

MANAGEMENT PRESCRIPTION 4B

(Emphasis is on habitat for management indicator species)

354,732 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on the habitat needs of one or more management indicator species. Species with compatible habitat needs are selected for an area. The prescription can be applied to emphasize groups of species, such as early succession dependent or late succession dependent, in order to increase species richness or diversity.

Vegetation characteristics and human activities are managed to provide optimum habitat for the selected species, or to meet population goals jointly agreed to with the Utah Division of Wildlife Resources. Tree stands are managed for specific size, shape, interspersion, crown closure, age, structure, and edge contrast. Grass, forb, and browse vegetation characteristics are regulated. Rangeland vegetation is managed to provide needed vegetation species composition and interspersed grass, forb, and shrub sites or variety in age of browse plants. Fish habitat improvement treatments are applied to lakes and streams to enhance habitats and increase fish populations. Recreation and other human activities are regulated to favor the needs of the designated species. Roaded-natural recreation opportunities are provided along forest arterial and collector roads. Local roads and trails are either open or closed to public motorized travel. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive nonmotorized opportunities are provided on those that are closed. A full range of tree harvest methods and rangeland vegetation treatment methods are available. Investments in other compatible resource uses may occur but will be secondary to habitat requirements. Management activities may dominate in foreground and middleground, but harmonize and blend with the natural setting.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. DESIGN AND IMPLEMENT MANAGEMENT ACTIVITIES TO
BLEND WITH THE NATURAL LANDSCAPE.

a. MINIMUM VISUAL QUALITY OBJEC-
TIVE (VQO) SHALL BE MODIFICATION.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. MANAGE HUMAN RECREATIONAL ACTIVITIES SO THEY
DO NOT CONFLICT WITH HABITAT NEEDS OF SELECTED INDICATOR
SPECIES.

2. SEMI-PRIMITIVE NONMOTORIZED, SEMI-PRIMITIVE
MOTORIZED, ROADED NATURAL AND RURAL RECREATION
OPPORTUNITIES CAN BE PROVIDED.

a. MAXIMUM USE AND CAPACITY
LEVELS ARE:

RECREATION USE AND CAPACITY
RANGE DURING THE SNOW-FREE
PERIOD (PAOT/ACRE):

TRAIL USE AND CAPACITY RANGE
(PAOT/MILE OF TRAIL):

USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODER- ATE	HIGH
ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - SEMI-PRIMITIVE MOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - ROADED NATURAL				

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5
ROS CLASS	- RURAL			
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.5	.8	5.0	7.5
REDUCE THE ABOVE USE LEVEL CO-EFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.				
REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.				

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

3. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

4. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITHIN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND RESTORE CLASS 5 SITES.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

5. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

WILDLIFE AND
FISH RESOURCE
MANAGEMENT
(C01)

1. MANAGE FOR HABITAT NEEDS OF MANAGEMENT
INDICATOR SPECIES.

a. MAINTAIN AT LEAST 80%
OF THE HABITAT REQUIREMENTS
FOR THESE SPECIES.

2. EMPHASIS ON SPECIES COMMONLY HUNTED, FISHED, OR
TRAPPED WILL FOLLOW SPECIES PRIORITIES ESTABLISHED
BY UDWR.

a. MAINTAIN AT LEAST 90 PERCENT
OF THE HABITAT NEEDED TO SUPPORT
POPULATION GOALS FOR EACH SPECIES.

3. MAINTAIN HIDING COVER FOR ELK AND DEER, WHERE PRESENT.

a. MAINTAIN, ALONG 75 PER-
CENT OF ALL ARTERIAL AND
COLLECTOR ROAD EDGES, COVER
THAT HIDES 90 PERCENT OF AN ADULT
STANDING DEER OR ELK FROM HUMAN
VIEW AT A DISTANCE OF 200 FEET
FROM THE ROAD.

b. IN MANAGEMENT AREAS DOMINATED
BY FORESTED ECOSYSTEMS, MAINTAIN
A MINIMUM OF 50 PERCENT OF THE
AREA IN DEER OR ELK
HIDING COVER. THIS HIDING COVER
SHOULD BE WELL DISTRIBUTED OVER
THE UNIT. MAINTAIN 30 PERCENT
OF THE MANGEMENT AREA IN THERMAL
COVER (WINTER OR SPRING-SUMMER).
HIDING COVER CAN BE USED TO MEET
THERMAL COVER REQUIREMENTS IF
THEY INDEED COINCIDE BIOLOG-
ICALLY.

RANGE RESOURCE
MANAGEMENT
(D02)

1. IMPLEMENT ROTATION GRAZING SYSTEMS.

66-AI

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF
RANGE RESOURCE
MANAGEMENT
(D02)

- 2. APPLY WILDLIFE AND LIVESTOCK FORAGE ALLOWABLE USE GUIDES SPECIFIED IN FOREST DIRECTION. MODIFY SPLIT BETWEEN WILDLIFE AND LIVESTOCK SO NEEDS OF MANAGEMENT INDICATOR SPECIES ARE MET.
- 3. STRUCTURAL RANGE IMPROVEMENT SHOULD BE DESIGNED TO BENEFIT WILDLIFE AND LIVESTOCK.

- a. STRUCTURAL IMPROVEMENTS WILL NOT ADVERSLY AFFECT BIG GAME MOVEMENT (FSH 2209.22).
- b. WATER DEVELOPMENTS WILL BE MODIFIED OR CONSTRUCTED TO ALLOW SAFE ACCESS FOR WILDLIFE.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

- 1. MANAGE FOREST COVER TYPES TO PROVIDE VARIETY IN STAND SIZES, SHAPE, CROWN CLOSURE, EDGE CONTRAST, AGE STRUCTURE AND INTERSPERSION.
- 2. MANAGE FOREST COVER TYPES USING THE FOLLOWING HARVEST METHODS:
 - CLEARCUT IN ASPEN,
 - SHELTERWOOD CUT IN PONDEROSA PINE AND MIXED CONIFER, AND
 - SELECTION CUT ,GROUP OR SINGLE TREE, IN ENGELMANN SPRUCE-SUBALPINE FIR.

a. APPLY HARVEST TREATMENTS TO FOREST COVER TYPES AS SPECIFIED BELOW ON AT LEAST 80 PERCENT OF THE FOREST COVER TYPE. UP TO 20 PERCENT OF THE TYPE MAY BE TREATED USING OTHER HARVEST METHODS SPECIFIED IN FOREST DIRECTION.

b. SILVICULTURAL STANDARDS:
(THESE STANDARDS MAY BE EXCEEDED ON AREAS MANAGED FOR OLD GROWTH)

1. CLEARCUT:
> > > > > > > > > > > > > > > > >
FOREST COVER TYPE

	ASPEN	OTHER FOREST COVER TYPES
ROTA- TION AGE	80-120 YRS	100 OR MORE YRS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

3. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING
STOCK LEVEL STANDARDS.

4. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

TRANSPORTATION
SYSTEM
MANAGEMENT
(L01 & 20)

1. MANAGE ROAD USE TO PROVIDE FOR HABITAT NEEDS OF
MANAGEMENT INDICATOR SPECIES, INCLUDING ROAD CLOSURES
AND AREA CLOSURES, AND TO MAINTAIN HABITAT EFFECTIVENESS.

FUEL TREATMENT
(P11 THRU 14)

1. MAINTAIN FUEL CONDITIONS WHICH PERMIT FIRE
SUPPRESSION AND PRESCRIBED FIRE TO MAINTAIN HABITAT NEEDED
FOR SELECTED SPECIES OR SPECIES POPULATION LEVELS.

IV-102

MANAGEMENT PRESCRIPTION 5A

(Emphasis is on big game winter range in nonforested areas)

66,720 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on winter range for deer, elk, and bighorn sheep if introduced. Treatments are applied to increase forage production of existing grass, forb, and browse species or to alter plant species composition. Prescribed burning, seeding, spraying, planting, and mechanical treatments may occur. Browse stands are regenerated to maintain a variety of age classes and species.

Investments in compatible resource activities occur. With the exception of bighorn sheep range, livestock grazing is compatible but is managed to favor wildlife habitat.

Structural range improvements benefit wildlife. Management activities are not evident, remain visually subordinate, or are dominant in the foreground or middleground but harmonize or blend with the natural setting.

New roads other than short-term (temporary) roads are located outside of the management area. Short term roads are obliterated within one season after intended use. Selected local roads are closed and motorized recreation use is managed to prevent unacceptable stress on big game animals during the primary big game use season.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES																																																	
VISUAL RESOURCE MANAGEMENT (A04)	1. DESIGN AND IMPLEMENT MANAGEMENT ACTIVITIES TO BLEND WITH THE NATURAL LANDSCAPE.	a. MINIMUM VISUAL QUALITY OBJECTIVE (VQO) SHALL BE MODIFICATION.																																																	
RECREATION FACILITY AND SITE MANAGEMENT (A08, 09, 11 & 13)	1. DESIGN, CONSTRUCT AND OPERATE ONLY THOSE DEVELOPED SITES WHICH ARE NEEDED TO MEET SUMMER SEASON MANAGEMENT OBJECTIVES, AND ARE APPROPRIATE FOR THE ESTABLISHED ROS DESIGNATION. CLOSE ALL DEVELOPED SITES DURING THE WINTER MANAGEMENT SEASON.																																																		
RECREATION OPPORTUNITIES AND USE ADMINISTRATION (A14 AND 15)	<p>1. MANAGE SUMMER USE SEASON FOR APPROPRIATE ROS OPPORTUNITIES.</p> <p>PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC MOTORIZED TRAVEL.</p> <p>PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.</p> <p>WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.</p> <p>PROVIDE SEMI-PRIMITIVE NON-MOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.</p>	<p>a. MAXIMUM USE AND CAPACITY LEVELS ARE:</p> <p>RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):</p> <p>TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):</p> <table border="1"> <thead> <tr> <th rowspan="2">USE LEVEL</th> <th colspan="4">CAPACITY RANGE</th> </tr> <tr> <th>VERY LOW</th> <th>LOW</th> <th>MODERATE</th> <th>HIGH</th> </tr> </thead> <tbody> <tr> <td>ROS CLASS - PRIMITIVE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON TRAILS PAOT/MILE</td> <td>0.5</td> <td>1.0</td> <td>2.0</td> <td>3.0</td> </tr> <tr> <td>AREA WIDE PAOT/ACRE</td> <td>.001</td> <td>.002</td> <td>.007</td> <td>.025</td> </tr> <tr> <td>ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON TRAILS PAOT/MILE</td> <td>2.0</td> <td>3.0</td> <td>9.0</td> <td>11.0</td> </tr> <tr> <td>AREA-WIDE PAOT/ACRE</td> <td>.004</td> <td>.008</td> <td>.05</td> <td>.08</td> </tr> <tr> <td>ROS CLASS - SEMI-PRIMITIVE MOTORIZED</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON TRAILS</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	USE LEVEL	CAPACITY RANGE				VERY LOW	LOW	MODERATE	HIGH	ROS CLASS - PRIMITIVE					ON TRAILS PAOT/MILE	0.5	1.0	2.0	3.0	AREA WIDE PAOT/ACRE	.001	.002	.007	.025	ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED					ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0	AREA-WIDE PAOT/ACRE	.004	.008	.05	.08	ROS CLASS - SEMI-PRIMITIVE MOTORIZED					ON TRAILS				
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ROS CLASS - SEMI-PRIMITIVE MOTORIZED																																																			
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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - ROADED	NATURAL			
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5

REDUCE THE ABOVE USE LEVEL COEFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.

REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

d. PROHIBIT OPEN FIRES WHEN THE OCCURRANCE OF FIRE RINGS EXCEEDS FRISSELL CLASS 1 SITE CONDITIONS ON 10 PERCENT OR MORE OF THE KNOWN CAMPSITES.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: RECREATION OPPORTUNITIES AND USE ADMINISTRATION (A14 AND 15)	2. MANAGE WINTER USE FOR VERY LOW OR LOW DENSITIES. CLOSE AREAS TO HUMAN USE TO THE DEGREE NECESSARY IN WINTER TO PREVENT DISTURBANCE OF WILDLIFE.	a. CLOSE MANAGEMENT AREA TO CROSS-COUNTRY SKI TRAIL DE- VELOPMENT AND TO SNOWMOBILE USE. b. DO NOT PROVIDE PARKING OR TRAIL HEAD FACILITIES DURING WINTER.
WILDLIFE AND FISH RESOURCE MANAGEMENT (C01)	1. PROVIDE BIG GAME FORAGE, COVER, AND HABITAT.	a. MAINTAIN AT LEAST 30 PERCENT OF SHRUB PLANTS IN MATURE STAGE, AND AT LEAST 10 PERCENT IN YOUNG STAGE. b. MAINTAIN AT LEAST TWO SHRUB SPECIES ON SHRUB LANDS CAPABLE OF GROWING TWO OR MORE SHRUB SPECIES. c. MAINTAIN HABITAT EFFECTIVENESS DURING WINTER OF AT LEAST 90 PERCENT. d. MAINTAIN HABITAT CAPABILITY AT A LEVEL AT LEAST 80 PERCENT OF POTENTIAL FOR BIG GAME.
RANGE RESOURCE MANAGEMENT (D02)	1. MANAGE GRAZING TO FAVOR BIG GAME AND TO ACHIEVE THE WILDLIFE POPULATIONS IDENTIFIED IN STATE-WIDE COMPREHENSIVE WILDLIFE PLANS.	a. MAINTAIN VEGETATION IN FAIR OR BETTER RANGE CON- DITION.
SPECIAL USE MANAGEMENT (NON -RECREATION) (J01)	1. ELIMINATE SPECIAL USES THAT CONFLICT WITH WINTERING ANIMALS.	

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

RIGHTS-OF-WAY
AND LAND
ADJUSTMENTS
(J02, 13, 15,
16, 17, AND 18)

1. ACQUIRE PRIVATE LANDS NEEDED FOR BIG GAME
WINTER RANGE.

TRANSPORTATION
SYSTEM
MANAGEMENT
(L01 & 20)

1. DO NOT ALLOW ROAD TRAFFIC OR ROAD CUT AND FILL
SLOPES TO BLOCK BIG GAME MOVEMENT IN DELINEATED
MIGRATION ROUTES.

2. ALLOW NEW ROADS IN THE MANAGEMENT AREA ONLY IF
NEEDED TO MEET PRIORITY GOALS OUTSIDE THE MANAGEMENT
AREA OR TO MEET BIG GAME GOALS ON THE MANAGEMENT
AREA. OBLITERATE TEMPORARY ROADS WITHIN ONE SEASON
AFTER PLANNED USE ENDS.

a. NEW PERMANENT OR TEMPORARY
ROADS CONSTRUCTED IN THE MANAGE-
MENT AREA MUST MEET THE FOLLOW-
ING CRITERIA:
1) NO FEASIBLE LOCATION
EXISTS FOR THE ROAD OUTSIDE
THE AREA. THE ROAD IS
ESSENTIAL TO ACHIEVE GOALS
AND OBJECTIVES OF CONTIGUOUS
MANAGEMENT AREAS, OR TO PROVIDE
ACCESS TO LAND ADMINISTERED
BY OTHER GOVERNMENT AGENCIES
OR CONTIGUOUS PRIVATE LAND.
2) THE UDWR IS FULLY INVOLVED
IN THE ROAD LOCATION, PLANNING
AND ALTERNATIVE EVALUATION.
3) PLANNED MANAGEMENT OF ROAD
USE DURING WINTER WILL PREVENT
OR MINIMIZE DISTURBANCE OF
WINTERING BIG GAME ANIMALS, OR
WILL ALLOW HUNTING AND OTHER
MANAGEMENT ACTIVITIES NEEDED TO
MEET WILDLIFE MANAGEMENT OBJEC-
TIVES.
4) ROADS ARE CONSTRUCTED TO THE
MINIMUM STANDARDS NECESSARY TO
PROVIDE SAFETY FOR THE ROAD USE
PURPOSE.
5) ROADS CROSS THE WINTER RANGE
IN THE MINIMUM DISTANCE FEASIBLE
TO FACILITATE THE NECESSARY
USE.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
TRANSPORTATION
SYSTEM
MANAGEMENT
(LO1 & 20)

3. CLOSE SELECTED EXISTING ROADS, PROHIBIT OFF-ROAD
VEHICLE USE AND MANAGE NON-MOTORIZED USE TO PREVENT
STRESS ON BIG GAME ANIMALS.

a. OPENING OF EXISTING ROADS
DURING WINTER CAN BE APPROVED
IF THE FOLLOWING CRITERIA ARE
MET:
1) NO REASONABLE ALTERNATIVE
EXISTS FOR OWNERS OR MANAGERS
TO REACH CONTIGUOUS PRIVATE OR
PUBLIC LAND DURING WINTER.
2) ROAD USE, OFF-ROAD VEHICLE
USE, OR NON-MOTORIZED USE OF
THE AREA IS ESSENTIAL AND IS
THE MINIMUM NECESSARY TO MEET
PRIORITY RESOURCE MANAGE-
MENT GOALS AND OBJECTIVES.
3) THE UDWR IS INVOLVED
IN PLANNING HUMAN USE OF AREA
DURING WINTER.

4. WHEN ROAD CONSTRUCTION IS ALLOWED, LOST WILDLIFE
HABITAT WILL BE MITIGATED.

IV-108

MANAGEMENT PRESCRIPTION 6B

(Emphasis is on livestock grazing)

658,704 Acres

A. Management Prescription Summary

1. General Description and Goals:

Range resource management level D (intensive management) is applied. This involves use of structural and non-structural improvements with associated maintenance. Any grazing system can be applied which is consistent with maintaining the environment and providing for multiple use of the range. Condition is improved through use of vegetation and soil restoration practices, improved livestock management, and regulation of other resource activities. Investment in structural and non-structural improvements is moderate to high. Structural improvements benefit or at least do not adversely affect wildlife. Nonstructural restoration and forage improvement practices available are seeding, planting, burning, fertilizing, pitting, furrowing, spraying, crushing, plowing, and chaining.

Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive nonmotorized and roaded natural. Management activities are evident but harmonize and blend with the natural setting.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. DESIGN AND IMPLEMENT MANAGEMENT ACTIVITIES TO
BLEND WITH THE NATURAL LANDSCAPE.

a. MINIMUM VISUAL QUALITY OBJECTIVE (VQO) SHALL BE MODIFICATION.

b. WHEN PROJECTS REQUIRE CLEARING OF VEGETATION AND (OR) SOIL DISTURBANCE, USE IRREGULAR CLEARING EDGES AND SHAPES TO BLEND WITH THE NATURAL LANDSCAPES.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.

PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.

PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.

WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.

PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):

TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):

USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH

ROS CLASS - SEMI-PRIMITIVE
NONMOTORIZED

ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
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AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
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ROS CLASS - SEMI-PRIMITIVE
MOTORIZED

ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
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AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ROS CLASS - ROADED NATURAL

ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5
ROS CLASS - RURAL				
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.5	.8	5.0	7.5

REDUCE THE ABOVE USE LEVEL COEFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.
REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

MANAGEMENT PRESCRIPTION 06B

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

WILDLIFE AND
FISH RESOURCE
MANAGEMENT
(C01)

1. MAINTAIN HABITAT CAPABILITY FOR MANAGEMENT
INDICATOR SPECIES.

a. MAINTAIN 60 PERCENT OR
MORE OF ECOSYSTEMS REQUIRED
FOR THESE SPECIES.

2. PROVIDE ADEQUATE FORAGE TO SUSTAIN BIG GAME
POPULATION LEVELS AGREED TO IN THE STATEWIDE
COMPREHENSIVE WILDLIFE MANAGEMENT PLAN ON NFS
LANDS.

a. ALLOCATE 90 PERCENT OF
AVAILABLE FORAGE TO LIVESTOCK.

RANGE RESOURCE
MANAGEMENT
(D02)

1. USE ONLY INTENSIVE MANAGEMENT STRATEGIES OR ADJUST
LIVESTOCK NUMBERS TO INDICATED CAPACITY WHEN RECOVERY OF
RANGE CONDITION CANNOT BE ACCOMPLISHED BY SUCH MANAGEMENT.

a. BASE RANGE CONDITION ON THE
STANDARDS IN RANGE ANALYSIS
HANDBOOK (FSH 2209.21).

2. INVEST IN COST-EFFECTIVE GRAZING MANAGEMENT AND
RANGELAND PRODUCTIVITY IMPROVEMENTS. WHERE IMPROVE-
MENTS INCLUDE WATER DEVELOPMENTS, A WATER RIGHT IN THE
NAME OF THE UNITED STATES MUST BE OBTAINED.

a. STRUCTURAL IMPROVEMENTS
WILL BE CONSTRUCTED TO
STANDARDS IN FSH 2209.22.

b. BASE ECONOMIC ANALYSIS ON
PROJECT EFFECTIVENESS ANALYSIS
HANDBOOK (FSH 2209.11).

3. MANAGE UNDER LEVEL D, INTENSIVE (FSH 1909.11A), AND
COMPLETE NON-STRUCTURAL IMPROVEMENTS WHERE NECESSARY.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MAINTAIN AND MANAGE FORESTED INCLUSIONS TO PROVIDE
A HIGH LEVEL OF FORAGE PRODUCTION, WILDLIFE HABITAT,
AND DIVERSITY.

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

2. MANAGE FOREST COVER TYPES USING THE FOLLOWING
HARVEST METHODS:
- CLEARCUT IN ASPEN,
- SHELTERWOOD CUT IN PONDEROSA PINE, AND
- SELECTION CUT IN ENGELMANN SPRUCE AND
MIXED CONIFERS.

a. APPLY HARVEST TREATMENTS TO
FOREST COVER TYPES AS SPECIFIED
BELOW ON AT LEAST 80 PERCENT OF
THE FOREST COVER TYPE. UP TO
20 PERCENT OF THE TYPE MAY BE
TREATED USING OTHER HARVEST
METHODS SPECIFIED IN FOREST
DIRECTION.

b. SILVICULTURAL STANDARD:
> > > > > > > > > > > > > >

FOREST COVER TYPE	REGENERA- TION CUTTING METHOD	ROTATION AGE
ENGELMANN SPRUCE- SUBALPINE FIR	SELECTION	N/A
PONDEROSA PINE	SHELTER- WOOD	100-180 YRS.
MIXED CONIFER	SELECTION	N/A
ASPEN	CLEARCUT	80-120 YRS.

APPLY RELEASE AND WEEDING AS
NEEDED TO IMPROVE VISUAL QUALITY.

3. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

IV-113

MANAGEMENT PRESCRIPTION 7A

(Emphasis is on wood-fiber production and utilization)

44,104 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on wood-fiber production and utilization of large roundwood of a size and quality suitable for sawtimber. The harvest method by forest cover type is clearcutting in aspen and Engelmann spruce-subalpine fir and shelterwood in ponderosa pine and mixed conifers.

The area generally will have a mosaic of fully stocked stands that follow natural patterns and avoid straight lines and geometric shapes. Management activities are not evident or remain visually subordinate along forest arterial and collector roads and primary trails. In other portions of the area, management activities may dominate in foreground and middleground but harmonize and blend with the natural setting.

Roaded-natural recreation opportunities are provided along forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive nonmotorized opportunities are provided on those that are closed.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. MEET STATED VISUAL QUALITY OBJECTIVE.

a. MINIMUM VISUAL QUALITY OBJECTIVES (VQO) SHALL BE: PARTIAL RETENTION WITHIN THE FOREGROUND OF ARTERIAL/COLLECTOR ROADS AND PRIMARY TRAILS. MODIFICATION ON ALL OTHER AREAS.

b. APPLY REHABILITATION PRACTICES WHERE THE ABOVE OBJECTIVES ARE NOT CURRENTLY BEING MET.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.

PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.

PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.

WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.

PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):

TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):

USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH

ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED

ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
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AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
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ROS CLASS - SEMI-PRIMITIVE MOTORIZED

ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
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AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
---------------------	------	------	-----	-----

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ROS CLASS	- ROADED NATURAL			
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5
ROS CLASS	- RURAL			
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.5	.8	5.0	7.5

REDUCE THE ABOVE USE LEVEL COEFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.
REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

MANAGEMENT
ACTIVITIES

GENERAL
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CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

RANGE
IMPROVEMENT AND
MAINTENANCE
(D03, 04, 05
AND 06)

1. UTILIZE TRANSITORY FORAGE THAT IS AVAILABLE
WHERE DEMAND EXISTS AND WHERE INVESTMENTS IN REGENERATION
CAN BE PROTECTED.

a. VARY UTILIZATION STANDARDS
WITH GRAZING SYSTEM AND ECOLOGICAL
CONDITION. SPECIFY STANDARDS IN
THE ALLOTMENT MANAGEMENT PLAN.

b. MAXIMUM GRAZING USE ALLOWED ON
TRANSITORY RANGES RESULTING FROM
CLEARCUTS:
-- KEY SHRUBS-20 PERCENT OF
CURRENT GROWTH.
-- GRASSES-50 PERCENT OF
CURRENT GROWTH.
-- FORBS-20 PERCENT OF TOTAL
PRODUCTION.

2. PROTECT REGENERATION FROM LIVESTOCK DAMAGE.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MANAGE FOREST COVER TYPES USING THE FOLLOWING
HARVEST METHODS:
- CLEARCUT IN ASPEN AND ENGELMANN SPRUCE-SUBALPINE
FIR.
- SHELTERWOOD CUT IN PONDEROSA PINE AND MIXED CONIFER.

a. APPLY HARVEST TREATMENTS TO
FOREST COVER TYPES AS SPECIFIED
BELOW ON AT LEAST 80 PERCENT OF
THE FOREST COVER TYPE. UP TO
20 PERCENT OF THE TYPE MAY BE
TREATED USING OTHER HARVEST
METHODS SPECIFIED IN FOREST
DIRECTION.

b. SILVICULTURAL STANDARDS
(THESE STANDARDS MAY BE EXCEEDED
ON AREAS MANAGED FOR OLD GROWTH)
1. CLEARCUT:

MANAGEMENT
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STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

	FOREST COVER TYPE		
	ENGELMANN SPRUCE- SUBALPINE FIR	ASPEN	OTHER FOREST COVER TYPES
ROTA- TION AGE	90-180 YRS	80-120 YRS	80 OR MORE YRS
GROW- ING STOCK LEVEL	80-120	N/A	60 TO 120
THINNING CYCLE	20-50 YRS	N/A	10 TO 40 YRS
2. TWO-STEP SHELTERWOOD:			
	FOREST COVER TYPE		
	PONDEROSA PINE & ENGELMANN SPRUCE & MIXED CONIFER		OTHER FOREST COVER TYPES
ROTA- TION AGE	50-180 YRS		80 OR MORE YRS
GROWING STOCK LEVEL	80-160		60-120
THINNING CYCLE	20-50 YRS		20-40 YRS
FIRST CUT (SEED CUT), REMOVE 40 TO 70 PERCENT OF THE BASAL AREA OR CUT TO: BA 25-60			
SECOND CUT (REMOVAL CUT)			

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

REMOVE ALL OVERSTORY WHEN
REGENERATED STAND MEETS
MINIMUM STOCKING STANDARDS.

3. THREE-STEP SHELTERWOOD:

	FOREST COVER TYPE	
	PONDEROSA PINE, ENGELMANN SPRUCE & MIXED CONIFER	OTHER FOREST COVER TYPES
ROTA- TION AGE	50-180 YRS	80 OR MORE YRS
GROWING STOCK LEVEL	80-160	60-120
THINNING CYCLE	20-50 YRS	20-40 YR
FIRST CUT (PREPARATORY CUT), REMOVE 10 TO 40 PERCENT OF THE BASAL AREA OR CUT TO:	BA 60-80	BA 50-80
SECOND CUT (SEED CUT), REMOVE 40 TO 50 PERCENT OF THE REMAINING BASAL AREA OR CUT TO:	BA 25-50 10-20 YRS AFTER PRE- PARATORY CUT	
THIRD CUT (REMOVAL CUT): REMOVE ALL OVERSTORY WHEN REGENERATED STAND MEETS MINIMUM STOCKING STANDARDS.		

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

2. CLEARCUTS MAY BE APPLIED TO DWARF MISTLETOE INFECTED
STANDS OF ANY FOREST COVER TYPE.

3. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING
STOCK LEVEL STANDARDS.

4. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

IV-120

MANAGEMENT PRESCRIPTION 7B

(Emphasis is on wood-fiber production and utilization through selected planting stock)

6,061 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on wood-fiber production and utilization of large roundwood of a size and quality suitable for sawtimber. Artificial regeneration methods using selected planting stock rather than natural regeneration is used to achieve increased wood fiber production. The harvest method by forest cover type is clearcutting in Engelmann spruce-subalpine fir and shelterwood in ponderosa pine and mixed conifers. Rapid restocking will permit rotations to be 5 to 8 percent shorter than rotations in other wood fiber emphasis prescriptions.

The area generally will have a mosaic of fully stocked stands that follow natural patterns and avoid straight lines and geometric shapes. Management activities are not evident or remain visually subordinate along forest arterial and collector roads and primary trails. In other portions of the area, management activities may dominate in foreground and middleground but harmonize and blend with the natural setting.

Roaded-natural recreation opportunities are provided along forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive nonmotorized opportunities are provided on those that are closed.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. MEET STATED VISUAL QUALITY OBJECTIVE.

a. MINIMUM VISUAL QUALITY OBJECTIVES (VQO) SHALL BE: PARTIAL RETENTION WITHIN THE FOREGROUND OF ARTERIAL/COLLECTOR ROADS AND PRIMARY TRAILS. MODIFICATION ON ALL OTHER AREAS.

b. APPLY REHABILITATION PRACTICES WHERE THE ABOVE OBJECTIVES ARE NOT CURRENTLY BEING MET.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.
 PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.
 PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.
 WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.
 PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE).				
TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):				
USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH
ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - SEMI-PRIMITIVE MOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ROS CLASS - ROADED NATURAL				
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5
ROS CLASS - RURAL				
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.5	.8	5.0	7.5

REDUCE THE ABOVE USE LEVEL CO-EFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.
REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

RANGE
IMPROVEMENT AND
MAINTENANCE
(D03, 04, 05
AND 06)

1. UTILIZE TRANSITORY FORAGE THAT IS AVAILABLE
WHERE DEMAND EXISTS AND WHERE INVESTMENTS IN REGENERATION
CAN BE PROTECTED.

a. VARY UTILIZATION STANDARDS
WITH GRAZING SYSTEM AND ECOLOGICAL
CONDITION. SPECIFY STANDARDS IN
THE ALLOTMENT MANAGEMENT PLAN.

b. MAXIMUM GRAZING USE ALLOWED ON
TRANSITORY RANGES RESULTING FROM
CLEARCUTS:

- KEY SHRUBS-20 PERCENT OF
CURRENT GROWTH.
- GRASSES-50 PERCENT OF
CURRENT GROWTH.
- FORBS-20 PERCENT OF TOTAL
PRODUCTION.

2. PROTECT REGENERATION FROM LIVESTOCK DAMAGE.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MANAGE FOREST COVER TYPES USING THE FOLLOWING
HARVEST METHODS:
- CLEARCUT IN ENGELMANN SPRUCE-SUBALPINE FIR.
- SHELTERWOOD CUT IN PONDEROSA PINE AND MIXED CONIFER.

a. APPLY HARVEST TREATMENTS TO
FOREST COVER TYPES AS SPECIFIED
BELOW ON AT LEAST 80 PERCENT OF
THE FOREST COVER TYPE. UP TO
20 PERCENT OF THE TYPE MAY BE
TREATED USING OTHER HARVEST
METHODS SPECIFIED IN FOREST
DIRECTION.

b. SILVICULTURAL STANDARDS
(THESE STANDARDS MAY BE EXCEEDED
ON AREAS MANAGED FOR OLD GROWTH)

1. CLEARCUT:

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

FOREST COVER TYPE		
	ENGELMANN SPRUCE- SUBALPINE FIR	OTHER FOREST COVER TYPES
ROTA- TION AGE	90-180 YRS	80 OR MORE YRS
GROW- ING STOCK LEVEL	80-120	60 TO 120
THINNING CYCLE	20-50 YRS	10 TO 40 YRS
2. TWO-STEP SHELTERWOOD:		
FOREST COVER TYPE		
	PONDEROSA PINE & MIXED CONIFER	OTHER FOREST COVER TYPES
ROTA- TION AGE	100-160 YRS	80 OR MORE YRS
GROWING STOCK LEVEL	80-160	60-120
THINNING CYCLE	20-50 YRS	20-40 YRS
FIRST CUT (SEED CUT), REMOVE 40 TO 70 PERCENT OF THE BASAL AREA OR CUT TO: BA 25-50 BA 20-60		
SECOND CUT (REMOVAL CUT): REMOVE ALL OVERSTORY WHEN		

MANAGEMENT PRESCRIPTION 07B

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

2. CLEARCUTS MAY BE APPLIED TO DWARF MISTLETOE INFECTED
STANDS OF ANY FOREST COVER TYPE.

3. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING
STOCK LEVEL STANDARDS.

4. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

RAPID
ARTIFICIAL
REGENERATION
(E09)

1. PLANT TREES THAT ARE OF SELECTED PLANTING STOCK.

MANAGEMENT PRESCRIPTION 7C

(Emphasis is on management of forested areas on steep slopes)

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is to develop and maintain healthy tree cover on forested slopes greater than 40 percent. The harvest method by forest cover type is clearcut for ponderosa pine and mixed conifer; group or strip clearcut for aspen and spruce-fir; or group selection in spruce-fir; or shelterwood for ponderosa-pine and mixed conifer. Management activities, although visually dominant, harmonize and blend with the natural setting.

Roaded-natural recreation opportunities are provided along forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semiprimitive nonmotorized opportunities are provided on those that are closed.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. MEET STATED VISUAL QUALITY OBJECTIVE.

a. MINIMUM VISUAL QUALITY OBJECTIVES (VQO) SHALL BE: PARTIAL RETENTION WITHIN THE FOREGROUND OF ARTERIAL/COLLECTOR ROADS AND PRIMARY TRAILS. MODIFICATION ON ALL OTHER AREAS.

b. APPLY REHABILITATION PRACTICES WHERE THE ABOVE OBJECTIVES ARE NOT CURRENTLY BEING MET.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.
 PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.
 PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.
 WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.
 PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):				
TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):				
USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH
ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - SEMI-PRIMITIVE MOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ROS CLASS - ROADED NATURAL

ON TRAILS
PAOT/MILE - - - -

AREA-WIDE
PAOT/ACRE .04 .08 1.2 2.5

ROS CLASS - RURAL

ON TRAILS
PAOT/MILE - - - -

AREA-WIDE
PAOT/ACRE .5 .8 5.0 7.5

REDUCE THE ABOVE USE LEVEL CO-
EFFICIENTS AS NECESSARY TO REFLECT
USABLE ACRES, PATTERNS OF USE, AND
GENERAL ATTRACTIVENESS OF THE
SPECIFIC MANAGEMENT AREA TYPE AS
DESCRIBED IN THE ROS USERS GUIDE,
CHAPTER 25.
REDUCE THE ABOVE USE LEVELS WHERE
UNACCEPTABLE CHANGES TO THE BIO-
PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE
RESTRICTIONS BASED ON ORV
USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732,
FSH 7709.12 (TRAILS
HANDBOOK), FSH 7109.11A
AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION
CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

RANGE
IMPROVEMENT AND
MAINTENANCE
(D03, 04, 05
AND 06)

1. UTILIZE TRANSITORY FORAGE THAT IS AVAILABLE
WHERE DEMAND EXISTS AND WHERE INVESTMENTS IN REGENERATION
CAN BE PROTECTED.

a. VARY UTILIZATION STANDARDS
WITH GRAZING SYSTEM AND ECOLOGICAL
CONDITION. SPECIFY STANDARDS IN
THE ALLOTMENT MANAGEMENT PLAN.

b. MAXIMUM GRAZING USE ALLOWED ON
TRANSITORY RANGES RESULTING FROM
CLEARCUTS:

- KEY SHRUBS-20 PERCENT OF
CURRENT GROWTH.
- GRASSES-50 PERCENT OF
CURRENT GROWTH.
- FORBS-20 PERCENT OF TOTAL
PRODUCTION.

2. PROTECT REGENERATION FROM LIVESTOCK DAMAGE.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MANAGE FOREST COVER TYPES USING THE FOLLOWING
HARVEST METHODS:
- CLEARCUT IN PONDEROSA PINE AND MIXED CONIFER,
- GROUP AND STRIP CLEARCUT IN ASPEN AND SPRUCE-FIR,
- GROUP SELECTION CUT IN ENGELMANN SPRUCE-SUBALPINE
FIR, AND
- SHELTERWOOD CUT IN PONDEROSA PINE AND MIXED CONIFER.

a. APPLY HARVEST TREATMENTS TO
FOREST COVER TYPES AS SPECIFIED
BELOW ON AT LEAST 80 PERCENT OF
THE FOREST COVER TYPE. UP TO
20 PERCENT OF THE TYPE MAY BE
TREATED USING OTHER HARVEST
METHODS SPECIFIED IN FOREST
DIRECTION.

b. SILVICULTURAL STANDARDS:
(THESE STANDARDS MAY BE EXCEEDED
ON AREAS MANAGED FOR OLD GROWTH)

1. CLEARCUT (GROUP OR STRIP ONLY)

MANAGEMENT
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CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

IN ASPEN AND SPRUCE-FIR):

FOREST COVER TYPES			
	ENGELMANN SPRUCE SUB- ALPINE FIR, PONDEROSA PINE, AND MIXED CONIFER	ASPEN	OTHER FOREST COVER TYPES
ROTA- TION AGE	90-180 YRS	80-120 YRS	80 OR MORE YRS
GROW- ING STOCK LEVEL	80-120	N/A	60 TO 120
THINNING CYCLE	20-50 YRS.	N/A	10 TO 40 YRS.

2. GROUP SELECTION:

FOREST COVER TYPES	
	ENGELMANN SPRUCE AND SUBALPINE FIR
RESIDUAL BA	80-120
CUTTING CYCLE	20-40 YRS.

3. TWO STEP SHELTERWOOD

FOREST COVER TYPES	
	PONDEROSA PINE AND MIXED CONIFER

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MANAGEMENT
ACTIVITIES

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GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

ROTA- TION AGE	50-180 YRS.
GROW- ING STOCK LEVEL	80-160
THINNING CYCLE	50 YRS.

2. CLEARCUTS MAY BE APPLIED TO DWARF MISTLETOE INFECTED STANDS OF ANY FOREST COVER TYPE.
3. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING STOCK LEVEL STANDARDS.
4. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL AND NONCOMMERCIAL METHODS.

MANAGEMENT PRESCRIPTION 7D

(Emphasis is on wood fiber production and utilization for products other than sawtimber)

8,564 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on production and utilization of small roundwood of a size and quality suitable for products such as fuelwood, posts, poles and props. The harvest method by forest cover type is clearcutting in aspen and selection and shelterwood in all other forest cover types.

Management activities, although they may be visually dominant, harmonize and blend with the natural setting.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. MEET STATED VISUAL QUALITY OBJECTIVE.

a. MINIMUM VISUAL QUALITY OBJECTIVES (VQO) SHALL BE: PARTIAL RETENTION WITHIN THE FOREGROUND OF ARTERIAL/COLLECTOR ROADS AND PRIMARY TRAILS. MODIFICATION ON ALL OTHER AREAS.

b. APPLY REHABILITATION PRACTICES WHERE THE ABOVE OBJECTIVES ARE NOT CURRENTLY BEING MET.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.
 PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.
 PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.
 WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.
 PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):				
TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):				
USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH
ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - SEMI-PRIMITIVE MOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08

MANAGEMENT
ACTIVITIES

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CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

ROADED NATURAL				
ON TRAILS				
PAOT/MILE	-	-	-	-
AREA-WIDE				
PAOT/ACRE	.04	.08	1.2	2.5
RURAL				
ON TRAILS				
PAOT/MILE	-	-	-	-
AREA-WIDE				
PAOT/ACRE	.5	.8	5.0	7.5

REDUCE THE ABOVE USE LEVEL COEFFICIENTS AS NECESSARY TO REFLECT USABLE ACRES, PATTERNS OF USE, AND GENERAL ATTRACTIVENESS OF THE SPECIFIC MANAGEMENT AREA TYPE AS DESCRIBED IN THE ROS USERS GUIDE, CHAPTER 25.

REDUCE THE ABOVE USE LEVELS WHERE UNACCEPTABLE CHANGES TO THE BIO-PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE RESTRICTIONS BASED ON ORV USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732, FSH 7709.12 (TRAILS HANDBOOK), FSH 7109.11A AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

MANAGEMENT
ACTIVITIES

GENERAL
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STANDARDS &
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CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

RANGE
IMPROVEMENT AND
MAINTENANCE
(D03, 04, 05
AND 06)

1. UTILIZE TRANSITORY FORAGE THAT IS AVAILABLE
WHERE DEMAND EXISTS AND WHERE INVESTMENTS IN REGENERATION
CAN BE PROTECTED.

a. VARY UTILIZATION STANDARDS
WITH GRAZING SYSTEM AND ECOLOGICAL
CONDITION. SPECIFY STANDARDS IN
THE ALLOTMENT MANAGEMENT PLAN.

b. MAXIMUM GRAZING USE ALLOWED ON
TRANSITORY RANGES RESULTING FROM
CLEARCUTS.

-- KEY SHRUBS-20 PERCENT OF
CURRENT GROWTH.

-- GRASSES-50 PERCENT OF
CURRENT GROWTH.

-- FORBS-20 PERCENT OF TOTAL
PRODUCTION.

2. PROTECT REGENERATION FROM LIVESTOCK DAMAGE.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MANAGE FOREST COVER TYPES USING THE FOLLOWING HARVEST
METHODS:
- CLEARCUT IN ASPEN.
- SELECTION AND SHELTERWOOD CUTS IN PONDEROSA PINE, MIXED
CONIFER AND ENGELMANN SPRUCE-SUBALPINE FIR.

a. APPLY HARVEST TREATMENTS TO
FOREST COVER TYPES AS SPECIFIED
BELOW ON AT LEAST 80 PERCENT OF
THE FOREST COVER TYPE. UP TO
20 PERCENT OF THE TYPE MAY BE
TREATED USING OTHER HARVEST
METHODS SPECIFIED IN FOREST
DIRECTION.

b. SILVICULTURAL STANDARDS:
(THESE STANDARDS MAY BE EXCEEDED
ON AREAS MANAGED FOR OLD GROWTH)

1. CLEARCUT.

MANAGEMENT PRESCRIPTION 07D

MANAGEMENT
ACTIVITIES

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GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

FOREST COVER TYPE	
ASPEN	
ROTA- TION AGE	60-80 YRS
GROW- ING STOCK LEVEL	N/A
THINNING CYCLE	N/A
2. TWO-STEP SHELTERWOOD:	
FOREST COVER TYPE	
ENGELMANN SPRUCE- SUBALPINE FIR, PONDEROSA PINE & MIXED CONIFER	
ROTA- TION AGE	50-90 YRS
GROWING STOCK LEVEL	80-160
THINNING CYCLE	10-40 YRS
FIRST CUT (SEED CUT): REMOVE 40 TO 70 PERCENT OF THE BASAL AREA OR CUT TO: BA 25-60	
SECOND CUT (REMOVAL CUT): REMOVE ALL OVERSTORY WHEN	

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STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

REGENERATED STAND MEETS
MINIMUM STOCKING STANDARDS.

3. THREE-STEP SHELTERWOOD:

FOREST COVER TYPE

ENGELMANN
SPRUCE-
SUBALPINE
FIR,
PONDEROSA
PINE &
MIXED
CONIFER

ROTA- 50-90 YRS
TION
AGE

GROWING 80-160
STOCK
LEVEL

THINNING 10-40 YRS
CYCLE

FIRST CUT (PREPARATORY CUT):
REMOVE 10 TO 40 PERCENT OF THE
BASAL AREA OR CUT TO: BA 60-80.

SECOND CUT (SEED CUT),
REMOVE 40 TO 50 PERCENT OF THE
REMAINING BASAL AREA OR
CUT TO: BA 25-50
10-20 YRS
AFTER PRE-
PARATORY CUT

THIRD CUT (REMOVAL CUT):
REMOVE ALL OVERSTORY WHEN
REGENERATED STAND MEETS
MINIMUM STOCKING STANDARDS.

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

2. CLEARCUTS MAY BE APPLIED TO DWARF MISTLETOE INFECTED
STANDS OF ANY FOREST COVER TYPE.

3. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING
STOCK LEVEL STANDARDS.

4. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

REFORESTATION
(E04)

1. DO NOT APPLY FINAL SHELTERWOOD REMOVAL CUT UNTIL THE
DESIRED NUMBER (AS SPECIFIED IN MINIMUM STOCKING STANDARDS)
OF WELL-ESTABLISHED SEEDLINGS PER ACRE ARE EXPECTED TO
REMAIN FOLLOWING OVERWOOD REMOVAL.

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MANAGEMENT PRESCRIPTION 9A

(Emphasis is on riparian area management)

1,038 Acres

A. Management Prescription Summary

1. General Description and Goals:

Emphasis is on the management of all component ecosystems of riparian areas. These components include the aquatic ecosystem, the riparian ecosystem (characterized by distinctive vegetation), and adjacent ecosystems that are within 100 ft. measured horizontally from the edges of perennial streams or from shores of lakes and other still water bodies. All of the components are managed together as a land unit comprising an integrated riparian area and not as separate components.

The goals of management are to provide healthy, self-perpetuating plant communities, meet water quality standards, provide habitats for viable populations of wildlife and fish, and provide stable stream channels and still water-body shorelines. The aquatic ecosystem may contain fisheries habitat improvement and channel stabilizing facilities that harmonize with the visual setting and maintain or improve wildlife or fish habitat requirements. The linear nature of streamside riparian areas permits programming of management activities which are not visually evident or are visually subordinate.

Forested riparian ecosystems are treated to improve wildlife and fish habitat diversity through specified silvicultural objectives. Both commercial and noncommercial vegetation treatments are used to achieve multi-resource benefits. Clearcutting is used to regenerate aspen clones. Other forest cover types are treated with either small-group or single-tree selection methods.

Livestock grazing will be managed to assure maintenance of the vigor and regenerative capacity of the riparian plant communities. Vehicular travel is limited on roads and trails at times when the ecosystems would be unacceptably damaged. Developed recreation facility construction for overnight use is prohibited within the 100-year floodplain.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

VISUAL RESOURCE
MANAGEMENT
(A04)

1. DESIGN AND IMPLEMENT MANAGEMENT ACTIVITIES WHICH SUSTAIN INHERENT VISUAL VALUES OF RIPARIAN AREAS AND BLEND WITH THE SURROUNDING NATURAL LANDSCAPES.

a. MINIMUM VISUAL QUALITY OBJECTIVE (VQO) SHALL BE PARTIAL RETENTION.

RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

1. RECREATION OPPORTUNITY SPECTRUM CLASSES FROM RURAL TO SEMI-PRIMITIVE NONMOTORIZED MAY BE PROVIDED IN THIS MANAGEMENT AREA.
 PROVIDE ROADED NATURAL RECREATION OPPORTUNITIES WITHIN 1/2 MILE OF FOREST ARTERIAL, COLLECTOR AND LOCAL ROADS WITH BETTER THAN PRIMITIVE SURFACES WHICH ARE OPEN TO PUBLIC TRAVEL.
 PROVIDE SEMI-PRIMITIVE MOTORIZED RECREATION OPPORTUNITIES WITH A LOW TO MODERATE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS WITHIN 1/2 MILE OF DESIGNATED LOCAL ROADS WITH PRIMITIVE SURFACES AND TRAILS OPEN TO MOTORIZED RECREATION USE.
 WHERE LOCAL ROADS ARE CLOSED TO PUBLIC MOTORIZED RECREATION TRAVEL, PROVIDE FOR DISPERSED NON-MOTORIZED RECREATION OPPORTUNITIES. MANAGE RECREATION USE TO PROVIDE FOR THE INCIDENCE OF CONTACT WITH OTHER GROUPS AND INDIVIDUALS APPROPRIATE FOR THE ESTABLISHED ROS CLASS.
 PROVIDE SEMI-PRIMITIVE NONMOTORIZED RECREATION OPPORTUNITIES IN ALL AREAS MORE THAN 1/2 MILE AWAY FROM ROADS AND TRAILS OPEN TO MOTORIZED RECREATION USE.

a. MAXIMUM USE AND CAPACITY LEVELS ARE:

RECREATION USE AND CAPACITY RANGE DURING THE SNOW-FREE PERIOD (PAOT/ACRE):

TRAIL USE AND CAPACITY RANGE (PAOT/MILE OF TRAIL):

USE LEVEL	CAPACITY RANGE			
	VERY LOW	LOW	MODERATE	HIGH
ROS CLASS - SEMI-PRIMITIVE NONMOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - SEMI-PRIMITIVE MOTORIZED				
ON TRAILS PAOT/MILE	2.0	3.0	9.0	11.0
AREA-WIDE PAOT/ACRE	.004	.008	.05	.08
ROS CLASS - ROADED NATURAL				
ON TRAILS PAOT/MILE	-	-	-	-
AREA-WIDE PAOT/ACRE	.04	.08	1.2	2.5

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

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GUIDELINES

CONTINUATION OF:
RECREATION
OPPORTUNITIES
AND USE
ADMINISTRATION
(A14 AND 15)

 ROS CLASS - RURAL

 ON TRAILS
 PAOT/MILE - - - -

 AREA-WIDE
 PAOT/ACRE .5 .8 5.0 7.5

 REDUCE THE ABOVE USE LEVEL CO-
 EFFICIENTS AS NECESSARY TO REFLECT
 USABLE ACRES, PATTERNS OF USE, AND
 GENERAL ATTRACTIVENESS OF THE
 SPECIFIC MANAGEMENT AREA TYPE AS
 DESCRIBED IN THE ROS USERS GUIDE,
 CHAPTER 25.
 REDUCE THE ABOVE USE LEVELS WHERE
 UNACCEPTABLE CHANGES TO THE BIO-
 PHYSICAL RESOURCES WILL OCCUR.

b. SPECIFY OFF-ROAD VEHICLE
RESTRICTIONS BASED ON ORV
USE MANAGEMENT (FSM 2355).

c. SEE FSM 2331, FSM 7732,
FSH 7709.12 (TRAILS
HANDBOOK), FSH 7109.11A
AND 11B (SIGN HANDBOOK).

2. MAINTAIN UNDESIGNATED SITES IN FRISSELL CONDITION
CLASS 1 THROUGH 3 WHERE UNRESTRICTED CAMPING IS ALLOWED.

3. MANAGE SITE USE AND OCCUPANCY TO MAINTAIN SITES WITH-
IN FRISSELL CONDITION CLASSES 1 THROUGH 3 EXCEPT FOR
DESIGNATED SITES WHICH MAY BE CLASS 4. CLOSE AND
RESTORE CLASS 5 SITES.

4. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM
ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON
SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR
SPECIAL WILDLIFE HABITAT.

MANAGEMENT PRESCRIPTION 09A

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

WILDLIFE
HABITAT
IMPROVEMENT AND
MAINTENANCE
(C02, 04, 05
AND 06)

1. PROVIDE HABITAT DIVERSITY TO MEET OR EXCEED UTAH DWR POPULATION GOALS FOR ALL AQUATIC VERTEBRATE SPECIES.
2. PROVIDE HABITAT FOR VIABLE POPULATIONS OF ALL NATIVE VERTEBRATE SPECIES OF FISH AND WILDLIFE.
3. COORDINATE LAKE AND STREAM HABITAT IMPROVEMENT PROJECTS WITH THE UTAH DWR, WHERE AQUATIC HABITATS ARE BELOW PRODUCTIVE POTENTIAL.
4. MAINTAIN INSTREAM FLOWS IN COOPERATION WITH UTAH DWR TO SUPPORT A SUSTAINED YIELD OF NATURAL FISHERIES RESOURCES.

- a. MAINTAIN OR IMPROVE OVERALL STREAM HABITAT CONDITION AT OR ABOVE 50 PERCENT OF OPTIMUM. USE R-4 GAWS AQUATIC HABITAT SURVEY HANDBOOK, OR R-1 COWFISH HABITAT CAPABILITY MODEL

RANGE RESOURCE
MANAGEMENT
(D02)

1. MAINTAIN PROPER STOCKING AND LIVESTOCK DISTRIBUTION TO PROTECT RIPARIAN ECOSYSTEMS.

- a. LIVESTOCK GRAZING IN RIPARIAN AREAS WILL BE CONTROLLED AT THE FOLLOWING LEVELS OF UTILIZATION:
- | GRAZING SYSTEM | VEGETATION CONDITION CLASS | TOTAL FORAGE UTILIZATION BY WEIGHT |
|--|----------------------------|------------------------------------|
| 1. GRASS/GRASSLIKE FORB VEGETATIVE TYPE: | | |
| CONTINUOUS | GOOD | 40% |
| | FAIR | 30% |
| | POOR | 20% |
| REST-ROTATION | HEAVY USE PASTURE (1) | 60% |
| | LIGHT USE PASTURE | 40% |
| | DEFERRED-ROTATION | HEAVY USE PASTURE (2) |
| | LIGHT USE PASTURE | 35% |
| 2. WILLOW/GRASS/GRASSLIKE VEGETATIVE TYPE: | | |
| CONTINUOUS | GOOD | 55% |
| | FAIR | 40% |
| | POOR | 30% |
| 3. WILLOW-FOREST VEGETATIVE TYPE. | | |

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MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
RANGE RESOURCE
MANAGEMENT
(D02)

REST- ROTATION	HEAVY USE PASTURE (1) LIGHT USE PASTURE	70%
DEFERRED- ROTATION	HEAVY USE PASTURE (2) LIGHT USE PASTURE	60% 40%

(1) TRAMPLED AREAS AND STREAMBANK
DAMAGE CAUSED DURING HEAVY USE
YEAR SHOULD BE HEALED OR STABILIZED
WITHIN THE FOLLOWING REST YEAR.

(2) BARE SOIL CAUSED BY DISTUR-
BANCE IN A HEAVY USE PASTURE
SHOULD BE STABILIZED OR HEALED
PRIOR TO USE THE FOLLOWING YEAR.

BROWSE UTILIZATION WITHIN THE
RIPARIAN ECOSYSTEM WILL NOT EXCEED
50% OF NEW LEADER PRODUCTION.

THE LIMITING FACTOR ON A GIVEN
RIPARIAN AREA WILL BE WHICHEVER
UTILIZATION STANDARD IS REACHED
FIRST, EITHER TOTAL FORAGE OR
BROWSE.

2. PROHIBIT TRAILING OF LIVESTOCK ALONG THE LENGTH OF
RIPARIAN AREAS EXCEPT WHERE EXISTING STOCK DRIVEWAYS
OCCUR. REHABILITATE EXISTING STOCK DRIVEWAYS WHERE
DAMAGE IS OCCURRING IN RIPARIAN AREAS. RELOCATE
THEM OUTSIDE RIPARIAN AREAS IF POSSIBLE, AND IF
NECESSARY TO ACHIEVE RIPARIAN AREA GOALS.

SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

1. MANAGE FOREST COVER TYPES TO PERPETUATE TREE COVER
AND PROVIDE HEALTHY STANDS, HIGH WATER QUALITY AND
WILDLIFE AND FISH HABITAT.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

2. MANAGE FOREST COVER TYPES USING THE FOLLOWING
HARVEST METHODS:
- CLEARCUT IN ASPEN, AND
- SELECTION CUTS, GROUP OR SINGLE TREE, IN ALL OTHER
COVER TYPES.

a. SILVICULTURAL STANDARDS:
(THESE STANDARDS MAY BE EXCEEDED
ON AREAS MANAGED FOR OLD
GROWTH)

1. CLEARCUT:

FOREST COVER TYPE

ASPEN

ROTATION 80-120
AGE YRS.

2. SELECTION (GROUP OR SINGLE
TREE):

ALL
OTHER
FOREST
COVER
TYPES

ROTATION
AGE 90-160

CUTTING
CYCLE 20-30 YRS

FOR GROUP SELECTION, SIZE OF OPEN-
INGS ARE LESS THAN THREE ACRES.

3. CLEARCUTS MAY BE APPLIED TO DWARF MISTLETOE INFECTED
STANDS OF ANY FOREST COVER TYPE.

4. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING
STOCK LEVEL STANDARDS.

5. ADJUST STOCKING LEVELS BY SITE QUALITY. HIGHER
STOCKING SHOULD OCCUR ON BETTER SITES.

6. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL
AND NONCOMMERCIAL METHODS.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

7. ESTABLISH A SATISFACTORY STAND EITHER NATURALLY OR THROUGH ARTIFICIAL REGENERATION METHODS WITHIN A FIVE-YEAR PERIOD AFTER DISTURBANCE.
8. PROHIBIT LOG LANDING AND DECKING AREAS WITHIN THE RIPARIAN AREA.

WATER RESOURCE
IMPROVEMENT AND
MAINTENANCE
(F05 AND 06)

1. PROPOSED NEW LAND-USE FACILITIES (ROADS, CAMPGROUNDS, BUILDINGS) WILL NOT NORMALLY BE LOCATED WITHIN FLOODPLAIN BOUNDARIES FOR THE 100-YEAR FLOOD. PROTECT PRESENT AND ALL NECESSARY FUTURE FACILITIES THAT CANNOT BE LOCATED OUT OF THE 100-YEAR FLOODPLAIN BY STRUCTURAL MITIGATION (DEFLECTION STRUCTURES, RIPRAP, ETC.).

2. PREVENT STREAM CHANNEL INSTABILITY, LOSS OF CHANNEL CROSS-SECTIONAL AREAS, AND LOSS OF WATER QUALITY RESULTING FROM ACTIVITIES THAT ALTER VEGETATIVE COVER.

3. DETERMINE THE EFFECTS ON WATER QUALITY AND SEDIMENT YIELDS FROM VEGETATION MANIPULATION AND ROAD CONSTRUCTION PROJECTS THROUGH THE USE OF APPROPRIATE MODELING AND QUANTIFICATION PROCEDURES.

a. IMPLEMENT MITIGATION MEASURES WHEN PRESENT OR UNAVOIDABLE FUTURE FACILITIES ARE LOCATED IN THE ACTIVE FLOODPLAIN TO ENSURE THAT STATE WATER QUALITY STANDARDS, BANK STABILITY CRITERIA, FLOOD HAZARD REDUCTION, AND INSTREAM FLOW STANDARDS ARE MET DURING AND IMMEDIATELY AFTER CONSTRUCTION.

a. LIMIT CHANGES IN CHANNEL RATING OR CLASSIFICATION SCORES TO AN INCREASE OF 10 PERCENT OR LESS. USE CHANNEL STABILITY CRITERIA ESTABLISHED BY COOPER, 1978, AND PFANKUCH, 1975. USE CHANNEL CLASSIFICATION CRITERIA ESTABLISHED BY ROSGEN, 1980.

b. MAINTAIN AT LEAST 80 PERCENT OF POTENTIAL GROUND COVER WITHIN 100 FEET FROM THE EDGES OF ALL PERENNIAL STREAMS, LAKES AND OTHER WATERBODIES, OR TO THE OUTER MARGIN OF THE RIPARIAN ECOSYSTEM, WHERE WIDER THAN 100 FEET.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
WATER RESOURCE
IMPROVEMENT AND
MAINTENANCE
(F05 AND 06)

4. AVOID CHANNELIZATION OF NATURAL STREAMS. WHERE CHANNELIZATION IS NECESSARY FOR FLOOD CONTROL OR OTHER PURPOSES, USE STREAM GEOMETRY RELATIONSHIPS TO RE-ESTABLISH MEANDERS, WIDTH/DEPTH RATIOS, ETC. CONSISTENT WITH EACH MAJOR STREAM TYPE.
5. TREAT AREAS DISTURBED BY MANAGEMENT ACTIVITIES TO REDUCE EROSION TO NATURAL RATES.
6. STABILIZE STREAMBANKS, WHICH ARE DAMAGED BY MANAGEMENT ACTIVITIES, WITH METHODS THAT EMPHASIZE REVEGETATION.
7. DESIGN AND LOCATE SETTLING PONDS TO REDUCE DOWN-STREAM SEDIMENT YIELD AND TO PREVENT WASHOUT DURING HIGH WATER. LOCATE SETTLING PONDS OUTSIDE OF THE ACTIVE CHANNEL. RESTORE ANY CHANNEL CHANGES TO HYDRAULIC GEOMETRY STANDARDS FOR EACH STREAM TYPE.
8. INCLUDE WILDLIFE AND FISH HABITAT, AESTHETIC, AND SAFETY GOALS WHEN PLANNING PROJECTS THAT RESULT IN VEGETATION TYPE CONVERSION.
9. REQUIRE CONCURRENT MONITORING TO ENSURE THAT MITIGATIVE MEASURES ARE EFFECTIVE AND IN COMPLIANCE WITH STATE WATER QUALITY STANDARDS.

SOIL RESOURCE
MANAGEMENT
(KA1)

1. REHABILITATE DISTURBED SOILS AREAS WHERE ADVERSE IMPACTS WOULD OCCUR ACCORDING TO THE FOLLOWING PRIORITIES:
 - AQUATIC ECOSYSTEMS;
 - RIPARIAN ECOSYSTEMS; AND
 - RIPARIAN AREAS OUTSIDE OF AQUATIC AND RIPARIAN ECOSYSTEMS.
2. PREVENT SOIL SURFACE COMPACTION AND DISTURBANCE IN RIPARIAN ECOSYSTEMS. ALLOW USE OF HEAVY CONSTRUCTION EQUIPMENT FOR CONSTRUCTION, RESIDUE REMOVAL, ETC. ONLY DURING PERIODS WHEN THE SOIL IS LEAST SUSCEPTIBLE TO COMPACTION OR RUTTING.
3. MAINTAIN OR ENHANCE THE LONG-TERM PRODUCTIVITY OF SOILS WITHIN THE RIPARIAN ECOSYSTEM.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

MINING LAW
COMPLIANCE AND
ADMINISTRATION
(LOCATABLES)
(GO1)

1. MINIMIZE DETRIMENTAL DISTURBANCE TO THE RIPARIAN AREA BY MINERAL ACTIVITIES. INITIATE TIMELY AND EFFECTIVE REHABILITATION OF DISTURBED AREAS AND RESTORE RIPARIAN AREAS TO A STATE OF PRODUCTIVITY COMPARABLE TO THAT BEFORE DISTURBANCE.

a. PROHIBIT THE DEPOSITING OF SOIL MATERIAL FROM DRILLING, PROCESSING, OR SITE PREPARATION IN NATURAL DRAINAGEWAYS.

b. LOCATE THE LOWER EDGE OF DISTURBED OR DEPOSITED SOIL BANKS OUTSIDE THE ACTIVE FLOODPLAIN.

c. PROHIBIT STOCKPILING OF TOPSOIL OR ANY OTHER DISTURBED SOIL IN THE ACTIVE FLOODPLAIN.

d. PROHIBIT MINERAL PROCESSING (MILLING) ACTIVITIES WITHIN THE ACTIVE FLOODPLAIN.

e. DISCONTINUE HEAVY EQUIPMENT USE WHEN SOIL COMPACTION, RUTTING, AND PUDDLING IS PRESENT.

2. LOCATE MINERAL REMOVAL ACTIVITIES AWAY FROM THE WATER'S EDGE OR OUTSIDE THE RIPARIAN AREA.

a. LOCATE DRILLING MUD PITS OUTSIDE THE ACTIVE FLOODPLAIN UNLESS ALTERNATE LOCATIONS ARE MORE ENVIRONMENTALLY DAMAGING. IF LOCATION IS UNAVOIDABLE, SEAL AND DIKE ALL PITS TO PREVENT LEAKAGE.

b. DRAIN AND RESTORE ROADS, PADS, AND DRILL SITES IMMEDIATELY AFTER USE IS DISCONTINUED. REVEGETATE TO 80 PERCENT GROUND COVER IN THE FIRST YEAR. PROVIDE SURFACE PROTECTION DURING STORMFLOW AND SNOWMELT RUNOFF EVENTS.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
MINING LAW
COMPLIANCE AND
ADMINISTRATION
(LOCATABLES)
(G01)

3. DESIGN AND LOCATE PLACER MINE SETTLING PONDS TO PREVENT WASHOUT DURING HIGH WATER. LOCATE SETTLING PONDS OUTSIDE OF THE ACTIVE CHANNEL. RESTORE ANY CHANNEL CHANGES TO HYDRAULIC GEOMETRY STANDARDS FOR EACH STREAM TYPE.

a. PERMIT DIVERSION ACTIVITIES WITHIN THE RIPARIAN ZONE WHERE TECHNOLOGY IS AVAILABLE TO MAINTAIN WATER QUALITY STANDARDS, SEDIMENT THRESHOLD LIMITS, AND INSTREAM FLOW STANDARDS.

4. CONFINE HEAVY EQUIPMENT USE TO AREAS NECESSARY FOR MINERAL EXTRACTION.

5. LOCATE MINING CAMPS OUTSIDE THE ACTIVE FLOODPLAIN.

6. REQUIRE CONCURRENT MONITORING TO ENSURE THAT MITIGATIVE MEASURES ARE EFFECTIVE AND IN COMPLIANCE WITH STATE WATER QUALITY STANDARDS.

TRANSPORTATION
SYSTEM
MANAGEMENT
(L01 & 20)

1. LOCATE ROADS AND TRAILS OUTSIDE RIPARIAN AREAS UNLESS ALTERNATIVE ROUTES HAVE BEEN REVIEWED AND REJECTED AS BEING MORE ENVIRONMENTALLY DAMAGING.

a. DO NOT PARALLEL STREAMS WHEN ROAD LOCATION MUST OCCUR IN RIPARIAN AREAS EXCEPT WHERE ABSOLUTELY NECESSARY. CROSS STREAMS AT RIGHT ANGLES. LOCATE CROSSINGS AT POINTS OF LOW BANK SLOPE AND FIRM SURFACES.

2. CREATE ARTIFICIAL SEDIMENT TRAPS WITH BARRIERS WHERE NATURAL VEGETATION IS INADEQUATE TO PROTECT WATERWAYS OR LAKES FROM SIGNIFICANT ACCELERATED SEDIMENTATION.

3. MINIMIZE DETRIMENTAL DISTURBANCE TO THE RIPARIAN AREA BY CONSTRUCTION ACTIVITIES. INITIATE TIMELY AND EFFECTIVE REHABILITATION OF DISTURBED AREAS AND RESTORE RIPARIAN AREAS SO THAT A VEGETATIVE GROUND COVER OR SUITABLE SUBSTITUTE PROTECTS THE SOIL FROM EROSION AND PREVENTS INCREASED SEDIMENT YIELD.

IV-150

MANAGEMENT PRESCRIPTION 9F

(Emphasis is on improved watershed condition)

135,842 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is on improving watershed condition and thus eliminating the watershed improvement needs backlog. Emphasis is also on maintenance of projects already completed. This will be achieved by protection, seeding, cultural treatment or any combination of other methods that will accomplish the objectives. Management activities in the foreground, middleground, and background may dominate, but should be designed to harmonize and blend with the natural setting to the extent possible.

Livestock grazing on the treated areas is eliminated until the area can be grazed without causing decreased watershed condition or damage to cultural treatments. Motorized travel is prohibited except for over-snow machines and for designated routes.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
RECREATION OPPORTUNITIES AND USE ADMINISTRATION (A14 AND 15)	<ol style="list-style-type: none"> 1. SEMI-PRIMITIVE NONMOTORIZED OPPORTUNITIES CAN BE PROVIDED. 2. PROHIBIT MOTORIZED VEHICLE USE OFF FOREST SYSTEM ROADS AND TRAILS (EXCEPT SNOWMOBILES OPERATING ON SNOW) WHERE NEEDED TO PROTECT SOILS, VEGETATION, OR SPECIAL WILDLIFE HABITAT. 	
WILDLIFE AND FISH RESOURCE MANAGEMENT (C01)	<ol style="list-style-type: none"> 1. MAINTAIN HABITAT CAPABILITY FOR MANAGEMENT INDICATOR SPECIES. 2. PROVIDE ADEQUATE FORAGE TO SUSTAIN BIG GAME POPULATION LEVELS AGREED TO IN THE STATEWIDE COMPREHENSIVE WILDLIFE MANAGEMENT PLAN ON NFS LANDS. 	<ol style="list-style-type: none"> a. MAINTAIN HABITAT NEEDED TO SUPPORT STATE POPULATION GOALS FOR BIG GAME AND EXCEED HABITAT REQUIREMENTS FOR MINIMUM VIABLE POPULATION LEVELS FOR OTHER MANAGEMENT INDICATOR SPECIES.
RANGE RESOURCE MANAGEMENT (D02)	<ol style="list-style-type: none"> 1. STABILIZE AND/OR REGENERATE SUITABLE AREAS THAT ARE IN LESS THAN GOOD RANGE OR WATERSHED CONDITION. 2. EXCLUDE GRAZING OF ALL LIVESTOCK UNTIL RECOVERY ON AREAS TREATED FOR RESTORATION OF WATERSHED CONDITION. 3. USE ONLY INTENSIVE GRAZING SYSTEMS OR REMOVE LIVESTOCK WHEN RECOVERY OF RANGE CONDITIONS CAN NOT BE ACCOMPLISHED BY INTENSIVE GRAZING SYSTEMS. 4. INVEST IN COST-EFFECTIVE ALLOTMENT MANAGEMENT AND ASSOCIATED RANGE IMPROVEMENTS. 	<ol style="list-style-type: none"> a. BASE RANGE AND WATERSHED CONDITION ON STANDARDS IN RANGE ANALYSIS HANDBOOK (FSH 2209.21). a. REFER TO FOREST SUPPLEMENT ON OPENING OF CLOSED AREAS TO GRAZING. a. BASE ECONOMIC ANALYSIS ON PROJECT EFFECTIVENESS ANALYSIS HANDBOOK (FSH 2209.11).

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: RANGE RESOURCE MANAGEMENT (D02)	5. INVEST IN COST-EFFECTIVE GRAZING MANAGEMENT AND RANGELAND PRODUCTIVITY IMPROVEMENTS. WHERE IMPROVEMENTS INCLUDE WATER DEVELOPMENTS, A WATER RIGHT IN THE NAME OF THE UNITED STATES MUST BE OBTAINED.	a. STRUCTURAL IMPROVEMENTS WILL NOT ADVERSELY AFFECT BIG GAME MOVEMENT.
SOIL RESOURCE MANAGEMENT (KA1)	1. RESTORE SOIL DISTURBANCES CAUSED BY HUMAN USE (PAST MINING, GRAZING, TRAIL CONSTRUCTION AND USE, CAMPING) TO SOIL LOSS TOLERANCE LEVELS COMMENSURATE WITH THE NATURAL ECOLOGICAL PROCESSES FOR THE TREATMENT AREA.	a. FOLLOW PRELIMINARY THRESHOLD RATES ESTABLISHED FOR THE FOREST, CONTAINED IN THE SOIL MONITORING PLAN.
TRANSPORTATION SYSTEM MANAGEMENT (L01 & 20)	1. MANAGE ROAD USE BY SEASONAL OR PERMANENT CLOSURE IF: <ul style="list-style-type: none"> A. USE CAUSES UNACCEPTABLE DAMAGE TO SOIL AND WATER RESOURCES DUE TO WEATHER OR SEASONAL CONDITIONS B. USE CONFLICTS WITH THE ROS CLASS ESTABLISHED FOR THE AREA; C. USE CAUSES UNACCEPTABLE WILDLIFE CONFLICT OR HABITAT DEGRADATION; D. USE RESULTS IN UNSAFE CONDITIONS. E. THE ROAD DOES NOT SERVE AN IDENTIFIED PUBLIC OR ADMINISTRATIVE NEED; F. AREA ACCESSED HAS SEASONAL NEED FOR PROTECTION OR NONUSE; OR G. FINANCING IS NOT AVAILABLE TO MAINTAIN THE FACILITY OR MANAGE THE ASSOCIATED USE OF ADJACENT LANDS. 	
LAW ENFORCEMENT (P24 THRU 27)	1. USE SPECIAL CLOSURES WHEN NECESSARY TO PROTECT FROM ACTUAL OR POTENTIAL DAMAGE FROM PUBLIC USE.	a. ISSUE CLOSURE ORDER UNDER PROVISIONS OF 36 CRF 261.50 (FSM 4063.3).

MANAGEMENT PRESCRIPTION 10A

(Provides for research natural areas)

4,300 Acres

A. Management Prescription Summary

1. General Description and Goals:

Emphasis is on research, study, observations, monitoring, and educational activities that are nondestructive, nonmanipulative, and that maintain unmodified conditions.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
VISUAL RESOURCE MANAGEMENT (A04)	1. MEET STATED VISUAL QUALITY OBJECTIVE.	a. MINIMUM VISUAL QUALITY OBJECTIVE (VQO) SHALL BE RETENTION.
RECREATION FACILITY AND SITE CONSTRUCTION AND RECONSTRUCTION (A05 AND 06)	1. PROHIBIT CONSTRUCTION OF DEVELOPED RECREATION SITES.	
RECREATION OPPORTUNITIES AND USE ADMINISTRATION (A14 AND 15)	1. DISCOURAGE OR PROHIBIT ANY PUBLIC USE WHICH CONTRIBUTES TO IMPAIRMENT OF RESEARCH OR EDUCATIONAL VALUES.	a. REFERENCE FSM 4063.36.
WILDLIFE HABITAT IMPROVEMENT AND MAINTENANCE (C02, 04, 05 AND 06)	2. PERMIT AND ENCOURAGE USE BY SCIENTISTS AND EDUCATORS.	
	1. PROHIBIT ANY DIRECT HABITAT MANIPULATION.	
	2. PROHIBIT INTRODUCTION OR SPREAD OF EXOTIC OR NON-NATIVE PLANT OR ANIMAL SPECIES.	
RANGE RESOURCE MANAGEMENT (D02)	1. RESTRICT GRAZING BY LIVESTOCK TO THAT ESSENTIAL FOR THE MAINTENANCE OF A SPECIFIC VEGETATION TYPE.	
	2. PROHIBIT RANGE IMPROVEMENTS.	
SILVICULTURAL PRESCRIPTIONS (E03, 06 & 07)	1. PROHIBIT ANY LOGGING ACTIVITY.	
	2. CLOSE TO FIREWOOD OR CHRISTMAS TREE GATHERING.	

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

SPECIAL USE
MANAGEMENT (NON
-RECREATION)
(J01)

1. USE SPECIAL USE PERMITS OR COOPERATIVE AGREEMENTS
TO AUTHORIZE AND DOCUMENT SCIENTIFIC ACTIVITY.

a. REFERENCE FSM 4063.37.

WITHDRAWALS,
MODIFICATIONS
AND REVOCATIONS
(J04)

1. WITHDRAW FROM MINERAL ENTRY IN CONFORMANCE WITH
SECTION 204 OF FEDERAL LAND POLICY AND MANAGEMENT
ACT OF 1976 (PL 94-579).

2. UNTIL THE AREA IS WITHDRAWN, USE NO SURFACE OCCUPANCY
STIPULATIONS IN ANY NEW LEASES COVERING THE RNA'S.

PROPERTY
BOUNDARY
LOCATION
(J06)

1. MONUMENT ALL CORNERS OR TURNING POINTS AND
DOCUMENT AND RECORD THE MONUMENTATION IN THE
ESTABLISHMENT REPORT. MARK BOUNDARIES IN THE
FIELD WHEN APPROPRIATE TO ENSURE INTEGRITY
OF THE AREA.

TRANSPORTATION
SYSTEM
MANAGEMENT
(L01 & 20)

1. IN GENERAL DO NOT PERMIT IMPROVEMENTS SUCH AS
ROADS.

TRAIL
SYSTEM
MANAGEMENT
(L23)

1. LIMIT TRAILS TO THOSE NEEDED FOR ACCESS TO
CONDUCT RESEARCH AND FOR EDUCATIONAL PURPOSES.

FIRE PLANNING
AND
SUPPRESSION
(P01)

1. EXTINGUISH WILDFIRES ENDANGERING RESEARCH
NATURAL AREAS (RNA'S). ALLOW FIRES WITHIN THE
RNA'S TO BURN UNDISTURBED UNLESS THEY THREATEN
PEOPLE OR PROPERTY OUTSIDE THE AREA, OR THE
UNIQUENESS OF THE RNA.

a. LEAVE FIRE-CAUSED DEBRIS
FOR NATURAL DECAY.

2. DO NOT REDUCE FIRE HAZARD WITHIN THE RNA.

LAW ENFORCEMENT
(P24 THRU 27)

1. CLOSE RNA'S WHEN NECESSARY TO PROTECT THEM
FROM ACTUAL OR POTENTIAL DAMAGE FROM PUBLIC USE.

a. ISSUE CLOSURE ORDER UNDER
PROVISIONS OF 36 CRF 261.50
(FSM 4063.3).

PROTECTION
(P40)

1. TAKE NO ACTION AGAINST ENDEMIC INSECTS, DISEASES
OR WILD ANIMALS.

IV-156

MANAGEMENT PRESCRIPTION 10E

(Provides for municipal watershed and municipal
water supply watershed)

1,179 Acres

A. Management Prescription Summary

1. General Description and Goals:

Management emphasis is to protect or improve the quality and quantity of municipal water supplies. Management practices vary from use restrictions to water resource improvement practices, with the primary objective of meeting water quality standards established for the individual watershed. A secondary objective is to manage the watersheds to improve the yield and timing of water flows, consistent with water quality requirements.

* Note: This prescription applies to existing and proposed Research Natural Areas. If all or a part of a proposed area is rejected, it shall be managed according to the Prescription assigned to the adjacent management area.

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
SILVICULTURAL
PRESCRIPTIONS
(E03, 06 & 07)

ROTATION AGE	90-180 YRS.	80-120 YRS.	100 OR MORE YRS.
GROWING STOCK LEVEL	80-160	N/A	60-120
THINNING CYCLE	20-30 YRS.	N/A	20-40 YRS.

THE LARGEST INCREASE IN WATER AVAILABLE FOR STREAM FLOW RESULTS WHEN 30 TO 40 PERCENT OF A DRAINAGE IS HARVESTED IN CLEARCUT PATCHES (3 TO 10 ACRES) DISPERSED THROUGHOUT THE AREA OF A WATERSHED (LEAF AND ALEXANDER FS RES. PAP. RM 133).

2. APPLY INTERMEDIATE TREATMENTS TO MAINTAIN GROWING STOCK LEVEL STANDARDS.

3. UTILIZE FIREWOOD MATERIAL USING BOTH COMMERCIAL AND NONCOMMERCIAL METHODS.

REFORESTATION
(E04)

1. PLANT TREES OF KNOWN GENETIC QUALITIES TO ESTABLISH NEW STANDS.

WATER RESOURCE
IMPROVEMENT AND
MAINTENANCE
(F05 AND 06)

1. PREVENT OR REDUCE DEBRIS ACCUMULATIONS IN RIPARIAN AREAS THAT REDUCE STREAM CHANNEL STABILITY AND CAPACITY.

2. PREVENT SOIL SURFACE COMPACTION AND DISTURBANCE IN RIPARIAN ECOSYSTEMS. ALLOW USE OF HEAVY CONSTRUCTION EQUIPMENT FOR CONSTRUCTION, RESIDUE REMOVAL, ETC. ONLY DURING PERIODS WHEN THE SOIL IS LEAST SUSCEPTIBLE TO COMPACTION OR RUTTING.

a. PROPOSED LAND-USE FACILITIES (ROADS, CAMPGROUNDS, BUILDINGS) SHOULD NOT BE LOCATED WITHIN FLOODPLAIN BOUNDARIES FOR THE 100-YEAR FLOOD. PROTECT PRESENT AND FUTURE FACILITIES THAT CANNOT BE LOCATED OUT OF THE 100-YEAR FLOODPLAIN BY STRUCTURAL MITIGATION (DEFLECTION STRUCTURES,

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
WATER RESOURCE
IMPROVEMENT AND
MAINTENANCE
(F05 AND 06)

RIPRAP, ETC.)

3. PREVENT STREAM CHANNEL INSTABILITY, LOSS OF CHANNEL
CROSS-SECTIONAL AREAS, AND LOSS OF WATER QUALITY
RESULTING FROM ACTIVITIES THAT ALTER VEGETATIVE COVER.

a. LIMIT CHANGES IN CHANNEL RATING
OR CLASSIFICATION SCORES TO AN
INCREASE OF 10 PERCENT OR LESS.
USE CHANNEL STABILITY CRITERIA
ESTABLISHED BY COOPER, 1978, AND
PFANKUCH, 1975. USE CHANNEL
CLASSIFICATION CRITERIA ESTAB-
LISHED BY ROSGEN, 1980.

4. MANAGE NON-FORESTED AREAS TO IMPROVE STREAMFLOW
THROUGH INCREASED ON-SITE WATER YIELDS AND TO MEET STATE
WATER QUALITY STANDARDS. USE AVAILABLE SNOWDRIFT
TECHNOLOGY, SUCH AS SNOW FENCES, WINDROWED BRUSH PILES,
LINEAR CONVERSION OF UNBROKEN BRUSH TO GRASS, LOW EARTHEN
RIDGES, ETC., TO CAPTURE AND STABILIZE BLOWING SNOW.

a. STRUCTURES ARE DESIGNED IN
TERMS OF THE SIZE OF AND SNOW
VOLUMES AVAILABLE FROM THE UP-
WIND SOURCE AREAS, LOCAL AND
DOWNWIND TERRAIN FEATURES, PRE-
VAILING WINDS, AND DEPOSITION
AREA CONDITIONS, ETC., AS RE-
FERENCED IN 'STUDYING SNOW-
DRIFTING PROBLEMS WITH SMALL-
SCALE MODELS OUTDOORS' BY TABLER,
R. D. AND JAIVELL, R. S.,
PROCEEDINGS WESTERN SNOW CON-
FERENCE, APRIL 15-17, 1980.

SOIL RESOURCE
MANAGEMENT
(KA1)

1. IMMEDIATELY REHABILITATE MAN-CAUSED DISTURBANCES AND
RESTORE BURNED AREAS. INSPECT REHABILITATED AREAS
ANNUALLY AND PROVIDE MAINTENANCE NECESSARY TO PROTECT
THE WATERSHED.

CHAPTER V

IMPLEMENTATION OF THE FOREST PLAN

A. Implementation Direction

During implementation of this Forest Plan, the Fishlake will be guided by existing and future laws, regulations, policies, and guidelines. The Forest Plan is designed to supplement, not replace, direction from these sources.

As soon as practicable after the Plan is approved, the Forest Supervisor will ensure that, subject to valid existing rights, all outstanding and future permits and other occupancy and use documents which affect National Forest System lands are consistent with the Plan. The management direction contained in the Forest Plan is used in analyzing proposals by prospective Forest users. All permits, contracts, and other instruments for occupancy and use of the National Forest System lands covered by this Plan must be consistent with the Management Requirements in both the Forest and Management Area Direction sections. This is required by 16 USC 1604(i) and 36 CFR 219.10(e).

Subsequent administrative activities affecting National Forest System lands, including budget proposals, shall be based on the Plan. The Forest Plan is implemented through the program development, budgeting, and annual work planning processes. These processes reflect current priorities within the overall management direction contained in the Plan.

The Forest Plan guides development of multi-year implementation programs for each Ranger District. The Plan's management area direction, objectives, and management requirements are translated into these multi-year program budget proposals which specifically identify the activities and expenditures necessary to achieve the direction provided by the Forest Plan. These implementation programs form the basis for the Forest's annual program budget.

Upon approval of the final budget appropriation for the Forest, the annual program of work is completed and implemented on the ground. The annual work plan provides the detail to the program budget proposals necessary to guide the land managers and their staffs in responding to the direction of the Forest Plan. The activity files in the data base and the Program Accounting and Management Attainment Reporting System provide information on monitoring the accomplishment of the annual Forest program.

Environmental assessments and environmental impact statements, when needed, will supplement the Forest Plan Environmental Impact Statement. Future environmental analyses will be guided by the Forest Plan. Additional detail will be included in the environmental documents for future project level decisions.

Future environmental analysis associated with the above processes will usually be tiered to the Forest Plan and EIS. Information appropriate for project-related decisions, rather than land use decisions, will normally be utilized in such environmental analysis.

Projects and activities permitted within the Forest Plan will be subjected to environmental analysis as they are planned for implementation (Forest Service Manual FSM 1952). If the environmental analysis for a project shows that: (1) the management area prescription and standards can be complied with and (2) little or no environmental effects are expected beyond those identified and documented in the Forest Plan final EIS; the analysis will probably result in a categorical exclusion (see FSM 1952.2). A Decision Notice may be used to document the decision (FSM 1951). An analysis file and/or a project file will be available for public review, but this will not necessarily be documented in the form of an Environmental Assessment of Environmental Impact Statement.

B. Monitoring and Evaluation Program

This monitoring and evaluation plan is designed to provide feedback to planners and the Forest Supervisor. It will provide Forest Managers with information primarily on plan implementation.

More specifically this plan will determine:

- If the Forest is achieving the goals and objectives of the plan as predicted.
- If the standards and guidelines are being applied as specified in the plan.
- If the effects of implementation are as predicted.
- If the Forest's program and management are resolving the planning issues.
- If the cost of implementation of the plan and work force needed is as predicted.

The monitoring plan that follows is comprised of the following components.

1. Activity, practice of effect - a specific statement of what will be monitored.
2. MIH Code - the numerical identifier of the item to be monitored.
3. Monitoring techniques - a description of the techniques and sources of information to be employed. To the extent possible, existing reporting systems and standard methods will be used.
4. Annual Costs - estimated costs to complete monitoring requirements.
5. Expected precision - the accuracy with which data is collected. Precision is qualitatively rated as high, moderate, or low.

Expected reliability - a measure of how accurately the monitoring reflects the situation. A qualitative and class system is used to rate reliability (high, moderate, low).
6. Measurement frequency - the schedules of samples stated in years or parts of years. It includes some measure of sample size or number.

7. Reporting period - the reoccurring interval between reports summarizing monitoring results for a particular activity or practice. The sampling period should be long enough for specialists to capture significant information.
8. Standards - Acceptable limits indicating no need for further planning action - a statement describing the tolerance limits within which actual performance can vary from predicted performance. When these limits are exceeded, further evaluation is triggered.

At least once a year the Forest Management and Interdisciplinary Teams will meet to review the results of monitoring. This meeting should be in conjunction with the annual budgeting cycle. For those items or areas that do not appear to be meeting standards, plans for remedial action will be formulated.

TABLE V-1
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
RECREATION							
Developed Sites; Actual Use	A07	Recreation Information Management (RIM) System; estimates samples, 20% of sites/yr. RIM Use Source Documents	3.0	Moderate/Moderate	Various Continuing in accordance with random sampling procedures	Annual	Less than 10% planned use or more than 50% planned use a site annually over a three year period.
Developed Sites; Condition	334	RIM facility condition and routine inspections	3.0	Low/Moderate	Continuously	Annual	Facility condition below RIM condition class 2.
Dispersed Actual Use	A08	RIM Source Documents RIM System estimates; statistical samples; trails & roads traffic counts; trail registers estimates	4.0	Low/Low	Various Continuing in accordance with random sampling procedures	Annual	When use is more than 10% ± of the Recreation Opportunity Spectrum (ROS) social setting criteria for the ROS class annually over a three year period.
Dispersed campsite condition	A08	Frissell site inspection	4.0	High/Moderate	Sample selected heavy use areas.	Annual	Sites in facility condition class 5 will be rehabilitated.
Off-road vehicle damage	A08	Area reviews	3.0	Moderate/Moderate	Continuous	Annual	ORV use routes stable. Road and trail density stable not more than 2% increase/yr. Use not conflicting with management goals.
Trail condition	A12	Project trail inspections	6.0	High/High	20%/yr.	Annual	Rate of soil erosion acceptable. Varies one maintenance level class from that prescribed in local trail management plan.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
<u>CULTURAL RESOURCES</u>							
Acres Surveyed/ Sites Evaluated	A02 A03	Actual acres by class of survey. Annual report. Project work records	.5	High/High	Periodic	Annual	Applicable surveys completed prior to disturbance - each project. Meet assigned targets.
Sites located and Protected,	A04	Sample 25% of significant or unevaluated sites at completion of project. Revisit 5 significant or unevaluated sites previously recorded, on an annual basis.	1.0	High/High	Periodic	Annual	Cultural resource surveys completed prior to ground-disturbance projects. Known cultural resources not disturbed without appropriate adverse effect mitigation.
<u>VISUALS</u>							
Monitor compliance of visual quality objective on project or activity basis	A14	10% of District work plans, 100% of Environmental Impact Statements, 10% of Special Use Applications	1.0	High/High	Annual	Annual	Failure to meet intended visual quality objectives of the management area. 10% of project.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/ RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
<u>FISH AND WILDLIFE</u> - Coordinate Monitoring With State and Other Federal Agencies.							
Wildlife Habitat Diversity		Vegetation inventories	2.5	Low/Moderate	5 years	5 years	Meets standards in Forest Direction
Modification of Ecosystem		Acres treated or modified	0.5	High/High	Annual	Annual	Meets standards in Forest Direction
Big game habitat condition		Trend analysis	15.0	Moderate/ moderate	20 percent per year	5 years	Stable or Upward trend
Management Indicator Species Population Trends							
a. Fish Bonne- ville Cutthroat Trout		Electro shocking & gill netting	1.0	Moderate/ Moderate	1 stream per year	Annual	No decrease attributed to management activities
b. Threatened Plant Species		Vegetation Surveys	2.0	Moderate/ Moderate	Annual	Annual	No change attributed to management activities
c. Nongame Species		Plot census	2.5	Moderate/ Moderate	Annual	Annual	Maintain stable trend
d. Macroinvertebrate		Stream sampling/ laboratory counts	5.0	Moderate/ Moderate	5 streams per year	Annual	BCI above 75. Moderate
T&E and Sensitive Animals		Visual reconnaissance	1.5	Moderate/ Moderate	Annual	Annual	No decrease attributed to management activities.
Habitat Condition Inventory		Stream Survey	2.0	Moderate/High	Annual	Annual	Meets prescribed standard.
Snag Management		Condition Survey	1.0	Moderate/ Moderate	Annual	Annual	Meets prescribed standard.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMIT INDICATING NO NEED FOR FURTHER PLANNING ACTION
RANGE							
Permitted AUM		Annual Range Report	2.0	High/High	Annual	Annual	Permitted AUM's meet assigned targets. Average increases as projected meet planned outputs, ±10%.
Forage Utilization		Vegetation Analysis	15.0	Moderate/Moderate	Each Allotment every 4 yr.	Annual	Meet utilization standards on 90% of allotments.
Check compliance Suitability		on site reviews	25.0	high/high	annual	As action is needed	Compliance with conditions in grazing permits.
Range Trend		Frequency analysis	10.0	Moderate/Moderate	5 years	5 years	Stable or upward trend on 90% of allotments.
TIMBER							
Sales	E06	Forest sales records	3.0	High/High	Quarterly	Annual	Meet assigned sales targets in timber sales offered. Meet Forest Plan objectives.
Assure restocking of treated areas within 5 years following final harvest, except when a longer regeneration period is allowed by the management prescription	E03	District Stand Files; regeneration exams and plantation survival surveys; silvicultural prescriptions	2.5	High/High	100% Sample	5 year Reports	Meet assigned reforestation targets. Treated acres restocked within required time periods.

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TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
TIMBER Cont.							
Assure that timber manipulation will not favor an increase in forest pests (insects, diseases, etc.).	P39	Stand exams, ground & aerial pest surveys post sale reviews, prescriptions	2.0	Moderate/Moderate	20% Sample	Annual	Destructive insect and disease organisms to not increase following management activities
Assure that treatment objectives (area in acres) by forest type and stand size, class are being met during plan implementation	E03	District Stand File Activity Reporting (S2K)	No Increase	High/High	100% Summary	Annual	Not more than 20% deviation from forestwide area targets by type and stand size.
Assure that cutting methods prescribed in the management area prescriptions are being utilized for project implementation	E03	District Stand File Activity Reporting (S2K); Administrative and ID Team Reviews	8.0	Moderate/Moderate	25% Sample Annually	Annual	Not more than 20% deviation from management area prescriptions (Tree Stand Management Activities on a forestwide basis).
Assure lands classified as not suitable for timber production are reviewed every ten years	E06	Silvicultural Exams, Stage I Inventory, FORPLAN	3.0	High/High	Each 10 year Period.	10 years	Date indicates unsuitable lands may be suitable.
Assure that timber sold does not exceed the allowable sale quantity established for the 10 year period	E06	10-year & 5-year sale Programs; Cut & Sold Reports; District Stand File activity reporting	1.0	High/High	100% Sample	Annual	Allowable quantity not exceeded.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/ RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
<u>TIMBER cont.</u>							
a) Regulated timber offered	E06	Accomplishment Reports	.5	High/High	100% Sample	Annual	Allowable quantity not exceeded.
b) Unregulated timber offered	E06	Accomplishment Reports	.5	High/High	100% Sample	Annual	Allowable quantity not exceeded.
<u>WATER:</u>							
Water Quality		Establish baseline stations. Establish short term data sta- tions. Utilize STORET Data System. Forest- wide Monitoring Plan	5.0	Moderate/ Moderate	Annual	Annual	Meet state water quality stan- dards and project plan objec- tives.
Potable Water Compliance to Pro- tect Public Health and Safety		Bacteriological Sampling	6.0	Moderate/Low	Monthly dur- ing use season	Annual	State water quality standards.
Changes in riparian Areas Due to Manage- ment		Vegetative and cover Analysis	4.0	Moderate/ Moderate	Annual	Annual	10% decrease from ground cover, forage utilization & bank cover standards.
Best Management practices effectiveness and compliance on land disturbing projects		Project evaluations by disciplinary Team members	4.0	Moderate/ moderate	Annually until land stabilization is completed	Annual	Meet projected Plan objectives.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
MINERALS							
Onsite Inspection for Compliance with Operating Plans.		Onsite Review	60.0	High/High	Routinely	Routinely	Compliance with Operating Plans
HUMAN AND COMMUNITY DEVELOPMENT							
Human Resource Manpower Programs	Y-27&36 Y-29&38 Y-31&40 Y-32&41	Enrollee Counts Management Attainment Report	1.0	High/High	Quarterly	Annually	Meet targets.
Community Stability & Productive Harmony		Citizen Involvement (SRM); issues & concerns analysis	10.0	Moderate/Moderate	Annual	Annual & 5 yr. (prior to plan update)	Positive trends.
Equal Employment Opportunity	Z01,Z08 Z15,Z36	Enrollee Counts Management Attainment Report	1.0	High/High	Quarterly	Annual	Meet targets.
SOILS							
Soil & Water Resource Improvements		Acres treated Management Attainment Report	0.5	High/High	Every 4 Months	Annual	Meet assigned targets.
Accelerated Soil Loss Forestwide		Project Analysis Universal soil loss equation, see Appendix Q	2.5	Low/Low	Routinely	Routinely	Average soil loss not to exceed 1 to 5 tons per acre, depending on soil depth and natural erosion rate.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/ RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
FACILITIES							
Transportation System Management	L01	Traffic counts. Road Condition Surveys of selected roads	5.0	Moderate/ Moderate	Periodic	Annual	Road design and maintenance classes and conditions meet Forest Plan & project needs.
Roads-Construction and Reconstruction	L01 thru L18	Project analysis	10.0	High/High	Annual	Annual	Meet assigned targets, answer project needs.
Road Maintenance	C-19 &	Road Maintenance Plan Condition surveys	5.0	Moderate/ Moderate	Annual	Annual	Meet targets, meet Maintenance-manage- ment System Benchmarks.
Telecommunications	L33 thru L44	Telecommunication Plan Maintenance Cost Records Use Charges	75.0	High/High	Semi-Annual	Annual	Cost effective. Meets Forest Tele- communication Plan.
Administrative Sites		Project Inspections Analysis Adminis- trative Site Plan	3.0	Moderate/ Moderate	Annual	Annual	Meets health, safety and sanitation requirements, maintenance standards. Cost Effective.
Special Uses Except Recreation	J01 L28	Permit Clauses Operat- ing & Construction Plans	50.0	Moderate/ Moderate	Periodic	Annual	Meets applicable laws, regulations and permit requirements.
Rights-of-Way	J02	Right-of-Way Acquisi- tion Plan Assigned Targets	2.0	High/High	Annual	Annual	Meets targets. Adequate Forest Access.
Land Adjustment	J13,15 16 & 17	Land adjustment plan Assigned target	1.0	Moderate/ Moderate	Annual	Annual	Meets targets & objectives
Property Boundary Location	Y52	Boundary Location Plan targets	1.0	Moderate/ Moderate	Semi-Annual	Annual	Meet targets. No encroachments. Follows Plan.

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TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/ RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
<u>PROTECTION</u>							
Fuel Treatment	P-11	Project analysis, Acres treated Management Attainment Report	2.0	Moderate/ Moderate	Semi-Annual	Annual	Meets targets & management area standards for activity fuels loading (Tons/Area).
Air Quality		Analysis of projects with indicated potential for pollution	1.0	Low/LOW	Current	Annual	Meet applicable Federal & State Ambient Air Quality Standards.
Insect & Disease		Project analysis detec- tion surveys, acres treated	4.0	Low/LOW	Annual	Annual	Meet targets or control objectives.
Law Enforcement	P-24	Compliance patrols issuing posting & enforce- ing orders, investiga- tions, numbers & types of incidents. Incidents reported by others	6.0	Moderate/	Annual	Annual	No loss of human life.
<u>ECONOMICS</u>							
Captial Investments		Forest Reports	No Increase	High/High	Annual	Annual	Meet Forest Plan objectives & assigned targets.
Returns to U.S. Treasury		Forest Reports	No Increase	High/High	Current	Annual	No targets assigned. Monitor for effect.
Receipt Shares to Counties		Forest Reports	No Increase	High/High	Annual	Annual	No targets assigned. Monitor for effect.

TABLE V-I (Continued)
MONITORING REQUIREMENTS

ACTIVITY, PRACTICE OR EFFECT	MIH	MONITORING TECHNIQUES OR DATA SOURCES	ANNUAL COSTS M \$	PRECISION/ RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	STANDARDS-ACCEPTABLE LIMITS INDICATING NO NEED FOR FURTHER PLANNING ACTION
ECONOMICS cont.							
Efficiency Analysis		Cost & benefit values updated as better information becomes available. PNV analysis completed	3.0	High/High	Annual	Annual	No targets assigned. Monitor for effects & information updates. Use FORPLAN, MIVEST, etc.
Impact		Outputs confirmed and Impact Analysis completed after Management Attainment Reporting	1.5	High/High	Annual	Annual	No targets assigned. Monitor for effects and information updates. Use IMPLAN.
Unit Costs for Planning Activities		Forest Reports	.1	High/High	Annual	Annual	Not more than 20% deviation from estimated costs on a forestwide basis.

C. REVISION AND AMENDMENT

The Forest Supervisor may change proposed Forest action schedules to reflect differences between proposed annual budgets and appropriated funds. Such scheduled changes shall be considered an amendment to the Forest Plan, but shall not be considered a significant amendment, or require the preparation of an Environmental Impact Statement, unless the changes significantly alter the long-term relationship between levels of multiple-use goods and services projected under planned budget proposals as compared to those projected under actual appropriations.

The Forest Supervisor may amend the Forest Plan. Based on an analysis of the objectives, guidelines, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the Plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

A Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in RPA policies, goals, or objectives would have a significant effect on Forest level programs. In the monitoring and evaluation process, the interdisciplinary team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of a Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the Plan at least every 5 years to determine whether conditions or demands of the public have changed significantly.

This Forest Plan will be revised when necessary but no later than October 1, 2000.

CHAPTER VI

GLOSSARY

Access - See Public access.

Acre equivalent - The index of acres affected by wildlife habitat improvements in contrast to actual acres treated.

Acre-foot - A measure of water or sediment volume equal to the amount which would cover an area of 1 acre to a depth of 1 foot (325,851 gallons).

Activity - Work processes or management practices.

Activity fuels - Debris fuels generated by such activity as timber harvesting.

Activity outputs - The quantifiable goods or services resulting from management actions.

Administrative headquarters site - A site which exists primarily for general administrative purposes.

Administrative unit - All the National Forest System lands for which one Forest Supervisor has responsibility.

Affected environment - The natural and physical environment under the administration of one line officer, such as District Ranger or Forest Supervisor.

Age class - An interval, usually 10 to 20 years, into which the age ranges of vegetation are divided for classification or use.

Agricultural base - Economy in which the base industry of a community is agriculture.

Airshed - A geographic area that, because of topography, meteorology, and climate, shares the same air.

Alignment - The specific surveyed location or route.

Allocation - The assignment of management prescriptions or combination of management practices to a particular land area to achieve the goals and objectives of the alternative.

Allocation model - See Resources allocation model.

Allotment - See Range allotment.

Allowable sale quantity - The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

Alternative - One of several policies, plans, or projects proposed.

Anadromous fish - Those species of fish that mature in the sea and migrate into streams to spawn; i.e., salmon, steelhead.

Analysis area - One or more capability areas grouped for purposes of analysis.

Analysis of the Management Situation (AMS) - A determination of the ability of the planning area to supply goods and services in response to society's demand for those goods and services.

Animal Unit Month (AUM) - The amount of feed or forage required by an animal unit for 1 month. Animal unit months are calculated by multiplying given animal months by the appropriate animal unit conversion factor. Not synonymous with animal month. Abbreviation: AUM.

Annual Forest Program - The summary or aggregation of all projects that make up an integrated (multifunctional) course of action.

Annual work planning process - The process used to translate the objectives from the Regional Guide into specific activities.

Appropriate costs - The sum of operational and capital investment costs.

Aquatic ecosystems - The physical environment of or pertaining to water--stream channel, lake or pond bed, wetland, water itself--and biotic communities that occur therein.

Arterial roads - See "Forest arterial road".

Assessment - The Forest and Rangeland Renewable Resource Assessment required by the Resources Planning Act (RPA).

Available, capable, and suitable - See "Available forest lands," "Capable lands," and "Suitable lands."

Available forest land - Land which has not been legislatively withdrawn or administratively withdrawn by the Secretary of Agriculture or Forest Service Chief from timber production.

Average annual cut - The volume of timber harvested in a decade divided by 10.

Avoidance areas - Areas having one or more physical, environmental, institutional, or statutory impediments to corridor designation.

Background - The visible terrain beyond the foreground and middleground where individual trees are not visible but are blended into the total fabric of the stand.

Basal area - The area of the cross-section of a tree stem near the base, generally at breast height and including bark.

Base area - The public or private land used to support a recreation operation that depends on use of National Forest System land. A ski area is an example.

Base sale schedule - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade, and this planned sale and harvest for any decade is not greater than the long-term sustained yield capacity. (This definition expresses the principle of nondeclining flow.)

Baseline - With respect to soils, the amount of erosion and sedimentation due to natural sources in the absence of human activity.

Benefit - The total value of an output or other effect.

Best Management Practices (BMP) - A practice or combination of practices that are the most effective and practical.

Big game - Those large mammals normally managed for sport hunting.

Big game winter range - The area used by big game in winter.

Biological capacity - The average net growth of wood attainable under intensive management.

Biological control - Control of insect populations or tree diseases through applied technology.

Biological growth-potential - The average net growth attainable in a fully stocked natural forest stand.

Biological potential - The max & its inherent physical and biological characteristics.

Board feet - One board foot is a piece of wood one foot by one foot by one inch thick.

Broadcut Burn - Allowing a prescribed fire to burn over a designated area.

British Thermal Unit - The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

Browse - The part of shrubs, woody vines and trees available for animal consumption.

BTU - An abbreviation of British Thermal Unit.

Canopy - The more-or-less continuous cover of tree branches and foliage.

Capable lands - Those portions of the Forest that have an inherent ability to support trees for timber harvest and produce at least 20 cubic feet/acre/year of wood fiber.

Capability - The productive potential of land.

Capital investment costs - Those associated with construction or development of improvements.

Carrying capacity - The number of organisms of a given species and quality that can thrive in a given ecosystem.

Catastrophic Condition - A significant change in forest conditions that affects management objectives.

Cavity - A tree hollow of the sort used by birds and mammals.

CEQ - See "Council on Environmental Quality."

CFR - Code of Federal Regulations.

Chemical control - Use of chemicals to control insects or tree diseases.

Clearcutting - The cutting method that clears a considerable area at one time.

Climax - The culminating stage in plant succession for a given site where the vegetation has reached a highly stable condition.

Closure - The administrative order restricting use of a specific area.

Coliform bacteria - Any of several bacteria found in the large intestine of man and animals.

Collector roads - See "Forest collector road".

Commercial Forest Land (CPL) - See "Timber classification."

Community lifestyles - The routine conduct of residents associated with the National Forest.

Commodities - Outputs such as wood, livestock forage, minerals.

Concern - See "Management concern."

Confinement - To hold a fire within prescribed boundaries.

Congressionally classified and designated areas - See "Wilderness."

Conifer - Cone-bearing trees.

Consumptive use - A use of resources that reduces the supply, such as logging and mining.

Containment - To surround a fire, and any spot fires therefrom, with control line which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

Control - To complete control line around a fire.

Corridor - A linear strip of land identified for the present or future location of transportation or utility rights-of-way.

Cost effectiveness - Achieving specified outputs or objectives under given conditions for the least cost.

Cost-efficiency - The usefulness of specified inputs (costs) to produce specified outputs (benefits).

Council on Environmental Quality - An advisory council to the President established by the National Environmental Policy Act of 1969.

Cover/forage ratio - The ratio of cover (usually conifer types) to open foraging areas.

Created opening - See "Tree opening."

Critical habitat - Key land areas used by wildlife for forage and reproduction.

Critical minerals - Minerals essential to the National defense.

Crown closure - Percent of area occupied by crowns of all trees which can be estimated ocularly from aerial photographs to the nearest ten percent.

Crown height - Of a standing tree, the vertical distance from ground level to the base of the crown.

Cubic foot - The amount of timber equivalent to a piece of wood one foot by one foot by one foot.

Cubic yard - A measure of soil or sediment volume which would cover a square yard of area one yard deep (3 feet x 3 feet x 3 feet).

Culmination of mean annual increment - The point where the mean annual growth increment (the basal area of a stand of trees divided by their age) ceases to increase prior to decline.

Cultural resource - The remains of sites, structures, or objects used by humans in the past--historical or archaeological.

Cultural sensitivity - Refers to the likelihood of encountering significant cultural items.

Cutting cycle - The planned lapse of time between successive cuttings in a stand.

d.b.h. - Diameter at breast height. The diameter of a tree measured 4 feet 6 inches above the ground.

d.i.b. - Diameter inside bark.

Deficit timber sale - A timber sale where the costs associated with producing the primary product(s) plus profit margin are greater than the selling value of the same product(s).

Decking areas - Sites that are intermediate between stump and landing, used to collect logs.

Decision criteria - Essentially the rules or standards used to evaluate alternatives.

Demand - The quantity of goods or services called for at various prices, holding other factors constant.

Departure - The temporary deviation from the non-declining even-flow policy.

Dependent communities - Communities whose welfare is involved with the National Forests.

Design capacity - The maximum use a developed recreation site was built to accommodate.

Design standard - Approved design and construction specifications.

Designated corridor - A linear area of land with boundaries identified and designated by legal public notice.

Destination resort - A recreation resort designed for multi-day use.

Determinate stand - A group of trees of similar age and species that are clearly a separate group from surrounding stands.

Developed recreation - Recreation that requires facilities that, in result in concentrated use of an area.

Developed recreation site - A defined area where facilities are provided for concentrated public use.

Direct outputs - Resource outputs that are caused by the action and occur at the same time and place.

Direction - See "Management direction."

Discount rate - An interest rate that represents the cost or time value of money in determining the present value of future costs and benefits.

Discounting - An adjustment, using a discount rate, for the value of money over time so that costs and benefits occurring in the future are reduced to a common time, usually the present, for comparison.

Dispersed recreation - Recreation use outside the developed recreation site.

Distance zone - One of three categories used in the Visual Management System to divide a view into near and far components. The three categories are: (1) foreground, (2) middle ground, and (3) background.

District - See "Ranger District."

Diversity - The distribution and abundance of different plant and animal communities.

Draft Environmental Impact Statement - The statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act, and released to the public and other agencies for comment and review.

Early forest succession - The biotic community that develops immediately following the removal or destruction of the vegetation in an area.

Economic efficiency analysis - An analytical method in which incremental market and nonmarket benefits are compared with incremental economic costs.

Economic growth - Increased economic output in real terms over time.

Ecosystems - An interacting system of organisms considered together with their environment.

Edge - Where plant communities meet or where successional stages or vegetation conditions within the plant communities come together.

Edge contrast - A qualitative measure of the difference in structure of two adjacent vegetative areas.

Effects - Environmental consequences of a proposed action.

Electronic sites - Areas designated for equipment related to radio and other electronic devices.

Endangered species - Any species of animal or plant that is in danger of extinction.

Endemic plant - A plant with a comparatively restricted geographic distribution.

Environmental analysis - An analysis of alternative actions and their predictable environmental effects.

Environmental Assessment - The concise public document needed to meet the procedural requirements of NEPA (40 CFR 1508.9).

Environmental documents - A set of documents to include, as applicable, the Environmental Assessment, Environmental Impact Statement, Finding of No Significant Impact, or Notice of Intent.

Environmental Impact Statement (EIS) - A statement of the environmental effects of a proposed action and alternatives to it.

Escape areas - A place for deer, for example, to get away from danger.

Evaluation criteria - Standards developed for appraising alternatives.

Even-aged management - Actions that produce trees of essentially the same age.

Clearcutting - The removal, in a single cut, of all trees in stands larger than seedlings.

Seed tree cutting - Similar to clearcutting, except that a few of the better trees of the desired species are left scattered over the area to provide seed for regeneration.

Shelterwood cutting - The removal of all trees in a series of two or more cuts over a period of not more than 30 years.

Even-aged systems - Product stands in which all trees are of about the same age. (A spread of 10 to 20 years is generally considered one age class).

Even-flow - Maintaining a relatively constant supply of timber from decade to decade.

Exclusion areas - Areas ruled out for corridor allocation or facility siting.

Expanded suppression - The control or containment of wildfires at increased acreage within allowable limits.

Experience levels - The range of opportunities for satisfying basic recreation needs of people. A scale of five experience levels ranging from "primitive" to "modern" is planned for the National Forest System.

Extensive grazing - Management seeks full utilization of forage allocated to livestock.

Facilities - For example, administrative buildings, water and sanitation systems, sanitary landfills, dams, bridges, and communication systems.

Facility condition class - The rating system used in the Recreation Information Management System to classify the condition of repair of a specific facility.

Family unit - A developed site or picnic spot with table, fireplace, tent pad, and parking spot designed to handle a group of people.

Fee ownership - The maximum possible ownership in real estate under the system of property rights founded on English common law.

Fee purchase - Acquisition of fee ownership of property.

Fee site - A Forest Service recreation area where users must pay a fee.

Final cut - Removal of the last seed bearers or shelter trees after regeneration is considered to be established under a shelterwood system.

Fire hazard - The fuel in which a fire can ignite and burn.

Fire management - All activities required for protection of resources from fire and the use of fire to meet land management goals and objectives.

Fire risk - The potential cause of a fire.

Firewood - See "Fuelwood."

Fisheries habitat - Streams, lakes, and reservoirs that support fish.

Flood plains - The lowland and relatively flat area adjoining inland waters, including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Forage - All browse and nonwoody plants available to grazing animals or harvested for feeding.

Forest and Rangeland Renewable Resources Planning Act of 1974 - An Act of Congress requiring the preparation of a program for the management of the National Forests' renewable resources and of land and resource management plans for units of the National Forest System. It also requires a continuing inventory of all National Forest System lands and renewable resources.

Foreground - A term used in visual management to describe the stand of trees immediately adjacent to the high-value scenic area, recreation facility, or forest highway.

Forest arterial road - Provides service to large land areas and usually connects with public highways or other Forest arterial roads to form an integrated network of primary travel routes.

Forest collector road - Serves smaller land areas than a Forest arterial road and is usually connected to a Forest arterial or public highway. Collects traffic from Forest local roads and/or terminal facilities.

Forest development roads and trails - A legal term for Forest Service roads or trails.

Forest land - See "Timber classification."

Forest local road - Connects terminal facilities with Forest collector or Forest arterial roads, or public highways.

Forest Supervisor - The official responsible for administering the National Forest System lands in a Forest Service administrative unit, which may consist of two or more National Forests or all the Forests within a state. He reports to the Regional Forester.

Forest system roads - Roads that are part of the Forest development transportation system.

Forest-wide standard - A performance criterion indicating acceptable norms, specifications, or quality.

FORPLAN - A linear programming system used for developing and analyzing Forest planning alternatives.

FSH - Forest Service Handbook.

FSM - Forest Service Manual.

FSM - Full Service Management is achieved in recreation when signing, cleanup, and other activities are accomplished according to standards and objectives established in approved management plans.

Fuel break - A zone in which fuel quantity has been reduced or altered to provide a position for suppression forces to make a stand against wild-fire. Fuel breaks are designated or constructed before the outbreak of a fire.

Fuel model - A simulated fuel complex for which all the fuel descriptions required by the mathematical fire spread model have been specified.

Fuel treatment - The rearrangement or disposal of natural or activity fuels to reduce the fire hazard.

Fuels - Include both living and dead trees and vegetative materials which will burn.

Fuels management - The practice of planning and executing treatment or control of fuels to meet management goals and objectives.

Fuelwood - Wood--round, split, or sawed, and generally otherwise refuse material--cut into short lengths for burning.

Full-service management - Management of developed recreation facilities to provide optimum maintenance.

Future scenarios - A word picture of a fixed sequence of future events in a defined environment.

Game species - Any species of wildlife or fish for which seasons and bag limits have been prescribed and which are normally harvested by hunters, trappers, and fishermen.

Goal - A concise statement that describes a desired future condition.

Goods and services - The various outputs, including on-site uses, produced from forest and rangeland resources.

Grass/forb - An early Forest successional stage where grasses and forbs are the dominant vegetation.

Grazing allotment - See "Range allotment."

Group selection cutting - The cutting method in which trees are removed periodically in small groups, resulting in openings that do not exceed an acre or two in size.

Growing season - The months of the year during which a species of vegetation grows.

Growing stock level - The number or volume of trees growing in a Forest or in a specified part of it.

Guideline - An indication of policy.

Habitat - The place where a plant or animal or normally lives or grows.

Habitat diversity - See "Wildlife habitat diversity."

Habitat diversity index - A measure of habitat diversity improvement expressed as a percentage of optimum size class distribution that is achieved over time.

Habitat effectiveness - See "Wildlife habitat effectiveness."

Habitat grouping - Grouping of habitat types in logical categories to facilitate resource planning.

Habitat type - The aggregate of all areas that support or can support the same primary vegetation at climax.

Hiding cover - Vegetation that will hide 90 percent of an elk from human view at a distance of 200 feet or less.

Horizontal diversity - The distribution and abundance of different plant and animal communities or successional stages across an area of land.

Implementation - Those activities necessary to respond to the approved Land and Resource Management Plan.

Incidental grazing - Grazing use that occurs on lands not normally managed for the production of domestic livestock.

Indeterminate stands - A group of trees of similar age and species composition that has been invaded by other tree species to the point where the original group has lost its identity as a distinct unit.

Indirect outputs - Outputs caused by the action but which are later in time or farther removed in distance.

Individual (single) tree selection - Trees are removed individually, here and there, each year over an entire forest or stand.

Induced outputs - Outputs in the private sector induced by the Forest's direct outputs.

Inherent edge - Naturally occurring breaks between two or more elements of the environment.

Improvement cutting - Removing trees of undesirable species, form, or condition.

Indicator species - A plant or animal species adapted to a particular kind of environment. Its presence is sufficient indication that specific habitat conditions are also present.

Individual tree selection cutting - Involves the removal of selected trees.

Input/output analysis - A quantitative study of the interdependence of a group of activities based on the relationship between inputs and outputs.

Insecticide - An agent used to control insect populations.

Instream flows - Those nonconsumptive in situ quantities of water necessary to meet seasonal stream flow requirements to accomplish the purposes of the National Forests, including, but not limited to, maintenance of favorable conditions of water flow, fisheries, visual quality, and recreational opportunities at acceptable levels.

Integrated pest management - A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed.

Intensive grazing - Grazing management that controls distribution of cattle and duration of use on the range, usually by fences, so parts of the range are rested during the growing season.

Intensive management - A high investment level of timber management that includes use of precommercial thinnings, commercial thinnings, genetically improved stock, and control of competing vegetation.

Interdisciplinary approach - The utilization of individuals representing two or more areas of knowledge and skills focusing on the same task, problem, or subject.

Intermediate cutting - Any removal of trees from a stand between the time of its formation and the regeneration cut.

Intermittent streams - A stream which flows only at certain times of the year.

Intermountain Region - That part of the National Forest System which encompasses National Forests within the Intermountain Region (Utah, southern and central Idaho, western Wyoming, and Nevada).

Interpretive services - Visitor information services designed to enhance the visitors understanding, appreciation, and enjoyment of the Forest.

Inventory data and information collection - The process of obtaining, storing, and using current inventory data appropriate for planning and managing the Forest.

Irretrievable - Applies to losses of production, harvest, or commitment of renewable natural resources.

Irreversible - Applies primarily to the use of nonrenewable resources such as minerals.

Issue - A point, matter, or question of public discussion or interest to be addressed or decided through the planning process.

Kuchler vegetation types - Potential natural vegetation as classified by Kuchler.

Key winter range - The portion of the year-long range where big game find food and/or cover during severe winter weather.

Land class - The topographic relief of a unit of land. Land classes are separated by slope, which coincides with the timber inventory process.

Land exchange - The conveyance of non-Federal land or interests in the United States in exchange for National Forest System land or interests in land.

Landing - Any place where round timber is assembled for further transport, commonly with a change of method.

Landline - For Forest Plan purposes, National Forest property boundaries.

Landline location - Legal identification and accurate location of National Forest property boundaries.

Late Forest succession - A stage of Forest succession where the majority of trees are mature or overmature.

Landownership pattern - The National Forest System resource land base in relation to other landownerships within given boundaries.

Linear programming - A mathematical method used to determine the cost-effective allocation of limited resources between competing demands when both the objective (profit or cost) and the restrictions on its attainment are expressible as a system of linear equalities or inequalities; e.g., $y=x+bx$.

Local dependent industries - Industries relying on National Forest outputs for economic activity.

Local road - See "Forest local road".

Logging residues - The unused portions of pole timber and saw timber trees remaining after logging.

Long-term sustained yield timber capacity - The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

M - Thousand

Management action - Any activity undertaken as part of the administration of the Forest.

Management area - An area of land with similar management goals and a common management prescription.

Management concern - An issue, problem, or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

Management direction - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

Management intensity - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

Management indicator species - A species selected because its population changes indicate effects of management activities on the plant and animal community.

Management opportunity - A statement of general actions, measures, or treatments that address a public issue or management concern in a favorable way.

Management practice - A specific activity, measure, course of action, or treatment.

Management prescription - Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

Management program - A set of activities designed to achieve a specific outcome.

Management standards and guidelines - See standards and guidelines.

Mature timber - Trees that have attained full development, particularly height, and are in full seed production.

Market-value outputs - Goods and services valued in terms of what people are willing to pay for them, as evidenced by market transactions.

Maximum modification - See "Visual quality objectives."

MAUM's - A symbol to indicate 1,000 animal unit months of range forage.

MBF - Thousand board feet, a measure of wood volume.

MCF - Thousand cubic feet, a measure of wood volume.

Mean annual increment of growth - The total increase in girth, diameter, basal area, height, or volume of individual trees, or a stand up to a given age divided by that age.

Middleground - The visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the stand.

Mineral development - The preparation of a proven deposit for mining.

Mineral entry - The filing of a mining claim for public land to obtain the right to any minerals it may contain.

Mineral entry withdrawal - The exclusion of the right of exclusive possession by the locator of locatable mineral deposits and mineral development work on areas required for administrative sites by the Forest Service and other areas highly valued by the public. Public lands withdrawn from entry under the general mining laws and/or the mineral leasing laws.

Mineral exploration - The search for valuable minerals on lands open to mineral entry.

Mineral fractions - Small, irregularly shaped parcels of National Forest lands created by the presence of a number of mining patents haphazardly located.

Mineral production - Extraction of mineral deposits.

Mineral soil - Weathered rock materials without any vegetative cover.

Minerals, common variety - Such deposits as sand, stone, gravel, pumicite, cinders, pumice, clay, and petrified wood.

Minerals, leasable - Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur, and geothermal steam.

Minerals, locatable - Generally, those hardrock minerals which are mined and processed for the recovery of metals.

Minimum streamflows - A specified level of flow through a channel that must be maintained by the users of streams for biological, physical, or other purposes.

Mining claims - That portion of the public estate held for mining purposes in which the right of exclusive possession of locatable mineral deposits is vested in the locator of a deposit.

Mitigation - Actions to avoid, minimize, reduce, eliminate, or rectify the impact of a management practice.

MM - Million.

MMBF - Million board feet.

MMCF - Million cubic feet.

Modification - See "Visual quality objectives."

Monitoring and evaluation - The periodic evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met and how closely management standards have been applied.

Mortality - Trees of commercial species, standing or down, that have died during a specified period and were not cull trees at the time of death.

Mosaic of forest and openings - Areas with trees and areas without trees occurring in interrupted sequence.

Mountain Pine Beetle - A tiny black insect, ranging in size from 1/8 to 3/4 inch, that bores into the tree's cambium and cuts off its supply of food, thus killing the tree.

Multiple Use - The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet public needs.

National Environmental Policy Act (NEPA) - An Act to declare a National policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation and to establish a Council on Environmental Quality.

National Forest Land and Resource Management Plan - A Plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management.

National Forest landscape management system - The planning and design of the visual aspects of multiple-use land management.

National Forest Management Act (NFMA) - A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

National Forest System (NFS) lands - National Forests, National Grasslands, or purchase units, and other lands under the management of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

National Recreation Trails - Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the National system of trails authorized by the National Trails System Act.

National Register of Historic Places - A listing (maintained by the U.S. National Park Service) of areas which have been designated as being of historical significance.

National Wilderness Preservation System - All lands covered by the Wilderness Act and subsequent Wilderness designations.

Natural barrier - A natural feature that will restrict livestock movements.

Natural catastrophic condition - A significant change in Forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and impacts on local communities.

Net public benefits - An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not.

NFRS - Inventoried National Forest Recreation Sites.

No-action alternative - The most likely future condition if current management direction were to continue unchanged.

Noncommercial vegetative treatment - The removal of trees that cannot be bought and sold.

Nonconsumptive use - That use of a resource that does not reduce the supply. Fishing, for example, is a nonconsumptive use of water.

Nondeclining flow - The principle expressed by the definition of the base sale schedule.

Nonforest land - See "Timber classification."

Nongame - Species of animals which are not managed for sport hunting.

Nonpoint source pollution - Sources of pollution that are diffuse in origin.

Nonmarket valued outputs - Goods and services not generally traded in the marketplace, but valued in terms of what reasonable people would be willing to pay for them rather than go without.

Notice of Intent - Written notice of proposed activities.

Noxious weeds - A troublesome plant species of no known benefit to man.

Occupancy trespass - The illegal occupation or possession of National Forest land or property.

Off-road vehicle (ORV) - Such as motorcycles, all-terrain vehicles, four-wheel drives, and snowmobiles.

Old growth - A stand of trees that is past full maturity and showing decadence.

Old growth habitat - Habitat for certain wildlife that is characterized by overmature coniferous forest stands with large snags and decaying logs.

Oligotrophic - Lakes having low nutrient supplies which are poor producers of organic matter.

Operational Plan - A written document approved by the Forest Supervisor which provides specifically, at the project level, for implementation of the management direction established in the Forest Plan.

Opportunity - See management opportunity.

Optimum - A level of production that is consistent with other resource requirements as constrained by environmental, social, and economically sound conditions.

ORV - An abbreviation for off-road vehicles.

Outputs - Describing any result, product, or service that a process or activity actually produces.

Overflow camping - Developed site camping that exceeds site capacity.

Overmature timber - Trees that have attained full development, particularly in height, and are declining in vigor, and soundness.

Overstory - That portion of the trees, in a Forest or more than one story, forming the uppermost canopy.

PAOT - See Persons-at-one-time.

PAOT Days - A measurement term indicating capacity (PAOT) multiplied by the number of days (24 hour period) which an area or sites are managed.

PARS - The burned acreage and fire occurrence guidelines which represent the annual average long-term fire loss.

Partial retention - See "Visual quality objectives."

Particulates - Small particles suspended in the air and generally considered pollutants.

Patented mining claim - A patent is a document which conveys title to land.

Payment in lieu of taxes - Payments to local or state governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing.

Personal use - Normally used to describe the type of permit issued for removal of wood products (firewood, post, poles, and Christmas trees) from National Forest land when the product is for home use and not to be resold for profit.

Persons-at-one-time (PAOT) - A recreation capacity measurement term indicating the number of people who can use a facility or area at one time.

Person-year - Approximately 2,080 working hours. May be filled by one person working year long or several people filling seasonal positions.

Physiographic surface - A land surface created by geological processes.

Planned ignitions - A fire started by a deliberate management action.

Planning area - The area of National Forest land covered by a Regional Guide or Forest Plan.

Planning corridor - A general broad linear area of land used to evaluate where a specific right-of-way could be placed.

Planning criteria - Standards, tests, rules, and guidelines by which the planning process is conducted and upon which judgments and decisions are based.

Planning period - The 50-year time frame (1980-2030) for which goods, services, and effects were projected in the development of the Forest Plan.

Planning questions - A major policy question of long-range significance, derived from the public issues and management concerns, to be decided when selecting among alternative Forest Plans.

Planning records - A system that records decisions and activities which result from the process of developing a Forest Plan, revision, or significant amendment.

Pole/sapling - A Forest successional stage in which trees between 5- and 7-inch diameter are the dominant vegetation.

Pole timber - Line trees at least 5 inches in diameter at breast height but smaller than the minimum utilization standard for sawtimber.

Policy - A guiding principle.

PNV - An abbreviation of present net value.

Practices - Those management activities that are proposed or expected to occur.

Precommercial thinning - The practice of removing some of the trees less than merchantable size from a stand so that the remaining trees will grow faster.

Predator - One that preys, destroys, or devours--usually an animal that lives by preying on other animals.

Preparatory cut - The removal of trees near the end of a rotation, which permanently opens the canopy and enables the crowns of seed bearers to enlarge and improve conditions for seed production and natural regeneration. Typically done in the shelterwood system.

Prescribed fire - A wildland fire burning under specified conditions which will accomplish certain planned objectives.

Prescription - A predesignated set of criteria established for the use of prescribed fire to accomplish specific land and resource management objectives.

Preservation - A visual quality objective that allows for only ecological changes.

Presuppression - Activities organized in advance of fire occurrence to assure effective suppression action.

Primitive recreation - Those recreation activities which occur in a natural environment of fairly large size.

Primitive roads - Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeatedly driving over an area.

Productive Forest lands - Forest lands that are capable of producing crops of industrial wood and have not been reserved or deferred.

Production potential - The capability of the land or water to produce a given resource.

Program - When capitalized, the Renewable Resource Program required by the RPA. Generally, sets of activities or projects with specific objectives.

Program Budget - The fiscal planning document for estimating short- and long-range dollar needs by program area.

Program development and budgeting - The process by which activities for the Forest are proposed and funded.

Programed harvest - The part of the potential yield that is scheduled for harvesting. It is based on current demand, funding, and multiple use considerations.

Project administrative site - A site with facilities such as guard stations, project work cabins, and other facilities primarily existing for project purposes.

Project design - The process of developing specific information related to location, timing, activities, accountability, and control that result in the achievement of an objective or desired future condition.

Projects - Work schedule prescribed for a project area to accomplish management prescriptions.

Proponent interest - An individual or organization desiring to develop and operate a winter sports site.

Public access - Usually refers to a road or trail route over which a public agency claims a right-of-way for public use.

Proposed action - In terms of the National Environmental Policy Act, the project, activity, or decision that a Federal agency intends to undertake.

Public issue - A subject or question of widespread public interest relating to management of the National Forest System.

Public participation - Meetings, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service planning.

QRD - A decision aiding tool comprised of three separate parts: (1) Question analysis "Q," (2) rules "R," and (3) Data "D." Question analysis is the process of breaking a question into more detailed specific questions. Rules means the knowledge and assumptions whereby raw data is changed into information relating to the question. Once the question and rules are analyzed, then a determination (D) can be made of the data needed to answer the question.

Quad maps - Standard U.S. Geological Survey quadrangle maps.

Quality management (range) - Management of the range ecosystem where vegetation production is being maximized, soils disturbance is minimal, and animal production is high. Impacts to the environment are low.

Range - Land producing native forage for animal consumption and lands that are revegetated naturally or artificially to provide forage cover that is managed like native vegetation.

Range allotment - An area designated for use of a prescribed number and kind of livestock under one management plan.

Range condition - The state of health of the range based on what it is naturally capable of producing.

Ranger District - Administrative subdivisions of the Forest supervised by a District Ranger who reports to the Forest Supervisor.

Raptors - Bird of prey with a strong notched beak and sharp talons, such as the eagle, hawk, owl.

RARE II - See Roadless Area Review and Evaluation II.

Real dollar value - A monetary value that compensates for the effects of inflation.

Record of Decision - A document separate from but associated with an Environmental Impact Statement that publicly and officially discloses the responsible official's decision on which alternative assessed in the Environmental Impact Statement to implement.

Recreation capacity - The number of people that can take advantage of the

recreation opportunity at any one time without substantially diminishing the quality of the experience.

Recreation experience level - A classification (using a 1 to 5 scale) of the level of development in camp and picnic sites.

Recreation Information Management (RIM) - The Forest Service system for recording recreation facility condition and use.

Recreation management area - An area of several thousand acres where the management emphasis is on recreation and where there is direction given to establish a Recreation Area Management Plan.

Recreation opportunity - Availability of a real choice for a user to participate in a preferred activity within a preferred setting.

Recreation Opportunity Spectrum (ROS) - A method of measuring the ability of the Forest land to meet the various recreation demands.

Recreation (PAOT) - Refers to people at one time that occupy a given campground, picnic area, or any other developed recreation area.

Recreation residences - Houses or cabins on National Forest land that are not the primary residence of the owner.

Recreation types - A term used to indicate the type of recreation experience sought by Forest users.

Recreation visitor day (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

Recreational livestock - Animals used primarily in conjunction with recreation such as horses, mules, etc.

Reduced service management - Management of developed recreation facilities below optimum maintenance standards.

Reforestation - The natural or artificial restocking of an area with forest trees.

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself.

Region - For Regional planning purposes, the standard administrative Region of the Forest Service administered by the official responsible for preparing a Regional Guide.

Regional analysis areas - Geographic areas within the Region that encompass several Forests or Grasslands.

Regional Forester - The official responsible for administering a single Region.

Regional Guide - The guide developed to meet the requirements of the Forest

and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given Region.

Regulations - Generally refers to the Code of Federal Regulations, Title 36, Chapter II, which covers management of the Forest Service.

Removal cut (final cut) - The removal of the last seed bearers or shelter trees after regeneration is established under a shelterwood method.

Research Natural Areas - An area in a natural condition which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. The area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes.

Residual stand - The trees remaining standing after some event such as.

Residual utilization - Removal and use of forest residue such as slash for home heating or wood products.

Resource allocation model - A mathematical model using linear programming which will allocate land to prescriptions and schedule implementation of those prescriptions simultaneously.

Resource element - A major Forest Service mission-oriented endeavor which fulfills statutory or executive requirements and comprises a collection of activities from the various operating programs required to accomplish the mission. The eight resource elements are: Recreation, wilderness, wildlife and fish, range, timber, water, minerals, and human and community development.

Resource Management Plan - A Plan developed prior to the Forest Plan that outlines the activities and projects for a particular resource element independently of considerations for other resources. Such Plans are superseded by the Forest Plan.

Resource use and development opportunities - A possible action, measure, or treatment and corresponding goods and services identified and introduced during the scoping process which subsequently may be incorporated into and addressed by the Land and Resource Management Plan in terms of a management prescription.

Responsible official - The Forest Service employee who has been delegated the authority to carry out a specific planning action.

Retention - See "Visual quality objectives."

Retrogressive vegetative succession - A reversal of the usual ecological trend toward more complex and stable plant communities.

Right-of-way - An accurately located strip of land with defined width, point of beginning, and point of ending. It is the area within which the user

has authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding (MOU).

Riparian - Areas of land directly influenced by water. Examples are stream sides, lake borders, or marshes.

Riparian ecosystems - A transition between the aquatic ecosystem and the adjacent upland terrestrial ecosystem.

Road - A general term denoting a travel route for vehicles greater than 40 inches in width.

Forest arterial road. Provides service to large land areas and usually connects with public highways or other Forest arterial roads to form an integrated network of primary travel routes.

Forest collector road. Serves smaller land areas than a Forest arterial road and is usually connected to a Forest arterial or public highway. Collects traffic from Forest local roads and/or terminal facilities.

Forest local road. Connects terminal facilities with Forest collector or Forest arterial roads, or public highways.

Road maintenance levels - Levels are described as follows:

Level 1. Road normally closed to vehicle traffic.

Level 2. Road open for limited passage of traffic but not normally suitable for passenger cars.

Level 3. Road open for public traffic including passenger cars, but may not be smooth or comfortable.

Level 4. Road suitable for all types of vehicles, generally smooth to travel, and dust may be controlled.

Level 5. Road is smooth and dust free, and the surface is skid resistant if paved.

Roaded natural - A classification of the recreation opportunity spectrum that characterizes a predominately natural environment with evidence of moderate permanent alternate resources and resource utilization.

Roadless Area Review and Evaluation II (RARE II) - The national inventory of roadless and undeveloped areas within the National Forest and Grasslands. This refers to the second such assessment, which was documented in the Final Environmental Impact Statement of the Roadless Area Review and Evaluation, January 1979.

Rotation - The planned number of years between the formation of a regeneration of trees and its final cutting at a specified stage of maturity.

Roundwood - Timber and fuelwood prepared in the round state--from felled trees to material trimmed, barked, and crosscut.

RPA Program - The Forest and Rangeland Renewable Resources Planning Act of

1974. Also refers to the National Assessment and Recommended Program developed to fulfill the requirements of the Act. The most recent recommended program was done in 1980.

RSM - Reduced service management; refers to recreation administration, operation, and maintenance at a level below established standards and management objectives (due to inadequate funding).

Rural - A recreation opportunity spectrum classification for areas characterized by a substantially modified natural environment.

RVD's - An abbreviation of recreation visitor days.

Sale schedule - The quantity of timber planned for sale by time period from an area of suitable land covered by a Forest Plan.

Saleables - See "Minerals, common variety."

Salvage cutting - The exploitation of trees that are dead, dying, or deteriorating before their timber becomes worthless.

Sanitation cutting - The removal of dead, damaged, or susceptible trees, done primarily to prevent the spread of pests or pathogens

Sawtimber - Live trees that equal or exceed the minimum utilization standard for sawtimber.

Scenic areas - Places of outstanding or matchless beauty which require special management to preserve these qualities.

Scenic easement - An interest in the land of another which allows the easement holder specified uses or rights without actual ownership of the land.

Scoping process - The public land management activities used to determine the range of actions, alternatives, and impacts to be considered in an Environmental Impact Statement.

Second growth - Forest growth that has become established after some interference with the previous Forest crop.

Seed tree cutting - Removal in one cut of the mature timber crop from an area, except for a small number of seed bearers left singly or in small groups.

Seedlings and saplings - Live trees less than 5 inches in diameter at breast height.

Selected alternative - The alternative recommended for implementation as the Forest Plan based on the evaluation completed in the planning process.

Selection - See "Group selection" and "Individual (single) tree selection."

Semiprimitive motorized - A classification of the recreation opportunity which present at least moderate challenge, risk, and a high degree of skill testing.

Semiprimitive nonmotorized - A classification of the recreation opportunity spectrum characterized by a predominately unmodified natural environment of a size and location that provides a good to moderate opportunity for isolation from sights and sounds of man.

Sensitive species - Plant or animal species which are susceptible or vulnerable to activity impacts or habitat alternations.

Sensitivity level - A particular degree of measure of viewer interest in scenic qualities of the landscape.

Shade-intolerant plants - Plant species that do not germinate or grow well in the shade.

Shade-tolerant plants - Plants that grow well in shade.

Shelterwood - The cutting method that describes the silvicultural system in which, in order to provide a source of seed and/or protection for regeneration, the old crop (the shelterwood) is removed in two or more successive shelterwood cuttings.

Seral condition - The unique characteristics of a biotic community which is a developmental, transitory stage in an orderly ecologic succession involving changes in species, structure, and community processes with time.

Shrub/seedling - A Forest successional stage in which shrubs and seedling trees are the dominant vegetation.

Sight distance - The distance at which 90 percent or more of a deer or elk is hidden from an observer.

Silvicultural examination - The process used to gather the detailed in-place field data needed to determine management opportunities and direction for the timber resource within a small subdivision of a Forest area such as a stand.

Silvicultural system - A management process whereby Forests are tended, harvested, and replaced, resulting in a Forest of distinctive form.

Single-tree selection - See "Individual (single) tree selection."

Site index - A numerical evaluation of the quality of land for plant productivity.

Site preparation - A general term for removing unwanted vegetation, slash, roots and stones from a site before reforestation.

Site productivity - Production capability of specific areas of land.

Size class - For the purposes of Forest planning, size class refers to the three intervals of tree stem diameter used for classification of timber in the Forest Plan data base.

- less than 5-inch diameter = seedling/sapling
- 5- to 7-inch diameter = pole timber
- greater than 7-inch diameter = sawtimber

Skidding - Moving logs by sliding from stump to roadside, deck, skidway, or other landing.

Skier day - Measure of downhill skiing use equivalent to one person skiing for 8 hours.

Slash - The residue left on the ground after timber cutting and/or accumulating there as a result of storm, fire, or other damage.

Slope slump - A slide or earthflow of a soil mass.

Small game - Birds and small mammals normally hunted or trapped.

Snag - A nonliving standing tree.

Social disruption - The disruption or breaking up of people's lives.

Society of American Foresters (SAF) forest and cover types - A forest type is a descriptive term used to group stands of similar character in regards to composition and development due to given ecological factors, by which they may be differentiated from other groups of stands.

Soil productivity - The capacity of a soil to produce a specific crop such as fiber or forage under defined levels of management.

Soil surveys - Systematic examinations of soils in the field and in laboratories.

Sound wood - Timber free from defect.

Special Use Permit - A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest land for some special purpose.

Spring break-up - The time of year when roads break up due to melting frost and ice.

Stand (tree stand) - An aggregation of trees or other vegetation occupying a specific area and sufficiently uniform in composition to be distinguishable.

Stand examination surveys - Procedures consisting of seven types of surveys used to collect data on Forest stands.

Stand size class - A classification of forest land based on the predominant size of trees present.

Standard and Guideline - A principle requiring a specific level of attainment.

State Air Quality Regulations - The legal base for control of air pollution sources in that state.

State Implementation Plan - A State Plan that covers implementation, maintenance, and enforcement of primary and secondary standards in each air quality control region, pursuant to Section 110 of the Clean Air Act.

Strategic minerals - Those minerals of which the U.S. imports 50 percent or more from foreign sources (based on 1978 U.S. Bureau of Mines figures).

Stream - A water course having a distinct natural bed and banks which provides water at least periodically.

Successional stage - A stage or recognizable condition of a plant community that occurs during its development from bare ground to climax.

Suitability - The appropriateness of applying certain resource management practices to a particular area.

Suitability analysis - Process of identifying lands to be managed for timber production.

Suitable Forest land - Lands allocated to timber management as a result of suitability analysis.

Supply - A schedule of the quantity of a product or Forest output that will be produced at various prices.

Supply potential - The output production possible from the available resources.

Suppression - An act extinguishing or confining fire.

Surface resources - Renewable resources located on the earth's surface in contrast to ground water and mineral resources located below the earth's surface.

Sustained yield of products and services - The achievement of maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest without impairment of the productivity of the land.

Targets - A quantifiable output. Assignments made to the Forest by the Regional Forester.

Technically suitable Forest land - Land for which technology is available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions.

Temporary road - A road that will be physically obliterated and seeded after its primary use is completed.

Thermal cover - Cover used by animals to ameliorate effects of weather.

Thinning - A felling made in an immature stand primarily to maintain or accelerate diameter increment and also to improve the average form of the remaining trees without permanently breaking the canopy.

Threatened species - Those plant or animal species likely to become endangered species throughout all or a significant portion of their range within the foreseeable future.

Tiering - Refers to additional coverage of general matters in broader Environmental Impact Statements.

Timber base - The lands within the Forest capable, available, and suitable for timber production.

Timber classification - Forested land is classified under each of the land management alternatives according to how it relates to the management of the timber resource.

1. Forest land - Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use.
2. Suitable forest land - Land that is managed for timber production on a regulated basis.
3. Unsuitable forest land (not suited) - Forest land that for various reasons is not managed for timber production.
4. Tentatively suitable (commercial forest land) - Forest land which is producing or is capable of producing crops of industrial wood.

Timber harvest schedule - See "Sale schedule."

Timber production - The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.

Timber stand improvement (TSI) - Measures such as thinning, pruning, release cutting, prescribed fire, girdling, weeding, or poisoning of unwanted trees aimed at improving growing condition of the remaining trees.

Tractor logging - Any logging method which uses a tractor as the motive power for transporting logs from the stumps to a collecting point--whether by dragging or carrying the logs.

Tradeoff Evaluation Process (TEP) - A process whereby factors, issues, elements, etc., are evaluated with regard to the tradeoffs that would occur.

- Trail maintenance level - One of the categories outlined in the Management Information Handbook describing the type and intensity of maintenance for trails.
- Transitory range - Land that is suitable for grazing use of a nonenduring nature over a period of time.
- Travel management - The administrative decisions on the location and timing of road and trail closures.
- Treatment area - The site-specific location of a resource improvement activity.
- Tree opening - An opening in the forest cover created by the application of even-aged silvicultural practices.
- Type conversion - The conversion of the dominant vegetation in an area from forested to nonforested or from one tree species to another.
- Understory - The trees and other woody species growing under a more-or-less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth.
- Uneven-aged management - The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products.
- Uneven-aged silviculture systems - The combination of action that results in the creation of forests or stands of trees, in which trees of several or many ages grow together.
- Individual tree selection cutting. The removal of selected trees of all size classes on an individual basis.
- Group selection cutting. The removal of selected trees of all size classes in groups of a fraction or an acre up to two or three acres in size.
- Unpatented mining claim - See "Mining claim."
- Unplanned ignition - A fire started at random by either natural or human causes, or a deliberate incendiary fire.
- Unregulated harvest - This harvest is not charged against the allowable sale quantity, and includes occasional volumes removed that were not recognized in calculations of the allowable sale quantity, such as cull or dead material and noncommercial species and products. It also includes all volume removed from nonsuitable areas. Harvests from nonsuitable areas will be programmed as needed for objectives such as research on experimental Forests, to meet multiple use objectives other than timber production, and for improvement of administrative sites.

Unsuitable lands - See "Timber classification."

Utilization standards - Standards guiding the projection of timber yields and the use and removal of timber. The standards are described in terms of minimum diameter at breast height, minimum length, and percent soundness of the wood, as appropriate.

Variety class - A classification system for establishing three visual landscape categories according to the relative importance of the visual features. This classification system is based on the premise that all landscapes have some visual values, but those with the most variety or diversity of visual features have the greatest potential for high scenic value.

Vegetative management - Activities designed primarily to promote the health of the Forest cover for multiple-use purposes.

Vertical diversity - The diversity in a stand that results from the complexity of the above-ground structure of the vegetation; the more tiers of vegetation.

Visual absorption capability - The ability of the landscape to conceal evidence of human modifications. Rated as high, moderate, and low.

Viable populations - A number of individuals of a species sufficient to ensure the long-term existence of the species in natural self-sustaining populations adequately distributed throughout their region.

Visitor Information Service (VIS) - Activities which interpret for visitors, in layman's language, Forest management, protection, utilization, and research.

Visual quality objective (VQO) - Categories of acceptable landscape alteration measured in degrees of deviation from the natural appearing landscape.

Preservation (P) - Ecological change only here.

Retention (R) - Human activities should not be evident to the casual Forest visitor.

Partial Retention (PR) - Human activities may be evident but must remain subordinate to the characteristic landscape.

Modification (M) - Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

Maximum Modification (MM) - Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

Enhancement - A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists.

Visual resource - The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

VQO - An abbreviation of visual quality objective.

Water rights - Rights to divert and use water or to use it in place.

Water yield - The measured output of the Forest's streams.

Water yield increase - Additional water released to the Forest streams as a result of Forest management activities.

Watershed - The entire area that contributes water to a drainage system or stream.

Wetlands - Areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

Wilderness - Areas designated by congressional action under the 1964 Wilderness Act. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation.

Wildfire - Any wildland fire that is not a prescribed fire.

Wildlife habitat diversity - The distribution and abundance of different plant and animal communities and species within a specific area.

Wildlife habitat effectiveness - The character of locations where wildlife are not disturbed by human activities.

Window - A critical segment of terrain through which right-of-way could pass in traversing from point of origin to destination.

Winter range - See "Big game winter range."

Withdrawal - An order removing specific land areas from availability for certain uses.

Wood fiber production - The growing, tending, harvesting, and regeneration of harvestable trees.

Work center - A facility where crews assemble and are direct toward their various work assignments.

Year-round economies - Economies based on employees working year-round as opposed to seasonal employment.

Zone of influence (ZOI) - The area influenced by Forest Service management activities.

APPENDIX A
TEN YEAR TIMBER SALE SCHEDULE

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1985	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1985	Loa	Neff's #1	7A T27S, R4E	100	110	.55	Spruce/fir: Group Selec- tion	1.0	0	
1985	Loa	Small Sales	District Wide	40	60	.3	Varied	0	0	1/
1985	Beaver	Circleville #2	7A T30S, R5W	75	120	.6	Spruce/fir: Group Selec- tion	.5	0	
1985	Beaver	Kent's Lake	7A T29S, R5W	75	80	.4	Aspen Clear- cut	.5	0	
1985	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/
1985	Richfield	Forshea Aspen	4B T30S, R2-1/2W	200	130	.65	Aspen Clear- cut	0	0	
1985	Richfield	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1986	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1986	Loa	Neff's #2	7A T27S, R4E	100	130	.65	Spruce/fir: Group Selec- tion	1.0	0	
1986	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1986	Beaver	Betenson Flat	7A T30S, R5W	125	120	.6	Spruce/fir: Group Selec- tion	0	0	

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1986	Beaver	Anderson Meadow	7A	75	80	.4	Spruce/fir: Group Selec- tion	0	0	
1986	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/
1986	Richfield	Whooten Spring	7B T25S, R2W	100	100	.5	Spruce/fir: Progressive strip Selec- tion	1.0	0	
1986	Richfield	Small Sales	District Wide	70	70	.35	Varied	0	0	1/
1987	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1987	Loa	Wiff's Pasture	7A T27S, R1E	120	130	.65	Spruce/fir: Two Step Shelterwood	.3	0	
1987	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1987	Beaver	High Hunt	7A T30S, R5W	125	300	1.5	Spruce/fir: CC Strips	1.5	0	2/
1987	Beaver	Circleville #3	7A T30S, R5W	50	140	.7	Spruce/fir: Group Selec- tion	0	0	
1987	Beaver	Long Flat Aspen	7A T29S, R4W	100	60	.3	Aspen Clear- cut	.5	0	
1987	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1987	Richfield	Clover Flat	7B T22S, R2W	150	90	.45	Spruce/fir: Group Selec- tion	1.0	0	
1987	Richfield	Small Sales	District Wide		80	.4	Varied	0	0	1/
1988	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1988	Loa	Hancock	7A T26S, R1E	120	130	.65	Spruce/fir: Two Step Shelterwood & Group Sel- ection	1.0	1.0	
1988	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1988	Beaver	Sawmill Bench	6B, 4B T27S, R6W	35	50	.25	Ponderosa Pine, Doug- las fir: Shelterwood	0	0	
1988	Beaver	Lake Peak	7A T28S, R4W	60	80	.5	Spruce/fir: Group Selec- tion	.5	0	
1988	Beaver	Small Sales	7A District Wide	60	70	.35	Varied	0	0	1/
1988	Richfield	Whiteledge Aspen	4B T27S, R2-1/2W	100	120	.6	Aspen Clear- cut	1.0	0	
1988	Richfield	Small Sales	District Wide	60	50	.25	Varied	0	0	1/
1988	Richfield	Convulsion	6B T22S, R4E	75	80	.25	Ponderosa Pine Shelterwood	0	0	
1989	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1989	Loa	Daniels	6B, 4B T24S, R2E	120	130	.65	Aspen Clear- cut	0	0	
1989	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1989	Beaver	Lousy Jim	6B, 7A T29S, R5W	75	160	.8	Spruce/fir: Strip CC	.5	2	2/
1989	Beaver	Forked Flat Aspen	7A T29S, R5W	100	80	.4	Aspen Clear- cut	0	0	
1989	Beaver	Round Flat	7A T29S, R5W	125	120	.6	Spruce/fir: Group Selec- tion	0	0	
1989	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/
1989	Richfield	Doe Flat	7B T25S, R1W	150	100	.5	Spruce/fir: Progressive Strip Selec- tion	.5	0	
1989	Richfield	Small Sales	District Wide	70	70	.35	Varied	0	0	1/
1990	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1990	Loa	Neff's #3	7A T27S, R4E	100	100	.5	Spruce/fir: Group Selec- tion	1.0	0	
1990	Loa	Small Sales	District Wide	50	70	.35	Varied	0	0	1/
1990	Beaver	Anderson #2	7A T30S, R5W	75	80	.4	Spruce/fir: Group Selec- tion	0	0	

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1990	Beaver	Kent's Lake #2	7A T30S, R5W	150	80	.4	Aspen Clear- cut	0	0	
1990	Beaver	Small Sales	7A	50	90	.45	Varied	0	0	1/
1990	Richfield	Farnsworth Aspen	4B T23S, R2E	120	120	.6	Aspen Clear- cut	.5	0	
1990	Richfield	Small Sales	District Wide	50	50	.25	Varied	0	0	1/
1991	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1991	Loa	Deep Creek	7A T27S, R4E	120	130	.65	Spruce/fir: Two Step Shelterwood	1.0	0	
1991	Loa	Small Sales	District Wide	40	40	.2		0	0	
1991	Beaver	Labaron #2	7A T30S, R5W	120	100	.5	Spruce/fir: Group Selec- tion	0	0	
1991	Beaver	Anderson Meadow Resale	7A T30S, R5W	120	100	.5	Spruce/fir: Group Selec- tion	0	0	
1991	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/
1991	Richfield	Annebella	7B T25S, R2W	140	120	.6	Spruce/fir: Group Selec- tion	1.0	0	
1991	Richfield	Small Sales	District Wide	50	50	.25	Varied	0	0	1/
1992	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1992	Loa	Snow Bench	7A T27S, R4E	80	100	.5	Spruce/fir: Two Step Shelterwood	.5	0	
1992	Loa	Small Sales	District Wide	50	70	.35	Varied	0	0	1/
1992	Beaver	Fat Chance	2B, 7A T29S, R5W	100	100	.5	Spruce/fir: Shelterwood	1	1.5	
1992	Beaver	Peterson Flat Resale	7A T30S, R5W	196	100	.5	Spruce/fir Group Selec- tion	0	0	
1992	Beaver	Small Sales	7A District Wide	50	50	.25	Varied	0	0	1/
1992	Richfield	Barney Lake	4B T27S, R2-1/2W	80	100	.5	Spruce/fir: Two Step Shelterwood	.5	0	
1992	Richfield	Small Sales	District Wide	70	70	.35	Varied	0	0	1/
1993	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1993	Loa	Neal's Flat	3A T24S, R2W	140	130	.65	Spruce/fir: Two Step Shelterwood	1.0	.5	
1993	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1993	Beaver	Straight Creek Aspen	7A	144	60	.3	Aspen Clear- cut	0	0	
1993	Beaver	Grindstone Salvage	7A T29S, R4W	150	60	.3	Spruce/fir Clear cut	0	0	

FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1993	Beaver	Oak Basin	4B, 6B T30S, R4W	139	60	.3	Ponderosa Pine, Doug- las fir, White-fir, Shelterwood	0	0	
1993	Beaver	Small Sales	7A District Wide	70	50	.35	Varied	0	0	1/
1993	Richfield	Indian Peak	4B T26S, R2W	100	120	.6	Spruce/fir: Group Selec- tion	.5	0	
1993	Richfield	Small Sales	District Wide	50	50	.25	Varied	0	0	1/
1994	Fillmore	Small Sales	District Wide 4B, 6B, 9F	50	10	.05	Varied	0	0	1/
1994	Loa	Willies Flat	6B, 4B T25S, R3E		130	.65	Spruce/fir: Two Step Shelterwood	1.0	0	
1994	Loa	Small Sales	District Wide	40	40	.2	Varied	0	0	1/
1994	Beaver	Indian Creek	4B, 6B T27S, R6W	274	100	.5	Ponderosa Pine, Doug- las fir Shelterwood	0	0	
1994	Beaver	Grindstone Aspen	7A T29S, R4W	200	60	.3	Aspen Clear- cut	0	0	
1994	Beaver	Burnt Flat Aspen	7A	150	60	.3	Aspen Clear- cut	0	0	
1994	Beaver	Small Sales	7A District Wide	50	40	.20	Varied	0	0	1/

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FISCAL YEAR	DISTRICT	SALE NAME	AREA LOCATION MANAGEMENT AREA TOWNSHIP & RANGE	TREATMENT AREA (ACRES)	ESTIMATED VOLUME		PROBABLE HARVEST METHODS BY FOREST TYPE	PURCHASER ROADS MILES		
					MCF	MMBF		C	R	
1994	Richfield	Nielsen Canyon	4B T26S, R2W	140	120	.6	Spruce/fir Group Selec- tion	1.0	0	
1994	Richfield	Small Sales	District Wide	50	50	.25	Varied	0	0	1/

1/ Small sales are unnamed timber sales sold under the District Rangers authority. Such sales are designed to respond to resource needs and demands on short notice. As such, they cannot be located at this time, but may occur anywhere on the Forest that is available for timber management.

2/ Dependent upon Regional financing for demonstration cable sale.

APPENDIX B

DETERMINATION OF LAND CLASSIFICATION

1. Non-Forest land (includes water)

Meadow	17,530 acres
Sagebrush	267,680 acres
Mountain brush	331,910 acres
Barren (includes water)	<u>29,580 acres</u>
Total Non-Forest land	646,700 acres

2. Forest Land:

Total National Forest	1,424,479 acres
Minus Non-Forest land (1)	<u>- 646,700 acres</u>
Total Forest Land	777,779 acres

3. Forest land withdrawn from timber production:

Partridge Mountain Research Natural Area (RNA)	162 acres
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4. Forest land not capable of producing crops of industrial wood:

Pinyon juniper	371,560 acres
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Not expected to be utilized for timber within the next ten years.

5. Forest land physically unsuitable:
 - a. Irreversible damage likely to occur-14,448 acres.

Criteria: soil - shallow (less than one foot), errodiable, arid (4,546 acres)

landslide - landslide areas which are

 - (1) on slopes over 40 percent
 - (2) on North Horn formation
 - (3) either almost 40 percent and on slide prone formations (e.g. Lousy Jim) or on known active unstable areas (9,902 acres)

 - b. Not restockable within 5 years-8,143 acres.

Criteria: Conifer stands with excessive surface rock where regeneration can not be established artificially or naturally. Aspen stands with similar rock content are excluded as they can be regenerated through coppice sprouting.

6. Forest land - inadequate information:

Non-commercial aspen*	853 acres
Non-commercial conifer*	<u>13,978 acres</u>
Total	14,831 acres

7. Tenatively suitable forest land: 386,635 acres

8. Forest land not appropriate for timber production:		
Acres by management emphasis		
a. Existing and proposed developed recreation sites		120 acres
b. Semi-primitive non-motorized with timber harvest not allowed		14,783 acres
c. Improved watershed		3,779 acres
d. Proposed Research Natural Areas		1,751 acres
e. Economically less suitable land (not utilized to meet timber objectives)		268,230 acres
	Total	288,663 acres
9. Unsuitable forest land:		697,807 acres
10. Suitable forest land:		
a. Softwood		67,972 acres
b. Hardwood		12,000 acres
c. Total		79,972 acres
11. Total national forest land:		1,424,479 acres

*Based on 20 cubic feet criteria in previous timber plans.

Summary of Changes in Timber Resource Inventory
and Management Direction from The Previous Timber
Management Plan

Area	Previous Plan Acres		This Plan Acres	% of Change
Net National Forest	1,415,700		1,424,479	+1
Forested Land	668,400		777,779	+14
Productive Deferred	18,800		0	-100
Productive Reserved	0		162	+100
Commercial Forest	332,600	Suitable	79,972	
Standard	65,200			
Special	20,300			
Marginal	246,100			
Unproductive Forest	318,000	Unsuitable	697,807	

APPENDIX C

RECREATION CONSTRUCTION
AND
RECONSTRUCTION

The following projects are listed in order of priority. Only the Johnson Valley project represents new construction. All other projects are reconstruction to restore worn out facilities. Funds for these projects are not included in the Forest constrained budget for recreation.

PRIORITY	DISTRICT	DESCRIPTION	LOCATION TOWNSHIP- RANGE MANAGEMENT AREA	UNITS (PAOT)	REMARKS
1.	All	Camp & picnic site water systems. Reconstruction	Forest Wide 1A		Upgrade systems not corrected with Jobs Bill funds. Meet State standards
2.	Fillmore	Oak Creek Campground Reconstruction \$396M	Sec. 11, T27S, R4W 1A	395	Work partially completed.
3.	Loa	Johnson Valley Camp- ground New Construction \$734 M	Sec. 24, T25S, R2E 1A	280	40 unit CG to be built in coordination with Fremont River Road Re- construction & paving
4.	Beaver	Kent's Lake Camp- ground Reconstruction \$246M	Sec. 31, T29S, R5W 1A	212	Improve layout to accomodate higher lake level.

PRIORITY	DISTRICT	DESCRIPTION	LOCATION TOWNSHIP- RANGE MANAGEMENT AREA	UNITS (PAOT)	REMARKS
5.	Fillmore	Maple Grove Camp- ground Reconstruction \$160M	Sec. 1, T21S, R2-1/2W 1A	185	Replace facil- ities-popular group & single unit facility.
6.	Richfield	Monrovia Picnic Area Reconstruction \$200M	Sec. 25, T25S, R3W 1A	200	Replace old facilities-Pop- ular site near communities.
7.	Beaver	Little Reservoir Campground Reconstruction \$206M	Sec. 25, T29S, R6W 1A	67	Replace facil- ities to accom- modate in- creased use due to dam recon- struction.

FISHLAKE NATIONAL FOREST

LAND MANAGEMENT PLAN

APPENDIX D

WILDLIFE AND FISH

Habitat improvement projects for wildlife; fish; and threatened, endangered, and sensitive species (T&E species) have been prioritized by District for each fiscal year based on budget levels identified in the preferred alternative. Fisheries projects are emphasized. Nonstructural wildlife projects are coordinated with range improvement projects.

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1985							
Fillmore	Sam Stowe Crk.	Rock structures	4 str	1,000	T25S, R4W	4B	Bonn. CTT (T&E)
Fillmore	North Walker	Seed	300 ac	1,500	T17S, R3E	4B	Big game
Beaver	Pine Creek	Log & brush bank structures	6 str	2,000	T26S, R6W	4A	Bonn. CTT (T&E)
Richfield	Table Mtn.	Burn	500 ac	5,600	T17S, R3W	4B	Big game
FISCAL YEAR 1986							
Fillmore	Corn Creek	Reshape banks & revegetate	0.5 mi	50,000	T24S, R4-1/2W	4A	Also T23S, R5W
Fillmore	Corn Creek	Rock riprap	0.8 mi	50,000	T24S, R4-1/2W	4A	DWR coop project
Loa	Doctor Creek	Prairie dog exclosure	5 ac/1 str	7,500	T26S, R1E	7A	Prairie dog (T&E)
Richfield	Mud Springs	Chaining	400 ac	16,100	T27S, R1E	9F	Big game
FISCAL YEAR 1987							
Fillmore	Corn Creek	Reshape banks & revegetate	0.5 mi	50,000	T23S, R5W	4A	Also T24S, R4-1/2W
Fillmore	Corn Creek	Revegetation	30 ac	70,000	T23S, R5W	6B	DWR coop project
Fillmore	Dameron Canyon	Chaining	595 ac	23,800	T24S, R5W	5A	Big game
Loa	Frying Pan	Prairie dog exclosure	5 ac/1 str	7,500	T25S, R2E	2B	Prairie dog (T&E)
Beaver	N. Fk North Crk	Barrier dam	1 str	2,500	T28S, R5&6W	4A	Bonn. CTT (T&E)
Beaver	N. Fk North Crk	Reshape banks & revegetate	25 ac	17,500	T28S, R5&6W	4A	Bonn. CTT (T&E)
Beaver	N. Fk North Crk	Plant willows	25 ac	7,500	T28S, R5&6W	4A	Bonn. CTT (T&E)
Richfield	Hamilton Res.	Dam reconstruction	1 str	30,000	T23S, R2E	4A	Resident fish
Richfield	Gooseberry	Chaining	100 ac	4,000	T22S, R2E	5A	Range - 1000 ac
Richfield	Lost Creek	Burn	120 ac	2,200	T23S, R1E	4B	Range - 1160 ac
FISCAL YEAR 1988							
Fillmore	Mud Springs	Fence spring	0.25 mi	2,000	T18S, R3W	6B	Game and nongame
Fillmore	Buck Hollow	Fence spring	0.1 mi	500	T16S, R3W	4B	Game and nongame
Fillmore	North Walker	Fence spring	0.2 mi	1,000	T16S, R3W	4B	Game and nongame
Fillmore	Robins Valley	Fence spring	0.1 mi	500	T20S, R2W	6B	Game and nongame
Fillmore	Rockwood	Pothole & fence	1 str	1,000	T25S, R4W	4B	Waterfowl & other
Fillmore	Little Valley	Guzzler & fence	.1 mi/1 str	2,500	T23S, R3W	4B	Game and nongame
Fillmore	Sam Stowe Crk.	Rock structures	100 str	10,000	T25S, R4W	4B	Bonn. CTT (T&E)
Fillmore	Butler Spring	Fence spring	0.2 mi	1,000	T25S, R4-1/2W	6B	Game and nongame
Fillmore	Bridge Canyon	Raptor perches	5 str	750	T16S, R4W	5A/6B	Bald eagle, other
Fillmore	Mahogany Hollow	Raptor perches	5 str	750	T16S, R4W	5A/6B	Bald eagle, other
Fillmore	Corn Creek	Rock riprap	0.8 mi	50,000	T23S, R5W	4A	DWR coop project
Fillmore	Corn Creek	Reshape banks & revegetate	0.5 mi	50,000	T21S, R4W	4A	DWR coop project
Fillmore	Red Canyon	Chaining	100 ac	4,000	T22S, R2W	4B/6B	Range - 1000 ac.
Fillmore	Dameron Canyon	Chaining	595 ac	23,800	T24S, R5W	5A	Big game

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1988 (CONT.)							
Loa	Lake Creek	Water development	1 str	1,000	T26S, R4E	9F	Game and nongame
Loa	Forsyth	Raptor perch	5 str	1,000	T26S, R3E	6B	Bald eagle, other
Loa	Sevenmile Crk.	Fence riparian area	4 mi	20,000	T24&25S, R2E	2B/6B	Riparian protec.
Loa	Sevenmile Crk.	Rock bank structures	100 str	30,000	T24&25S, R2E	2B/6B	Bank stab.
Loa	Mud Springs	Pond	1 str	1,000	T27S, R4E	7A	Waterfowl & other
Loa	Fish Lake	Waterfowl potholes	1 str	1,000	T25S, R2E	2B	Waterfowl & other
Loa	Twin Creeks	Spawning channel	5 ac	5,000	T26S, R2E	2B	Fish Lake spawn.
Loa	Hilgaard Mtn	Ponds	2 str	2,000	T24S, R3E	6B	Waterfowl & other
Loa	Fish Lake	Waterfowl potholes	3 str	3,000	T25S, R2E	2B	Waterfowl & other
Loa	Johnson Valley	Raptor perches	5 str	1,000	T25S, R2E	2B	Osprey and others
Loa	Pelican Point	Prairie dog enclosure	5 ac/1 str	7,500	T26S, R2E	2B	Prairie dog (T&E)
Beaver	Beaver River	Reshape banks & revegetate	68 ac	31,300	T29S, R6W	2B	Flood rehab.
Beaver	Beaver River	Rock bank structures	60 str	18,700	T29S, R6W	2B	Flood rehab.
Beaver	Indian Creek	Reshape banks & revegetate	30 ac	10,000	T27&28S, R6W	4A	Flood rehab.
Beaver	Indian Creek	Rock & log bank structures	33 str	9,500	T27&28S, R6W	4A	Flood rehab.
Beaver	Pine Creek	Ponds	2 str	1,000	T30S, R5W	6B	Game and nongame
Beaver	Thompson Hollow	Pond	1 str	1,000	T30S, R6W	4B	Game and nongame
Beaver	N. Fk North Crk	Reshape banks & revegetate	15 ac	22,500	T28S, R5&6W	4A	Bonn. CTT (T&E)
Beaver	N. Fk North Crk	Log & rock bank structures	95 str	28,500	T28S, R5&6W	4A	Bonn. CTT (T&E)
Beaver	Oak Basin/ Belly Ache	Water development modification	7 str	2,500	T29S, R4W	6B	Game and nongame
Beaver	Sargent Lake	Burn or rail and seed	50 ac	1,250	T26S, R4-1/2W	6B	Prairie dog (T&E)
Beaver	Sargent Lake	Gully plugs and seed	5 str	2,500	T26S, R4-1/2W	6B	Prairie dog (T&E)
Beaver	Briggs Hollow	Chaining	300 ac	11,800	T27S, R6W	6B	Big game
Beaver	Pine Creek	Chaining	100 ac	4,000	T26S, R6W	6B	Range - 975 ac.
Beaver	North Cedar	Burn	30 ac	600	T26S, R5W	6B	Range - 300 ac.
Beaver	North Indian	Burn	50 ac	1,100	T27S, R6W	6B	Range - 500 ac.
Beaver	Baker Canyon	Burn	50 ac	1,300	T29S, R6W	6B	Range - 520 ac.
Beaver	Pine Creek	Logworm fence	2 mi	10,000	T26S, R6W	4A	Bonn. CTT (T&E)
Beaver	Pine Creek	Plant willows	5 ac	1,500	T26S, R6W	4A	Bonn. CTT (T&E)
Beaver	Bullion Past.	Wildlife pond	1 str	1,000	T28S, R5W	3A	Game and nongame
Beaver	Kane Canyon	Wildlife fence modification	1 mi	1,500	T30S, R6W	5A/6B	Big game
Richfield	Monroe Mtn	Water development	1 str	2,000	T27S, R2W	4B	Game and nongame
Richfield	Forshea Mtn	Raptor perch	5 str	1,000	T28S, R2W	4B	Raptors
Richfield	Notche	Water development	1 str	1,000	T23S, R2E	4B	Game and nongame
Richfield	Farnsworth Res.	Dam reconstruction	1 str	80,000	T23S, R2E	4A	Resident fish
Richfield	Triangle Mtn.	Chaining	120 ac	3,300	T22S, R1E	9F	Range - 1200 ac
Richfield	Musinea	Elk wallow construction	1 str	1,000	T20S, R3E	9F	Big game (elk)
Richfield	Browns Hole	Water development	1 str	1,000	T22S, R2E	4B	Game and nongame
Richfield	Old Woman	Raptor snag management	5 str	1,000	T23S, R4E	6B	Raptors
Richfield	Cold Spr. Res.	Dam reconstruction	1 str	20,000	T23S, R2E	4A	Resident fish

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1989							
Fillmore	First Spring	Fence spring	0.1 mi	500	T17S, R4W	9F	Game and nongame
Fillmore	Little Oak Spr	Fence spring	0.2 mi	1,500	T17S, R4W	9F	Game and nongame
Fillmore	Cummings Spr.	Fence spring	0.1 mi	1,000	T20S, R3W	6B	Game and nongame
Fillmore	Corn Creek	Log bank structures	50 str	25,000	T24S, R4-1/2W	4A	DWR coop project
Fillmore	Corn Creek	Plant seedlings	30 ac	20,000	T24S, R4-1/2W	4A	DWR coop project
Fillmore	Chalk Creek	Reshape banks & revegetate	0.6 mi	60,000	T21S, R4W	4A	Flood rehab.
Loa	Sevenmile Crk.	Fence riparian area	3 mi	15,000	T24&25S, R2E	2B/6B	Riparian protec.
Loa	Sevenmile Crk.	Log & rock bank structures	150 str	45,000	T24&25S, R2E	2B/6B	Adfluvial fish
Loa	Sevenmile Crk.	Plant willows	15 ac	5,000	T24&25S, R2E	2B/6B	Adfluvial fish
Loa	Sevenmile Crk.	Snag & perch management	5 str	1,000	T24S, R2E	2B/6B	Raptors
Loa	Fish Lake	Waterfowl potholes	1 str	1,000	T25S, R2E	2B	Waterfowl & other
Beaver	N. Fk South Crk	Pothole development	4 str	2,500	T30S, R5W	4B	Waterfowl & other
Beaver	Beaver River	Rock & log bank structures	67 str	20,000	T29S, R6W	2B	Resident fish
Beaver	Indian Creek	Log drop structures	67 str	20,000	T27&28S, R6W	4A	Resident fish
Beaver	Wades Canyon	Chaining	320 ac	12,800	T30S, R4W	6B	Big game
Beaver	N. Fk North Crk	Log & rock bank structures	67 str	20,000	T28S, R5&6W	4A	Bonn. CTT (T&E)
Richfield	Abes Reservoir	Dam reconstruction	1 str	35,000	T23S, R2E	4A	Resident fish
Richfield	Twin Ponds	Dam reconstruction	1 str	15,000	T23S, R2E	4A	Resident fish
Richfield	Forshea	Prairie dog enclosure	5 ac/1 str	7,500	T29S, R2W	4B	Prairie dog (T&E)
Richfield	Lost Creek	Chaining	40 ac	16,000	T23S, R1E	4B	Big game
Richfield	White Mtn.	Elk wallow management	1 str	1,000	T23S, R2E	4B	Big game (elk)
Richfield	Gooseberry	Snag management	5 str	1,000	T23S, R2E	2B	Raptors
FISCAL YEAR 1990							
Fillmore	Clear Spot Spr.	Fence spring	0.1 mi	2,500	T17S, R3W	4B	Game and nongame
Fillmore	Leamington Pass	Wildlife guzzler	1 str	2,500	T15S, R3W	6B	Game and nongame
Fillmore	Corn Creek	Log bank & drop structures	120 str	60,000	T24S, R4-1/2W	4A	DWR coop project
Fillmore	Chalk Creek	Reshape banks & revegetate	0.6 mi	60,000	T21S, R4W	4A	Flood rehab.
Fillmore	Oak Creek	Reshape banks & revegetate	0.5 mi	50,000	T17S, R4W	4A/9F	Flood rehab.
Loa	Fremont River	Boulder placement	1000 str	35,000	T25&26S, R3E	2B	Resident fish
Loa	Fish Lake	Waterfowl potholes	1 str	1,000	T25S, R2E	2B	Waterfowl & other
Loa	Mamoits Spring	Fence spring	0.15 mi	1,500	T25S, R2E	2B	Game and nongame
Beaver	Beaver River	Log & rock bank structures	67 str	20,000	T29S, R6W	2B	Resident fish
Beaver	Black Hollow	Modify fence for deer	1 mi	1,500	T24S, R6W	5A/6B	Big game (deer)
Beaver	Beaver Front	Raptor perches	8 st.	1,600	Varied	6B	Bald eagle, other
Beaver	Pine Creek	Log & rock bank structures	100 str	30,000	T26S, R6W	4A	Bonn. CTT (T&E)
Beaver	Sargent Lake	Prairie dog enclosure	5 ac/1 str	7,500	T26S, R4-1/2W	6B	Prairie dog (T&E)
Beaver	S. Fk North Crk	Log bank structures	77 str	23,000	T28S, R5&6W	3A	Resident fish
Beaver	Clear Creek	Reshape banks & revegetate	0.1 mi	10,000	T25S, R5W	4A	Resident fish

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1990 (CONT.)							
Richfield	Salina Creek	Fence riparian area	5 mi	25,000	T22S, R1,2&3W	2B/9F	Riparian protec.
Richfield	Willow Creek	Chaining	400 ac	16,000	T21S, R2E	5A/9F	Big game
Richfield	Soloman Basin	Chaining	230 ac	9,000	T25S, R3E	6B	Big game
Richfield	Gooseberry	Snag management	5 str	1,000	T23S, R2E	2B	Raptors
Richfield	Yogo Creek	Big game water development	1 str	1,000	T23S, R2E	2B	Big game & others
FISCAL YEAR 1991							
Fillmore	Cedar Ridge	Chaining	400 ac	16,000	T22S, R3W	6B	Big game
Fillmore	Chalk Creek	Reshape banks & revegetate	0.6 mi	60,000	T21S, R4-1/2W	4A	Flood rehab.
Fillmore	Oak Creek	Reshape banks & revegetate	25 ac	25,000	T17S, R4W	4A	Flood rehab.
Fillmore	Oak Creek	Rock bank structures	83 str	25,000	T17S, R4W	4A	Flood rehab.
Loa	Soloman Basin	Chaining	300 ac	12,000	T25S, R3E	6B	Big game
Loa	Fish Lake	Waterfowl pothole	1 str	1,000	T24S, R2E	6B	Waterfowl & other
Loa	Sheep Valley	Elk wallow	1 str	1,000	T24S, R2E	4B	Big game (elk)
Beaver	Upper City Crk.	Ponds	3 str	2,500	T29S, R4W	4B	Waterfowl & other
Beaver	Pine Creek	Log drop structures	100 str	30,000	T26S, R6W	4A	Bonn. CTT (T&E)
Beaver	Birch Creek	Barrier removal	10 str	3,000	T30S, R6W	4B	Bonn. CTT (T&E)
Beaver	Birch Creek	Logworm fence	1 mi	10,000	T30S, R6W	4B	Bonn. CTT (T&E)
Beaver	Clear Creek	Reshape banks & revegetate	20 ac	20,000	T25S, R5W	4A	Resident fish
Richfield	Salina Creek	Fence riparian area	5 mi	25,000	T21S, R3E	2B/9F	Riparian protec.
Richfield	Salina Creek	Plant willows	20 ac	6,000	T22S, R1,2&3E	2B/9F	Also T21S, R3E
Richfield	Monroe Mtn.	Elk wallow	4 str	1,000	T27S, R2W	4B	Big game (elk)
Richfield	Box Creek	Raptor snag management	5 str	1,000	T27S, R2W	4B	Raptors
FISCAL YEAR 1992							
Fillmore	Black Cedar	Chaining	50 ac	2,000	T22S, R3W	4B	Range - 500 ac.
Fillmore	Rockwood	Elk wallow & fence	.1 mi/1 str	1,000	T24S, R4-1/2W	4B	Big game & others
Fillmore	Bear Hollow	Fence spring	0.1 mi	750	T21S, R3W	4B	Game and nongame
Fillmore	Turner Timber	Fence spring	0.1 mi	750	T21S, R3W	4B	Game and nongame
Fillmore	Chalk Creek	Reshape banks & revegetate	0.6 mi	60,000	T22S, R3W	4A	Flood rehab.
Fillmore	Oak Creek	Log drop structures	100 str	30,000	T17S, R4W	4A	Resident fish
Loa	Round Spr. Draw	Chaining	400 ac	16,000	T24S, R4E	6B	Big game
Loa	Fish Lake	Waterfowl pothole	1 str	1,000	T25S, R2E	2B	Waterfowl & other
Loa	Geysers Peak	Elk wallow	1 str	1,000	T26S, R4E	7A	Big game (elk)
Loa	UM Creek	Log drop structures	100 str	30,000	T25&26S, R3E	6B	Adfluvial fish
Loa	UM Creek	Plant willows	5 ac	1,500	T25&26S, R3E	6B	Adfluvial fish
Loa	UM Creek	Boulder placement	100 str	3,500	T25&26S, R3E	6B	Adfluvial fish
Beaver	Birch Creek	Log drop structures	100 str	30,000	T30S, R6W	4B	Bonn. CTT (T&E)
Beaver	Clear Creek	Log bank & drop structures	100 str	30,000	T25S, R5W	4A	Resident fish

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1992 (CONT.)							
Beaver	South Creek	Ponds	4 str	3,000	T30S, R6W	4B	Waterfowl & other
Richfield	Salina Creek	Log bank & drop structures	100 str	30,000	T22S, R2&3W	2B/9F	Resident fish
Richfield	Langdon Mtn.	Snag management	5 str	1,000	T28S, R2W	4B	Raptors
Richfield	Monroe Meadows	Wildlife water development	1 str	1,000	T26S, R2W	4B	Game and nongame
FISCAL YEAR 1993							
Fillmore	Elsinore	Burn and seed	450 ac	14,000	T24S, R4W	4B	Big game (elk)
Fillmore	Robins Valley	Pothole & fence	.1 mi/1 str	1,000	T20S, R3W	6B	Game and nongame
Fillmore	East Eight Mile	Raptor perches	5 str	500	T18S, R3W	6B	Raptors
Fillmore	Crazy Hollow	Fence spring	0.1 mi	1,000	T23S, R4W	6B	Game and nongame
Fillmore	Meadow Creek	Chaining	400 ac	16,000	T22S, R4W	6B	Big game
Fillmore	Chalk Creek	Reshape banks & revegetate	0.7 mi	70,000	T21S, R4W	4A	Flood rehab.
Fillmore	Meadow Creek	Reshape banks & revegetate	0.5 mi	50,000	T22S, R4-1/2W	6B	Flood rehab.
Fillmore	Pioneer Creek	Reshape banks & revegetate	0.2 mi	20,000	T20S, R3W	4A	Flood rehab.
Fillmore	Robins Vly Lake	Pipeline	1 str	10,000	T20S, R3W	6B	Resident fish
Fillmore	Robins Vly Lake	Fence	1 mi	10,000	T20S, R3W	6B	Resident fish
Fillmore	Robins Vly Lake	Aerator	1 str	2,500	T20S, R3W	6B	Resident fish
Loa	Fish Lake	Waterfowl pothole	1 str	1,000	T26S, R2E	2B	Waterfowl & other
Loa	Daniels Canyon	Big game water development	1 str	1,000	T26S, R2E	3A	Big game & others
Beaver	Bull Spring	Wildlife fence modification	0.2 mi	2,500	T27S, R7W	6B	Big game (deer)
Beaver	Mumford Res.	Dam reconstruction	1 str	20,000	T30S, R5W	4B	Resident fish
Beaver	Lower Kents Lake	Dam reconstruction	1 str	55,000	T29S, R5W	7A	Resident fish
Beaver	Fish Crk Meadow	Burn or rail and seed	50 ac	1,250	T27S, R5W	6B	Prairie dog (T&E)
Beaver	Fish Crk Meadow	Gully plugs and seed	5 str	2,500	T27S, R5W	6B	Prairie dog (T&E)
Beaver	Fish Crk Meadow	Prairie dog enclosure	1 str	7,500	T27S, R5W	6B	Prairie dog (T&E)
Richfield	Lost Creek	Log bank & drop structures	100 str	30,000	T23S, R1E	5A	Resident fish
Richfield	Magleby Pass	Snag development	5 str	1,000	T25S, R2W	7B	Raptors
Richfield	Old Woman	Fence modification	2 mi	1,500	T21S, R3E	6B	Big game

DISTRICT	SITE I.D.	PROJECT DESCRIPTION	NO. OF UNITS	COST (\$)	LOCATION	MGMT AREA	REMARKS
FISCAL YEAR 1994							
Fillmore	Wildhorse	Guzzler	1 str	2,500	T15S, R4W	6B	Game and nongame
Fillmore	Meadow Creek	Reshape banks & revegetate	0.5 mi	50,000	T22S, R4-1/2W	6B	Flood rehab.
Fillmore	Pioneer Creek	Reshape banks & revegetate	0.2 mi	20,000	T20S, R3W	4A	Flood rehab.
Loa	Deep Crk. Lake	Dam reconstruction	1 str	35,000	T27S, R4E	7A	Resident fish
Loa	Crater Lakes	Prairie dog exclosure	1 str	7,500	T26S, R2E	4B	Prairie dog (T&E)
Loa	Fish Lake	Waterfowl pothole	1 str	1,000	T25S, R2E	2B	Waterfowl & other
Loa	Mill Meadow	Snag development	5 str	1,000	T26S, R3E	2B	Raptors
Beaver	Kents Lake	Snag development	5 str	1,000	T30S, R5W	7A	Raptors
Beaver	Little Res.	Snag development	5 str	1,000	T29S, R6W	2B	Bald eagle, other
Beaver	E Birch/Gold Crk	Chaining	450 ac	18,000	T30S, R4W	6B	Big game
Beaver	Twin Lakes	Dam reconstruction	1 str	50,000	T28S, R5W	3A	Resident fish
Beaver	Little Pine Crk	Fence and seed	0.5 mi	5,000	T30S, R5W	4B	Prairie dog (T&E)
Beaver	Little Pine Crk	Gully plugs and seed	5 str	2,500	T30S, R5W	4B	Prairie dog (T&E)
Richfield	Lost Creek	Fence modification	5 mi	2,500	T23S, R1E	5A	Big game
Richfield	Manning Creek	Fence riparian area	2 mi	10,000	T27S, R2-1/2E	4B/6B	Riparian protec.
Richfield	Manning Creek	Log drop structures	100 str	30,000	T27S, R2-1/2E	4B/6B	Resident fish
Richfield	Koosharem	Chaining	400 ac	16,000	T26S, R1W	4B/5A	Big game

APPENDIX E
RANGE MANAGEMENT

A list of range projects for the next 10 years is given by District and allotment. These projects will be done on a priority basis established on availability of funds and the need to maintain a good mix of structural and nonstructural improvements. Some work will be accomplished on priority allotments on each District.

In addition to the new improvements, some reconstruction/retreatment will be accomplished. This is necessary to maintain previous investments.

Projects for the allotments within the Oak Creek Coordinated Management Area are listed separately. This area has had special funding to accomplish coordinated range management on a demonstration basis.

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DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Fillmore	Watt's Mtn	Unit Fences	6 m1	30,000	T25S.R4-1/2W	4B/6B	
Fillmore	Watt's Mtn	Trail Construction	2 m1	2,000	T25S.R4-1/2W	4B/6B	Driftways
Fillmore	Watt's Mtn	Revegetation	625 ac	25,000	T25S.R4-1/2W	6B	
Fillmore	Watt's Mtn	Water Developments	8str	12,000	T24S. R3W	6B/4B	
Fillmore	Watt's Mtn	Fencing	5 m1	25,000	T25S.R4-1/2W	6B/4B	Also R3W
Fillmore	Watt's Mtn	Revegetation	575 ac	23,000	T24S. R3W	6B/9F	
Fillmore	Cedar Ridge	Water Development	3str	3,900	T22S. R2W	3A/4B	
Fillmore	Cedar Ridge	Ponds	6str	5,760	T22S. R2W	3A/4B	
Fillmore	Cedar Ridge	Fencing	3 m1	15,000	T22S, R3W	6B	
Fillmore	Cedar Ridge	Revegetation	835 ac	33,450	T21S, R2W	6B	
Fillmore	Cedar Ridge	Fencing	3 mi	15,000	T21S, R2W	4B/6B	
Fillmore	Cedar Ridge	Water Developments	3str	5,200	T22S, R2W	4B/6B	
Fillmore	Cedar Ridge	Revegetation	525 ac	21,000	T22S, R2W	4B/6B	
Fillmore	Cedar Ridge	Revegetation	1,000 ac	40,000	T22S, R3W	6B	
Fillmore	Meadow Creek	Revegetation	825 ac	33,000	T22S, R4W	6B	
Fillmore	Meadow Creek	Reconstruct/Retreat					
Fillmore	Meadow Creek	Water Development	3str	2,500	T22S, R4W	6B	
Fillmore	Meadow Creek	Revegetation Retreat	275 ac	11,000	T22S, R4W	6B	
Fillmore	Center Fork Chalk Creek	Fencing	7 m1	35,000	T21S, R3W	4B	
Fillmore	Center Fork Chalk Creek	Water Development	1str	1,500	T21S, R3W	4B	
Fillmore	Center Fork Chalk Creek	Revegetation	500 ac	20,000	T21S, R4W	4B/6B	
Fillmore	Corn Creek	Fencing	4 m1	21,000	T23S, R3W	6B/9F	
Fillmore	Corn Creek	Trail Construction	3 m1	5,000	T24S,R4-1/2W	9F	Driftways
Fillmore	Corn Creek	Water Developments	12str	20,000	T23S,R4&3W	6B/9F	
Fillmore	Cottonwood	Water Development Reconstruct	6str	6,000	T23S, R3W	4B/6B	
Fillmore	Elsinore	Water Development Reconst.	3str	3,000	T24S, R4W	4B	
Fillmore	N Fk Chalk Cr	Water Development Reconst.	1str	1,000	T21S, R3W	4B	
Fillmore	N Fk Chalk Cr	Fence Reconstruction	2 mi	11,000	T21S, R3W	4B	
Fillmore	N Fk Chalk Cr	Revegetation Retreatment	275 ac	11,000	T21S, R3W	4B	
Fillmore	S Fk Chalk Cr	Water Development Reconst.	3str	2,200	T22S, R4W	6B	
Fillmore	S Fk Chalk Cr	Fences	2 mi	10,400	T22S, R3W	4B/6B	

DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Fillmore	Wildgoose	Revegetation Retreatment	280 ac	11,200	T19S, R3W	6B	
Fillmore	Wildgoose/Ebbs	Revegetation Retreatment	165 ac	6,600	T19S, R3W	6B	
Fillmore	Grass Creek	Water Development Reconst.	5str	4,400	T25S, R5W	6B	
Fillmore	Grass Creek	Pond Reconstruction	3str	3,000	T25S, R5W	6B	
Fillmore	Grass Creek	Fence Reconstruction	2 mi	11,000	T24S, R5W	6B	
Fillmore	Grass Creek	Revegetation Retreatment	275 ac	11,000	T25S, R6W	6B	
Loa	UM Common	Spray/Chain/Seed	1,900 ac	76,000	T26S, R3E	6B	
Loa	Um Common	Fencing	2 mi	14,000	T24S, R3E	6B	
Loa	UM Common	Mytoge/UM Boy Fence	3 mi	15,000	T26S, R2&3E	6B	
Loa	Um Common	Reconstruction/Retreatment					
Loa	UM Common	Rewire Fence	2 mi	7,000	T26S, R2E	6B	
Loa	UM Common	Spring/Trough Reconstruction	2str	1,000	T26S, R3E	6B	
Loa	UM Common	Clean/Treat Reservoirs	4str	3,000	T26S, R2&3E	6B	
Loa	UM Common	Rewire Pole Canyon Fence	1.5 mi	5,200	T26S, R2E	6B	
Loa	UM Common	Log Worm Boundary Fence	1 mi	7,000	T24S, R3E	6B	
Loa	UM Common	Log Worm Fence	1.5 mi	10,000	T25S, R3E	6B	
Loa	UM Common	Wire Fencing	1 mi	5,000	T24S, R3E	6B	
Loa	UM Common	Black Flat Fence & Corral	1mi/1str	7,000	T24S, R3E	6B	
Loa	Seven Mile	Sagebrush Spray	1,965 ac	50,000	T24S, R2E	6B	
Loa	Seven Mile	Fencing	2 mi	10,500	T24S, R2E	6B	
Loa	Seven Mile	Reconstruction/Retreatment					
Loa	Seven Mile	Spring/Trough Reconstruction	2str	1,100	T26S, R2E	6B	
Loa	Seven Mile	Corral & Fence	1str/1mi	7,000	T25S, R2E	2B/6B	
Loa	Thousand Lake	Sagebrush Spray	1,600 ac	40,000	T27S, R3&4E	6B/7A	
Loa	Thousand lake	Spray & Retreat	795 ac	15,000	T27S, R3&4E	6B/7A	
Loa	Thousand Lake	Reconstruction/Retreatment					
Loa	Thousand Lake	Fencing	1 mi	3,000	T28S, R4E	6B/7D	
Loa	Thousand Lake	Rehabilitate Spring/Trough	1str	1,000	T28S, R3E	6B	
Loa	Thousand Lake	Rehabilitate Stock Reservoir	3str	1,800	T27S, R3&4E	7A	
Loa	Thousand Lake	Log Worm Fence	1/2mi	3,000	T26S, R4E	6B	
Loa	Thousand Lake	Spring/Pipe	2str	1,000	T27S, R4E	6B/7A	
Loa	Thousand Lake	Reconstruct Pine Spring	1str	700	T27S, R5E	6B	
Loa	Thousand Lake	Wire Fence	1 mi	3,400	T27S, R3E	6B	
Loa	Solomon	Chain/Seed	1,495 ac	60,000	T26S, R4E	9F	
Loa	Solomon	Fencing/Springs	4mi/2str	22,000	T26S, R4E	9F	
Loa	Solomon	Reconstruction					

DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Loa	Solomon	Wire Fencing	1 mi	4,000	T27S, R4E	9F	
Beaver	Pine Creek/ Sulpherbed	Chain & Seed	1,225 ac	49,000	T27S, R7W	6B	
Beaver	Pine Creek/ Sulpherbed	Fencing	6 mi	31,000	T27S, R7W	6B	
Beaver	Pine Creek Sulpherbed	Sulpherbeds Fencing	4-1/2mi	23,000	T26S, R7W	6B	
Beaver	Pine Creek Solpherbed	Fencing	4 mi	20,000	T26S, R6W	6B	
Beaver	Pine Creek Sulpherbed	Water Developments	10str	17,800	T26S, R6W	6B	
Beaver	Pine Creek Sulpherbed	Fencing	3 mi	14,500	T27S, R6W	4B/6B	
Beaver	Pine Creek Sulpherbed	Trough	1str	1,000	T27S, R6W	4B	
Beaver	Pine Creek Sulpherbed	Reconstruction/Retreatment					
Beaver	Pine Creek	Cove Creek Burn	350 ac	6,500	T26S, R6W	6B	
Beaver	Clear Creek	Sevier Canyon Water Develop	7str	15,000	T26S, R5W	6B	
Beaver	Clear Creek	Stock Trails	1.5 mi	5,000	T26S, R5W	6B	Driftways
Beaver	Clear Creek	Aspen Spring Development	5str	8,000	T26S, R5W	6B	
Beaver	Clear Creek	Fencing	4 mi	21,000	T26S, R5W	6B	
Beaver	Clear Creek	Reconstruction/Retreatment					
Beaver	Clear Creek	N. Cedars Burn or Spray	350 ac	6,500	T26S, R4-1/2W	6B	
Beaver	North Indian	Indian Creek Fence	1 mi	5,000	T29S, R6W	6B	
Beaver	North Indian	Fencing	9.5 mi	47,000	T28S, R6W	3A/6B	
Beaver	North Indian	Spring Development	4str	4,000	T28S, R6W	3A/6B	
Beaver	North Indian	Pond/Trough	4str	6,000	T28S, R6W	3A/6B	
Beaver	North Indian	Herbicide Treatment or Burn	500 ac	11,000	T28S, R6W	3A/6B	
Beaver	North Beaver	Baker Canyon Spray	520 ac	13,000	T29S, R6W	6B	
Beaver	North Beaver	Unit Fence Reconstruction	1-1/2mi	6,500	T29S, R6W	6B	
Beaver	North Beaver	Black Ridge Water Recons.	3str	2,000	T29S, R6W	6B	
Beaver		Additional Reconstruction/ Retreatment					
Beaver	Marysvale	Water System	5str	6,500	T28S, R4W	4B/6B	
Beaver	Marysvale	Allunite Water System	4str	4,500	T28S, R4W	4B/6B	
Beaver	Marysvale	Water System	3str	3,000	T28S, R4W	4B/6B	

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DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Beaver	South Beaver	Big Twist Water System	6str	6,500	T30S, R6W	6B	
Beaver	South Beaver	Birch Lake Water System	3str	3,500	T29S, R6W	4B/6B	
Beaver	Ten Mile	Unit Fences	1-1/2mi	6,500	T29S, R4W	4B/6B	
Beaver	Circleville	Boundary Fence	1-1/2mi	6,500	T29S, R5W	3A/7A	
Beaver	Circleville	Oak Basin Water System	2str	2,500	T29S, R4W	6B	
Richfield	Brown's Hole	Triangle/Black Mtn Pipeline	2 m1	9,000	T22S, R1E	9F	
Richfield	Bown's Hole	Mud Spring Chain	1,500 ac	60,000	T22S, R1E	9F	
Richfield	Brown's Hole	Gooseberry Chain	1,000 ac	40,000	T22S, R2E	5A	
Richfield	Brown's Hole	Gooseberry/Brown Fence	4 m1	18,000	T22S, R2E	5A	
Richfield	Brown's Hole	Fencing/Gates	1.5 m1	12,000	T22S, R2E	5A	
Richfield	Brown's Hole	Brush Trail Reseeding	1,400 ac	56,000	T23S, R1E	4B	
Richfield	Brown's Hole	Triangle Mtn Chain Maintenance	1,200 ac	32,000	T22S, R1E	9F	
Richfield	Brown's Hole	Spring Range Fencing	6 m1	27,000	T22S, R1E	9F/5A	
Richfield	Brown's Hole	Devils Kitchen Fence	1 m1	5,500	T22S, R1E	4B	
Richfield	Lost Creek	Chaining Maintenance	2,200 ac	41,800	T23S, R1E	4B	
Richfield	Lost Creek	Kasov Chain Maintenance	1,700 ac	32,300	T23S, R1E	4B	
Richfield	Lost Creek	Niotche Fence	3 m1	27,000	T23S, R2E	4B	
Richfield	Lost Creek	Cold Spring Fence	1/2 m1	4,500	T23S, R2E	4B	
Richfield	Lost Creek	Humphry Fence	1 m1	9,000	T23S, R2E	4B	
Richfield	Lost Creek	Boobe Hole Fence	2 m1	18,000	T23S, R1E	4B	
Richfield	Lost Creek	Shoap Spring Pipe	1 m1	4,000	T23S, R1E	4B	
Richfield	Water hollow	Turner Pipeline	11 m1	40,000	T21S, R2E	9F	
Richfield	Water Hollow	Lower Cottonwood Pond	1str	1,000	T22S, R2E	9F	
Richfield	Water Hollow	Upper Mud Spring Pond	1str	1,000	T21S, R2E	9F	
Richfield	Water Hollow	Dry Hollow Trough	1str	1,500	T21S, R2E	9F	
Richfield	Water Hollow	Upper Bull Valley Fence	2 m1	18,000	T22S, R2E	9F	
Richfield	Water Hollow	North Steve's Pass Reveg.	1,000 ac	19,000	T21S, R2E	9F	
Richfield	Water Hollow	Wyethia Spray	200 ac	4,000	T21S, R2E	9F	
Richfield	Water Hollow	Tuner Pipeline (Addition)	11 m1	40,000	T21S, R2E	9F	
Richfield	Water Hollow	Beaver Cr Troughs Recons.	6str	6,000	T21S, R3E	9F	
Richfield	Water Hollow	Livestock Access Trail	10 m1	4,000	T22S, R2E	9F	Driftway
Richfield	Water Hollow	Mud Spring Pipeline	2 mi	9,000	T21S, R2E	9F	
Richfield	Water Hollow	Ridge Fence Reconstruction	4 m1	12,000	T21S, R2E	9F	
Richfield	Willow Creek	Dead Horse Fence	3.5 m1	31,500	T21S, R2E	9F	
Richfield	Willow Creek	Flat Top Trough	1str	1,000	T21S, R2E	9F	
Richfield	Willow Creek	Buck Flat Pond	1str	500	T21S, R2E	9F	

DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Richfield	Willow Creek	Mill Creek Pipeline	3 mi	13,500	T21S, R2E	9F	
Richfield	Willow Creek	Elbow Spray	700 ac	14,000	T21S, R2E	9F	
Richfield	Willow Creek	E. Flat Top Spray	1,000 ac	19,000	T21S, R2E	9F	
Richfield	S Water Hollow	Sheep Valley Spray	600 ac	11,400	T24S, R3E	4B	
Richfield	Moroni Peak	Moroni Peak Spray	600 ac	11,400	T23S, R3E	4B	
Richfield	S Water Hollow	S Water Hollow Spray	1,000 ac	19,000	T22S, R4E	6B	
Richfield	Moroni Peak	S Water Hollow Drill Maint.	1,000 ac	19,000	T22S, R4E	6B	
Richfield	Koosharem	Indian Flat Pipeline	4 mi	18,000	T26S, R1W	4B	
Richfield	Koosharem	Indian Flat Spray and Seed	2,000 ac	80,000	T26S, R1W	4B	
Richfield	Koosharem	Big Flat Fence Reconstruction	3 mi	8,000	T26S, R1W	4B	
Richfield	Koosharem	Robison P. Fence Reconstr.	1-1/2mi	12,000	T26S, R1W	4B	
Richfield	Koosharem	Rough Section Fence Reconstr.	1 mi	8,000	T26S, R1W	4B	
Richfield	Koosharem	Ledge Rock Pipe Reconstr. Additional Reconstruction/ Retreatment	1 mi	7,000	T26S, R1W	4B	
Richfield	Salina Creek	Gunnison Valley Fence	2 mi	16,000	T21S, R3E	4B	
Richfield	Calina Creek	Bull Pasture Pond/Pipe	1str/1-1/2mi	8,000	T21S, R3E	4B	
Richfield	Quitchoompah	Salina/Beaver Fence	4 mi	8,000	T21S, R4E	4B	
Richfield	Quitchoompah	Snow Corral Fence	3 mi	24,000	T21S, R4E	9F	
Richfield	Glenwood	Christensen Spring Pipeline	6 mi	7,000	T25S, R2W	7B	
Richfield	Glenwood	Porter Pasture Fence	1/2 mi	4,000	T24S, R1W	4B	
Richfield	Glenwood	Bell Rock Ponds	3str	5,000	T24S, R1W	4B	
Richfield	Monument/Glenwood	Signal Peak Spring	1 mi	8,000	T25S, R2W	4B	
Richfield	Monument/Glenwood	Indian Ranch Pond	1str	2,000	T24S, R2W	9F	
Richfield	Monument/Glenwood	Dry Canyon Spring	1str	2,000	T24S, R2W	9F	
Richfield	Manning Creek	Little Table Pipe	3 mi	12,000	T28S, R2-1/2W	4B	
Richfield	Manning Creek	Dry Creek Fence	1-1/2mi	8,000	T28S, R2-1/2W	6B	
Richfield	Manning Creek	Big Table Fence	2 mi	6,000	T28S, R2-1/2W	4B	
Richfield	Manning Creek	Big Table Pond	1str	2,000	T28S, R2-1/2W	4B	

DISTRICT	ALLOTMENT	PROJECT DESCRIPTION	NO. OF UNITS	COST	LOCATION	MGMT AREA	REMARKS
Richfield	Kingston	Kingston Pasture Spring	1str	1,000	T29S, R2-1/2W	4B	
Richfield	Kingston	Kingston Ponds	8str	8,000	T29S, R2-1/2W	4B	
*****OAK CREEK COORDINATED RESOURCE MANAGEMENT AREA*****							
Fillmore	Dry Creek	Long Canyon Chain	700 ac	25,000	T17S, R3W	6B	
Fillmore	Dry Creek	Unit Fence	1 mi	4,000	T17S, R3W	6B	
Fillmore	Dry Creek	Scipio West Pipeline	1 mi	5,000	T17S, R3W	6B	
Fillmore	Dry Creek	Whiskey/Dry Division Fence	2 mi	10,000	T17S, R3W	6B	
Fillmore	Dry Creek	Radford Canyon Spring	1str	2,000	T16S, R3W	6B	
Fillmore	Dry Creek	Hardscrab Fence Remove Reconstruction	1-1/2mi	1,500	T17S, R3W	6B	
Fillmore	Dry Creek	Dry Creek Fence	8 mi	40,000	T17S, R3W	6B	
Fillmore	Dry Creek	Dry/Wild Horse Fence	1 mi	5,000	T16S, R3W	6B	
Fillmore	Dry Creek	Oak Creek Drift Fence	1/4mi	1,000	T16S, R3W	6B	
Fillmore	Fool Creek	Wood Canyon Dixie harrow	300 ac	11,000	T15S, R3W	6B	
Fillmore	Fool Creek	Wild Horse Burn and Seed Reconstruction	100 ac	2,000	T16S, R3W	6B	
Fillmore	Fool Creek	Fool Cr/W. Horse Fence	1 mi	6,000	T16S, R3W	4B	
Fillmore	Fool Creek	Fool Cr. Pass Canyon Fence	1-1/2mi	7,500	T15S, R3W	6B	
Fillmore	Oak Creek	Oak Creek Dixie Harrow	300 ac	11,000	T17S, R4W	2/6B	
Fillmore	Oak Creek	Dry Creek Dixie Harrow	100 ac	4,000	T17S, R4W	6B	
Fillmore	Oak Creek	S Walker Spring Development Reconstruction	1str	3,000	T17S, R3W	4B	
Fillmore	Oak Creek	L. Aspen Drift Fence	1 mi	6,000	T17S, R4W	6B	
Fillmore	Wildhorse	Williams Spring Development Retreatment	1str	2,000	T16S, R3W	6B	
Fillmore	Wildhorse	Wide Canyon Burn	800 ac	12,000	T16S, R3W	6B	
Fillmore	Whiskey Creek	L. Whiskey Pipe & Pond	2 mi	8,000	T18S, R4W	6B	
Fillmore	Whiskey Creek	Cedar Ridge Spring Development	1str	2,000	T18S, R4W	6B	
Fillmore	Whiskey Creek	Upper Whiskey Spring Develop.	1str	2,000	T18S, R4W	6B	
Fillmore	Whiskey Creek	Scipio Pass Fence Remove Retreatment	2 mi	2,000	T18S, R3W	6B	
Fillmore	Whiskey Creek	Eightmile Burn	500 ac	8,000	T18S, R4W	6B	
Fillmore	Pass Canyon	Pass/Wringer Fence reconst.	1/2mi	2,000	T15S, R3W	6B	
Fillmore	Wringer Canyon	Boundary Fence Removal	4 mi	4,000	T15S, R3W	6B	

APPENDIX F

TRAIL CONSTRUCTION AND RECONSTRUCTION

The following trail projects are listed in order of priority. Some of the larger projects are planned for completion over a period of several years. Funds for completing the work are included in the Forest constrained budget for Alternative 11.

YEAR	DISTRICT	DESCRIPTION	LOCATION, TOWNSHIP & RANGE	UNITS	REMARKS
1986	Beaver	Skyline NRT #175. Spot Reconstruction \$5 M	T29S, R4W	5.0	Bring trail up to National Standards.
1986	Fillmore	North Fork Chalk Creek #018 New Construction \$10 M	T21S, R3W	2.0	Complete cen- ter portion of trail. Both ends completed by contract several years ago.
1987	Loa	Pelican #125 Reconstruction \$9 M	T26S, R2E	3.5	Trail adjacent to Fish Lake Recreation Complex.
1987	Loa	Doctor Creek #124 Reconstruction \$7.5 M	T26S, R1E	3.0	Trail adjacent to Fish Lake recreation complex.
1988	Loa	Tasha Creek #126 Reconstruction \$20.0 M	T25S, R2E	8.0	Trail adjacent to Fish Lake recreation complex.
1989	Beaver	Skyline NRT #175 New Construction \$13.5 M	T28S, R5W	2.7	Complete trail across Tushar Range.

<u>YEAR</u>	<u>DISTRICT</u>	<u>DESCRIPTION</u>	<u>LOCATION, TOWNSHIP & RANGE</u>	<u>UNITS</u>	<u>REMARKS</u>
1990	Beaver	Skyline NRT #175 New Construction \$13.5 M	T28S, R5W	2.7	Complete trail across Tushar Range.
1991	Beaver	Skyline NRT #175 New Construction \$13.5 M	T28S, R5W	2.6	Complete trail across Tushar Range.
1992	Richfield	Monrovia Trail Head Facility New Construction \$23.5 M	T25S, R2-1/2W	36 (PAOT)	Serve 5 system trails origin- ating in Mon- roe Canyon.
1993	Loa	Lake Shore NRT #162 New Construction \$51.0 M	T26S, R2E	1.5	Complete paved trail.
1994	Richfield	Gooseberry Trails New Construction \$30.0 M	T23S, R2E	6.0	Construct trails to con- nect walk-in fisheries.

APPENDIX G
ENERGY TRANSPORTATION AND UTILITY
CORRIDOR EVALUATION

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FISHLAKE NATIONAL FOREST

ENERGY TRANSPORTATION AND UTILITY CORRIDOR EVALUATION

INTRODUCTION

There is an increased concern at the national, state and local levels for meeting future rights-of way needs while protecting the environment. The concern is founded upon a real demand for more utility and energy transportation facilities - especially pipelines, electric transmission lines, and railroads - to transport energy from the resource areas to the centers of consumption. The concern has led to legislation authorizing the Forest Service and other Federal land management agencies to designate utility and energy transportation corridors on Federal lands. Selecting routes for linear facilities is complicated by mixed ownership land patterns, conflicting land uses, and environmental and engineering constraints.

The Fishlake National Forest has evaluated and selected corridors by application of FSM and Regional Plan direction for energy transportation and utility corridor planning. Such direction has been written to assist National Forests in addressing the complications encountered in corridor evaluation and designation.

DEFINITIONS OF UTILITY DESIGNATION TERMS

1. Corridor - A linear strip of land which has ecological, technical, economic, social or similar advantages over other areas for the present or future locations of energy transportation or utility rights-of-way within the boundaries.
2. Rights-of-Way - Land authorized to be used or occupied for the construction operation, maintenance and terminous of a project facility passing over, upon, under or through such land.
3. Window - A critical segment of terrain through which rights-of-way could pass in traversing from points of origin to destination.
4. Exclusion area - An area where linear facilities would not be legally permitted to cross.
5. Avoidance area - An area that poses particular environmental impacts which would be difficult or impossible to mitigate or has characteristics which impose unusual engineering constraints.

OBJECTIVES

The objectives in applying the Servicewide and Regional direction for energy transportation and utility corridor/window planning are to: (listed in a planning sequence).

1. Inventory and field check existing pipelines, electric transmission lines, and major transportation routes which are located on the Forest; (Transportation routes are inventoried as potential corridors for electrical transmission and pipeline facilities; not for expansion of or addition to the State/Interstate Road/Highway System).
2. Identify criteria which will be used to evaluate potential corridors/windows;
3. Analyze suitability of routes or areas to handle new or additional facilities and the suitability of the routes or areas for overhead vs. underground vs. surface linear right-of-way facilities;
4. Evaluate and designate areas suitable for corridors/windows on the Fishlake National forest within the land management planning process;
5. Consolidate right-of-way alignments into designated corridors/windows to avoid the proliferation of separate linear rights-of-way.

MANAGEMENT DIRECTION FOR ACHIEVING OBJECTIVES

General Direction -

Generally where the purpose of the transportation, transmission, or pipeline route is to accommodate or service a particular end use on the Forest, the route they followed is not considered as a potential corridor. Where existing rights-of-way pass into or through Forest lands, within an identifiable strip of land, and where the probability exists that other energy transportation systems may be located within, the strip is considered for designation as a corridor.

Before new corridors/windows or widening of existing corridors/windows are approved, consideration will be given to wheeling, upgrading or multiple circuiting of transmission lines; increasing pipeline capacity by addition of compressors or looping; or utilizing existing highway transportation rights-of-way.

Specific Direction -

Specific direction is related to utility sizes, existing rights-of-way, and restrictions on future corridor locations.

1. The description of general utility sizes, and rights-of-way to be used in the evaluation process are:
 - a. Electric transmission lines 66 kv and above; 1/
 - b. Oil, gas or slurry pipelines 10 inches in diameter or larger; 1/ and
 - c. Federal, State, and Interstate Highways. 2/

- 1/ *Inclusion of lower rated transmission lines or smaller pipelines within designated corridors/windows would be permitted.
- 2/ Federal, State, and Interstate Highway routes are considered as potential corridors for energy transportation facilities.
2. Identification and designation of existing energy transportation rights-of-way as corridors that:
- a. Comply with evaluation criteria for determination of corridor/window suitability; and
 - b. Are desirable for retention, but not capable of further widening; or
 - c. Are desirable to retain and have widening potential for future uses; and
 - d. Agree with the potential corridor/window designations on public or state lands and the corridor/window designations of adjacent National Forest.
3. Based on the most current planning information from utility and power administrations, the Fishlake National Forest has directed planning for future energy/transportation rights-of-way and associated corridors by:
- a. Designating planning windows; 3/ or
 - b. Identifying constrained areas where future energy transportation rights-of-way will be discouraged or denied - such areas are identified as:
 - 1) Avoidance areas or; 4/
 - 2) Exclusion areas 5/
- 3/ Windows and avoidance areas are to be evaluated and designated upon application of evaluation criteria for determining corridor suitability.
- 4/ Application for linear rights-of-way within avoidance areas would be processed by the Forest if, after project evaluation, it was determined that proposed mitigation measures would meet the management standards and guidelines for the various resources within the areas.
- 5/ Applications for linear rights-of-way within exclusion areas would not be processed, due to the statutory prohibitions applicable to the area in question.

APPROACHES FOR CORRIDORS, EVALUATIONS, AND SELECTION

Three approaches for evaluating and designating corridors will be followed in this corridor evaluation report. These are:

1. Direct (where facilities can be placed)
- Identification/evaluation of land areas for designation as long linear corridors or windows.
2. Indirect (where facilities can not be placed)
- Identification/evaluation of land areas where facilities may not or will not be placed, by classifying the areas as avoidance areas or exclusion areas.
3. Direct and Indirect Combined
- Combination of the above to: a) identify, evaluate, and designate important right-of-way areas; and b) identify, evaluate, and designate areas exhibiting important natural, cultural, and social values.

(Refer to Attachments, Exhibit 1, page G-43, for a detailed discussion on these three approaches.)

INVENTORY OF EXISTING RIGHTS-OF-WAY THAT MEET STANDARDS FOR POTENTIAL CORRIDOR DESIGNATION (See Energy Transportation and Utility Corridor Map.)

Electrical transmission lines and Federal, State, and Interstate highway rights-of-way currently existing on the Fishlake National Forest are displayed in Tables A and B, respectively.

(No rights-of-way exist on the Forest for oil, gas or coal slurry pipelines or for railroads.)

TABLE A
EXISTING ELECTRICAL TRANSMISSION LINES

NAME	LOCATION BEGINNING-ENDING	SIZE	R/W WIDTH (FEET)	LENGTH (MILES)	ACRES
Sigurd - Cedar City (UP&L)	From Sigurd sub- station to Cedar City via Clear Cr. Canyon Area.	128-kv	75	15.14	137.62
Sigurd - Nevada State Line	From Sigurd sub- station to Ely, Nevada via Round Valley and Scipio Pass	230-kv	120	7.83	113.89
Sigurd - Cedar City	From Sigurd sub- station to Cedar via Sevier Valley/Circleville	230 kv	110	8.34	111.18
Huntington Sigurd (UP&L)	From Huntington Power Plant at Huntington, Utah to Sigurd sub- station via Salina Canyon/Gooseberry Valley	345 kv	130	23.45	369.53
Hunter- Sigurd (UP&L)	From Hunter Power Plant at Castle Dale, Utah to Sigurd sub- station via Salina Canyon/Gooseberry Valley	345 kv	130	23.45	369.40
Lynndyl- Mona Lines 1 and 2	From IPP Power Plant at Lynndyl, Utah to Mona sub- station via Leam- ington Pass	345 kv 345 kv	200 200	3.5 3.5	84.84 84.84

SOURCE: 2720 Case File Folders

TABLE B
EXISTING FEDERAL, STATE, AND INTERSTATE HIGHWAYS

NAME	LOCATION BEGINNING-ENDING	R/W WIDTH (FEET)	LENGTH (MILES)	ACRES
Interstate 70 (I-70)	Salina Canyon	550	23*	1,533*
Interstate 70 (I-70) (Approximately 10.0 miles still under construction)	Clear Creek Canyon	550	13*	867*
State Highway (U-13)	Clear Creek Canyon	200	7*	170*
Interstate 15 (I-15)	Within one mile of National Forest for approximately 6 miles at Scipio Pass	---	---	---
State Highway (U-72)	I-70 (Salina Canyon) to U-24 at Loa, Utah	132*	15.4*	246*
State Highway (U-132)	Leamington, Utah to Nephi, Utah	132	0.34	5.45
State Highway (U-24)	Torrey, Utah to Fruita, Utah	132	0.7	11.2
State Highway (U-25)	Fishlake	400	6*	290*
State Highway (U-153)	Beaver, Utah to Junction, Utah	132	26.10	417.6

*Approximate figures

SOURCE: Forest Land Status and Road Atlas Records

INVENTORY OF PLANNING WINDOWS THAT WERE EVALUATED FOR POTENTIAL WINDOW DESIGNATION

An inventory of planning windows resulted in the following areas being identified for potential window designation: (These areas are shown on the Energy Transportation and Utility Corridor Map.)

1. Trough Hollow
2. Gooseberry Valley
3. Clear Creek Canyon
4. Scipio Pass
5. Salina Canyon

EXCLUSION AREAS

There are no areas on the Fishlake National Forest with legislation prohibiting transmission facilities. Thus, there are no exclusion areas on the Forest.

AREAS EVALUATED AS POTENTIAL AVOIDANCE AREAS

Seven general geographical areas have been identified as potential avoidance areas. These areas are as follows: (Refer to the Energy Transportation and Utility Corridor Map for location.)

1. Canyon Range
2. Pahvant Range
3. Tushar Mountains
4. Monroe Mountain
5. Gooseberry-Fishlake-Hilgard Areas
6. Old Woman-Willow Creek Areas
7. Thousand Lake Mountain Area
8. Research Natural Areas

EVALUATION CRITERIA

Factors used by the Forest to determine suitability of the inventoried rights-of-way, and planning windows as designated corridors/windows are as follow: (The same factors were also used to establish avoidance area designations.)

1. Compliance with Federal, State and local land-use plans and applicable Federal and State Laws.
2. Reasonable mitigation would prevent unacceptable impacts to natural resources, including soil, water, fish, wildlife, vegetation, cultural resources, and visual quality.
3. Few or no physical restrictions on corridor placement or rights-of-way placed therein would exist due to geology, hydrology, soil or land forms.
4. Existing and future right-of-way uses would be engineeringly and technologically compatible.
5. Reasonable mitigation would prevent unacceptable social and economic impacts to adjacent landowners and other groups or individuals.

6. Few if any potential health and safety hazards to National Forest users and the general public would result due to materials or activities within the right-of-way corridors.
7. Off-road-vehicle administrative costs for right-of-way corridors would not exceed Forest budget constraints for alternative management programs.
8. Economic efficiency would be achieved by placing a right-of-way within a corridor/window. Consideration would be given to costs of construction, operation and maintenance, and costs of modifying or relocating existing facilities in a proposed corridor/window.
9. National Security risks would be minimized by location of proposed corridors/windows.
10. Potential adverse impacts to threatened or endangered species or their habitats would occur.
11. Acceptable mitigation should be formulated for disturbances to wetlands, flood plains, and all riparian areas.
12. Maximum use of existing electric transmission, pipeline and transportation routes would occur.

EVALUATION PROCESS

Each right-of-way route (the right-of-way and terrain immediately adjacent to the right-of-way) and each planning window area was evaluated by analyzing how each of the 12 criteria would be met or affected under a corridor or window designation and eventual right-of-way use. This analysis is shown on Tables C through E. The listed Avoidance Areas were also evaluated by applying the 12 criteria.

EVALUATION PROCESS

TABLE C

RIGHTS-OF-WAY (ELECTRIC TRANSMISSION LINES)

Evaluation Criteria	a. Sigurd-Cedar City 138 kv	b. Sigurd-Scipio 230 kv	c. Sigurd-Circleville 230 kv	d. Huntington-Sigurd 345 kv	d. Hunter-Sigurd 345 kv	e. Lynndyl-Mona Lines 1 and 2 345 kv
1. Land-Use Plan and Laws	NO KNOWN CONFLICT					
2. Effect to Resource Values (Discussion on re-source areas/values where considered critical or sensitive)	Sigurd to Clear Cr. Canyon is located off NF land. Adjacent NF land is characterized by shallow soils, high erosion and important visuals. Mitigation of impacts would be difficult.	Sigurd to Scipio Lake is located off NF land. Adjacent NF land is characterized by shallow soil, high erosion, and important visuals. Mitigation of impacts would be difficult.	Sigurd to Piute Res. located off NF land. Adjacent NF land is characterized by unstable shallow soils; impacts would be difficult to mitigate.	Plant site to Trough Hollow located off of NF land. Trough Hollow to Sigurd located mostly on NF land; impacts could be mitigated except for resources associated with two critical areas-Trough Hollow and Gooseberry Valley; these two areas are characterized by shallow soils or unstable landforms. Impacts could be mitigated in these critical areas by careful location of facilities. Adjacent NF land exhibits high density cultural resources and important visual quality.	No major problems. Impacts could be mitigated.	
	Clear Cr. Canyon to Pine Cr. within NF land; impacts could be mitigated. Adjacent canyon slopes and bottom exhibits shallow soils, high erosion, high density cultural resources, & important visuals; impacts would be difficult to mitigate.	Scipio Lake to tip of Pavant is located partly on NF land. Impacts could be mitigated. Adjacent NF land exhibits shallow soils, high erosion and important visuals; impacts would be difficult to mitigate.	Piute Res. to I-15 located partly on NF land; impacts could be mitigated. Adjacent NF land to the north exhibits important visual resources.			

G-10

TABLE C
RIGHTS-OF-WAY (ELECTRIC TRANSMISSION LINES)

Evaluation Criteria	a. Sigurd-Cedar City 138 kv	b. Sigurd-Scipio 230 kv	c. Sigurd-Circleville 230 kv	d. Huntington-Sigurd 345 kv	d. Hunter-Sigurd 345 kv	e. Lynndyl-Mona Lines 1 and 2 345 kv
3. Geology, Hydrology, Soil and Landform Restrictions	<p>Sigud to Clear Cr. Canyon-adjacent NF land is characterized by steep slopes and incised canyons.</p> <p>Clear Cr. Canyon to Pine Cr. - the canyon area and areas north of canyon also characterized by steep slopes and numerous rock outcrops. Areas south of ROW route are on steep slopes; the route itself is located on gentle to moderately steep slopes.</p>	<p>Steep slopes and numerous rock outcrops exist on adjacent NF land from Sigurd to Scipio Lake.</p> <p>Some steep slopes exist on the Scipio Lake to Tip of Pavant route portion. Terrain adjacent to route exhibits very steep rocky slopes.</p>	<p>Very steep slopes exist from Sigurd to Piute Res. on adjacent NF land.</p> <p>Actual route from Piute Res. to I-15 located on gentle slopes; NF land adjacent to route exhibits steep and rocky slopes and numerous rock outcrops.</p>	<p>Trough Hollow exists as a narrow V-shaped box canyon; adjacent NF land exhibits very steep slopes with numerous rock outcrops.</p> <p>Gooseberry Valley is characterized by soil slides and slumps, i.e. the valley area is geologically unstable with a history of severe sliding and slumping.</p>	<p>No major problems.</p>	

Most of actual route is located on gently sloping terrain.

TABLE C

RIGHTS-OF-WAY (ELECTRIC TRANSMISSION LINES)

Evaluation Criteria	a. Sigurd-Cedar City 138 kv	b. Sigurd-Scipio 230 kv	c. Sigurd-Circleville 230 kv	d. Huntington-Sigurd 345 kv	d. Hunter-Sigurd 345 kv	e. Lynndyl-Mona Lines 1 and 2 345 kv
4. New and Existing Uses Would be Engineeringly & Technologically Compatible	For the Sigurd to Clear Cr. Canyon portion, construction on adjacent NF land would cause problems with compatibility of new uses.	Uses would experience compatibility problem if located on NF land adjacent to existing ROW route --this applies to Sigurd to tip of Pavant route. Restrictive terrain would be the cause of incompatibility.	Same as for Route No. 2--applies to route from Sigurd to I-15 via Circleville.	Same as for Route No. 2--applies to route from Plant Site to Sigurd.	No major problems.	
	No problems with compatibility with terrain route location from Clear Cr. Canyon to Pine Cr. There would be problems outside of route due to restrictive terrain features.					
5. Socioeconomic Impacts to Adjacent Landowners and other Groups or Individuals	Decisions to expand ROW's to private lands instead of on to adjacent NF land would affect private farm and ranch operations and some community developments.				No major problems.	
6. Health and Safety Hazards to National Forest Users and General Public.	Few hazards would exist beyond construction area associated with right-of-way facilities.					

TABLE C

RIGHTS-OF-WAY (ELECTRIC TRANSMISSION LINES)

Evaluation Criteria	a.	b.	c.	d.	d.	e.
	Sigurd-Cedar City 138 kv	Sigurd-Scipio 230 kv	Sigurd-Circleville 230 kv	Huntington-Sigurd 345 kv	Hunter-Sigurd 345 kv	Lynndyl-Mona Lines 1 and 2 345 kv
7. Off-Road Vehicle Administrative Costs.	Costs would exceed Forest budget for all alternatives, if routes were expanded on to NF land characterized by steep rocky slopes and shallow soils or highly incised canyons.			No major changes would result in present off-road vehicle use.		
8. Economic Efficiency of Constructing, Operating and Maintaining ROW and Costs of Relocating Existing Facilities.	Questionable efficiency if ROW's were expanded to adjacent NF land which is characterized by steep rocky slopes and erosive soils. No major problems with economic efficiency or modifying or relocating facilities within existing route areas.			Poor economic efficiency and high costs of modifying or relocating existing facilities outside of Trough Hollow and the Gooseberry Valley areas. Existing slides and slumps in the Gooseberry Valley area would require careful location within the existing route.		No major problems.
9. National Security Risks	Existing routes would pose no major problems to energy security.					
10. Threatened or Endangered Species	No known major problems within existing routes or on areas of possible expansion.					
11. Wetlands, Flood Plains and Riparian Areas.	Clear Cr. Canyon area has important and critical riparian areas, i.e., important and critical wildlife and fish habitat. Mitigation would be difficult.	No major problems within routes or on NF lands immediately adjacent to routes.		Crosses flood plains and riparian areas in the Gooseberry Valley Area. Mitigation of impacts could be acceptable.		No major problems.
12. Maximum Use of Existing Linear Rights-of-Way	Approximately 1/2 percent of route is located along transportation ROW's.	Approximately 75 percent of route is located adjacent to existing transportation ROW's.	Approximately 50 percent of route is located adjacent to existing transportation ROW's.	Less than 33 percent of route is located adjacent to other linear ROW's.		Most of route is located adjacent to transportation ROW's.

EVALUATION PROCESS
TABLE D
RIGHTS-OF-WAY (HIGHWAYS)

RIGHTS-OF-WAY (HIGHWAYS)

EVALUATION CRITERIA

- | | |
|---|---|
| | 1. Land Use Plans and Laws |
| a. Interstate 70 (I-70)
Salina Canyon | Approval and coordination would be required by State Department of Transportation (DOT) and Federal Highway Administration (FHA) during planning, design, construction and maintenance work for utilities and other transportation facilities within highway ROW. |
| b. Interstate 70 (I-70)
Clear Creek | Approval and coordination would be required from State Department of Transportation during planning, design, construction and maintenance work for utilities and other transportation facilities within highway ROW. |
| c. State Highway (U-13)
Clear Creek Canyon | Same as for I-70 |
| d. Interstate 15 (I-15)
Scipio Pass | Same as for U-13. |
| e. State Highway (U-72)
Fremont Junction - Loa | Same as for U-13 |
| f. State Highway (U-132)
Leamington | Would conflict with management of Capitol Reef National Park. |
| g. State Highway (U-24)
Torrey | Would conflict with management of Fishlake Recreation Area. (Exclusion Areas). |
| h. State Highway (U-25)
Fishlake | Would conflict with Avoidance Area designation for the area being crossed. |
| i. State Highway (U-153)
Beaver | |
| | 2. Effects to Resource Values
(Discussion on resource areas/
values where considered critical
or sensitive) |

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
a. Interstate 70 (I-70) Salina Canyon	Critical wildlife, soil, and visual resources exist along most of route. Site specific mitigation could prevent unacceptable impacts to these routes.
b. Interstate 70 (I-70) Clear Creek	Adjacent slopes exhibit shallow soils with high erosion potentials. High density cultural resources exist in the area. Visual resources are important. Impact to the above resources within the ROW could be mitigated; mitigation would be difficult outside of ROW.
c. State Highway (U-13) Clear Creek Canyon	Critical soil, water, visual, fish, and cultural resources exist along ROW length and on adjacent canyon slopes. Impacts would be difficult to mitigate.
d. Interstate 15 (I-15) Scipio Pass	Same as for I-70
e. State Highway (U-72) Salina - Loa	Important cultural resources, visuals and wildlife habitat along ROW route; impacts could be mitigated. Adjacent slopes are characterized by erosive soils and critical visual resources.
f. State Highway (U-132) Leamington	No major impacts to resources within ROW; impacts to resources adjacent to ROW could be mitigated.
g. State Highway (U-24) Torrey	Impacts to critical soil and visual resources within and adjacent to ROW would be difficult to mitigate.
h. State Highway (U-25) Fishlake	Impacts to critical soil, water, wildlife, fish and visual resources within and adjacent to ROW would be difficult to mitigate.
i. State Highway (U-153) Beaver	
	3. Geology, Hydrology, Soil and Landform Restrictions
a. Interstate 70 (I-70) Salina Canyon	Canyon bottom very narrow in places; adjacent slopes steep with numerous rocky outcrops. Major streams along most of route.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
b. Interstate 70 (I-70) Clear Creek	Slopes adjacent to most of ROW are moderately steep. Several large drainages are crossed. Route is located within drainage bottoms on steep side slopes.
c. State Highway (U-13) Clear Creek Canyon	Canyon bottom, characterized by narrow widths and steep rocky side slopes, major stream along most of route. Slides evident on adjacent slopes.
d. Interstate 15 (I-15) Scipio Pass	Route crosses through narrow saddle with steep side slopes on east side and moderately steep to very steep side slopes on west side. Slopes are rocky with shallow soils.
e. State Highway (U-72) Salina-Loa	Route traverses area of gently rolling slopes. Adjacent terrain is steep with shallow soils.
f. State Highway (U-132) Leamington	Route confined to limited area between the Sevier River and steep slopes.
g. State Highway (U-24) Torrey	Adjacent terrain varies from gentle to steep slopes.
h. State Highway (U-25) Fishlake	Adjacent terrain varies from gentle to steep slopes.
i. State Highway (U-153) Beaver	Route traverses area of steep to very steep slopes and numerous springs and streams. A variety of terrain features exist, i.e., from valleys to canyons & side slopes.
	4. New and Existing Uses would be Engineeringly and Technologically Compatible.
a. Interstate 70 (I-70) Salina Canyon	Uses and areas of use would be limited due to confined area and restrictive terrain features. Vehicle transportation flows would be disrupted for substantial periods of time during construction of utilities and transportation facilities.

EVALUATION PROCESS
 TABLE D (cont)
 RIGHTS-OF-WAY (HIGHWAYS)

RIGHTS-OF-WAY (HIGHWAYS)

EVALUATION CRITERIA

- | | | |
|----|--|---|
| b. | Interstate 70 (I-70)
Clear Creek | No problem with compatibility within ROW location. There would be problems outside of route due to restrictive terrain features. Some disruption to vehicle transportation flow patterns would result during construction of utilities and transportation facilities. |
| c. | State Highway (U-13)
Clear Creek Canyon | Areas traversed would limit size, type and number of uses due to very restrictive terrain. Compatibility between uses would be a problem. Substantial disruption to vehicle transportation flows would result during construction of utilities and transportation facilities. |
| d. | Interstate 15 (I-15)
Scipio Pass | Same as for Clear Creek, I-70 |
| e. | State Highway (U-72)
Salina-Loa | No problem with compatibility within area of gently rolling slopes. On adjacent slopes, compatibility problems would exist. Minor disruption to vehicle transportation flows would result during construction of utilities and transportation facilities. |
| f. | State Highway (U-132)
Leamington | Uses and areas of use would be limited due to confined area. Substantial disruption to vehicle transportation flow patterns would result during construction of utilities and transportation facilities. |
| g. | State Highway (U-24)
Torrey | Same as for Clear Creek U-13. |
| h. | State Highway (U-25)
Fishlake | Same as for Clear Creek U-13 |
| i. | State Highway (U-153)
Beaver | Same as for Clear Creek U-13 |

5. Socioeconomic Impacts to Adjacent
 Landowners Other Groups or Individuals

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
a. Interstate 70 (I-70) Salina Canyon	No major problems other than the traffic delays that would result during construction of utilities--such delays could be substantial.
b. Interstate 70 (I-70) Clear Creek	No major problems. Some traffic delays would result during construction of utilities.
c. State Highway (U-13) Clear Creek Canyon	Adjacent private landowners would be adversely affected due to proximity of ROW to private dwellings. Traffic could be disrupted for long periods of time.
d. Interstate 15 (I-15) Scipio Pass	Same as for Clear Creek, I-70.
e. State Highway (U-72) Salina-Loa	No major problems. Minor delays to road traffic during construction of facilities.
f. State Highway (U-132) Leamington	Same as for Clear Creek U-13
g. State Highway (U-24) Torrey	Recreation users and general public would be adversely impacted during construction of utilities. Adjacent private land owners would be adversely affected due to proximity of ROW to private facilities.
h. State Highway (U-25) Fishlake	Recreation users and general public would be adversely affected during construction of utilities.
i. State Highway (U-153) Beaver	Recreation users and general public would be adversely affected during construction of utilities.
	6. Health and Safety Hazards to National Forest Users and General Public.
a. Interstate 70 (I-70) Salina Canyon	Hazards would exist during utility construction period.
b. Interstate 70 (I-70) Clear Creek	Hazards would exist during utility construction period.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
c. State Highway (U-13) Clear Creek Canyon	Hazards would exist during utility construction period.
d. Interstate 15 (I-15) Scipio Pass	Hazards would exist during utility construction period.
e. State Highway (U-72) Salina-Loa	Hazards would exist during utility construction period.
f. State Highway (U-132) Leamington	Hazards would exist during utility construction period.
g. State Highway (U-24) Torrey	Hazards would exist during utility construction period.
h. State Highway (U-25) Fishlake	Hazards would exist during utility construction period.
i. State Highway (U-153) Beaver	Hazards would exist during utility construction period.
7. Off-Road Vehicle Administrative Costs	
a. Interstate 70 (I-70) Salina Canyon	No major changes would result in present off-road vehicle use.
b. Interstate 70 (I-70) Clear Creek	No major changes would result in present off-road vehicle use.
c. Interstate 70 (I-70) Clear Creek Canyon	No major changes would result in present off-road vehicle use.
d. Interstate 15 (I-15) Scipio Pass	No major changes would result in present off-road vehicle use.
e. State Highway (U-72) Salina-Loa	Increased off-road vehicle use could result due to non-restrictive terrain immediately adjacent to ROW.
f. State Highway (U-132) Leamington	No major changes would result in present off-road vehicle use.
g. State Highway (U-24) Torrey	Same as for Salina-Loa U-72.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
h. State Highway (U-25) Fishlake	Same as for Salina-Loa, U-72. Administrative costs could be substantial.
i. State Highway (U-153) Beaver	Same as for Salina-Loa, U-72. Administrative costs could be substantial.
	8. Economic Efficiency of Constructing, Operating, and Maintaining ROW and Costs of Modifying or Relocating Existing Facilities
a. Interstate 70 (I-70) Salina Canyon	Poor economic efficiency could result without careful planning and design of utilities. There would be a high cost of modifying existing highway facilities.
b. Interstate 70 (I-70) Clear Creek	
c. State Highway (U-13) Clear Creek Canyon	Poor economic efficiency and high costs of modifying or relocating existing ROW facilities and adjacent facilities on private land.
d. Interstate 15 (I-15) Scipio Pass	No major problems within existing ROW.
e. State Highway (U-72) Salina-Loa	No major problems.
f. State Highway (U-132) Leamington	Same as for Clear Creek, U-13.
g. State Highway (U-24) Torrey	Same as for Clear Creek, U-13.
h. State Highway (U-25) Fishlake	Same as for Clear Creek, U-13.
i. State Highway (U-153) Beaver	No major problems.
	9. National Security Risks.
a. Interstate 70 (I-70) Salina Canyon	Existing routes would pose no major problems to energy security.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
b. Interstate 70 (I-70) Clear Creek	Existing routes would pose no major problems to energy security.
c. State Highway (U-13) Clear Creek Canyon	Existing routes would pose no major problems to energy security.
d. Interstate 15 (I-15) Scipio Pass	Existing routes would pose no major problems to energy security.
e. State Highway (U-72) Salina-Loa	Existing routes would pose no major problems to energy security.
f. State Highway (U-132) Leamington	Existing routes would pose no major problems to energy security.
g. State Highway (U-24) Torrey	Existing routes would pose no major problems to energy security.
h. State Highway (U-25) Fishlake	Existing routes would pose no major problems to energy security.
i. State Highway (U-153) Beaver	Existing routes would pose no major problems to energy security.
10. Threatened or Endangered Species and Habitats	
a. Interstate 70 (I-70) Salina Canyon	No known major problems within existing routes or on areas of possible expansion.
b. Interstate 70 (I-70) Clear Creek	No known major problems within existing routes or on areas of possible expansion.
c. State Highway (U-13) Clear Creek Canyon	No known major problems within existing routes or on areas of possible expansion.
d. Interstate 15 (I-15) Scipio Pass	No known major problems within existing routes or on areas of possible expansion.
e. State Highway (U-72) Salina-Loa	No known major problems within existing routes or on areas of possible expansion.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
f. State Highway (U-132) Leamington	No known major problems within existing routes or on areas of possible expansion.
g. State Highway (U-24) Torrey	No known major problems within existing routes or on areas of possible expansion.
h. State Highway (U-25) Fishlake	No known major problems within existing routes or on areas of possible expansion.
i. State Highway (U-153) Beaver	No known major problems within existing routes or on areas of possible expansion.
	11. Wetlands, Flood Plains and Riparian Areas.
a. Interstate 70 (I-70) Salina Canyon	Important riparian areas exist along ROW --areas are important as wildlife and fish habitat. Mitigation would be difficult.
b. Interstate 70 (I-70) Clear Creek	Important riparian areas exists along a portion of the ROW--areas are important wildlife and fish habitat. Mitigation would be difficult.
c. State highway (U-13) Clear Creek Canyon	Same as for Salina Canyon, I-70.
d. Interstate 15- (I-15) Scipio Pass	No major problems within ROW or on National Forest lands immediately adjacent to route.
e. State Highway (U-72) Salina-Loa	Same as for Scipio Pass, I-15
f. State Highway (U-132) Leamington	Riparian area adjacent to ROW. Impacts could be mitigated.
g. State Highway (U-24) Torrey	Same as for Scipio, I-15.
h. State Highway (U-25) Fishlake	Same as for Scipio, I-15.

EVALUATION PROCESS
TABLE D (cont)
RIGHTS-OF-WAY (HIGHWAYS)

<u>RIGHTS-OF-WAY (HIGHWAYS)</u>	<u>EVALUATION CRITERIA</u>
i. State Highway (U-153) Beaver	Same as for Clear Creek, I-70.
	12. Maximum Use of Existing Linear Rights-of-Way.
a. Interstate 70 (I-70) Salina Canyon	Meets criterion since actual transportation ROW would be fully or partially utilized.
b. Interstate 70 (I-70) Clear Creek	Meets criterion since actual transportation ROW would be fully or partially utilized.
c. State Highway (U-13) Clear Creek Canyon	Meets criterion since actual transportation ROW would be fully or partially utilized.
d. Interstate 15 (I-15) Scipio Pass	Meets criterion since actual transportation ROW would be fully or partially utilized.
e. State Highway (U-72) Salina-Loa	Meets criterion since actual transportation ROW would be fully or partially utilized.
f. State Highway (U-132) Leamington	Meets criterion since actual transportation ROW would be fully or partially utilized.
g. State Highway (U-24) Torrey	Meets criterion since actual transportation ROW would be fully or partially utilized.
h. State Highway (U-25) Fishlake	Meets criterion since actual transportation ROW would be fully or partially utilized.
i. State Highway (U-153) Beaver	Meets criterion since actual transportation ROW would be fully or partially utilized.

EVALUATION PROCESS
 TABLE E
 WINDOW AREAS

<u>WINDOW AREAS</u>	<u>EVALUATION CRITERIA</u>
	1. Land-Use Plans and Laws
Trough Hollow	No Known Conflict
Gooseberry Valley	No Known Conflict
Clear Creek, I-70 Scipio Pass Salina Canyon	Approval and coordination would be required from State Department of Transportation and Federal Highway Administration during planning design, construction, and maintenance work for utilities and other transportation facilities that affected highway ROW's.
	2. Effects to Resources Values
	(Discussion on resource values/areas where considered critical or sensitive).
Trough Hollow Gooseberry Valley	See Table C, Hunter/Huntington-Sigurd 345 kv electric transmission lines.
Clear Creek, I-70	Analyzed as part of electric transmission and highway ROW's--see Table C, Sigurd-Cedar City, 138 kv and Table D, Clear Creek, I-70.
Scipio Pass	Analyzed as part of electrical transmission and highway ROW's--See Table C, Sigurd-Scipio 230 kv and Table D, Scipio I-15.
Salina Canyon	Analyzed as part of highway ROS; see Table D, Salina Canyon I-70.
	3. Geology, Hydrology, Soil and Landform Restrictions.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.

EVALUATION PROCESS
 TABLE E (cont)
 WINDOW AREAS

WINDOW AREAS

EVALUATION CRITERIA

	4. New and Existing Uses Would Be Engineeringly and technologically compatible.
	5. Socioeconomic Impacts to Adjacent Landowners and Other Groups or Individuals.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	6. Health and Safety Hazards to National Forest Users and General Public.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	7. Off-Road Vehicle Administrative Costs.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	8. Economic Efficiency of Constructing, Operating and Maintaining ROW Costs or Relocating Existing Facilities.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.

EVALUATION PROCESS
 TABLE E (cont)
 WINDOW AREAS

WINDOW AREAS

EVALUATION CRITERIA

	9. National Security Risks.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	10. Threatened or Endangered Species
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	11. Wetlands, Flood Plains and Riparian Area.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.
	12. Maximum Use of Existing Linear Rights-of-Way.
Trough Hollow	Same as for Criterion 2.
Gooseberry Valley	Same as for Criterion 2.
Clear Creek, I-70	Same as for Criterion 2.
Scipio Pass	Same as for Criterion 2.
Salina Canyon	Same as for Criterion 2.

EVALUATION RESULTS - PROCEDURES AND RECOMMENDED DESIGNATIONS

- Procedures

The analysis information from the EVALUATION PROCESS was used to:

1. Designate routes and areas as corridors, windows, or avoidance areas;
2. Establish widths of corridors and windows; and
3. Establish type of permitted energy right-of-way facility, i.e., underground, overhead, over-the-surface, or a combination of the three.

-Recommended Designations for Existing Linear Right-of-Way Routes and Planning Windows

A Summary of the recommendations is presented in Table F: Summary of Management Direction for Existing Electrical Transmission Line and Highway Routes and Planning Windows. The Summary is found on pages G-29 to G-32.

The narratives on corridor and window designations, including widths and type of right-of-way, are found on pages G-33 to G-42. These pages address the recommended designations for existing electrical transmission lines, Federal, State and Interstate Highway Routes, and Planning Windows.

TABLE F

SUMMARY OF MANAGEMENT DIRECTION FOR
EXISTING ELECTRICAL TRANSMISSION LINE AND HIGHWAY ROUTES
AND PLANNING WINDOWS

	CORRIDOR DESIGNATION	TYPE OF FACILITY	WIDTH OF CORRIDOR	ADJACENT N.F. LAND DESIGNATION
1. ELECTRICAL TRANSMISSION LINE ROUTES				
a. Sigurd-Cedar City 138 kv				
	Sigurd to Clear Creek Segment	Yes	Overhead and underground	Areas between private residential developments and NF boundary. Canyon Range Avoid- ance Area.
	Clear Creek to Pine Cr. Segment	Yes	Overhead and underground	One to three miles Canyon Range and Tushars-Beaver Mtn. Avoidance Areas.
b. Sigurd-Scipio 230 kv				
	Sigurd to Scipio Lake Segment	Yes	Overhead and underground	Areas between private residential developments and NF boundary. Canyon Range Avoid- ance Area.
	Scipio Lake to Pavant Mountains Segment	Yes	Overhead and underground	0.1 to 3.0 miles Canyon Range and Avoidance Areas.
c. Sigurd-Circleville 230 kv				
	Sigurd to Piute Reservoir Segment	Yes	Overhead and underground	Areas between existing line and National Forest boundary for por- tion north of Monroe, Ut.; Valley and foothills adja- cent to NF boundary south of Monroe, Ut. Monroe Mountain Avoidance Area.

TABLE F (Cont.)
 SUMMARY OF MANAGEMENT DIRECTION FOR
 EXISTING ELECTRICAL TRANSMISSION LINE AND HIGHWAY ROUTES
 AND PLANNING WINDOWS

	CORRIDOR DESIGNATION	TYPE OF FACILITY	WIDTH OF CORRIDOR	ADJACENT N.F. LAND DESIGNATION	
	Piute Reservoir to I-15 Segment	Yes	Overhead and underground	0.25 to 3.0 miles	Tushars-Beaver Mtn. Avoidance Area.
d.	Huntington/Hunter-Sigurd 345 kv				
	Plant Site to Trough Hollow Segment	Yes	Overhead and underground	500 to 1000 feet (controlled by Trough Hollow area)	Old Woman-Willow Creek Avoidance Area.
	Trough Hollow to Sigurd Segment	Yes	Overhead only	Lateral distance of Trough Hollow or lateral distance of most stable landforms in Goose- berry Valley, which- ever is the least distance.	Gooseberry-Fishlake- Hilgard and Old Woman-Willow Creek Avoidance Area.
e.	Lynndyl-Mona 345 kv				
	Lines 1 and 2	Yes	Overhead and underground	1.5 to 2.0 miles	Canyon Range Avoid- ance Area.
2.	HIGHWAY ROUTES				
a.	I-70 Salina Canyon	Yes	Highway	Canyon bottom area	Gooseberry-Fishlake- Hilgard and Old Woman-Willow Creek Avoidance Areas.
b.	I-70 Clear Creek	Yes	Highway	One to three miles	Canyon Range and Tushars-Beaver Mtn. Avoidance Areas.

TABLE F (Cont.)

SUMMARY OF MANAGEMENT DIRECTION FOR
EXISTING ELECTRICAL TRANSMISSION LINE AND HIGHWAY ROUTES
AND PLANNING WINDOWS

	CORRIDOR DESIGNATION	TYPE OF FACILITY	WIDTH OF CORRIDOR	ADJACENT N.F. LAND DESIGNATION	
c.	U-13 Clear Creek Canyon	Yes	Highway	Eastern 3.0 miles Areas between private residential developments and NF boundary	Remaining length (7.0 miles) located within Canyon Range Avoidance Area
d.	I-15 Scipio Pass	Yes	Highway	0.1 to 3.0 miles	Canyon Range and Pavant Avoidance Areas.
e.	U-72 Salina - Loa	Yes	Highway	1.0 mile average.	Gooseberry-Fishlake- Hilgard and Tousand Lakes Avoidance Areas
f.	U-132 Leamington	Yes	Highway	0.1 to 0.5 miles	Canyon Range Avoid- ance Area.
g.	U-24 Torrey Would also conflict	No			Within Thousand Lakes Avoidance Area. with Management of Capitol Reef National Park.
h.	U-25 Fishlake	No			Within Gooseberry- Fishlake-Hilgard Avoidance Area. Would also conflict with management of Fishlake Recreation Area Exclusion Area.
i.	U-153 Beaver-Junction	No			Within Tushars-Beaver Mountain Avoidance Area.

TABLE F (Cont.)

SUMMARY OF MANAGEMENT DIRECTION FOR
EXISTING ELECTRICAL TRANSMISSION LINE AND HIGHWAY ROUTES
AND PLANNING WINDOWS

	CORRIDOR DESIGNATION	TYPE OF FACILITY	*WIDTH OF CORRIDOR	ADJACENT N.F. LAND DESIGNATION	
3. PLANNING WINDOWS					
	Trough Hollow	Yes	Overhead only	500 to 1000 feet	Old Woman-Willow Creek Avoidance Area
	Gooseberry Valley	Yes	Overhead only	Lateral distance of most stable landform.	Gooseberry-Fishlake- Hilgard Avoidance Area.
	Clear Creek Canyon-I-70 Route	Yes	Overhead and underground	1.0 to 3.0 miles	Canyon Range and Tushars-Beaver Mtn. Avoidance areas.
	Scipio Pass	Yes	Overhead and underground	3.0 miles average underground	Canyon Range and Pavant Avoidance Areas
	Salina Canyon	Yes	Underground and Surface	Canyon bottom area	Gooseberry-Fishlake- Hilgard and Old Woman-Willow Creek Avoidance Areas.

- See Transportation and Utilities Management Map of the Land Management Plan for boundaries of these areas.

EVALUATION RESULTS FOR AVOIDANCE AREAS

- Recommended Designation for Avoidance Areas

Application of the 12 Evaluation Criteria to the 7 geographical areas listed on page G-9 led to the following general statements concerning corridor and window designations:

Most (and in some cases all) locations within these areas would conflict with or not meet the goals and objectives for any one criterion; and reasonable mitigation would (for the most part) not prevent unacceptable impacts to natural, physical, or social resources and values located within and adjacent to the areas.

NOTE: There are presently no linear rights-of-way within these areas that meet the standards and guidelines for potential transportation and utility corridor designation.

The narratives on avoidance area designations are also found on pages G-32 to G-41.

In addition, Management Areas 3B and 10A within the general avoidance areas are designated for no surface occupancy. (See the Transportation and Utilities Management Map of the Land Management Plan for the location of these areas).

MANAGEMENT DIRECTION FOR EXISTING ELECTRICAL TRANSMISSION, FEDERAL, STATE, AND INTERSTATE HIGHWAYS, PLANNING WINDOWS AND AVOIDANCE AREAS

(The following serves as narrative backup to recommended Management Direction shown on table F.)

1. General Assumptions

- a. The concerned counties and communities would support Fishlake National Forest corridor designations; such counties and communities might not agree on corridor widths as specified on National Forest lands and might, through negotiation and applicable authorizing actions, set different corridor widths on county property or within community boundaries.
- b. State Department of Transportation and/or the Federal Highway Administration would approve of highway right-of-way encroachments proposed by project proponents.
- c. Most of the Forest Service System Roads would be part of Avoidance Area designations.
- d. Where applicable, Fishlake national Forest corridor and window designations would agree with such designations on adjacent BLM land.

2. Electrical Transmission Line Routes. (Assumptions, Recommendations, Mitigation, and Adjacent Lands)

a. Sigurd - Cedar City, 138 kv

Sigurd to Clear Creek Canyon

Assumption - Existing route would be within a designated corridor on BLM administered lands. (Existing line presently located on land administered by the BLM and on private lands.)

Recommendations

- Support corridor designation.
- Corridor suitable for both overhead and underground facilities.
- Expansion or widening should be limited to areas located between private residential developments and the National Forest boundary.

Adjacent Lands

Adjacent National forest lands are located in a designated Avoidance Area (Canyon Range), if overhead utility corridor proposals involve expansion onto National Forest land, helicopter construction would be required to protect critical natural resources. Underground pipeline proposals would be discouraged due to steep and highly dissected terrain and erosive soils.

Clear Creek Canyon to Pine Creek

Assumption - Fishlake National Forest corridor designation would agree with corridor designations on BLM lands located both east and west of National Forest land.

Recommendations

- Designate as a corridor. 6/
- Corridor suitable for overhead and underground facilities. 7/
- Width of corridor to vary from one to three miles. (see Energy Transportation Corridor Map for corridor boundaries.)

General Mitigation Measures

- Helicopter construction would be required for overhead utilities on portions of the corridor.

Adjacent Lands

Adjacent National Forest lands are located in designated avoidance Areas (Canyon Range on the north and Tushars-Beaver Mountain on the south). Overhead and underground facility proposals would be discouraged due to very steep and highly dissected terrain, erosive soils, important visual resources and key wildlife habitat.

- 6/ Corridor area fits definition of a Window area due to the restrictive terrain located on both sides (north and south) of the corridor.
- 7/ Although there are presently no pipelines located within the corridor window area, terrain features within the one to three mile width could permit planning, design, and construction of pipelines.
- b. Sigurd - Scipio, 230 kv

Sigurd to Scipio Lake

Assumption - Existing route would be within a designated corridor on BLM and State of Utah administered lands. (Existing line presently located on lands administered by the BLM and State and on private lands.)

Recommendations

- Support corridor designations.
- Corridor suitable for overhead and underground facilities. 8/
- Expansion or widening should be limited to areas located between private residential developments and the National Forest boundary

Adjacent Lands

Adjacent National Forest land is located in a designated Avoidance Area (Canyon Range); if overhead utility corridor proposals involved expansion onto National Forest land, helicopter construction would be required to protect critical natural resources. Underground pipeline proposals would be discouraged due to steep and highly dissected terrain and associated erosive soils.

Scipio Lake to Tip of Pahvant

Assumption - Fishlake National Forest corridor designation would agree with corridor designations on BLM and State lands located on both ends of this route segment.

Recommendations

- Support corridor designation on non-National Forest land and designate a corridor on National Forest land. 9/
- Corridor suitable for overhead and underground facilities. 10/
- Width of corridor to vary from 0.1 to 3.0 miles on National Forest land. 11/ (see Energy Transportation Corridor Map for corridor boundaries.)

- 8/ Terrain features east of the National Forest boundary would permit planning, design and construction of pipelines, i.e., the corridor is located on flat to gently rolling valley and foothill areas.

- 9/ Northern end of corridor area (Scipio Pass) fits definition of a Window area due to restrictive terrain features located on north and south sides of the Pass.
- 10/ Although there are presently no pipelines within the Corridor area terrain features (flat to gently rolling valley and foothill area) could permit planning design and construction of north/south running pipelines systems.

Adjacent Lands

National Forest lands adjacent to the corridor boundary are part of designated Avoidance Areas (Canyon Range and); if overhead utility corridor proposals involved expansion onto these areas, helicopter construction would be required to protect critical natural resources. Underground pipeline proposals in the Avoidance Areas would be discouraged due to steep and highly dissected terrain and associated erosive soils.

- c. Sigurd - Circleville, 230 kv

Sigurd to Piute Reservoir

Assumption - Existing route would be within designated BLM and State of Utah corridors. (Existing line presently located on lands administered by the BLM and State and on private lands.)

Recommendations

- Support corridor designations.
- Corridor suitable for overhead and underground facilities. 12/
- Expansion or widening along the Sigurd to Monroe portion of the route should be limited to areas located east of the existing line and west of the National Forest boundary. For the Monroe to Piute Reservoir route portion expansion or widening should be limited to valley and foothill areas located adjacent to the National Forest boundary.

Adjacent Lands

Adjacent National Forest lands are located in a designated Avoidance Area (Monroe Mountain). If overhead utility corridor proposals involved expansion onto National Forest land, helicopter construction would be required to protect critical soil resources. Underground pipeline proposals would be discouraged due to steep and highly dissected terrain and associated erosive soils.

- 11/ The southern end of the National Forest corridor portion could be part of a BLM corridor designation for the areas presently occupied by the 230 kv line. The corridor width on the National Forest portion is approximately 0.1 to 0.5 miles, becoming wider (1.0 to 3.0 miles) in the Scipio Pass area.

- 12/ There are presently no pipelines located within or adjacent to the route location.

Piute Reservoir to I-15

Assumptions - Fishlake National Forest corridor designatuon would agree with corridor designations of BLM and State lands located both east and west of National Forest land.

Recommendations

- Designate as a corridor.
- Corridor suitable for overhead and underground facilities. 13/
- Width of corridor to vary from 0.25 to 3.0 miles. (see Energy Transportation Corridor Map for corridor boundaries.) 14/

Adjacent Lands

National Forest land north of the corridor width is designated as an Avoidance Area, (Tushars-Beaver Mountain). If overhead utility corridor proposals involved expansion into this area, helicopter construction would be required to protect critical resource values. Underground pipeline proposals would be discouraged due to steep rocky and visually sensitive terrain.

- d. Huntington/Hunter - Sigurd, 345 kv

Plant Site to Trough Hollow

Assumptions - Existing route would be within a designated BLM corridor. (Existing lines presently located on lands administered by the BLM; some State of Utah and private lands are also crossed.)

Recommendations

- Support corridor designations.
- Underground pipelines could utilize portions of this corridor, i.e., portions north of Trough Hollow, otherwise overhead utilities only.
- Expansion or widening of corridor would be controlled by design and construction limitations associated with Trough Hollow.

- 13/ There are presently no pipelines located within or adjacent to the route.

- 14/ The existing line is located on BLM, National Forest and State of Utah lands; expansion of the right-of-way on National Forest land would be acceptable; the width of the corridor on National Forest land would vary from 0.25 to 3.0 miles.

Adjacent Lands

Trough Hollow is a Window Area, located on National Forest land. Due to topographic constraints, this area could be the limiting factor for the width of the total corridor.

National Forest lands north of Trough Hollow are located approximately 3 to 8 miles from the existing transmission line route; expansion or widening of the corridor would not affect these lands.

Trough Hollow to Sigurd

Assumptions - Fishlake National forest corridor designation would agree with corridor designations on BLM lands located on both ends of this route segment.

Project proponents would consider the topographic constraints of Trough Hollow and the unstable landforms of Gooseberry Valley as limiting engineering factors for placement of overhead utilities.

Recommendations

- Support corridor designation on BLM lands and designate a corridor on National Forest land.
- Overhead utilities only.
- The width of the total corridor route would be limited to that lateral distance found within the Trough Hollow area or the lateral distance of most stable landforms in the Gooseberry Valley area, whichever is the least distance. (Lateral distance within the Trough Hollow area - from one side of the canyon to the other side - varies from 500 to 1000 feet. The lateral distance of most stable landforms along the Gooseberry Valley corridor route is subject to periodic geologic evaluation.

Adjacent Lands

National Forest lands north and south of the corridor windows, i.e., Trough Hollow and Gooseberry Valleys, are designated as Avoidance Areas, (Gooseberry-Fishlake-Hilgard and Old Woman-Willow Creek). The areas are characterized by steep sloped canyons with narrow canyon bottoms (Trough Hollow area) or by extremely unstable landforms (Gooseberry Valley area). Soils and visuals are the primary management concerns in the Avoidance Areas immediately adjacent to these Windows. Soils exhibit high erosion hazard ratings and low revegetation potential; visual quality objective is partial retention and visual absorption capability is low.

e. Lynndyl to Mona, 345 kv

Assumption - Fishlake National Forest corridor designation would agree with corridor designations on BLM lands located on both ends of the Forest segment.

Recommendations

- Support corridor designations on BLM lands and designate a corridor on National Forest land.
- Corridor on National Forest land suitable for overhead and underground facilities. 15/
Width of corridor to vary from 1.5 to 2.0 miles (see Transportation Corridor map for corridor boundaries.)

Adjacent Lands

National Forest lands north and south of the corridor width are designated as an Avoidance Area, (Canyon Range). If overhead utility corridor proposals involved expansion into this area, helicopter construction would be required to protect soil resources. Underground pipeline proposals would be discouraged due to steep and moderately dissected terrain.

2. Federal, State, and Interstate Highways

a. Interstate 70 (I-70) - Salina Canyon

Assumptions - Fishlake National Forest corridor designation would agree with corridor designations on BLM lands located east and west of National Forest boundaries. Project proponents would consider the steep canyon slopes as topographic constraints to economic efficiency and engineering feasibility in regards to both overhead and underground construction proposals.

Recommendations

- Support corridor designations on BLM lands and designate a corridor on National Forest land. 16/
- Underground and surface facilities. 17/
- Width of corridor limited to canyon bottom only.

15/ Although there are presently no pipelines located within or adjacent to the corridor, the existing flat to gently rolling terrain would facilitate planning, design, and construction of east-west running pipeline systems.

16/ Corridor area on National Forest land fits definition of a Window area due to adjacent steep, rocky and highly dissected canyon slopes along approximately 80 percent of the route.

- 17/ There are presently no pipelines or railroads located within the Salina Canyon area. Terrain features within the canyon bottom area could permit planning, design, and construction of east-west running pipeline or rail systems, i.e., width is sufficient.

Adjacent Lands

Adjacent National Forest lands are located in designated Avoidance Areas, (Gooseberry-Fishlake-Hilgard and Old Woman-Willow Creek). The Avoidance Area terrain immediately adjacent to the corridor exhibits critical soil erosion problems, critical wildlife habitat, unstable landforms, and important visual qualities; encroachment on this terrain would be strongly opposed by the Forest.

- b. Interstate 70 (I-70) - Clear Creek Canyon

Refer to writeup for EVALUATION RESULTS of Electrical Transmission Line Routes, item 1.a., Clear Creek Canyon to Pine Creek; the highway route is located within the designated corridor as described. The Assumptions and Recommendations for that corridor would also apply to this highway route.

- c. State Highway (U-13) - Clear Creek Canyon

Eastern end of highway route is located within the Sigurd to Clear Creek Canyon Corridor as discussed under EVALUATION RESULTS for Electrical Transmission Line Routes, item 1.a. The Recommendations for that corridor would also apply to this highway segment. (The length of the highway segment within the designated corridor is 3.0 miles.)

The remaining highway length is located within a designated Avoidance Area, (Canyon Range). Proposals for overhead and underground facilities along the highway route would be discouraged. (See EVALUATION PROCESS, Table D for discussions on potential impacts from right-of-way proposals.)

- d. Interstate 15 (I-15) - Scipio Pass

Refer to writeup for EVALUATION RESULTS of Electrical Transmission Line Routes, item 1.b., Scipio Lake to Tip of; the highway route is located within a portion of the designated corridor as described. The Assumptions and Recommendations for that corridor would also apply to this highway route.

- e. State Highway (U-72) - Salina to Loa

Assumptions - Fishlake National Forest corridor designation would agree with corridor designations and uses on BLM lands located both north and south of highway segment on National Forest land.

Recommendations

- Designate as a corridor.
- Corridor suitable for overhead, underground and surface facilities. 18/
- Width to average one mile; one half mile on either side off highway right-of-way. (See Transportation and Utilities Management Map for boundaries of these areas).

Adjacent Land

National Forest lands adjacent to the corridor boundaries are part of designated Avoidance Areas, (Gooseberry-Fishlake-Hilgard and Thousand Lakes). Both overhead and underground facility proposals in these areas would be discouraged due to the existence of important cultural and visual resources, erosive soils and key wildlife habitats.

f. State Highway (U-132) - Leamington

Assumption - Fishlake National Forest corridor designation would agree with corridor designations on BLM lands located on both ends of the Forest segment.

Recommendations

- Support corridor designations on BLM lands and designate a corridor on National Forest land.
- Corridor on National Forest land suitable for overhead, underground and surface facilities.
- Width of corridor to vary from 0.1 to 0.5 miles (See Transportation Corridor Map for corridor boundaries.)

Adjacent Lands

National Forest lands south of the corridor width are designated as an Avoidance Area, (Canyon Range). If overhead utility corridor proposals involved expansion into this area, helicopter construction would be required to protect soil resources. Underground pipeline proposals would be discouraged due to steep and moderately dissected terrain.

g. State Highway (U-24) - Torrey

The highway portion on the Fishlake National Forest is located within a designated Avoidance Area (Thousand Lakes). Proposals for overhead and underground facilities would not be permitted due to proximity of Capitol Reef National Park. (See EVALUATION PROCESS, Table D for discussions on potential impacts from right-of-way proposals.)

h. State Highway (U-25) - Fishlake
The Fishlake National Forest highway portion is located within a designated Avoidance Area (Gooseberry-Fishlake-Hilgard Areas.) Proposals for overhead and underground facilities would conflict with important recreation and visual resources; the proposals would also conflict with management of adjacent designated Exclusion Area (Fishlake Recreation Area).

i. State Highway (U-153) - Beaver to Junction

The Fishlake National Forest highway portion is located within a designated Avoidance Area (Tushars-Beaver Mountain). Proposals for overhead and underground facilities would be discouraged, due to critical natural resources and potential engineering and administrative difficulties. (See EVALUATION PROCESS, Table D for discussions on potential impacts from right-of-way proposals.)

18/ The variation in terrain features within the corridor, i.e., north-south running ridges and flat to gently sloping terrain, would facilitate planning, design, and construction of overhead and underground and surface facilities.

3. Window Area

a. Trough Hollow

The Assumptions, Recommendations, and Adjacent land discussions for the Huntington/Hunter - Sigurd, 345 kv transmission line apply to this planning window.

b. Gooseberry Valley

Same as above

c. Clear Creek Canyon

The Assumptions, Recommendations and Adjacent Land discussions for the Sigurd-Cedar City 138 kv transmission line apply to this planning window.

d. Scipio Pass

The Assumptions, Recommendations, and Adjacent Land discussions for the Scipio Lake to Tip of , 230 kv transmission line apply to this planning window.

e. Salina Canyon

The Assumptions, Recommendations, and Adjacent Land discussions for the Intestate 70 (I-70) - Salina Canyon apply to this planning window.

ATTACHMENTS

EXHIBIT NO. 1

APPROACHES FOR CORRIDOR/WINDOW SELECTION

Three approaches for designating corridor/window -

the direct (where facilities could go),
the indirect (where facilities could not go), and
the combination (mixture of direct and indirect) will be followed in
the corridor/window evaluation report.

The direct and indirect approach both identify two categories of land: where facilities could go and where facilities could not go. The combination approach involves a mixture of the above two land categories.

In the following item presentations, each approach is evaluated according to the flexibility of the process.

1. Direct Designation (where to place facilities)

a. Identification of land areas for designation as corridors

1) Long linear, or

2) Windows

b. Positive and negative aspects of long linear corridor designations

Positive

1) Needed, to address existing utility and transportation rights-of-way located in constrained or physically restrictive land areas.

2) Controls right-of-way proliferation.

Negative

1) Reduces planning flexibility for location length, origin, and destination of proposed facilities.

2) Could require a lengthy amendment process if right of way needs change, requiring use of land areas outside the corridor.

3) Directly affects property values of adjacent state and private land.

4) Shifts planning responsibilities for facilities from industry to the Forest Service.

c. Positive and negative aspects of window designations

The concept of a "window" is valid only where there are geographical constraints to siting facilities. These constraints can be caused by designation of adjoining sensitive areas.

Positive

- 1) More planning flexibility in response to origin, destination, source, and market differences -- giving industry more freedom in selecting alternative routes and releasing Forest Service from the responsibility to have engineering expertise or familiarity with industry standards and design requirements.

Negative

- 1) Does not fit all physical land categories, where widths are constrained by environmental features.
- 2) Does not recognize patterns of land ownership.
- 3) Does not prevent right-of-way proliferation.

2. Indirect Designation (where not to place facilities)

a. Identification of land areas where facilities could not or should not be placed, by classifying the areas as:

- 1) Avoidance Areas, or
- 2) Exclusion Areas.

Avoidance areas could be crossed under strict conditions, although by definition, facilities should avoid these areas to the greatest extent possible.

Construction linear facilities would be prohibited in exclusion areas.

b. Positive and negative aspects of indirect corridor designations

Positive

- 1) Retain flexibility for planning, concentrating agency efforts on the protection of important natural, cultural, and social values. Eliminates premature application of right-of-way needs or assumption of industry's role in facility planning.

Negative

- 2) Critical right-of-way needs might not be preserved, if a comprehensive framework for corridor planning was not developed.

3. Combination of Direct and Indirect Designations

- a. Identification of existing linear rights-of-way and windows to protect critical right-of-way areas, and identification of avoidance and exclusion areas to protect important natural, cultural, and social values.
- b. Aspects of a combination approach
 - 1) Should help to limit proliferation of rights-of-way and allow the Forest Service some flexibility in the planning process.
 - 2) Recognizes the importance of existing linear rights-of-way and provides an opportunity to address expansion potentials.
 - 3) Industry could continue to design its own routes to meet source-to-market needs.
 - 4) Routing decisions would be speeded up because avoidance and exclusion areas would be identified prior to route selection process.
 - 5) Window designations would better incorporate multiple use factors and would be less presumptive concerning uses of adjoining non-Forest lands.
 - 6) Unavoidable adverse effects might be minimized by eliminating sensitive areas from further study at an early stage.

EXHIBIT NO. 2

TRANSPORTATION AND UTILITIES MANAGEMENT MAP - LOCATED IN MAP PACKET OF THE LAND MANAGEMENT PLAN.

APPENDIX H

STIPULATIONS FOR MINERAL ACTIVITIES

Provision for general protection of surface resources and prevention of conflict with other activities, plans, and programs of the Forest Service and other users is included in existing laws and regulations. More specific provision is contained in the form of standard stipulations, which the forest imposes or recommends be imposed upon mineral and energy resources activities. Such stipulations include the following: (Copies of documents at end of this appendix)

A. Oil and Gas Leases

1. Bureau of Land Management form 3109-3 - Stipulations for Lands Under Jurisdiction of Department of Agriculture.
2. Forest Service (Intermountain Region) Supplement A to form 3109-3 - Surface Disturbance Stipulation.

B. Common Variety Materials (Salable)

1. Forest Service form 2800-76 - Standard Terms and Conditions (Preference Right Lease or Mineral Materials Permit).

In addition, special stipulations are formulated and recommendations/consent/approval conditioned to cover those concerns, identified in the environmental analysis process, which are not covered by the standard stipulations or where protection is not otherwise provided. Examples of special stipulations the Forest uses are shown below:

1. All of the land in this lease is included in (recreation or special area, etc.). Therefore, no occupancy or disturbance of the surface of the land described in this lease is authorized. The lessee, however, may exploit the oil and gas resources in this lease by directional drilling from sites outside this lease. If a proposed drilling site lies on land administered by the Bureau of Land Management, or by the Forest Service, a permit for use of the site must be obtained from the BLM District Manager or the Forest Service District Ranger, before drilling or other development begins.
2. No access or work trail or road, earth cut or fill, structure or other improvement, other than an active drilling rig, will be permitted if it can be viewed from the (road, lake, river, etc.).
3. No occupancy or other activity on the surface of (legal subdivision) is allowed under this lease.

4. No occupancy or other surface disturbance will be allowed within feet of the (road, trail, river, creek, canal, etc.). This distance may be modified when specifically approved in writing by the appropriate District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.
5. No drilling or storage facilities will be allowed within feet of (live water, the reservoir, the archaeological site, the historical site, the paleontological site, etc) located in (legal subdivision). This distance may be modified when specifically approved in writing by the appropriate District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.
6. No occupancy or other surface disturbance will be allowed on slopes in excess of _____ percent, without written permission from the appropriate District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.
7. In order to (minimize watershed damage, protect important seasonal wildlife habitat, etc) exploration, drilling, and other development activity will be allowed only (during the period from to _____, during dry soil period, over a snow cover, on frozen ground). This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the appropriate District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.
8. In order to minimize watershed damage, during muddy and/or wet periods, the authorized officer of the Federal surface management agency, through the appropriate District Manager of the BLM, may prohibit exploration, drilling, or other development. This limitation does not apply to maintenance and operation of producing wells.
9. The _____ (Trail/Road) will not be used as an access road for activities on this lease, except as follows: (No exceptions, weekdays during recreation season, etc.).
10. To maintain esthetic values, all semi-permanent and permanent facilities may require painting or camouflage to blend with the natural surroundings. The paint selection or method of camouflage will be subject to approval by the appropriate District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.
11. Controlled or Limited Surface Use Stipulation. This stipulation may be modified when specifically approved in writing by the appropriate District Manager, BLM, with concurrence of the Federal surface management agency. Distances and/or time periods may be made less restrictive depending on the actual on-ground conditions.

The lessee/operator is given notice that all or portions of the lease area may contain special values, may be needed for special purposes, or may require special attention to prevent damage to surface and/or other resources. Any surface use or occupancy within such special areas will be strictly controlled or, if necessary, excluded. Use or occupancy will be authorized only when the lessee/operator demonstrates that the special area is essential for operations in accordance with a surface use and operations plan which is satisfactory to the Geological Survey and the Federal surface management agency for the protection of such special areas and existing or planned uses. Appropriate modifications to imposed restrictions will be made for the maintenance and operation of producing oil and gas wells; however, in extremely critical situations, occupancy may only be allowed in emergencies.

After the Federal surface management agency has been advised of specific proposed surface use of occupancy on these lands, and on request of the lessee/operator, the agency will furnish more specific locations and additional information on such special areas which now include:

(Legal land description to lot and/or quarter, quarter section.)

Reason for Restriction:

Duration of Restriction: (year-round, month(s))

12. Activity Coordination Stipulation. This lease includes lands within * _____ which has resource values sensitive to high levels of activity. In order to minimize impacts to these resources, special conditions, such as unitization prior to approval of operations, and/or other limitations to spread surface disturbance activities over time and space may be required prior to approval and commencement of any operations on the lease.

*Wilderness Areas, Further Planning Areas, Areas of Threatened and Endangered Species.

13. Protection of Endangered or Threatened Species. The Federal surface management agency is responsible for assuring that the area to be disturbed is examined, prior to undertaking any surface-disturbing activities on lands covered by this lease, to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened species, some restrictions to the operator's plans or even disallowances of use may result.

The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by the surface management agency. An acceptable report must be provided to the surface management agency identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE *

The lands embraced in this lease or permit being under the jurisdiction of the Secretary of Agriculture, the lessee or permittee hereby agrees

(1) To conduct all operations authorized by this lease or permit with due regard for good land management, not to cut or destroy timber without first obtaining permission from the authorized representative of the Secretary of Agriculture, and to pay for all such timber cut or destroyed at the rates prescribed by such representative, to avoid unnecessary damage to improvements, timber, crops, or other cover, unless otherwise authorized by the Secretary of Agriculture, not to drill any well, carry on operations, make excavations, construct tunnels, drill, or otherwise disturb the surface of the lands within 200 feet of any building standing on the lands and whenever required, in writing, by the authorized representative of the Secretary of Agriculture to fence or fill all sump holes, ditches, and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the lands to their former condition, including the removal of structures as and if required, and when required by such representative to bury all pipelines below plow depth

(2) To do all in his power to prevent and suppress forest, brush, or grass fires on the lands and in their vicinity, and to require his employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise Unless prevented by circumstances over which he has no control, the lessee or permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the lands at the disposal of any authorized officer of the Department of Agriculture for the purpose of fighting forest, brush, or grass fires on or originating on the lands or on adjacent areas or caused by the negligence of the lessee or permittee or his employees, contractors, subcontractors and employees of contractors and subcontractors, with the understanding that payment for such services shall be made at rates to be determined by the authorized representative of the Secretary of

Agriculture, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character *Provided*, that if the lessee or permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors, caused or could have prevented the origin or spread of said fire or fires, no payment shall be made for services so rendered

During periods of serious fire danger to forest, brush, or grass, as may be specified by the authorized representative of the Secretary of Agriculture, the lessee or permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the area involved except at established camps, and shall enforce this prohibition by all means within his power *Provided*, that the authorized representative of the Secretary of Agriculture may designate safe places where, after all inflammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee or permittee, smoking may be permitted

The lessee or permittee shall not burn rubbish, trash, or other inflammable materials *except* with the consent of the authorized representative of the Secretary of Agriculture and shall not use explosives in such a manner as to scatter inflammable materials on the surface of the lands during the forest, brush, or grass fire season, *except* as authorized to do so or on areas approved by such representative

The lessee or permittee shall build or construct such fire lines or do such clearing on the lands as the authorized representative of the Secretary of Agriculture decides is essential for forest, brush, and grass fire prevention which is or may be necessitated by the

* This form of stipulation may be used in connection with leases and permits issued under the Acts of February 25, 1920, as amended (30 U S C 181 *et seq.*), August 7, 1947 (30 U S C 351 *et seq.*), February 7, 1927, as amended (30 U S C 281 *et seq.*), April 17, 1926, as

amended (30 U S C 271 *et seq.*), June 28 1944 (58 Stat 483-485), September 1 1949 (30 U S C 192c), June 30 1950 (16 U S C 508b), or under the authority of any of the Acts cited in Section 402 of the President's Reorganization Plan No 3 of 1946 (5 U S C 133y-16, Note)

exercise of the privileges authorized by this lease or permit, and shall maintain such fire tools at his headquarters or at the appropriate location on the lands as are deemed necessary by such representative.

(3) In the location, design, construction, and maintenance of all authorized works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures or clearance, the lessee or permittee shall do all things reasonably necessary to prevent or reduce to the fullest extent scarring and erosion of the lands, pollution of the water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities on or connected with this lease or permit causes damage to the watershed or pollution of the water resources, the lessee or permittee agrees to repair such damage and to take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the authorized representative of the Secretary of Agriculture

(4) If in the opinion of the authorized representative of the Secretary of Agriculture, the lands are valuable for watershed protection, the lessee or permittee shall provide for control of surface runoff and return the affected area to as productive condition as practicable.

(5) To pay the lessor or permitter or his tenant or the surface owner or his tenant, as the case may be, for any and all damage to or destruction of property caused by the lessee's or permittee's operations hereunder; to save and hold the lessor or permitter or the surface owner or their tenants harmless from all damage or claims for damage to persons or property resulting from the lessee's or permittee's operations under this lease or permit.

(6) To recognize existing uses and commitments, in the form of Department of Agriculture grazing, timber cutting, and special use permits, water developments, ditch, road, trail, pipeline, telephone line, and fence rights-of-way and other similar improvements, and to conduct his operations so as to interfere as little as possible with the rights and privileges granted by these permits or with other existing uses

(7) To install and maintain cattle guards to prevent the passage of livestock in any openings made in fences by the lessee or permittee or his contractors to provide access to the lands covered by this lease or permit for automotive and other equipment

(8) If lessee or permittee shall construct any camp on the lands, such camp shall be located at a place approved by the authorized representative of the Secretary of Agriculture, and such representative shall have authority to require that such camp be kept in a neat and sanitary condition.

(9) To comply with all federally-approved rules and regulations of the Secretary of Health, Education, and Welfare governing the emission of pollutants into the air from activities which are embraced in this lease or permit.

(10) To comply with all the rules and regulations of the Secretary of Agriculture governing the national forests or other lands under his jurisdiction which are embraced in this lease or permit.

(11) Unless otherwise authorized, prior to the beginning of operations to appoint and maintain at all times during the term of this lease or permit a local agent upon whom may be served written orders or notices respecting matters contained in this stipulation, and to inform the authorized representative of the Secretary of Agriculture, in writing, of the name and address of such agent. If a substitute agent is appointed, the lessee or permittee shall immediately so inform the said representative

(12) To address all matters relating to this stipulation to

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who is the authorized representative of the Secretary of Agriculture, or to such other representative as may from time to time, be designated, provided that such designation shall be in writing and be delivered to the lessee or permittee or his agent.

(Signature of Lessee)

GPO 880-292

STANDARD TERMS AND CONDITIONS
(Preference Right Lease or Mineral Materials Permit)

Section 1. *Good Operational and Conservation Practice* The lessee (permittee) shall:

(a) Conduct all operations authorized by this lease (permit) with due regard for good land management, not cut or destroy timber without first obtaining permission from the Forest Service, pay for all such timber cut or destroyed at the rates prescribed by it, and avoid unnecessary damage to improvements, timber, crops, or other cover.

(b) Not clear or use the land for roads, other works or structures necessary for the enjoyment of this lease (permit) until a plan of construction or development covering such use of the premises has been approved by the Forest Service. In the location, design, construction, and maintenance of all authorized roads, works or structures and in operations under this lease (permit), the lessee (permittee) shall do all things reasonably necessary to prevent or reduce to the fullest extent scarring and erosion of the land, pollution of the soil and water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities under this lease (permit) causes damage to the watershed or pollution of the soil or water resources, the lessee (permittee) shall repair such damage and take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the Forest Service.

Section 2. *Safety.* The lessee (permittee) shall carry on all mining operations in a good and workmanlike manner and in compliance with all Federal and State laws and the regulations of the Secretary of Agriculture, having due regard for the health and safety of miners and other employees; and safeguard with fences, barriers, fills, covers, or other effective devices, any shafts, pits, tunnels, cuts, and other excavations which otherwise would unduly imperil the life, safety, or property of other persons.

Section 3. *Fires Precautions.* The lessee (permittee) shall do all in his power to prevent and suppress fires on the lease (permit) area and in its vicinity, and require his employees, contractors, and subcontractors to do likewise. Unless prevented by circumstances over which he has no control and to the extent possible the lessee (permittee) shall place his employees, contractors, and subcontractors at the disposal of the Forest Service for the purpose of fighting fires, with the understanding that they may become employees of the Forest Service during such period and be paid for firefighting services at current rates of pay established by the Forest Service for the said national forest for services of similar character: *Provided*, That the lessee (permittee) shall reimburse the Forest Service for the cost of suppressing any fires which the lessee (permittee), his employees, contractors or subcontractors caused in any manner or the origin or spread of which he or they could have prevented. During periods of serious fire danger, as may be specified by the Forest Service, the lessee (permittee) shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, and subcontractors within the lease (permit) area except at established camps, and shall enforce this prohibition by all means within his power. However, the Forest Service may designate safe places where, after all flammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee (permittee), smoking may be permitted. When in the judgment of the Forest Service the fire danger is of such serious nature that fires may result from the operation, the lessee (permittee) will close down operations upon request of the Forest Service for the period of such emergency. The lessee (permittee) shall not burn rubbish, trash, or other flammable material except with the consent of the Forest Service and shall not use explosives during the fire season except as authorized to do so or on areas approved by the Forest Service. The lessee (permittee) shall build or construct such fire lines or do such clearing on the lease (permit) area as the Forest Service decides is necessary for fire prevention and shall maintain such fire tools at his headquarters on the lease (permit) area as are deemed necessary by the Forest Service.

Section 4. *Roads; Utility Facilities.*

(a) The lessee (permittee) shall fully and currently repair all damage, other than ordinary wear and tear, to national forest or project roads and trails caused by the exercise of the privileges granted by this permit. No transportation of mineral materials shall be permitted on roads until drainage acceptable to the Forest Service is installed.

(b) The Forest Service shall have the right to use any road constructed by the lessee (permittee) under this lease (permit) for any and all purposes in connection with the protection and administration of the national forest or other lands under its jurisdiction.

(c) Truck roads constructed by the lessee (permittee) under this lease (permit) may be used by other parties in connection with other authorized uses of national forest, national grassland, or other lands administered by the Forest Service. *Provided*, That on nonpublic roads, such use shall not materially interfere with the operations of the lessee (permittee). On truck roads which the lessee (permittee) constructed or is required to maintain, such other parties using the roads for heavy hauling purposes, such as logging and mining, shall pay a fair share of the cost of construction and shall perform a fair share of such maintenance based on their use, or shall pay to the lessee (permittee) the cost of such fair share, as may be agreed upon by the parties concerned, subject to final determination by the Forest Service if the parties disagree.

(d) In all phases of construction and operations the lessee (permittee) shall protect, so far as practicable, all telephone lines, ditches, fences, and other improvements and, if such improvements are damaged by his operations under this lease (permit), he shall restore them promptly. When necessary by reason of the lessee's (permittee's) operations under this lease (permit), the Forest Service may require the lessee (permittee) to move any such telephone line or fence from one location to another.

Section 5. *Cooperative Deposits.* All or portions of any work for fire prevention, road maintenance, restoration, or removal of improvements, revegetation or reforestation, control of erosion, for which the lessee (permittee) is responsible, may, upon written request of the lessee (permittee) and approval by the Forest Service, to be attached hereto and become a part hereof, be performed by the Forest Service on a basis of cooperation or assistance under Section 5, act of April 24, 1950 (64 Stat 83; 16 U S C 572) When the work is to be so performed the lessee (permittee) shall make advance deposits into the Cooperative Work Fund at such times and in such manner as requested by the Forest Service, the total deposits to be sufficient to cover the cost of the work, including necessary overhead charges. *Provided*, That deposits for the control of soil erosion may be used to maintain proper drainage of roads until they have become stabilized.