They have removed competing pinyon-juniper through chainings and hand-thinnings. There has also been an effort to increase deer forage through the planting of bitterbrush seedlings. Fences have been used to protect the young plants until they

become established.

Mule deer winter range is critical to the survival of entire herds. This area has been identified as an extremely important area and must be managed primarily to provide winter habitat to resident mule deer herds.

Horseshoe Springs

The Horseshoe Springs Complex is located in the north end of Skull Valley about seven miles south of the Timpie Spring Wildlife Management Area (State of Utah). These springs are fed by numerous upwellings of warm water, which keeps them open year round and adds to their value as fish and wildlife habitat. These springs are comprised of several interconnected ponds and channeled stream that cumulatively provide several acres of water area and adjacent riparian habitat.

Excellent nesting cover and available food is found here for waterfowl and shorebirds. However, this area is heavily overgrown with hard-stem bullrush, which sometimes tends to reduce the open water. BLM, in conjunction with the Tooele Wildlife Federation and the Division of Wildlife Resources, has made more open water available through the blasting of potholes and the burning of bullrushes. Horseshoe Springs also has a good population of largemouth bass, some weighing over six pounds. Providing more open water has also helped to improve the bass fishing.

This complex has become increasingly valuable to waterfowl, due to the destruction of waterfowl habitat surrounding the Great Lake Lake. Many refuges have been damaged by saltwater from the flooding Great Salt Lake and will take years to return to their original condition. Much of the wildlife that was dependent upon these now-flooded refuges have relocated to Horseshoe Springs and similar areas.

The Horseshoe Springs Complex also provides a key feeding area for raptor species. This area has been identified as a prime location for the reintroduction of the peregrine falcon, an endangered species.

North Stansbury Mountains

This area is located on the northern end of the Stansbury Mountain Range. A single ridge dominates the landscape and provides the area with a backbone for vistas to the north, east, and west. The access into this area is severely restricted, providing a great deal of solitude and primitive recreation opportunities. The vegetation community is extremely diverse, varying from a pinyon-juniper woodland at the lower elevations to montane conifer forest and open mountain meadows at the higher elevations.

This area has a large number of wildlife species, including mule deer, mountain lion, and bobcat. The bald eagle, an endangered species, also inhabits this area. BLM and UDWR have proposed transplants of two big game species on the North Stansbury Mountains. Within the near future, visitors to this area might expect to see Rocky Mountain bighorn sheep and Rocky Mountain elk. The cliffs provide prime nesting areas for the peregrine falcon, an endangered species. Some of these rare birds have been sighted in the surrounding area and it is hoped that some nesting pairs will make these cliffs their home.

Several small cultural surveys have discovered four sites dating back to the Archaic and Fremont periods. These sites indicate the importance of high elevation settlement and subsistence patterns in the Great Basin and one is the only known site eligible for nomination to the National Register of Historic Places. These and other unknown sites are significant due to the scarcity of such sites in Tooele County and because the remaining undisturbed areas with in the sites could provide information related to the Great Basin aboriginal subsistence patterns.

The land just to the south of this area is administered by the Forest Service and has been designated as the Deseret Peak Wilderness Area. The north end of the Stansbury Mountains make an ideal gateway for hikers and horseback riders to the wilderness area. Low elevation trailheads may provide a great opportunity for the recreationists to enjoy this area.

Rush Lake

The Rush Lake area contains endangered species habitat and wetlands. This area is a major part of a habitat complex that supports one of the largest wintering bald eagle populations in the lower 48 states. It is also within the historic range of the peregrine falcon; recent sightings have occurred near the lake. In addition, Rush Lake and its associated wetlands provide resting, feeding, and nesting areas for over 100 species of waterfowl and shorebirds.

Between 200 and 250 bald eagles winter adjacent to Rush Lake. Food is the single most important factor influencing the number of bald eagles that use this area. Currently, Rush Lake is providing a constant food source to these birds.

Rush Lake lies within the historic range of the peregrine falcon and within its historic breeding range. Preferred peregrine hunting habitat includes meadows, marshes, lakes, and croplands. Rush Lake has been identified as suitable for the establishment of a hacking site.

Records indicate that Rush Lake has long provided important habitat for waterfowl and shorebirds. One hundred and eighteen different species of birds have been recorded using Rush Lake and its environs in recent years.

This area receives heavy recreation use. Visitors to the area are primarily concerned with windsurfing, fishing, and bird watching. This has become a very popular area in northern Rush Valley and for the residents of Tooele.

Clover Reservoir

The original reservoir was constructed in 1937 under the CCC program to provide water for sheep trailing through the area. It still serves that function today. It also provides an important nesting habitat for waterfowl, shorebirds, and upland gamebirds. When the rising floodwaters of the Great Salt Lake destroyed many of the major waterfowl management areas surrounding the it, small desert reservoirs became increasingly important to waterfowl.

The BLM and UDWR, in conjunction with volunteers from the Tooele Wildlife Federation, have joined together in an effort to create more waterfowl habitat. A concrete weir and rock gabion structures have been installed to control water levels and prevent gully erosion. Potholes have been blasted to increase water storage during the dry months and islands have been built to provide nesting areas safe from predators. The area has been seeded with grass, rushes, sedges, and forbs and a fence was constructed to protect the entire area from damage by ORV's.

This area has received a significant amount of attention from local biologists, hunters, and bird watchers, due to its importance to nesting waterfowl. The reservoir also has the potential to be the site of future habitat improvement projects.

Ophir Canyon

This area was first settled in the late 1860's as prospectors dug for silver. It became an important silver producer in the early 1900's, but as production dwindled, so did the town's population. It never really became a ghost town, but has been home over the years to several dozens residents. The area today has nearly thirty year-long residents, a mayor, and even its own post office. Ophir Canyon has become a very popular tourist attraction and draws people from all over.

Ophir Canyon is also an important watershed to the residents of Ophir and those in nearby Rush Valley. The increased popularity of the area has made it more inviting to the ORV rider, but this has tended to destroy the vegetation and damage the watershed. The Tooele County Commissioners, supported by the residents of Ophir, have closed this area to ORV's and asked the BLM for their cooperation in protecting this historic area and valuable watershed.

Tintic Mountains

This area was first settled in the late 1860's, when enormous deposits of gold and silver were discovered in the surrounding hills. Dozens of mining camps sprang up around the mining district and remains of many of them can still be seen today. A few of the larger one, such as Tintic, Eureka, and Mammoth, still have year-round residents. Today, this area is a very popular tourist attraction. Some of the old mines are currently being reopened and reworked by present mining methods and are proving to be quite profitable. The Tintic Mining District is still producing gold and silver over 100 years after it was first discovered.

The Tintic Mountains provide important habitat for many wildlife species, including mule deer, mountain lion, bobcat, and an occasional Rocky Mountain elk. The BLM and UDWR have reintroduced pronghorn antelope into the lower foothills and numbers seem to be steadily growing. This area also provides nocturnal roosting sites for wintering bald eagles, an endangered species. This region is thought to hold one of the largest populations of wintering bald eagles in the lower 48 states.

The Tintic Mountains are also a popular area for many local recreationists. Snowmobilers and hunters frequent this area during the fall and winter, but in spring and summer, the mountains are used by hikers, campers, and ORV riders.

APPENDIX 3

SPECIAL STIPULATIONS FOR FLUID MINERAL LEASING

The following special stipulations are in addition to the lease terms and standard stipulations, and are necessary to protect specific resource values on the lease area.

1. In order to protect crucial mule deer winter range, exploration, drilling and other development activity will be allowed only from April 16 to November 30 and not allowed from December 1 to April 15. This limitation does not apply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

2. In order to protect crucial raptor nesting sites, exploration drilling and other development activity within 0.5 mile radius of the sites will be allowed from July 16 to February 28, and not allowed from March 1 through July 15. This limitation does not apply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

3. In order to protect crucial sage grouse breeding complexes, exploration, drilling and other development activity within 0.5 mile radius of the complexes will be allowed from June 16 to March 14, and not allowed from March 15 through June 15. This limitation does not apply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

4. In order to protect visual resources in VRM Class II and III areas, activities in these areas will be located and designed in a way to meet Class II and III management criteria. This limitation does not appply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

5. In order to protect riparian habitat and municipal and non-municipal watershed areas, no occupancy or other surface disturbance will be allowed within 1200 feet of live water. This limitation does not apply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

6. Inorder to protect crucial watershed areas, no occupancy or other surface disturbance will be allowed on slopes in excess of 30 percent. This limitation does not apply to maintenance and operation of producing wells. If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted, if approved in writing by the authorized officer in consultation with the Utah Division of Wildlife Resources.

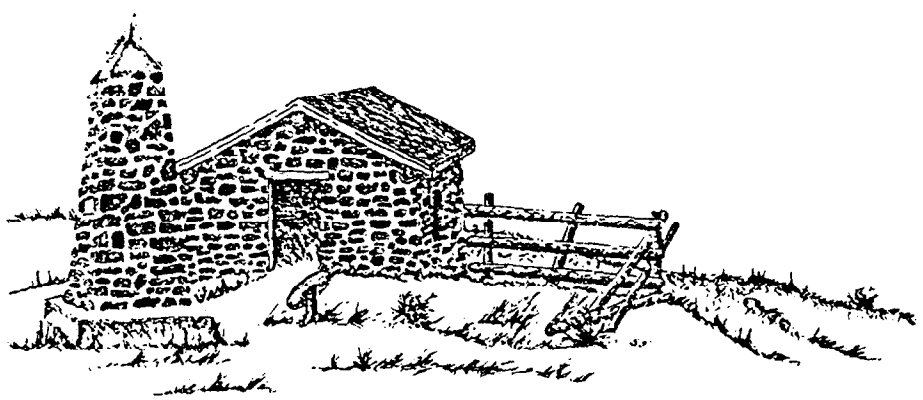
BUREAU OF LAND MANAGEMENT

SALT LAKE DISTRICT

PONY EXPRESS RESOURCE AREA

RANGELAND PROGRAM SUMMARY (RPS)

UPDATE



TOOELE PLANNING AREA

AUGUST 1987

APPENDIX 4

TOOELE PLANNING AREA

RANGELAND PROGRAM SUMMARY UPDATE

The purpose of this Rangeland Program Summary Update is to provide information in the status of decisions affecting the rangeland resources in the Tooele Planning Area which includes public lands in Tooele County and small portions of west Salt Lake, and Box Elder Counties. These public lands total approximately 2,001,166 acres.

The Bureau of Land Management (BLM) completed its Management Framework Plan for public lands in Tooele County in 1984. The plan addressed two issues (identified in Issues 3 and 4) related to rangeland management. The decisions chosen to resolve the issues were part of the balanced use alternative addressed in the environmental impact statement prepared for the rangeland portion of the plan. The objective for the balanced use alternative was as follows:

> Alternative 4: Balanced Use. This alternative resolves issues through a compromise between all grazing uses. Long-term forage increases from land treatments would be shared among grazing animals.

A description of the issues and the status of related decisions follows:

ISSUE 3. Allocate forage based upon carrying capacity and season-of-use for each class of livestock wildlife, wild horses, and watershed protection.

DECISION 3-1. Divide 71 grazing allotments into the three management categories:

Category I. The allotments placed in the I category generally have the greatest grazing management problems, the most substantial conflicts between grazing and other resource uses, and/or the highest potential for improved productivity through proper management with good potential for positive return on investment in proper management.

Category M. The allotments placed in M category are generally in satisfactory condition and have no major conflicts between any other resource uses.

Allotments within this category may have potential for improved productivity through proper management with a good potential for positive return on investments in proper management.

Refer to Decisions 3-3, 4-1, and 12-2 for additional direction on management of M category allotments.

Category C. The allotments placed in C category have generally little or no potential to increase productivity through management and show little potential for positive return on investments in management.

RATIONALE 3-1. It is BLM Range Management policy to categorize allotments to help focus management attention on those areas with the greatest management problems and the greatest potential for improved productivity through proper management.

IMPLEMENTATION STATUS. All allotments have been divided and are being managed as follows:

Category	Number	Percent
Improvement Management (I)	26	37
Maintain Management (M)	22	31
Custodial Management (C)	23	32
	71	100%

DECISION 3-2. The following forage allocation has been made for grazing allotments within the planning area.

Cattle	39,193 AUM's	Mule Deer	29,853 AUM's
Sheep	67,001 AUM's	Elk	470 AUM's
Domestic Horses	125 AUM's	Antelope	1,518 AUM's
Wild Horses	1,560 AUM's	Big Horn	0 AUM's

Season-of-use for each allotment is recommended in the allotment decision. Refer to the allotment decisions and the Rangeland Program Summary. Season-of-use is adjusted to the needs of the rancher's operation and forage consideration.

All forage allocation will be phased in over a five-year period. The allotment decisions will indicate monitoring needs and methods. Monitoring could include some or all of the following studies: (1) actual grazing use, (2) vegetation utilization, (3) trend, (4) climatic analysis. Data will be evaluated to make necessary adjustments where applicable. The monitoring plan was updated and revised February 28, 1984.

RATIONALE 3-2. The recommended forage allocations are based upon the best available data for each of the allotments within the planning area. It is felt that these proposed allocations will allow the maximum use within carrying capacity for each class of livestock, wild horses, and affected wildlife species. These baseline allocations, when coupled with proper season-of-use (Rec. 3-2b), AMP/HMP development (Recs. 3-3 and 6-1), and proposed range improvements (Rec. 4-1) will help improve the overall condition of the vegetative resource. Maintaining this resource in good condition will permit maximum multiple use of the vegetative resource on a sustained yield basis.

Seasons-of-use are estimated to represent the needs of the rancher and the physiological needs of the key plant species. Dates have been set to reduce stress on plants during spring growth periods.

In most cases, grazing use on public land can be improved by development and implementation of AMP's (Rec. 3-3). It is recognized that season-of-use dates may have to be changed somewhat to accommodate grazing systems designed in conjunction with AMP development. It is also acknowledged that rest-rotation and deferred grazing can accomplish many of the same things in improving range condition and reducing conflicts such as changes in season-of-use. It is not intended that these recommended season-of-use changes replace or circumvent the AMP development process, but rather that they be used during the interim period to help improve the vegetative resource on public land.

It is national law and policy to phase such reductions or increase over time with monitoring. It is also good management to move slowly with such changes and to continuously evaluate progress toward management objectives. If during this evaluation of grazing levels for any allotment it becomes apparent tht management objectives are not being met or they have been met earlier than expected, necessary adjustments in livestock numbers, season-of-use or distribution will be made based upon monitoring data.

IMPLEMENTATION STATUS. Attachment B is a listing of all of the tentative range decisions and their status as to who has signed and how many that are still unsigned and an estimation of how many will need actual decisions issued.

It would be my recommendation that no category C allotments be decisioned. Changes in these allotments should follow the recommendations outlined in the tentative range decisions. We would still strive to obtain agreement with the permittees but no decisions would be issued. My main idea behind this would be that if the resource needed the change, as outlined, it should not be in category C.

DECISION 3-3. An AMP will be developed for all category I and M allotments. Category C allotments may have AMP's developed as needed.

The prioritized list of AMP's (see attachment) has been developed as a guideline. The goal is to complete most of the I category within two years and the remaining I and M allotments within five years.

AMP's will be developed first on allotments where the permittees are most cooperative. Cooperation will place their permits in the highest priority.

All funding for range improvements will be spent on allotments with AMP's, unless there is a compelling reason to do otherwise.

Future levels of funding and manpower may require some adjustments in the timely development of the AMP's. Allotments with existing AMP's which may or may not require revisions are placed at the bottom of their particular subgrouping. All category I allotments will have AMP's completed before any of the C category allotments are begun. Cooperative Management Agreements could take the place of AMP's on C allotments.

Development of AMP's will consider all other resources and their respective plans, i.e., HMP's, wild horse and watershed plans. Whenever possible, these plans will be written simultaneously.,

RATIONALE 3-3. It is estimated that grazing use in any grazing allotment can be improved with development of a plan including goals and objectives. Obviously, the intensity and level of detail necessary for development of an adequate AMP will vary from allotment to allotment depending on the nature of the problems and conflicts. Some AMP's will be very short and simple, while others will be detailed and complex.

The priority listing of allotments for AMP's will consider the following list:

1. Allotment Category - I, M, C

2. Allotments with cooperative permittees.

3. Allotments with management reductions of numbers.

4. Allotments in a designated monitoring situation.

5. Allotments that require AMP's for needed land treatments.

6. Workload for range conservationists assigned to the allotments.

APPENDIX 4

IMPLEMENTATION STATUS. This decision deals with AMP's for the MFP area. The priority listing has been followed and the following list indicates the status of the AMP process and the target year for the rest of the allotments.

An AMP will be developed for all category I and M allotments. Category C allotments may have AMP's developed as needed.

The prioritized list of AMP's (see attachment) has been developed as a guideline. The goal is to complete most of the I category within 2 years and the remaining I and M allotments within 5 years. Thsi goal has not been met and I's should have AMP's by 1991.

All funding for range improvements will be spent on allotments with AMP's, unless there is a compelling reason to do otherwise.

Future levels of funding and manpower may require some adjustment in the timely development of the AMP's. Allotments with existing AMP's which may or may not require revisions are placed at the bottom of their particular subgrouping. All category I allotments will have AMP's completed before any of the C category allotments are begun. Cooperative Management Agreements could take the place of AMP's on C allotments.

Development of AMP's will consider all other resources and their respective plans, i.e., HPM's, wild horse and watershed plans. Whenever possible, these plans will be written simultaneously.

APPENDIX 4

Allotment Management Plan
Priorities
for Category I Development

Priority	Allotment
1	Skunk Ridge - Completed '84
2	Broad Canyon - '86
3	South Clover - Completed '85
4	West Ibapah - Transferred to Ely, NV
5	South Skull Valley - Completed '85
6	Onaqui Mountain East - Completed '85
7	Onaqui Mountain West - Completed '85
8	Skull Valley - Completed '85
9	Ophir - '89
10	Ibapah - Completed '85
11	Ochre - '87
12	Government Creek - '86 Draft
13	Saint John - '88 Draft
14	Mercur Canyon/West Ophir - '89
15	Hill Spring - Completed '85
16	Overland Canyon - '88
17	Clifton Flat - '89
18	Indian Springs - '87
19	Aragonite - '88
20	North Cedar Mountain - '90
21	North Puddle - '90
22	Soldier Canyon - '91
23	Rush Lake - '89
24	Salt Mountain - '86 Draft

Existing AMP's equal West Lookout, Cottonwood East, Cottonwood West, Deep Creek and Pinyon Flat.

Using this schedule, 18 of the 27 Category I allotments will be completed by the end of 1987. M allotments (20 in number) would not be completed until after 1991.

MONITORING. There are 18 allotments that are being monitored for increase or decrease preference.

These allotments are:

Category I

Aragonite
Ibapah
Mercur Canyon/West Ophir
North Cedar Mountains
North Puddle Valley
Onaqui Mountain East
Ophir
Saint John
Skull Valley
Soldier Canyon
South Skull Valley
West Ibapah

Category M

Black Rock
Boulter Rock
Fandangle
German Valley
North Grassy
Triangle

Trend studies have been established on all of these allotments. Trend on all I & M's has been established with the exception of Fivemile Pass and Soldier Canyon. Fivemile is scheduled for 1989. Soldier Canyon is to be established by the Wildlife Biologist.

All of the following areas are being monitored.

- Vegetation
- Grazing Animals
- Watershed
- Weather

See forage use decisions on attachments C, D, and E.

APPROPRIATIONS. The development of the grazing management plan for the Tooele EIS area will be dependent upon adequate funding for manpower and projects. Since the completion date of the EIS, the AMP schedule has been revised. Up to this point (Jan. '87), monitoring studies have been completed on schedule. Also proposed decisions have become signed agreements with the exception of some C allotments.

DECISION 3-4.

Cedar Mountain. The Cedar Mountain-Dugway area will be designated as the Cedar Mountain Wild Horse Area. Essential components of this decision include:

1. Retention of the area in Federal ownership and intensive management (Rec. 1-1a).

2. Acquisition of non-Federal inholdings within the protection area (Rec. 1-1b), and

3. Development of a specific management plan for the wild horse herd by the first of September, 1984.

4. Limitation of the herd size to approximately 85 (1,020 AUM's) animals, including those that range on the Dugway Proving Grounds.

Onaqui Mountain. The Onaqui Mountain wild horses would be designated as the Onaqui Mountain Wild Horse Area. Essential components are the same as 1 and 2 above and the following.

1. Retention of the area in Federal ownership and intensive management (Rec. 1-1a).

2. Acquisition of non-Federal inholdings within the protection area (Rec. 1-1b), and

3. Development of a herd management plan by October 1, 1985.

4. Limitation of the herd size to 45 animals (540 AUM's).

RATIONALE 3-4. The Cedar Mountain and Onaqui areas are traditional wild horse use areas. BLM is required by the Wild Horse and Burro Act to properly manage and maintain wild horse herds.

Retention of the area in Federal ownership and acquisition of non-Federal inholdings will enhance management of the wild horse herd and will be consistent with the overall management scheme for the area.

APPENDIX 4

Development of a management plan will help insure proper utilization of the area by wild horses at a level sufficient to insure their continued existence, but within overall carrying capacity for horses, livestock and wildlife. Coordination of the plan with other plans and users of the area will help keep conflicts with other uses to a minimum. Frequent evaluation of the plan will insure that goals and objetives are being met or that necessary adjustments are made in the plan.

IMPLEMENTATION STATUS. Wild Horses. There have been two herd management plans developed since May of 1984. These plans cover:

- Cedar Mountain Herd
- Onaqui Mountain Herd

There have been horse removals on Cedar Mountain during 1984, '85, '86, and one planned for 1987.

Numbers Removed:	Cedar Mountain	
1984	30	
1985	81	
1986	73	
1987	65	(Planned Removal)
	Onaqui Mountain	
1987	20	Planned to be removed.

Numbers are still above planned herd unit sizes.

	Present Numbers	Planned Numbers
Cedar Mountian	159	85
Onaqui	78	45

These numbers were taken during the 1986 all aerial inventory flights.

ISSUE 4 - RANGELAND IMPROVEMENTS.

DECISION 4-1. Rangeland improvements will be planned and implemented according to the Salt Lake District Manual Supplement 1732. Funding for new rangeland improvements will be allocated on allotments with approved activity plans, i.e. AMP's, HMP's, wild horse and watershed plans.

All rangeland improvements will be constructed in accordance with BLM standards and the following.:

STANDARD DESIGN, CONSTRUCTION AND OPERATION MEASURES. The following protective measures will be required as standard procedures:

1. No permanent trails or roads will be constructed to project sites. Existing access will be used. Soil disturbance at all project sites will be held to a minimum.

2. No vegetaton clearing on project sites will be allowed except as authorized by the District Manager.

3. If necessary, disturbed areas will be reseeded to provide ground cover and minimize soil losses.

4. Site factors such as slope, precipitaton, exposure, soil depth, seeding suitability and erosion hazard will be the criteria used in selecting sites for land treatments.

5. A survey of potential habitat for threatened or endangered species (including an sensitive species under consideration for formal designation as threatened or endangered) will be made prior to taking any action that could affect these species. Should BLM determine that there might be an effect on listed species, formal consultation with the Fish and Wildlife Service (FWS) will be initiated.

6. Cultural surveys and clearances will be required for all project sites (Decision 9, Cultural) prior to new construction. BLM has entered into a memorandum of understanding with the Utah State Historic Preservation Office regarding protection of cultural resources.

7. An environmental assessment (EA) will be required prior to ground-disturbing actions if significant modification of actions descibed in the EIS occurs or if resource information becomes available that indicates a need for further examination. The EA will be written to conform with BLM policy, would be site specific and would supplement the EIS.

8. According to policy, BLM will conduct a cost/benefit analysis of all proposed rangeland improvement projects.

9. Land treatments will be designed to supply cover, runways and edge effect necessary for wildlife use.

10. Land treatments will be contoured into the terrain in mosaic patterns compatible with the visual resource management objectives of the area.

11. Seed mixtures may contain grasses, forbs and shrubs as recommended by range conservationists and wildlife biologists from the BLM resource area.

12. On allotments receiving land treatment, grazing by livestock will not be allowed until vegetation becomes well established. Two growing seasons with no livestock grazing will be required for sprayed areas. Rest for one full year plus the following growing season will be required for burned, plowed, chained, or seeded area.

13. All rangeland improvements will be periodically inspected by BLM. Maintenance of improvements for livestock will be performed as needed by the livestock operators. Cooperative agreements shall be required before BLM authorizes funding for range (4322, 7121, 8100) improvements.

14. BLM policy on water development wildlife will be complied with regardless of the source of funding for the development.

15. Fence construction will follow the guidelines in BLM Manual 1737 to allow for safe wildlife passage on big game ranges.

16. The Area Manager will be notified if paleontological remains are encountered during any land treatment or construction activities. Recovery, protection and preservation measures will be implemented, as necessary, to mitigate adverse impacts.

17. Water developments, spring areas, or other important riparian areas that are susceptible to livestock trampling shall be fenced.

18. Prior to the development of projects, provisions of the Memorandum of Understanding of April 1, 1979, between the BLM, Forest Service (FS), UDWR and Soil Conservation Service (SCS) and the master Memorandum of Understanding between BLM and UDWR of June 1979 will be met. These memoranda provide for coordination in the development and establishment of guidelines for buffer zones for water and other developments.

RATIONALE 4-1. Rangeland improvements are a proven method of enhancing management and use of public lands. It is estimated that they will provide the greatest positive return on investment.

Other specific stipulations have been included to help insure that rangeland improvements are designed to provide multiple use benefits and to reduce impacts to and conflicts with valuable resources and resource uses.

IMPLEMENTATION STATUS. All projects are being planned as prescribed. A recent range improvment evaluation has been completed by the Utah State Office to ensure compliance.

For additional information please contact:

Area Manager
Pony Express Resource Area
2370 South 2300 West
Salt Lake City, Utah 84119
Phone (801) 524-5348

APPENDIX 4

Table 3-1

Management of Categories of Allotments

I	M	C
Improve (I): This category will receive first priority for rangeland improvements as funding becomes available. Allotments have major resource conflicts or grazing problems. Potential for improved productivity and positive return from investment exists. Permittees will be encouraged to invest in rangeland projects.	Maintain (M): No special management needs noted. Allotments are in satisfactory condition and no major conflicts are evident. Permittees will be encouraged to invest in rangeland improvement projects.	Custodial (C): Allotments have limited or no potential for improvement or return on investment. Present management is satisfactory or the most logical practice for the resources involved. Permittees will be encouraged to invest in rangeland improvement projects.
ragonite	Allen Basin/Wanless	Ajax
road Canyon	Black Rock	Cedar Fort
lifton	Boulter Wash	Chimney Rock/Tenmile
ottonwood East	Deseret/Rush Valley	Dead Man Creek
ottonwood West	Dutch Mountain	Elberta West
eep Creek	East Grassy	Faust Rest Area
overnment Creek	East Onaqui RCA	Lakeside
ill Spring	Elephant Knoll	Lost Creek
bapah	Fandangle	Middle Canyon
ndian Springs	Fivemile Pass	Oquirrh Mountain North
ercur Canyon/West Ophir	German Valley	Pole Canyon
orth Cedar Mountain	Grantsville SCS	Roadside
orth Puddle	North Grassy	Stansbury/Broad Canyon
chre	Riverbed (Stewart)	Stansbury Island Central
naqui Mountain East	Six Mile	Stansbury Island NE
naqui Mountain West	South Deseret	Stansbury Island NW
phir	Spotted Fawn	Stansbury Island SE
verland	Toplift	Stansbury Island South
inyon Flat	Triangle	Stansbury Mountain
ush Lake	West Grassy	Stockton
aint John		Timpie/NW Grantsville
kull Valley		Vernon
kunk Ridge		West Canyon
oldier Canyon		
outh Clover		
outh Skull Valley		
est Ibapah		
est Lookout Pass		

APPENDIX 4

TOOELE COUNTY DECISIONS

ALLOTMENT	SIGNED	UNSIGNED	DECISIONED
Category I			
Aragonite	X		
Broad Canyon	X		
Clifton	X		
Cottonwood East	X		
Cottonwood West	X		
Deep Creek	X		
Government Creek	X		
Hill Spring	X		
Ibapah	X		
Indian Springs	X		
Mercur Canyon/West Ophir	X		
North Cedar Mountain	X		
North Puddle	X		
Ochre	X		
Onaqui Mountain East	X		
Onaqui Mountain West	X		
Ophir	X		
Overland	X		
Pinyon Flat	X		
Rush Lake	X		
Saint John	X		
Skull Valley	X		
Skunk Ridge	X		
Soldier Canyon	X		
South Clover	X		
South Skull Valley	X		
West Ibapah	X		
West Lookout Pass	X		
Category M			
Allen Basin/Wanless	X		
Black Rock	X		
Boulter Wash	X		
Deseret/Rush Valley	X		
Dutch Mountain	X		
East Grassy	X		
East Onaqui RCA	X		
Elephant Knoll	X		
Fandangle	X		
Fivemile Pass	X		
German Valley	X		
Grantsville SCS	X		
North Grassy	X		

APPENDIX 4

TOOELE COUNTY DECISIONS

ALLOTMENT	SIGNED	UNSIGNED	DECISIONED
Category M (continued)			
Riverbed (Stewart)	X		
Six Mile	X		
South Deseret	X		
Spotted Fawn	X		
Toplift	X		
Triangle	X		
West Grassy	X		
Category C - Signed Decisions Not Required			
Ajax	X		
Cedar Fort	X		
Chimney Rock/Tenmile	X		
Dead Man Creek	X		
Elberta West	X		
Faust Rest Area	X		
Lakeside	X		
Lost Creek	X		
Middle Canyon	X		
Oquirrh Mountain North	X		
Pole Canyon	X		
Roadside	X		
Stansbury/Broad Canyon	X		
Stansbury Island Central		X	
Stansbury Island NE		X	
Stansbury Island NW		X	
Stansbury Island SE	X		
Stansbury Island South		X	
Stansbury Mountain		X	
Stockton	X		
Timpie/NW Grantsville		X	
Vernon	X		
West Canyon	X		

FORAGE USE DECISIONS
CATEGORY I ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	ALLOTMENT ACTION: MONITOR 5 YEARS	ALLOTMENT ACTION: REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	PRIORITY FOR AMP (1-21)	MANAGEMENT CATEGORY
Aragonite		x		1,582	1,582	0	19	I
Broad Canyon			x	995	543	452	2	I
Clifton	x			1,894	1,894	0	17	I
Cottonwood East	x			562	562	0	**	I
Cottonwood West	x			848	848	0	**	I
Deep Creek	x			2,046	2,046	0	**	I
Government Creek	X			3,745	3,745	0	12	I
Hill Creek	x			144	144	0	15	I
Ibapah		x		2,887	2,887	0	10	I
Indian Springs	x			2,220	2,220	0	18	I
Mercur Canyon/West Ophir		x		1,598	1,598	0	14	I
North Cedar Mountain		x		5,916	5,916	0	20	I
North Puddle Valley		x		1,925	1,925	0	21	I
Ochre	x			1,472	1,472	0	11	I
Onaqui Mountain East		x		1,757	1,757	0	6	I
Onaqui Mountain West			x	1,118	725	393*	7	I
Ophir		x		1,426	1,426	0	9	I
Overland Canyon	x			2,396	2,396	0	16	I
Pinyon Flat	x			2,153	2,153	0	**	I
Rush Lake	x			182	182	0	23	I
Saint John		x		406	406	0	13	I
Skull Valley		x		18,887	18,887	0	8	I
Skunk Ridge			x	4,680	3,650	1,030	1	I
Soldier Canyon		x		160	160	0	22	I
South Clover			x	1,062	754	308	3	I
South Skull Valley		x		10,742	10,742	0	5	I
West Ibapah		x		2,522	2,522	0	4	I
West Lookout Pass	x			1,867	1,867	0	**	I

* Reduction will be mitigated with increased use in the East Onaqui RCA Allotment.

** This allotment is being managed under an existing Allotment Management Plan.

FORAGE USE DECISIONS
CATEGORY M ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	ALLOTMENT ACTION: MONITOR 5 YEARS	ALLOTMENT ACTION: REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	EXISTING AMPs **	MANAGEMENT CATEGORY
Allen Basin/Wanless	x			575	575	0		M
Black Rock		x		3,320	3,320	0		M
Boulter Wash		x		4,330	2,561	1,769*		M
Deseret/Rush Valley	x			1,400	1,400	0	x	M
Dutch Mountain	x			1,746	1,746	0	x	M
East Grassy	x			1,558	1,558	0	x	M
East Onaqui RCA	x			770	770	0		M
Elephant Knoll	x			1,925	1,925	0		M
Fandangle		x		2,900	2,900	0		M
Fivemile Pass	x			775	775	0		M
German Valley		x		2,942	1,937	0		M
Grantsville SCS	x			594	594	0		M
North Grassy	x	x		1,350	1,350	0		M
Riverbed	x			667	667	0		M
Six Mile	x			260	286	0		M
South Deseret	x			166	166	0		M
Spotted Fawn	x			1,580	1,580	0	x	M
Toplift	x			4,002	4,002	0		M
Triangle		x		1,470	1,470	0		M
West Grassy	x			4,140	3,440	0	x	M

* Reduction is the result of sheep to cattle conversion.

** AMPs will be prepared during 1986-1988 for those category M allotments without existing AMPs after category I allotment AMPs are completed.

Attachment D

FORAGE USE DECISIONS
CATEGORY C ALLOTMENTS

Allotment	ALLOTMENT ACTION: NO CHANGE	MONITOR 5 YEARS	REDUCE GRAZING PREFERENCE	PREVIOUS GRAZING PREFERENCE (AUMs)	PROPOSED GRAZING PREFERENCE (AUMs)	AUM REDUCTION	EXISTING AMPs *	MANAGEMENT CATEGORY
Ajax	x			*160*	*160*	*0*		*C*
Cedar Fort	x			*72*	*72*	*0*		*C*
Chimney Rock/Ten Mile	x			*674*	*6741*	*0*		*C*
Dead Man Creek	x			*90*	*90*	*0*	x	*C*
Elberta West	x			*320*	*320*	*0*	x	*C*
Faust Rest Area	x			*4*	*4*	*0*	x	*C*
Lakeside	x			*2,389*	*2,389*	*0*		*C*
Lost Creek	x			*180*	*180*	*0*		*C*
Middle Canyon	x			*420*	*420*	*0*		*C*
Oquirrh Mountain North	x			*250*	*250*	*0*		*C*
Pole Canyon	x			*320*	*320*	*0*		*C*
Roadside	x			*45*	*45*	*0*		*C*
Stansbury/Broad Canyon				*401*	*401*	*0*		*C*
Stansbury/Island Central	x			*516*	*516*	*0*		*C*
Stansbury Island NE	x			*130*	*130*	*0*		*C*
Stansbury Island NW	x			*271*	*271*	*0*		*C*
Stansbury Island SE	x			*93*	*93*	*0*		*C*
Stansbury Island South	x			*422*	*422*	*0*		*C*
Stansbury Mountain	x			*646*	*646*	*0*	x	*C*
Stockton	x			*338*	*338*	*0*		*C*
Timpie/NW Grantsville	x			*417*	*417*	*0*		*C*
[illegible]on	x			*178*	*178*	*0*	x	*C*
[illegible]st Canyon	x			*142*	*142*	*0*		*C*

New AMPs will be prepared as needed for category C allotments after AMPs are completed for category I and M allotments.

Attachment E

APPENDIX 5

Off-Road Vehicle Designations

AREAS	ALTERNATIVE 1 Open	ALTERNATIVE 1 Limited (Acres)	ALTERNATIVE 1 Closed	ALTERNATIVE 2 Open	ALTERNATIVE 2 Limited (Acres)	ALTERNATIVE 2 Closed	ALTERNATIVE 3 Open	ALTERNATIVE 3 Limited (Acres)	ALTERNATIVE 3 Closed	ALTERNATIVE 4 Open	ALTERNATIVE 4 Limited (Acres)	ALTERNATIVE 4 Closed
Utah County												
Mule Deer Crucial Winter Range	280				280[1]		280				280[2]	
Elk Crucial Winter Range	1,920				1,920[1]		1,920				1,920[2]	
Sage Grouse Strutting Grounds (.5 mi. radius)	340				340[1]		340				340[2]	
Riparian/Wetland (1200 feet)					1,447[3]		4,662				1,447[4]	
Tooele County												
Mule Deer Crucial Winter Range	22,511	23,236[6]			45,747[7]		45,747				45,747[8]	
Mule Deer Fawning	1,070				1,070[1]		1,070				1,070[2]	
Riparian Wetland Areas		23,897[9]			43,408[10]			43,408[10]				43,408
Bald Eagle Roosts	13,575				13,575[1]			13,575[2]				13,575
Sage Grouse Strutting Grounds (.5 mi.)	10,314				10,314[1]		10,314				10,314[2]	
Antelope Habitat (Puddle Valley)		192,854[11]			192,854[11]		192,854				192,854[11]	
Elk Calving		652[5]			652[5]		652				652[5]	
Critical Watershed		34,904[5]			34,904[5]			34,904[5]				34,904
Simpson Springs Campground		40[5]			40[5]		40				40[5]	
No. Deep Creek Mountains			21,860		28,260[12]		28,260					28,260
Stansbury Mountains			10,000		10,000[2]		10,000					10,000
Antelope Fawning	8,285	1,470[1]			9,755[1]		9,755				9,755[2]	
Mule Deer Crucial Summer Range	1,540				1,540[1]		1,540				1,540[2]	
GRAND TOTALS	1,725,655	275,191	31,860	1,669,267	363,439	0	1,957,656	75,050	0	1,669,287	245,899	117,520

[1] Seasonal limitation for organized, permitted ORV events.
[2] Seasonal limitation for all ORV activity.
[3] No organized, permitted ORV events within 1,200 feet.
[4] No ORV activity within 1,200 feet.
[5] Limited to existing roads and trails.
[6] Stansbury Mountains: Limited to existing roads and trails seasonally.
Onaqui Mountains: Limited to existing roads and trails yearlong.
[7] Same as 6, plus closed seasonally to organized permitted events in Deep Creek Mountains.
[8] Same as 6, plus closed seasonally to all ORV activity in Deep Creek Mountains.
[9] Rush Lake and Horseshoe Springs: Closed seasonally.
[10] Same as 9, plus no activity within 1,200 feet of other riparian areas.
[11] Closed to organized, permitted events year-round.
[12] Limited to designated roads and trails.

APPENDIX 6A

FORAGE DISTRIBUTION BY ALLOTMENT

ALTERNATIVE 1

Allotment	Livestock Use (AUM's) Cattle	Sheep	Total	Big Game Use (AUM's) Deer	Elk	Moose	TOTAL
Cherry Creek	--	0 Non-use	0 Non-use	23	14	10	47
Scofield	--	6	6	1	--	--	1
West Mountain	147	726	873	103	--	--	103
Lake Mountain NE	--	40	40	29			29
Lake Mountain Davis	--	271	271	16			16
Lake Mountain Smith	--	117	117	19			19
Lake Mountain Monte Vista	320	--	320	25			25
Chipman	--	245	245	19			19
Iso-tract Willes	6	--	6	--			
Iso-tract Cook	12	--	12	--			
Iso-tract Ludlow	--	0 Non-use	0 Non-use	--			
Genola Hill	0 Non-use	--	0 Non-use	--			
TOTAL	485	1,405	1,890	235	14	10	259

GRAND TOTAL - 2,149 AUM's

APPENDIX 6B

FORAGE DISTRIBUTION BY ALLOTMENT

ALTERNATIVE 2

Allotment	Livestock Use (AUM's) Cattle	Sheep	Total	Big Game Use (AUM's) Deer	Elk	Moose	TOTAL
Cherry Creek			*	23	14	50	87
Scofield			*	1			1
West Mountain	178	710	888	103			103
Lake Mountain NE	--	445	445	29			29
Lake Mountain Davis	--	348	348	16			16
Lake Mountain Smith	--	53	53	19			19
Lake Mountain Monte Vista	317	--	317	25			25
Chipman	--	276	276	19			19
Iso-tract Willes			*				
Iso-tract Cook			*				
Iso-tract Ludlow			*				
Genola Hill			*				
TOTAL	495	1,832	2,327	236	14	50	300

GRAND TOTAL - 2,627 AUM's

*These grazing allotments would be eliminated under this alternative.

APPENDIX 6C

FORAGE DISTRIBUTION BY ALLOTMENT

ALTERNATIVE 3

Allotment	Livestock Use (AUM's) Cattle	Sheep	Total	Big Game Use (AUM's) Deer	Elk	Moose	TOTAL
Cherry Creek			*	23	14	10	47
Scofield			*	1			1
West Mountain	178	710	888	103			103
Lake Mountain NE	--	445	445	29			29
Lake Mountain Davis	--	348	348	16			16
Lake Mountain Smith	--	41	41*	19			19
Lake Mountain Monte Vista	317	--	317	25			25
Chipman	--	276	276	19			19
Iso-tract Willes	6		6				
Iso-tract Cook	12		12				
Iso-tract Ludlow			*				
Genola Hill			*				
TOTAL	513	1,820	2,333	235	14	10	259

GRAND TOTAL - 2,595 AUMs

*Part or all of these grazing allotments would be disposed under this alternative.

APPENDIX 6D

FORAGE DISTRIBUTION BY ALLOTMENT

ALTERNATIVE 4

Allotment	Livestock Use (AUM's) Cattle	Sheep	Total	Big Game Use (AUM's) Deer	Elk	Moose	TOTAL
Cherry Creek			*	23	14	50	87
Scofield			*	1			1
West Mountain	178	726	904	103			103
Lake Mountain NE	--	445	445	29			29
Lake Mountain Davis	--	348	348	16			16
Lake Mountain Smith	--	117	117	19			19
Lake Mountain Monte Vista	320	--	320	25			25
Chipman	--	276	276	19			19
Iso-tract Willes			*				
Iso-tract Cook			*				
Iso-tract Ludlow			*				
Genola Hill			*				
TOTAL	513	1,912	2,410	236	14	50	300

GRAND TOTAL - 2,710 AUMs

*These grazing allotments would be eliminated under this alternative.

APPENDIX 7

Fluid Mineral Leasing Categories

AREAS	Cat. 2 Reference Code*	Alternative 1				Alternative 2			
		Cat. 1	Cat. 2	Cat. 3	Cat. 4	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Utah County									
Mule Deer Crucial Winter Range	1		2,320				2,320		
Elk Crucial Winter Range	2	5,549		320			5,860		
Sage Grouse Strutting Grounds (.5 mi.)	3	580					580		
Raptor Nest Sites (.5 mi.)	4	2,120					2,120		
VRM Class III	5	12,440					12,440		
Riparian/Wetland Habitat (1200 feet)	6		2,880				5,347	6,228	
Watershed	7		5,347	320				320	0
Tooele County									
Mule Deer Crucial Winter Range	8	20,390	41,643				62,033		
Elk Crucial Winter Range	9	6,930					6,930		
Elk Calving	10		825				825		
Pronghorn Fawning	11		9,965				9,965		
Riparian/Wetland Areas (1200 feet)	6	120	44,168				44,288		
Sage Grouse Strutting Grounds (.5 mi.)	12		10,474				16,320		
Mule Deer Fawning	13	3,530					3,530		
Crucial Deer Summer Range	14	1,660					1,660		
Bald Eagle Roosts	15,16		15,188				15,188		
Raptor Nest Sites (.5 mi.)	17	77,180					77,180		
VRM Class II	18	27,780	1,440	14,460	26,840		8,720	61,540	
VRM Class III	5	94,600	9,800	9,820	6,940		121,160		
Deep Creek Mountains without Wilderness	14,17,18			7,001	14,997			28,260	
Stansbury Mountains without Wilderness	14,17,18			4,307	5,902			10,000	
Bonneville Salt Flats	18			12,153	18,529		12,153	18,529	
Simpson Springs Campground	6			1,464	709			2,173	
Danger Cave State Park				560		560			
Wendover Vicinity				2,155		1,831		324	
Terra Vicinity				360		80		280	
Middle Canyon				112				112	
Ophir Canyon				124				124	
GRAND TOTALS		1,872,011	132,810	28,637	40,137	1,898,075	143,492	32,028	0

*Applies only to lands designated in Category 2 under the Alternatives.

APPENDIX 7 (Continued)

Fluid Mineral Leasing Categories

AREAS	Cat. 2 Reference Code	Alternative 3				Alternative 4			
		Cat. 1	Cat. 2	Cat. 3	Cat. 4	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Utah County									
Mule Deer Crucial Winter Range	1	2,320					2,320		
Elk Crucial Winter Range	2	5,860					5,860		
Sage Grouse Strutting Grounds (.5 mi.)	3	580					580		
Raptor Nest Sites (.5 mi.)	4	2,120					2,120		
VRM Class III	5	12,440					12,440		
Riparian/Water Habitat (400 yards)	6		11,575				5,347	6,228	
Watershed	7		320					320	0
Tooele County									
Mule Deer Crucial Winter Range	8		41,643				62,033		
Elk Crucial Winter Range	9	6,930					6,930		
Elk Calving	10		825				825		
Pronghorn Fawning	11		9,965				9,965		
Riparian/Wetland Areas (400 yards)	6	120	44,168				44,288		
Sage Grouse Strutting Grounds (.5 mi.)	12		10,474				16,320		
Mule Deer Fawning	13	3,530					3,530		
Crucial Mule Deer Summer Range	14	1,660					1,660		
Bald Eagle Roosts	15,16		15,188				15,188		
Raptor Nest Sites (.5 mi.)	17	77,180					77,180		
VRM Class II	18							70,620	
VRM Class III	5						121,160		
Deep Creek Mountains without Wilderness	14,17,18		28,260					28,260	
Stansbury Mountains without Wilderness	14,17,18		10,209					10,209	
Bonneville Salt Flats	18		12,153	18,529			12,153	18,529	
Simpson Springs Campground	6		2,173					2,173	
Danger Cave State Park		560						560	
Wendover Vicinity		2,155						2,155	
Terra Vicinity		360						360	
Middle Canyon				112				112	
Ophir Canyon				124				124	
GRAND TOTALS		1,905,110	149,720	18,765	0	1,718,845	238,717	116,033	0

APPENDIX 7 (Continued)

Fluid Mineral Leasing Categories

REFERENCE CODES

(1) No activity from December 1 to April 15.
(2) No activity from November 1 to April 15.
(3) No activity within .5 mile from March 15 to June 30.
(4) No activity within .5 mile from February 1 to July 15.
(5) No degradation of scenic values.
(6) No activity within 1,200 feet of water.
(7) Restriction on slope.
(8) Alternatives 1 & 4 - No activity from November 1 to April 30.
Alternatives 2 & 3 - No activity from December 1 to April 30.
(9) No activity from December 1 to April 30.
(10) No activity from May 1 to June 30.
(11) No activity from May 1 to July 31.
(12) No activity from March 1 to April 30.
(13) No activity from May 16 to July 15.
(14) No activity from May 16 to October 31.
(15) No activity from November 1 to March 31.
(16) No activity from November 1 to March 31. Oquirrh Mountains only - No occupancy on slopes greater than 30%.
(17) No activity February 1 to August 15.
(18) No degradation of scenic values.

Appendix 8

ACEC Evaluation Process

Introduction

Areas of Critical Environmental Concern (ACECs) are areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes or to protect life and safety from natural hazards.

An area or resource must meet two criteria, relevance and importance, in order to qualify as an ACEC. The relevance criterion is evaluated by determining whether special management attention would be required in order to protect an area or resource from receiving irreparable damage that would otherwise occur in spite of existing management prescriptions. The second criterion, importance, is evaluated by determining whether an area or resource has special worth, meaning, distinctiveness, or cause for concern when compared to any like or similar resource elsewhere.

The Pony Express Management Situation Analysis evaluated 24 areas or resources for possible ACEC values. These are identified in Table A-1.

Three areas were determined to have sufficiently relevant and important resource values to warrant designating them as ACECs. Two of the three are wilderness study areas and will only be designated as ACECs if they are not designated wilderness. It was also determined that the Bonneville Salt Flats ACEC should be continued. It is included as a feature common to all alternatives.

All 24 areas that were evaluated for possible ACEC values are briefly discussed below. The existing Bonneville Salt Flats ACEC is also described below.

Bald Eagle Roosting Areas

Bald eagles, a Federally listed endangered species, are winter residents of the PERA. They are found in the area from late October through March. A large bald eagle population is dispersed throughout Tooele County. Bald eagles in Utah County are found in three principal locations; Diamond Fork Canyon, lower Nebo Creek, and near the town of Elberta. Preferred roosting sites are large trees with long horizontal branches. Roosting sites are widely dispersed. All known heavy-use roosting sites are on private land.

The bald eagle is of national importance. The relevance criterion is not met for any roosting areas since none is known to be on public land and roosting sites are dispersed. For these reasons, these sites will not be considered further.

Cedar Mountains

The Cedars are presently being studied for possible wilderness designation. The basic values of the Cedars are remoteness and steep, angular ridges and slopes. The features and resources are found quite commonly in other ranges in the west desert area.

The Cedar Mountains, other than the White Rocks area, do not meet either the importance or the relevance criterion for ACEC designation.

The Cedar Mountains will not be further considered.

Cultural Resources Areas (4)

Four areas in the PERA contain concentrations of archaeological sites representing use from Archaic through early historic cultural periods. The amount of archaeological material requires that these areas be managed to preserve them so that valuable data is not lost before it can be interpreted.

The importance criterion is met. The relevance criterion is not clearly met but there is a strong case for taking definitive management steps to provide protection of the sites.

The sites are clearly of high value. The question is: Can ACEC designations offer greater security than is offered by existing management options? ACEC designations would draw increased awareness of the archaeological sites. Remoteness would make patrolling for disturbance and vandalism ineffective.

These areas will not be considered further.

Deep Creek Mountains

The Deep Creek Mountains are a unique "island ecosystem" within the Basin and Range Province. The special worth of these mountains rests on many outstanding features, including scenic, recreation, watershed, bristlecone pine, cultural/historical values, and bighorn sheep. These mountains are being evaluated for possible inclusion in the National Wilderness System.

The unique character of the Deep Creek Mountains compared to all others in the PERA makes them of regional importance. The extensive num-

APPENDIX 8

TABLE A-1

PONY EXPRESS RESOURCE AREA

AREAS CONSIDERED FOR ACEC DESIGNATION

NAME	Resources Protected	Carried into RMP
Bald Eagle Roosting Areas	T&E Species	No
Cedar Mountain	Scenery	No
Cultural Resources Areas (4)[1]	Archaeological Sites	No
Deep Creek Mountains	Scenery, Watershed, Bristlecone Pine, Unusual Geology, Bighorn Sheep, Cultural and Historic Values	Yes
Eagle Nest Mine	Historic Mining Site	No
Elk Calving Grounds	Elk Calving Habitat	No
Elk Crucial Winter Range	Elk Range	No
Ferruginous Hawk Nest Sites	Candidate Specie for T&E Listing	No
Gold Hill	Historic Mining Community	No
Historic Peregrine Falcon Eyries	T&E Species	No
Historic Pony Express Trail	Historic Trail	No
Horseshoe Springs	Riparian, Wetland Values, Waterfowl, Recreation, Fishery	Yes
Lake Mountain	Paleontological Values	No
Mule Deer Crucial Summer Range	Deer Range	No

TABLE A-1 (Continued)

PONY EXPRESS RESOURCE AREA

AREAS CONSIDERED FOR ACEC DESIGNATION

NAME	Resources Protected	Carried into RMP
Mule Deer Crucial Winter Range	Deer Range	No
Mule Deer Fawning Areas	Deer Fawning Habitat	No
North Stansbury Mountains	Watershed, Scenery, Vegetative diversity, Geology	Yes
Raptor Nest Sites (Other than Ferruginous Hawk)	Raptor Nests	No
Riparian/Wetland Areas (other than Horseshoe Springs)	Riparian/Wetland Values	No
Sage Grouse Breeding Complexes	Sage Grouse Habitat	No
Wild Horse Ranges	Wild Horse Range	No

[1]The protection of archaeological values requires that these cultural sites not be identified. Information related to ACEC evaluations is on file at the Salt Lake District Office.

ber of sensitive resources present satisfy the relevance criterion and justify the need for special management to protect against irreparable damage.

For these reasons the Deep Creek Mountains are recommended for ACEC designation.

Eagle Nest Mine

The Eagle Nest Mine is located at the 8,000 foot level on the east slope of the Deep Creek Mountains. This is the most extensively developed area in the Willow Springs Mining District, with 11 adits and 4 shafts. The mine is not presently operated but has been recently and may well be again. The mine is on private land.

Importance and relevence criteria are not met because of the lack of cultural/historical remnants on public land.

For this reason the Eagle Nest Mine will not be considered further.

Elk Calving Grounds

Cow elk generally congregate early in the calving season at higher elevation areas. Calving areas are used with high fidelity annually. The Oquirrh Mountain elk, calf in or near the heads of major drainages where water and forage meet the gestation and lactation needs of the animals. The majority of such lands are in private ownership. Public lands are mainly in lower elevations. Some scattered parcels of public land are within better quality elk-calving areas. The Heaston Unit elk herd is marginally important on a regional basis because of the economic and aesthetic value of elk wherever they are found. The economic and the aesthetic value of the Heaston herd will be suppressed until access to the herd improves, allowing DWR to more effectively manage the herd.

Neither the importance nor the relevance criterion is clearly met. BLM administered lands that serve as elk calving grounds are so limited in the Oquirrhs that it would not be possible to influence the future of the elk herd through ACEC designations.

These habitats will not be considered further for recommendation as an ACEC because existing management practices would be sufficient to protect the habitat.

Elk Crucial Winter Range

There are four elk herd units in the PERA. Three of these are in Utah County and only one of these has any elk use (summer use by an estimated 11 head) on public land. The Heaston Elk Herd Unit is the only established elk herd with significant ties to public land. This herd unit essentially encompasses the Oquirrh Mountains. Winter range is located at the base area of the mountains and outward into surrounding lowlands. Almost all crucial winter habitat areas that offer forage for elk are on private land. A significant portion have some form of agricultural or other development on them.

Public lands that serve as winter range for elk are characterized by low-value forage plants, chiefly oak, annual, and mule's ear/sagebrush communities. These plant communities are commonly invaded by such plants as snakeweed, mule's ear, sunflower, and cheatgrass. Of all of this, only cheatgrass is readily taken by elk (Murie, 1979). However, the public land portion of elk wintering range is important. If winter range on public land were to diminish, the result would be greater damage by wintering elk on cropland, urban landscapes, and other human development.

BLM's primary option for maintaining winter crucial range for elk is to keep winter range in public ownership and minimize winter period human disturbance through ORV designations and other stipulations. No advantages would be afforded by ACEC designations. The importance criterion is marginally met.

These habitats will not be considered further.

Ferruginous Hawk Nest Sites

Ferruginous hawks are candidate species for Federal listing as threatened and endangered species. These hawks nest on cliffs, rimrock, the ground, and in the tops of isolated juniper trees in the PERA. They construct and renovate up to five nests and alternate among them from year to year when nesting. This unique nesting habit offers the birds alternate sites when conditions at one site are not conducive to using it in a given year. It is important to manage areas containing ferruginous hawk nests in a manner that will maintain the sites as viable nesting areas. Avoidance of all raptor nest sites during nesting periods is standard management procedure on public lands in the PERA.

As a candidate species for threatened and endangered listing, the ferruginous hawk meets the importance criterion but not the relevance criterion for ACEC designation.

The ferruginous hawk nest sites will not be further considered.

Gold Hill

Gold Hill is a historic mining community which has been constantly inhabited since before the turn of the century. The area around Gold Hill is marked by many prospects, mine shafts, and adits. There are remnants of structures and streets that were part of the town in times past. Presently, there are perhaps 10 occupied residences in the immediate area of the townsite.

No known significant historic remnants are located on public lands in the Gold Hill area. Current mining operations are on private land. The area is interesting to visit but does not meet the importance or relevance criteria for ACEC designation.

For these reasons, Gold Hill is not recommended for further consideration.

Historic Peregrine Falcon Eyries

The peregrine falcon is an endangered species. Unlike so many other endangered species, habitat loss is not the major cause of the peregrine's decline. The decline of this falcon coincides with widespread use of DDT over the past few decades. Three historic eyries are known in the PERA. One historic peregrine falcon eyrie is located at Timpie Springs. A hacking tower has been installed on State land within the Timpie Springs State Waterfowl Management Area. Public lands are very marginally involved in the hunting range associated with peregrine occupancy of Timpie Springs. Public lands have no bearing on the success or failure to reestablish peregrines at Timpie Springs. The two eyries on the Lake Mountains are unoccupied and no plans presently exist to reintroduce birds to these sites. They should remain in public ownership in case later reintroductions are desired.

Peregrine falcons, as a federally listed endangered species, are of national importance. None of the three historical eyrie sites meet the relevance criterion and will not be recommended for further consideration.

Historic Pony Express Trail

The trail is a general corridor with no evidence of its route across the PERA except for occasional cement monuments that mark the way. There are a few sites along the trail where station remnants can still be distinguished but nothing of significant stature to warrant special management attention remains. The trail is being considered for possible addition to the National Historic Trails listing.

The trail has historical values from the standpoint that the Pony Express is anchored in the national mind as an important event in the nation's development. It meets the importance criterion but because there is nothing to protect through ACEC designation, it fails to meet the relevance criterion. The isolated remains can best be managed and interpreted as individual sites of historic value. For these reasons, the area is not recommended for further consideration.

Horseshoe Springs

Horseshoe Springs is located in the north end of Skull Valley about seven miles south of U.S. Interstate 80. The springs are comprised of several interconnected ponds and channeled streams that cumulatively provide several acres of water area and adjacent wetland habitat.

The Horseshoe Springs area has potential for ACEC management to recognize and protect unique springs and wetlands. The Horseshoe Springs wetland complex covers a significant amount of acreage and is unique to an otherwise dry region. The springs are warm enough to remain open throughout the winter months. This makes the springs complex very valuable as a winter water source. The area is a popular recreation site for off-road vehicle use, birdwatching, hunting, fishing, and camping. The springs and wetland complex are a concentrated nesting and feeding area for ducks and other species of birds. The area is a historic use area for the endangered peregrine falcon and with reintroduction would likely be used again.

BLM feels that the importance and sensitivity of the spring complex warrant a recommendation for an ACEC designation.

Lake Mountains

The Manning Canyon Formation, found on both sides (east and west) of the Lake Mountains, is considered quite sensitive for paleontological resources. The east side has especially ideal conditions for fossil recovery. The formation is well known for plant and invertebrate fossils, but also represents a time period when the earliest reptiles were emerging. It has excellent potential to yield reptile fossils.

The importance criterion is clearly met. The relevance criterion is not met. Existing management options offer adequate protection to these paleontological resources. The Lake Mountains will not be considered further.

Mule Deer Crucial Summer Range

That portion of the PERA west of the Salt Lake and Utah Valleys is atypical in that crucial summer range is more limiting than winter range. Some areas of summer range are in poor condition. These are mainly in the Heaston Deer Herd Unit (Oquirrh Mountains) where some oak and aspen plant communities receive heavy use by livestock. Summer range for the portions of three deer herds that are located in Utah County is abundant.

Crucial summer range is very important to the well being of mule deer in the Great Basin portion of the PERA. Still, in terms of relevance and importance, summer range is not threatened by loss or irreparable damage to an extent that deer numbers would decline solely as a result of change in amount or quality of crucial deer summer range. Present management offers sufficient flexibility to provide for the preservation of crucial deer summer range.

Since present management of these ranges provide ample protection of the resource, mule deer crucial summer range is not recommended for further consideration for an ACEC designation.

Mule Deer Crucial Winter Range

Sufficient crucial winter range exists in mountain foothills and valley uplands to support mule deer at numbers that would exceed the full optimum population desired for management by the Utah Division of Wildlife Resources. All deer herds in the Pony Express Resource Area are now at those optimum populations.

There are no public land areas where multiple-use or special-use management threatens to cause a significant reduction in available winter range. In the case of the PERA, mule deer crucial winter range meet neither the relevance nor the importance criterion for ACEC designation. Other management prescriptions provide adequate protection of winter range to support the full optimum population of mule deer within each deer herd unit or portion thereof found in the PERA.

For these reasons mule deer crucial winter range will not be considered further.

Mule Deer Fawning Grounds

Mule deer fawning grounds roughly correlate with crucial summer range. Fawning grounds are important in terms of localized production of deer to sustain the herds. Fawning occurs mainly in the month of June and normally in proximity to water and shrubland such as maple, oak, snowberry, and sagebrush. Fawning areas are even more specific to the above areas in the drier Great Basin Portion of the PERA than in more lush environments such as mountain regions eastward.

In a regional perspective, fawning grounds in the PERA are ample and are manageable under other prescriptions that call for the maintenance of the resource base upon which deer fawning relies. Neither the relevance nor the importance criterion is met.

For these reasons, mule deer fawning grounds will not be considered further.

Stansbury Mountains

The southern part of this mountain range has been designated as a U.S. Forest Service wilderness area (Deseret Peak Wilderness). The northern portion, comprised of 10,480 acres of contiguous public land, is being evaluated for possible wilderness designation. The main values found in the range are remoteness, watershed, varied topography, scenic quality, geologic values, and vegetative diversity.

If the northern portion of the Stansbury Mountains is not designated as wilderness, BLM feels that the area has sufficiently important qualities to be recommended for ACEC designation.

Other Raptor Nest Sites

Avoidance of all raptor nest sites during nesting periods is standard management procedure on public land in the PERA. Any activities occurring during the nesting periods are required to stay a prescribed distance away from nests so that the birds will not be disturbed during the incubation-hatching-fledging period.

Protection of these sites can be accomplished through present management. These sites will not be considered further.

Riparian/Wetland Areas

Riparian and wetland areas are a very limited resource on public lands in the PERA. These areas comprise less than one percent of the public land. In Utah County they are found along eleven streams totalling 8.3 miles of reach, at least 13 springs, and a few areas around Utah Lake. In Tooele County they are found along twelve streams totalling 26 miles of reach, several springs, and a few isolated areas in Rush Valley. These areas are important for wildlife, livestock, watershed condition, water quality, scenic values and recreation use. BLM Instruction Memorandum 87-294 reaffirms BLM's strong commitment

to "maintain, restore, or improve riparian areas by fully considering riparian values in day-to-day management and decision making."

No individual or grouped areas, except Horseshoe Springs, meet either the importance or the relevance criterion. The goals of IM 87-294 can be attained by application of other management prescriptions.

For these reasons riparian/wetland areas are not recommended for further consideration as an ACEC.

Sage Grouse Breeding Complexes

There are five active sage grouse strutting grounds in the PERA. One of these is exclusively on National Forest land. The remaining four have a significant amount of public land associated with them, although two are in areas where much of each complex is in the Richfield BLM District.

Activities on public lands within two miles of strutting grounds would have a significant influence on this important sage grouse habitat. These lands are integral to the future well being of each complex.

The importance and relevance criteria do not support ACEC designations. Current management prescriptions provide adequate means to preserve and protect habitat located on public land.

Sage grouse breeding complexes are not recommended for further consideration.

Wild Horse Ranges

Two wild horse herds are located within the PERA. A third herd is located on the boundary of the PERA but is managed out of the Ely BLM District in Nevada. The two herds are both prospering and populations are well above desired numbers. The horses are of mixed breeds with no distinctive or unique bloodlines. Management plans are in place for both herds.

The importance criterion may be met. The relevance criterion is not met. The herds are managed for their perpetuation and no threat of irreparable damage or need for special management beyond that now in place is needed.

These areas will not be recommended for further consideration.

Bonneville Salt Flats

The unique saline plains of the Bonneville Salt Flats (BSF) have been intensively managed for the past few decades for high speed automobile testing and racing. A Recreation Area Management Plan was completed in 1977 and revised in 1985. In 1985, 30,203 acres of the BSF were also designated as an ACEC to perpetuate and protect the values and resources of the area. Objectives of the plan are to (a) preserve the unique visual, historic and geological resources, (b) minimize and manage mineral uses and other surface disturbing activities to avoid resource damage, (c) coordinate management of the BSF ACEC with other landowners and (d) recognize and manage racing and filming activities on the Salt Flats.

The BSF contain three "relevant" resources.

Historic Values

The salt's potential for land speed racing was recognized in 1896 and has become known as the "world's fastest mile." Thousands of records have been set there.

Scenic Values

Unique vistas are offered by the contrast between the white salt flats and a distant blue horizon broken only by various mountains. The BSF is rated as a Class A Scenic Quality Unit. The VRM resources were designated as a Class II.

Natural Systems

The BSF are a unique area, directed by geophysical processes that are highly sensitive to interruption by human activity. The area is estimated to have once covered 96,000 acres of crystalline salt, but presently covers only 30,000 acres.

Because of its sensitivity and unique character the BSF is a nationally and internationally significant resource and meets importance and relevance criteria for an ACEC. The area is recommended to be continued as an ACEC.

APPENDIX 9

AVERAGE SHEEP RANCH BUDGET

UTAH COUNTY

Receipts	Quantity	Unit	Average Weight	Price/CWT	Total Value
Slaughter lambs	596	head	95	65.30	36,972.86
Feeder lambs	397	head	84	65.30	21,776.24
Ewes	165	head	130	21.30	4,568.85
Wool	927	fleeces	10.2	.66/lb.	6,240.56
Wool incentive payment		dol.			9,268.83
Unshorn lamb[a] payment		dol.			3,292.98
TOTAL RECEIPTS (GROSS RANCH INCOME)[b]					$82,120.32
TOTAL RECEIPTS PER HEAD[c]					99.27

CASH COST (Does not include depreciation and interest on investments.)	TOTAL COSTS	COST/HEAD[c]
BLM permit ($1.35/AUM)	$ 193.05	$ .23
Forest (or other BLM at $1.35)	695.25	.84
Grass, hay, Class III land, 30 acres[d]	2,841.00	3.11
Grain, Class III land, 2 acres[d]	231.38	.31
Pasture, Class IV, 37 acres	1,971.73	1.8
Salt	182.60	.20
Custom trucking	1,734.72	1.90
Veterinary and medicine	556.94	.61
Fuel and lubricants	849.10	.93

APPENDIX 9 (Continued)

AVERAGE SHEEP RANCH BUDGET

CASH COST (Does not include depreciation and interest on investments.)	TOTAL COSTS	COST/HEAD[c]
Equipment and vehicle repairs	986.04	1.19
Repair and maintenance of range imp.	474.76	.57
Shearing	1,827.67	2.21
Labor	2,309.91	2.27
Lamb promotion	161.81	.20
Wool promotion	378.21	.46
Predator control	487.93	.59
Legal and accounting	291.16	.35
Wool handling[e]	756.43	.91
Ram death loss	504.47	.61
Taxes	1,442.55	1.74
Insurance	1,086.48	1.31
Interest on operating capital	1,332.99	1.61
TOTAL CASH COSTS	$21,296.18	$25.75
INCOME	TOTAL INCOME	INCOME/HEAD[c]
NET CASH INCOME	$60,824.14	$73.54

[a]Unshorn lamb payment computed at $1.73/CWT of lamb sold

[b]1986 prices (Utah Agricultural Statistics, 1987)

[c]Determined by dividing by herd size, 827 ewes

[d]Costs of production for hay and grain determined from Davis, Wheeler, 1982

[e]Wool handling cost determined at 8 cents per pound

APPENDIX 9

AVERAGE CATTLE RANCH BUDGET
UTAH COUNTY

Receipts	Quantity	Unit	Average Weight	Price/CWT	Total Value
Heifer calves	17	head	433	55.20	4,063.27
Steer calves	26	head	448	55.201	6,429.70
Cull cow	9	head	988	34.00	3,023.28
TOTAL RECEIPTS (GROSS RANCH INCOME)[a]					$13,516.25
TOTAL RECEIPTS PER HEAD[b]					225.27

CASH COST (Does not include depreciation and interest on investments.)	TOTAL COSTS	COST/HEAD[b]
BLM permit ($1.35/AUM)	$ 114.75	$ 1.91
Alfalfa hay, Class III land, 29 acres	5,762.88	96.05
Barley, Class III land, 9 acres[c]	1,488.96	24.82
Salt	112.61	1.88
Custom trucking	205.34	3.42
Veterinary and medicine	185.47	3.09
Marketing[d]	270.20	4.50
Fuel and lubricants	1,079.10	18.00
Equipment and vehicle repairs	2,191.88	36.53
Repair and maintenance of range imp.	530.58	8.84
Taxes	244.43	4.07
Insurance	308.02	5.14
Interest on operating capital	833.30	13.89
TOTAL CASH COSTS	13,328.13	222.14
INCOME	TOTAL INCOME	INCOME/HEAD[b]
NET CASH INCOME	$ 188.12	$ 3.14

[a]1986 prices (Utah Agricultural Statistics, 1987)

[b]Determined by dividing by herd size, 60 head

[d]Costs of production for hay and barley determined from Davis, Bond, 1986 (costs include labor)

[d]Marketing costs computed at 2 percent for sales up $20,000; 1 percent for sales above $20,000.

LIST OF PREPARERS

Core Team

Dennis Oaks
RMP Assignment: Team Leader, Writer.
Experience: BLM, 10 years; Pacific N.W. River Basin Commission, 4 years.

Terri Yeckley
RMP Assignment: Technical Coordinator, Editor, Writer.
Experience: BLM, 10 years.

Kezia Snyder
RMP Assignment: Biological Resources Coordinator, Writer, Air Quality.
Experience: BLM, 4 years; private industry, 2 years; U.S. Forest Service Service, 1 year.

Support Team

Jay Cram
RMP Assignment: Cartography.
Experience: BLM, 1 year; private industry, 6 years.

Douglas Dodge
RMP Assignment: Cultural Resources.
Experience: BLM, 12 years.

Patricia Johnston
RMP Assignment: Wildlife, Fisheries.
Experience: BLM, 1 year; private industry, 1 year; Soil Conservation Service, 5 years.

Larry Lichthardt
RMP Assignment: Range, Wild Horses.
Experience: BLM, 9 years.

A.J. Martinez
RMP Assignment: Watershed, Soils, Forestry.
Experience: BLM, 10 years; U.S. Forest Service, 4 years.

Bob Mitchell
RMP Assignment: Fire.
Experience: BLM, 19 years.

Gregg Morgan
RMP Assignment: Recreation, VRM, Wilderness.
Experience: BLM, 10 years.

Connie Mountain
RMP Assignment: Word Processing.
Experience: BLM, 9 years.

LIST OF PREPARERS

Dan Naegle
RMP Assignment: Lands.
Experience: BLM, 16 years; Bureau of Reclamation, 2 years.

Tom Roberts
RMP Assignment: Range Economics.
Experience: BLM, 10 years.

Sue Skinner
RMP Assignment: Geology, Minerals, Hazardous Waste.
Experience: BLM, 10 years; Soil Conservation Service, 1 year.

Review Team

Howard Hedrick, Area Manager
Experience: BLM, 13 years.

Deane Zeller, District Manager
Experience: BLM, 25 years.

References

Benton, Robert, 1987. "Peregrine Falcon Nest Sites" (Personal Communication). December 18, 1987. U.S. Fish and Wildlife Service, Salt Lake City, Utah.

Dalley, Robert, 1987. Non Attainment Areas, Emission Facilities, and PSD Increments in Utah County (Personal Communication). Utah Bureau of Air Quality, Salt Lake City, Utah.

Hayward, C.L., et al. 1976. *American Birds*. Great Basin Naturalist Memoirs, BYU Press, Provo, Utah.

Heady, Harold F., 1975.*Rangeland Management*. McGraw-Hill Book Company, San Francisco, California.

Loveless, Ray, 1986. Non-Point Pollution Sources (Personal Communication). November 1986. Mountainland Association of Governments, Provo, Utah.

Loveless, Ray, 1987. Groundwater Systems and Water Control Structures (Personal Communication). February 1987. Mountainland Association of Governments, Provo, Utah.

Murie, Olaus J., 1979. *The Elk of North America*. Teton Bookshop, Jackson, Wyoming.

Nelson, Kendall, 1987. Elk Crucial Areas in Tooele County (Personal Communication). December 16, 1987. Utah Division of Wildlife Resources, Springville, Utah.

Platt, J.B., 1976. "Bald Eagles Wintering in a Utah Desert." *American Birds*. Volume 30, Number 4. National Audubon Society, New York, New York, pp. 783-788.

Thompson, Charles, 1982. "Fisheries Habitat in the Tooele EIS Area" (Personal Communication). November 10, 1982. Utah Division of Wildlife Resources, Springville, Utah.

U.S. Department of Agriculture, Soil Conservation Service, 1980. "Soil Descriptions and Interpretations for Portions of Tooele County, Utah" (Unpublished Document). Prepared for U.S. Department of the Interior, Bureau of Land Management, Salt Lake City, Utah.

U.S. Department of Agriculture, Soil Conservation Service. 1984. *Soil Survey of Fairfield-Nephi Area, Utah*. Washington, D.C.

U.S. Department of Agriculture, Soil Conservation Service, 1981. *Soil Survey of Sanpete Valley Area, Utah*. Washington, D. C.

U.S. Department of Agriculture, Soil Conservation Service, 1972. *Soil Survey of Utah County, Utah*. Washington, D.C.

U.S. Department of the Interior, Bureau of Land Management, 1983. *Draft Tooele Grazing Environmental Impact Statement*, Salt Lake District Office, Salt Lake City, Utah.

U.S. Department of the Interior, Bureau of Land Management, 1982. "Unit Resource Analysis, Tooele Planning Area" and "Management Framework Plan, Tooele Planning Area" (Unpublished Documents). Salt Lake District Office, Salt Lake City, Utah.

U.S. Department of the Interior, Fish and Wildlife Service, 1985. "Endangered and Threatened Wildlife and Plants, Review of Vertebrate Wildlife." Notice of Review 50 CFR Part 17, September 18, 1985.

U.S. Department of the Interior, Fish and Wildlife Service, 1985. "Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species" Notice of Review. 50 CFR Part 17, Sept. 27, 1985.

U.S. Department of the Interior, U.S. Fish and Wildlife Service, 1987.
"Endangered and Threatened Wildlife and Plants," 50 CFR 17.11 and 17.12, April 10.

Utah Agriculture Experiment Station, 1980.

Utah Bureau of Air Quality, 1979. State Implementation Plan. Salt Lake City, Utah.

Utah Department of Health, 1976. Inventory of Existing Point and Nonpoint Discharges in Summit, Wasatch and Utah Counties. Technical Report No. 4, February 1976.

Utah Division of Wildlife Resources, 1981. *The 1981 Utah Big Game Investigations and Management Recommendations Book*. Publication 81-4. Salt Lake City, Utah.

Utah Division of Wildlife Resources, 1985. *Utah Big Game Annual Report 1985*. Publication 85-1, Salt Lake City, Utah.

Utah Division of Wildlife Resources, 1975. *Utah Big Game Range Inventory-1974*. Publication 75-14, Salt Lake City, Utah.

Utah Division of Wildlife Resources, 1976. *Utah Big Game Range Inventory-1975*. Publication 76-10, Salt Lake City, Utah.

Utah Division of Wildlife Resources, 1980. *Utah Big Game Range Invertory-1978*. Publication 80-9, Salt Lake City, Utah.

Utah Division of Wildlife Resources, 1982. *Utah Big Game Range Inventory-1980*. Publication 82-5, Salt Lake City.

REFERENCES

Utah Division of Wildlife Resources, 1978. *Vertebrate Wildlife Species of North Central Utah.* Salt Lake City, Utah.

Vallentine, John F., 1971. *Range Developments and Improvements.* Brigham Young University Press, Provo, Utah.

Wagner, William, 1987. BLM Guidelines for Air Quality Management (Personal Communication). Bureau of Land Management, Salt Lake City, Utah.

Whitson, Tom D., 1987. *Weeds and Poisonous Plants of Wyoming and Utah.* Cooperative Extension Service, College of Agriculture, University of Wyoming, Laramie, Wyoming.

Workman, John P., 1979. *Range Economics.* Macmillan Publishing Company, New York City, New York.

Glossary

Active grazing preference. The total number of AUMs that could be currently licensed.

Adjudication. Legal processing of applications, entries, claims, etc., to assure full compliance with the public land laws and regulations.

Allotment. An area of land where one or more permittees graze their livestock. Generally consists of public land but may include parcels of private or State lands. The number of livestock and season-of-use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture.

Allotment management plan (AMP). A concisely written program of livestock grazing management, including supportive measures, if required, designed to attain specific management goals in a grazing allotment.

Animal unit month (AUM). The amount of forage necessary for the sustenance of one cow or five sheep for 1 month.

Area of critical environmental concern (ACEC). An area of public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life or provide safety from natural hazards.

Average licensed (livestock) use. The average livestock grazing use of 5 representative years.

Blocking. A process of consolidating or making isolated land tracts contiguous through selling or exchanging with other land holders, both public and private.

Browse. That part of the current leaf and twig growth of shrubs, woody vines, and trees available for animal consumption. Also, to graze a plant.

Corridor. A linear strip of land forming a passageway between two points in which transportation and/or utility systems exist or may be located.

Cover. The material covering the soil and providing protection from, or resistance to, the impact of raindrops and the energy of overland flow, and expressed in percent of the area covered. Composed of vegetation, litter, small rock, and large rocks.

Critical wildlife habitat. That portion of the living area of a threatened or endangered wildlife species that is essential to the survival and perpetuation of the species, either as individuals or as a population.

Crucial range. Range on which a species depends for survival; there are no alternative ranges available due to climate conditions or other limiting factors. May also be called key range.

Cultural resources. Those fragile and nonrenewable remains of human activities, occupations, and endeavors as reflected in sites, buildings, structures or objects including works of art, architecture, and engineering. Cultural resources are commonly discussed as prehistoric and historic values, but each period represents a part of the full continuum of cultural values from the earliest to the most recent.

Desirable plants. Those plants that are palatable and productive forage species, often dominant under climax or near climax conditions. They are normally long-lived plants which can include grasses, forbs, and browse.

Directional drilling. Slant drilling or drilling on an angle. Directional drilling is utilized when the operator is not allowed to occupy the surface of a given tract of land, but still wishes to drill a structure or target beneath that tract.

Distribution. The uniformity of livestock grazing over a range area.

Endangered animal species. Any animal species in danger of extinction throughout all or a significant portion of its range. This definition excludes species of insects that the Secretary of the Interior determines to be pests and whose protection under the Endangered Species Act of 1973 would present an overwhelming and overriding risk to man.

Endangered plant species. Species of plants in danger of extinction throughout all or a significant portion of their ranges. Existence may be endangered because of the destruction, drastic change, or severe curtailment of habitat, or because of overexploitation, disease, predation, or even unknown reasons. Plant taxa from very limited areas (e.g., the type of localities only), or from restricted fragile habitats usually are considered endangered.

Ephemeral stream. A stream that flows only briefly after a storm or during the snowmelt.

Erosion. The group of natural processes including weathering, dissolution, abrasion, corrosion, and transportation, by which earthy or rocky material is removed from any part of the earth's surface.

Fire management. The integration of fire protection, prescribed fire, and fire ecology knowledge into multiple use planning decision making, and land management activities.

Floodplain. The flat ground along a stream covered by water at the flood stage.

Forage. Vegetation of all forms available for animal consumption.

Groundwater. Water filling all the unblocked pores of underlying material below the water table.

Habitat. A specific set of physical conditions that surround a species group or a large community.

Impact. A change in the ecosystem resulting from or accelerated by human action.

Income. Employee compensation, profits rents, and other payments to households.

Isolated tract. A parcel of vacant public lands which is surrounded by appropriated public lands.

Land disposal. A transaction that leads to the transfer of title to public lands from the Federal Government.

Land treatment. Alteration of the soil and/or vegetation of an area by mechanical or chemical means or by burning.

Licensed use (grazing). The number of animal unit months (AUMs) that a livestock operation actually uses and pays for during a year.

Management framework plan (MFP). A land use plan for public lands that provides a set of goals and constraints for a specific planning area to guide the development of detailed plans for the management of each resource.

M, I, C categorization. The grouping of allotments into three differernt categories (M maintain, I = improve, and C = custodial) for management purposes.

Mineral entry. The location of mining claims by an individual to protect his right to a valuable mineral.

Mitigating measures. Methods used (often included as lease stipulations) to reduce the significance of or eliminate an anticipated environmental impact.

Monitor. To scrutinize or check systematically with a goal of collecting certain specified categories of data.

Multiple use planning. Planning for harmonious and coordinated management of the various surface and subsurface resources, without impairment of the land, that will best meet the present and future needs of the people.

National Ambient Air Quality Standards (NAAQS). National standards, established under the Clean Air Act by the Environmental Protection Agency (EPA), prescribing levels of pollution in the outdoor air which may not be exceeded.

Non-attainment area. The status of an area that is shown by monitoring data or that is calculated by air quality modeling to exceed any National Ambient Air Quality Standards for that pollutant.

Nonuse (grazing). The active grazing privileges not used or paid for by an operation during a year. Nonuse and licensed use equal active grazing preference.

Off-road vehicle (ORV). Any motorized vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, excluding (1) any nonamphibious registered motorboat, (2) any military, fire, emergency or law enforcement vehicle while being used for emergency purposes, (3) any vehicle whose use is expressly authorized by the authorizing officer, or otherwise officially approved, (4) vehicles in official use, and (5) any combat or combat support vehicle when used in times of national defense emergencies. (Quoted from Executive Order 11644 as amended by Executive Order 11989.)

Pasture. As used in this document, a subdivision of a grazing allotment.

Payment in lieu of taxes (PILT). Payments to local or State governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing. Specifically, they include payments made under the Payments in Lieu of Taxes Act of 1976 by the U.S. Department of the Interior.

Perennial stream. A stream that flows throughout the year.

Permittee (grazing). A person who has livestock grazing privileges on an allotment or allotments within the Resource Area.

Precipitation. As used in hydrology, precipitation is the discharge of water, in liquid or solid state, out of the atmosphere, generally upon a land or water surface.

Prescribed fire. The skillful application of fire to natural fuels under conditions of weather, fuel moisture, soil moisture, etc., that will allow confinement of the fire to a predetermined area and at the same time produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives of wildlife management, grazing, hazard reduction, etc.

Prior stable population numbers. A number of animals, by species (derived from wildlife popula-

tion dynamics data and long-term observations), previously supported at or near the grazing capacity of the given wildlife herd unit.

Public land. Formal name for lands administered by the Bureau of Land Management (BLM).

Range trend. The change in vegetation and soil characteristics as a direct result of environmental factors, primarily climate and grazing.

Raptor. Living on prey: a group of carnivorous birds consisting of hawks, eagles, falcons, vultures, and owls.

Right-of-way. The legal right for use, occupancy, or access across land or water areas for a specified purpose or purposes.

Riparian. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to the plants of all types that grow along or around springs.

Run-off. That part of the precipitation that does not immediately enter the soil or evaporate, ultimately reaching a stream channel. Run-off occurs when the rate of snowmelt or rainfall exceeds the rate of infiltration into the soil.

Saline soil. Soil containing soluble salts in an amount that impairs growth of plants.

Season-of-use. The time of livestock grazing on a range area based on type and stage of vegetative growth.

Sediment. Soil or mineral transported by water and deposited in streams or other bodies of water.

Sensitive plant. A plant that is not officially listed as threatened or endangered, but may be considered for such designation.

Slope. The inclination of the land surface from the horizontal.

Threatened animal species. Any animal species likely to become endangered within the foreseeable future throughout all or a significant part of its range.

Threatened plant species. Species of plants that are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges, including species categorized as rare, very rare, or depleted.

Total grazing preference. Total number (active and suspended) of animal unit months of livestock grazing on public land apportioned and attached to base property owned or controlled by a permittee.

Visual resource management (VRM). The system by which BLM classifies and manages the visual resource of public lands, based on their scenic qualities, sensitivities, and the distance from which they are viewed.

Watershed. The region draining into a river, river system, or body of water.

Wilderness study area (WSA). An area determined, through BLM's wilderness inventory to meet the definition of wilderness established by Congress.

Wildlife. All species of mammals, birds, fish, amphibians, and reptiles found in a wild state.

Wildlife habitat. All elements of a wild animal's environment necessary for completion of its life cycle. These elements include food, cover, water, and living space.

Withdrawal. An action that restricts the disposal of public lands and holds them for specific public purposes.

LIST OF AGENCIES, GROUPS AND PERSONS TO WHOM COPIES OF THE EIS WILL BE SENT

Federal Agencies

Department of Agriculture
Agricultural Stabilization and Conservation Service
Forest Service
Soil Conservation Service
Department of Commerce
Department of Defense
Dugway Proving Ground
Tooele Ordinance Depot
Hill Airforce Base
Department of the Interior
Geological Survey
Fish and Wildlife Service
Bureau of Indian Affairs
Bureau of Mines
Bureau of Reclamation
Office of the Solicitor
Advisory Council on Historic Preservation
Environmental Protection Agency

State Agencies

State of Utah
Clearing House
Department of Agriculture
Department of Natural Resources
Division of Water Resources
Division of Wildlife Resources
Division of Lands and Forestry
Division of Oil, Gas, and Mining
Division of Water Rights
Division of History
University of Utah
Utah State University

Local Agencies

Wasatch Front Regional Council
Utah Association of Counties
Juab County Commission
Salt Lake County Commission
Tooele County Commission
Utah County Commission
Local Mayors

Groups and Organizations

Association of Four Wheel Drive Clubs
American Fisheries Society
Audobon Society
American Horse Protection Association
Bees Motorcycle Club
Brigham Young University
Buzzards Motorcycle Club
Defenders of the Outdoor Heritage
Friends of the Earth
FUND
GSSA Snowmobile Club
High Uintas Wilderness Coalition
Humane Society of Utah
Intermountain Mustang Association
Intermountain Off-Road Racing Association
Izaak Walton League
League of Women Voters
National Mustang Association
National Wildlife Federation
National Woolgrowers' Association
Natural Resources Defense Council
Nature Conservancy
Outdoors Unlimited, Inc.
Recreation Vehicle Advisory Council
Salt Lake Motorcycle Club
Save Our Canyons Committee
Sierra Club
Society for Range Management
Source
The Wilderness Society
Tooele Wildlife Federation
Utah Cattleman's Association
Utah Council, Trout Unlimited
Utah Cyclist
Utah Farm Bureau Federation
Utah Heritage Foundation
Utah Nature Study Society
Utah Public Lands Office
Utah Sportsmen's Association
Utah Water Users Association
Utah Wilderness Association
Utah Woolgrowers' Association
Wasatch Mountain Club
Weber State College
Westminster College
WHOA
Wildlife Society

Congressional

Utah Delegation

Interested/Affected Individuals

Permittees
Private Landowners

INDEX

☆ U.S. GOVERNMENT PRINTING OFFICE: 1988—573-065/60,053 REGION NO. 8

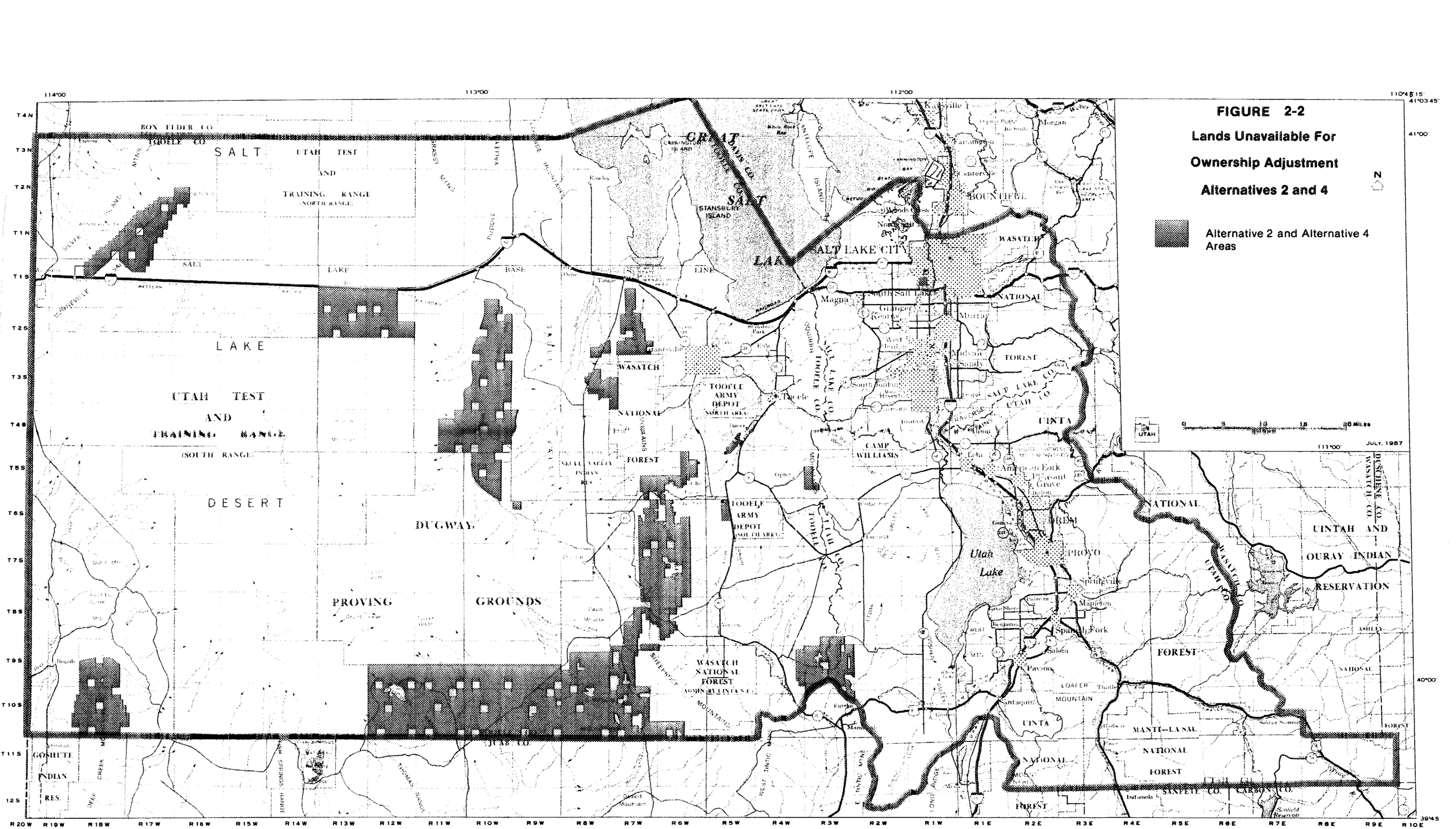


FIGURE 2-2

Lands Unavailable For Ownership Adjustment

Alternatives 2 and 4

▨ Alternative 2 and Alternative 4 Areas

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

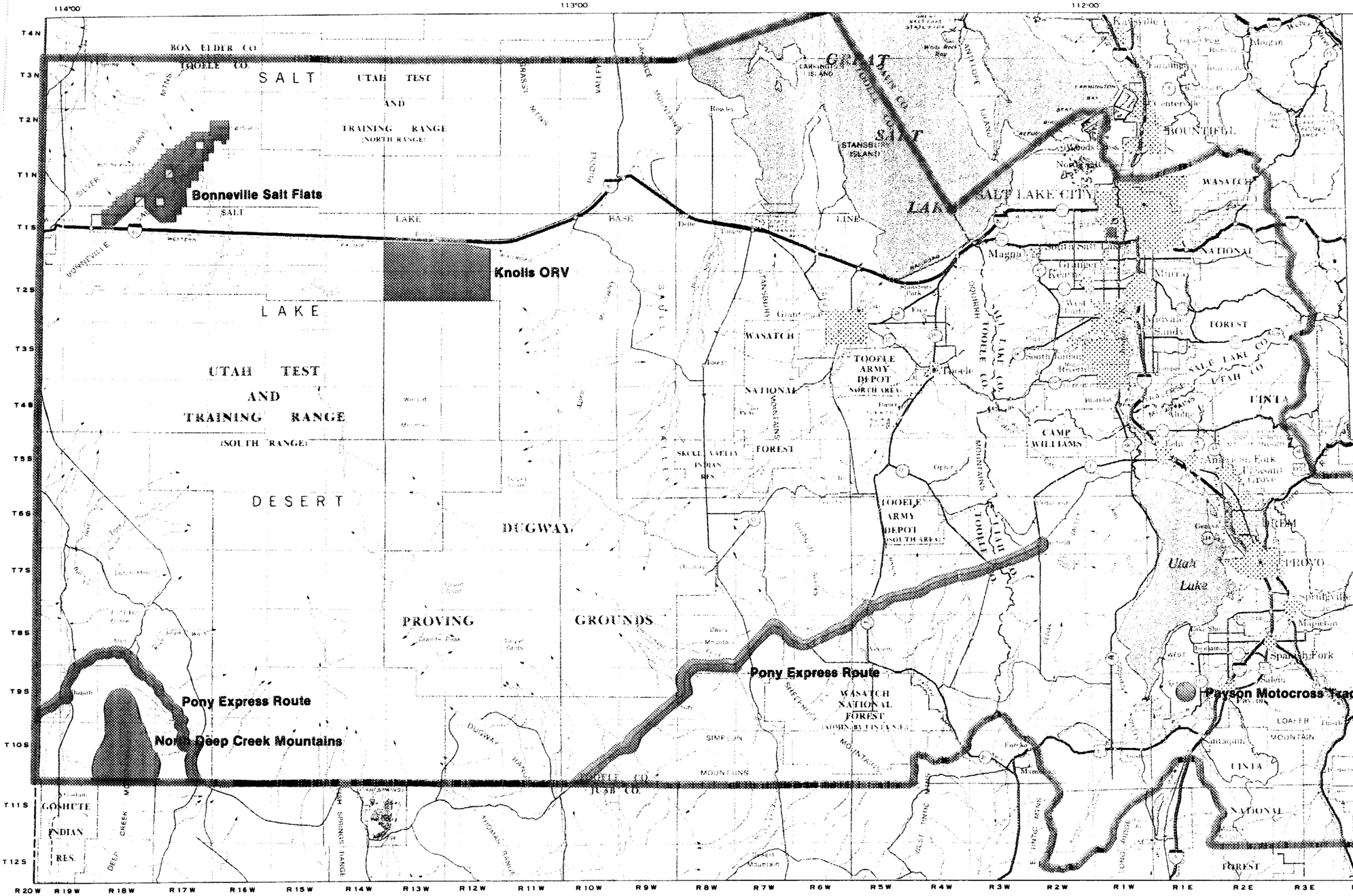


FIGURE 2-3

Proposed Recreation Management Areas (RMA)

N

RMA's

UTAH

SCALE 0 5 10 15 20 Miles

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-4

Visual Resource Management Classes

- none — Class I
- Class II
- Class III
- Class IV
- Rehabilitation Areas

N

0 5 10 15 20 MILES
SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-5

Wilderness Study Areas (WSA)

N

Wilderness Study Areas

UTAH

0 5 10 15 20 MILES

SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-6

Major Rights-of-Way and Utility Corridors

N

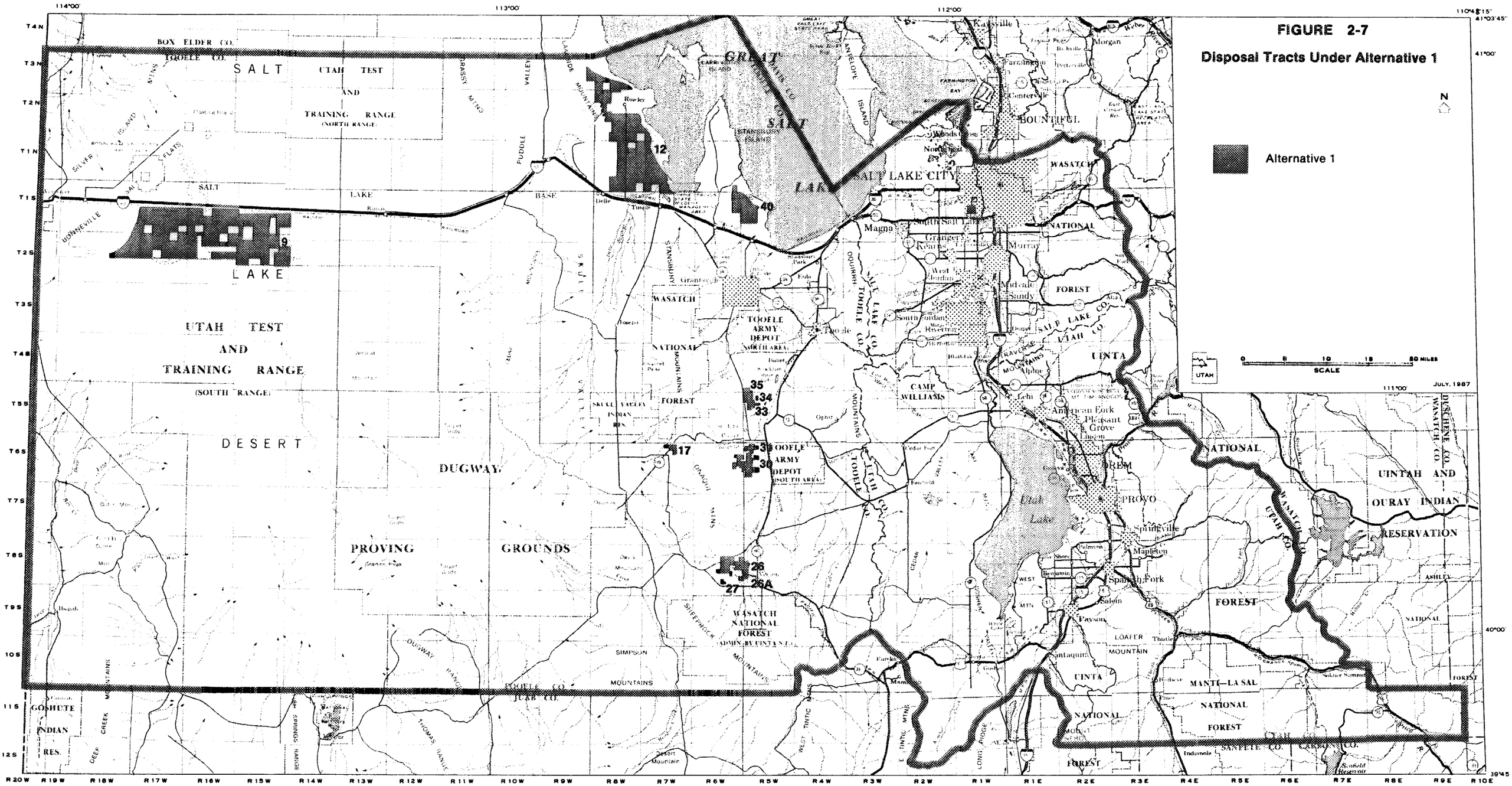
Major Rights-of-Way

Utility Corridors

SCALE

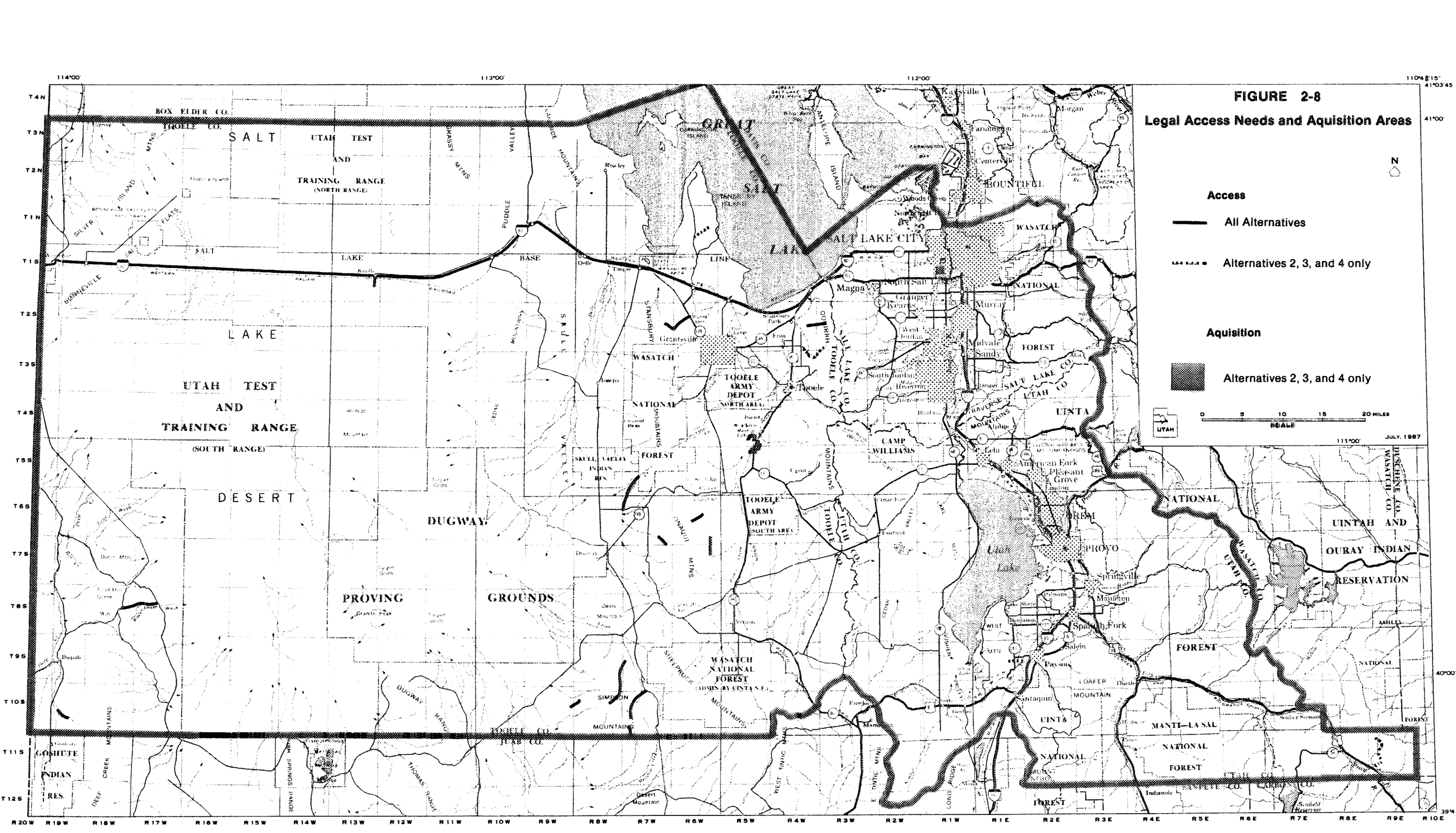
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

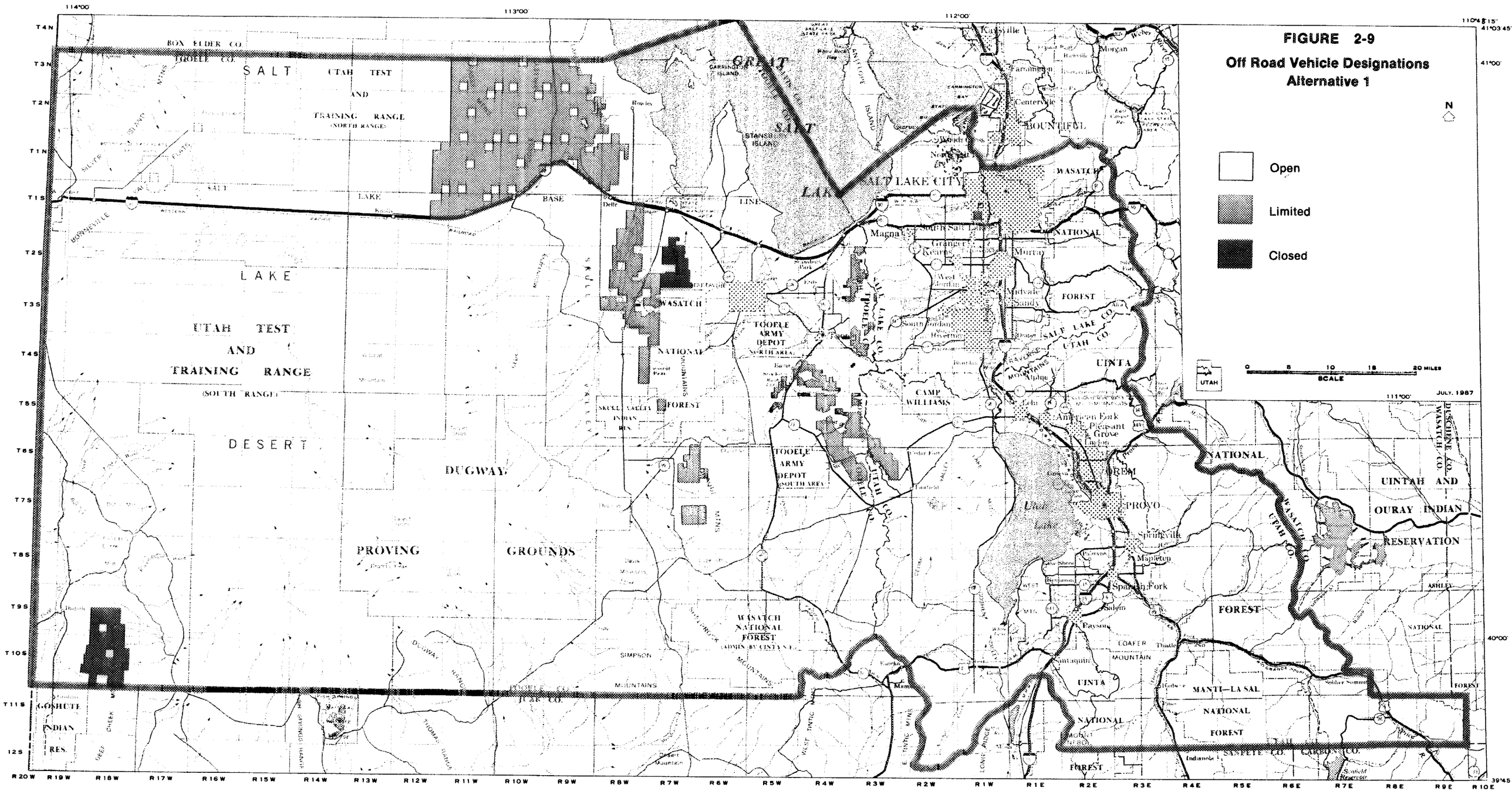
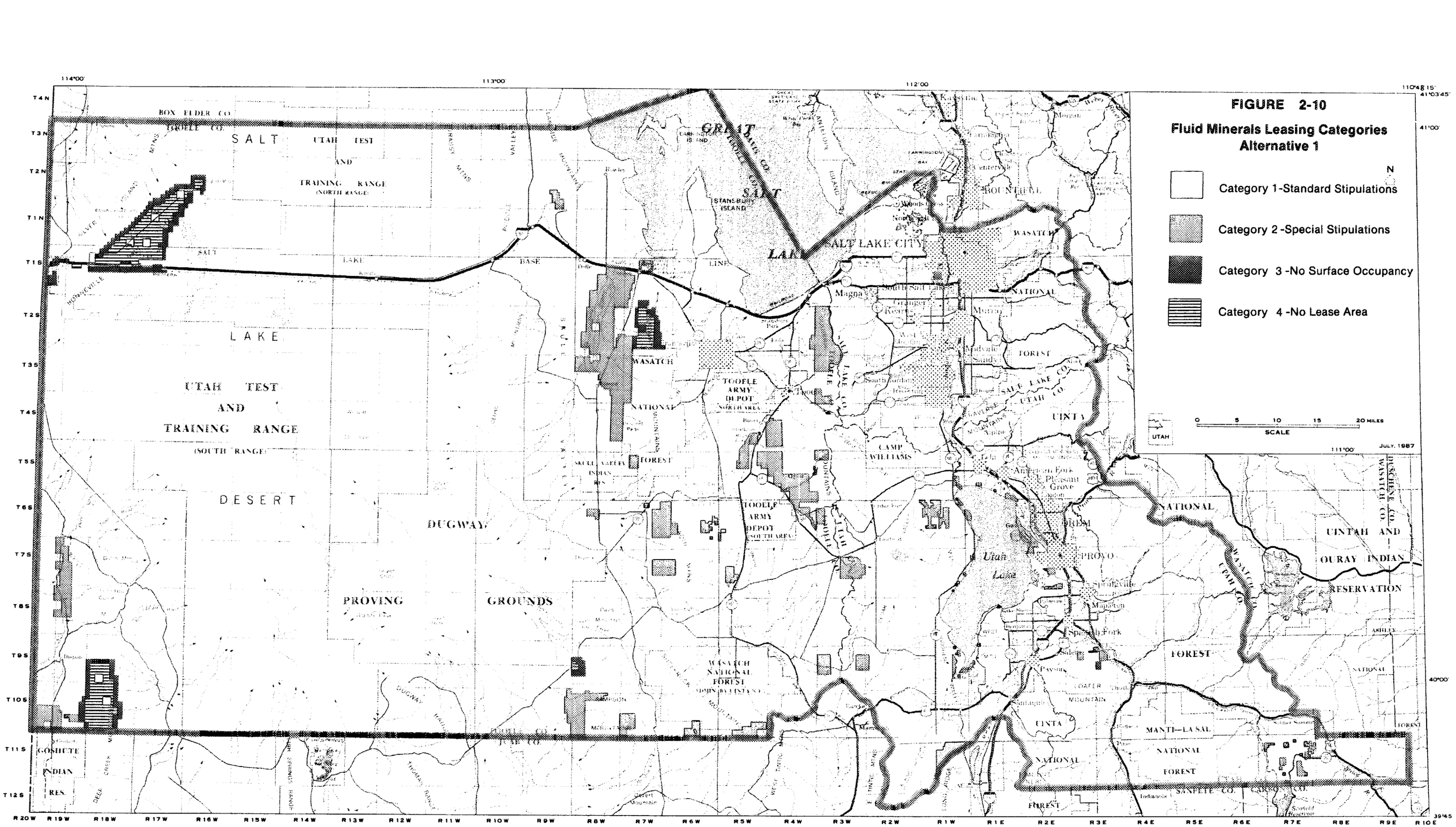


FIGURE 2-9

Off Road Vehicle Designations Alternative 1

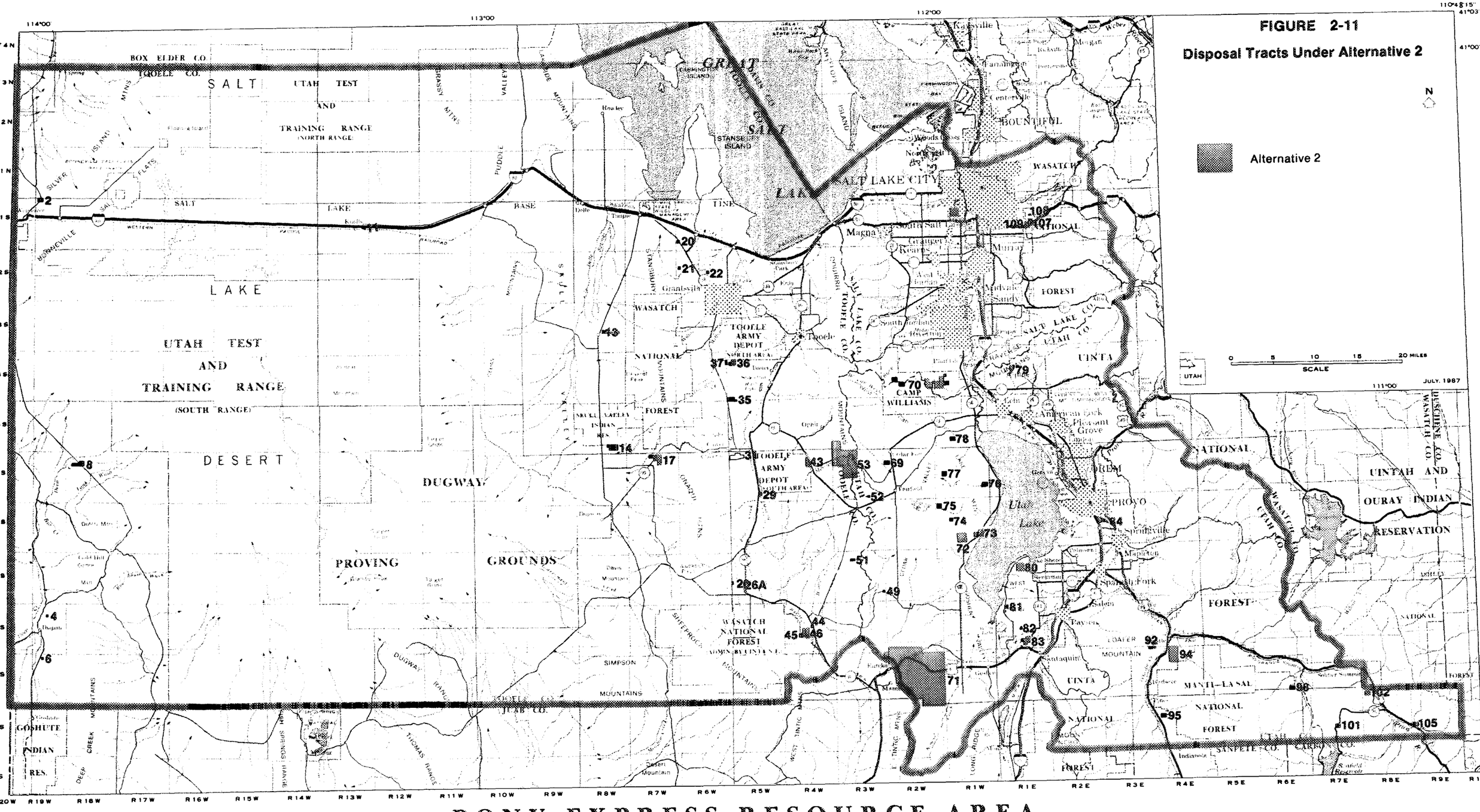
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-12

Off Road Vehicle Designations
Alternative 2

N

Open

Limited

none Closed

0 5 10 15 20 MILES
SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-13

Fluid Minerals Leasing Categories
Alternative 2

N

Category 1 -Standard Stipulations

Category 2 -Special Stipulations

Category 3 -No Surface Occupancy

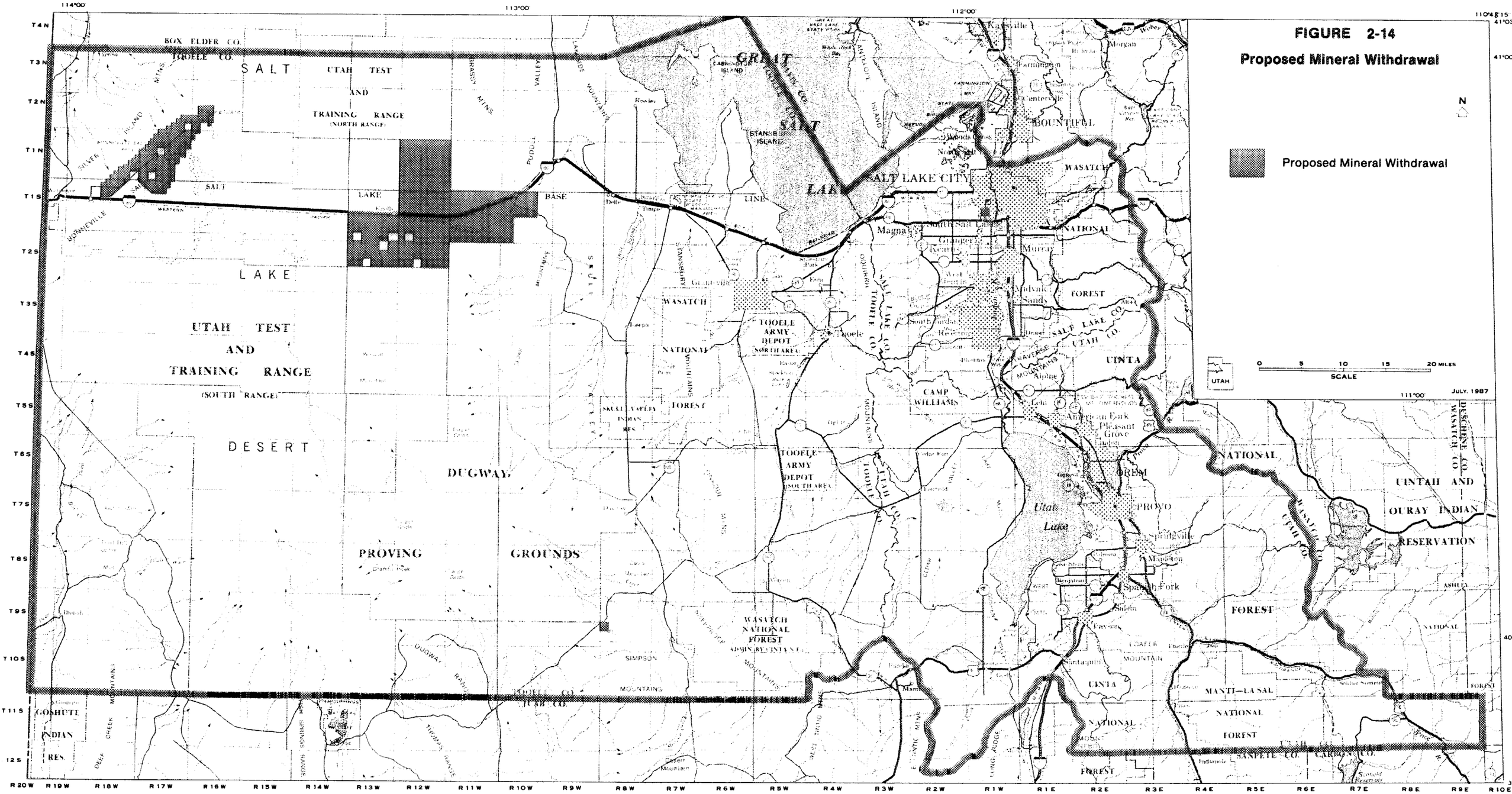
none — Category 4 -No Lease Area

0 5 10 15 20 MILES
SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

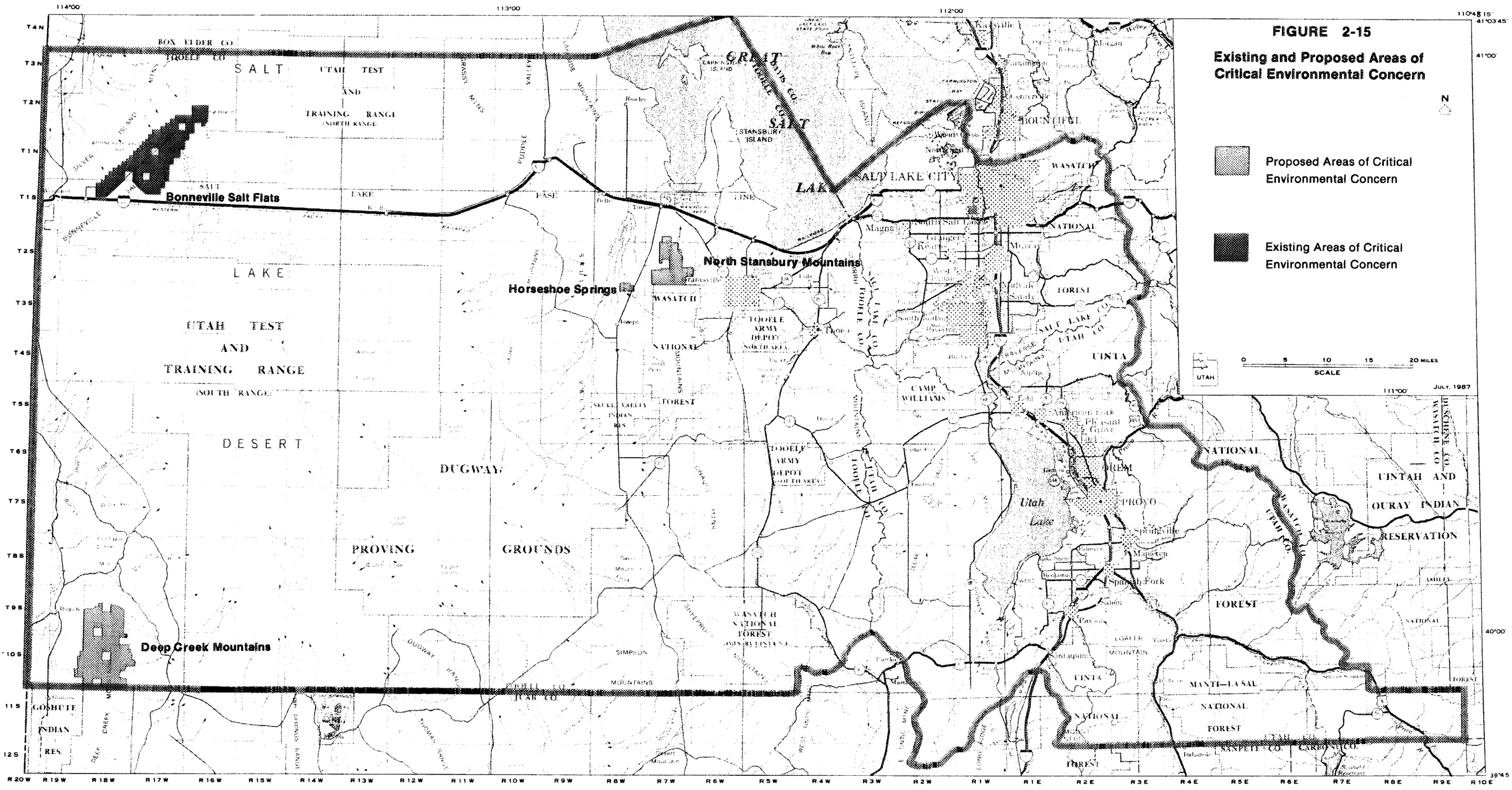


PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 2-15

Existing and Proposed Areas of Critical Environmental Concern

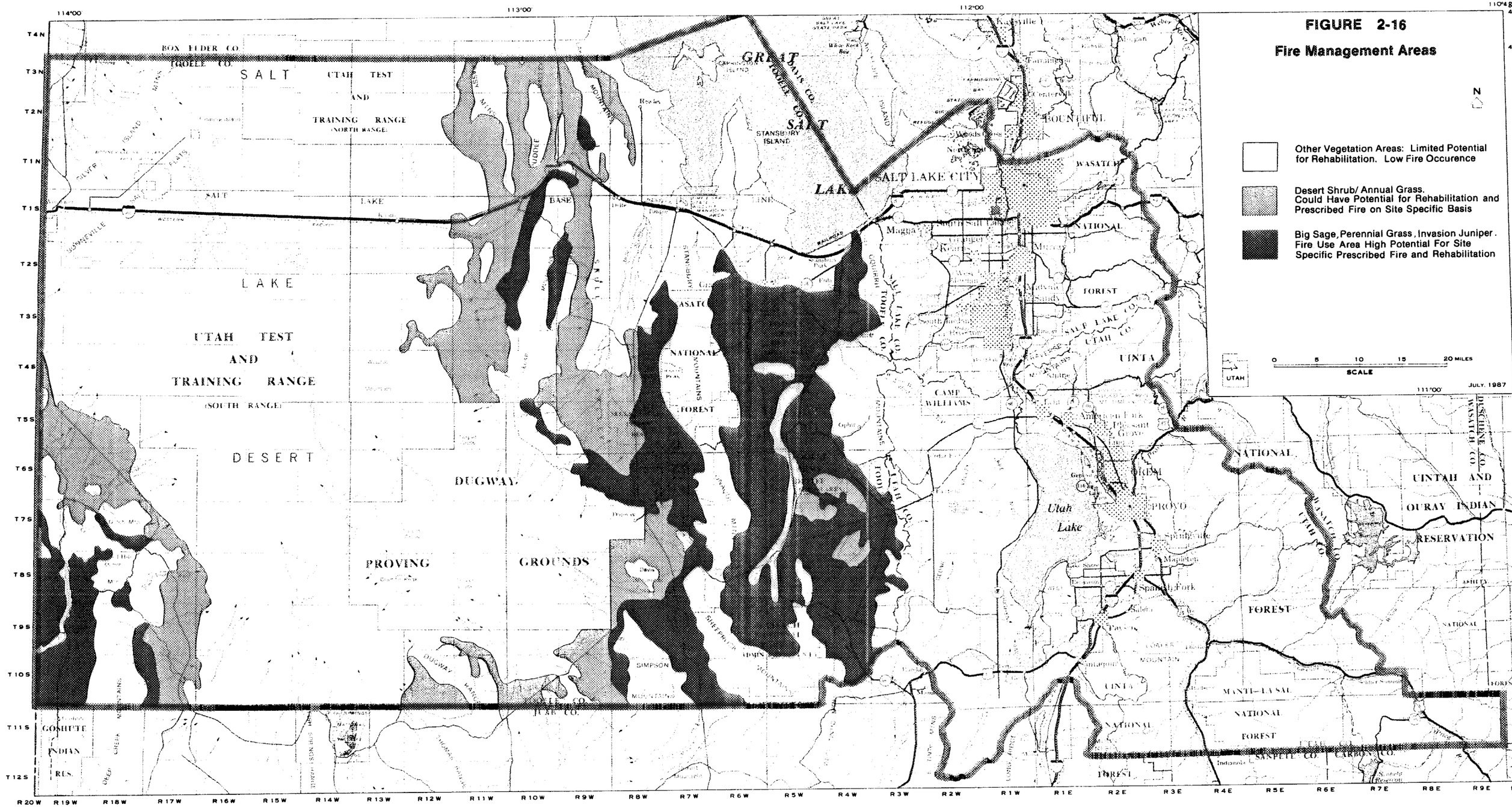


PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

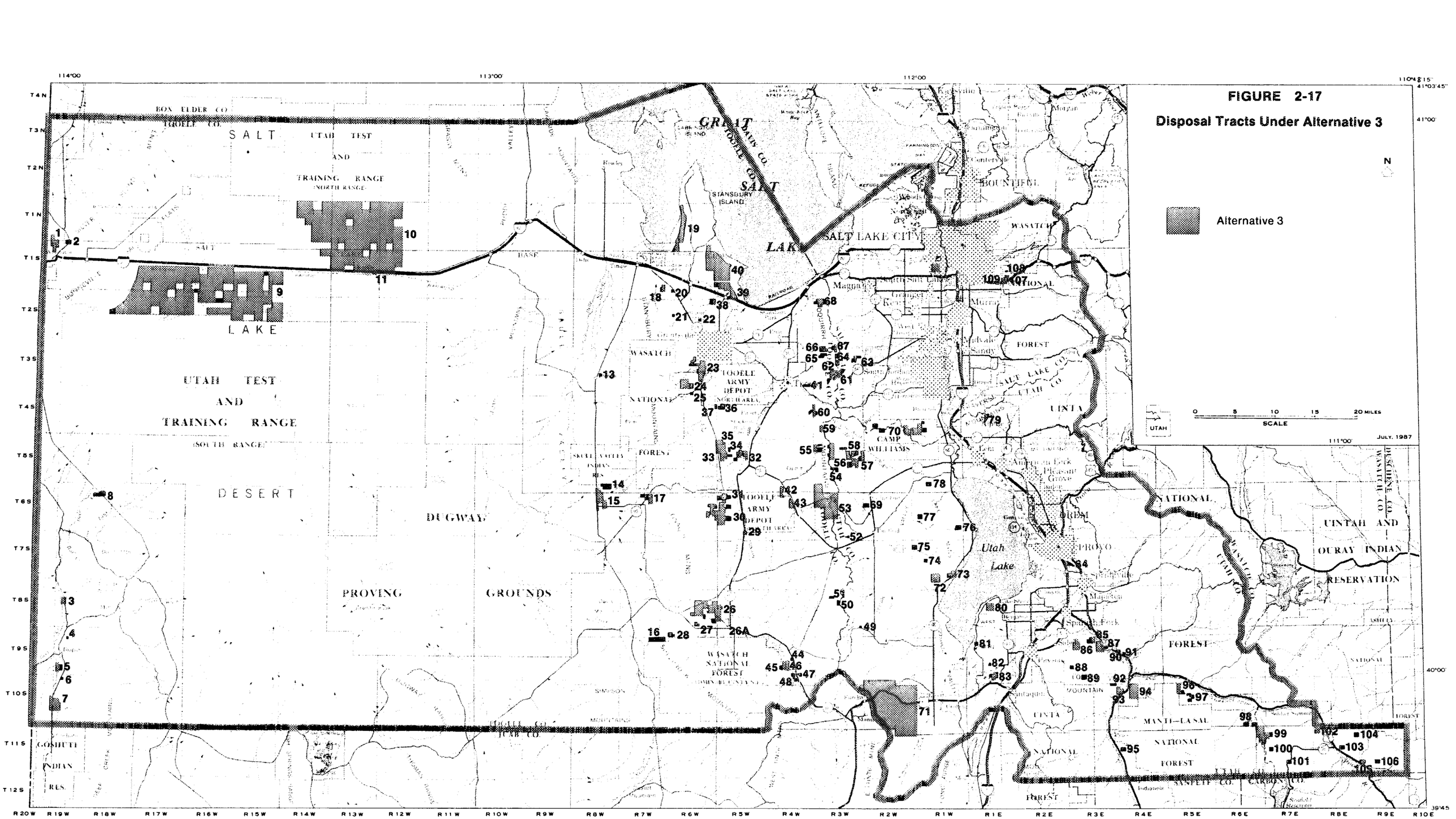
FIGURE 2-16

Fire Management Areas



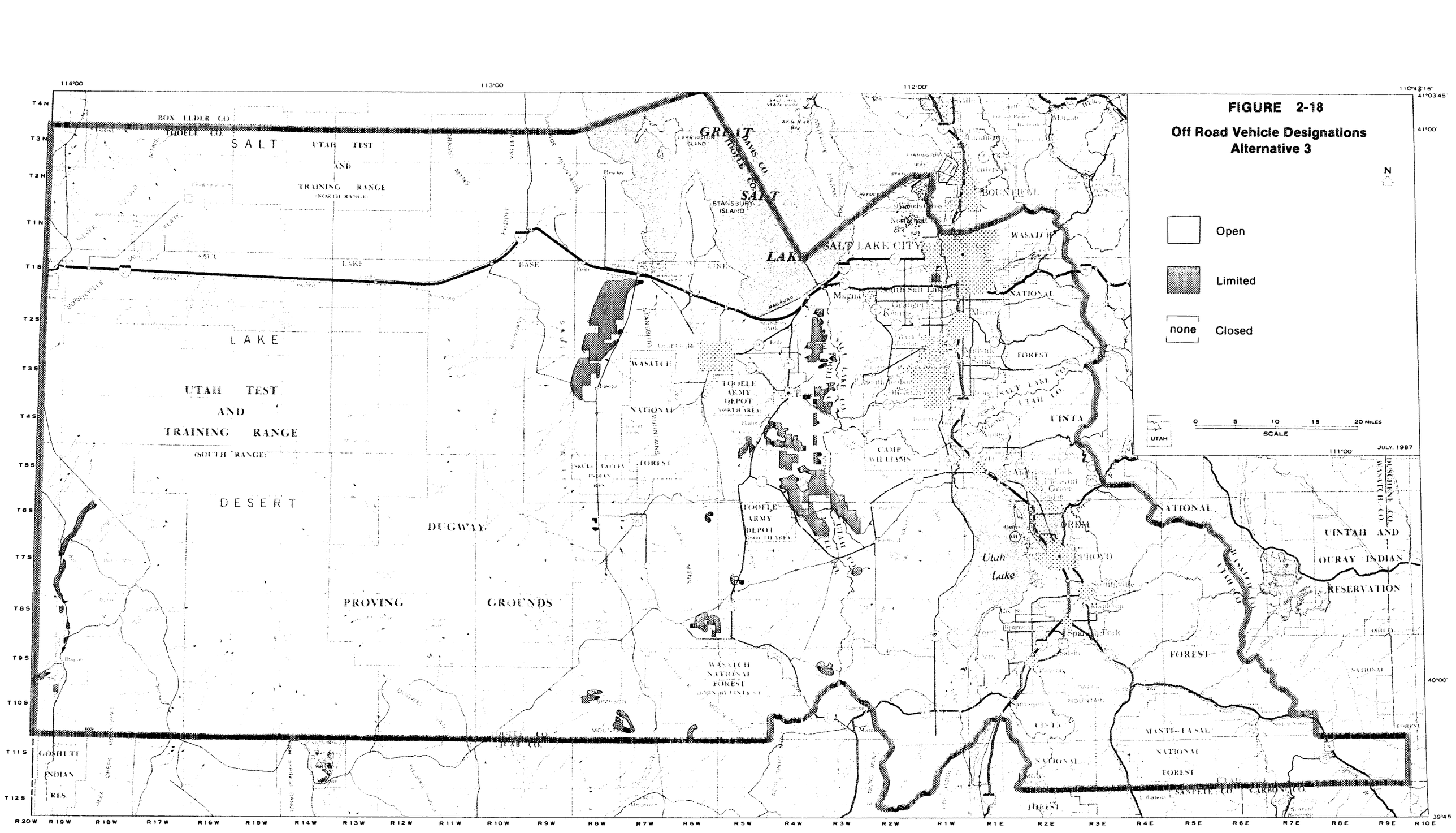
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



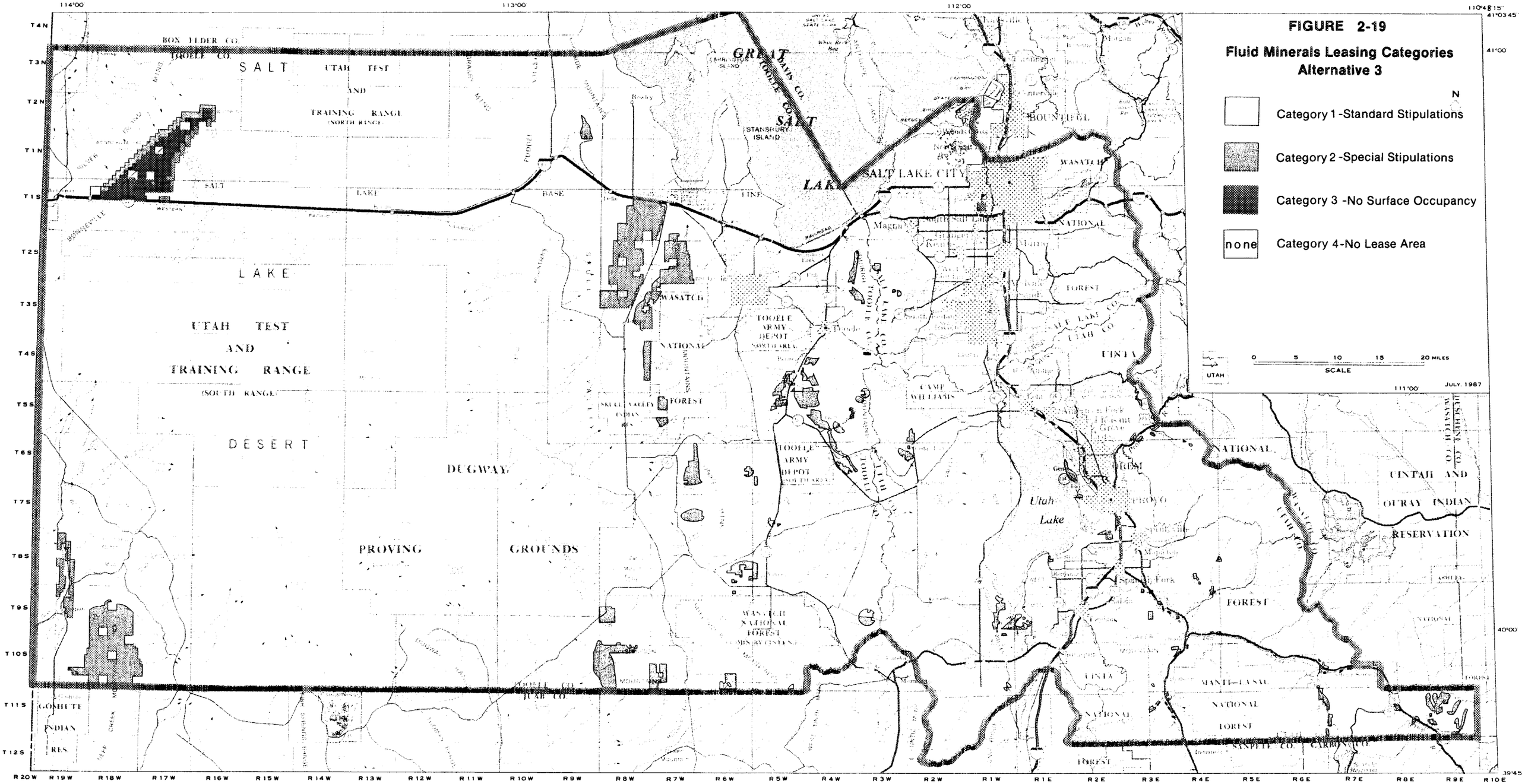
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



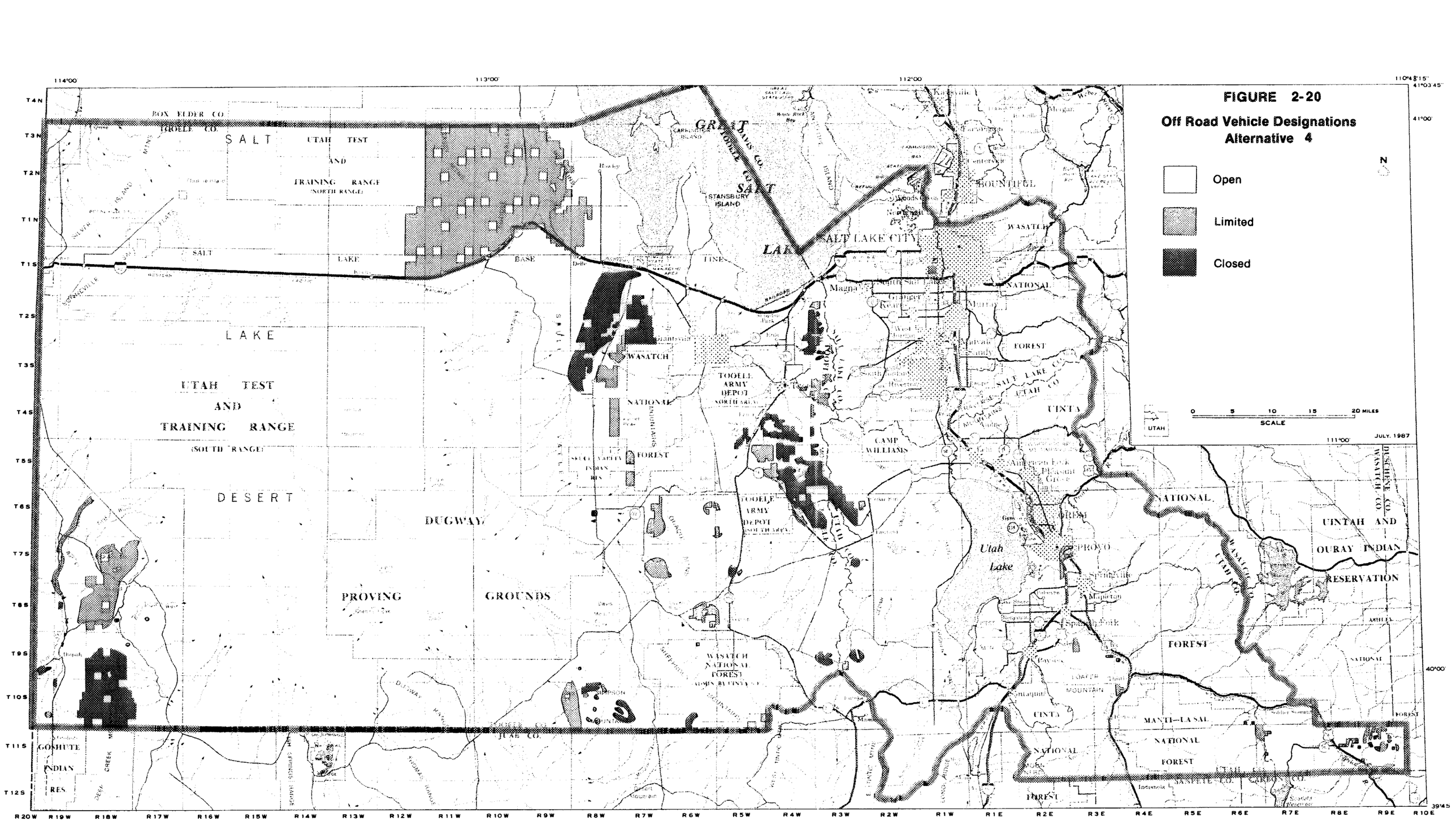
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



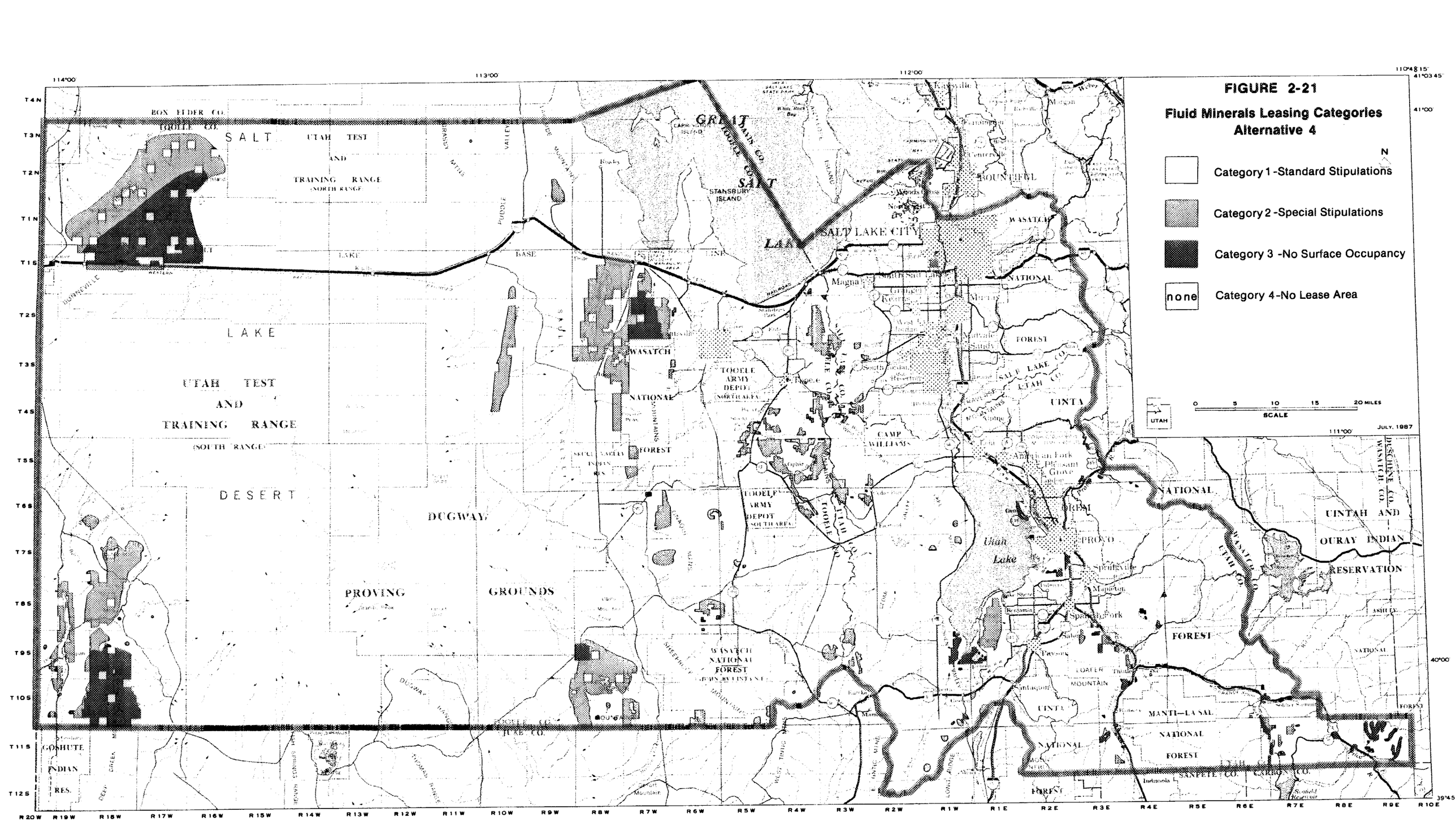
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 3-1

Riparian and Wetland Areas

Riparian and Wetland Areas

N

0 5 10 15 20 MILES
SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 3-2

Wild Horse Herd Units

N

Wild Horse Herd Units

Cedar Mountain Wild Horse Herd

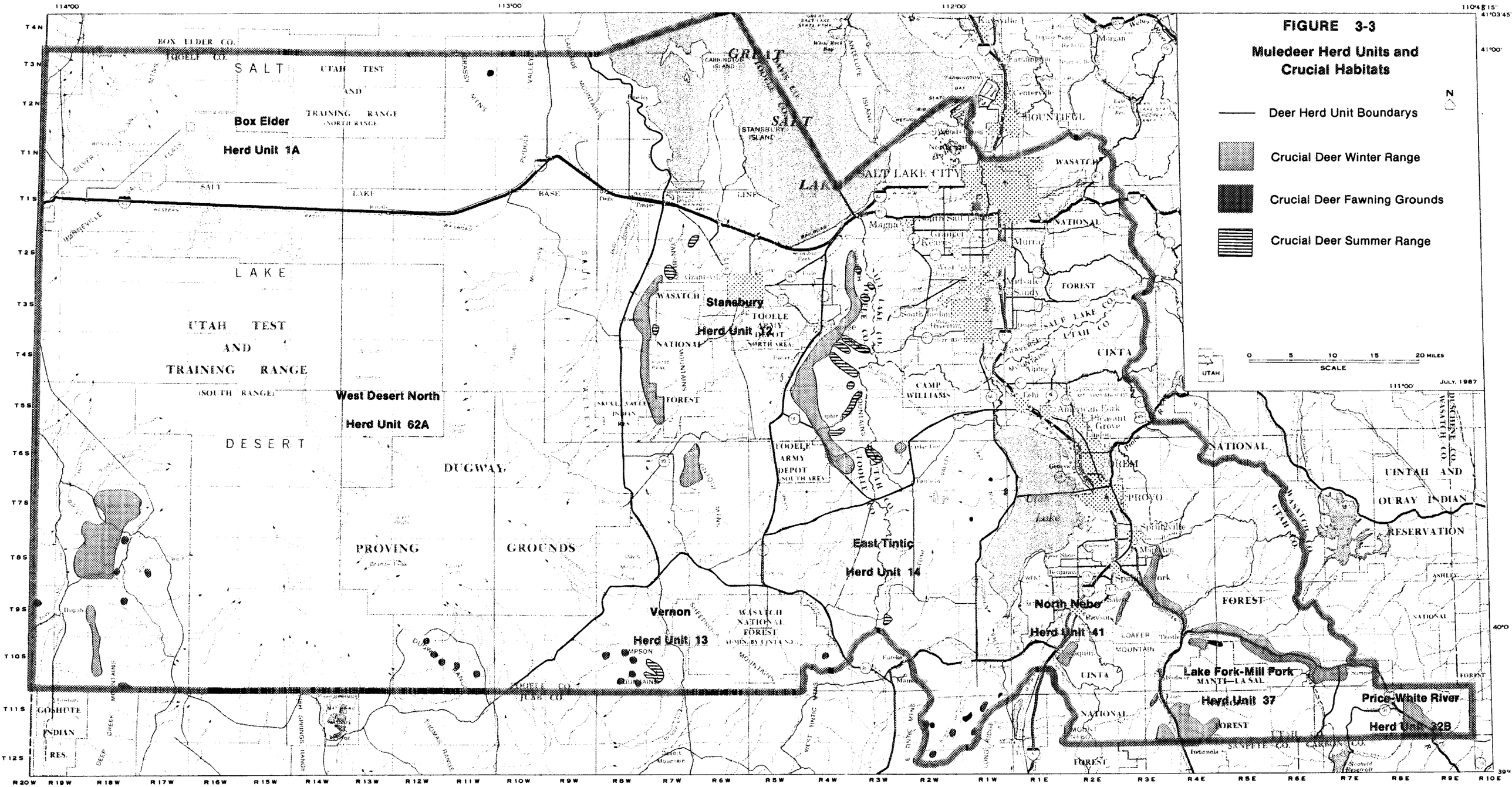
Onaqui Mountain Wild Horse Herd

0 5 10 15 20 MILES
SCALE

JULY, 1987

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 3-4

Elk and Antelope Herd Units and Crucial Ranges

Elk

Elk Herd Unit Boundarys

Crucial Elk Winter Range

Crucial Elk Calving Grounds

Antelope

Antelope Herd Unit Boundarys

Crucial Antelope Range

N

0 5 10 15 20 MILES
SCALE

UTAH

JULY, 1987

Puddle Valley
Antelope Herd Unit 15

West Desert Antelope Herd Unit 2
(A) Riverbed

West Desert Antelope Herd Unit 2
(B) Snake Valley

Heaston
Elk Herd Unit 4

Nebo
Elk Herd Unit 11

Manti
Elk Herd Unit 12

Avintaquin-White River
Elk Herd Unit 22

UTAH TEST AND TRAINING RANGE (NORTH RANGE)

UTAH TEST AND TRAINING RANGE (SOUTH RANGE)

DUGWAY PROVING GROUNDS

TOOELE ARMY DEPOT (NORTH AREA)

TOOELE ARMY DEPOT (SOUTH AREA)

SALT LAKE CITY

Utah Lake

GOSHUTE INDIAN RES.

UINTAH AND OURAY INDIAN RESERVATION

WASATCH NATIONAL FOREST

UINTA NATIONAL FOREST

SIMPSON MOUNTAINS

PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT

FIGURE 3-5

Sage Grouse Crucial Habitat
Big Horn Sheep Habitat

N

Sage Grouse
Strutting Grounds, Brooding Grounds and Winter Concentration Areas

Big Horn Sheep
Big Horn Sheep Habitat

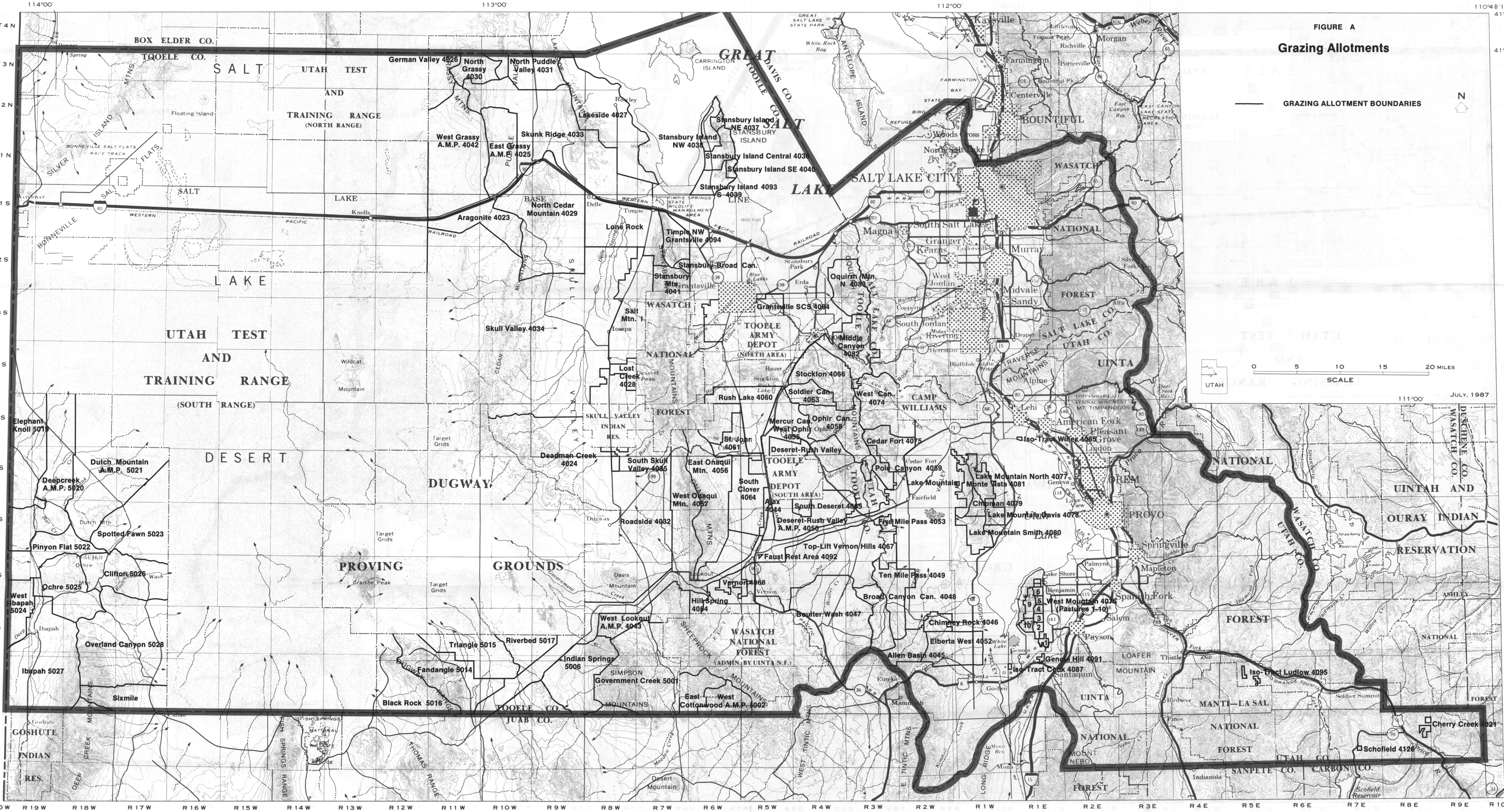
0 5 10 15 20 MILES
SCALE

UTAH

JULY, 1987

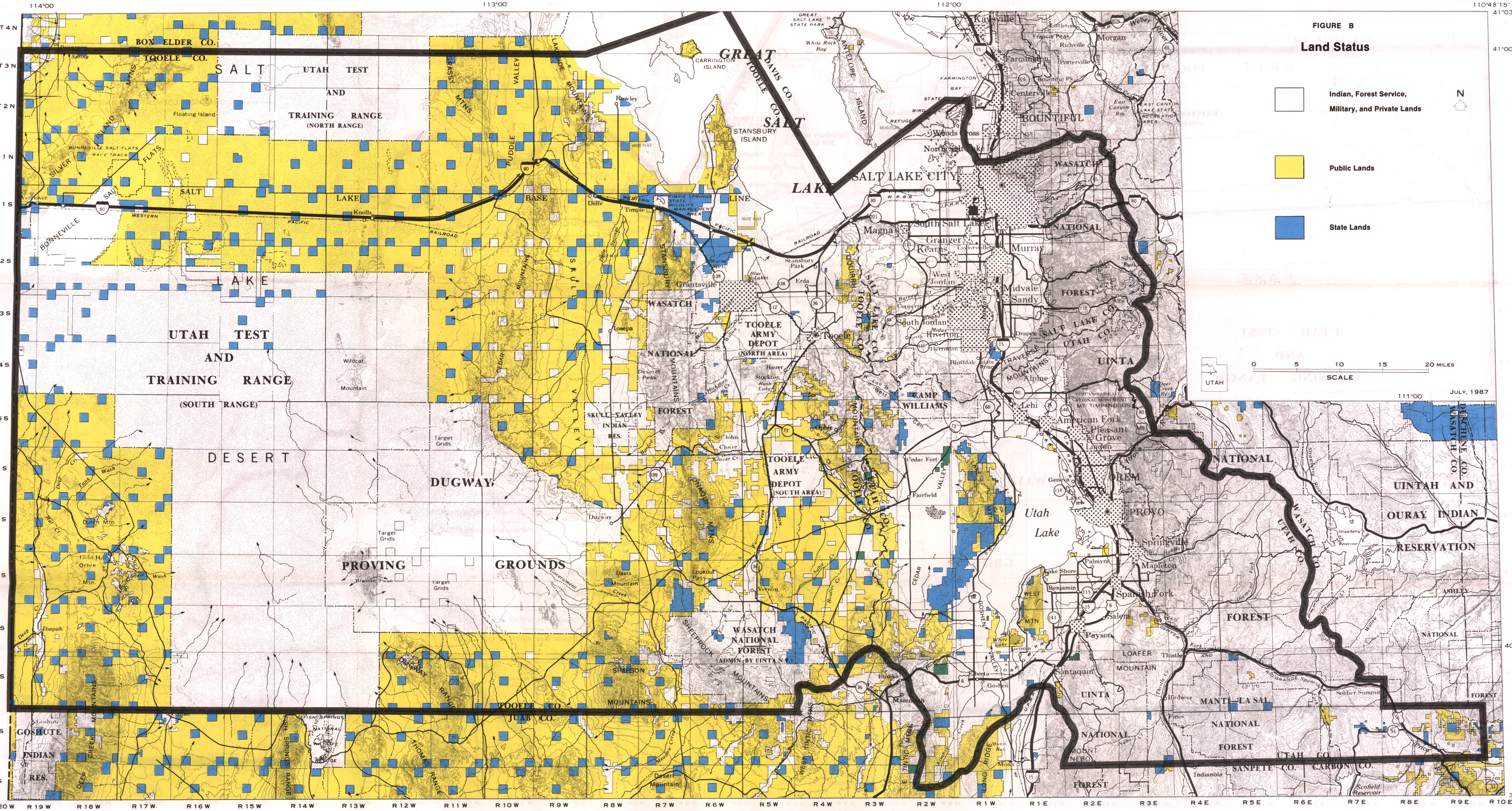
PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT



PONY EXPRESS RESOURCE AREA

SALT LAKE DISTRICT