

Section 6. *Lessee's (Permittee's) Responsibility for Damages.* The lessee (permittee) shall pay the United States or its tenant, as the case may be, for any and all damage to or destruction of property caused by lessee's (permittee's) operations hereunder, and shall save and hold the United States or its tenants harmless from all damage or claims for damage to persons or property resulting from operations under this lease (permit).

Section 7. *Compliance With Regulations.* The lessee (permittee) shall comply with all the rules and regulations of the Secretary of Agriculture governing the national forests, national grass lands, or other lands under his jurisdiction.

Section 8. *Local Agent.* The lessee (permittee) shall, unless otherwise authorized, prior to the beginning of operations appoint and maintain at all times during the term of this lease (permit), a local agent upon whom may be served written orders or notices respecting matters contained in this lease (permit), and to inform the Forest Service in writing of the name and address of such agent. If a substitute agent is appointed, the lessee (permittee) shall immediately inform the Forest Service.

Section 9. *Prior Uses and Claims; Other Uses.* This lease (permit) shall be subject to all privileges and uses heretofore duly authorized and all prior valid claims. It shall also be subject to any other lawful uses by the United States, its lessees, permittees, licensees, and assigns, provided that such uses shall not prevent, obstruct or unduly interfere with the lessee (permittee) in the exercise of any privileges granted hereby.

Section 10. *Inspection and Records.* The lessee (permittee) shall hold open at all times for inspection by a duly authorized representative of the Forest Service any books of account covering the operations conducted under this lease (permit) and the sale of materials obtained therefrom and keep such additional records and submit such additional reports as may be required by the Forest Service in the interest of the United States. He shall permit at all reasonable times inspection by any duly authorized representative of the Forest Service of the lease (permit) area and all improvements, works, machinery, equipment pertaining to operations and surveys or investigations under this lease (permit).

Section 11. *Performance by Other than Lessee (Permittee).* The acquisition or assumption by another party under an agreement with the lessee (permittee) of any right or obligation of the lessee (permittee) under this lease (permit) shall be ineffective as to the Forest Service unless and until the Forest Service shall have been notified of such agreement and shall have recognized and approved it in writing; and in no case shall such recognition or approval

- (a) Operate to relieve the lessee (permittee) of the responsibilities or liabilities he has assumed hereunder; or
- (b) Be given unless such other party
 - (1) Is acceptable to the Forest Service as a lessee (permittee) and assumes in writing all of the obligations to the Forest Service under the terms of this lease (permit) as to the incomplete portion thereof, or
 - (2) Acquires the rights in trust as security and subject to such conditions as may be necessary for the protection of the public interests.

Section 12. *Suspension.* All or any part of the operations under this lease (permit) may be suspended by the Forest Service, by notice in writing, if the provisions of this lease (permit) are disregarded.

Section 13. *Termination.*

(a) The Forest Service may, upon reconsideration of the conditions existing at the date of this lease (permit) and in accordance with which the terms of this lease (permit) were fixed, and with the consent of the lessee (permittee), terminate this lease (permit), but in the event of such termination the lessee (permittee) shall be liable for any damages sustained by the United States arising from the lessee's (permittee's) operations hereunder.

(b) If the lessee (permittee) breaches any of the provisions of this lease (permit), the Forest Service may serve written notice of such breach upon the lessee (permittee) and if such breach is not remedied within thirty (30) days after such notice, the Forest Service may terminate this lease (permit).

Section 14. *Removal of Improvements.* Upon abandonment, relinquishment, termination, or cancellation of this lease (permit), the lessee (permittee) shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this lease (permit). If the lessee (permittee) fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the lessee (permittee) of liability for the cost of their removal and restoration of the site.

Section 15. *Officials not to Benefit.* No Member of, or Delegate to, Congress, or Resident Commissioner, shall be admitted to any share or part of this lease (permit) or to any benefit that may arise therefrom unless it is made with a corporation for its general benefit.

Section 16. *Covenant Against Contingent Fees.* The lessee (permittee) warrants that no person or agency has been employed or retained to solicit or secure this permit upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial agencies maintained by the permittee for the purpose of securing business. For breach or violation of this warranty, the Forest Service shall have the right to annul this lease (permit) without liability or, in its discretion, to require the lessee (permittee) to pay, in addition to the permit price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

Section 17. *Nondiscrimination in Employment.*¹

[To be attached]

¹ Does not apply to transactions not exceeding \$10 000

APPENDIX I
FACILITIES
SUMMARY LISTS

LMP FACILITIES LIST

D.1 FILLMORE DISTRICT

SOLITUDE GUARD STATION BUNKHOUSE
BUILDING REPAIR
WATER & SANITATION CONST.
TRAILER FACILITY
ROAD MAINTENANCE & RECONST.
FENCING

FLAMMABLE STORAGE BLDG.

RADIO HOUSING & MAINTENANCE

FIRE CACHE - DOOR REPLACEMENT

ROCKWOOD GUARD STATION
ROOF REPLACEMENT & BUILDING MAINTENANCE
WATER & SANITATION CONST.
TRAILER FACILITY
ROAD MAINT. & RECONST.
FENCING

FILLMORE WAREHOUSE SITE
FLOOR RECONST.
RANGE EQUIPMENT SHED
BLDG. MAINTENANCE
WAREHOUSE ADDITION

INDIAN SPRINGS GUARD STATION
GENERAL REPAIR & MAINTENANCE
WATER & SANITATION CONST. (OR REMOVE &
ROAD MAINTENANCE SALVAGE EXISTING
FENCING FACILITIES)
TRAILER FACILITY

RED VIEW GUARD STATION
GENERAL REPAIR & MAINTENANCE
WATER & SANITATION CONST.
TRAILER FACILITY
FENCING
ROAD MAINTENANCE & RECONST.

PAHVANT GUARD STATION
GENERAL REPAIR & MAINTENANCE
TRAILER FACILITY
ROAD MAINTENANCE & RECONST.
FENCING

D.2 LOA DISTRICT

ELKHORN GUARD STATION
SANITATION SYSTEM - CONST.
FENCING
BUILDING REPAIR & MAINTENANCE
HORSE CORRAL RECONST.

CLEAR CREEK GUARD STATION
TRAILER PAD
WATER & SANITATION SYSTEM CONST.

FISHLAKE ADMINISTRATIVE SITE
UPGRADE ELECTRICAL SERVICE
TRAILER FACILITIES

D.3 BEAVER DISTRICT

BEAVER WAREHOUSE SITE
PAINT STORAGE BLDG-REMODEL-

INDIAN CREEK GUARD STATION
BUILDING DISPOSAL
SITE RESTORATION

BIG FLAT GUARD STATION
INSULATION
ROOFING
WATER & SANITATION CONST.
ELECTRICAL REWIRING
FENCING
ROAD MAINTENANCE & RECONST.
TRAILER FACILITY

FA&O FACILITIES

D.4 RICHFIELD DISTRICT

GOOSEBERRY ADMIN. SITE

ROAD MAINTENANCE & RECONST.
BUILDING REPAIR
BUILDING REMODELING-SHOWER & BATH HOUSE
TRAILER FACILITY
ELECTRICAL REWIRING
STAIR BRACES

DRY CREEK GUARD STATION

WATER & SANITATION CONST.
TRAILER FACILITY
ROAD MAINTENANCE & RECONST.

MT. TERRILL GUARD STATION

WATER & SANITATION CONST.
BUILDING REPAIRS-ROOF & FOUNDATION
INSULATION
ROAD MAINTENANCE & RECONST.
BUNKHOUSE FLOOR REPLACEMENT
TRAILER FACILITY

MUSINIA GUARD STATION

TRAILER FACILITY
WATER & SANITATION CONST.
ROAD RECONST.
CORRAL CONST.

BUILDING MAINTENANCE

WATER SYSTEM O & M

KOOSHAREM GUARD STATION

BUILDING DISPOSAL
TRAILER FACILITY
WATER & SANITATION CONST.
ROAD MAINTENANCE & RECONST.

APPENDIX J

ARTERIAL, COLLECTOR, AND LOCAL ROAD SCHEDULE

This table contains a summary of needed road projects that can not be funded as part of the regular budget. Construction of these projects will require funding from outside the Forest budget. Most timber sale roads will need supplementation to be economically viable.

LMP-10 YEAR ROAD CONSTRUCTION SUMMARY
ARTERIAL, COLLECTOR, AND LOCAL ROAD CONSTRUCTION/RECONSTRUCTION

FY	NAME	LOCATION	SIZE	REMARKS
1985	HOGAN PASS RD.	FREMONT/	15.4 MI.	FED. HIGHWAYS CONST.
		FREMONT JTN.		
	FREMONT RIVER RD.	FREMONT/	5.0 MI.	FED. HIGHWAYS CONST.
		JOHNSON RES.		
	MONROE MTN. #3		2.5 MI.	FINISH FINAL WRK
	CHALK CREEK		5.0 MI.	ERFO FLOOD REPAIR
	SALINA- WILLOW CREEK		20.0 MI.	ERFO FLOOD REPAIR
	ERFO PROJECTS (MISC)		20.0 MI.	ERFO FLOOD REPAIR
1986	HOGAN PASS/			
	FREMONT RIVER		\$4.5 MM	FED. HIGHWAYS CONST.
	KENTS LAKE	LABARON	5.0 MI.	NO MONEY SET UP
	BIG LAKE	MONROE MT.	4.0 MI.	NO MONEY SET UP
1985	NEFFS RES. T.S.		1.0 MI.	NO MONEY SET UP
	CIRCLEVILLE #2 T.S.		0.5 MI.	NO MONEY SET UP
	KENT LAKE ASPEN T.S.		0.5 MI.	NO MONEY SET UP
1986	NEFFS RS. #2 T.S.		1.0 MI.	NO MONEY SET UP
	WHOOTEN SPGS. T.S.		1.0 MI.	NO MONEY SET UP
1987	HOGAN PASS		\$3.7 MM	FED. HIGHWAYS CONSTR.
	FREMONT RIVER		\$1.4 MM	FED. HIGHWAYS CONSTR.
	KENT'S LAKE	LABARON	5.0 MI.	
	BIG LAKE	MONROE MT.	4.0 MI.	
	FORSYTH	ELKHORN	4.0 MI.	
	WIFFS PASTURE T.S.		0.3 MI	
	H. HUNT T.S.		1.5 MI	
	LONG FLAT ASPEN T.S.		0.5 MI	
	CLOVER FLAT T.S.		1.0 MI	
1988	HOGAN PASS		\$3.0 MM	FED HIGHWAYS CONST.
	FREMONT RIVER			FED HIGHWAYS CONST.
	KENTS LAKE UI53		5.0 MI	
	FORSYTH	ELKHORN	2.5 MI	
	SAND ROCK RIDGE		5.5 MI	
	HANCOCK T.S.		1.0 MI	
	LAKE PEAK		0.5 MI	
	WHITE LEDGE ASPEN		1.0 MI	

LMP-10 YEAR ROAD CONSTRUCTION SUMMARY (CONT)
 ARTERIAL, COLLECTOR, AND LOCAL ROAD CONSTRUCTION/RECONSTRUCTION

FY	NAME	LOCATION	SIZE	REMARKS
1989	HOGAN PASS			
	GOOSE BERRY	SEVEN MI.	4.0 MI	
	SAND ROCK RIDGE		4.0 MI	
	SUN GLOW		1.0 MI	
	CASTLE ROCK		1.0 MI	
	BIG JOHNS FLAT		2.0 MI	
	LOUSY JIM T.S. (D.3)		0.5 MI	
DOE FLAT (D.4)		0.5 MI		
1990	GOOSEBERRY	SEVEN MI	4.0 MI	RECONST.
	BIG JOHN'S FLAT		1.0 MI	RECONST.
	MAPLE GROVE CG		4.0 MI	REPAVE
	NEFF'S #3 T.S.		1.0 MI	
	FARNSWORTH ASPEN		0.5 MI	
1991	GOOSEBERRY	SEVEN MI	4.0 MI	RECONST.
	MONROE CANYON		3.0 MI	ART.
	MONROE CANYON		4.0 MI	COLL.
	DEEP CREEK T.S. (D.2)		1.0 MI	
	ANNABELLA T.S. (D.4)		1.0 MI	
1992	GOOSEBERRY	SEVEN MI	4.0 MI	RECONST.
	MONROE CANYON		8.0 MI	COLLECTOR RECONS.
	SNOW BENCH T.S. (D.2)		0.5 MI	
	FAT CHANCE (D.3)		1.5 MI	
	BARNEY LAKE (D.4)		0.5 MI	
1993	GOOSEBERRY	SEVEN MI	4.0 MI	
	BIG JOHN'S	MARYSVALE	9.0 MI	
	NEAL'S FLAT T.S.		1.0 MI	
	INDIAN PEAK (D.4)		0.5 MI	
1994	GOOSEBERRY	SEVEN MI	4.0 MI	
	WEST WILLOW CREEK		9.0 MI	ARTERIAL SPOT RECONST.
	WILLIES FLAT T.S.		1.0 MI	
	NIELSEN CANYON T.S.		1.0 MI	
1995	RICHFIELD PIONEER		4.0 MI	
	KOOSHAREM		5.0 MI	
	ASSORTED T.S.		2.5 MI	
1996	RICHFIELD PIONEER		4.0 MI	
	CORN CREEK	ADELAIDE	5.0 MI	
	ASSORTED T.S.		2.5 MI	

ROAD CLASS SUMMARY
RE-CONSTRUCTION SCHEDULE & PRIORITY LISTING

D1	ARTERIAL ROADS	MILES
2	RICHFIELD PIONEER	24.3
5	JOSEPH - ROCKWOOD	5.8
1	CHALK CREEK	15.3
3	WILLOW CREEK	9.1
6	OAK CREEK	7.0
4	CORN CREEK-ADELAIDE	5.4
7	LEAMINGTON PASS	16.9
		83.8

D1	COLLECTOR ROADS	MILES
3	ELSINORE	5.8
3	ROCKWOOD	8.2
4	WATTS MTN	9.8
1	SAND ROCK RIDGE	9.1
9	ROBINS VALLEY	9.5
2	MAPLE GROVE CG	3.9
6	EIGHT MILE	15.8
5	CORN CREEK- PAHVANT	14.7
		72.9

D2	ARTERIAL ROADS	MILES
5	FISHLAKE HWY	15.8
1	FREMONT RIVER	11.2
2	HOGAN PASS	26.9
3	SEVEN MILE (GOOSEBERRY)	6.6
4	FISHLAKE-JOHNSON VAL	5.8
		66.3

D2	COLLECTOR ROADS	MILES
5	POLK CREEK	4.8
1	FORSYTH-ELKHORN	6.4
2	SUNGLow CG	1.0
6	FREMONT-LAST CHANCE	6.3
7	BAKER RANCH	5.7
3	MYTOGE MTN	14.9
4	HANCOCK FLAT	9.1
		48.2

D3	ARTERIAL ROADS	MILES
3	BIG JOHNS FLAT	3.1
2	U-153	36.3
1	KENTS LAKE-LABARON	13.8
		53.2

D3	COLLECTOR ROADS	MILES
1	INDIAN CREEK	10.1
2	BIG JOHNS/MARYSVALE	9.0
4	COTTONWOOD-BULLION	17.0
3	KIMBERLY-BEAVER	20.8
7	SHINGLE CREEK	6.2
5	SO. CREEK- COYOTE	17.4
8	TEN MILE	3.8
6	CASTLE ROCK CG	1.0
		85.3

D4	ARTERIAL ROADS	MILES
6	SUFco-CONVULSION	10.4
4	SOLDIER CANYON	6.6
5	REX'S RESERVOIR	5.8
2	MONROE CANYON	3.0
1	GOOSEBERRY/SEVENMILE	19.2
3	WILLOW CREEK	30.2
		75.2

D4	COLLECTOR ROADS	MILES
6	WATER HOLLOW	8.9
8	DUNCAN MTN	10.2
7	OLD WOMAN	17.4
5	LOST CREEK-REX'S RES.	11.0
9	GATES LAKE	2.8
4	GREENWICH	7.2
3	KOOSHAREM	5.4
1	BIG LAKE (MONROE MTN)	38.4
2	MONROE CANYON	20.0
		121.3

APPENDIX K
LANDOWNERSHIP PLAN

Objectives

The primary purpose of this plan is to facilitate better management of the Forest resources through consolidation of both private and Federal lands within and adjacent to the National Forest. Land adjustments in accordance with the plan will:

1. Improve the planning and layout of timber sales. In some cases landowner-ship lines will be adjusted where they fall across timber types, drainages, or on slopes where it is not feasible to set up working units because of private lands.
2. Improve efficiency of livestock management. Allotment Management Plans will be set up without restriction in relation to topography, cover, and soil types. Also, better distribution of cattle on the range and implementation of intensive management systems of grazing will be facilitated.
3. Increase the feasibility of watershed treatment programs. Many flood-producing areas on acquired lands could be readily treated whereas with several landowners involved, cooperation in land treatment is difficult.
4. Improve the development of the transportation system for fire suppression and resource management. With benefit of land consolidation, Forest Service planning, location, and construction of roads will necessarily be carried out more effectively.
5. Increase recreation opportunities. Recreation planning will be keyed to public demand for camp and picnic sites in given areas. Most important, potential use of recreation areas will be realized with a better organized land net established through land exchanges and purchases.

Implementation of the Landownership Plan will greatly improve general Forest administration so that effective resource management may be carried out more adequately. Recreation and aesthetic values in drainages threatened by floods originating on private lands can be only partly protected at the present time. The need for coordination involving other soil, water, and land use relationships is also obvious. Consolidation of State of Utah and private lands will give the landowners more incentive to fence and properly manage their property, with promise of lower operating costs.

Attainable Goals

In the past 9 years, the Fishlake Forest land exchange program has had moderate success despite the complicated land pattern and many District administrative problems.

Annually, a few landowners express an interest in land exchanges in order to acquire lands adjacent to the Forest boundary or to group their holdings in a workable unit.

Based on indicated interest in land adjustments, an average of three or four cases can be negotiated annually. As the program gets better known and is accepted by some, others will become desirous of making exchanges. In a few years, the average number of exchange cases may increase.

Hopefully, within a fairly short time frame, funds will be available to conduct a land purchase program on the Forest. Land valuations remain moderate, but could accelerate within a few years as demand for summer homesites and other land uses increases. Some speculation is evident on the Richfield, Beaver, and Loa Ranger Districts where lands are being purchased for later subdivision and sale as cabin lots. These lands very likely will be lost for possible acquisition. Therefore, Government acquisition of recreation lands through purchase must be accomplished soon.

Transfers of certain lands from Bureau of Land Management to National Forest jurisdiction are being studied with the BLM. Most of these BLM lands are for grazing purposes and are used by the same permittees who hold permits to use adjacent National Forest System lands, with some allotments on both agencies' land administered either by Forest Service or BLM. The BLM lands would be best described as located from the Forest boundary west to Interstate 15 or east to U.S. 89, another major highway. Both highways run parallel to the Forest boundary lines. Although, when Interstate-70 through the Richfield area is completed, not much BLM acreage will remain between the new highway and the Forest boundary.

A tract of land south of Fish Lake is not isolated from other BLM holdings but is well suited for National Forest purposes because of terrain and topography. The same permittees graze both areas.

(These BLM jurisdictional transfers were submitted in November 1983, in answer to R.O. letter of 7/22/1983.)

Opportunities should be pursued to transfer these BLM lands to the Forest Service for administration.

Priorities

In most cases, the Priority I lands are those most desirable for purchase. However, Priority I acquisition was also given those lands currently "tied up" in land exchange cases; two cases in particular being near completion.

Many Priority III lands are those which probably cannot be acquired in the near future. Most of these lands are under cultivation, comprise an important part of a livestock operation, or belong to a larger block that lends itself to a private operation. Some State lands are currently leased to private entities.

Most State lands are classed under Priority II and III. They are quite uniform in importance as the more valuable lands have gone to patent. A large exchange transaction with the State of Utah would be desirable, and acquisition and consolidation of these State lands would greatly assist Forest administration.

Lands Proposed for Disposal

Most Forest lands offered for exchange will come from the lower areas, outside municipal supply watersheds. In some areas, lands will be offered that are bounded on two sides or more by private lands where serious administration problems exist, and blocking of private lands is desired. A large block of land in the Forshea Mountain area (T. 29 S., R. 2 and 2-1/2 W.) of the Richfield Ranger District is planned for possible disposal to the State of Utah in exchange for their scattered holdings throughout the Forest.

The block of National Forest lands at the southern tip (Garfield County) and on the western side of the Forest, on Beaver Ranger District, is also a possible disposal tract to the State of Utah in exchange for scattered State holdings.

Those disposal lands identified in the patented mining claims area of the Tushar Range, Beaver Ranger District, were also identified in the Assets Management Program, and are comparatively unimportant for resource production purposes. Mining and exploratory work on these claims are active, and the intermingled National Forest lands are difficult to locate and manage, many being of extremely small acreage. Some of these tracts may be disposed of under the authority of the Small Tracts Act.

The block of lands identified on the east side of the Beaver Ranger District could be administered by the BLM if the BLM lands are not transferred to the Forest Service (T. 29 S., R.3 & 4 W).

Lands identified for disposal in the far northeastern reaches of the Forest (T. 14, 15, & 16 S., R. 3 W.), near adjoining BLM lands, could best be administered by one Federal agency, the BLM, since they already administer the allotments which graze both National Forest lands and the BLM lands.

The objective will be to dispose of lands better suited to management and access by others. When Project Bold is completed, the State of Utah will be seeking additional lands south of the Forest, in the vicinities of Piute and Otter Creek Reservoirs, to help build up their recreation interests, both fishing and hunting. However, consideration will be given to reserving lower National Forest System lands which are keyed to the survival of deer herds.

LANDS PROPOSED FOR DISPOSAL

<u>Acres</u>	<u>Projected Class of Use</u>
320 1/	Recreation (State of Uteh, U-50511)
150 1/	Grazing (Parker Ranches, Inc., U-50510)
5,806	Grazing
1,236	Subdivision
4,376	Grazing/subdivision
5,473	Mining/subdivision/grazing
6,460 2/	Grazing
3	Commercial development
21	Residential/agriculture
2,743	Industrial development
5,642	Grazing (BLM only)
4,346	Grazing/agriculture/subdivision
1,680	Grazing/agriculture
<u>12,391</u>	Grazing/wildlife/recreation (State of Utah only in
50,647	exchange for State lands)

1/ exchange case nearing completion

2/ to BLM, if adjoining BLM outside F.S. boundary not transferred to NFS

LANDS PROPOSED FOR ACQUISITION

<u>ACRES</u>	<u>LANDOWNERSHIP</u>	<u>PROJECTED CLASS OF USE</u>	<u>PRIORITY</u>
600	State	Recreation	I
640	State	Wilderness study area	I
640 1/	State	Grazing	I
3,360	State	Grazing	II
640	State	Timber	II
21,010	State	Grazing	III
<u>480</u> (22,370)	State	Commercial development	III
115,705 2/&4/	BLM	Grazing	II
<u>7,520</u> 3/&4/ (123,225)	BLM	Grazing	II
1,200	private	Recreation	I
17	private	Agricultural/grazing	I
200 1/	private	Grazing	I
1,800	private	Grazing	II
960	private	Watershed	II
160	private	Wildlife	III
13,224	private	Grazing	III
<u>160</u> (17,721)	private	Commercial development	III
168,316	TOTAL ACRES		

1/ exchange case nearing completion

2/ BLM lands outside F.S. boundary for transfer to NFS

3/ BLM lands outside F.S. boundary if adjacent NFS lands not disposed of

4/ acreage determined from map; i.e., estimate

Total Priority I acres	3,297
Total Priority II acres	129,985
Total Priority III acres	<u>35,034</u>
Total All Acres	168,316

APPENDIX L

FISHLAKE NATIONAL FOREST FIRE ACTION PLAN

I. INTRODUCTION

Following is a list of the desired objectives resulting from the use of prescribed fire on the Fishlake National Forest.

1. Reduce fire suppression costs. (man-hrs/yr)
2. Increase forage production for livestock. (AUM's/yr)
3. Improve wildlife habitat. (acres/yr)
4. Increase forage production for wildlife. (lbs/acre/yr).
5. Reduce fuel loading in conifer.

Specific objective outputs will be located under each zone immediately following:

A. PINYON--JUNIPER--ZONE 1

1. Dwarf tree species predominate.
 - a. Average height of woody plants is 6 feet or greater.
 - (1) Woody plants occupy two-thirds or more of the site.
 - (a) One-fourth or more of woody foliage is dead.

Permit low and high intensity fires to burn within the guidelines of prescribed fuel and weather conditions. In the event that a fire is threatening life or special situation Zone 4 or escape from the FMA, suppression forces would consist of ground personnel with hand tools, pumps, tractors, or air attack bombers.

Low intensity fires in PJ will consume foliage only on a few trees in the close proximity of each other. The litter will be singed and only partially consumed with irregular and spotty burning.

High intensity fires consume foliage on numerous trees and only ashes remain on the soil surface.

With low intensity fires, the opening will be reoccupied by grasses, forbs and/or brush species. The difference between the two intensities is that the high intensity fire will create a larger opening. The possibility that a future fire will maintain that larger opening is fairly high. Therefore, the PJ monotype will be broken up and vegetative mosaic maintained.

The specific objective output for this fuel type are as follows:

1. Reduce Fire Suppression Costs by 58% (from 2983 average man-hours/yr to 1253 average man-hours/yr).
2. Increase Forage Production for Livestock by 0.5 AUM's/acre the first growing season following a burn.
3. Improve Wildlife Habitat by 250 acres/yr.
4. Increase Forage Production for Wildlife by 500 lbs/acre/yr (4000 lbs/acre/yr with seeding).

B. SAGE-GRASS, BRUSH, ASPEN - ZONE 2

1. Sage-Grass
 - a. Brush species predominate.
 - (1) Average height of woody plants is less than 6 feet.
 - (a) Woody plants occupy less than two-thirds but greater than one-third of the site.
2. Brush
 - a. Brush species predominate.
 - (1) Average height of woody plants is 6 feet.
 - (a) Woody plants occupy two-thirds or more of the site.
3. Aspen
 - a. Deciduous broadleaf species predominate.
 - (1) The area has not been thinned or partially cut.
 - (a) The overstory is in full leaf.
 - (b) The overstory is dormant; the leaves have fallen.

Permit low and moderate intensity fires to burn within the guidelines of prescribed fuel and weather conditions. In the event that the prescribed fuel and weather conditions are exceeded or the fire is threatening life or special situation Zone 4 or escape from the FMA, suppression forces would consist of ground personnel with hand tools, or pumpers, or air attack bombers. Tractors would only be considered where the fire is threatening life or special situation Zone 4 or escape from the FMA.

Low intensity fires in sagebrush and grass burn less than 40 percent of the brush canopy. Irregular and spotty burning occur and some leaves and small twigs remain on the plants either unharmed or slightly singed. Some litter and duff are charred but not ashed and a few perennial grass crowns are killed.

The burn may cover a large area but will be spotty and non-uniform.

Moderate intensity fires in sagebrush burn between 40 and 80 percent of the plant canopy. The remaining charred stems are 4 inches or longer and greater than 0.25-0.5 inches in diameter. Most litter and duff are charred

but not ashed and some perennial grass crowns are killed. The burned area takes less of a mosaic pattern than it does with a low intensity fire. It is more uniform in shape but will still have some unburned islands interspersed with the burned area.

The specific objective outputs for this fuel type are as follows:

1. Reduce Fire Suppression Costs by 63% (from 4689 average man hours/yr to 1735 average man hours/yr).
2. Increase Forage Production for Livestock by 0.45 AUM's/acre the first growing season following a burn.
3. Improve Wildlife Habitat by 1500 acres/yr.
4. Increase Forage Production for Wildlife by 4000 lbs./acre/yr (9000 lbs /acre/yr with seeding).

C. SHORT NEEDLE CONIFER- ZONE 3

1. Conifer species predominate.
 - a. Woody shrubs and/or reproduction dominate as understory fuels.
 - (1) The understory seldom burns.
 - (a) The needles are less than 2 inches.

Permit low intensity fires to burn within the guidelines of prescribed fuel and weather conditions. In the event that the prescribed fuel and weather conditions are exceeded or the fire is threatening life or special situation Zone 4 or escape from the FMA, suppression forces would consist of ground personnel with hand tools, or pumpers, or air attack bombers. Tractors would only be considered where the fire is threatening life or special situation Zone 4 or escape from the FMA.

A low intensity fire in short needle conifer would burn less than 40 percent of the canopy. The burning would also be irregular and spotty with little scorching of the understory. There would be light sapling mortality with 20 to 60% of the dead downed fuel 0 to 3 inches in diameter being consumed.

The specific objective outputs for this fuel type are as follows:

1. Reduce Fire Suppression Costs by 35% (from 5037 average man-hours/yr to 3224 average man-hours/yr).
2. Increase Forage Production for Livestock by 0.25 AUM's/acre the first growing season following a burn.
3. Improve Wildlife Habitat by 250 acres/yr.

4. Increase Forage Production for Wildlife by 500 lbs./acre/yr (10,000 lbs/acre/yr with seeding).
5. Reduce Fuel Loading in Conifer by 50% for dead downed fuels 0 to 3 inches in diameter.

II. FIRE MANAGEMENT ZONES

The following zones were selected by vegetative types. Corresponding National Fire Danger Rating System (NFDRS) and fire behavior fuel models representing each vegetative type are located in the righthand columns.

<u>Zone Number</u>	<u>Acres in Each Zone</u>	<u>Vegetative Type</u>	<u>NFDRS FUEL MODEL</u>	<u>Fire Behavior</u>
1	197,424	Pinyon-Juniper	F	6
2	580,518	Sage-Grass, Brush, Aspen	T	5
3	48,031	Short Needle Conifer	H	8
4	574,905	Special Situation - F.S.	N/A	N/A
4	101,209	Special Situation - State and private	N/A	N/A

Special situation Zone 4 includes such areas as Forest Service campgrounds, Forest Service administrative sites, State and private land, water lines, powerlines, high value timber areas, watershed protection areas and heavy traveled road corridors. Suppression action will be taken on fires that either occur in Zone 4 or are threatening to burn into Zone 4.

Photos illustrating the three vegetative zones are included in the Beehive Peak Fire Management Area Environmental Assessment.

III. ANTICIPATED FIRE BEHAVIOR

The following are examples of the possible fire behavior that could be anticipated in each zone.

PINYON-JUNIPER- ZONE 1

Permit low and high intensity fires to burn within the guidelines of prescribed fuel and weather conditions.

The NFDRS fuel type F2P2 will be used to predict the BI for planning purposes. It must be noted that this fuel type will usually overrate the fire behavior at low wind speeds due to a lack of continuous ground fuel between the pinyon and juniper trees. The maximum BI for this fuel type recorded at Chalk Creek Weather Station (5760 feet) is 211. The maximum BI for this fuel type recorded at Fish Lake Weather Station (8900 feet) is 110. The BI range for low intensity is 0 to 40. A fire with a BI of 40 burning on a 20% slope with the wind averaging 11 MPH would spread 13 feet per minute or 11.8 chains per hour. According to the fuel model the fire size in 3 hours would be 1267 acres. In a typical PJ stand it would be extremely unlikely that this would actually occur.

A high intensity fire would have a flame length of 12 feet or more.

An example of a high intensity fire in PJ with a BI of 110 burning on a 20% slope with a windspeed of 16 MPH would spread at 92 feet per minute or 84 chains per hour. The fire size is predicted at 2972 acres in 3 hours. This is unlikely since the largest PJ fire since 1951 in the Beehive Fire Management Plan area was 25 Acres in 1954. This is due primarily to the natural breaks in topography, noncontinuous nature of the fuels, and lack of ground fuels to carry a fire from tree to tree at low wind speeds.

SAGE-GRASS, BRUSH, ASPEN - ZONE 2

Permit low and moderate intensity fires to burn within the guidelines of prescribed fuel and weather conditions. In the event that the prescribed fuel and weather conditions are exceeded or a fire is threatening life or special situation Zone 4 or escape from the FMA, suppression forces would consist of ground personnel with hand tools, or pumpers, or air attack bombers. Tractors would only be considered where the fire is threatening life, special situation Zone 4, or escape from the FMA.

A low intensity fire would be obtained with a BI of 40 or less. A fire burning on a 20 percent slope in sage-grass with a BI of 40 would have a spread of 16 chains per hour. The fire would be approximately 220 acres in size 3 hours after ignition.

A moderate intensity fire would have an ERC (Energy Release Component) between 11 and 19 and a BI between 41 and 80. A fire on a 20 percent slope, with a DB of 91, a RH of 10 percent, a 20-foot wind speed of 13, a BI of 80, and ERC of 19, and a projection time of 3 hours would have a speed of 40 chains per hour, a perimeter of 383 chains, an area of 1024 acres, and an ignition component of 56.

Historically, 87 percent of the days during the season would be within this prescription at Chalk Creek Weather Station and 96 percent at Fishlake Weather Station.

The next two tables indicate the percent safe levels for being at or below a BI of 80 and an ERC of 19 using the highest historical indices and components recorded since 1965 at Chalk Creek and Fishlake Weather Stations.

CHALK CREEK (5760 FEET)-BI AND ERC

<u>PERCENT SAFE LEVEL</u>	<u>END</u>	<u>BEGIN</u>
100%	JUNE 9	OCT. 29
93%	JUNE 23	OCT. 28
86%	JUNE 24	OCT. 27
79%	JUNE 27	OCT. 25
72%	JUNE 30	OCT. 24
65%	JULY 1	OCT. 23

FISHLAKE (8900 FEET)-BI AND ERC

<u>PERCENT SAFE LEVEL</u>	<u>END</u>	<u>BEGIN</u>
100%	Aug 5	Oct 21
93%	Aug 31	Oct 20
86%	Sept 2	Oct 19
79%	Sept 3	Oct 18
72%	Sept 21	Oct 16
65%	Sept 22	Oct 15

*Signal Peak Remote Automated Weather Station (RAWS) considered equivalent to Fishlake data.

SHORT NEEDLE CONIFER - Zone 3

Permit low and moderate intensity fires to burn within the guidelines of prescribed fuel and weather conditions. In the event that the prescribed fuel and weather conditions are exceeded or a fire is threatening life or special situation Zone 4 or escape from the FMA, suppression forces would consist of ground personnel with hand tools, or pumpers, or air attack bombers. Tractors would only be considered where the fire is threatening life, special situation Zone 4, or escape from the FMA.

A low intensity fire in short needle conifer would have an ERC of 30 or less and a BI of 40 or less. A fire on a 20% slope, with a DB of 81 F, an RH of 34%, a 20-foot windspeed of 20 MPH, and a projection time of three hours would have a spread of one chain per hour, a perimeter of 13 chains, an area of one acre, and an ignition component of 33.

Historically, 44 percent of the days during the season would be within this prescription at Chalk Creek Weather Station and 74 percent at Fishlake Weather Station.

The next two tables indicate the percent safe levels for being at or below a BI of 40 and an ERC of 30 using the highest historical indices and components recorded since 1965 at Chalk Creek and Fishlake Weather Stations.

CHALK CREEK (5760 FEET)- BI AND ERC

<u>PERCENT SAFE LEVEL</u>	<u>END</u>	<u>BEGIN</u>
100%	May 8	Oct 29
93%	May 9	Oct 28
86%	May 10	Oct 27
79%	May 11	Oct 25
72%	May 12	Oct 24
65%	May 13	Oct 23

FISHLAKE (8900 FEET) - BI AND ERC

<u>PERCENT SAFE LEVEL</u>	<u>END</u>	<u>BEGIN</u>
100%	June 1	Oct 22
93%	June 2	Oct 21
86%	June 3	Oct 20
79%	June 4	Oct 19
72%	June 9	Oct 18
65%	June 21	Oct 17

Normally, in late June or early July the ERC will exceed the prescribed limits for the Sage-Grass, and Conifer Zones (greater than 19 and 30 respectively) at the lower elevations (below 8000 feet). Once this occurs, suppression action will be taken on all fires in the low elevation Sage-Grass, Conifer Zones until September 1st. Management of fires in the lower elevation areas will resume on September 1st in accordance with the above mentioned prescriptive limitations.

IV. FIRE EVALUATION TEAM

The Fire Evaluation Team's responsibility is to initially classify and periodically evaluate FMA fires with significant management potential until they are declared out. A team is not needed where fires obviously need to be controlled or with small fires less than one acre that will be managed for efficiency.

Each team will consist of a District Representative, a Supervisor's Office Representative, and a two person Monitoring Team.

Annually, qualified personnel will be documented and attached to this plan. If additional resource expertise is necessary, the Evaluation Team Leader will utilize members of the District Ranger's Staff or Supervisor's Office Specialists. There must be at least one qualified Sector Boss (under the National Interagency Fire Qualifications System - NIFQS), one qualified Fire Behavior Specialist and one Range Conservationist on the

Team to evaluate a Management Fire. It is possible for one Team Member to fill all three qualification requirements.

The Fire Evaluation Team Leader will be designated by the Forest Supervisor and documented in the file for that fire. The responsibilities of the Fire Evaluation Team Leader are as follows:

1. Make the final decision as to whether a fire is either within prescription and will be managed or is out of prescription and will be suppressed.
2. Report to the Forest Supervisor or Acting on the status of Management Fires.
3. Notify the news media of all newsworthy fires through the Forest P.I.O.

V. MONITORING TEAM

A monitoring team will be dispatched to the fire unless it is obviously out of prescription or has no management potential. The decision will be made by a line officer. Each Monitoring Team will have a number of premade fire monitoring file folders (one per fire) that will contain the following forms and work sheets:

1. Individual Fire Report Form, 5100-29
2. Fire Weather Special Forecast Request Form, WB 653-1
3. Escaped Fire Situation Analysis Form
4. Fire Behavior Work Sheets, June 1980
5. Decision Logic Chart Checklist
6. Copy of the Fishlake Fire Management Action Plan.

Each file folder will contain sections for documentation of chronological events, and photos.

In addition to the file folder, the Monitoring Team will have:

1. Packet of Topographical Maps of the Forest.
2. TI-59 Calculator
3. Belt Weather Kit
4. Camera, Film
5. Personal Portable Radio
6. First Aid Kit
7. All necessary Fire Fighting Gear (Hard Hat, Nomex Pants and Shirt, Gloves, Tools, Field Glasses, etc.)

It will be the monitoring team's responsibility to promptly initiate the documentation of pertinent data and information for each fire to which they are assigned. Each file must be regularly updated during the monitoring procedure until the fire is declared out.

There is a limit to the number of fires a monitoring team can monitor at a time. Only one fire that has potential to reach 10 acres or larger can be monitored by a team at a time. Fires of this potential must be monitored on the ground from 1200 Hr. to 1700 Hr. each day until declared out. This is a minimum requirement and can be increased if necessary.

A monitoring team can also monitor several fires that obviously have no potential for growing larger than 10 acres and at the same time monitor one fire with potential for growth larger than 10 acres. The limiting factor for the number of low potential fires they can monitor is that each fire must be initially classified by the team and then observed at least once a day until declared out. If the team cannot fill these requirements, either two monitoring teams will be utilized or suppression action taken on some of the fires.

Another requirement of the monitoring team is that they must verify what fuel type and zone each fire is burning in. This information will be relayed quickly to the other members of the Fire Evaluation Team.

Each monitoring team must include a qualified Fire Behavior Specialist.

VI. DAILY ASSESSMENT

The initial assessment of a fire will be made within the first burning period by the Fire Behavior Specialist or Fire Behavior Officer using the TI-59 calculator and Fire Behavior Fuel Models. This assessment will be studied by the Fire Evaluation Team. If a fire is determined to be within prescription during the next burning period, the team leader will schedule when the next day's assessment will be performed. The daily assessment will continue until the fire is either declared out or it is predicted that the fire will be out of prescription the next burning period. If the latter is the case suppression action will be taken on the fire.

VII. METHODS OF WEATHER MONITORING AND PREDICTION

Day-to-day weather monitoring will be done at the Chalk Creek Weather Station and at the Fishlake Signal Peak RAWs. The actual and forecasted NFDRS weather data will be received at the Richfield Interagency Dispatch, from AFFIRMS at approximately 1600 hour and posted on the fire bulletin board in the Supervisor's Office at 1630 hour. This information will also be broadcast over the Forest net radio to the four district offices at approximately 1615 hour.

As soon as this information is available a prediction will be made (approximately 1700 hour) as to whether a fire in any one of the zones will be in or out of prescription the following day. Also the actual BI and ERC for that day and forecasted for the next day will be compared to the respective dates on the Seasonal Plot (Seaplt). This will give an indication as to the long-range trend that can be expected in the next few days.

When a fire is detected in the FMA and determined to be in prescription through a correlation between on-the-ground fire behavior data and NFDRS data, it will be monitored each day until it is declared out.

At 1700 hour when the daily prediction is made for the next day, a decision will be made by the Fire Evaluation Team as to the management strategy for the following day. Here again, the Seasonal Plot for BI and ERC will be used to determine what the long range trend can be expected to do.

VIII. DETECTION REQUIREMENTS

Approximately 95% of all fires detected on the Fishlake are reported by the general public and the Utah Highway Patrol from local highways and towns. Also some fires are reported from aircraft passing over the area. The remaining 5% of the fires are detected by Forest Service employees in the field or Forest Service detection flights following lightning activity.

The District Ranger will determine if detection flights are necessary.

IX. CONTINGENCY PLAN

When an unplanned ignition is detected in the fire management area the monitoring team will be activated by the Richfield Interagency Dispatch Office. While the monitoring team is enroute the Dispatcher will assess the availability of the Forest and Regional suppression forces. The dispatcher will then notify the Fire Evaluation Team of the fire and what information is available at that time. The Fire Evaluation Team will already know what the forecasted BI values are for each Zone. Their final decision on management strategy will not be made until more complete information is received from the monitoring team. Upon receiving their report the Fire Behavior Specialist or Officer with the appropriate zone decision logic flow chart will determine if the fire is burning at the desired fire intensity. If the data indicate that the fire is burning out of prescription, the monitoring team will be directed to begin initial attack suppression action. If the initial attack effort cannot suppress the fire the Fire Evaluation Team will begin an escaped fire situation analysis. This process will continue until successful and the fire is declared out.

NOTE: The first time the ERC for the sage-grass or conifer zones is exceeded, there will be no more fires managed in those zones until September 1 and the respective ERC's and BI's are within the desired prescriptions.

If the fire is determined to be burning at the desired intensity and is expected to stay in prescription through the next burning period based on predicted fire weather and fire behavior system outputs, then the team will proceed to answer the next three questions:

1. Is the fire threatening public safety?
2. Is the clearing index less than 500 or could smoke affect a sensitive area?
3. And, is the fire threatening special situation Zone 4 or escape from the Fire Management Area?

If any one of these questions is answered affirmatively, then the Fire Evaluation Team must determine if the fire can be returned or maintained within criteria with project funds. A fire that cannot be returned or maintained within criteria with project funds must be suppressed with FFF funds.

X. FUNDING AVAILABLE FOR IMPLEMENTATION

Funding for management of fires within the FMA follows the guidelines as stated in FSM 6514.23C-1g:

"All fire protection activities in connection with a fire burning within prescription (on National Forest System lands covered by an approved Fire Management Area Plan), including actions taken to contain the fire within prescription will be financed from FFP, or when applicable, from the benefiting project funds. Fire suppression in connection with fires burning outside the prescription will be financed from FFF."

In the event that FFP funds and Benefiting Project Funds are insufficient to monitor or maintain the fire within prescription, the fire will be considered out of prescription and suppression action will be initiated and financed from FFF. If a fire goes out of prescription for any one of the listed reasons it will be declared out of prescription and suppressed with FFF.

XI. INFORMATION AND INVOLVE PLAN

As was done during the formulation of the Beehive Peak Fire Management Plan, a news article will be run in the local papers. The article will describe the general area and intent of the management area. An explanation on how the public can assist in the detection and management of fires will be included, along with phone numbers and names of people to contact 24 hours a day.

The article will be run immediately following the approval of the Forest Plan, and will state the expected implementation date of the Plan.

In addition to the news article a written explanation and map of the FMA will be available to the public at the District Ranger and the Supervisor's Offices.

When any individual from the public sector calls a Forest Service Office to report an FMA fire, they will be given information as to why this fire is different from other fires outside the FMA.

XII. PUBLIC SAFETY

It will be the Fire Evaluation Team's responsibility to assess the possible danger to the public based upon the information provided by the monitoring team. If the monitoring team encounters individuals in the vicinity of the fire, it will be their job to professionally explain the management situation and ask them politely to move to a safer area.

XIII. FOREST TO REGION REPORTING AND NOTIFICATION

The Regional Dispatcher will be immediately notified by phone or computer terminal when fires occur in sensitive areas (Fire Management Areas) or in high value class areas (Region 4 Fire Mobilization Plan 22.2-1).

After the initial phone call the fire will be reported on the daily status report as follows:

7. Prescribed Fires

- a. planned
- b. natural (FMA)
- c. new ignition
- d. planned ignition today
- e. current activity
- f. acres burned
- g. acres burned year-to-date (planned & natural)

8. Air Quality

- a. good
- b. serious
- c. critical
- d. if serious or critical, list areas of concern.

Also, when an FMA fire is detected the following agencies will be contacted by the Richfield Interagency Dispatch Center:

Manti-LaSal National Forest, Price, Utah
Dixie National Forest, Cedar City, Utah
Richfield BLM, Richfield, Utah
Capitol Reef National Park, Fruita, Utah
Utah Highway Patrol, Richfield, Utah
Appropriate County Sheriffs

XIV. POST FIRE EVALUATION

Fire - It will be extremely valuable for future planning purposes to document the actual and predicted NFDRS indexes, components, and fire weather data so they can be correlated with the actual onsite fire behavior. In turn, this information will be compared with the immediate post burn results and each fuel type's objective fire intensity description. Photographs will be a valuable and necessary tool in the evaluation.

The Decision Logic Chart Check List will be used to collect and document this information.

In time, the prescriptions can be fine tuned so that desired results can be more accurately predicted.

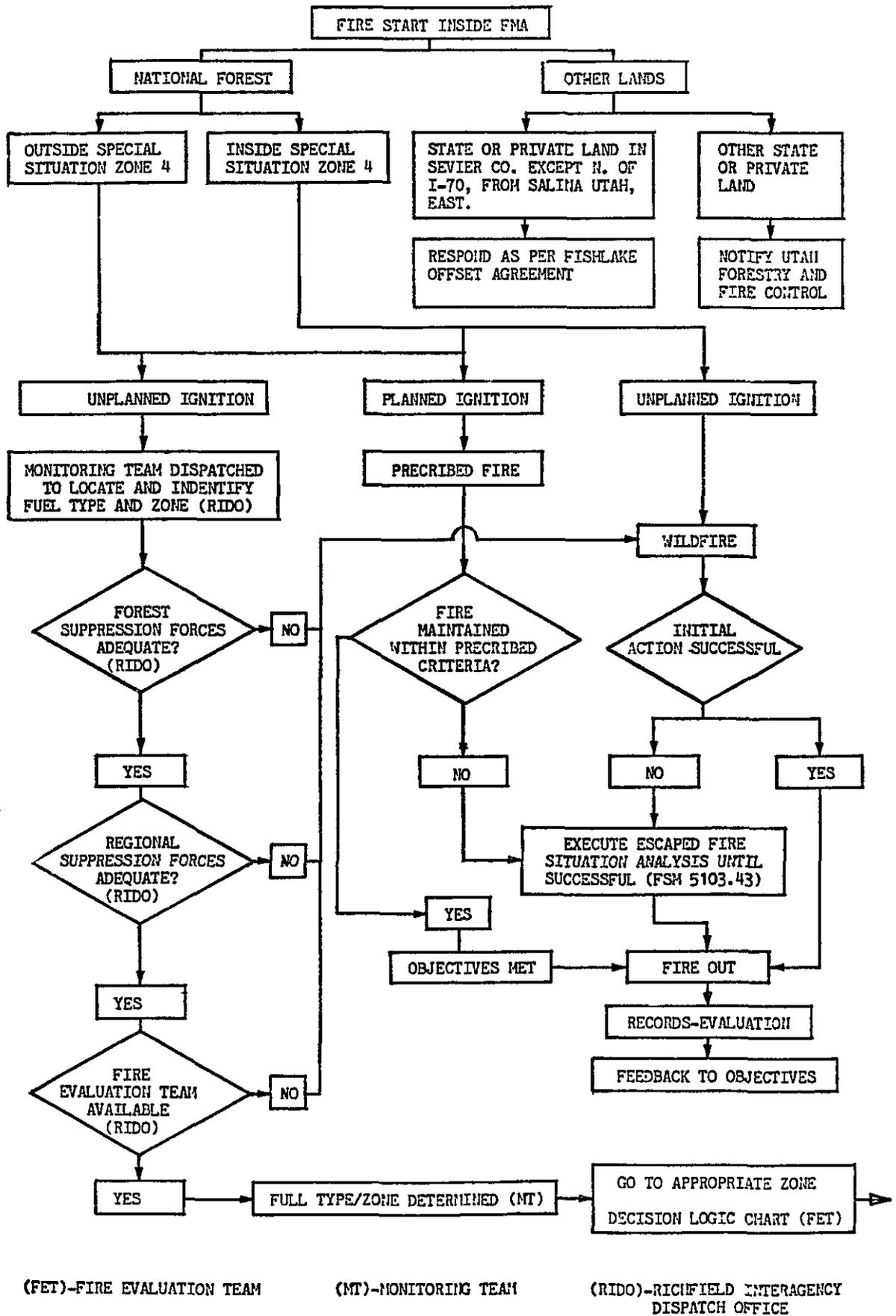
If possible, followup photographs should be taken 6 months and 3 years following the burn and compared to the actual burning conditions.

Range - Range improvement information will be gathered on all burn areas greater than 100 acres on slopes less than 30%. Site analysis transects will be run to compare the data with post second and fifth growing seasons. This will include plant composition, dry weight production of desirable and intermediate plants, cover dispersion, ground cover, and erosion index. On some areas less than 100 acres the same data will be collected.

Wildlife - Wildlife information will be gathered on all burn areas greater than 100 acres. Pellet transects will be performed to monitor improved wildlife habitat. The acres burned will be measured to determine improved wildlife habitat (acres/year). Also the vertical stratification of vegetation in the Conifer Zone will be measured for habitat diversity. On some areas less than 100 acres the same data will be collected.

Soils and Water Resources - Information concerning impacts to soil and water resources will be gathered on all burn areas greater than 100 acres on slopes greater than 30%. On some areas less than 100 acres the same data will be collected.

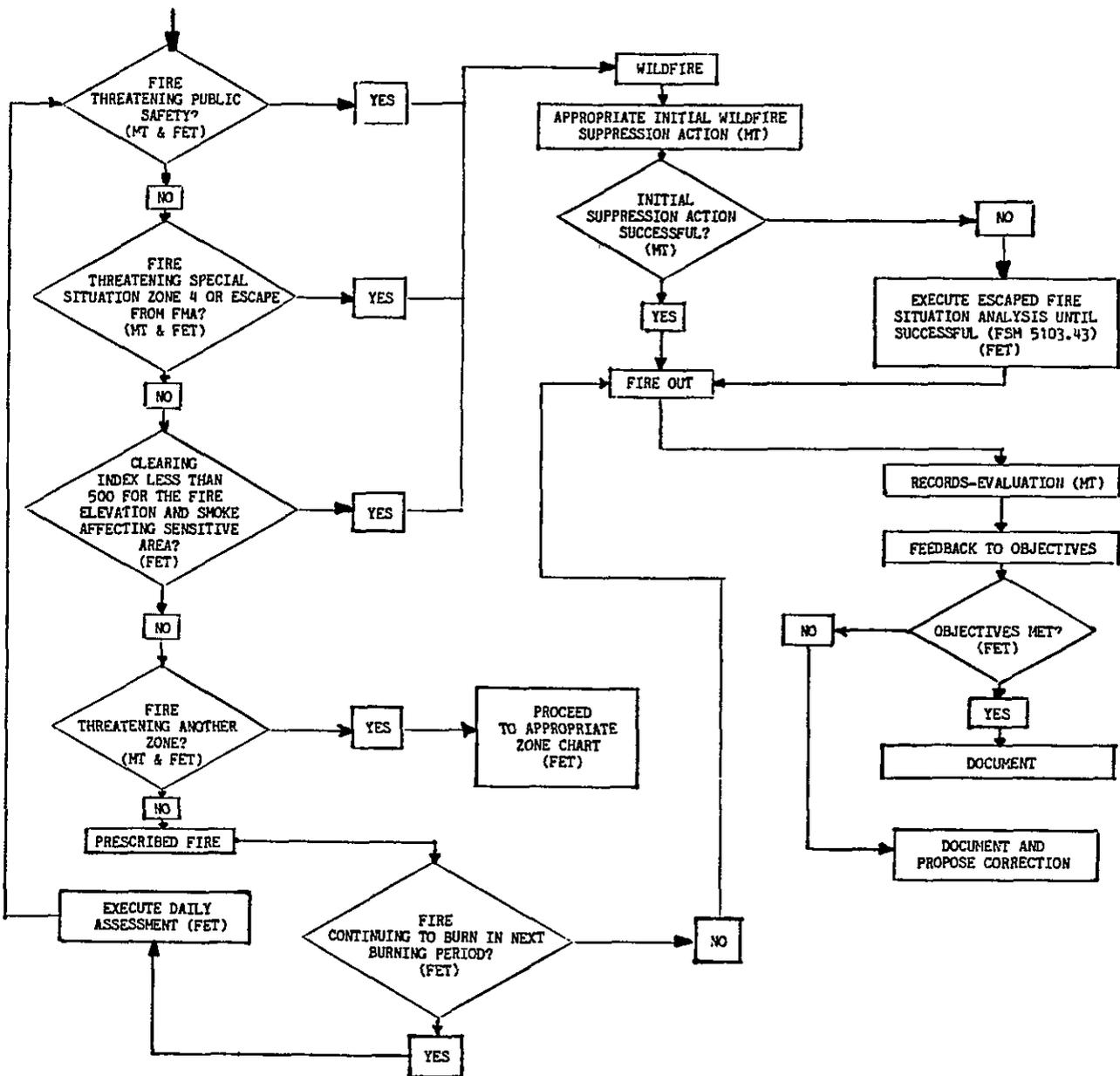
Fuel Loading- Fuel loading information will be gathered on all fires greater than 25 acres in the short needle conifer - Zone 3. The method used for collecting the data will be from the handbook for Inventory Downed Woody Material, (Brown, 1974). Samples will be taken outside and inside the burn and compared to see if the desired objectives was obtained.



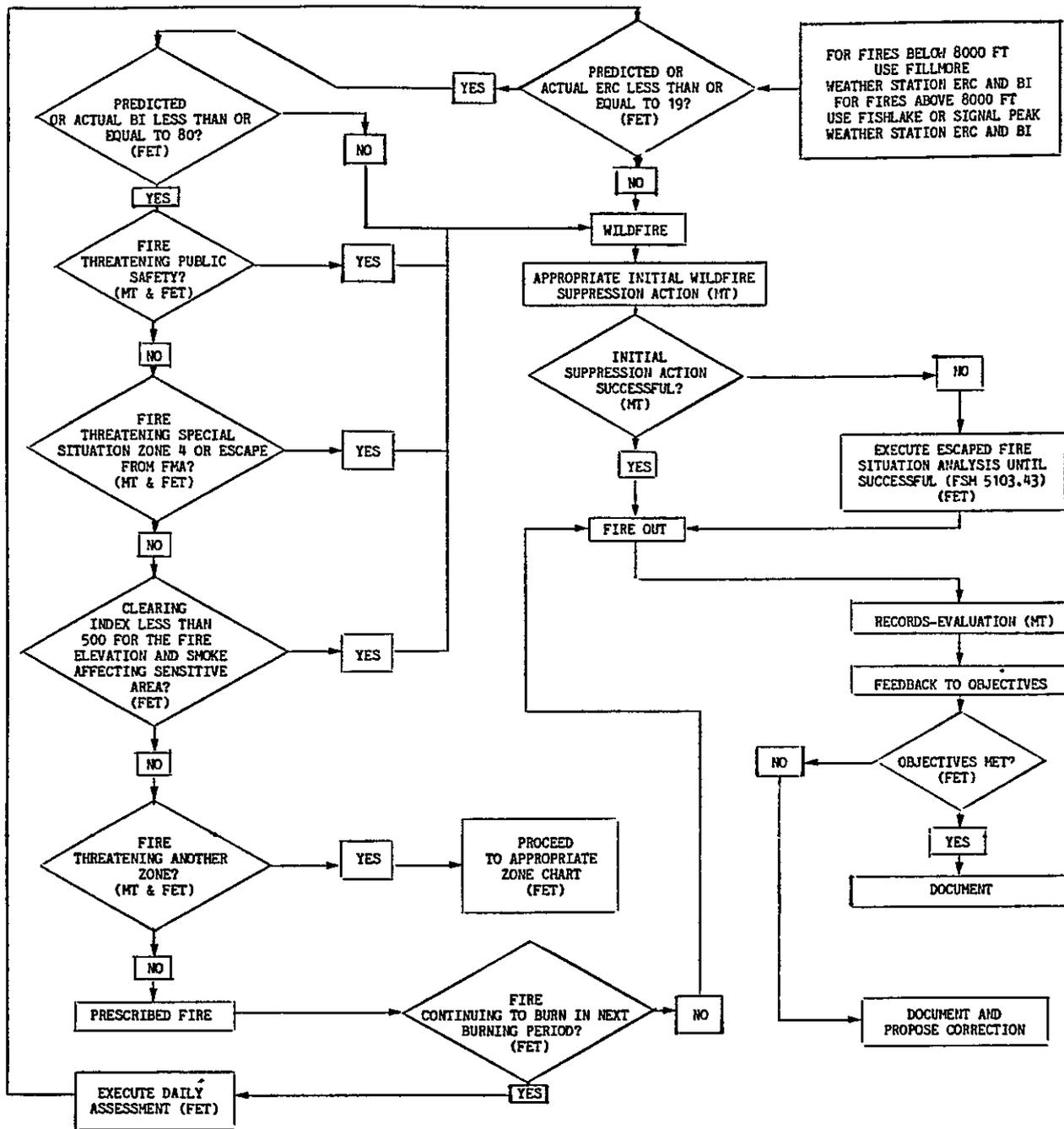
(FET)-FIRE EVALUATION TEAM

(MT)-MONITORING TEAM

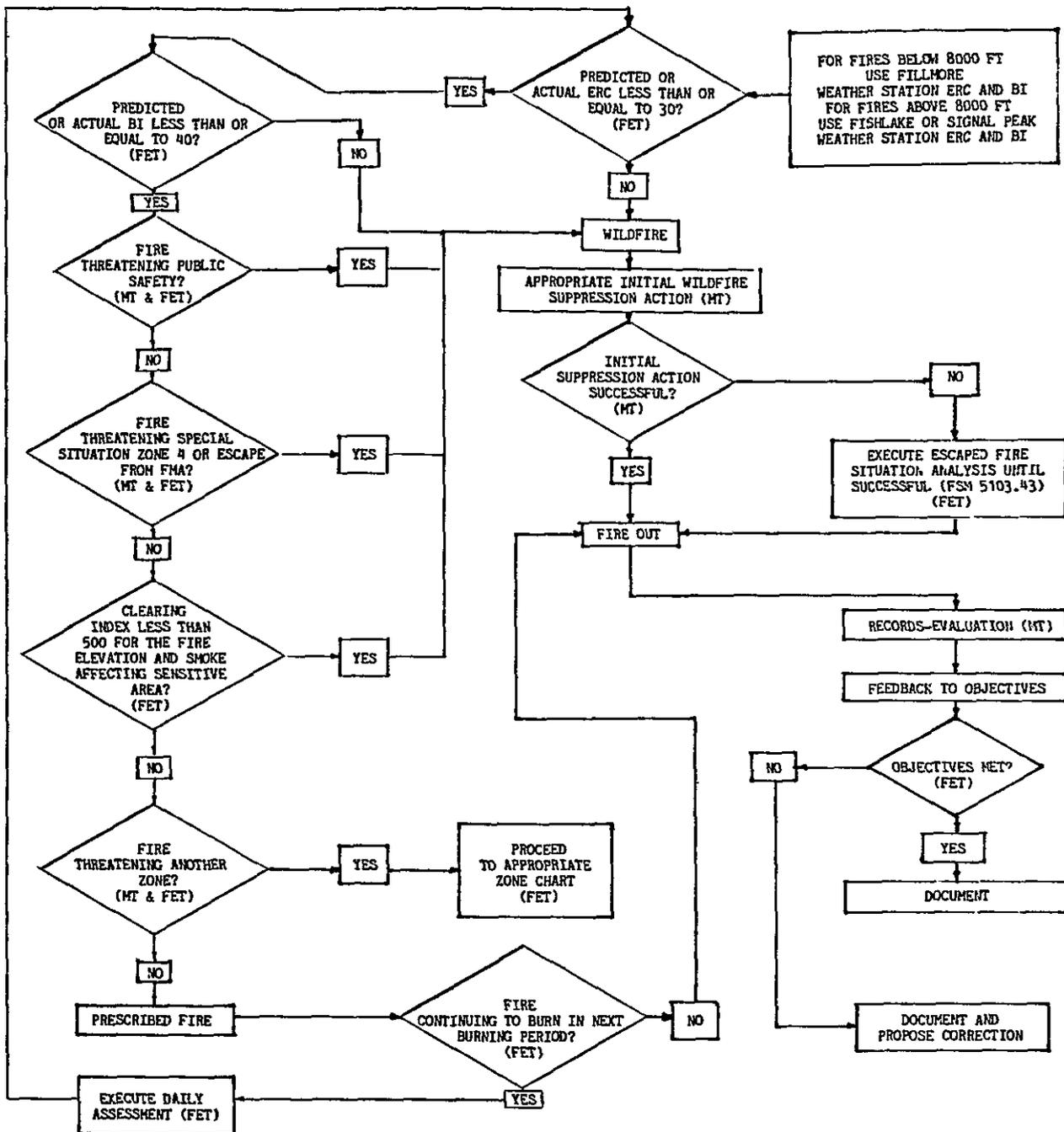
(RIDO)-RICHFIELD INTERAGENCY DISPATCH OFFICE



PINYON-JUNIPER - ZONE 1 F2P2



SAGE-GRASS, BRUSH, ASPEN - ZONE 2 T2P2



SHORT-NEEDLE CONIFER - ZONE 3 H2P2

APPENDIX M
(Reserved)

APPENDIX N

LONG-RANGE ROAD AND TRAIL RIGHTS-OF-WAY ACQUISITION (Map on File at Forest Supervisor's Office)

This document comprises the narrative section of the long-range Forest rights-of-way acquisition plan. The old Forest Road and Trail Rights-Of-Way Status Record, the new status records and/or the Forest Transportation plan contain the basic inventory and plan maps from which this information was compiled and which are made a part of this plan by reference.

1. Objectives

The general objectives for the acquisition of permanent public access to National Forest System lands administered by the Forest Service are outlined in FSM 5460.2. In accordance with those objectives, the purposes of this plan are:

- a. to provide for the acquisition of needed road and trail rights-of-way a systematic order one year in advance of planned construction schedules.
- b. to facilitate multiple use management by the acquisition of needed permanent public access over all roads and trails on the Forest transportation system by September 30, 2004. To meet this objective, the Forest plans to acquire no less than 5 percent of the right-of-way needs each year until the job is completed.

2. Annual action plans - shall be developed from the long-range plan and proposed in the program budgeting process.

3. Assignment of Personnel and Responsibilities

- a. Forest level. It is estimated that at least one person, exclusive of those needed for surveys, drafting, and clerical work, will be needed to handle the right-of-way coordination and workload at the Forest level. Primary duties will consist of securing and checking title evidence, researching county records, preparing related documents, recording deeds, assisting District Rangers in negotiations with landowners, arranging for and assistance to an appraiser, and, if needed, assisting in any drafting and/or clerical services.
- b. District level. Approximately one pay period annually of District personnel time for each of the four Ranger Districts will be required to implement the right-of-way program set forth in this plan. Items to be handled to a considerable extent at this level will include preliminary contacts with landowners, route selections, property inspections, and negotiations.

- c. Training needs. Personnel assigned to the Supervisor's Office will require a working knowledge and background of the right-of-way system. Periodic in-service training sessions will also be of value. Limited training should be made available to participating personnel at both District and Supervisor's Office levels. One individual from the S.O. and one from each of the four Districts should be a duly authorized Notary Public to expedite deed executions from landowners.
- d. Other. Use and need of a Zone Appraiser should be maintained at a level no less than currently programmed -- one Zone Appraiser stationed in Cedar City, which services the Dixie, Manti-Lasal, and Fishlake National Forests. Engineering survey and drafting services at the Forest level will need to be maintained at a minimum of one Engineer Program Survey Leader and two survey crew personnel to accomplish the surveying and drafting jobs generated by the acquisition program.

4. Acquisition Climate

- a. Attitude of Public in General to Rights-of-way Acquisition by the Forest Service to Access National Forest System Lands. The attitude of the general public is favorable to the extension of the Forest road system. Public interest lies primarily in better access for hunting, fishing, and other recreational activities. There are some individuals who would prefer to have more development and/or space for 4-wheel and off-road vehicles, but this doesn't reflect the prevailing attitude.
- b. Attitude of Public Road Agencies. Public road agencies have been very cooperative in granting rights-of-way to the United States. The Forest has recently completed negotiations with Sevier County Commissioners, with the result that 19 roads in the County were declared public. Negotiations are on-going with other county agencies to have more roads declared public.
- c. Attitude of Major Landowners. The attitude of major private landowners has been quite good. Many are even willing to donate the right-of-way in a desire to improve access to their property or to eliminate an encroachment or trespass problem on other portions of their property.
- d. Absentee Landowners. Absentee landowners are the usual situation on the Forest and are the class that must be dealt with in most cases.
- e. Settlement of Estates. A small number of cases may be involved in settlement of estates but this should not present a big problem in the acquisition program. There have been no cases of this type in the recent past.

5. Particular Problems in Processing Acquisitions

- a. Obtaining Title Reports and Policies. Service from the local title companies and abstractors has greatly improved within the past several years; occasionally, there is a "lengthy" delay, but on the whole service is quite good.
- b. Outstanding Third-party Interests. To date, these have not been a problem on the Fishlake.

6. General Priority of Acquisitions

- a. Areas in Which Existing Roads are Being Closed to General Public Travel. Although some landowners would rather not have public travel on roads through their lands because of vandalism, littering, gates left open, etc., no attempt is currently being made to prevent such travel.
- b. Area in Which Subdivision Appears Probable. A high priority for right-of-way acquisition exists where subdivision probabilities are highest. Some high mountain properties continue in the process of being subdivided for recreation homesites. Forest efforts continue to be directed toward being aware of potential subdivision sites so that emphasis can be placed on acquisition from these properties.
- c. Areas Planned for Disposal by County, State, and other Federal Agencies. The Forest keeps posted on any disposal transactions involving State, County, and other Federal lands. The Forest also continues to work with Counties in declaring public travel access over those roads deemed of a high priority.
- d. Opportunity Cases. The greatest source of right-of-way at present is opportunity cases; although the greatest one-time amount would be by County declaration. Some opportunity case acquisitions are not as critical to the transportation system as other roads and trails may be, but the "ease" with which these cases can be completed makes them very desirable. Some cases will be given considerable attention because of the willingness on the part of current landowners which may not carry through to any subsequent owners. Donations from cooperative owners who favor extension and improvement of access are sometimes available, and will be encouraged.

7. Feasible and Desirable Cost-share Possibilities with Intermingled Landowners.

There are no known opportunities on the Forest where cost-sharing arrangements are appropriate. Very little commercial hauling of timber or other products is currently taking place, and it is not expected that cost-sharing has much application at this time.

8. Unique Problems Involving Appraisal of right-of-way, such as special types of properties.

Lack of transaction evidence in acreage volume and current market values pose a problem to adequately appraise rights-of-way to mountain lands for recreation potential. In some instances the owners are happy to have new or improved access to these areas, which is an enhancement to the Forest program. However, many times good public access is not desired and the landowners wish to maintain a considerable degree of privacy. Strong opposition to the program can be expected in some situations because landowners do not want to provide access, especially as noisy on- and off-road vehicles become more numerous.

9. Other Unique Problems

Any kind of a reduction of current level personnel would pose a definite problem to the program, as well as lack of sufficient funds to work a good landline location and corners records program.

ADDENDA. District and Forest Summary Sheets:

FOREST SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>FOREST-WIDE</u>	
	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>139</u>	<u>68.56</u>
2. Rights-of-way needed on existing roads and trails.	<u>139</u>	<u>68.56</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>50</u>	<u>25.45</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>89</u>	<u>43.11</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>6</u>	<u>4.52</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>78</u>	<u>34.59</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>5</u>	<u>4.0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FOREST SUMMARY
(Fishlake National Forest)

	<u>BEAVER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>26</u>	<u>10.6</u>
2. Rights-of-way needed on existing roads and trails.	<u>26</u>	<u>10.6</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>9</u>	<u>5.1</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>17</u>	<u>5.5</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>16</u>	<u>4.6</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>1</u>	<u>0.9</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FOREST SUMMARY
(Fishlake National Forest)

MILLARD CO.

<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>13</u>	<u>6.25</u>
2. Rights-of-way needed on existing roads and trails.	<u>13</u>	<u>6.25</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>10</u>	<u>4.0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>3</u>	<u>2.25</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>3</u>	<u>2.25</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FOREST SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>PIUTE CO.</u>	
	<u>No. Cases</u>	<u>No.Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>24</u>	<u>14.01</u>
2. Rights-of-way needed on existing roads and trails.	<u>24</u>	<u>14.01</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>14</u>	<u>5.40</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>10</u>	<u>8.61</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>9</u>	<u>7.31</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>1</u>	<u>1.3</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FOREST SUMMARY
(Fishlake National Forest)

	<u>SEVIER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>72</u>	<u>35.40</u>
2. Rights-of-way needed on existing roads and trails.	<u>72</u>	<u>35.40</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>17</u>	<u>10.95</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>55</u>	<u>24.45</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>6</u>	<u>4.52</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>49</u>	<u>19.93</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FOREST SUMMARY
(Fishlake National Forest)

	<u>WAYNE CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>4</u>	<u>2.3</u>
2. Rights-of-way needed on existing roads and trails.	<u>4</u>	<u>2.3</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>4</u>	<u>2.3</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>1</u>	<u>0.5</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>3</u>	<u>1.8</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FILLMORE
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>DISTRICT-WIDE</u>	
	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>28</u>	<u>17.75</u>
2. Rights-of-way needed on existing roads and trails.	<u>28</u>	<u>17.75</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>18</u>	<u>11.25</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>10</u>	<u>6.5</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>10</u>	<u>6.5</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FILLMORE
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>MILLARD CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>13</u>	<u>6.25</u>
2. Rights-of-way needed on existing roads and trails.	<u>13</u>	<u>6.25</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>10</u>	<u>4.00</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>3</u>	<u>2.25</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>3</u>	<u>2.25</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

FILLMORE
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

SEVIER CO.

<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>15</u>	<u>11.50</u>
2. Rights-of-way needed on existing roads and trails.	<u>15</u>	<u>11.50</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>8</u>	<u>7.25</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>7</u>	<u>4.25</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>7</u>	<u>4.25</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

LOA
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>DISTRICT-WIDE</u>	
	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>6</u>	<u>3.60</u>
2. Rights-of-way needed on existing roads and trails.	<u>6</u>	<u>3.60</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>6</u>	<u>3.60</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>3</u>	<u>1.80</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>3</u>	<u>1.80</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

LOA
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>SEVIER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>2</u>	<u>1.30</u>
2. Rights-of-way needed on existing roads and trails.	<u>2</u>	<u>1.30</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>2</u>	<u>1.30</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>2</u>	<u>1.30</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

LOA
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>WAYNE CO.</u>	
	<u>No. Cases</u>	<u>No.Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>4</u>	<u>2.30</u>
2. Rights-of-way needed on existing roads and trails.	<u>4</u>	<u>2.30</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>4</u>	<u>2.30</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>1</u>	<u>0.50</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>3</u>	<u>1.80</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

BEAVER
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>DISTRICT-WIDE</u>	
	<u>No. Cases</u>	<u>No.Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>54</u>	<u>26.50</u>
2. Rights-of-way needed on existing roads and trails.	<u>54</u>	<u>26.50</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>32</u>	<u>4.20</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>22</u>	<u>12.30</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>20</u>	<u>10.10</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>2</u>	<u>2.20</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

BEAVER
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>BEAVER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>26</u>	<u>10.60</u>
2. Rights-of-way needed on existing roads and trails.	<u>26</u>	<u>10.60</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>9</u>	<u>5.10</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>17</u>	<u>5.50</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>16</u>	<u>4.60</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>1</u>	<u>0.9</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

BEAVER
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

PIUTE CO.

<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>18</u>	<u>10.90</u>
2. Rights-of-way needed on existing roads and trails.	<u>18</u>	<u>10.90</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>14</u>	<u>5.40</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>4</u>	<u>5.50</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>3</u>	<u>4.20</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>1</u>	<u>1.30</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

BEAVER
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>SEVIER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>10</u>	<u>5.00</u>
2. Rights-of-way needed on existing roads and trails.	<u>10</u>	<u>5.00</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>9</u>	<u>3.70</u>
5. Rights-of-way to be acquired in the name of the United States. .	<u>1</u>	<u>1.30</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

RICHFIELD
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

<u>Item</u>	<u>DISTRICT-WIDE</u>	
	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>51</u>	<u>20.71</u>
2. Rights-of-way needed on existing roads and trails.	<u>51</u>	<u>20.71</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>51</u>	<u>20.71</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>6</u>	<u>4.52</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>45</u>	<u>16.19</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>45</u>	<u>16.19</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

RICHFIELD
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>PIUTE CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>6</u>	<u>3.11</u>
2. Rights-of-way needed on existing roads and trails.	<u>6</u>	<u>3.11</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>6</u>	<u>3.11</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

RICHFIELD
RANGER DISTRICT SUMMARY
(Fishlake National Forest)

	<u>SEVIER CO.</u>	
<u>Item</u>	<u>No. Cases</u>	<u>No. Miles</u>
1. Road and trail rights-of-way to be acquired.	<u>45</u>	<u>17.60</u>
2. Rights-of-way needed on existing roads and trails.	<u>45</u>	<u>17.60</u>
3. Rights-of-way to be needed on proposed roads and trails.	<u>0</u>	<u>0</u>
4. Rights-of-way to be acquired in cooperaton with, and in the name of, a public road agency.	<u>0</u>	<u>0</u>
5. Rights-of-way to be acquired in the name of the United States.	<u>45</u>	<u>17.60</u>
6. Rights-of-way to be acquired by purchases or exchange of land in accordance with the Forest landownership adjustment plan.	<u>0</u>	<u>0</u>
7. Rights-of-way to be acquired by easement deed to United States over private, county, or state owned lands.		
a. Existing roads and trails.	<u>39</u>	<u>13.08</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>
8. Rights-of-way to be acquired across other Federal Lands.		
a. Existing roads and trails.	<u>0</u>	<u>0</u>
b. Proposed roads and trails.	<u>0</u>	<u>0</u>

APPENDIX O

COAL UNSUITABILITY

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION	4
II. DETERMINATION OF AREAS ACCEPTABLE FOR FURTHER CONSIDERATION FOR COAL LEASING	9
A. High to Moderate Potential Coal Lands	13
B. Unsuitability Criteria	17
Criterion 1 - Federal Land Systems	18
Criterion 2 - Rights-of-Way and Easements	21
Criterion 3 - Buffer Zones for Rights-of Way, Cemeteries, Dwellings, etc	24
Criterion 4 - Wilderness Study Areas	24
Criterion 5 - Scenic Areas	25
Criterion 6 - Lands Used for Scientific Studies	25
Criterion 7 - Historic Lands and Sites	25
Criterion 8 - Natural Areas	28
Criterion 9 - Federally Listed Threatened/Endangered Species	28
Criterion 10- State Listed Threatened/Endangered Species	28
Criterion 11- Eagle Nests	29
Criterion 12- Eagle Roost and Concentration Areas	30
Criterion 13- Falcon Cliff Nesting Sites	30
Criterion 14- Migratory Birds	31
Criterion 15- State Resident Fish and Wildlife	33
Criterion 16- Floodplains	35
Criterion 17- Municipal Watersheds	37
Criterion 18- National Resource Waters	37
Criterion 19- Alluvial Valley Floors	37
Criterion 20- State Proposed Criteria	37
C. Multiple Use Resource Management Decision	38
D. Surface Owner Consultation	38
III. DESIGNATION OF AREAS UNSUITABLE FOR MINING	38
IV. CONCLUSIONS	39
V. PUBLIC PARTICIPATION	39

LIST OF FIGURES

<u>FIGURE NO.</u>		<u>PAGE</u>
1.	Map of KRCRA Boundaries, Coal Review Area and Coal Fields	5
2.	Map showing Potentially Minable Coal-Bearing Lands Within the Exterior Boundary of The Fishlake National Forest	8
3.	Map showing Existing and Proposed Coal Leases Involving Fishlake National Forest Lands	12
4.	Map of Assessment Area (Criteria 1, 14, & 15)	15
5.	Map showing Federal Lands Involved in Rights-of-Way, Easements, and Forest Service Special Use Permits Within the Assessment Area (Criteria 2 & 3)	23
6.	Map showing Historic Lands and Sites (Criterion 7) and Eagle Nest Sites and Roost Concentration Areas (Criteria 11 & 12) Within the Assessment Area	27
7.	Map showing Special Floodplains Within the Assessment Area (Criterion 16)	36

LIST OF TABLES

<u>Table No.</u>		PAGE
1.	Reserve Data Pertaining to Coal Review Area	6
2.	Data Pertaining to Federal Coal Leases and Proposed Lease Tracts Which Include Lands Administered by the Fishlake National Forest	10
3.	Acreage Available for Screening Process	11
4.	Surface and Mineral Estate Acreages for the Assessment Area	13
5.	Reserve Data for Assessment Area	16
6.	Applicability of Unsuitability Criteria to the Assessment Area	19
7.	Applicability of Exceptions to Criteria to The Assessment Area	20
8.	Data for Rights-of-Way, Easements, and Forest Service Special Use Permits Involving Federally Owned Surface Within the Assessment Area	22
9.	Migratory Birds of High Federal Interest Found in the Uinta-Southwestern Utah Coal Production Region and Occurrence Rating for Assessment Area	32
10.	Resident Fish and Wildlife Species of High Interest to the State of Utah Which Are Known to Inhabit the Assessment Area	34

FISHLAKE NATIONAL FOREST COAL LANDS REVIEW

I. INTRODUCTION

The Forest Service is a participant in the Department of Interior's Federal Coal Management Program (FCMP) which was designed in response to the President's May 1977 direction and a September 1977 Federal court order. An environmental impact statement which analyzed the options for managing Federal coal was completed in April 1979. In June 1979, the Secretary of Interior made a final decision and regulations (Title 43 of the Code of Federal Regulations, Part 3400) were issued in July 1979.

The FCMP incorporates the requirements of the Mineral Leasing Act of 1920, as amended by the Federal Coal Leasing Amendments Act of 1967 (FCLAA) (including 1978 supplements to this act), the Surface Mining Control and Reclamation Act of 1977, (SMCRA) and the coal production policies of the President.

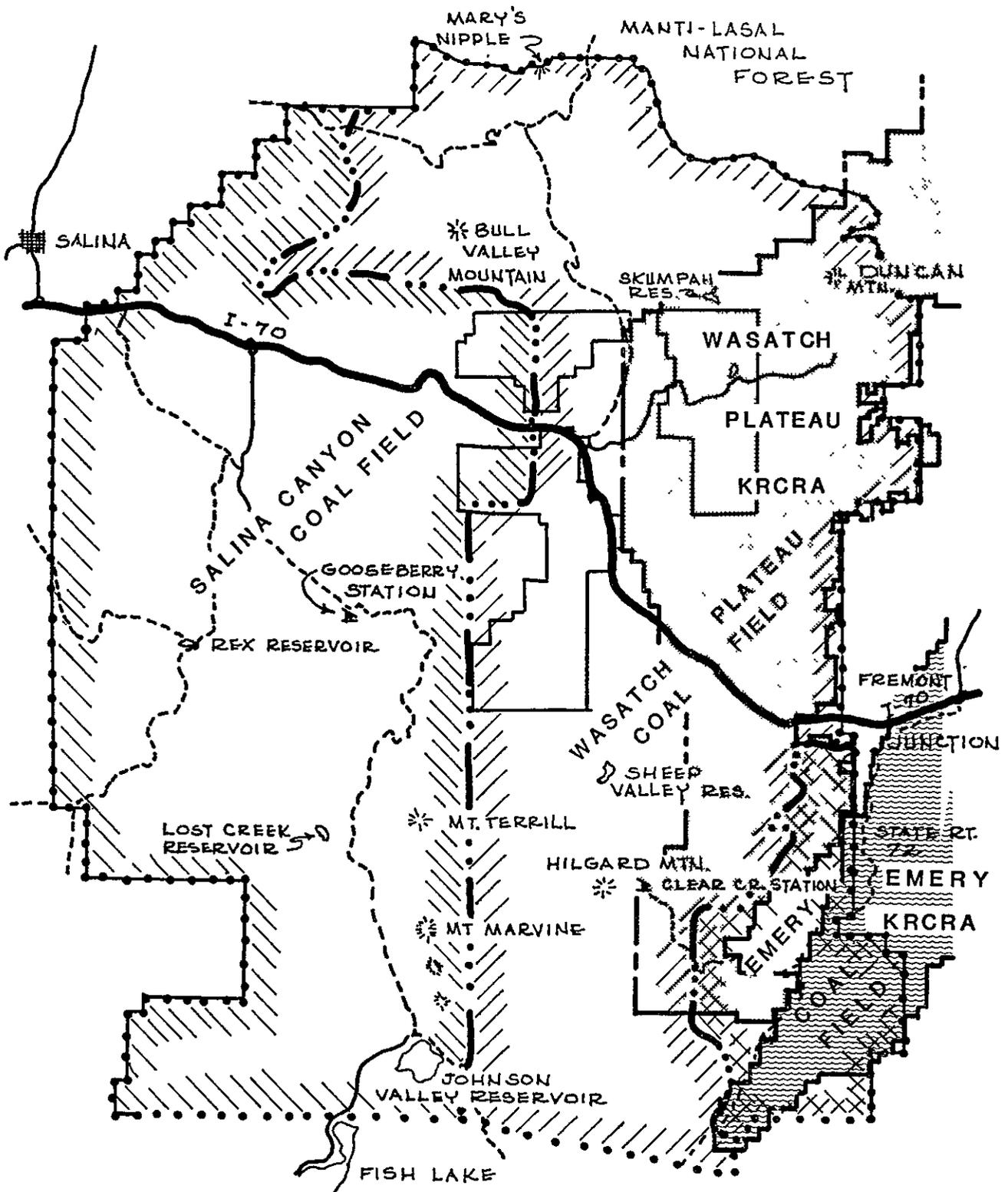
The FCLAA directs that "no lease sale shall be held unless the lands containing the coal deposits have been included in a comprehensive land-use plan and such sale is compatible with such plan." The SMCRA requires a Federal lands review be conducted to assess whether certain classes of Federal lands are unsuitable for all or certain types of coal mining operations, and to establish a process by which the public may petition to have Federal lands designated unsuitable for all or certain types of coal mining operations.

The Fishlake National Forest is presently in the process of developing its Land and Resource Management Plan as required by the National Forest Management Act of 1976. Until the new plan is finalized, the Forest is using its Multiple Use and Unit Plans, developed under the Multiple-Use Sustained-Yield Act of 1960, as the bases for resource development decisions. The new plan will strengthen or redefine the management goals, objectives, and guidelines for actions and programs on lands under the Forest's jurisdiction.

As a part of its current planning effort and pursuant to the requirements of SMCRA and the FCLAA, the Forest has made a review of the coal-bearing lands within the Forest boundary. These lands include approximately 433,300 acres in Sevier County, Utah (including all interior exclusion lands), and are comprised of all of the Salina and the portion of the Wasatch and Emery Coal Fields which lie within the Forest (See Figures 1 & 1a).

Using U.S. Geological Survey (USGS) source data it was derived these lands contain an estimated reserve of 1,693.6+ million tons of coal (See Table 1 and Figure 2). Only those coal beds that average 4 feet or greater in thickness and are covered by less than 3000 feet of overburden are included in the reserve data.

The review was conducted and documented using direction set forth in the Forest Service "Mineral Planning Handbook Coal Supplement" received by the Forest on April 23, 1982.



Known Recoverable Coal Resource Areas (KRCRA)
 Also
 FIGURE 1 Coal Review Area and Coal Fields

TABLE 1. Estimated Reserves Within the Exterior Boundary of the Fishlake National Forest (Million Short Tons)

Coal Field	Area No.	Coal Classes				Subtotal of Entire Area	Estimated % of Area Within FNF	Subtotal Within FNF
		I, II	III	I-IV	IV			
Wasatch Plateau	74				324.0	324.0	98	317.5
	75				87.0 ^c	87.0	99	86.1
	76				106.0	106.0	35	37.1
	81			39.5		39.5	100	39.5
	82			346.3		346.3	100	346.3
	83			146.7		146.7	100	146.7
	84				17.3	17.3	100	17.3
	85			Reserve potential not quantified; coal present and inferred to have thickness and tonnage like areas to north and east, but structure is complex and minability not established.				
	86			241.2 ^d		241.2	100	241.2
	87	10.5	124.0		100.0	234.5	100	234.5
	88e	Like area 85 to north, except that cover over coal exceed 3000 feet.						
	Subtotal	10.5	124.0	773.7	634.3	1,542.5		1,466.2 ^f
Salina Canyon	89				69.1	69.1	100	69.1
	90	Little or no reserve potential, coal generally this or absent.						
	91e	Like area 90, but also with cover over coal exceeding 3,000 feet.						
Emery	100	72.0	98.2		19.8	190.0	65	123.5
	101	34.8				34.8	100	34.8
	102	Reserve not quantified; data lacking.						
	Subtotal	106.8	98.2		19.8	224.8		158.3
Total All Fields		117.3	222.2	773.7	723.2	1,836.4		1,693.6

a. Includes reserves of interior exclusions within F.F. exterior boundary

b. Class I -Measured reserves based on adequate exploration data; properly correlated; control no more than one-half mile apart.

Class II -Indicated reserves based on geologic measurement supplemented by limited drill-hole information and limited to 1-1/2 miles from control point.

Class III -Inferred reserves based on geologic inference and projection of the habit of the coal beyond 1-1/2 miles from control points.

Class IV -Potential reserves based on geographic and geologic position with little surrounding data; includes coal covered by no more than 3,000 feet of overburden.

Most of the coal reserve is based on surface measurements which are not always as reliable as the drill. The reserve commonly is underestimated because surface measurements usually are smaller than thickness penetrated by drilling. Class I and II figures are combined in these reports; no attempt was made to separate the more reliable figure. The first three reserve classes constitute the principal reserve and more nearly reflect the current potential. The reserves include only coal beds that average four feet or greater thickness and are covered by less than 3,000 feet of overburden except where otherwise noted. Less than 50 percent of the total reserves are economically mineable. (The division of coal into four classes generally follows that described by Doelling, 1972, p.549.)

- c. Recent drill hole data indicates that this estimate may be high.
- d. Chiefly Classes II - IV.
- e. Areas identified as not potentially mineable.
- f. Plus noted unquantified amounts could possibly add 10-20 percent to the tabulated tonnage.

Information obtained from FEIS, Development of Coal Resources in Central Utah, 1979, Figure II-9, USGS map and table showing coal resources in Central Utah.

Known Recoverable Coal Resource Area Boundary taken from Bureau of Land Management of "Uinta-Southwestern Utah Coal Study Region," 1982.

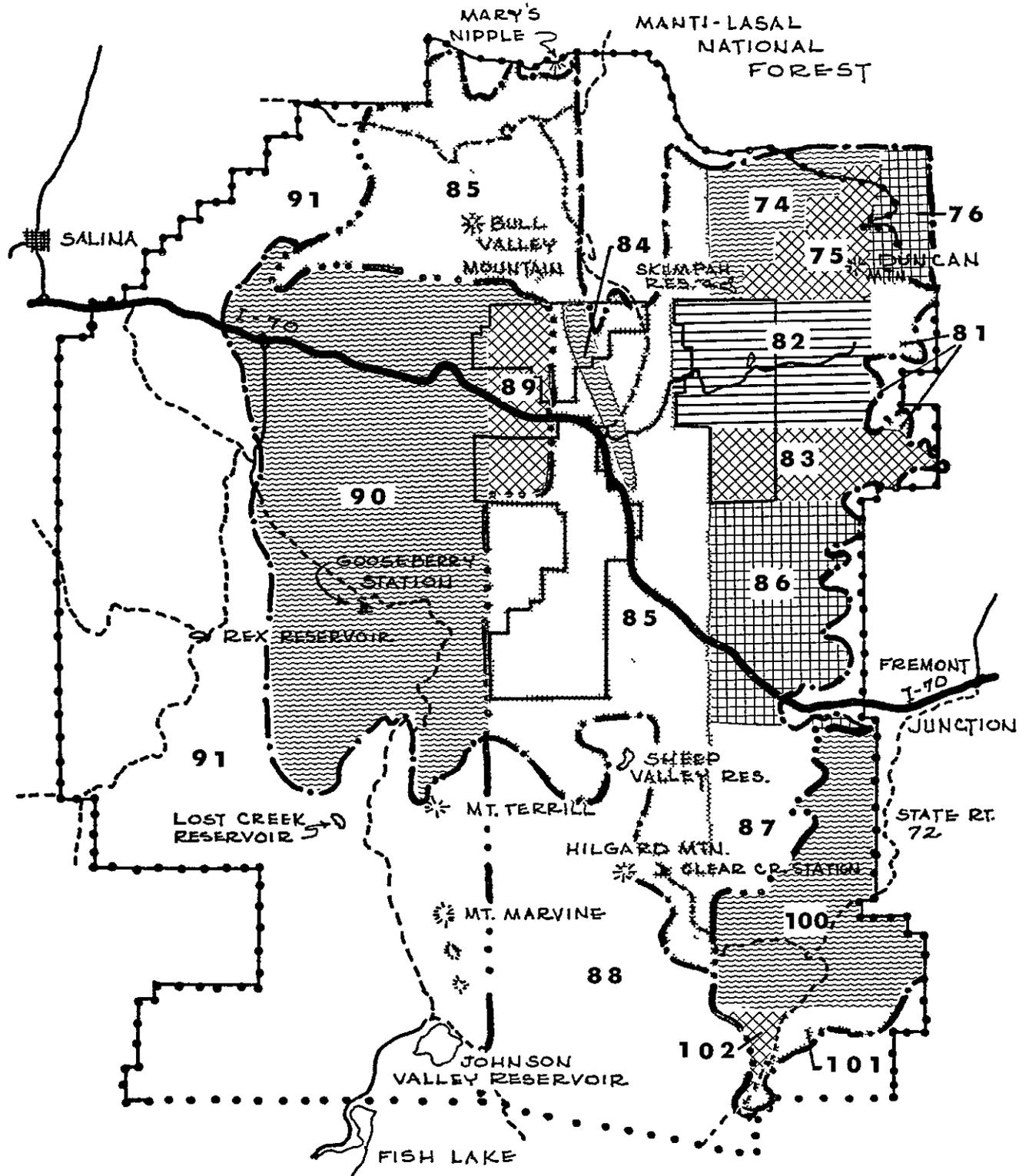


FIGURE 2 Potentially Minable Coal Bearing Lands

II. AREAS ACCEPTABLE FOR FURTHER CONSIDERATION FOR COAL LEASING

The principle land use planning decision concerning the coal resource is to determine which areas are acceptable for further consideration for coal leasing. These areas are identified by placing all coal-bearing lands in the planning area through four screens integral to the planning process:

- 1) Areas are eliminated from further consideration for coal development if they do not have high to medium coal potential.
- 2) Additional coal areas are eliminated if they are judged unsuitable under the Department of Interior's unsuitability criteria.
- 3) Additional coal areas may be eliminated on multiple use grounds if other Federal resource values are determined to be superior to coal.
- 4) Additional coal areas where the Federal government owns the coal, the coal would be surface mined, and the surface is owned by ranchers or farmers may be eliminated after consultation with those surface owners.

The areas remaining after application of these screens are identified as areas acceptable for further consideration for coal leasing, subject to area wide constraints and multiple use coordination requirements to guide coal program activities.

The above 433,300 acres of coal-bearing lands contain 31,669 acres of interior exclusion lands which are eliminated from the above screening process since they are not a part of the Forest. Also within the 433,300 acres are ten Federal coal leases which include, among other lands, approximately 18,273 acres administered by the Fishlake National Forest. Additionally, there are three tracts of land included which are proposed for leasing in the Uinta-Southwestern Utah Coal Region's second round of leasing. These tracts contain 3,423 acres administered by the Forest and 120 acres of privately owned surface.

Since the existing and proposed lease areas have previously been determined as acceptable for coal leasing, they are eliminated from the screening process also. Data for these areas are provided in Table 2 and the locations are shown in Figure 3. Additional information is available in the appropriate environmental documents addressing each existing or proposed lease.

The above eliminated lands result in 379,815 acres available for the screening process as shown in Table 3.

TABLE 2
 DATA PERTAINING TO FEDERAL COAL LEASES AND PROPOSED LEASE TRACTS
 WHICH INCLUDE FISHLAKE NATIONAL FOREST SYSTEM LANDS

Existing Leases

Approximate Lease Acreage By Surface Jurisdiction

	<u>Lease no. or Tract Name</u>	<u>Effective Lease Issuance Date</u>	<u>Fishlake N.F.</u>	<u>Manti-LaSal N.F.</u>	<u>Bureau of Land Mgt.</u>	<u>Non-federal</u>	<u>TOTAL</u>
1.	SL-062583	09/12/41	2,203				2,203
2.	U.-062453	03/01/62	73	407			480
3.	U-0149084	06/01/66	240				240
4.	U-041171	03/01/67	1,825				1,825
5.	U-041176	03/01/67	436			1,109 1/	1,545
6.	U-041177	03/01/67	593			1,911 1/	2,504
7.	U-041178	03/01/67	1,896			80 1/	1,976
8.	U-5135	05/01/77	7,636		1,188		8,824
9.	U-28s97	01/01/79	2,213	255	164		2,632
10.	U-47080	01/01/81	<u>1,158</u>				<u>1,158</u>
	Subtotal		18,273	662	1,352	3,100	23,387

Proposed Lease Tracts

1.	Skumpah		520			120	640
2.	Ivie		1,040				1,040
3.	Quitcupah		<u>1,863</u>	<u>6,480</u>	<u>1,360</u>	80 2/	<u>9,783</u>
	Subtotal		3,423	6,480	1,360	200	11,463
	TOTAL		21,696	7,142	2,712	3,300	34,850

1/ Interior Exclusion Lands - Private Surface.

2/ State Lands - Outside of Forest Boundary.

TABLE 3. Area Available for Screening Process.

Acres	Description
433,300	Coal-bearing lands
-31,669	Interior exclusion
-18,273	Existing leases
<u>- 3,543</u>	Proposed leases
379,815	Available for screening

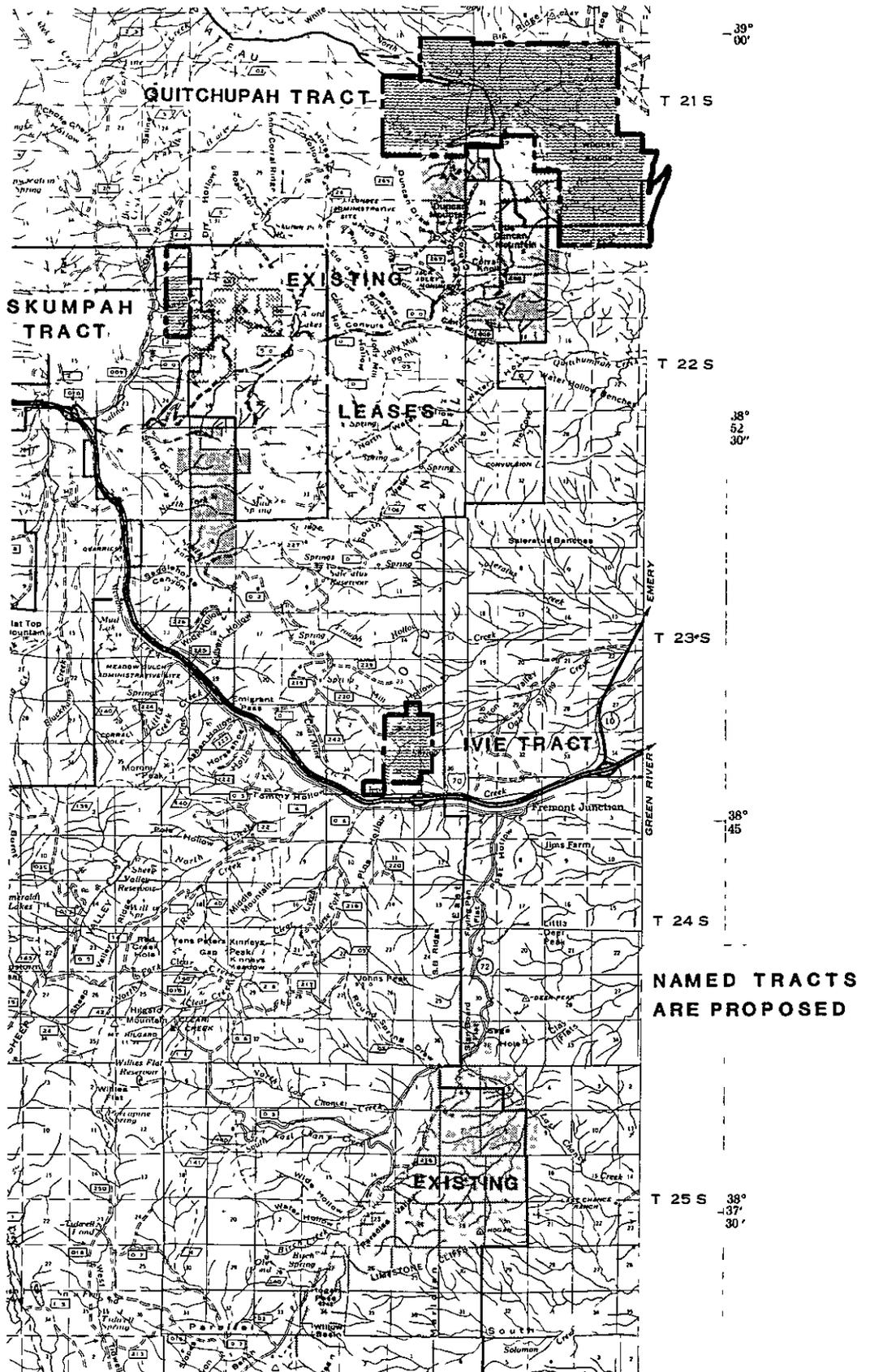


FIGURE 3 Existing & Proposed Federal Coal Leases

A. High to Moderate Potential Coal Lands

Only a portion of the uncommitted coal reserves within a land use planning area is likely to be potentially economic to mine or to become so over the life of the land use plan. Rather than apply all the screens in the planning process to uneconomic coal, the first screen is to identify coal with high or moderate potential for development. Lands with less than moderate development potential are dropped from further consideration until their potential for development is judged to be higher, perhaps the next land use planning cycle.

Using the USGS data shown in Table 1 and Figure 2 it was derived that, out of the 379,815 acres being placed through the screening process, approximately 190,957 acres have little or no reserve potential and thus drop out. They are areas where the coal is generally thin or absent and/or overlain by overburden exceeding 3,000 feet thickness. This results in approximately 188,858 acres which are within the area identified as potentially minable by the USGS. From these, approximately 107,324 acres have been identified as having a low potential for coal development and are thus eliminated. They include lands outside the Known Recoverable Coal Resource Areas established by the USGS where reserve potential is not quantified and minability has not been established. These lands also have generated no apparent interest by the coal industry. All of the Salina Coal Field is included as low potential since it has been predicted that mining is doubtful or will not occur until after 1992 (Doelling, p. 20).

The remaining 81,534 acres of potentially minable lands have been identified as having a high to moderate potential for development and are shown in Figure 4. They comprise the lands to be placed through the remaining three screens and are hereafter referred to as the "assessment area". Surface and mineral estate acreages are shown in Table 4.

TABLE 4. Surface and Mineral Estate Acreages for the Assessment Area.

Status of Jurisdiction		Acres
	Surface/Mineral	
	Federal/Federal	76,827
	Private/Federal	120
	Private/Private	4,547
	Federal/Private	40
	TOTAL	81,534

Estimated reserves for the assessment area total 1,450.8 million tons as shown in Table 5. Recoverability is estimated at 580.3 million tons using an average recoverability rate of 40% (Doelling, p. 131, 438, & 551).

All of the included coal has been determined to be minable by only underground methods (Doelling, P. 129, 438, 440). Those lands which are believed minable by surface methods are contained in existing leases U-5135 shown in Figure 3 and are not contained within the assessment area.

The identification of high to moderate potential coal lands (assessment area) was made using: 1) USGS data contained in the Final Environmental Impact Statement on the Development of Coal Resources in Central Utah, 1979 (Figure II-9, USGS map and table showing coal resource data); 2) Bureau of Land Management Map of Uinta-Southwestern Utah Coal Study Region, 1982 showing KRCRA boundaries; 3) H. H. Doelling's Monograph Series No. 3, 1972 on Central Utah Coal Fields; and 4) input from industry (Expressions of Leasing Interest - Round 1 & 2 for Uinta-Southwestern Utah Coal Region; and nominations under the Energy Minerals Activity Recommendations System).

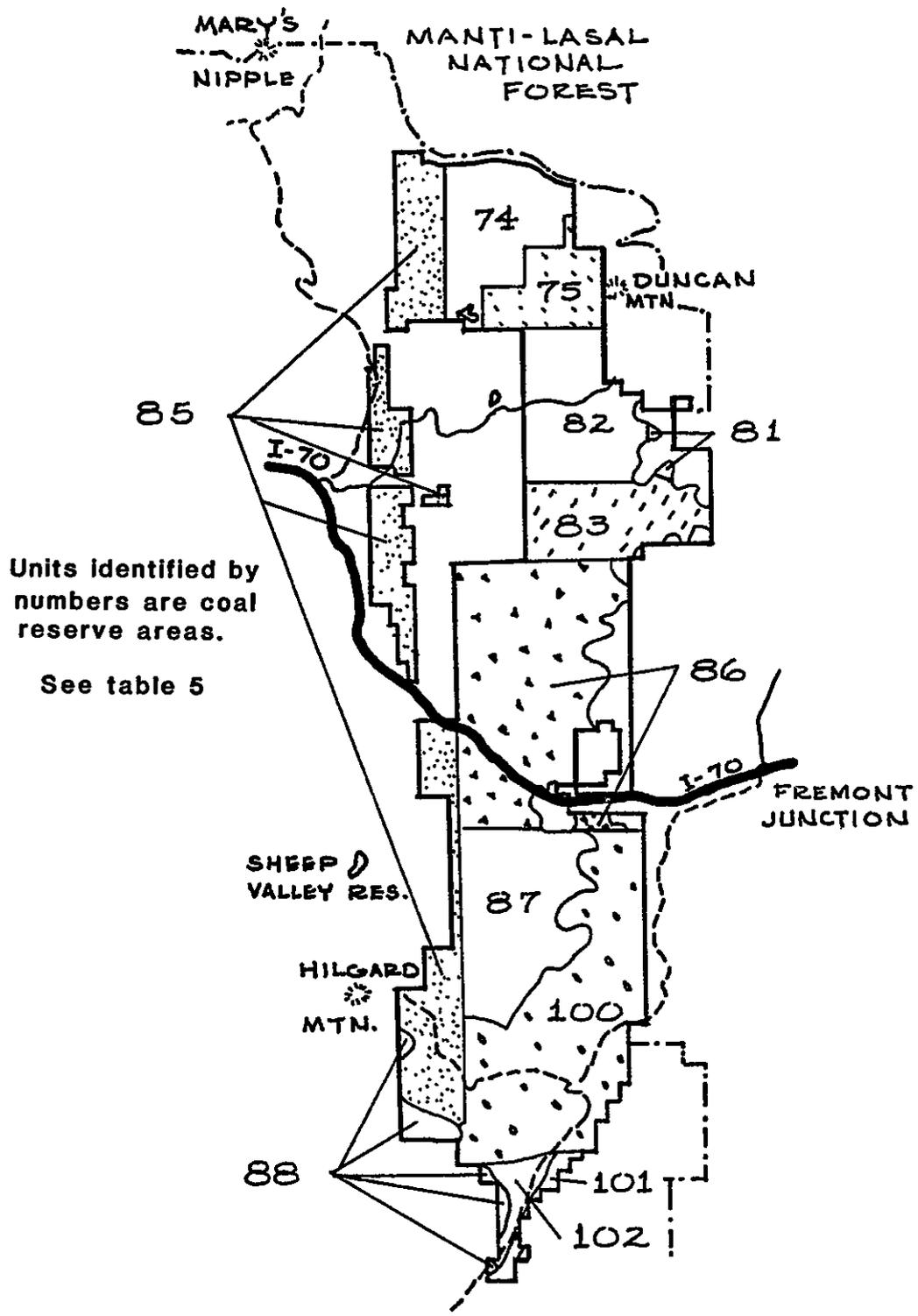


FIGURE 4

Assessment Area

TABLE 5
ESTIMATED RESERVES WITHIN THE ASSESSMENT AREA

Reserve Area No.	Total Est. Reserves (MMT) Within Forest	Total Reserve Acreage Within Forest	=	Est. Reserves per Acre (MMT)	X	Assessment Area Acreage	=	Est. Reserves (MMT) Within Assessment Area
74	317.5	6,698		.04740		6,334		300.2
75	86.1	5,955		.01446		3,342		48.3
81	39.5	2,567		.01539		305		4.7
82	346.3	14,471		.02393		6,496		155.4
83	146.7	7,661		.01905		5,101		97.7
85		18,376		.02124*		13,062		277.4
86	241.2	16,277		.01482		15,437		228.8
87	234.5	8,666		.02706		8,666		234.5
88		1,313				1,313		
100	123.5	19,192		.00643		19,192		98.1
101	34.8	2,552		.01364		415		5.7
102		1,292				1,212		
Non-coal Land						<u>4,596</u>		
						81,534		<u>1,450.8</u>

*Estimation derived by averaging reserves of adjoining areas to north and east:

Reserve Area No.	East Reserves per Acre (MMT)
82	.02393
83	.01915
86	.01482
87	<u>.02706</u>
	.08496 - 4 = .02124 MMT/A.

B. Unsuitability Criteria

On August 3, 1977, the President signed into law the Surface Mining Control and Reclamation Act (SMCRA). Section 522 of this act requires the secretary of Interior to review Federal lands to determine whether they contain areas which are unsuitable for surface coal mining operations. In May 1980, a Memorandum of Understanding (MOU) between the Departments of Agriculture and Interior was approved authorizing the Secretary of Agriculture to assess the unsuitability or acceptability of lands within the National Forest System boundaries for surface mining operations. Surface mining operations are defined as "activities conducted on the surface of lands in connection with a surface coal mine and surface impacts incident to an underground coal mine" (43CFR 3400.0-5).

Under the MOU, the Department of Agriculture's Forest Service has the responsibility to administer the Federal lands review on lands within its jurisdiction boundaries using the unsuitability assessment procedures and standards contained in 43 CFR 3400.

The unsuitability criteria have been applied to the assessment area. In the summer-fall of 1980, the Forest and Richfield District of the Bureau of Land Management jointly applied the unsuitability criteria to lands including T. 22s., R. 3, 4 and 5E., and T. 23S., R.3 & 4E. The application results are recorded in the Forest Planning Unit Coal Unsuitability Study, October 1980. Unsuitability criteria were applied to additional lands including the remaining delineated high to moderate potential lands in 1981 and 1982. Application results for the lands included in the proposed lease tracts are recorded in the Final Environmental Impact Statement for Round Two of coal leasing in the Uinta-Southwestern Utah Coal Region, October 1983. This document combines the application results for all lands within the assessment area. The previously documented results have been updated where warranted, and carried forward into this report to include under one cover, the results for all the assessment area.

The criteria defined in the Federal Register, Volume 47, July 30, 1982, (effective August 30, 1982) are used. The complete write-up of each criterion is presented, followed by application results including what is unsuitable and why in those cases where the criterion applies. The recoverable coal involved in the unsuitable area is also shown. When an exception does not apply, application of the criterion is complete. Where an exception does apply, the complete write-up of the exception is presented. The recoverable coal is recorded in terms of coal made available through application of the exception.

Table 6 shows which criteria apply to the assessment area and the logic used in determining those which do not apply. The applicability of exceptions to the criteria are shown in Table 7.

Each criterion applied contains the phrase "shall be considered unsuitable" which is shorthand for "shall be considered unsuitable for all or certain stipulated methods of coal mining involving surface mining operations" (surface mining operations are defined earlier).

CRITERION 1 -- FEDERAL LAND SYSTEM

ALL FEDERAL LANDS INCLUDED IN THE FOLLOWING LAND SYSTEMS OR CATEGORIES SHALL BE CONSIDERED UNSUITABLE: NATIONAL PARK SYSTEM, NATIONAL WILDLIFE REFUGE SYSTEM, NATIONAL SYSTEM OF TRAILS, NATIONAL WILDERNESS PRESERVATION SYSTEM, NATIONAL WILD AND SCENIC RIVERS SYSTEM, NATIONAL RECREATION AREAS, LANDS ACQUIRED WITH MONEY DERIVED FROM THE LAND AND WATER CONSERVATION FUND, NATIONAL FORESTS AND FEDERAL LANDS IN INCORPORATED CITIES, TOWNS, AND VILLAGES.

RESULTS

There are no National Park Systems, National Wildlife Refuge Systems, National Systems of Trails, National Wilderness Protection Systems, National Wild and Scenic Rivers Systems, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund or Federal lands incorporated cities, towns, and villages within the study area.

However, 76,867 acres of the assessment area are National Forest System lands, and thus, unsuitable for surface and underground coal mining (see Fig. 4). Involved reserves are estimated at 1,387.3 million tons. Using the average recoverability rate of 40% an estimated 554.9 million tons of coal are associated with the unsuitable lands.

EXCEPTIONS TO CRITERION 1

(i) A LEASE MAY BE ISSUED WITHIN THE BOUNDARIES OF ANY NATIONAL FOREST IF THE SECRETARY FINDS NO SIGNIFICANT RECREATIONAL, TIMBER, ECONOMIC OR OTHER VALUES WHICH MAY BE INCOMPATIBLE WITH THE LEASE: AND (A) SURFACE OPERATIONS AND IMPACTS ARE INCIDENT TO AN UNDERGROUND COAL MINE, OR (B) WHERE THE SECRETARY OF AGRICULTURE DETERMINES, WITH RESPECT TO LANDS WHICH DO NOT HAVE SIGNIFICANT FOREST COVER WITHIN THOSE NATIONAL FORESTS WEST OF THE 100TH MERIDIAN, THAT SURFACE MINING MAY BE IN COMPLIANCE WITH THE MULTIPLE-USE SUSTAINED-YIELD ACT OF 1960, THE FEDERAL COAL LEASING AMENDMENTS ACT OF 1976 AND THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977. (ii) A LEASE MAY BE ISSUED WITHIN THE CUSTER NATIONAL FOREST WITH THE CONSENT OF THE DEPARTMENT OF AGRICULTURE AS LONG AS NO SURFACE COAL MINING OPERATIONS ARE PERMITTED.

RESULTS

As stated previously, none of the reserves within the assessment have been determined to be minable by surface methods (Doelling). Therefore, the underground mining exemption from criteria (included below) is applied and the above area is assessed as suitable for underground mining, making available the above 554.9 million tons of recoverable coal. Under exception (i) and (i) (A) to criterion 1, leasing may occur if no significant recreational, timber, economic or other values incompatible with leasing are found in the Forest planning process or the coal activity planning-leasing process (43CFR 3420.3), conducted after land use planning has been completed.

TABLE 6
 APPLICABILITY OF UNSUITABILITY CRITERIA TO THE ASSESSMENT AREA

Criterion No.	Criterion Title	Criterion		Rationale for Inapplicability
		Applicable	Inapplicable	
1.	Federal Lands Systems	X		
2.	Rights-of-Way, & Easements	X		
3.	Buffer Zones for Rights-of-Way, Cemeteries, Dwellings, etc.	X		
4.	Wilderness Study Areas		X	None within assessment area.
5.	Scenic Areas		X	None within assessment area.
6.	Lands Used for Scientific Studies		X	None within assessment area.
7.	Historic Lands and Sites	X		
8.	Natural Areas		X	None within assessment area.
9.	Federally Listed Threatened/Endangered Species		X	None within assessment area.
10.	State Listed Threatened/Endangered Species		X	Utah accepts as adequate the Federal list of T/E species and has no State listing.
11.	Eagle Nests	X		
12.	Eagle Roost/Concentration Areas	X		
13.	Falcon Cliff Nesting Sites		X	None within assessment area.
14.	Migratory Birds	X		
15.	State Resident Fish/Wildlife	X		
16.	Floodplains	X		
17.	Municipal Watersheds		X	None within assessment area.
18.	National Resource Waters		X	None within assessment area.
19.	Alluvial Valley Floors	X		
20.	State Proposed Criteria		X	No Criteria proposed by State.

TABLE 7
 APPLICABILITY OF EXCEPTIONS TO CRITERIA TO THE ASSESSMENT AREA

<u>Criterion No.</u>	<u>Criterion Title</u>	<u>Exception</u>		<u>Rationale for Inapplicability</u>
		<u>Applicable</u>	<u>Inapplicable</u>	
1.	Federal Lands Systems	X		
2.	Rights-of-Way, & Easements	X		
3.	Buffer Zones for Rights-of-Way, Cemeteries, Dwellings, Etc.	X		
7.	Historic Land(and Sites	X		
11.	Eagle Nests	X		
12.	Eagle Roost/Concentration Areas	X		
14.	Migratory Birds	X		
15.	State Resident Fish/Wildlife	X		
16.	Floodplains	X		
19.	Alluvial Valley Floors		X	No exception provided.

UNDERGROUND MINING EXEMPTION FROM CRITERIA (43 CFR 3461.2)

(a) FEDERAL LANDS WITH COAL DEPOSITS THAT WOULD BE MINED BY UNDERGROUND MINING METHODS SHALL NOT BE ASSESSED AS UNSUITABLE WHERE THERE WOULD BE NO SURFACE COAL MINING OPERATIONS, AS DEFINED IN 43CFR 3400.0-5 OF THIS TITLE, ON ANY LEASE, IF ISSUED.

(b) WHERE UNDERGROUND MINING WILL INCLUDE SURFACE OPERATIONS AND SURFACE IMPACTS ON FEDERAL LANDS TO WHICH A CRITERION APPLIES THE LANDS SHALL BE ASSESSED AS UNSUITABLE UNLESS THE SURFACE MANAGEMENT AGENCY FIND THAT A RELEVANT EXCEPTION OR EXEMPTION APPLIES.

CRITERION 2 -- RIGHTS-OF-WAY AND EASEMENTS

FEDERAL LANDS THAT ARE WITHIN RIGHTS-OF-WAY OR EASEMENTS OR WITHIN SURFACE LEASES FOR RESIDENTIAL, COMMERCIAL, INDUSTRIAL, OR OTHER PUBLIC PURPOSES. FEDERALLY OWNED SURFACE SHALL BE CONSIDERED UNSUITABLE.

RESULTS

For the purpose of applying criterion 2, the Forest has included Forest Service Special Use Permits as a type of right-of-way or easement. Table 8 lists rights-of-way, easements and special use permits involving National Forest lands within the assessment area. Figure 5 shows the locations. These encumbrances include approximately 391 acres of Federal surface and are suitable for surface and underground mining. An estimated 7.0 million tons of reserves and 2.8 million tons of recoverable coal are involved.

Using the above stated "underground mining exemption from criteria" (included with criterion 1) the Forest assessed the criterion 2 lands as suitable for underground mining provided that no surface operations or surface impacts are allowed. As such the 2.8 million tons of recoverable coal are made available.

Where underground mining would include surface operations and surface impacts, leasing and mining operations would be allowed only if a following exception applied.

EXCEPTIONS TO CRITERION 2

A LEASE MAY BE ISSUED AND MINING OPERATIONS APPROVED IN SUCH AREAS IF THE SURFACE MANAGEMENT AGENCY DETERMINES THAT:

(i) ALL OR CERTAIN TYPES OF COAL DEVELOPMENT (e.g., UNDERGROUND MINING) WILL NOT INTERFERE WITH THE PURPOSE OF THE RIGHT-OF-WAY OR EASEMENT; OR

(ii) THE RIGHT-OF-WAY OR EASEMENT WAS GRANTED FOR MINING PURPOSES; OR

(iii) THE RIGHT-OF-WAY OR EASEMENT WAS ISSUED FOR A PURPOSE FOR WHICH IT IS NOT BEING USED; OR

(iv) THE PARTIES INVOLVED IN THE RIGHT-OF-WAY OR EASEMENT AGREE IN WRITING TO LEASING; OR

(v) IT IS IMPRACTICAL TO EXCLUDE SUCH AREAS DUE TO THE LOCATION OF COAL AND METHOD OF MINING AND SUCH AREAS OR USES CAN BE PROTECTED THROUGH APPROPRIATE STIPULATIONS.

TABLE 8
 DATA FOR RIGHTS-OF-WAY, EASEMENTS AND FOREST SERVICE
 SPECIAL USE PERMITS INVOLVING FEDERALLY OWNED SURFACE WITHIN THE ASSESSMENT AREA

<u>Types of Use</u>	<u>User</u>	<u>Dist (mi)</u>	<u>Acreage</u>	<u>Description</u>
Roads	a. Utah Dept. of Transportation	2.6	66	I-70; T23S, R4E, Sec. 28, 29, 30, 33 & 34; T24S, R4E, Sec. 3
	b. Utah Dept. of Transportation	7.4	94	U-72; T25S, R4E, Sec 1, 11, 14, 22, 23 & 27; T26S, R4E, Sec.3
	c. Utah Dept. of Transportation	4.8	51	SUFCo Mine Rd; T22S, R3E, Sec. 13 & 24; T22S, R4E, Sec. 10, 11, 12, 15 & 16.
	d. Utah Power & Light Company	1.1	2	T22S, R4E, Sec. 12
	e. Haward W. Nielsen	3.0	18	T21S, R3E, Sec. 12 & 13
	f. Energy Reserves Group	0.2	1	Knight Mine Rd.; T23S, R4E, Sec. 35 & 36.
Power Trans- mission Lines	a. Utah Power & Light Company	1.3	5	46KV; T22S, R4E, Sec. 12
	b. Utah Power & Light Company	5.0	79	35KV; T23S, R3E, Sec. 13; T23S, R4E, Sec. 13, 14, 15, 16 & 17
	c. Utah Power & Light Company	2.0	6	25KV; T23S, R4E, Sec. 35 & 36
Reservoirs	a. Salina Irrigation Company		48	Skumpah; T21S, R4E, Sec. 32
	a. U.S. Geological Survey		1	T22S, R4E, Sec. 12
Water Diversion and Weirs	a. Utah Dept. of Transportation		1	T24S, R4E, Sec. 3
Well				
Water Trans- mission Lines	a. Coastal States Energy Company	0.7	1	T22S, R4E, Sec 12
Warehouse Storage Yards	a. Southern Utah Fuel Company		9	T22S, R4E, Sec. 12
	b. Utah Dept. of Transportation		2	T24S, R4E, Sec. 3
	a. Coastal States Energy Company		1	T22S, R4E, Sec. 13
Antenna Systems	b. Coal Search Corp.		1	T23S, R4E, Sec. 34
	a. Utah Dept. of Transportation		5	T26S, R4E, Sec 4.

TOTAL

28.0 Approx 391

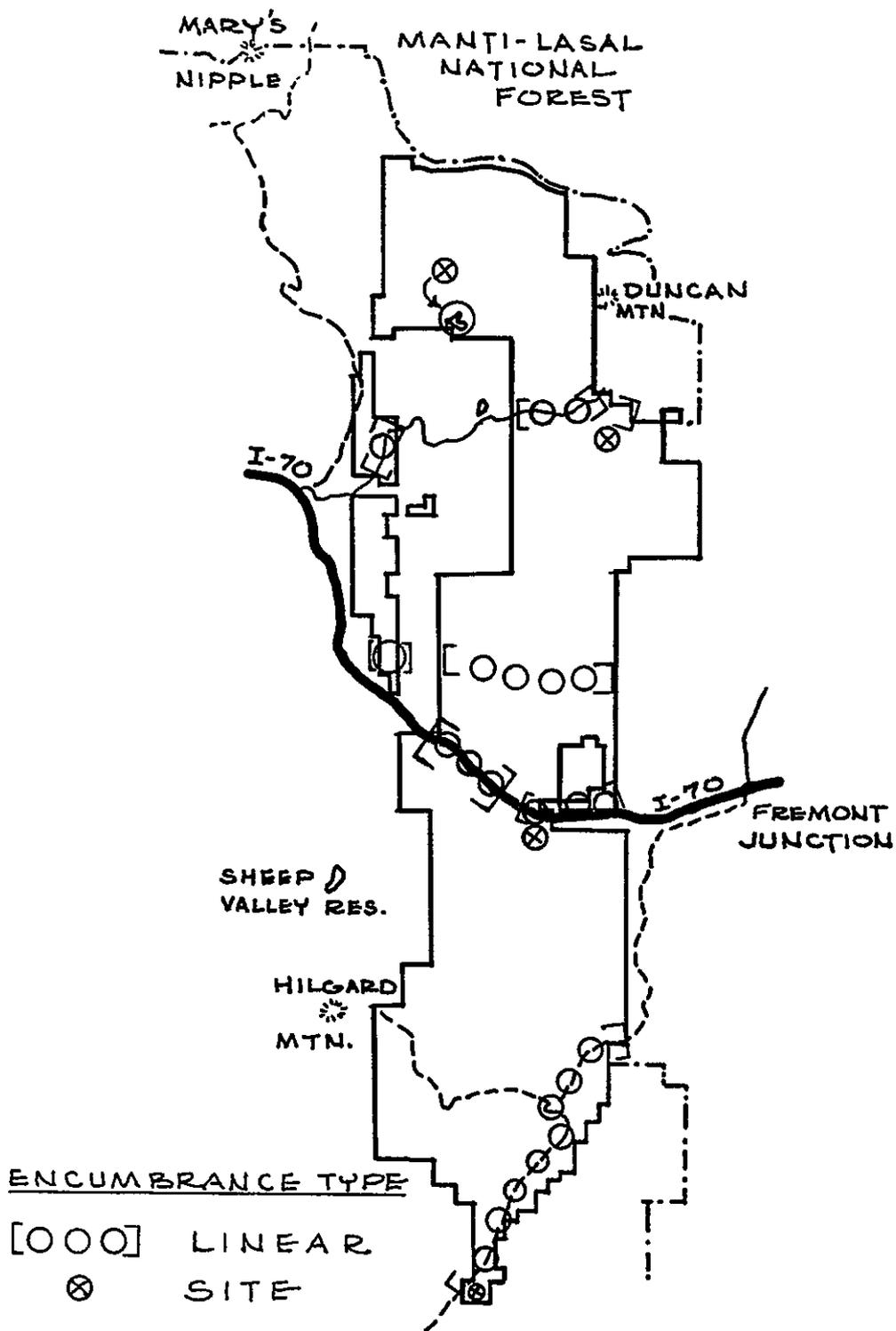


FIGURE 5

Rights-of-Way, Easements, & Forest Service Special Use Permits

CRITERION 3 -- BUFFER ZONE FOR RIGHTS-OF-WAY, CEMETERIES, DWELLINGS, ETC.

FEDERAL LANDS AFFECTED BY SECTION 522(E) (4) AND (5) OF THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977 SHALL BE CONSIDERED UNSUITABLE. THIS INCLUDES LANDS WITHIN 100 FEET OF THE OUTSIDE LINE OF THE RIGHT-OF-WAY OF A PUBLIC ROAD OR WITHIN 100 FEET OF A CEMETARY, OR WITHIN 300 FEET OF ANY PUBLIC BUILDING, SCHOOL, CHURCH, COMMUNITY OR INSTITUTIONAL BUILDING OR PUBLIC PARK OR WITHIN 300 FEET OF AN OCCUPIED DWELLING.

RESULTS

For the purpose of applying this criterion, a "public road" is defined as a designated state or Federal highway. The roads listed in Table 8 which are applicable are: Federal Highway I-70, State Highways U-72 and the SUFCo mine road. The buffer area along each side of these roads totals approximately 259 acres and includes an estimated 4.8 million tons of coal reserves.

There are no known cemeteries, public buildings, schools, churches, community buidlings, or public parks within the boundaries of the study area. The two warehouse-storage yards listed in Table 8 involve approximately 13 acres of buffer and an estimated 0.2 million tons.

The above stated underground mining exemption from criteria was applied by the Forest and the Criterion 3 lands assessed as suitable for underground mining provided that no surface operations or surface impacts are allowed. Recoverable coal made available by application of the underground mining exemption is 2.0 million tons.

Where underground mining would include surface operations and surface impacts incident to underground mining, leasing and mining operations would be allowed only if a following exception applied.

EXCEPTIONS TO CRITERION 3

A LEASE MAY BE ISSUED FOR LANDS:

- (i) USED AS MINE ACCESS ROADS OR HAULAGE ROADS THAT JOIN THE RIGHT-OF-WAY FOR A PUBLIC ROAD;
- (ii) FOR WHICH THE OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT HAS ISSUED A PERMIT TO HAVE PUBLIC ROADS RELOCATED;
- (iii) IF, AFTER PUBLIC NOTICE AND OPPORTUNITY FOR PUBLIC HEARING IN THE LOCALITY, A WRITTEN FINDING IS MADE BY THE AUTHORIZED OFFICER THAT THE INTERESTS OF THE PUBLIC AND THE LANDOWNERS AFFECTED BY MINING WITHIN 100 FEET OF A PUBLIC ROAD WILL BE PROTECTED.

CRITERION 4 -- WILDERNESS STUDY AREAS

FEDERAL LANDS DESIGNATED AS WILDERNESS STUDY AREAS SHALL BE CONSIDERED UNSUITABLE WHILE UNDER REVIEW BY THE ADMINISTRATION AND THE CONGRESS FOR POSSIBLE WILDERNESS DESIGNATION. FOR ANY FEDERAL LAND WHICH IS TO BE LEASED OR MINED PRIOR TO COMPLETION OF THE WILDERNESS INVENTORY BY THE SURFACE MANAGEMENT AGENCY, THE ENVIRONMENTAL ASSESSMENT OR IMPACT

STATEMENT ON THE LEASE SALE OR MINE PLAN SHALL CONSIDER WHETHER THE LAND POSSESSES THE CHARACTERISTICS OF A WILDERNESS STUDY AREA. IF THE FINDING IS AFFIRMATIVE, THE LAND SHALL BE CONSIDERED UNSUITABLE UNLESS ISSUANCE OF NONCOMPETITIVE COAL LEASES AND MINING ON LEASES IS AUTHORIZED UNDER THE WILDERNESS ACT AND THE FEDERAL LAND POLICY AND MANAGMENT ACT OF 1976.

RESULTS

Criterion 4 is not applicable because there are no Wilderness Study Areas within the assessment area.

CRITERION 5 -- SCENIC AREAS

SCENIC FEDERAL LANDS DESIGNATED BY VISUAL RESOURCE MANAGEMENT (VRM) ANALYSIS AS CLASS I (AN AREA OF OUTSTANDING SCENIC QUALITY OR HIGH VISUAL SENSITIVITY) BUT NOT CURRENTLY ON THE NATIONAL REGISTER OF NATURAL LANDMARKS SHALL BE CONSIDERED UNSUITABLE. A LEASE MAY BE ISSUED IF THE SURFACE MANAGEMENT AGENCY DETERMINES THAT SURFACE COAL MINING OPERATIONS WILL NOT SIGNIFICANTLY DIMINISH OR ADVERSELY AFFECT THE SCENIC QUALITY OF THE DESIGNATED AREA.

RESULTS

Criterion 5 does not apply since there are no lands within the assessment area which are designated by VRM analysis as Class I.

CRITERION 6 -- LANDS USED FOR SCIENTIFIC STUDIES

FEDERAL LANDS UNDER PERMIT BY THE SURFACE MANAGEMENT AGENCY AND BEING USED FOR SCIENTIFIC STUDIES INVOLVING FOOD OR FIBER PRODUCTION, NATURAL RESOURCES, OR TECHNOLOGY DEMONSTRATIONS AND EXPERIMENTS SHALL BE CONSIDERED UNSUITABLE FOR THE DURATION OF THE STUDY, DEMONSTRATION OR EXPERIMENT, EXCEPT WHERE MINING COULD BE CONDUCTED IN SUCH A WAY AS TO ENHANCE OR NOT JEOPARDIZE THE PURPOSES OF THE STUDY, AS DETERMINED BY THE SURFACE MANAGEMENT AGENCY, OR WHERE THE PRINCIPLE SCIENTIFIC USER OF AGENCY GIVES WRITTEN CONCURRENCE TO ALL OR CERTAIN METHODS OF MINING.

RESULTS

Criterion 6 does not apply because there are no lands being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments within the assessment area.

CRITERION 7 -- HISTORIC LANDS AND SITES

ALL DISTRICTS, SITES, BUILDINGS, STRUCTURES, AND OBJECTS OF HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, OR CULTURAL SIGNIFICANCE ON FEDERAL LANDS WHICH ARE INCLUDED IN OR ELIGIBLE FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES, AND AN APPROPRIATE BUFFER ZONE AROUND THE OUTSIDE BOUNDARY OF THE DESIGNATED PROPERTY (TO PROTECT THE INHERENT VALUES OF THE PROPERTY THAT MAKES IT ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER) AS DETERMINED BY THE SURFACE MANAGEMENT AGENCY IN CONSULTATION WITH THE ADVISORY COUNCIL ON HISTORIC PRESERVATION AND THE STATE HISTORIC PRESERVATION OFFICE SHALL BE CONSIDERED UNSUITABLE.

RESULTS

The Utah State Historical Society has identified a portion of each of the Paradise Valley National Historic District (eligible) and the Last Chance National Historic District (eligible) as being within the assessment area. A 1/2 mile buffer zone around these areas is considered appropriate for protection of the inherent values of the property. Approximately 1,820 acres of Federal land, including the buffer zone, are included within the assessment area. These lands, as shown in Figure 6, are considered as unsuitable for surface mining and underground mining, where surface impacts or surface operations are included. An estimated 8.1 million tons of reserves and 3.2 million tons of recoverable coal are involved.

Other archeological sites, consisting of those evaluated as eligible for inclusion in the National Register of Historic Places and those unevaluated but deemed significant, are present within the assessment area. Formal determinations, to determine eligibility or non-eligibility, will be made principally by the State Historical Preservation office. Those sites formally determined as eligible would then be included as unsuitable for surface and underground mining by this criterion.

However, since all of the lands within the assessment area are minable by underground methods only, the underground mining exemption from criteria applies. As such the above 1,820 acres of Federal land are assessed by the Forest as suitable for underground mining provided no surface operations or impacts are included. Accordingly, the 3.2 million tons of recoverable coal are made available through application of the exemption.

In those areas where underground mining would include surface operations and impacts, such mining would be allowed only if values making property eligible for listing in the National Register were protected in accordance with the following exception:

EXCEPTION TO CRITERION 7

ALL OR CERTAIN STIPULATED METHODS OF COAL MINING MAY BE ALLOWED IF THE SURFACE MANAGEMENT AGENCY DETERMINES, AFTER CONSULTATION WITH THE ADVISORY COUNCIL ON HISTORIC PRESERVATION AND STATE HISTORIC PRESERVATION OFFICE, THAT THE DIRECT AND INDIRECT EFFECTS OF MINING, AS STIPULATED ON A PROPERTY IN OR ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES, WILL NOT RESULT IN SIGNIFICANT ADVERSE IMPACTS TO THE PROPERTY.

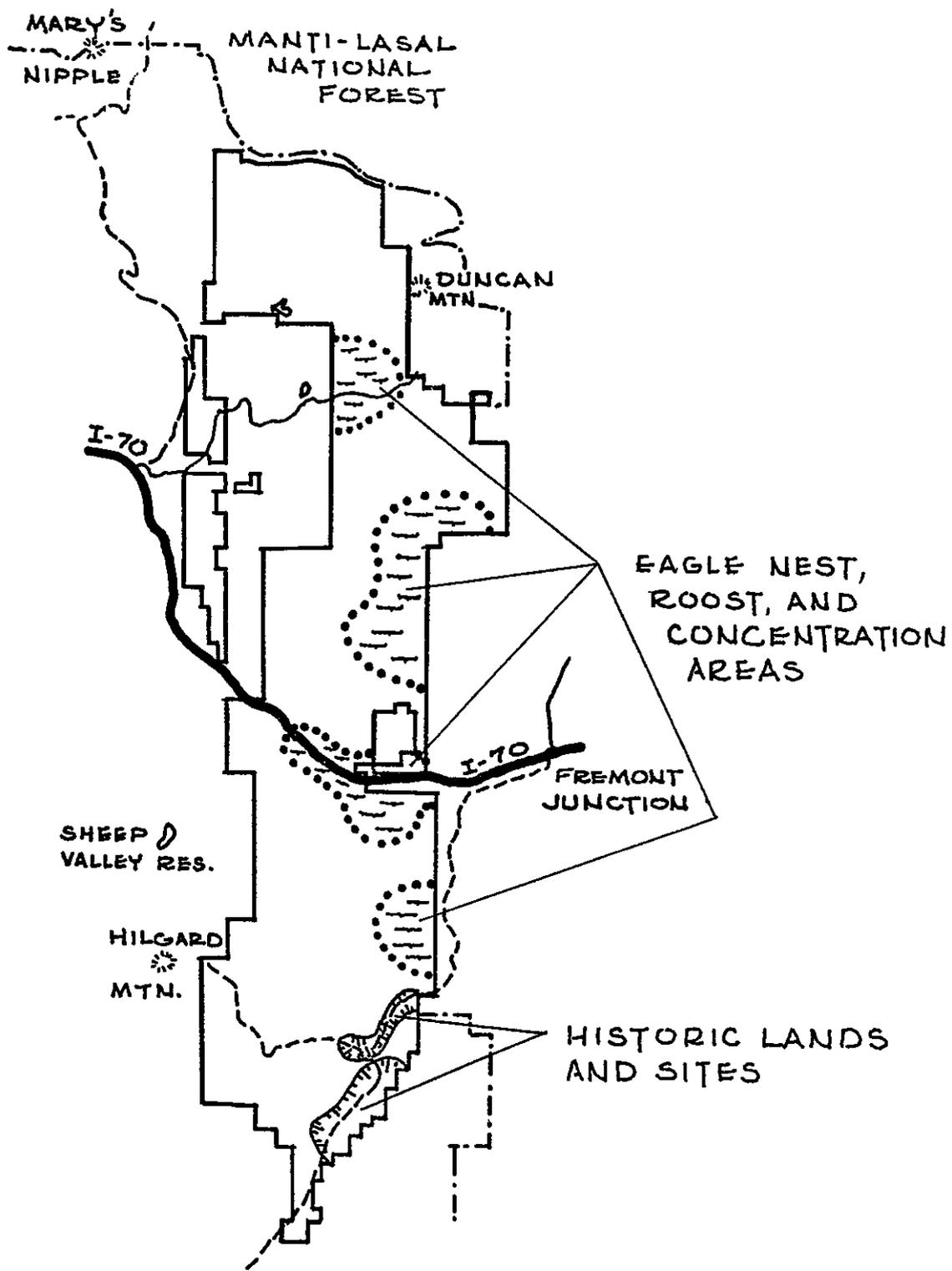


FIGURE 6

Eagle Areas and Historic Lands

CRITERION 8 -- NATURAL AREAS

FEDERAL LANDS DESIGNATED AS NATURAL AREAS OR NATIONAL NATURAL LANDMARKS SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Criterion 8 is not applicable because there are no lands designated as natural areas or National Natural Landmarks within the assessment area.

CRITERION 9 -- FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

FEDERALLY DESIGNATED CRITICAL HABITAT FOR THREATENED OR ENDANGERED PLANT AND ANIMAL SPECIES, AND HABITAT FOR FEDERAL THREATENED OR ENDANGERED SPECIES WHICH IS DETERMINED BY THE U.S. FISH AND WILDLIFE SERVICE AND THE SURFACE MANAGEMENT AGENCY TO BE OF ESSENTIAL VALUE AND WHERE THE PRESENCE OF THREATENED OR ENDANGERED SPECIES HAS BEEN SCIENTIFICALLY DOCUMENTED, SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Criterion 9 is not applicable because there is no Federally designated critical habitat for threatened and endangered plants and animals within the assessment area. Also, there is no threatened or endangered species habitat which is of essential value where the presence of threatened or endangered species has been scientifically documented.

CRITERION 10 -- STATE LISTED THREATENED AND ENDANGERED SPECIES

FEDERAL LANDS CONTAINING HABITAT DETERMINED TO BE CRITICAL OR ESSENTIAL FOR PLANT OR ANIMAL SPECIES LISTED BY A STATE PURSUANT TO STATE LAW AS ENDANGERED OR THREATENED SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Criterion 10 is not applicable because the State of Utah has no state-listed threatened or endangered species.

CRITERION 11 -- EAGLE NESTS

A BALD OR GOLDEN EAGLE NEST OR SITE ON FEDERAL LANDS THAT IS DETERMINED TO BE ACTIVE AND AN APPROPRIATE BUFFER ZONE OF LAND AROUND THE NEST SITE SHALL BE CONSIDERED UNSUITABLE. CONSIDERATION OF AVAILABILITY OF HABITAT FOR PREY SPECIES AND OF TERRAIN SHALL BE INCLUDED IN THE DETERMINATION OF BUFFER ZONES. BUFFER ZONES SHALL BE DETERMINED IN CONSULTATION WITH THE FISH AND WILDLIFE SERVICE.

RESULTS

There are no bald eagle nests or sites on Federal lands within the assessment area. During June and July 1981, a helicopter survey for raptors was conducted and four active golden eagle nest sites and two tended nest sites were found within the assessment area. Appropriate buffer zones around the sites were determined by the Forest in consultation with the Fish and Wildlife Service. These criterion 11 lands within the assessment area, as shown in Figure 6, total approximately 11,315 acres and are unsuitable for mining operations under this criterion. An estimated reserve of 130.7 million tons and 52.3 million tons of recoverable coal are involved in the unsuitable area.

By applying the underground mining exemption from criteria, the above 11,315 acres are assessed by the Forest as suitable for underground mining provided that no surface operations or surface impacts are allowed within the criterion 11 areas. The involved 52.3 million tons of recoverable coal are thus made available.

Leasing criterion 11 areas would be allowed only where surface operations and/or surface impacts would be conditioned pursuant to the following exceptions:

EXCEPTIONS TO CRITERION 11

A LEASE MAY BE ISSUED IF:

- (i) IT CAN BE CONDITIONED IN SUCH A WAY, EITHER IN MANNER OR PERIOD OF OPERATION THAT EAGLES WILL NOT BE DISTURBED DURING BREEDING SEASON; OR
- (ii) THE SURFACE MANAGEMENT AGENCY, WITH THE CONCURRENCE OF THE FISH AND WILDLIFE SERVICE, DETERMINES THAT THE GOLDEN EAGLE NEST(S) WILL BE MOVED.
- (iii) BUFFER ZONES MAY BE DECREASED IF THE SURFACE MANAGEMENT AGENCY DETERMINES THAT THE ACTIVE EAGLE NESTS WILL NOT BE ADVERSELY AFFECTED.

CRITERION 12 -- EAGLE ROOST AND CONCENTRATION AREAS

BALD AND GOLDEN EAGLE ROOST AND CONCENTRATION AREAS ON FEDERAL LANDS USED DURING MIGRATION AND WINTERING SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Within the assessment area, the Forest has identified one roost and concentration area used by bald and golden eagles during migration and wintering. This area, shown in Figure 6, includes approximately 1,756 acres of Federal land (approx. 940 A. coal-bearing) and is unsuitable for surface and underground mining operations under this criterion. An estimated 13.9 million tons of reserves and 5.6 million tons of recoverable coal are involved.

The underground mining exemption from criteria was applied and the Forest assessed the above 756 acres of criterion 12 lands as suitable for underground mining provided that no surface operations or surface impacts are allowed. Application of the underground mining exemption makes the above 5.6 million tons of recoverable coal available.

A lease allowing surface operations and surface impacts within the criterion 12 lands may be issued only if it provides for mitigation of impacts as specified in the following exception.

EXCEPTION TO CRITERION 12

A LEASE MAY BE ISSUED IF THE SURFACE MANAGEMENT AGENCY DETERMINES THAT ALL OR CERTAIN STIPULATED METHODS OF COAL MINING CAN BE CONDUCTED IN SUCH A WAY, AND DURING SUCH PERIODS OF TIME, TO ENSURE THAT EAGLES SHALL NOT BE ADVERSELY DISTURBED. (REFER TO FIGURE 6, FOLLOWING CRITERION 7).

CRITERION 13 -- FALCON CLIFF NESTING SITES

FEDERAL LANDS CONTAINING A FALCON (EXCLUDING KESTRAL) CLIFF NESTING SITE WITH AN ACTIVE NEST AND A BUFFER ZONE OF FEDERAL LAND AROUND THE NEST SITE SHALL BE CONSIDERED UNSUITABLE. CONSIDERATION OF AVAILABILITY OF HABITAT FOR PREY SPECIES AND OF TERRAIN SHALL BE INCLUDED IN THE DETERMINATION OF BUFFER ZONES. BUFFER ZONES SHALL BE DETERMINED IN CONSULTATION WITH THE FISH AND WILDLIFE SERVICE.

RESULTS

Criterion 13 does not apply because the assessment area is not known to contain a falcon cliff nesting site with an active nest.

CRITERION 14 -- MIGRATORY BIRDS

FEDERAL LANDS WHICH ARE HIGH PRIORITY HABITAT FOR MIGRATORY BIRD SPECIES OF HIGH FEDERAL INTEREST ON A REGIONAL OR NATIONAL BASIS, AS DETERMINED JOINTLY BY THE SURFACE MANAGEMENT AGENCY AND THE FISH AND WILDLIFE SERVICE, SHALL BE CONSIDERED UNSUITABLE.

RESULTS

The Bureau of Land Management and Fish and Wildlife Service have identified 21 migratory bird species of high Federal interest as being present within the Uinta-Southwestern Utah Coal Production Region -- a geographic region in which the assessment area is located. A list of these species is shown in Table 9 and is used for application of this criterion.

High priority habitat is defined as areas that: (1) are used regularly by one or more of the listed species, (2) are otherwise limited in availability for feeding, reproduction, wintering, or other uses or supportive of concentrations of one or more species, and (3) contain a combination of natural or man made factors that provide essential habitat requirements. No high priority habitat for the species listed in Table 9 has been identified within the assessment area except for eagles as discussed in criterias 11 and 12. However, because none of the assessment area is known to not meet the definition of high priority habitat, all 76,867 acres of Federal lands are considered unsuitable for surface and underground mining operations. An estimated 1,387.3 million tons of reserves and 554.9 million tons of recoverable coal are involved in the unsuitable lands.

By applying the underground mining exemption from criteria, the Forest assessed the above 76,867 acres as suitable for underground mining provided that no surface operations or impacts within the criterion 14 area are allowed. Thus, application of the underground mining exemption makes the above 554.9 million tons of recoverable coal available.

Leasing criterion 14 lands may be allowed only where surface operations and/or surface impacts would be conditioned pursuant to the following exception:

EXCEPTION TO CRITERION 14

A LEASE MAY BE ISSUED WHERE THE SURFACE MANAGEMENT AGENCY, AFTER CONSULTATION WITH THE FISH AND WILDLIFE SERVICE, DETERMINES THAT ALL OR CERTAIN STIPULATED METHODS OF COAL MINING WILL NOT ADVERSELY AFFECT THE MIGRATORY BIRD HABITAT DURING THE PERIODS WHEN SUCH HABITAT IS USED BY THE SPECIES.

TABLE 9
MIGRATORY BIRDS OF HIGH FEDERAL INTEREST FOUND IN THE UINTA-SOUTHWESTERN UTAH COAL PRODUCTION REGION
AND OCCURRENCE RATING FOR THE ASSESSMENT AREA

	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>KNOWN</u>	<u>OCCURRENCE POSSIBLE</u>	<u>UNLIKELY</u>
1.	Great Blue Heron	<u>ardea herodias</u>		X	
2.	Cooper's Hawk	<u>Accipiter cooperii</u>	X		
3.	Ferruginous Hawk*	<u>Buteo regalis</u>			X
4.	Golden Eagle	<u>Aquila chrysaetos</u>	X		
5.	Bald Eagle	<u>Haliaeetus leucocephalus</u>	X		
6.	Osprey*	<u>Pandion haliaetus</u>			X
7.	Prairie Falcon	<u>Falco mexicanus</u>	X		
8.	Peregrine Falcon	<u>Falco peregrinus</u>		X	
9.	Merlin	<u>Falco columbarius</u>		X	
10.	Long-billed Curlew	<u>Numenius americanus</u>			X
11.	Band-tailed Pigeon*	<u>Columba fasciata</u>			X
12.	Flammulated Owl	<u>Otus flammeus</u>		X	
13.	Burrowing Owl*	<u>Speotyto cunicularia</u>			X
14.	Spotted Owl	<u>Strix occidentalis</u>			X
15.	Black Swift*	<u>Cypseloides niger</u>			X
16.	Pileated Woodpecker	<u>Dryocopus pileatus</u>			X
17.	Lewis Woodpecker	<u>Asyndesmus lewis</u>		X	
18.	Williamson's Sapsucker	<u>Sphyrapicus thyroideus</u>		X	
19.	Western Bluebird	<u>Sialia mexicana</u>	X		
20.	Grace's Warbler	<u>Dendroica graciae</u>	X		
21.	Scott's Oriole	<u>Icterus parisorum</u>		X	

*No habitat type present in the assessment area for these species as per Forest in consultation with Fish and Wildlife Service.

CRITERION 15 -- STATE RESIDENT FISH AND WILDLIFE

FEDERAL LANDS WHICH THE SURFACE MANAGEMENT AGENCY AND THE STATE JOINTLY AGREE ARE FISH AND WILDLIFE HABITAT FOR RESIDENT SPECIES OF HIGH INTEREST TO THE STATE AND WHICH ARE ESSENTIAL FOR MAINTAINING THESE PRIORITY WILDLIFE SPECIES SHALL BE CONSIDERED UNSUITABLE. EXAMPES OF SUCH LANDS WHICH SERVE A CRITICAL FUNCTION FOR THE SPECIES INVOLVED INCLUDE:

- (i) ACTIVE DANCING AND STRUTTING GROUNDS FOR SAGE GROUSE, SHARP-TAILED GROUSE, AND PRAIRIE CHICKEN;
- (ii) WINTER RANGES MOST CRITICAL FOR DEER, ANTELOPE, AND ELK; AND
- (iii) MIGRATION CORRIDORS FOR ELK.

A LEASE MAY BE ISSUED IF, AFTER CONSULTATION WITH THE STATE, THE SURFACE MANAGEMENT AGENCY DETERMINED THAT ALL OR CERTAIN STIPULATED METHODS OF COAL MINING WILL NOT HAVE A SIGNIFICANT LONG-TERM IMPACT ON THE SPECIES BEING PROTECTED.

RESULTS

Resident fish and wildlife species of high interest to the State of Utah have been identified by the Utah Division of Wildlife Resources (UDWR). Table 10 lists those species known to inhabit the assessment area.

Areas essential for maintaining the listed species have been jointly agreed upon by the Forest and UDWR. They include:

- a. Water impoundments, all perennial and ephemeral stream channels riparian habitat, and associated wetlands along with a 0.5 mile terrestrial habitat buffer zone on each side of the riparian habitat.
- b. All coniferous and aspen vegetation types.
- c. Winter ranges most-critical for deer and elk.
- d. Elk calving areas.
- e. Cliff areas associated with raptor nests.

The above types of essential areas comprise virtually all 76,867 acres of Federal lands within the assessment area and are unsuitable for surface and underground mining operations (see Fig. 4). An estimated 1,387.3 million tons of reserves and 554.9 million tons of recoverable coal are involved in the unsuitable lands.

Through application of the underground mining exemption from criteria, the Forest assessed the above 76,867 acres as suitable for underground mining provided that no surface operations or impacts within the criterion 15 lands are allowed. The above 554.9 million tons of recoverable coal are made available by application of this exemption.

Leasing criterion 15 lands may be allowed where surface operations and/or surface impacts will not have a significant long-term impact on the species being protected, as determined by the Forest in consultation with the UDWR.

TABLE 10: Resident Fish and Wildlife Species of High Interest to the State of Utah Which Are Known to Inhabit the Assessment Area.

COMMON NAME	SCIENTIFIC NAME
BIRDS	
Goshawk	<u>Accipiter gentilis</u>
Sharp-chined Hawk	<u>Accipiter striatus</u>
Red-tailed Hawk	<u>Buteo jamaicensis</u>
Ferruginous Hawk	<u>Buteo regalis</u>
Golden Eagle	<u>Aguila chrysaetos</u>
Marsh Hawk	<u>Circus syaneus</u>
Prairie Falcon	<u>Falco mexicanus</u>
Peregrine Falcon	<u>Falco peregrinus</u>
American Kestrel	<u>Falco sparverius</u>
Blue Grouse	<u>Dendragapus obscurus</u>
Sage Grouse	<u>Centrocercus urophasianus</u>
Chukar Partridge	<u>Alectoris chukar</u>
Turkey	<u>Melaneris gallopavo</u>
MAMMALS	
Black Bear	<u>Ursus americanus</u>
Mountain Lion	<u>Felis concolor</u>
Rocky Mountain Elk	<u>Cervus canadensis</u>
Mule Deer	<u>Odocoileus hemionus</u>
Pronghorn Antelope	<u>Antilocarpra americana</u>
Snowshoe Hare	<u>Lepus americanus</u>
Mountain Cottontail	<u>Sylvilagus nuttallii</u>
Desert Cottontail	<u>Sylvilagus auduboni</u>
Pigmy Cottontail	<u>Sylvilagus idahoensis</u>
Beaver	<u>Castor canadensis</u>
Bobcat	<u>Lynx rufus</u>
Kit Fox	<u>Vulpes macrotis</u>
Badger	<u>Taxidea taxus</u>
FISH	
Cutthroat Trout	<u>Salmo clarki</u>
Rainbow Trout	<u>Salmo gairdneri</u>
Brown Trout	<u>Salmo trutta</u>
Brook Trout	<u>Salvelinus fontinalis</u>

CRITERION 16 -- FLOODPLAINS

FEDERAL LANDS IN RIVERINE, COASTAL AND SPECIAL FLOODPLAINS (100 YEAR RECURRENCE INTERVAL) ON WHICH THE SURFACE MANAGEMNT AGENCY DETERMINES THAT MINING COULD NOT BE UNDERTAKEN WITHOUT SUBSTANTIAL THREAT OF LOSS OF LIFE OR PROPERTY SHALL BE CONSIDERED UNSUITABLE FOR ALL OR CERTAIN STIPULATED METHODS OF COAL MINING.

RESULTS

Within the assessment area there are approximately 155 acres of Federal lands in special floodplains which the Forest determined are unsuitable for surface and underground mining operations. These lands are shown in Figure 7 and involve 2.8 million tons of reserves and 1.1 million tons of recoverable coal.

Through application of the underground mining exemption from criteria, the Forest has assessed the above 155 acres, invloving 1.1 million tons of recoverable coal, suitable for underground mining. Such suitability is based upon determination by the Forest that mining operations can be undertaken, through employment of adequate protective measures, without substantial threat of loss of life or property.

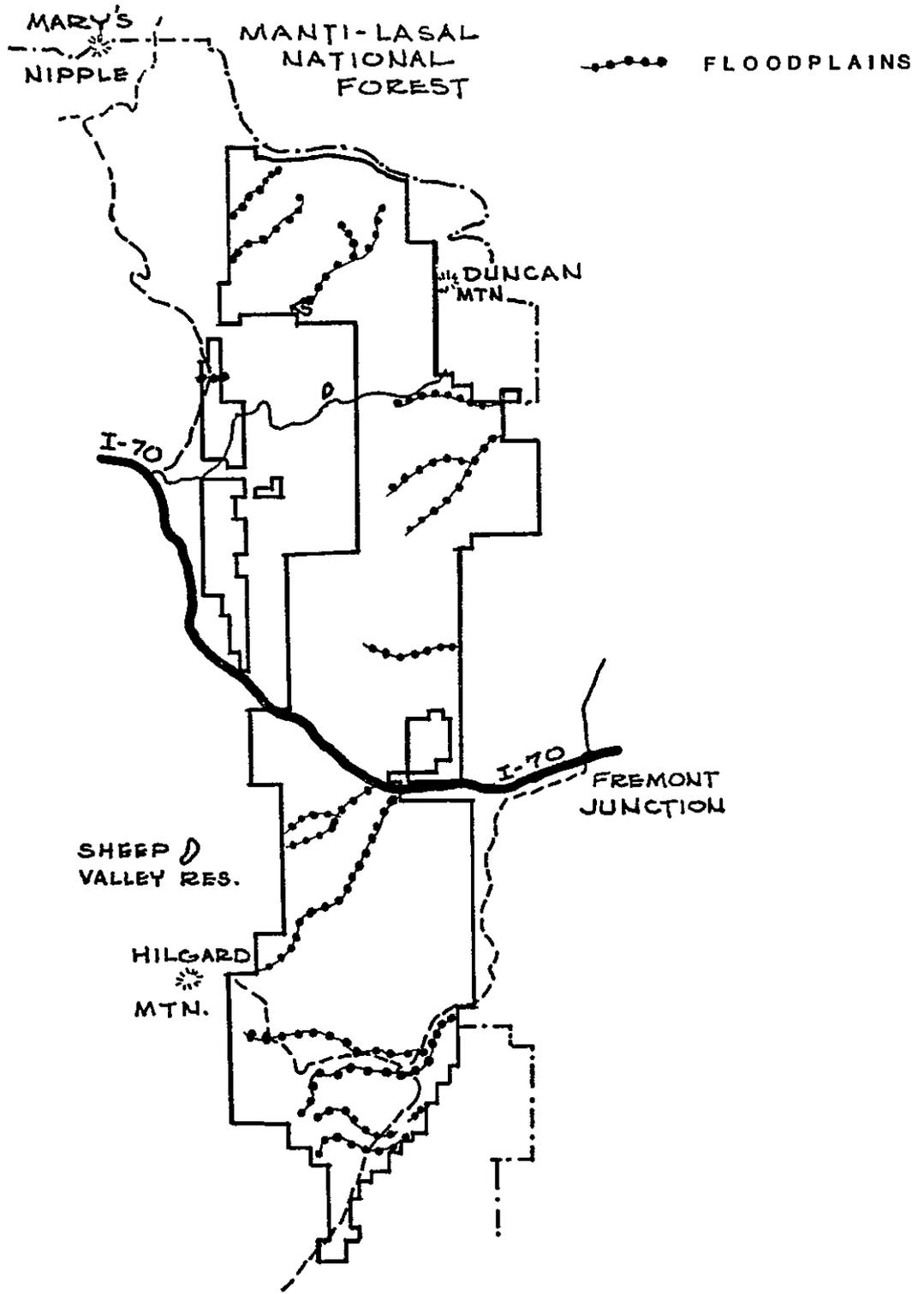


FIGURE 7

Special Floodplains

CRITERION 17 -- MUNICIPAL WATERSHEDS

FEDERAL LANDS WHICH HAVE BEEN COMMITTED BY THE SURFACE MANAGEMENT AGENCY TO USE AS MUNICIPAL WATERSHEDS SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Criterion 17 does not apply because there are no municipal watersheds within the assessment area.

CRITERION 18 -- NATIONAL RESOURCE WATERS

FEDERAL LANDS WITH NATIONAL RESOURCE WATERS, AS IDENTIFIED BY STATES IN THEIR WATER QUALITY MANAGEMENT PLANS, AND A BUFFER ZONE OF FEDERAL LAND 1/4 MILE FROM THE OUTER EDGE OF THE FAR BANKS OF THE WATER, SHALL BE UNSUITABLE.

RESULTS

Criterion 18 does not apply because no National Resource Waters have been identified within the assessment area by the State of Utah.

CRITERION 19 -- ALLUVIAL VALLEY FLOORS

FEDERAL LANDS IDENTIFIED BY THE SURFACE MANAGEMENT AGENCY, IN CONSULTATION WITH THE STATE IN WHICH THEY ARE LOCATED, AS ALLUVIAL VALLEY FLOORS ACCORDING TO THE DEFINITION IN 34--0.5 (A) OF THIS TITLE, THE STANDARD IN 30 CFR PART 822, THE FINAL ALLUVIAL VALLEY FLOOR GUIDELINES OF THE OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT WHEN PUBLISHED AND APPROVED STATE PROGRAMS UNDER THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977, WHERE MINING WOULD INTERRUPT, DISCONTINUE, OR PRECLUDE FARMING, SHALL BE CONSIDERED UNSUITABLE. ADDITIONALLY, WHEN MINING FEDERAL LAND OUTSIDE AN ALLUVIAL VALLEY FLOOR WOULD MATERIALLY DAMAGE THE QUANTITY OR QUALITY OF WATER IN SURFACE OR UNDERGROUND WATER SYSTEMS THAT WOULD SUPPLY ALLUVIAL VALLEY FLOORS, THE LAND SHALL BE CONSIDERED UNSUITABLE.

RESULTS

The Forest has identified no alluvial valley floors within the assessment area. Therefore the first part of this criterion does not apply.

Water from the assessment area does supply alluvial valley floors outside the assessment area. However, the Forest has determined that surface and underground mining operations are possible without materially damaging water quantity or quality, provided that performance standards defined in 30 CFR Parts 816 and 817 are met. Therefore, the lands within the assessment area are considered suitable for surface and underground mining.

CRITERION 20 -- STATE PROPOSED CRITERIA

FEDERAL LANDS IN A STATE TO WHICH IS APPLICABLE TO CRITERION (1) PROPOSED BY THAT STATE, AND (11) ADOPTED BY RULEMAKING BY THE SECRETARY, SHALL BE CONSIDERED UNSUITABLE.

RESULTS

Criterion 20 is not applicable because the State of Utah has not proposed, nor had additional criteria adopted by the Secretary of Interior.

C. Multiple Use Resource Management Decision

Most conflicts between coal and other resources and uses have been addressed in application of the unsuitability criteria. However, the Clear Creek Administrative Site, comprised of approximately 202 acres in Lots 1-6, T.24S., R.4E., SLM, and the Lisonbe Administrative Site including 40 acres in SW1/4NW1/4 Sec 34, T.21S., R.4E., SLM, require protection. Surface operations and impacts related to mining would be restricted to safeguard the values present. These sites involve an estimated reserve of 5.1 million tons and 2.0 million tons of recoverable coal. The 2.0 million tons of recoverable coal would be available by underground mining methods which would not include significant impacts to the surface.

Additional conflicts may be revealed through the Forest Planning process. Adjustments to accomodate these conflicts will be made as needed.

D. Surface Owner Consultation

As stated earlier in this document, there are 160 acres of privately owned surface estate overlying Federal coal resources. These lands are located in T.22S., R.3E., Sec 13: SE1/4SE1/4, and Sec. 24: NE1/4SE1/4; and T.24S., R.4E., Sec. 29: N1/2NW1/4. Since these lands are minable only by underground methods, consultation with surface owner(s) is not required (see 43 CFR 3420.1-4(e)(4)(i) and therefore was not done. Availability of the coal resource is not affected.

III. DESIGNATION OF AREAS UNSUITABLE FOR MINING

It should be noted that the Federal lands review is not a program for the designation of lands as unsuitable for mining. Formal designation of Federal lands as unsuitable would occur only in response to a petition to designate under Section 522(c) of the SMCRRRA. The office of Surface Mining Reclamation and Enforcement (OSM) has the responsibility to administer the statutory petition process.

Under the petition process, petitions would be filed with OSM. The petitioner must be adversely affected by potential mining of the lands in question. The petition must "contain allegations of facts with supporting evidence" to establish the truth of the allegations. On those petitions that do meet these requirements, designation as unsuitable, rejection of the petition, or termination of a prior designation would occur. The OSM would refer each petition to the appropriate land management agency for its review. The results of that review would be presented at or before a public hearing on the petition. The land management agency would also be able to petition OSM on its own behalf to designate Federal lands as unsuitable or to terminate a prior designation.

While the criteria applied in the Federal land review and the petition process are the same, it is important to note that OSM, not the land management agency, controls the outcome of the petition process. It

may be that certain lands which would not be found to be unsuitable in land use planning might be designated unsuitable upon petition, and conversely, lands deemed unsuitable by the land management agency might not be designated unsuitable upon petition. This is possible because the unsuitability criteria themselves, and their exceptions, are, in origin and function, designed to ensure environmental protection and establish mitigation of adverse impacts, while the formal designation process requires consideration of coal demand and the socio-economic impacts in carrying out the environmental purposes served by the criteria.

IV. CONCLUSIONS

Also it should be noted that the conclusions reached in this review and the land use planning process concerning the potential for coal leasing are not a commitment that leasing will take place. They merely identify lands that are acceptable for further consideration for leasing. Also, they do not end the process of evaluation. At a minimum, a potential lease area will still be evaluated as required by the National Environmental Policy Act and no mining will be allowed except as authorized by the Surface Mining Control and Reclamation Act (SMCRA). Environmental Analysis and Coordination with the BLM will be necessary before additional coal leasing occurs. Under the Federal Coal Management Program, even more evaluation is done through tract delineation, including a tract profile consisting of a site specific environmental inventory and preliminary analysis; ranking selection, and scheduling processes of tracts; and the regional sale environmental statement.

V. PUBLIC PARTICIPATION

The Forest invited public comment concerning application of the unsuitability criteria through a notice published in the Federal Register dated January 23, 1981. Notices were published in newspapers of general circulation in the area. Written notice was also sent to the local Six County Commissioner's Organization and the Utah State Planning Coordinator (A-95 Clearing House). A public meeting was also held February 10, 1981 in Richfield, Utah to explain the procedure, answer questions, and receive comments concerning the assessment.

Comments regarding impacts on raptor nests along cliff areas, water quantity and quality, archeological values, and deer and elk winter range were received. Written responses are on file at the Richfield Ranger District Office, 115 East 900 North Richfield, Utah.

APPENDIX P
See Travel Map in Pocket

APPENDIX Q

SOIL AND WATERSHED IMPROVEMENT NEEDS

Appendix Q shows the soil and watershed improvement needs and the Forest soil monitoring plan. Existing instream flow recommendations and streams needing instream flow quantification are shown in Tables Q-1 and Q-2. Table Q-3 is a prioritized listing of watershed improvement needs. Table Q-4 is a prioritized listing of abandoned mine land restoration. The Forest soil monitoring plan is also contained in this appendix.

1. Water Resource Inventories

The water resource inventories provide for collection and assembly of information which defines and characterizes water resources. These inventories provide interpretations that are made for land and resource management plans. Water resource inventories usually include descriptions of climate, water quality, water quantity, watershed characteristics and water uses and developments. Better definition of water rights, including instream flow claims for "securing favorable conditions of flow" and description of past watershed improvement needs, as identified in the watershed improvement needs inventory, are two major goals of such inventories. The schedule for the next 10 years follows:

<u>Year</u>	<u>Watershed ID</u>	<u>Costs</u>	<u>Acres</u>
85	Kanosh (028)	\$5,500	92,300
86	North Creek (025)/Sulphur(026)	5,500	99,400
87	Beaver River (024)/Fremont(030)	5,500	82,700
88	Fillmore (029)/Up. Salina (016)	5,500	103,200
89	Soldier (017)/L. Salina (016)	5,500	88,800
90	Clear Creek (011)	5,500	104,200
91	Fool Cr. (022)/Scipio (020)	5,500	79,400
92	Convulsion (001)/Koosharem (007)	5,500	87,500
93	Monroe (013)/Marysvale (012)	5,500	107,200
94	Otter Cr. (008)/Willow Cr (019)	5,500	91,700

Priorities are based on needs for water rights adjudications, completing instream flow quantifications, completing essential watershed restoration backlogs, the need to complete our watershed data bases and the seriousness of current watershed problems in terms of health, safety, and resource values.

2. Instream Flows

In the Forest Service Manual (FSM 2541.03), it states that "water, including instream flows and standing water, necessary for the development, use, and management of resources of the National Forest System will be obtained and used in accordance with the reservation principle, where applicable. Where the reservation principle is not applicable, water rights will be obtained in accordance with state law." Where neither the reservation principle nor state law can be used to secure a legal right to maintain instream flows, recognition

of values and quantification are necessary as a basis for land management decisions in possible future proposals for water diversions. Further direction along these same lines has been given by the Chief, in the President's Water Policy and in the National Forest Management Act (NFMA) regulations. Evaluation for instream flow values should recognize recreation, fish, and wildlife needs, and other uses as well as for activities and uses associated with timber production and securing favorable conditions of water flow.

Streams and standing water bodies have been identified by the Districts on which instream flow values and minimum water level determinations should be conducted. These streams, reservoirs, and lakes are listed by HRU's.

TABLE Q-1
 STREAMS AND STANDING WATER ON WHICH
 DETERMINATIONS SHOULD BE CONDUCTED

Beaver HRU

Birch Creek
 Pine Creek
 North Creek
 Beaver River
 South Creek
 Indian Creek
 Mill Creek

Fremont HRU

Seven Mile Creek
 UM Creek
 Fremont River
 Clear Creek
 Polk Creek

Fremont HRU

Sulphur Creek
 Sand Creek
 Cedar Creek
 Reese Creek
 Sweetwater Creek
 Pole Canyon Creek
 Salt Creek
 Tasha Creek
 Last Chance Creek
 Round Spring Draw

Richfield HRU

Salina Creek
 Willow creek
 Niotche Creek
 Little Lost Creek
 Lost Creek
 Gooseberry Creek
 Gates Creek
 Monroe Creek
 Box Creek
 Otter Creek
 Fish Creek
 Shingle Mill
 Skutumpah Reservoir

Delta HRU

Oak Creek

Fillmore HRU

Corn Creek
 Meadow Creek
 South Fork Chalk Creek
 North Fork Chalk Creek
 Pioneer Canyon Creek
 Maple Grove
 Willow Creek
 Second Creek
 Three Creek
 Pole Creek
 Skunk Creek

Piute HRU

Manning Creek
 City Creek
 Bullion Creek
 Beaver Creek
 Tenmile Creek
 Cottonwood Creek
 Deer Creek
 Birch Creek
 Manning Reservoir

Richfield HRU (con't)

Twin Ponds Reservoir
 Farnsworth Reservoir
 Abes Reservoir
 Harves Reservoir
 Salina Reservoir
 Hamilton Lake
 Gates Lake
 Rex's Reservoir
 Box Creek Reservoir
 Big Lake
 Annabella Reservoir
 Deep Lake

TABLE Q-2
WATERSHED IMPROVEMENTS

The following watershed improvements have been scheduled by priority for project work starting in 1985:

<u>Project Name</u>	<u>District</u>	<u>Watershed ID</u>	<u>Acres</u>	<u>Cost</u>
Na-Gah flat	D-2	003/03	3	\$2,000
N. Lake Creek	D-2	002/18	20	8,000
Hancock Flat	D-2	007/01	3	1,500
Right Fk UM	D-2	004/04	3	3,000
Gold Gulch Rd	D-3	010/17	20	5,000
Price Spring	D-3	010/08	20	15,000
Brush Hollow Rd.	D-3	026/06	25	5,000
Beaver River	D-3	024/14	21	4,500
Brush Trail	D-4	017/23	5	2,000
Salina Landslides	D-4	016	80	4,000
Sunset	D-1	028/05	5	1,800
Hell Hole Can.#1/2	D-1	028/01	150	20,800
Indian Spring	D-1	028/03	5	1,800
Chokecherry Can.	D-1	029/04	120	20,500
Willow Basin	D-2	002/11	350	26,200
Salt Gulch 2	D-2	004/02	100	17,400
Riley Spring	D-2	004/01	100	15,400
Chokecherry	D-3	009/01	15	3,650
S.Fk So.Cr (CC Pk)	D-3	024/03	15	3,650
Tushar Alpine	D-3	024	80	5,100
Clear Creek	D-4	019/05	15	4,700
Flat Top	D-4	016/47	25	8,200
Gooseberry/Squaw	D-4	017/03	80	14,100
Upper Chokecherry	D-1	029/06	280	30,000
McDonald Basin	D-2	002/10	150	30,000
Tushar Alpine	D-3	024	150	27,000
Tushar Alpine	D-3	010	180	24,700
Big John Flat	D-3	024/05	10	5,000
Soldier Can. #1	D-4	017/12	200	30,000
Cottonwood Cr. Rd	D-1	028/21	5	2,000
Low Rose Hol Rd	D-1	028/15	2	1,000
Up Trail Sp B Rd	D-1	028/16	6	3,000
Grass Valley	D-1	028/13	100	44,000
Upper Sevenmile	D-2	003/05	15	8,000
Mamoit Spring	D-2	003/07	2	1,000
Merchant Hollow	D-3	025/03	30	2,000
Brush Hollow Rd	D-3	026/06	25	5,000
Soldier Canyon # 2	D-4	017/13	200	60,000

<u>Project Name</u>	<u>District</u>	<u>Watershed ID</u>	<u>Acres</u>	<u>Cost</u>
Al Gay Flat	D-1	028/19	30	13,000
N. Fk. Big Hollow	D-1	028/11	30	13,000
Garden Basin	D-2	002/14	150	15,000
Cork Rd. Barley	D-3	025/09	10	3,000
Soldier Canyon	D-4	017/11	200	60,000
Pavant GS	D-1	011/05	10	10,000
Mud Sp. Hollow	D-1	011/07	20	15,000
Marys Nipple	D-1	011/09	35	5,000
Meeks Lake	D-2	002/16	40	10,000
Beaver River	D-3	024/14	20	50,000
S. Fk So. Cr.	D-3	025/14	15	43,000
S. Fk Big Hollow	D-1	028/12	200	88,000
Tasha Spring	D-2	003/04	60	5,000
S. Fk Manning R. Rd	D-4	012/12	5	1,000
No. Coal Rd.	D-4	016/11	15	10,000
Mud Lakes	D-4	016/24	7	7,000
N. Fk. North Cr.	D-3	025/15	10	12,000
City Cr. Peak	D-3	010/04	70	8,000
Beaver River 2	D-3	024/14	20	51,000
Snow Corral	D-4	016/02	100	20,000
No Bull Valley	D-4	018/03	38	10,000
Bean Canyon	D-1	014/06	500	40,000
Pole Canyon	D-2	005/01	150	25,000
Bullion Canyon	D-3	010/15	9	32,000
Indian Creek	D-3	025/16	20	50,000
Little Duncan	D-4	001/03	140	15,000
Upper Rock Can	D-1	020/02	250	30,000
Rock Canyon	D-1	020/03	200	25,000
Fish Creek M.	D-3	011/22	5	4,000
Wilson Creek	D-3	011/23	10	5,000
Rosebud Cr.	D-3	011/24	5	4,000
Pine Hollow Spring	D-4	001/15	300	30,000
East Skutumpah	D-4	016/04	200	40,000

TABLE Q-3
ABANDONED MINE LAND RESTORATION

The following abandoned mine lands have been scheduled by priority for project work starting in FY 1986:

<u>PROJECT NAME</u>	<u>WATERSHED ID</u>	<u>DISTRICT</u>	<u>ACRES</u>	<u>DOLLARS</u>
RAINBOW MINE	026-07	D-3	4	1.0
FULLMER CLAY MINE	011-26	D-3	12	7.0
WILD HORSE CANYON	022-07	D-1	3	2.0
MINE HOLLOW	022-06	D-1	13	6.0
HELL HOLE MINE	029-39	D-1	2	2.0
BEAR CANYON MINE	029-38	D-1	3	1.0
1ST LHF MONROE CR.	013-18	D-4	1	1.0
HOLT DRAW 1	006-05	D-2	2	1.0
HOLT DRAW 2	006-06	D-2	2	1.0
SAND CREEK	006-07	D-2	2	1.0
GREENWICH SHAFT	008-11	D-4	2	1.0
ALUNITE MINE	010-18	D-3	2	2.0
N DEER TRAIL MINE	010-19	D-3	5	1.0
UPPER S F MINE	001-20	D-3	5	2.0
RED CREEK	001-27	D-4	3	2.5
SEVENMILE	003-08	D-2	1	0.5
DRY WASH MINE 1	027-06	D-1	2	2.0
DRY WASH MINE 2	027-07	D-1	7	4.0
WRINGER CANYON	021-01	D-1	2	1.0
COTTONWOOD	018-26	D-4	2	1.0
MANNING CR SHAFT	012-15	D-4	1	1.0

3. FOREST SOIL MONITORING PLAN

A. Site Location

Five representative sites will be selected representing various portions of the Forest. These portions are as follows: 1. Canyon range, 2. Pahvant range, 3. Tushar range, 4. Monroe unit, and 5. Salina-Fremont unit. Specific area identification including name and location will be provided for each site with a map showing the location for each selected site. The sites selected will be representative of major habitat types found on the forest with soils typical of these sites.

B. Objectives

Five selected sites will be monitored once a year to evaluate the changes in percent bare ground over time. These sites will be selected in areas subject to management activities to show the related effect management has on soil loss and soil productivity using percent bare ground as an indicator and to ensure that soil loss tolerance limits are not being exceeded.

C. Type of Data to be Collected

Following the procedures as outlined in the Range Analysis Handbook, FSH 2209.21, 4.63 a-4.63 l, called Nested Frequency/Shrub Density Method, a 100 feet long baseline is established and staked along with a witness marker. Photographs are taken of the study site. Five beltlines are randomly selected perpendicular to the baseline and data is collected using a "nested frequency frame." The frame is placed at 5 feet intervals along the beltline. Data collection, gathered on ground cover, i.e., vegetation, pavement, rock, litter, and cryptogams verses bare soil will be obtained from the four points of the frame. Percent bare soil can then be calculated. This will provide 400 points of data per year per site to determine if ground cover is increasing or decreasing over time. This also establishes the "VM" factor used in the Modified Universal Soil Loss Equation to determine soil erosion rates. "VM" is explained in part G of this plan.

D. Timing of Collection and Date of Discontinuation

Data will be collected during the mid-summer each year for each site through the year 1995.

E. Estimated Cost of Total Monitoring Operations

The estimated cost of the total monitoring operation is 1200 dollars per year for all sites x 10 years = \$12,000.

F. Estimated Person Time Involved

Estimated man days is 5 days per year x 10 years = 50 man days.

G. How Data will be Used

Data obtained from the soil monitoring sites will be analyzed as follows using changes in bare soil over time:

1. Plot percent bare soil vs. year of analysis, i.e., year 1, 2, 3 etc.
2. Develop a regression equation using percent bare soil (Y) as the dependant variable and year (X) as the independant variable, (Y=a+bX) with "a" representing the Y intercept and "b" the slope of the line.
3. Test the hypothesis that the slope of the line equals zero, which indicates there is no change in bare soil over time an example follows:

% Bare Soil	Year	Estimated Bare Soil	Deviation from Regression	Square of Deviation
Y	X	Y'	Y-Y'=dyx	dyx ²
21	1	23.6	-2.6	6.76
26	2	22.7	3.3	10.89
23	3	21.8	1.2	1.44
19	4	20.9	-1.9	3.61
20	5	20.0	0	0
				dyx ² =22.70

Degrees of freedom for the analysis would be 5-2=3, where 5 observations were made and 2 averages were used in the computation. We then have $Syx^2 = dyx^2/n-2 = 22.7/5-2 = 7.57$ and $Syx = \sqrt{7.57} = 2.75$.

This value furnishes a sample standard deviation of the regression coefficient, where $Sb = Syx / \sqrt{x^2}$. The value for x^2 refers to a value calculated by obtaining the mean value for X (called X) and subtracting X from each X value. Square and sum these values to obtain x^2 . Then a significance test for b is given by $t = b/Sb$ with n-2 df.

The calculated t value is compared with tabular t values given in any statistical text. If the calculated t value is greater than the tabular value, you assume the slope of the line is different than zero and that a change in bare soil has occurred over time.

Using the Modified Universal Soil Loss Equation as described in "An Approach to Water Resource Evaluation of Non-Point Silvicultural Sources (A procedural Handbook)"¹ one can establish surface sheet and rill erosion rates as follows: $A=RKLSVM$

"A" is the estimated average soil loss per unit area in tons/acre for one year.

"R" is the rainfall factor (values taken from the iso-erodant map found in "Erosion Control during Highway Construction" Volume II₂), expressed in units of rainfall-erosivity index, EI.

"K" is the soil erodibility factor expressed in tons/acre/EI units.

"L" is the slope length and is the ratio of soil loss from the field slope length to that from a 72.6-foot (22.1m) length on the same soil, gradient, cover and management.

"S" is the slope gradient factor and is the ratio of soil loss from a given gradient to that from a 9-percent slope with the same soil, cover and management.

"VM" is the vegetation-management factor, and is the ratio of soil loss from land management under specified conditions to that from the fallow site. This must be the same site where the factor K is evaluated. This information is obtained from the on-site monitoring data as referred to in part C. of this plan.

Once erosion rates are calculated it can be shown whether soil loss tolerance limits are being approached or exceeded. Soil loss tolerance limits are defined as the amount of erosion that can occur on a soil in one year without lowering its productivity. They are as follows:

Rooting Depth Inches	Tons/Acre/Year
0-10	1
10-20	1
20-40	2
40-60	3
60+	5

If soil loss tolerance limits are exceeded, productivity is greatly reduced.

4. SOIL RESOURCE INVENTORY

The soil resource inventory for the Fishlake National Forest is part of the National Cooperative Soil Survey (NCSS) that is conducted under a Memorandum of Understanding with the Soil Conservation Service. The level of mapping intensity is dominantly Order 3. Included in the inventories are map preparation, interpretations, field reviews, correlation with the SCS, development and maintenance of legends and field soil notebooks, and publication in accordance with NCSS standards and guidelines. The 10 year schedule follows:

<u>Year</u>	<u>Location</u>	<u>Cost</u>	<u>Acres</u>
85	Pavant Range	\$23,200	65,000
86	Pavant Range	23,200	65,000
87	Tushar Range	23,200	65,000
88	Tushar Range	23,200	65,000
89	Tushar Range	23,200	65,000
90	Tushar Range	23,200	65,000
91	Tushar/Monroe	23,200	65,000
92	Salina Unit	23,200	65,000
93	Salina Unit	23,200	65,000
94	Fremont Unit	23,200	65,000

The Pavant and Tushar Ranges are combined into one soil survey area (SSA) designated as SSA 649. During the first 6 to 7 years, priority will be placed on this area for completion and publication. Where soil resource inventories are needed on specific sites for management decisions, site inventories will be conducted. The Monroe, Salina, and Fremont units represent one survey area and are given second priority for completion.

APPENDIX R
CULTURAL RESOURCES

This appendix contains a listing of needed cultural resource activities that are part of the Forest Plan.

1. Complete the Forest's cultural resources overview by 12/25/89.
2. Identify areas requiring more intensive inventories by 12/25/89.
3. Develop a plan for the interpretation of cultural resources for the education and enjoyment of the American Public by 12/25/89.

As each of the above items is developed, it will be included in this appendix.

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INDEX

	<u>PAGE NOS.</u>
administrative site.....	II-46,50,65-67, IV-5,46, L-4
affected environment (see Analysis of the Management Situation Summary, Chapter II)	
air quality.....	II-57,58, IV-5, V-12, L-12
base sale schedule.....	IV-8
big game.....	II-20,26,33,35,37,39, III-2, IV-4,50,72,79,103
budget.....	II-23,24,66,68, IV-1,2, C-1, F-1, J-1
campgrounds.....	II-5,21,22,23,46, IV-51, L-4
camping.....	II-6,22
climate.....	II-19
coal.....	II-4,12,15,18,31,47,50,51,53,54,56,58,69,70, III-2, G-5, O-1-44
corridors.....	II-69,70,73-77, IV-50,54, G- 2-5, L-4, O-33
cost and benefits.....	IV-9
counties	
Beaver.....	I-3, II-5,6,14
Garfield.....	I-3
Iron.....	II-14
Juab.....	I-3
Millard.....	I-3, II-5,14
Piute.....	I-3, II-6
Sanpete.....	I-3
Sevier.....	I-3, II-5,6,14
Wayne.....	I-3, II-5,6
cultural descriptors.....	II-4
cultural resources.....	IV-6,12, V-5
current management direction.....	II-38,51
deer.....	II-6,20,22,25,27,29,33,35, IV-103, K-3, O-33,39
developed recreation.....	II-67, IV-8-9,50-51,84,141, V-4 (see also recreation)
dispersed recreation.....	II-32,47,67,68, IV-3,8-9, V-4 (see also recreation)

livestock grazing (see Range)

long term sustained yield.....II-41

management concerns (see issues, concerns, and opportunities)

management indicator species.....II-26,29, III-2,IV-50,95

minerals.....II-12,15,18,47,50-57, III-2, IV-5,8,35-38
 locatables.....IV-36,92-93,149-150
 leasables.....IV-37-38

mineral withdrawals.....II-50

minorities.....II-14, IV-5

National Natural Landmarks.....II-24

NEPA.....Preface-1, 0-39

NFMA.....Preface-1, I-1

National Wild and Scenic Rivers.....0-18

off-road vehicle use.....II-59, IV-43, V-4

oil and gas.....II-11,12,15,18,51,54,56,66,69, IV-35,37,54, H-1,2

outdoor recreation (see recreation)

payment in lieu of taxesII-16-17

payment to counties.....II-17

planning process.....Preface-1,2, I-2, IV-1, V-1,14, G-3, 0-9,18,38,39

planning problems.....III-1

planning unit
 vicinity map.....I-3,4

population
 impacts.....II-15
 trends.....II-4,29

productivity.....IV-3,4

protection.....II-57-60

public issues (see issues, concerns, and opportunities)

range.....Preface-1, I-3, II-11,18,19,20,27,32,33,37-40,46,47,52,54,56,
 57,58,60,63,67,68,77, III-2, IV-4,8,9,21,22,23,24,50,51,53
 55,61,68,72,75,79,81,82,84,87,88,89,95,102,103,106,109,112

	117, 124, 131, 137, 141, 144, 145, 146, 152, 153, 154, 156, 159, V-7, I-1, K-1-5, L-1, 2, 3, 13, O-33, 39
recreation	II-1, 6, 14-15, 18, 21-25, 32, 38, 46, 49-50, 61, 67 III-1, IV-3, 8, 14-18, 50-51, 58, 65, 72, 79, V-4, C-1
reforestation	IV-8, 32, 33, 140, 160
Research Natural Areas (NRA's)	
return to treasury.....	II-18, 55, IV-9
roads.....	II-24, 62, 65, 66, 68, III-1, IV-5, 45, 46, 51, 58, 72, 79, 84, 103, 114, 121, 128, 141, J-1, K-1, N-1, 2, 3, 5-23, O-24
rights of way.....	II-60, 61, 62, 69, 70, III-3, IV-5, 39, 40, 55, 56, 57, 107, G-1-5, N-1, 2, 4-23, O-1, 2, 3, 21, 23
sensitive plants.....	II-40
scenic quality (see visual quality)	
small game.....	II-26
Social Resource Unit.....	II-1, 4, 6, 8, 11, 12, 15
soil and water	II-64-65, IV-4
soil and water improvement.....	Appendix Q
soils.....	II-63, IV-9, 42, 82, 91, 92, 149, 154, V-10, L-13
special uses.....	IV-5, 38, 63, 71, 77, 82, 106, 156, 161
threatened and endangered species.....	III-2, IV-3, H-3, O-28, 29
timber.....	II-18, 38, 41-47, 58-67, 76, III-2, IV-4, 6-7, 24-32, 114, 121 128, 134, V-7, 8, 9, A-1, B-1
trails.....	II-24, 65, 67, 68, III-1, IV-46, 51, 58, 64, 71, 82, 84, 95, 114, 121, 128, 141, 157, V-4, F-1, 2, N-1, 3, 5-23, O-18
transportation system.....	II-65, IV-43, 44, 63, 71, 82, 93, 94, 101, 107, 108, 150, 151, 154, 157 G-3, K-1, N-1, 3
utility lines and corridors.....	II-69-77, IV-50, 54, G-1
vegetation management.....	IV-3, 48
visual quality.....	II-24, IV-3, 6, 52, 55, 58, 59, 65, 66, 73, 80, 85, 96, 104, 110, 115, 122, 129, 135, 142, 156, 159, V-5, 9, O-25
water quality.....	II-47, III-3, 27, 39, 47, 51, IV-4, 84, 141, 158, O-37

watershed improvement.....III-3, IV-35,77,90,91,147,148,152,160
water yield.....II-45,46, III-3, IV-9
wilderness.....Preface-2, II-25, III-3, IV-72,79, O-18,24,25
wildlife and fish.....II-23,25,26,31,40, III-2, IV-3,8,18,19,
21,55,74,81,84,87,98,106,112,141,144,153,156, V-6, O-3,28-31,33