

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF
Silvicultural
Prescriptions
(E03, 06 & 07)

04 For management purposes, a cut-over area is considered an opening until such time as

- Increased water yield drops below 50 percent of the potential increase;
- Forage and/or browse production drops below 40 percent of potential production;
- Deer and elk hiding cover reaches 60 percent of potential;
- Minimum stocking standards by forest cover type and site productivity are met; and
- The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape

(0500) (10E)

a When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Stand Height (ft) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

III-271

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF
Silvicultural
Prescriptions
(E03, 06 & 07)

Pine	30	75%
Engelmann Spruce- Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level
2/ Percent of plots or transects that are stocked

(6014) (10E)

Water Resource
Improvement and
Maintenance
(F05 and 06)

01 Prevent or reduce debris accumulations in riparian areas that reduce stream channel stability and capacity
(0307) (10E)

02 Prevent soil surface compaction and disturbance in riparian ecosystems Allow use of heavy construction equipment for construction, residue removal, etc , during periods when the soil is least susceptible to compaction or rutting
(0003) (10E)

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, riprap, etc)
(6051) (10E)

03 Prevent stream channel instability, loss of channel cross-sectional areas, and loss of water quality resulting from activities that alter vegetative cover
(0007) (10E)

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
(6001) (10E)

b Prescription-induced water yield increases should not exceed

III-272

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF
Water Resource
Improvement and
Maintenance
(FO9 and O6)

O4 Manage non-forested areas to improve streamflow through increased on-site water yields and 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
(0303) (10E)

prescribed thresholds of allowable increase nor should the total yield of water and sediment exceed maximum allowable amounts as stated in the above references
(6060) (10E)

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, prevailing winds, and deposition area conditions, etc., as referenced in 'Studying Snow-drifting Problems with Small-Scale Models Outdoors' by Tabler, R D and Jaivell, R S, Proceedings Western Snow Conference, April 15-17, 1980
(6164) (10E)

Soil Resource
Management
(KA1)

O1 Immediately rehabilitate man-caused disturbances and restore burned areas Inspect rehabilitated areas annually and provide maintenance necessary to protect the watershed
(0309) (10E)

Fire Planning
and
Suppression
(PO1)

O1 Provide a level of protection from wildlife that is cost efficient and that will meet management objectives for the area
(2223GM) (10E)

a Prompt control of all wild-fires
(8220GM) (10E)

III-273



IV. Monitoring and Evaluation

CHAPTER IV
MONITORING AND EVALUATION

The Plan will be monitored to verify that scheduled activities are implemented and the anticipated outputs are produced. The goals, objectives, and standards and guidelines will be evaluated regularly to assess their validity and accomplishment.

Monitoring will determine:

- if individual management prescriptions are being applied as directed.
- if standards and guidelines are being followed.
- if the Forest is achieving the goals and objectives of the Plan.
- if individual management prescriptions are responding to public issues and management concerns.
- if the effects of implementing the Plan are occurring as predicted.
- if the expected costs of implementing the Plan are accurate.
- if management practices on adjacent or intermingled non-National Forest System lands are affecting the Plan's goals and objectives.
- if implementation of the Plan is affecting other agencies in reaching their objectives.

An annual monitoring program will be prepared as part of the Forest's annual work program. This program will include the details displaying amount and location of monitoring to be accomplished. This will be based on the approved work program and funds available for monitoring. Specific locations, sampling intensity, person-days required, and costs will be identified in the annual monitoring program. Evaluation of the results of the site-specific monitoring program will be documented in the annual evaluation report. The significance of the results will be analyzed and evaluated by the Forest Interdisciplinary Team and reviewed for action by the Management Team.

The action recommended to the Forest Supervisor by the Management Team can include:

- that no further action is needed as monitoring indicated that goals, objectives, and standards and guidelines have been achieved;
- referral to the appropriate line officer for improvement in the application of the individual management prescriptions;
- modification of the individual management prescription(s) as necessary as an amendment to the Forest Plan;
- modification of the allocation for an individual management prescription as an amendment to the Forest Plan;

--revision of the projected output schedule; or

--revision of the Forest Plan.

The documented file of the Forest Supervisor's decisions resulting from monitoring and review is maintained for future use in amending or revising the Forest Plan. The evaluation report will be prepared and submitted to the Regional Forester on a regular basis.

Table IV-1 displays the basic components of the monitoring process. The monitoring system is designed to indicate if programs are meeting Plan objectives, and to identify where amendment or revision is warranted. The Further Evaluation Variability Column defines the ranges or limits an activity can have. If outside the acceptable range, further evaluation will be necessary. A frequency for measuring the monitored item is also established.

TABLE IV-1.

MONITORING REQUIREMENTS

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
<u>RECREATION</u>			
Developed site use.	Recreation Information Management (RIM) use and double sampling.	Continuous sampling.	Developed recreation program is less than 10% use of a particular site or more than 80% use of a site over a 5-year period.
Developed site condition.	RIM facility condition and routine inspections.	Continuous sampling.	Facility condition is below RIM condition class 2.
Dispersed area use and experience level.	RIM use sampling including road and trail traffic counts.	Continuous sampling.	Dispersed area use is $\pm 10\%$ of ROS capacity criteria.
Dispersed campsite condition.	Site inspection using Frissell Method.	Annually on 20% of areas receiving heavy use.	Dispersed sites rated Frissell condition class 4 or 5.
Off-road vehicle damage.	Area inspections.	Annually on 20% of areas receiving off-road vehicle use.	Dispersed motorized use conflicts with management goals for a prescription.
Compliance with visual quality objectives (VQO).	Review vegetation disturbing projects.	Annually on 25% of completed projects.	Any management activity that fails to meet intended VQO within the guidelines.
Project compliance with Management Requirements on ground disturbing projects.	Field review.	Annually on 2 projects.	Cultural resource properties being damaged/destroyed directly/indirectly by project activities.
Cultural resource properties.	Field review.	Annually on 5 sites.	Cultural resource properties being damaged/destroyed directly/indirectly by unauthorized use or controllable natural agents.
<u>WILDERNESS</u>			
Wilderness use levels and distribution.	RIM reports. Trail registration, counters.	Annual assessment.	Use level does not meet prescription management goals.
Wilderness campsite condition.	Frissell site inspection.	Annually on 10% of areas receiving heavy use.	When 20% of campsites inspected are degraded one Frissell condition class from previous year.

IV-3

TABLE IV-1. (Cont.)

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
<u>FISH AND WILDLIFE</u>			
Winter range carrying capacity.	Extensive browse transects. Pellet counts.	Annual assessment.	±25% change in NFS winter range land carrying capacity for deer and elk.
Deer and elk productivity.	Annual harvest reports. Herd composition surveys- Forest Service and Colorado Division of Wildlife (DOW).	Annual survey.	±20% change in herd composition, ±30% change in herd population for deer and elk.
Wildlife diversity objectives.	Vegetation composition and age class surveys.	Annually on 20% of vegetation management projects.	75% or less compliance with prescription objectives for wildlife habitat diversity.
Fish habitat.	Field surveys.	Annual survey.	±30% change in fish habitat.
Riparian condition rating.	Riparian ecosystem scorecard.	Annual survey.	±10% change in current riparian condition.
Peregrine falcon occupancy.	Nest site survey and cooperative study with Colorado DOW.	Annual survey.	Any change from current status of known peregrine falcon eyries.
Population and habitat trends of management indicator species.	Population estimates by Colorado Division of Wildlife (DOW) and FS, Professional judgement of FS Wildlife Biologist, Stage II inventories, RIS, Program Reviews, Activity Reviews.	At least once every 5 years.	Long-term population declines. Magnitude to be determined by research.
<u>RANGE</u>			
Forage utilization.	Field examination to determine forage production/utilization.	Annually on 20% of allotments.	±10% change in allowable range use.
Range condition and trend.	Field examination.	Annually on 20% of allotments.	±10% change in range condition and trend.
<u>TIMBER</u>			
Assure harvest schedule is followed.	Review stand examination, prescriptions and sales program.	Semi-annual.	±20% predicted harvest volume for first years.

TABLE IV-1. (Cont.)

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
Growth response.	Stage II stand examination.	Once following treatment and every 10 years thereafter.	Variance in actual growth and assumptions made in growth simulations.
Clearcut harvest units will not exceed maximum sizes allowed.	Review silvicultural prescriptions, sale maps and sales program.	Semi-annually all sales.	Clearcuts exceed specified maximum size.
Openings created by management activities.	Review silvicultural prescriptions, sale maps and long range sales program.	Annually, on all sales.	In continuously forested stands, created openings involve more area than adjacent forested area. Created openings exceed size of contiguous natural openings 20 acres or more in size.
Lands not suited for timber production.	Regeneration surveys, review of management activities.	Annually on land classified not suitable for timber production.	Prohibited activities conducted or scheduled on land classified as not suitable for timber production.
Assure regeneration is within 5 years of final harvest.	Stand examination.	1st, 3rd, and 5th year after planting.	Suitable land fails to be regenerated within 5 years of final harvest.
Regeneration schedule.	Review silvicultural prescriptions, sale maps, long range sales program.	Annually all sales.	Regeneration harvests scheduled before adjacent stands are stocked with at least 300 trees/acre and 6 feet tall.
<u>WATER</u>			
Potable water source compliance with State health and sanitation codes to protect public health.	Bacteriological sample in potable water sources (campgrounds, picnic grounds administrative sites).	Monthly during use season at all potable water sources.	Violations of FSM 7420.
Watershed condition.	Acres: roads, clearcuts, power-lines, pipelines, etc, on the Forest. Appropriate functional records. HYSED Analysis.	Annually.	When a watershed is classified in a degraded condition.

IV-5

TABLE IV-1. (Cont.)

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
Compliance with State water quality standards.	Other agency and private sector water quality data. Baseline monitoring.	Entire Forest every 5 years; annually on "critical" watersheds and "near critical" watersheds.	Violation of Colorado Water Quality Standards.
Acid precipitation.	Monitoring pH levels in alpine lakes.	Semi-annually on 5 to 8 permanent stations.	Variability to be established.
Effects of management activities on water quality.	Establish baseline monitoring stations.	Annually, 1 to 2 samples per station at 15 to 20 stations.	Long-term trends in changes in water quality that violate State standards.
Water quality goals and objectives.	Project monitoring.	Annually, 5 to 10 samples at 10 stations.	Deviation from water quality goals and objectives related to specific management objectives.
<u>MINERALS</u>			
Compliance with terms of operating plans.	Field examination.	During operations.	Any unacceptable or unexpected results that deviate from the environmental assessment report.
Reclamation results.	Field examination.	Annually on 25% of the sites that have been closed for 2 to 3 years.	Any unacceptable or unexpected results that deviate from the environmental assessment report.
<u>FIRE</u>			
Fire control objective.	Individual Fire Reports.	Annually 100% sample.	±10% of standards compared to fire protection plan.
Fuel treatment program.	On-site inspection with burning plan. Accomplishment report, Management Attainment Report.	Annually.	±25% of burning plan objectives.
Fuel management.	Fuel inventory.	Annually.	Deviation from Regional Acceptable Work Standards for fuel treatment.
<u>AIR</u>			
Compliance with State Air Quality Standards.	Smoke management guidelines	Annually 100% sample.	±10% of air quality standards and guidelines in prescribed burn projects.

9-41

TABLE IV-1. (Cont.)

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
Compliance with Class I area visibility standards.	Monitoring stations.	Annually.	Any change of Class I areas for visibility set by State standards.
<u>INSECTS AND DISEASE</u>			
Abnormal timber mortality caused by insect, disease, fire, wind, etc., on suitable timber land.	Stand examination, aerial detection survey.	Annually.	10% increase over normal mortality.
Ensure that destructive insects and disease organisms do not increase following management activities.	Aerial surveys, ground checking.	Annually, (aerial survey) ground checks as needed.	Any insect or disease outbreak or infestation that exceeds endemic levels.
<u>SOILS</u>			
Ground disturbing activities that have the potential to alter soil productivity.	Visual estimates, remote sensing, transects which monitor amount and condition of ground cover, soil moisture and temperature measurements; sequential photo points; fertility and soil nutrient analysis; measurement of bulk density.	Annually, sample 10% of all ground disturbing activities, emphasizing completed soil survey areas.	Any deviation from management direction, standards and guidelines, on soil resources.
Soil survey activities.	Progress reviews, Management Attainment Report.	Annually, fiscal year program of work target.	±25% of Plan direction.
<u>LANDS</u>			
Special use permits, applications, amendments and transfers.	Land use reports.	Quarterly as scheduled in fiscal year work plan.	Deviation from Regional Acceptable Work Standards.
Special use permits administration and inspection.	Land use reports.	Quarterly, permits scheduled for inspection.	Deviation from Regional Acceptable Work Standards.
Land survey.	Management Attainment Report.	Annually, scheduled in fiscal year action plan.	±10% of planning period target.
Landline location and occupancy trespass.	Survey reports, Management Attainment Report.	Continuously, per fiscal year action plan.	±25% of planning period target.

IV-7

TABLE IV-1. (Cont.)

Activity, Practice, Effect or Resource to be Measured	Data Sources Monitoring Techniques	Frequency of Measurements	Variability Which Would Initiate Further Evaluation
Land exchange.	Land Adjustment Plan, Management Attainment Report.	Annually on all acres planned for exchange in fiscal year action plan.	±50% of planning period target.
Land purchase and acquisition.	Land Adjustment Plan, Management Attainment Report.	Annually on all acres planned for acquisition in fiscal year action plan.	±50% of planning period target.
Rights-of-way acquisition.	Land Adjustment Plan, Management Attainment Report.	Annually on all cases in fiscal year action plan.	±50% of planning period target.
<u>FACILITIES</u>			
Road density within Management Areas.	Engineering records. Project plans and maps.	Annually.	Road density greater than ±30% annually, greater than ±15% of 5-year average projected in Plan.
Travel management (area).	Travel Management Plan.	Annually.	Acres open, restricted, or closed to ORV use that is greater than ±10% projected in the Plan.
Travel management (roads and trails).	Travel Management Plan.	Annually.	Change in roads and trails open, restricted, or closed to public use that is greater than ±10% as displayed in Travel Management Plan.
Road construction costs.	Engineering records. Approved project plans.	Annually.	Costs estimated for road construction are greater than ±10% annually of that projected in Plan.
<u>ECONOMICS</u>			
Effects on local economies of Forest outputs.	District staff reviews of affected sectors.	Annually.	Significant changes in sectors within economic impact areas.

8-11



V. Index

CHAPTER V

INDEX

	<u>Page</u>
Air Quality	Ch. II: 66; Ch. III: 4
Alpine Tunnel Historic District, see Cultural Resources	
Bear Creek National Recreation Trail, see Facilities, Trails	
Budget (see also Economics)	Ch. II: 30, 41, 69 74, 97, 99; Ch. III: 1, 5
Cannibal Plateau Further Planning Area, see Wilderness Study Areas	
Continental Divide National Scenic Trail, see Facilities, Trails	
Crag Crest National Recreation Trail, see Facilities, Trails	
Cultural Resources (see also National Natural Landmarks and Natural Research Areas).	Ch. II: 32, 95; Ch. III: 3
Alpine Tunnel Historic District	Ch. II: 33, 96
Dry Mesa Dinosaur Quarry	Ch. II: 32, 96
East River, see Wild and Scenic Rivers	
Economics (see also Budget)	Ch. II: 9 31, 55; Ch. IV: 8
Cost Efficient	Ch. II: 49 64, 73, 75; Ch. III: 4
Economic Impact Analysis	Ch. II: 9
Economic Efficiency	Ch. II: 55, 64, 74
Economic Impact Area (EIA)	Ch. II: 9, 97
Employment	Ch. II: 10, 99
Escalante Creek Research Natural Area, see Research Natural Areas	
Facilities,	Ch. II: 30, 69, 70, 73, 74, 92; Ch. III: 5
Bridges	Ch. II: 70, 92
Buildings	Ch. II: 70
Dams	Ch. II: 70
Roads	Ch. II: 14, 24, 28, 30, 41, 56, 57 69, 70, 71, 73, 74, 91; Ch. III: 5
Trails	Ch. II: 30, 31; Ch. III: 5
Bear Creek National Recreation Trail	Ch. II: 31
Continental Divide National Scenic Trail	Ch. II: 31
Crag Crest National Recreation Trail.	Ch. II: 31

	<u>Page</u>
Fire,	Ch. II: 39, 49, 63, 64, 65
Prescribed Burning	Ch. II: 40, 65, 66, 99; Ch. III: 3
Fish (see also Wildlife).	Ch. II: 2, 39, 43, 46, 74; Ch. III: 2, 6, 7
Fossil Ridge Wilderness Study Area, see Wilderness Study Areas	
Firewood	Ch. II: 50, 52 76, 85, 91; Ch. III: 3
Goals	Ch. II: 63, 75; Ch. III: 1
Gothic Research Natural Area, see Research Natural Areas	
Human and Community Development	Ch. II: 62 97; Ch. III: 4
Human Resource Units (HRU),	Ch. II: 12, 97
Collbran	Ch. II: 12, 13, 97
Crested Butte	Ch. II: 12, 14, 97
Grand Junction	Ch. II: 12, 15, 97
Gunnison	Ch. II: 12, 16, 97
North Fork	Ch. II: 12, 17, 97
Uncompahgre	Ch. II: 12, 18, 97
Income	Ch. II: 10, 17, 98, 99
Lands,	Ch. II: 11, 66, 93, 94; Ch. III: 4, 9; Ch. IV: 7
Licenses and Permits	Ch. II: 11
Ownership.	Ch. II: 67, 93, 94
Rights-of-Way	Ch. II: 67, 93, 94 Ch. III: 4, 10; Ch. IV: 8
Special Use Permits	Ch. II: 66, 67 92, 94; Ch. III: 10, 13; Ch. IV: 7
Withdrawals	Ch. II: 67, 89
Livestock, see Range	
Management Areas, see Prescriptions	
Management Requirements, see Prescriptions	
Minerals,	Ch. II: 1, 11, 14, 15, 19, 58, 59, 60, 61 62, 67, 68, 69, 74, 89, 90, 91, 92 97; Ch. III: 4, 9; Ch. IV: 6
Leasable	Ch. II: 60
Locatable	Ch. II: 59; Ch. III: 9
Salable	Ch. II: 60
National Natural Landmarks,	Ch. II: 32, 33
Proposed Ophir Needles	Ch. II: 33, 96
Slungullion Earthflow	Ch. II: 32, 96

National Wilderness Preservation System, . . .Ch. II: 34
35, 76, 81, 82, 90; Ch. III: 13

Big Blue Ch. I: 3;
Ch. II: 16, 18, 34; Ch. III: 13

Collegiate Peaks Ch. I: 2, 3;
Ch. II: 24; Ch. III: 13

La Garita Ch. I: 1, 3;
Ch. II: 34, 66; Ch. III: 13

Lizard Head. . .Ch. I: 2, 3; Ch. II: 34; Ch. III: 13

Maroon Bells-Snowmass Ch. I: 2, 3;
Ch. II: 34; Ch. III: 13

Mount Sneffels Ch. I: 3;
Ch. II: 34; Ch. III: 13

Raggeds Ch. I: 2, 3;
Ch. II: 34; Ch. III: 13

West Elk Ch. I: 3;
Ch. II: 16, 17, 34, 61, 66; Ch. III: 13

Objectives Ch. I: 1; Ch. II: 63;
Ch. III: 1, 5; Ch. IV: 1, 2, 6

Off-Road Vehicles Ch. II: 15, 19, 69; Ch. IV: 3

Oh-Be-Joyful Wilderness Study Area, see Wilderness
Study Areas

Planning Questions Ch. II: 75-96

Prescriptions, Ch. I: 1; Ch. II: 87;
Ch. III: 2

1A Ch. III: 91

1B Ch. III: 94

1D Ch. III: 101

2A Ch. III: 105

2B Ch. III: 114

3A Ch. III: 123

4B Ch. III: 132

4C Ch. III: 142

4D Ch. III: 152

5A Ch. III: 158

5B Ch. III: 165

6A Ch. III: 177

6B Ch. III: 184

7A Ch. III: 191

7C Ch. III: 201

7E Ch. III: 210

8A Ch. III: 220

8B Ch. III: 224

8C Ch. III: 231

9A Ch. III: 238

9B Ch. III: 251

10A Ch. III: 259

10C Ch. III: 262

10E CH. III: 266

	<u>Page</u>
Management Areas	Ch. I: 1, 2; Ch. III: 1, 2, 5, 14, 86
Management Requirements	Ch. I: 1; Ch. III: 2, 14
Protection	Ch. II: 63; Ch. III: 4
Range,	Ch. II: 47, 48, 64, 68, 74, 76-85, 87, 95 100; Ch. III: 3, 7, 68
Livestock	Ch. II: 47, 95, 99; Ch. III: 2, 3
Developed	Ch. II: 25, 30, 71, 73, 75, 77, 78; Ch. III: 2
Dispersed	Ch. II: 28, 73, 77, 79, 80; Ch. III: 3
Skiing (Winter Sports)	Ch. II: 13, 14, 15 19, 26, 27, 50, 73, 75, 78, 79; Ch. III: 3, 8
Resources Planning Act (RPA)	Ch. II: 20; Ch. III: 1
Roadless Area Review and Evaluation (RARE)	Ch. II: 34, 60
Roads, see Facilities	
Social Resource Unit (SRU)	Ch. II: 12, 97
Skiing, see Recreation	
Soils	Ch. II: 68;
State of Colorado, Division of Wildlife (DOW)	Ch. II: 39, 41, 46, 66
Taylor River, see Wild and Scenic Rivers	
Threatened and Endangered Species, see Wildlife	
Timber,	Ch. II: 18, 19, 39, 49-57 65, 68, 69, 83-88, 99; Ch. III: 3
Allowable Sale Quantity	Ch. II: 51
Harvest	Ch. II: 39, 49, 51-56, 85, 86, 88, 92
Reforestation	Ch. II: 86; Ch. III: 3
Programmed Sales Offered	Ch. II: 51, 76
Trails, see Facilities, Trails	
Utility Corridor	Ch. II: 94 53, 54; Ch. III: 68
Visual Resource,	Ch. II: 33, 34, 96

	<u>Page</u>
Water,Ch. II: 14, 15, 16, 18, 56 57, 58, 74, 87, 89; Ch. III: 3 7, 71; Ch. IV: 5, 6
Quality	Ch. II: 57, 58, 87; Ch. III: 3
YieldCh. II: 47, 56, 74, 87, 88 38, 46, 47, 58; Ch. III: 7, 71
Wild and Scenic Rivers,Ch. II: 31
Wilderness (see also National Wilderness Preservation System)	Ch. I: 2, 3; Ch. II: 16, 17 34, 36, 37, 67, 74, 76, 81; Ch. III: 3, 67, 71; Ch. IV: 3
Wilderness Study Area, Further Planning Area (see also National Wilderness Preservation System),	Ch. II: 59, 61; Ch. III: 1
Cannibal Plateau	Ch. II: 37, 38, 39, 81, 82 Ch. III: 87
Fossil Ridge	Ch. II: 37, 38, 81; Ch. III: 87
Oh-Be-Joyful	Ch. II: 35; Ch. III: 87
Wildlife,	Ch. II: 2, 4, 6, 7, 9, 17, 39, 40 41, 46, 49, 83, 84, 85, 89; Ch. III: 3, 6, 7, 68-70; Ch. IV: 4
Indicator Species	Ch. II: 43
Threatened and Endangered Species	Ch. II: 42 44, 58; Ch. III: 6, 12
Winter Range	Ch. II: 45, 46 Ch. III: 2, 6



Appendices

APPENDIX A
CAPITAL INVESTMENT PLAN FOR DEVELOPED RECREATION

CAPITAL INVESTMENT PLAN FOR DEVELOPED RECREATION

Two action plans have been developed for developed recreation capital investment. Table A-1 displays the new construction capital investment needs for the next 50 years. Table A-2 displays the rehabilitation capital investment needs for the rehabilitation of all facilities in the next 15 years. Assuming that funding will be available for maintenance, all facilities will be maintained to standard after the 15 year rehabilitation plan.

TABLE A-1.

CAPITAL INVESTMENT PLAN FOR DEVELOPED RECREATION
(Fifty-Year New Construction of Recreation Sites)

Year	Location	Name & Type	Capacity		Total Cost (1978 \$)
			Unit	PAOT	
1986	Grand Mesa	Grand Mesa Campground (Includes converting Crag Crest and Eggleston Campgrounds to day use.)	60	300	690,000
1987	Taylor River/ Taylor Park Reservoir	Lake View Campground Expansion	25	125	287,500
1988	South Fork/San Miguel River	Mary E. Campground	32	160	368,000
1994	Horse Ranch Park/Lost Lake	Lost Lake Campground Expansion, Horse Ranch Park Campground, Picnic Ground and Trailhead.	40	200	460,000
1998	Grand Mesa	Trickle Park Campground	45	225	517,000
2002	Taylor River	Rivers End - Lottis Creek Campground Expansion	45	225	517,000
2005	Norwood	Woods Lake Campground	45	225	517,000
2008	Cebolla	Deer Lakes Campground Expansion	40	200	460,000
2013	Grand Mesa	Relocate Bonham - Expand Big Creek Campground	40	200	460,000

TABLE A-1. (Cont.)

Year	Location	Name & Type	Capacity		Total Cost (1978 \$)
			Unit	PAOT	
2016	Gothic/East River	Gothic - Avery Peak Campground Expansion	40	220	460,000
2022	Ouray	Dallas Creek Campground	20	100	230,000
2023	Grand Mesa	Expand Kiser Creek Campground	20	100	230,000
2026	Grand Mesa	Surface Creek Campground	40	200	460,000
	<u>TOTAL</u>		<u>492</u>	<u>2,480</u>	<u>5,656,500</u>

TABLE A-2.

CAPITAL INVESTMENT PLAN FOR DEVELOPED RECREATION
(Fifteen-Year Rehabilitation of Recreation Sites)

District (Location)	Facility Name	Capacity PAOT
	(Fiscal Years 1986-1990)	
Collbran	Jumbo Campground	130
Collbran	Mesa Picnic Ground	20
Grand Junction	Kiser Campground	60
Grand Junction	Carp Lake Campground	100
Taylor River	Onemile Campground	135
Taylor River	Lake Irwin Campground	160
Norwood	Sunshine Campground	75
Ouray	Amphitheatre Campground	90
Cebolla	Deer Lakes Campground	35
Cebolla	Spruce Campground	45
Paonia	Erickson Springs Campground	45
Collbran	Weir & Johnson Campground	60
Grand Junction	Valley View Campground	40
Grand Junction	Little Bear Campground	200
Taylor River	Dinner Station Campground	110
Taylor River	Lottis Creek Campground	100
		<u>1,405</u>
	TOTAL ESTIMATED COST \$241,000*	

* (1978 Dollars)

TABLE A-2. (Cont.)

District (Location)	Facility Name	Capacity PAOT
(Fiscal Years 1991-1995)		
Taylor River	Rosy Lane Campground	90
Cebolla	Pitkin Campground	110
Cebolla	Quartz Campground	50
Paonia	Lost Lake Campground	50
Collbran	Spruce Grove Campground	80
Grand Junction	Island Lake Campground	210
Grand Junction	Ward Way Picnic Ground	15
Taylor River	Lakeview Campground	175
Taylor River	Spring Creek Campground	55
Taylor River	Avery Peak Campground	50
Taylor River	Cold Spring Campground	30
Norwood	Matterhorn Campground	110
Ouray	Beaver Lake Campground	50
Cebolla	Snowblind Campground	115
Cebolla	Cebolla Campground	25
Collbran	Cottonwood Lake Campground	210
Taylor River	Soap Creek Campground	65
Taylor River	Taylor Canyon Campground	25
Collbran	Big Creek Campground	90
		1,605
TOTAL ESTIMATED COST \$239,500*		
(Fiscal Years 1996-2000)		
Taylor River	Mirror Lake Campground	50
Taylor River	Cement Creek Campground	75
Taylor River	Rivers End Campground	75
Cebolla	Middle Quartz Campground	35
Ouray	Big Cimarron Campground	90
Cebolla	Williams Creek Campground	143
Paonia	Smith Fork Campground	30
Collbran	Big Creek Campground	40
Grand Junction	Glacier Springs Picnic Ground	75
Grand Junction	Fruita Picnic Ground	135
Grand Junction	Hay Press Campground	40
Taylor River	Almont Campground	50
Taylor River	Mosca Campground	75
Taylor River	Dorchester Campground	50
Taylor River	North Bank Campground	115
Ouray	Iron Springs Campground	65
Cebolla	Gold Creek Campground	30
Cebolla	Tomichi Creek Picnic Ground	45
Cebolla	Slumgullion Campground	85
Paonia	McClure Pass Campground	95
		1,398
TOTAL ESTIMATED COST \$242,280*		

* (1978 Dollars)

APPENDIX B

TEN-YEAR TRAIL CONSTRUCTION/RECONSTRUCTION ACTION PLAN

TEN-YEAR TRAIL CONSTRUCTION/RECONSTRUCTION ACTION PLAN

Table B-1 displays the construction and reconstruction needs for the next ten years.

TABLE B-1.

TEN-YEAR TRAIL CONSTRUCTION/RECONSTRUCTION ACTION PLAN

Trail Name and Number	Miles	Action*	Ranger District**	Location
(Fiscal Years 1984-1990)				
Lizard Head #4409	3.5	R	Nor.	T41N R10W
Bald Mtn. #4528	3.0	R	Coll.	T8S R93W Sec. 19&20 T8S R94W Sec. 24&25
Coal Creek #4702	8.0	R	G.J.	T12S R96,97W
Carson Hole #4610	1.0	R	G.J.	T15S R100,101W
Wilson Mesa #4421	2.0	R	Nor.	T42N R10W Sec. 14&15
Blue Lakes #4201.1	5.7	R	Our.	T44N R9W
Mt. Sneffels #4201.11	.8	R	Our.	T43N R8W
Twin Peaks #4208.1	2.2	R	Our.	T44N R8W
Stewart Creek #470	4.0	R	Ceb.	T44N R1E
Wetterhorn Basin #226	3.0	R	Ceb.	T44N R6W
Machin Lake #784	2.0	R	Ceb.	T43N R1E
Dark Canyon #830	4.0	R	Pao.	T13S R88W Sec. 3-6
Spud Pass #824	4.0	R	Pao.	T12S R88W Sec. 14-16
Lowline #438.3	3.5	R	T.R.	T15S R87W Sec. 1-10,&15
Coal Mesa #451.2	7.0	R	T.R.	T50N R4W Sec. 2,3,10,15, 22,27,28
Battlement #4527	3.0	R	Coll.	T8S R93W Sec. 25-27,&35
Coal Creek Basin #4703	4.9	R	G.J.	T12S R97W
Leon #4717	1.5	R	G.J.	T11S R93W
Deep Creek #4709	1.1	R	G.J.	T12S R96W
Blue Lake #4707.1	.5	R	G.J.	T13S R96W
Wilson Mesa #4421	2.0	R	Nor.	T42N R10W
Oak Creek #4207	7.2	C-R	Our.	T44N R8W

TABLE B-1. (Cont.)

Trail Name and Number	Miles	Action*	Ranger District**	Location
(Fiscal Years 1984-1990 Continued)				
Twin Peaks #4208.11	1.8	R	Our.	T44N R8W
Machin Lake #784	5.0	R	Ceb.	T43N R1E
Skyline #465	4.0	R	Ceb.	T44N R1E
Curecanti #870	7.0	R	Pao.	T50S R89W Sec. 7,17,18
Lamborn #894	2.0	R	Pao.	T14S R91W Sec. 35&36
Mill Creek #450.2	10.0	R	T.R.	T15S R87W Sec. 30-34
Battlement #4527	3.0	R	Coll.	T8S R93W Sec. 20,21,27,28
Spring Camp #4707	7.7	R	G.J.	T12,13S R96-97W
Whitewater Basin #4700	1.1	R	G.J.	T12S R97W
Switchback #4705	1.1	R	G.J.	T12S R97W
Spring Camp #4707.1	7.7	R	G.J.	T13S R97W
Goat Creek #4424	2.0	C	Nor.	T42N R12W Sec. 15&16
Nate Creek #4221	6.0	C-R	Our.	T45N R7W
Lou Creek #4222	3.0	R	Our.	T46N R6W
Skyline #465	4.0	R	Ceb.	T44N R1E
Mineral Creek #466	5.0	R	Ceb.	T44N R2W
Soap Creek #443.2	8.0	R	T.R.	T15S R88W Sec. 19-21,28, 29,31&32
Brush Creek #4529	3.0	R	Coll.	T8S R94W Sec. 13,24,25
UnawEEP #4601	9.0	R	G.J.	T15S R101,102W T51N R16,17W
Goat Creek #4424	2.0	C	Nor.	T42N R12W Sec. 17&18
West Fork #4240	3.5	R	Our.	T46N R6W
Wetterhorn #4226	5.5	R	Our.	T44N R6W
Uncompahgre Peak #239	4.0	R	Ceb.	T44N R5W
Big Blue #232	5.0	R	Ceb.	T46N R5W
Little Elk Basin #892	6.0	R	Pao.	T15S R90W
Sun Park #444.2	6.0	R	T.R.	T50N R2W Sec. 6 T51N R3W Sec. 22,23,25, 26 & 36
Hauxhurst #4530	3.0	R	Coll.	T8S R94W Sec. 16,21,28,33
Cow Creek #4629	4.0	R	G.J.	T51N R17W
Cow Creek Cut-off #4648	2.0	R	G.J.	T51N R17W

TABLE B-1. (Cont.)

Trail Name and Number	Miles	Action*	Ranger District**	Location
(Fiscal Years 1984-1990 Continued)				
Gill Creek #4602	4.0	C-R	G.J.	T5S R101W
Cabin #4606	2.0	R	G.J.	T5S R101W
Indian #4401	2.0	R	Nor.	T48N R15W Sec. 35,36
Wetterhorn #4226	5.5	R	Our.	T44N R6W
Failer Creek #4231.11	3.0	R	Our.	T46N R5W
Big Blue #232	9.0	R	Ceb.	T45N R5W
Three Lakes #843	3.0	R	Pao.	T14S R88N Sec. 2,3
Ragged Mtn. #820	4.0	R	Pao.	T11S R89W Sec. 22,23,27
Crater Lake #800	3.0	R	Pao.	T11S R92W Sec. 21,22,28
Oh-Be-Joyful #835	2.0	R	Pao.	T13S R87W Sec. 9,16,17
Lowline #438	3.0	R	Pao.	T14S R87W Sec. 23,24,25
Soap Basin #442	7.0	R	T.R.	T51N R4W Sec. 11,14,15
Ten Trailheads spread out over the Forest will be reconstructed or constructed during this period.				
Total for Fiscal Years 1984-1990 - 252.8 Miles at an estimated cost of \$1,280,934.00.***				
(Fiscal Years 1991-1995)				
Silver Spruce #4517	3.0	R	Coll.	T10S R93W Sec. 14-16
UnawEEP #4601	4.0	R	G.J.	T15S R101,102W T51N R15,16,W
Snowshoe #4607	1.0	R	G.J.	T51N R17W
Middle Fork Bear Canyon #4654	2.6	R	G.J.	T15S R102W
North Fork Bear Canyon #4653	2.6	R	G.J.	T15S R102W
Woods Lake #4406.1	2.0	R	Nor.	T42N R11W Sec. 26,35
Baldy #4216	9.0	R	Our.	T44-45N R7W
South Lottis #428	4.0	R	Ceb.	T51N R3E
Gold Creek #427	2.5	R	Ceb.	T51N R4E

TABLE B-1. (Cont.)

Trail Name and Number	Miles	Action*	Ranger District**	Location
(Fiscal Years 1991-1995 Continued)				
South Lottis #428.1	8.0	R	T.R.	T15S R83W Sec. 1,12,13 T15S R82W Sec. 18,19,30,31 T15N R3E Sec. 12,13
Silver Spruce #4517	3.0	R	Coll.	T10S R93W Sec. 13,14,18
N. Leonards Mesa #4609	2.5	R	G.J.	T50N R17W
Ute Creek #4608	5.5	R	G.J.	T51N R17W
Woods Lake #4406.2	2.0	C	Nor.	T42N R11W Sec. 21,22
Roubideau #4105	9.0	C-R	Our.	T48N R12W
Cebolla #459	9.0	R	Ceb.	T43N R1W
Cliff Creek #840	10.0	R	Pao.	T14S R88W Sec. 11,12,14, 23,27,28,33
Swampy #439	4.0	R	T.R.	T14S R87W Sec. 26,30-35
Silver Spruce #4517	3.0	R	Coll.	T10S R92W Sec. 6,7 T9S R92W Sec. 31
Green Mtn. #4719.1-2	9.5	R	G.J.	T2S R93-94W
Lizard Head #4409.3	2.0	R	Nor.	T41N R9W Sec. 7,18
Pool Creek #4113	3.0	R	Our.	T47N R12W
Coal Bank #4112	3.5	R	Our.	T47N R12W
Dallas #4200.1	2.5	R	Our.	T44N R7W
Rough Creek #463	9.0	R	Ceb.	T44N R2W
Beckwith Pass #842	2.5	R	Pao.	T14S R88W Sec. 2,3,11
Castle Creek #441.2-3	5.0	R	Pao.	T15S R88W Sec. 2,3,4,5, 16,21,22
Summerville #430	11.0	R	T.R.	T15S R83W Sec. 26,27,34,35
Silver Spruce #4517	3.0	R	Coll.	T9S R92W Sec. 19,30,31
Bench #4621.1	9.0	R	G.J.	T15S R17W
Lizard Head #4409.3	2.0	R	Nor.	T41N R10W Sec. 11,12
Dallas #4200	9.0	R	Our.	T44N R8W
Skyline #465 M1 13-22	9.0	R	Ceb.	T43N R2W

TABLE B-1. (Cont.)

Trail Name and Number	Miles	Action*	Ranger District**	Location
(Fiscal Years 1991-1995 Continued)				
Sheep Lake East #848	2.5	R	Pao.	T15S R88W Sec. 5,8
Sheep Lake West #848A	1.5	R	Pao.	T15S R88W Sec. 5,9
West Elk Rim #446	3.0	R	T.R.	T51N R3W Sec. 21,28
Beaver Creek #464	3.0	R	T.R.	T51N R3W Sec. 15,21
Magdalena Gulch #542	3.0	R	T.R.	T13S R80W Sec. 10,29
Smalky Mountain #4531	3.0	R	Coll.	T8S R94W Sec. 20,29,33
Bench #4621.1	9.0	R	G.J.	T15S R17W
Lizard Head #4409.3	2.0	R	Nor.	T41N R10W Sec. 3,10
Cascade #4213	3.6	R	Our.	T44N R7W
Portland #4238	1.8	R	Our.	T44N R7W
Baldy-Horse Thief #4215	4.0	C	Our.	T44N R7W
Ridge Driveway #2330	9.0	R	Ceb.	T43N R6W
North Anthracite #832	8.0	R	Pao.	T12S R88W
Red Mtn. Creek #543	5.0	R	T.R.	T12S R82W Sec. 21,29,32
Texas Creek #416	3.0	R	T.R.	T13S R80W Sec. 34-36
Texas Lake #755	3.0	R	T.R.	T13S R80W Sec. 4-6

Ten Trailheads spread out over the Forest will be reconstructed or constructed during this period.

Total for Fiscal Years 1991-1995 - 231.1 Miles at an estimated cost of \$1,146,271.00***

Grand Total for Fiscal Years 1984-1995 - 483.9 Miles at an estimated cost of \$2,427,205.00***

* Action

R = Reconstruction
C = Construction

** Ranger District

Ceb. = Cebolla
Coll. = Collbran
G.J. = Grand Junction
Nor. = Norwood
Our. = Ouray
Pao. = Paonia
T.R. = Taylor River

***Cost based on 1978 dollars.

APPENDIX C
TEN-YEAR WILDLIFE HABITAT IMPROVEMENT ACTION PLAN

TEN-YEAR WILDLIFE HABITAT IMPROVEMENT ACTION PLAN

Four action plans have been developed to improve wildlife habitat on the Forest. The Colorado State Comprehensive Wildlife Plan helps to set priorities for wildlife and fish projects. Habitat management is a joint effort between the Forest and the DOW. These action plans will continue cooperation and improve project coordination with the DOW. The four action plans displayed are:

- TABLE C-1. Wildlife Structures Action Plan.
- TABLE C-2. Fishery Habitat Action Plan.
- TABLE C-3. Aspen Treatment Action Plan.
- TABLE C-4. Prescribed Burning Action Plan.

The above tables will be amended and revised as the Plan is implemented and other specific needs and projects are identified.

TABLE C-1.

WILDLIFE STRUCTURES ACTION PLAN

Task	Responsibility	Date
Prepare project plans to include wildlife structures.	District Staff	Annually
Prepare and review timber sale (KV)* plans to include wildlife structures.	District Staff	Annually
Review and revise with District Wildlife Manager (DOW)**; establish priorities with Area Wildlife Manager.	District Ranger Supervisor's Staff	Annually
Finalize program budget and final target.	District Ranger Supervisor's Staff	Annually

* KV = The Knutson-Vandenberg Act can require any purchaser of National Forest timber to make deposits to cover the cost of different activities. These activities can include: (1) reforestation, (2) protection, and (3) improvement of the renewable resources of the forest land on a sale area. Specific activities include planting, sowing, maintenance and construction, and wildlife habitat management.

**DOW = Colorado Division of Wildlife

TABLE C-2.

FISHERY HABITAT ACTION PLAN

District*	Drainage or Reservoir	Year			
		1984	1985	1986	1987
Cebolla	Gunnison River Tributaries (structures)	10	10	15	10
Collbran	Kenney Cr. Reservoir Spring Cr. Reservoir Pine Park Reservoir (conservation pool acres)	6	2		5
Grand Junction	Marcott and Current Cr. Beaver Cr. (structures) Grand Mesa Reservoirs (conservation pool numbers)		5 1	5 1	10 1
Norwood	San Miguel River (structures)	50	50		
Ouray	Roubideau Cr. (ponds) Goddard Cr. Middle Fork Cimarron R. East Dallas Cr. (structures) Fish Lakes 1 & 2 (conservation pool numbers)	4 2	10	5	10
Taylor River	Spring Cr. Taylor River North Willow Cr. West Beaver Cr. East River (structures)	40	10 10	10	5 10

*Cooperative Deposits with DOW will exceed targets scheduled for habitat improvement.

TABLE C-3.

ASPEN TREATMENT ACTION PLAN

District	Acres Per Year
Collbran	25
Grand Junction	100
Norwood	25
Ouray	50
Paonia	120
Cebolla	60
Taylor River	120
<u>TOTAL</u>	<u>500</u>

TABLE C-4.

PRESCRIBED BURNING ACTION PLAN

Project Name	Acres	Species	Location	District
(Fiscal Years 1984-1988)				
Hawxhurst	600	Oak	T8S R94W Sec. 32-34,26	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Coyote Basin	250	Oak	T50N R17W Sec. 35&36	Grand Junction
Campbell	500	Oak	T48N R15W Sec. 4-10,14-16,22&23 T49N R15W Sec. 32	Norwood
Iron Springs	80	Oak/Sage	T45N R12W Sec. 35&36 T44N R12W Sec. 1&2	Ouray
Henderson	1,000	Oak	T11S R90W Sec. 3-6	Paonia
Reynolds Cr.	400	Oak	T14S R91W Sec. 23,26,27	Paonia
East Terror B	950	Oak	T12S R91W Sec. 31&32	Paonia
Tomichi Dome	250	Sage	T49N R4E Sec. 33	Cebolla
South Beaver	250	Sage	T46N R1W Sec. 1&11	Cebolla

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1984-1988 Continued)				
Almont	400	Sage	T51N R1E Sec. 25&26	Taylor River
Hightower Mtn.	500	Oak/Sage	T9S R92W Sec. 20,21,27-29	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Blue Spring	200	Oak	T15S R100W Sec. 33&34	Grand Junction
East Branch	500	Oak/P-J	T48N R15W Sec. 9,10,14-16,23	Norwood
Middle Fork	500	Oak	T47N R10W Sec. 19,20,29,30	Ouray
Hotchkiss	400	Oak	T12S R90W Sec. 33-36	Paonia
Bell Creek	600	Oak	T14S R91W Sec. 27&34	Paonia
Tomichi Dome	400	Sage	T49N R4E Sec. 27-34	Cebolla
Alpine Plateau	150	Sage	T46N R4W Sec. 27&34	Cebolla
East Beaver	400	Sage	T51N R2E Sec. 10,15,22,26,27	Taylor River
Dry Mesa	100	Sage	T50N R14W Sec. 13&14 T50N R13W Sec. 18&19	Ouray
Sheep Creek	500	Oak	T8S R92W Sec. 32&33 T9S R92W Sec. 4,5,8,9	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Blue Dog	300	Oak	T51N R16W Sec. 25&36 T51N R15W Sec. 30&31	Grand Junction
North Fork	500	Oak	T48N R15W Sec. 1,12,13,24,25,36 T48N R14W Sec. 6,7,18,19,29,30	Norwood

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1984-1988 Continued)				
Escalante	500	Oak	T49N R14W Sec. 5&6 T50N R14W Sec. 32	Ouray
Roatcap B	100	Sage	T49N R12W Sec. 11	Ouray
Mesa 2	600	Oak/Sage	T49N R6W Sec. 10,15&16	Paonia
East Terror A	900	Oak	T12S R91W Sec. 32&33	Paonia
Black Sage	500	Sage	T49N R4E Sec. 12,13,24	Cebolla
Beaver	400	Sage	T15S R84W Sec. 26,27,34,35	Taylor River
Smalley	500	Oak	T8S R94W Sec. 31	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Lobe & Nelson	350	Oak	T15S R102W Sec. 16-18	Grand Junction
Tabeguache	500	Oak	T48N R14W Sec. 23-26 T48N R13W Sec. 19,20,30-32	Norwood
Big A	200	Oak	T46N R12W Sec. 3,4,9	Ouray
Roatcap C	80	Sage	T49N R12W Sec. 14	Ouray
Dry Fork	700	Oak	T13S R90W Sec. 32-34	Paonia
Lick Creek	1,000	Oak	T14S R90W Sec. 3,4,9-11	Paonia
East Beaver	250	Sage	T47N R1E Sec. 9&10	Cebolla
Bead	250	Sage	T47N R1E Sec. 15&22	Cebolla
Jacks Cabin	400	Sage	T15S R84W Sec. 19,20,29-31	Taylor River
Impson Spring	300	Oak	T45N R12W Sec. 16&17	Ouray

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1984-1988)				
Hawxhurst	500	Oak	T8S R94W Sec. 32-34	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Bear Canyon	190	Oak	T15S R102W 14&15	Grand Junction
Pinto	500	Oak/P-J	T47N R15W Sec. 2,3,10,11,14,15	Norwood
Payne Mesa	120	Sage	T48N R13W Sec. 1	Ouray
Hanks Valley	500	Oak	T46N R11W Sec. 15-17	Ouray
Lone Cabin	1,100	Oak	T14S R91W Sec. 13&24 T14S R90W Sec. 18-20	Paonia
Cow Creek	800	Oak	T15S R91W Sec. 24&25 T15S R90W 29-32	Paonia
Los Pinos	400	Sage	T44N R1W Sec. 2&3 T45N R1W Sec. 33&34	Cebolla
Ohio	400	Aspen/ Sage	Forest Land in Ohio Creek	Taylor River
(Fiscal Years 1989-1993)				
Bald Mountain	500	Oak	T11S R95W Sec. 2&3	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Smith Point	150	Oak/Sage	T51N R16W Sec. 10,15,16	Grand Junction
Buckley	500	Oak/Sage	T47N R14W Sec. 9-11,14-17	Norwood
Traver Mesa	120	Sage	T49N R12W Sec. 29&30	Ouray
W.F. Spring	500	Oak	T47N R11W Sec. 24&25 T47N R10W Sec. 19	Ouray
Landsend	800	Oak	T15S R91W Sec. 10-15	Paonia
Mesa	300	Oak	T49N R91W Sec. 8&9	Paonia

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1989-1993 Continued)				
Dyer	500	Oak	T50N R5 $\frac{1}{2}$ W Sec. 12&24	Paonia
Los Pinos	400	Sage	T45N R1E Sec. 17,18,19	Cebolla
West Fork Stueben	400	Sage	T50N R2W Sec. 32&33	Taylor River
Sheep Creek	500	Oak	T8S R92W Sec. 32&33 T9S R92W Sec. 4,5,8,9	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Red Creek	200	Oak	T51N R15W Sec. 32&33 T50N R15W Sec. 4&5	Grand Junction
Telephone	500	Oak/P-J	T47N R13W Sec. 28-32	Norwood
East Terror C	500	Oak	T12S R91W Sec. 27&28	Paonia
Henderson	1,000	Oak/Sage	T11S R90W Sec. 3-6	Paonia
7N Mesa	100	Sage	T49N R13W Sec. 13,14,23	Ouray
Middle Fork Spring Creek	500	Oak	T47N R10W Sec. 19,20,30	Ouray
Longbranch	400	Sage	T47N R5E Sec. 8,9,17	Cebolla
Rainbow	400	Sage	T50N R3W Sec. 35&36	Taylor River
Hightower Mtn.	500	Oak	T8S R92W Sec. 20,21,27-29	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Bull Dog	500	Oak	T50N R15W Sec. 8,9,16,17	Grand Junction
Dry Park	500	P-J	T46N R13W Sec. 7-10,15-18	Norwood
Roubideau Bench	300	Oak	T48N R12W Sec. 10&15	Ouray
Monitor Mesa	100	Sage	T49N R13W Sec. 11&14	Ouray

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1989-1993 Continued)				
Reynold	400	Oak	T14S R91W Sec. 23,26,27	Paonia
Terror B	950	Oak	T12S R91W Sec. 31,32	Paonia
Needle	250	Sage	T47N R4E Sec. 5&6	Cebolla
Willow	150	Sage	T50N R3E Sec. 21&22	Cebolla
Elk	400	Sage	T49N R4W Sec. 1,12 T50N R3W Sec. 31 T50N R4W Sec. 36	Taylor River
Crum Res.	200	Oak	T11S R96W Sec. 11,14	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Old Man Mtn.	120	Oak	T10S R95W Sec. 35	Collbran
Sheep Creek	180	Oak	T8S R92W Sec. 22,32 T9S R92W Sec. 4,5,8,9	Collbran
Salt House	200	Oak	T50N R15W Sec. 21	Grand Junction
Colony	500	Oak	T47N R14W Sec. 25-17,14-36	Norwood
Murray Park	500	Oak	T48N R12W Sec. 4,5	Ouray
Cottonwood	100	Sage	T49N R13W Sec. 8	Ouray
Hotchkiss	400	Oak	T12S R90W Sec. 33-36	Paonia
Bell Creek	600	Oak	T14S R91W Sec. 27,34,35	Paonia
Pitkin	250	Sage	T49N R3E Sec. 1&2	Cebolla
Rock	250	Sage	T47N R3E Sec. 17&18	Cebolla

TABLE C-4. (Cont.)

Project Name	Acres	Species	Location	District
(Fiscal Years 1989-1993 Continued)				
Soap Creek, Coal Creek	400	Oak	T49N R4W Sec. 3-5,8-10 T50N R4W Sec. 32	Taylor River
New Frontier	500	Oak	T8S R92W Sec. 19,20,28-30	Collbran
Jackpot	580	Oak	Where Conditions Permit	Collbran
Blue Creek	400	Oak	T50N R17W Sec. 2	Grand Junction
Sawmill Mesa	100	Sage	T49N R13W Sec. 7	Ouray
Horseshoe Basin	500	Oak	T49N R12W Sec. 32&33	Ouray
Mesa 2	600	Oak	T49N R6W Sec.10,15,16	Paonia
East Terror A	900	Oak	T12S R91W Sec. 32&33	Paonia
Cottonwood	500	Oak	T47N R13W Sec. 26-27,33,34	Norwood
Red Creek	400	Sage	T50N R3W Sec. 31	Taylor River

APPENDIX D

TEN-YEAR RANGE BETTERMENT ACTION PLAN

TEN-YEAR RANGE BETTERMENT ACTION PLAN

Table D-1 displays the proposed range betterment for the first 10 years of the Plan. It includes miles of fence, number of stockponds, number of spring developments, miles of stocktrail, miles of pipeline, number of cattleguards constructed or reconstructed, and acres of aspen or forage treated.

TABLE D-1.

TEN-YEAR RANGE BETTERMENT ACTION PLAN

Allotment	Ranger District***	Stock- Fence ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1984-1988)					
Buzzard C&H	Collbran	0.5	2	50	
Cheney C&H	Collbran	0.5	2		
Cottonwood C&H	Collbran	1.0			S-1.0 mi.
Spring - Bull C&H	Collbran	1.0			50
Green Mountain C&H	G. J.	1.0			
Kannah Creek C&H	G. J.	1.0			
Leroux Creek C&H	G. J.	0.5			
Whitewater C&H	G. J.	1.0			
Blue Creek C&H	G. J.		5		200
Campbell Point C&H	G. J.	1.0			
Dominguez C&H	G. J.		4		
Lakes C&H	G. J.	1.5			
Musser C&H	G. J.	1.0			
Ridge C&H	G. J.		1		
Smith Point C&H	G. J.	3.0		1	
Cottonwood C&H	Norwood	1.0	1		100
Clear Creek C&H	Ouray				200
Craig Point C&H	Ouray				400
Dry Fork C&H	Ouray	1.0		2	
Lazy Y C&H	Ouray				200
Roubideau C&H	Ouray	2.0		2	500
Dave Wood C&H	Ouray			2	
Sanborn Park C&H	Ouray		2	1	
Red Canyon/ Dry Creek S&G	Ouray		2	1	
Love Mesa C&H	Ouray			4	
Neale C&H	Ouray				700
South Beaver C&H	Cebolla	1.0			
Los Pinos C&H	Cebolla			1	P-1.0 mi.
San Luis C&H	Cebolla			1	P-1.0 mi.
Prosser C&H	Cebolla				400

TABLE D-1. (Cont.)

Allotment	Ranger District***	Stock- Fence ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1984-1988 Continued)					
Agate C&H	Cebolla				400
Longbranch C&H	Cebolla				20
Mineral Creek C&H	Cebolla				20
Dyer C&H	Paonia	8			
Dry Fork C&H	Paonia	2.0		S-2.0 mi.	
Mule Park C&H	Paonia	2.0			
Henderson C&H	Paonia	1.0			500
Minnesota C&H	Paonia		2	S-2.0 mi.	200
East Terror C&H	Paonia				450
Mesa C&H	Paonia				200
West Muddy D.U.	Paonia	2.0			
Beckwith C&H	T. R.		2	S-1.0 mi.	
Lost Canyon C&H	T. R.	4.0			
Rainbow C&H	T. R.	1.0			
Slate River C&H	T. R.		1	2	
Soap Creek C&H	T. R.	2.0			
Taylor Park C&H	T. R.	3.0			400
Soap Mesa C&H	T. R.	1.5			
Leon C&H	Collbran	0.5	2	2	100
Porter C&H	Collbran				50
Kimball Creek C&H	Collbran	0.5		1	
Hawxhurst Cr C&H	Collbran	0.5	1	2	
Plateau Creek C&H	Collbran	0.5		1	
Big Creek C&H	Collbran		1	1	
Green Mtn.C&H	G. J.	1.5			
Kannah Creek C&H	G. J.	1.5			S-1.0 mi.
Point C&H	G. J.	1.0			
Campbell Point C&H	G. J.	2.0			
Club C&H	G. J.	1.0			
Ridge C&H	G. J.	1.75			
Fruita Division	G. J.	3.0			
Forty Seven C&H	Norwood	1.5			
West Naturita C&H	Norwood	1.0			100
Boyden C&H	Ouray	2.0		2	200
Creek C&H	Ouray		1	3	20
Government	Ouray		2		
Springs C&H					
Love Mesa C&H	Ouray			4	C-1 ea.
Monitor C&H	Ouray				S-1.0 mi.
North Creek C&H	Ouray	2.0			300

TABLE D-1. (Cont.)

Allotment	Ranger District***	Stock- Fence ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1984-1988 Continued)					
Neale C&H	Ouray				300
Red Canyon/ Dry Fork S&G	Ouray		2		
Alpine Plateau C&H	Cebolla	2.0			
Cold Springs C&H	Cebolla		2	1	P-.5 mi.
Prosser C&H	Cebolla	3.0			
Tomichi Dome C&H	Cebolla				250
South Beaver C&H					250
East Turner D.U.	Paonia	2.0			
Munsey C&H	Paonia			2	
Hotchkiss S&G	Paonia		14		200
Williams Creek C&H	Paonia		6		
Snowshoe C&H	Paonia				300
Beckwith C&H	T. R.				100
Rainbow C&H	T. R.				400
Slate River C&H	T. R.				200
Taylor Park C&H	T. R.	4.0			
Soap Mesa C&H	T. R.	1.5			
Little Alkali C&H	T. R.		2		
Gothic C&H	T. R.		2		
Buzzard C&H	Collbran	0.5	3	2	500
Cheney C&H	Collbran	1.0	2		
Coon Creek C&H	Collbran				50
Cottonwood C&H	Collbran			1	50
Porter C&H	Collbran	0.5			50
Green Mountain C&H	G. J.	1.5	4		
Milk Creek C&H	G. J.	1.0			
Kannah Creek C&H	G. J.	3.75	6		
Whitewater C&H	G. J.	1.0			
Blue Creek C&H	G. J.		6		
Campbell Point C&H	G. J.	2.0			
Fruita Division	G. J.	3.0			
Basin C&H	Norwood	1.0			200
Beaver Park C&H	Norwood	1.0	2		
Dry Fork C&H	Ouray				A-20 ac. 300
Government Springs C&H	Ouray	2.0			
Horsefly C&H	Ouray				200
Lazy Y C&H	Ouray		2	6	
Monitor C&H	Ouray				C-1 ea.
North Creek C&H	Ouray		2		250
Ponderosa C&H	Ouray			3	100

TABLE D-1. (Cont.)

Allotment	Ranger District***	Fence	Stock- ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1984-1988 Continued)						
Black Sage C&H	Cebolla		1	2		
Tomichi Dome C&H	Cebolla	2.0	1	2		400
Daly Dawson C&H	Cebolla	2.0				
Alpine Plateau C&H	Cebolla					150
East Turner D.U.	Paonia	2.0				
West Muddy C&H	Paonia		5			
West Terror C&H	Paonia		5			
Mesa C&H	Paonia					500
East Terror C&H	Paonia					450
Soap Creek C&H	T. R.		2			
Soap Mesa C&H	T. R.	1.5				
Cunningham C&H	T. R.	3.0				
Beaver Creek C&H	T. R.					400
Condemn It Park S&G	Paonia		4			
Sheep Park S&G	Paonia		4			
Buzzard C&H	Collbran	1.0	3	2		50
Cheney C&H	Collbran	0.5		2		50
Brush Creek C&H	Collbran	0.5		2	S-1.0 ml.	
Big Creek C&H	Collbran			2		50
Kannah Creek C&H	G. J.	2.5				100
Leroux Creek C&H	G. J.		4	2		
Dominguez C&H	G. J.					600
Smith Point C&H	G. J.				P-5.0 ml.	
Sheep Creek C&H	Norwood	1.5		2		300
Boydén C&H	Ouray					300
Love Mesa C&H	Ouray	2.0	2			300
North Creek C&H	Ouray			3		
25 Mesa C&H	Ouray					200
Dave Wood C&H	Ouray	1.0	1			
Cold Springs C&H	Cebolla	2.0				
Cross Creek C&H	Cebolla	3.0				
Daly Dawson C&H	Cebolla		1	1		
East Beaver C&H	Cebolla			1		
Black Sage C&H	Cebolla					500
Dyer C&H	Paonia	1.0		4		
Mule Park C&H	Paonia		10			200
Williams Creek C&H	Paonia		5			
Dry Fork C&H	Paonia					700
Mesa C&H	Paonia					300
Gothic C&H	T. R.		2			
Red Creek C&H	T. R.					400
Dry Basin C&H	T. R.		4			
Castleton C&H	T. R.	4.0				
Antelope C&H	T. R.					200

TABLE D-1. (Cont.)

Allotment	Ranger District***	Fence	Stock-ponds	Spring Dev. #	Other*	Forage Treatment**
(Fiscal Years 1984-1988 Continued)						
Cottonwood C&H	Collbran	0.5	2	1		
Leon C&H	Collbran	1.0	2	2		50
Plateau C&H	Collbran	0.5	2		S-1.0 mi.	50
Green Mountain C&H	G. J.	1.0		2		100
Leroux C&H	G. J.	1.0				100
Mudholes C&H	G. J.	2.0	4			600
Orr C&H	Norwood	1.5	1			
Boyden C&H	Ouray			2		300
Clear Creek	Ouray	3.0				
Dry Fork C&H	Ouray			2	A-10 ac	200
Horsefly C&H	Ouray	1.0	2			
Ponderosa C&H	Ouray			2		
Neale C&H	Ouray		2			300
Longbranch C&H	Cebolla	3.0	4	1		
East Beaver C&H	Cebolla					250
Bead C&H	Cebolla					250
Baldy Chato C&H	Cebolla		2			
Dry Fork C&H	Paonia	2.0				
Mule Park C&H	Paonia	2.0				
Williams Creek C&H	Paonia	3.0				
(Fiscal Years 1989-1993)						
East Terror C&H	Paonia		5			
Henderson C&H	Paonia		3			
Minnesota C&H	Paonia					500
Hotchkiss S&G	Paonia					700
Lost Canyon C&H	T. R.					500
Slate River C&H	T. R.	1.0	4			
Spring Creek C&H	T. R.		4	1		
Leon C&H	Collbran	0.5				50
Brush Creek C&H	Collbran	0.25				25
Kimball Creek C&H	Collbran	0.5	2	1	S-0.5 mi.	25
Hawxhurst Cr C&H	Collbran	0.5	2	1		
Big Creek C&H	Collbran	0.25	3			
Milk Creek C&H	G. J.	1.0				
Ward Creek C&H	G. J.	1.0				
Whitewater C&H	G. J.	1.0		1		
Musser C&H	G. J.	2.0	6		S-2.0 mi.	600
East Naturita C&H	Norwood	1.5		1		
Clear Creek C&H	Ouray			2		
Dry Fork C&H	Ouray					250
North Creek C&H	Ouray					300

TABLE D-1. (Cont.)

Allotment	Ranger District***	Stock- Fence ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1989-1993 Continued)					
Ponderosa C&H	Ouray	3.0			
Spring Creek C&H	Ouray	3.0			200
25 Mesa C&H	Ouray		2		
Dave Wood C&H	Ouray			3	
Los Pinos C&H	Cebolla		5	1	400
Monchego C&H	Cebolla	2.0			
Meyers C&H	Cebolla	1.0			
Minnesota C&H	Paonia			1	
Mesa C&H	Paonia		10		300
Dyer C&H	Paonia				400
Beckwith C&H	T. R.				300
Taylor Park C&H	T. R.				500
Beaver C&H	T. R.				200
Castleton C&H	T. R.		6		
Antelope C&H	T. R.	3.0			
Carbon C&H	T. R.	4.0	2		
Buzzard C&H	Collbran	0.5		3	500
Coon Creek C&H	Collbran	0.5			
Cottonwood C&H	Collbran	0.5	2	1	50
Porter C&H	Collbran			1	S-0.5 mi. 100
Spring - Bull C&H	Collbran	0.5		1	S-0.5 mi. 50
Point C&H	G. J.	1.0			100
Leroux Creek C&H	G. J.	1.0			
Whitewater C&H	G. J.	1.0			
Lakes C&H	G. J.	2.0	5		
Smith Point C&H	G. J.				600
Portis C&H	Norwood	1.0	1		100
Dry Fork C&H	Ouray			3	
Lazy Y C&H	Ouray		2		200
Love Mesa	Ouray				200
Monitor C&H	Ouray	2.0		4	300
Ponderosa C&H	Ouray				A-10 Ac.
Hank's Valley C&H	Ouray				200
Los Pinos C&H	Cebolla	2.0			400
Monchego C&H	Cebolla		2	1	
Meyers C&H	Cebolla		2		
Needle	Cebolla	2.0			
Henderson C&H	Paonia	3.0			600
West Muddy C&H	Paonia	2.0			
Dry Fork C&H	Paonia		5		
Minnesota C&H	Paonia		25		
East Terror C&H	Paonia				200

TABLE D-1. (Cont.)

Allotment	Ranger District***	Stock-Fence ponds	Spring Dev. #	Other*	Forage Treatment**
(Fiscal Years 1989-1993 Continued)					
Dyer C&H	Paonia				50
Spring Creek C&H	T. R.				400
Cunningham C&H	T. R.				100
Beaver Creek C&H	T. R.	2	1		
Coon Creek C&H	Collbran	0.5			
Spring - Bull C&H	Collbran				50
Brush Creek C&H	Collbran	0.5	1	2	50
Plateau Creek C&H	Collbran			2	
West Bench C&H (All)	Collbran	0.5			
Big Creek C&H	Collbran	1.0	3		
Green Mountain C&H	G. J.	1.0			
Kannah Creek C&H	G. J.				S-1.0 mi.
Point C&H	G. J.	1.0	2		
Lakes C&H	G. J.				200
Sheep Creek C&H	Norwood	1.5		2	
Orr C&H	Norwood	1.5			
West Naturita C&H	Norwood	1.0	1		150
Boyden C&H	Ouray				200
Craig Point C&H	Ouray		3		
Government Springs C&H	Ouray				200
Love Mesa C&H	Ouray			6	200
Spring Creek C&H	Ouray				300
25 Mesa C&H	Ouray	2.0			
Needle C&H	Cebolla			2	
Pitkin C&H	Cebolla			2	
Razor C&H	Cebolla	2.0	1	1	
Longbranch C&H	Cebolla				400
Dry Fork C&H	Paonia	2.0		2	S-2.0 mi.
Dyer C&H	Paonia	2.0			
Mesa C&H	Paonia	6.0	10		
Minnesota C&H	Paonia		4		S-2.0 mi. 200
Munsey C&H	Paonia		2		
Gothic C&H	T. R.				400
West Brush C&H	T. R.	2.0			
Carbon C&H	T. R.	2.0			
Buzzard C&H	Collbran	1.0		3	200
Porter C&H	Collbran	1.0	2		
Big Creek C&H	Collbran	0.5	3		
Milk Creek C&H	G. J.	1.0		2	
Ward Creek C&H	G. J.	1.0	2		S-1.0 mi.
Campbell Point C&H	G. J.			3	

TABLE D-1. (Cont.)

Allotment	Ranger District***	Fence	Stock-ponds	Spring Dev. #	Other*	Forage Treatment**
(Fiscal Years 1989-1993 Continued)						
Club C&H	G. J.	2.0		4		
Dominguez C&H	G. J.					600
Fruita Division	G. J.	2.0		2		
Cottonwood C&H	Norwood	1.0				200
East Naturita C&H	Norwood					200
Clear Creek C&H	Ouray			2		
Government Springs C&H	Ouray					300
Monitor C&H	Ouray					300
North Creek C&H	Ouray		2	2		
Ponderosa C&H	Ouray					200
Neale C&H	Ouray			2		
Pitkin C&H	Cebolla	2.0				
Sawtooth C&H	Cebolla	1.0	3			
Willow C&H	Cebolla	1.0				150
Needle C&H	Cebolla					250
West Terror C&H	Paonia		5			
Snowshoe C&H	Paonia		5			
Mesa C&H	Paonia			2		
Hotchkiss S&G	Paonia					200
Minnesota C&H	Paonia					500
Soap Creek C&H	T. R.					400
Cement Creek C&H	T. R.		4	2		
Cheney C&H	Collbran	0.5		1		
Cottonwood C&H	Collbran			1		
Leon C&H	Collbran					50
Porter C&H	Collbran	0.5		3	S-0.5 mi.	50
Hawxhurst Cr C&H	Collbran	0.5	2	1		
Ward Creek C&H	G. J.	1.0				
Leroux Creek C&H	G. J.	1.0				
Whitewater C&H	G. J.					100
Blue Creek C&H	G. J.	2.0		3	S-1.0 mi.	
Mudholes C&H	G. J.					600
Fruita Division	G. J.	2.0				
Forty Seven C&H	Norwood	1.5				100
Basin C&H	Norwood	2.0	2			200
Roubideau C&H	Ouray		2	3		400
Dave Wood C&H	Ouray		2	1		
Sanborn Park C&H	Ouray					200
Pitkin C&H	Cebolla					250
Rock C&H	Cebolla					250
Dome C&H	Cebolla	3.0	1			
Mule Park C&H	Paonia		5			

TABLE D-1. (Cont.)

Allotment	Ranger District***	Stock- Fence ponds	Spring Dev. #	Other*	Forage Treat- ment**
(Fiscal Years 1989-1993 Continued)					
East Turner D.U.	Paonia	2			
Mesa C&H	Paonia				400
East Terror C&H	Paonia				300
Lost Canyon C&H	T. R.	3.0			300
Red Creek C&H	T. R.		2		
Taylor Park C&H	T. R.				500
Soap Mesa C&H	T. R.		4		
Dry Basin C&H	T. R.	2.0		2	

* Other

S = Stocktrail A = Aspen Treatment

C = Cattleguard P = Pipeline

** Forage treatment may include herbicide, mechanical (rotobearing, roller chopping, seeding, etc.), burning, and biological. Measurement is in acres.

***Ranger District

G.J. = Grand Junction

T.R. = Taylor River

APPENDIX E
TEN-YEAR TIMBER ACTION PLAN

TEN-YEAR TIMBER ACTION PLAN

Table E-1 displays the proposed timber sales for the first 10 years of the Plan. It includes sale name, ranger district, management area, location, species type, species volume, species acres, harvest method, logging method, and road miles.

TABLE E-1.

TEN-YEAR TIMBER ACTION PLAN

Sale Name	Ranger District	Management Area	Location	Species*		Harvest Method**	Logging Method***	Road Miles****
				Type	Vol. Acres			
(Fiscal Year 1984)								
Monument Hill	Grand Junction	4D & 9B	T49N R15W Sec. 7,8 T49N R16W Sec. 12	A	2 0 200	CC-200	T-200	C-0 R-0
Ute	Norwood	7E	T47N R13W Sec. 34-36 T46N R13W Sec. 1-3, 10,11	PP	2 8 1100	SW-1100	T-1100	C-7.3 R-2.3
Rocky Brook	Taylor River	7E	T13S R83W Sec. 28,29, 32,33	SF	3 3 1000	SW-1000	T-1000	C-1.0 R-0
Cameron Park	Cebolla	7E	T47N R5E Sec. 13,24,25 T47N R6E Sec. 7,18, 19,30	LPP SF	4.0 400 1.8 460	CC-400 SW-460	T-860	C-.8 R-1.1
Hay Park	Grand Junction	7E	T12S R94W Sec. 3,4,5, 8-10,16	SF	3 2 1600	SW-1600	T-1600	C-6.9 R-0
Illinois Creek	Taylor River	7E & 7A	T13S R81W Sec 19 T13S R82W Sec 9, 10, 13-16, 21-24	LPP SF	4.5 900 1.0 350	SW-500 IC-750	T-1250	C-6.0 R-1.0
Small Sales	All	Various		PP LPP SF A	3 3 1200 5.5 660 3 0 1000 0.6 180	SW-2200 CC-840	T-2125	C-0 R-0

TABLE E-1. (Cont.)

Sale Name	Ranger District	Management Area	Location	Species*			Harvest Method**	Logging Method***	Road Miles****
				Type	Vol	Acres			
(Fiscal Year 1985)									
Cathedral Creek	Cebolla	7E	T45N R1W Sec 33,34 T44N R1W Sec. 2-4,9, 10,15,16	SF	4.2	1100	SW-1100	T-1100	C-3.5 R-0
Bear Creek	Taylor River	7C & 7E	T13S R84W Sec. 33-35 T14S R84W Sec. 2-4,9-11	LPP SF	1.5 4.5	320 1480	SW-1620 CC-180	T-1800	R-2.0 C-5.5
Swamp	Norwood	7E	T41N R12W Sec 3,4,9,10	SF	3.3	280	SW-195	T-280	C-0 R-0
South Divide	Ouray	7E	T47N R11W Sec. 29-35 T46N R11W Sec 1-6,8-11	SF A	7.0 0.5	2850 150	SW-2500 IC-500	T-3000	C-5.2 R-13.2
Muender Mill	Grand Junction	7E	T12S R96W Sec. 5-8 T12S R97W	SF	1.5	575	SW-575	T-575	C-0 R-1.1
Mill Creek #2	Cebolla	2B & 7E	T43N R3W Sec 3,4,9,10	SF	2.3	440	SW-440	T-440	C-2.3 R-0
Little Cone	Norwood	7E	T43N R11W Sec. 32-34 T42N R11W Sec 4-6,8,9	SF	4.7	900	SW-850 IC-50	T-900	C-5.7 R-1.9
Englehart	Collbran	7E	T11S R94W Sec. 1-3,10-15 T11S R93W Sec. 18	SF	8.0	2173	SW-1800 IC-373	T-2173	C-4.0 R-8.7
Little Red	Ouray	7E	T46N R12W Sec 3,4,9,20 16,17	SF A	4.8 0.2	1400 100	SW-1400 CC-100	T-1500	C-4.0 R-1.2
Trickle Park #1	Grand Junction	7E	T11S R94W Sec. 26,34,35,36 T12S R94W Sec. 2,3	SF	1.7	1400	SW-1400	T-1400	C-3.8 R-0
Small Sales	All	Various		PP LPP SF A	1.5 4.0 3.0 2.3	400 400 800 200	SW-1200 CC-600	T-1800	C-0 R-0
(Fiscal Year 1986)									
Hubbard	Paonia	7E	T11S R91W Sec. 30,31 T11S R92W Sec 23,35,36 T12S R91W Sec. 6-8,18 T12S R92W Sec. 1,2, 11, 12,13	SF A	7.2 0.7	1077 200	SW-1077 CC-200	T-1277	C-4.9 R-0
47 Creek	Norwood	7E	T48N R15W Sec. 22-27,35	PP	4.0	1340	SW-1340	T-1340	C-12.5 R-0
Deadman #4	Cebolla	7E	T47N R3E Sec. 25,26,27, 35,36 T46N R3E Sec. 2	LPP SF	2.7 0.6	350 50	CC-350 SW-50	T-400	C-4.0 R-0

TABLE E-1. (Cont.)

Sale Name	Ranger District	Management Area	Location	Species*			Harvest Method**	Logging Method***	Road Miles****
				Type	Vol.	Acres			
Van Boxel	Ouray	7E	T46N R6W Sec. 14,15, 22,23,26,27	SF	7 0	1050	SW-1050	T-1050	C-7.0 R-0
South Trail	Taylor	7A & 7E	T13S R82W Sec. 19,30,31 T13S R83W Sec 13,23-26, 35,36	LPP SF	4 0 3.0	400 1500	CC-400 SW-1500	T-1900	C-7.0 R-0
Preachers Hole	Norwood	7E	T42N R13W Sec. 10,14,15	SF	2.3	900	SW-900	T-900	C-2.3 R-2 0
Monument Creek	Cebolla	7E	T46N R1E Sec. 7,17-20 T46N R1W Sec 11-11	LPP	3.5	1900	SW-500 CC-1000 IC-400	T-1900	C-2.7 R-1.2
Antelope Creek	Taylor River	7E	T51N R2W Sec. 13,14, 21-23,26-28 34,35 T50N R2W Sec. 2,3	SF	6 0	1100	SW-880 IC-220	T-1100	C-7.0 R-4.0
Big Creek	Colibran	7E	T11S R94W Sec. 5-9 T11S R95W Sec. 1,2	SF	3 0	1600	SW-1600	T-1600	C-2.1 R-0
Pine Ridge	Norwood	7E	T47N R13W Sec. 27,34,35	PP	3.0	1500	SW-1500	T-1500	C-2.3 R-1
Small Sales	All	Various		PP LPP SF A	1.5 3.0 1 8 1 7	500 300 600 100	SW-1100 CC-400	T-1500	C-0 R-0
(Fiscal Year 1987)									
Boston Peak	Taylor River	7C & 7E	T14S R84W Sec. 1,2,11,12 T13S R84W Sec. 25-27, 35,36	LPP SF	3.5 3.0	1400 1400	CC-1200 SW-1000 IC-600	T-2800	C-4.3 R-0
Willow	Taylor River	7A & 7C	T15S R82W Sec. 13,14,23	SF	2.0	1000	CC-650 IC-350	T-1000	C-0.6 R-0
Lumber	Taylor River	7E	T13S R83W Sec. 28,29,32, 33	LPP SF	1 1 3 4	500 1500	SW-1500 IC-500	T-2000	C-1.1 R-0 5
Dyke-Elk Creek	Paonia	7E	T11S R91W Sec 7,17-20 T11S R92W Sec 12-14, 23,24	SF A	8 0 0 8	1988 212	SW-1988 CC-212	T-2220	C-11.6 R-3.5
Rambouillet Creek	Cebolla	7E	T43N R3W Sec. 27,33, 34,35	SF	4.4	1245	SW-1245	T-1245	C-4.0 R-0
Dillard	Ouray	7E	T49N R14W Sec. 19-21, 28-33 T48N R14W Sec. 5	SF	6 5	2800	SW-2800	T-2800	C-4.0 R-1.5
Canyon Creek	Cebolla	7A	T50N R4E Sec. 24,25 T50N R5E Sec 18,19	LPP	4.2	800	CC-400 IC-400	T-800	C-5.0 R-0

TABLE E-1. (Cont.)

Sale Name	Ranger District	Management Area	Location	Species*			Harvest Method**	Logging Method***	Road Miles****
				Type	Vol	Acres			
Monarch	Cebolla	1B & 7E	T49N R5E	LPP	2.0	1500	SW-1500	T-2000	C-8.0
			Sec 12,13,24, 25,35,36 T49N R6E Sec. 18,19,30,31	SF	0.7	500	CC-500		R-0
Failles Creek	Ouray	7E	T46N R5W Sec. 8,9,15 16,17,21,22,27, 28	SF	10.0	2000	SW-2000	T-2000	C-10.0 R-0
Small Sales	All	Various		PP	1.6	230	SW-730	T-970	C-0
				LPP	2.0	180	CC-240		R-0
				SF	1.3	500			
				A	0.5	60			
(Fiscal Year 1988)									
West Sleuth	Norwood	7E & 6D	T42N R12W	SF	2.8	1000	SW-1250	T-1250	C-2.0
			Sec 19,20,29, 30	A	0.7	250			R-1.0
Doctor Park	Taylor River	7E	T14S R84W	LPP	3.0	2000	SW-2000	T-3000	C-3.8
			Sec 25,35,36	SF	2.0	1000	CC-1000		R-0
			T15S R84W Sec 1,2						
			T15S R83W Sec. 6						
Cottonwood	Ouray	7E	T49N R14W	SF	6.6	2800	SW-2800	T-3100	C-4.1
			Sec 26,27,34, 35	A	0.7	300	CC-300		R-2.4
			T48N R14W Sec 3-5						
North Quartz	Cebolla	7C	T51N R4E	LPP	4.2	2100	CC-1700	T-2100	C-0.9
			Sec. 36				IC-400		R-0.3
			T50N R4E Sec. 1,11,12						
			T51N R5E Sec. 30,31						
			T50N R5E Sec. 6						
Small Sales	All	Various		PP	0.7	230	SW-730	T-990	C-0
				LPP	2.1	200	CC-260		R-0
				SF	1.6	500			
				A	0.6	60			
(Fiscal Year 1989)									
Dallas	Ouray	2B	T44N R9W Sec 23-26	SF	3.5	1000	SW-1000	T-1000	C-0 R-9.0
Little Gutshall	Ouray	7E	T45N R12W Sec 2-4,8-11, 15-17	PP	2.0	2200	SW-2200	T-2200	C-3.3 R-1.2
North Trail Creek	Taylor River	7A & 7E	T13S R83W	LPP	5.0	2000	SW-2500	T-4000	C-5.4
			Sec 26,27, 33-35	SF	2.5	2000	CC-1500		R-2.0
Sawmill Park	Cebolla	7E & 9B	T47N R5E	SF	4.6	680	SW-880	T-1180	C-3.0
			Sec 22-27	LPP	3.7	500	CC-300		R-0
Trickle Park #2	Grand Junction	7E	T11S R94W Sec. 25,26 T11S R93W Sec. 31	SF	1.7	1000	SW-1000	T-1000	C-0.6 R-0.2
Small Sales	All	Various		LPP	1.0	200	SW-690	T-890	C-0
				SF	0.5	630	CC-200		R-0
				A	0.5	60			

TABLE E-1. (Cont.)

Sale Name	Ranger District	Management Area	Location	Species*		Harvest Method**	Logging Method***	Road Miles****
				Type	Vol Acres			
(Fiscal Year 1990)								
Blue Mud	Norwood	7E	T47N R13W Sec 16-21	PP	3 9 1800	SW-1800	T-1800	C-0.9 R-0.3
Johnson Spring	Ouray	7E	T46N R11W Sec. 11-14, 23,24 T46N R10W Sec. 18-20	SF A	4.7 2000 1 4 600	SW-2600	T-2600	C-1.4 R-0.3
Monchego	Cebolla	7E & 5B	T45N R3E Sec. 14,17, 20-23,26-32 T45N R2E Sec 35,36 T44N R2E Sec 1	SF	9 3 4800	SW-4800	T-4800	C-5.2 R-2.5
Small Sales	All	Various		PP LPP SF A	1.0 270 2.2 220 1.7 560 0.8 6.	SW-830 CC-280	T-1110	C-0 R-0
(Fiscal Year 1991)								
Castle Creek	Taylor River	7A & 7E	T15S R87W Sec 3,4,8-10, 14-16,22,23, 25-27	LPP SF	1.0 500 5.5 4000	IC-500 SW-3700 CC-300	T-4500	C-2.1 R-0.6
Armstrong	Cebolla	7E	T51N R4E Sec 21,27-28, 33-35	SF	4.6 2200	SW-2200	T-2200	C-1.1 R-0.3
West Fork	Ouray	7A	T48N R12W Sec. 28,33 T47N R12W Sec. 4	PP A	2.6 1600 0.2 100	CC-100 IC-1600	T-1700	C-0.6 R-0.2
North Creek	Ouray	7E	T45N R11W Sec. 16,19-22, 27-30	PP	4 6 2200	SW-1700 IC-500	T-2200	C-1.0 R-0.4
Small Sales	All	Various		PP LPP SF A	1.5 500 2.7 270 1.7 560 0.6 6.	SW-1060 CC-330	T-1390	C-0 R-.
(Fiscal Year 1992)								
Wolverine	Cebolla	7E	T46N R3E Sec 1-3,8-12, 14-17	SF	5 5 2800	SW-2800	T-2800	C-4.3 R-2.
Long Branch	Cebolla	7E & 9B	T47N R5E Sec. 9,10,15, 16,21,22, 27,34,35	SF	1.4 450	SW-450	T-450	C-1.4 R-0.6
Columbine West	Ouray	7E	T48N R14W Sec. 9-11, 14-17	SF A	6.7 3000 0 4 200	SW-3000 CC-200	T-3200	C-1.5 R-0.5
Trickle Park #3	Grand Junction	7E	T12S R94W Sec. 2-5, 10,11 T11S R94W Sec. 27, 28-32, 33, 34	SF A	3.5 1450 0.3 150	SW-1400 IC-200	T-1600	C-0.7 R-0.3

TABLE E-1. (Cont.)

Sale Name	Ranger District	Management Area	Location	Species*		Harvest Method**	Logging Method***	Road Miles****
				Type	Vol. Acres			
Leon Peak	Collbran	7E	T11S R94W Sec. 13-15, 23, 24 T11S R93W Sec. 7, 18	SF	2.5 1600	SW-1600	T-1600	C-0 7 R-0
Small Sales	All	Various		PP	0.7 250	SW-700	T-1600	C-0
				LPP	2.0 670	CC-830		R-0
				SF	1.5 520	IC-70		
				A	0.5 160			
(Fiscal Year 1993)								
Spring Creek	Taylor River	7E	T14S R84W Sec 1,2,11,12 T14S R83W Sec 6,7 T13S R84W Sec 35,36	LPP	1.5 500	SW-2200	T-2500	C-2.5
				SF	9.0 3000	IC-1000 CC-300	S-1000	R-0
Cow Creek	Cebolla	7E & 5B	T49N R5E Sec. 19,29,30, 31-33 T48N R5E Sec 4-6 T49N R4E Sec 25,26,35 T49N R4E Sec 24,25,36	SF	5.6 2700	SW-2500	T-2700	C-1.3
						IC-200		R-0
Sheep Creek	Norwood	7E	T47N R12W Sec. 19, 20 21, 29	SF	3.5 1380	SW-1380	T-1380	C-0.6 R-0.3
Small Sales	All	Various		PP	0.8 270	SW-800	T-1100	C-0
				LPP	2.4 240	CC-300		R-0
				SF	1.6 530			
				A	0.6 6.			

* Species
Species Type
SF = Spruce-Fir
A = Aspen
LPP = Lodgepole Pine
PP = Ponderosa Pine

Species Volume
Volume in Million Board Feet.

***Logging Method
T = Tractor
S = Cable

** Harvest Method
SW = Shelterwood
CC = Clearcut
IC = Intermediate Cut

****Road Miles
R = Reconstruction
C = Construction

APPENDIX F

LAND CAPABLE, AVAILABLE AND SUITABLE FOR TIMBER
PRODUCTION AND INVENTORY SUMMARY FOR THE PLAN

LAND CAPABLE, AVAILABLE, AND SUITABLE FOR TIMBER
PRODUCTION AND INVENTORY SUMMARY FOR THE PLAN

The tables and figures that follow display the Forest land relative to its suitability for timber production.

- Table F-1 displays land capable, available, and tentatively suitable for timber production including criteria.
- Table F-2 displays additional adjustments to the tentatively suitable land and the reason(s) for the adjustment.
- Figure F-1 displays the land classification displayed in Tables F-1 and F-2.
- Table F-3 displays inventory and management data comparison with the previous timber management plan.
- Table F-4 displays Allowable Sale Quantity and the annual RPA target statement.
- Table F-5 displays the annual Allowable Sale Quantity and the programmed sale statement.
- Figure F-2 displays Allowable Sale Quantity, Base Sale Schedule, and long-term sustained yield capacity.
- Table F-6 displays the timber land use classification and inventory summary for the Forest.
- Table F-7 displays the growth rates to 2030 for the President's Revised Statement of Policy.

TABLE F-1.

LAND CAPABLE, AVAILABLE, AND TENTATIVELY SUITABLE FOR TIMBER PRODUCTION

Criterion	Classification	Acres
	Net National Forest Ownership	2,953,186
Minimum Biological Growth Standard (20 CF/Ac/Yr)	Water	15,199
	Non-Forested Land	715,907
	Forested Land	
	A. Not Capable (Less than 20 CF/Ac/Yr)	848,337
Legislatively or Administratively Withdrawn	B. Capable but not Available	
	1. Reserved Wilderness Research Areas	213,249 426
	2. Deferred Wilderness Study Areas designated by Congress. designated by Administration.	32,181
	C. Capable and Available but not Suitable	
Lack of Technology	1. Technologically Not Suitable Irreversible Soil or Watershed Damage	37,381
	2. Administratively Not Suitable, Experimental Forest, & Admini- strative Sites.	1,298
Administrative Allocation	D. Capable Available and Tentatively Suitable Land.	1,089,208

TABLE F-2.

DISTRIBUTION OF TENTATIVELY SUITABLE LAND
(Plan)

Distribution Adjustments	Acres
Capable, Available and Tentatively Suitable Forest Land	1,089,208
Adjustments to specific allocations by cause:	
A. Timber production incompatible with allocation Capable and Tentatively Suitable Land	-1,173
B. Economically not Suitable Markets not Available (Aspen) High Logging Cost	462,183 144,280
C. Capable, available and suitable but surplus to timber production objectives.	7,667
Land Suitable for Timber Production	476,251

FIGURE F-1.

LAND SUITABLE FOR TIMBER PRODUCTION

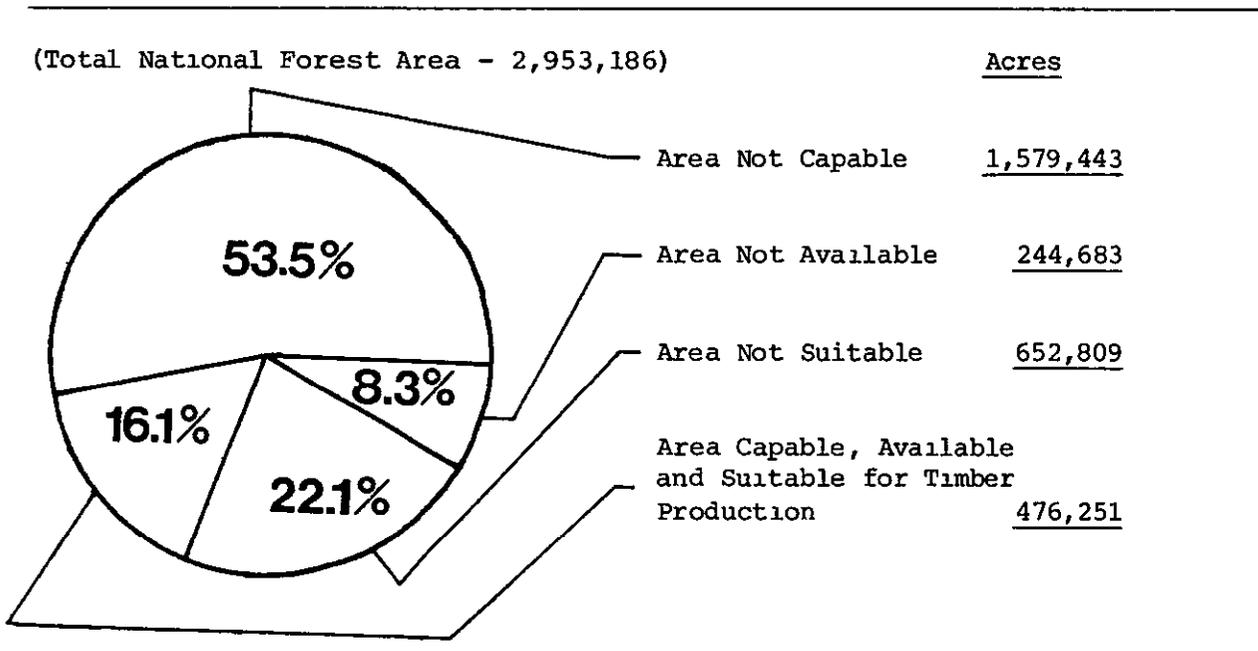


TABLE F-3.

COMPARISON WITH PREVIOUS PLAN*
(Part A.**)

	Previous Plan Acres	This Plan Acres	Percent Change (%)***
Area Summary			
Net National Forest	2,952,779	2,953,186	-
Total Forest Land	2,139,859	2,222,080	+ 4%
Total Productive Forest Land/ Capable Forest Land	1,762,419	1,373,743	- 22%
Total Comm. Forest Land/ Available Productive Forest Land	1,440,211	1,144,702	- 20%
Total Non-Productive/ Not Capable Forest Land	337,440	848,337	+ 225%
Total Non-Forest	812,920	731,106	- 10%
Productive Forest Land Not Available			
Productive Reserved	253,250	212,502	- 16%
Productive Deferred	68,958	32,181	- 47%

** Combined Grand Mesa, Uncompahgre and Gunnison Timber Management Plans.

*** Percent Change from Previous Plan. See Page F-14.

(Part B.)

Previous Plan Commercial Forest Land	Acres	This Plan Suitable and Available Productive Forest Land	Acres
Standard	384,268	Suitable - Full Yield	322,934
Special (by Reason)			
Water Influence and Travel Influence	51,164	Riparian	33,256
Ski Area	3,536	Aesthetic Retention	120,061
Backlog	60,246		
Stagnated Lodgepole	16,438		
Rockland	23,920		

TABLE F-3. (Cont.)

(Part C. - Productive Forest Land - Not Suited For Timber Production)

	Previous Plan Acres	This Plan Acres	Percent Change (%)
Technologically Not Suited			
Logging	105,421	0	-100%
Soils	37,381	37,381	0
Regeneration	84,000	0	-100%
Other Basis For Productive Forest Land Not Suited For Timber Production.			
Unregulated By Reason			
Administrative Sites	16,113	1,298	- 81%
Market Not Available	515,721	462,183	- 11%
High Development Costs	142,003	144,280	+ 2%
Surplus to Timber Production Needs	0	7,667	+100%

(Part D. - Commercial/Suitable Forest Land)

	Commercial Forest Acres	Suitable Forest Acres	Percent Change (%)
Timber Size Class			
Old Growth Sawtimber**	493,981	311,124	- 38%
Sawtimber (other)	318,971	86,122	- 74%
Poletimber	277,163	39,278	- 86%
Seed/Sapling	104,331	7,121	- 93%
Understocked	107,389	23,081	- 79%
Non-stocked	138,376	9,525	- 93%
Forest Type by Age Group			
Old Growth (150 yr.+)			
Douglas-fir	51,083	38,017	- 26%
Ponderosa Pine	36,300	27,193	- 26%
Lodgepole Pine	74,070	52,186	- 30%
Spruce/Fir	296,928	193,728	- 35%

TABLE F-3. (Cont.)

	Commercial Forest Acres	Suitable Forest Acres	Percent Change (%)
Forest Type by Age Group			
Younger Growth			
Douglas-fir	1,216	983	- 87%
Ponderosa Pine	173,700	27,008	- 85%
Lodgepole Pine	117,257	40,233	- 66%
Spruce/fir	200,264	74,720	- 63%
Aspen	489,593	22,183	- 95%
Site Class (Based on Potential Annual Growth)			
20-50 CF/Ac/Yr	907,268	247,651	- 73%
50-85	447,362	185,738	- 59%
85-120	85,581	42,863	- 50%
Area of Non-stocked by Site Class			
20 CF/Ac/Yr	N/A	-0- ***	
20-50	N/A	2,102 ***	
50-85	N/A	2,337 ***	
85-120	N/A	1,198 ***	
120 +	N/A	N/A	
Area by Condition Class			
Overstocked	111,232	42,645	- 68%
Full Stocking	363,660	152,010	- 58%
Medium Stocking	616,968	252,878	- 60%
Poor Stocking	209,995	23,081	- 90%
Non-stocked	138,376	5,637	- 96%
Area Put Under Management by Type			
Douglas-fir	N/A		
Ponderosa Pine	N/A	7,927****	
Engelmann Spruce-Subalpine	N/A		
Fir		245,186****	
Lodgepole Pine	N/A	80,005****	
Aspen	N/A	18,350****	

** Old growth is considered to be 150 years and over for Western National Forests.

*** Includes all Forest Land.

****Area planned this period.

TABLE F-3. (Cont.)

(Part E.)

	Previous Plan		This Plan		Percent Change (%)
	On Commercial Forest Land		On Suitable Forest Land		
	Total Volume	Per Acre	Total Volume	Per Acre	
Volume Comparison					
Growing Stock (GS) MMCF	3,067	2.1 MCF	1,381	2.9 MCF	- 55%
Salvable Dead MMCF**	N/A	N/A	95	.2 MCF	
TOTAL CUBIC VOLUME	3,067	2.1 MCF	1,476	2.5 MCF	- 52%
Sawtbr. G.S.*** MMCF	2,487	3.1 MCF	1,256	3.2 MCF	- 50%
Sawtbr. G.S.*** MMBF Local	10,130	12.5 MBF	5,642	14.2 MBF	- 46%
Growing Stock by Stand Size					
Old Growth Sawtbr. MMCF	1,476	3.0 MCF	964	3.1 MCF	- 35%
Younger Sawtbr. MMCF	1,011	3.2 MCF	292	3.4 MCF	- 72%
Poletimber MMCF	466	1.7 MCF	67	1.7 MCF	- 92%
Seedling/Sapling MMCF	59	.6 MCF	4	.5 MCF	- 93%
Understocked MMCF	55	.5 MCF	9	.4 MCF	- 84%
Old Growth Sawtbr. MMBF (Local)	7,295	14.8 MBF	4,729	15.2 MBF	- 36%
Younger Sawtbr. MMBF (Local)	2,835	10.2 MBF	913	10.6 MBF	- 68%
* Sawtimber Growing Stock by Type					
Douglas-fir MMBF (Local)	458	8.8 MBF	347	8.9 MBF	- 24%
Ponderosa MMBF (Local)	278	4.1 MBF	228	4.2 MBF	- 18%
Lodgepole Pine MMBF	952	8.3 MBF	795	8.6 MBF	- 17%
Spruce/fir MMBF	6,773	15.5 MBF	4,026	15.0 MBF	- 41%
Aspen MMBF	1,669	10.9 MBF	246	11.1 MBF	- 85%
Pole Timber Growing Stock by Type**					
Douglas-fir MMCF	N/A	N/A	2	2.0 MCF	
Ponderosa MMCF	N/A	N/A	3	.4 MCF	
Lodgepole MMCF	N/A	N/A	10	1.2 MCF	
Spruce/fir MMCF	N/A	N/A	50	2.5 MCF	
Aspen MMCF	N/A	N/A	2	1.0 MCF	
Growth and Mortality on CFL					
Annual Net Growth MMCF	34.8	41 CF	20.5	43 CF	- 41%
Annual Mortality MMCF	21.3	21 CF	9.5	20 CF	- 55%
Annual Gross Growth MMCF	56.1	62 CF	30.0	63 CF	- 47%

TABLE F-3. (Cont.)

	Previous Plan On Commercial Forest Land		This Plan On Suitable Forest Land		Percent Change (%)
	Total Volume	Per Acre	Total Volume	Per Acre	
Annual Growing Stock Growth by Stand Size					
Old Growth Sawtbr. and Younger Sawtbr. MDCF	37.8	46 CF	25.9	65 CF	- 31%
Poletimber and Seed/Sapling MDCF	18.3	86 CF	4.1	89 CF	- 78%
Old Growth Sawtbr. and Younger Sawtbr. MMBF	159.5	.20 MBF	114.9	29 MBF	- 28%
Annual Growing Stock Mortality by Stand Size					
Old Growth and Young Growth Sawtbr. -150 MDCF	16.6	20 CF	9.0	23 CF	- 46%
Poletimber and Seed/Saplings MDCF	4.7	12 CF	.5	12 CF	- 89%
Old Growth and Young Growth Sawtbr. (Local) MMBF	58.8	.07 MBF	40.1	1 MBF	- 32%
Annual Growth by Forest Type					
Douglas-fir MDCF	1.5	28 CF	1.0	26 CF	- 33%
Ponderosa MDCF	6.1	29 CF	1.6	30 CF	- 74%
Lodgepole Pine MDCF	5.2	27 CF	4.0	43 CF	- 24%
Spruce/fir MDCF	24.0	48 CF	20.5	76 CF	- 15%
Aspen MDCF	19.3	40 CF	1.4	63 CF	- 93%
Annual Mortality By Forest Type					
Douglas-fir MDCF	.5	9 CF	.4	10 CF	- 20%
Ponderosa MDCF	1.2	6 CF	.3	6 CF	- 75%
Lodgepole Pine MDCF	2.7	14 CF	1.4	15 CF	- 49%
Spruce/fir MDCF	12.4	25 CF	7.1	26 CF	- 43%
Aspen MDCF	4.5	9 CF	.2	9 CF	- 96%

** Not shown in previous Plan.

*** Growing Stock.

Source: * Forest Service Manual, Interim Directive No. 73. (FSM 241.1, Exhibit 1).

TABLE F-4.

ALLOWABLE SALE QUANTITY AND ANNUAL RPA TARGET STATEMENT* Effective Date _____
 Approval Date _____
 Regional Forester _____

Component and Activity	Periodic Allowable Sale Quantity** Effective FY 1983 - 1992 From 10/1/83 - 9/30/92						Annual RPA Target** Effective FY 1980 - FY 1984						
	Area	Large Round-wood Sawtimber****		Products***		Total Volume	Area	Large Round-wood Sawtimber		Products***		Total Volume	
	Acres	MMBF	MMCF	MMCF	M Cords	MMCF	Acres	MMBF	MMCF	MMCF	M Cords	MMCF	MMBF
Full Yield													
Clearcut	7,480	50.0	10.0	0.0	0.0	10.0	680	4.0	8	0.0	0.0	.8	4.0
Seed Cut	6,490	60.0	12.0	0.0	0.0	12.0	612	6.0	1.2	0.0	0.0	1.2	6.0
Intermediate	2,000	10.0	2.0	0.0	0.0	2.0	195	1.0	.2	0.0	0.0	.2	1.0
Prep Cut	49,180	200.0	40.0	0.0	0.0	40.0	4,701	19.0	3.8	0.0	0.0	3.8	19.0
Removal	6,400	30.0	6.0	0.0	0.0	6.0	612	3.0	.6	0.0	0.0	.6	3.0
Sub Total-Full Yield	71,460	350.0	70.0	0.0	0.0	70.0	6,800	33.0	6.6	0.0	0.0	6.6	33.0
Regulated Allowable Sale Quantity	71,460	350.0	70.0	0.0	0.0	70.0	6,800	33.0	6.6	0.0	0.0	6.6	33.0
TOTAL	71,460	350.0	70.0	0.0	0.0	70.0	6,800	33.0	6.6	0.0	0.0	6.6	33.0

** MMBF = Million Board Feet M Cords = Thousand Cords
 MMCF = Million Cubic Feet
 *** Convertible products - Converted to MBF at 2 cords/M for control purposes based on board feet.
 ****Minimum diameter breast height = 7.0"

Source: *Forest Service Manual Interim Directive No. 73. (FSM 2413.32, Exhibit 2).

F-10

TABLE F-5.

ANNUAL ALLOWABLE SALE QUANTITY AND PROGRAMMED SALE STATEMENT*

Effective Date _____
 Approval Date _____
 Regional Forester _____

Total Program Component and Activity	Annual Allowable Sale Quantity** From 10/1/83 - 9/30/92						Programmed Sale Statement** Fiscal Year 1984						
	Area	Large Round- wood Sawtimber****		Products***		Total	Area	Large Round- wood Sawtimber		Products***		Total Volume	
	Acres	MMBF	MMCF	MMCF	M Cords	MMCF	Acres	MMBF	MMCF	MMCF	M Cords	MMCF	MMBF
Full Yield													
Clearcut	748	5.0	1.0	0.0	0.0	1.0	1,440	12.1	2.4	0.0	0.0	2.4	12.1
Seed Cut	640	6.0	1.2	0.0	0.0	1.2	690	4.0	.8	0.0	0.0	.8	4.0
Intermediate	200	1.0	.2	0.0	0.0	.2	750	2.5	.5	0.0	0.0	.5	2.5
Prep Cut	4,918	20.0	4.0	0.0	0.0	4.0	5,480	14.4	2.9	0.0	0.0	2.9	14.4
Removal	640	3.0	.6	0.0	0.0	.6	690	2.0	.4	0.0	0.0	.4	2.0
Sub Total-Full Yield	7,146	35.0	7.0	0.0	0.0	7.0	9,050	35.0	7.0	0.0	0.0	7.0	35.0
Regulated Allowable Sale Quantity	7,146	35.0	7.0	0.0	0.0	7.0	9,050	35.0	7.0	0.0	0.0	7.0	35.0
TOTAL	7,146	35.0	7.0	0.0	0.0	7.0	9,050	35.0	7.0	0.0	0.0	7.0	35.0

** MMBF = Million Board Feet
 MMCF = Million Cubic Feet
 M Cords = Thousand Cords

*** Includes convertible products. (Converted to MBF at 2 cords per thousand for control purposes based on board feet.)

**** Minimum diameter at breast height = 7.0"

Source: *Forest Service Manual Interim Directive No. 73. (FSM 2413.32, Exhibit 3).

FIGURE F-2.

ALLOWABLE SALE QUANTITY, BASE SALE SCHEDULE
AND LONG-TERM SUSTAINED YIELD CAPACITY

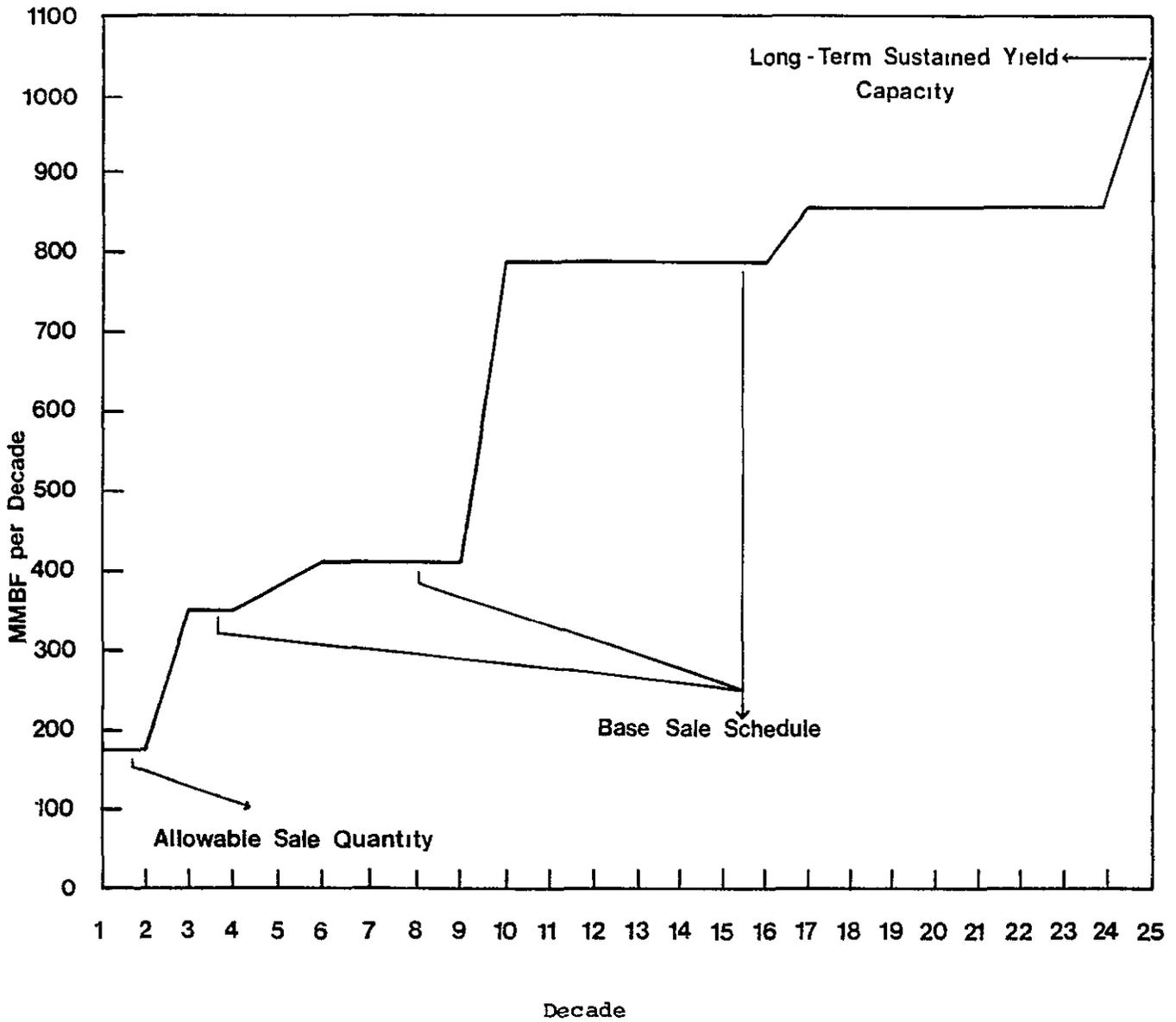


TABLE F-6.

TIMBER LAND USE CLASSIFICATION AND INVENTORY SUMMARY
 FOREST LAND AND RESOURCE MANAGEMENT PLAN
 GRAND MESA, UNCOMPAHGRE, AND GUNNISON NATIONAL FORESTS*

	Areas M Acres	Volume**		Total Annual Net Growth**		Total Annual Mortality**	
		All Products 5.0" + DBH	Large Roundwood* Local Scale***	All Products 5.0" + DBH	Large Roundwood Local Scale***	All Products 5.0" DBH	Large Roundwood Local Scale***
		M CUnits	MMBF	M CUnits	MMBF	M CUnits	MMBF
Water	15.2						
Non-Forest	715.9						
A Not Capable	848.3						
B Not Available							
Productive Reserved	244.3	5,715.0	2,857.5	98.3	49.2	45.7	22.7
Productive Deferred	.4	10.0	5.0	.2	.1	1	.5
Productive Admin. Withdrawn							
C Not Suited for Timber Production							
Technologically Not Suited	37.4	937.5	468.7	16.1	8.0	7.5	3.6
Administratively Not Suited	1.3	32.5	16.3	.6	.3	.3	.1
Incompatible Preferred Uses							
Economically Not Suited	606.4	8,730.0	4,365.0	267.5	133.8	124.4	62.2
Surplus to Timber Production Needs	7.7	192.5	96.2	3.3	1.7	1.5	.7
D. Suitable For Timber Production (CFL)							
Full Yield	476.3	14,760.0	7,380.0	204.8	102.3	95.3	47.6
TOTAL	2,953.2	30,377.5	15,188.7	590.8	295.4	274.8	137.4

** MMBF = Million Board Feet
 M Acres = Thousand Acres
 M CUnits = Thousand Cubic Units

***Conversion to Cubic Feet = 5.0 bF/cf

Source: *Forest Service Manual Interim Directive No. 73. (FSM 2413.32, Exhibit 4).

The major percentage differences between the previous Timber Management Plan and this Land and Resource Management Plan is explained by the difference in Total Productive Forest Land. This Plan classifies 470,897 acres more forest land as being non-productive or not capable. Most of this difference is reforestation backlog in oak type (considered ponderosa pine sites in previous plan) and high altitude spruce-fir openings (considered as suitable for planting in previous plan). An environmental assessment on reforestation backlog acres in 1980 eliminated these acres as productive forest land.

This difference in productive forest land between previous and this Plan causes all the high percentage differences displayed on pages F-5 through F-9.

PRESIDENT'S REVISED STATEMENT OF POLICY

The RPA Statement of Policy adopted by Congress calls for the productivity of suitable forest land to be maintained and enhanced in order to minimize inflationary impacts of wood product prices and to permit a net export of forest products by year 2030. In order to achieve these goals, most commercial timber land will have to be brought to and maintained, where possible, at 90 percent of their potential level of growth consistent with the provisions of the National Forest Management Act of 1976.

The Forest used the FORPLAN model and growth simulation runs to calculate the growth rate at 2030 and compared it to the growth rate at long-term sustained yield capacity. The Forest was able to achieve 90 percent of the long-term sustained yield growth rate in 2030. No additional actions or costs are needed to achieve this 90 percent growth goal. Table F-7 displays the growth rates in year 2030.

TABLE F-7.

GROWTH RATES TO YEAR 2030
(Cubic Feet Per Acre Per Year)

Growth Rates	Unit
At Long-Term Sustained Yield Capacity	59
In 2030 On Regenerated Acres	59
In 2030 On Acres Not Receiving Regeneration Harvest	54
Total Combined Growth Rate In 2030 (Regenerated and Not Regenerated Acres - Weighted Average)	56
Percent of Long-Term Sustained Yield Capacity	95
Percent of Acres Regenerated	41

APPENDIX G

TEN-YEAR WATER QUALITY MONITORING ACTION PLAN

TEN-YEAR WATER QUALITY MONITORING ACTION PLAN

The ten-year water quality monitoring action plan is comprised of three parts.

BASELINE MONITORING

The objective of baseline monitoring is to establish long-term water quality trends and degree of compliance with Colorado Water Quality Standards. It will also monitor the degree of compliance with other resource objectives established through the Plan.

PROJECT MONITORING

The project monitoring objective is to determine the effect and degree of compliance with established best management practices associated with specific management activities.

"CRITICAL" WATERSHED MONITORING

The objective of this monitoring activity is to verify and validate the HYSED water resource analysis procedure. Water quality and stream channel characteristics will be monitored in watersheds where water yield increases are a major management objective. Watersheds identified "critical" will be monitored to identify possible changes needed in management direction.

Information used in the water quality action plan is displayed in the following tables:

--Table G-1 displays the monitoring sites and watersheds for baseline monitoring.

--Table G-2 displays the monitoring type, location, and watersheds for project monitoring.

--Table G-3 displays the "critical" watershed monitoring sites by ranger district.

--Table G-4 displays the National Forest System watershed planning units and numbers used in Tables G-1, G-2, and G-3.

TABLE G-1.

BASELINE MONITORING

Monitoring Site	Watershed Number*	Ranger District
Smith Fork	05	Paonia
Big Cimarron River	81	Ouray
Kannah Creek (Grand Junction Municipal Watershed)	15	Grand Junction
Anthracite Creek	07	Paonia
East Muddy Creek	09	Paonia
Buzzard Creek	19	Collbran
Spring Creek	97	Taylor River
Taylor River above Almont	97	Taylor River
Coal Creek (Crested Butte Municipal Watershed)	99	Taylor River
Carbon Creek	01	Taylor River
Los Pinos Creek	87	Cebolla
Marshall Creek	91	Cebolla
Grand Mesa Lakes	13	Grand Junction
North Fork Escalante Creek	75	Grand Junction
West Fork Dallas Creek	79	Ouray
Middle Beaver Creek	61	Norwood
South Fork San Miguel River	63	Norwood
Clay Creek	65	Norwood

* See Table G-4.

TABLE G-2.

PROJECT MONITORING

Location Name	Watershed Number*	Type	Ranger District
(Fiscal Years 1984-1988)			
Grand Mesa Lakes	13,17	Chemical Aquatic Plant Control.	Grand Junction/Collbran
Prospect Creek Skunk Creek	63	Telluride Ski Area Expansion.	Norwood
Indian Creek	91	Mining (Pitch Project)	Cebolla
Coal Creek	99	Mining (Mt. Emmons Project, Proposed)	Taylor River
East River, Washington Gulch Tributaries	99	Crested Butte Ski Area Expansion	Taylor River
Kildeer Creek (tributary to Los Pinos Creek)	87	Timber harvest (Willow - Pinos Sale)	Cebolla
Deadman's Creek	91	Timber harvest (Cameron Park)	Cebolla
East Fork Big Creek	17	Timber harvest, road construction (Englehart Sale)	Collbran
Youngs Creek	13	Timber harvest, road construction (Hay Park Sale)	Grand Junction
Failes Creek	81	Timber harvest (Failes Creek Sale)	Ouray
Hubbard Creek	09	Timber harvest, road construction (Hubbard Sale)	Paonia
West Antelope Creek	03	Timber harvest (Antelope Sale)	Taylor River
Bear Creek	97	Timber harvest (Bear Creek Sale)	Taylor River

TABLE G-2. (Cont.)

Location Name	Watershed Number*	Type	Ranger District
(Fiscal Years 1984-1988 Continued)			
Slaughterhouse Creek	95	Timber harvest, road construction (Slaughterhouse Sale)	Taylor River
North Fork Tabeguache Creek	67	Prescribed burning (North Fork Burn)	Norwood
Hawxhurst Creek	17	Prescribed burning (Hawxhurst Burn)	Collbran
Tomichi Dome	89	Prescribed burning (Tomichi Dome Burn)	Cebolla
Lick Creek	11	Prescribed burning (Lick Creek Burn)	Paonia
East Beaver Creek	97	Prescribed burning (East Beaver Burn)	Taylor River
(Fiscal Years 1989-1993)			
Dyer Creek	05	Prescribed burning (Dyer Creek Burn)	Paonia
Long Branch Creek	91	Prescribed burning (Long Branch Burn)	Cebolla
Potter Creek	77	Prescribed burning (Monitor Mesa and 7N Mesa Burns)	Ouray
Coal Creek (tributary Blue Mesa Reservoir)	03	Prescribed burning (Soap - Coal Creek Burn)	Taylor River

* See Table G-4.

TABLE G-3.

"CRITICAL" WATERSHED MONITORING

Monitoring Site	Watershed Number*	Ranger District
Chavez Creek	87	Cebolla
Pauline Creek	87	Cebolla
Red Creek	03	Taylor Rive
Goat Creek	61	Norwood
Long Creek	77	Ouray
Trail Creek	95	Taylor River

* See Table G-4.

TABLE G-4.

WATERSHED PLANNING UNITS

	Region	Sub-region	Acct. Unit*	Cata. Unit*	Watershed Number
Upper Colorado River	14				
Colorado River Headwaters		01	00		
Lower Colorado River				05	
Headwaters					
Plateau Creek					17
Buzzard Creek					19
Gunnison River		02	00		
East - Taylor River				01	
Taylor Park Reservoir					95
Taylor River Canyon					97
East River					99

TABLE G-4. (Cont.)

	Region	Sub- region	Acct. Unit*	Cata. Unit*	Watershed Number
Upper Gunnison River				02	
Ohio Creek					01
Soap - Beaver Creek					03
Smith Fork - Currecanti Creek					05
Cimarron - Big Blue Creek					81
Lake Fork Gunnison River					83
Cebolla - South Beaver Creek					85
Tomichi Creek				03	
Cochetopa Creek					87
Lower Tomichi Creek					89
Long Branch-Upper Tomichi Creek					91
Quartz Creek					93
North Fork Gunnison River				04	
Anthracite - Coal Creek					07
Muddy Creek					09
North Fork Gunnison River					11
Lower Gunnison River				05	
Tongue - Currant Creek					13
Kannah Creek					15
East - Dominguez Creek					73
Escalante Creek					75
Roubideau Creek					77
Uncompahgre River				06	
Uncompahgre River					79
Upper Colorado River	14				
Middle Upper Colorado River		03	00		
Westwater Canyon				01	
Little Dolores River					71
San Miguel River				03	
Naturita - Beaver Creek					61
Upper San Miguel River					63
Horsefly - McKenzie Creek					65
Tabeguache - Cottonwood Creek					67
Lower Dolores River				04	
West - Mesa Creek					69

TABLE G-4. (Cont.)

	Region	Sub-region	Acct. Unit*	Cata. Unit*	Watershed Number
San Juan River		08			
Upper San Juan River			01		
Animas River				04	
Upper Animas River					25C
Rio Grande River	13				
Rio Grande River Headwaters		01	00		
Rio Grande River Headwaters Clear Creek				01	39C

* Acct. Unit = Accounting Unit.
 Cata. Unit = Cataloging Unit.

APPENDIX H
MINERAL LEASING STIPULATIONS

MINERAL LEASING STIPULATIONS

TABLE OF CONTENTS

	<u>PAGE</u>
<u>REQUIRED STIPULATIONS BY LAND USE CLASS</u>	H-3
STANDARD AREAS	H-3
SPECIAL AREAS	H-3
Classified Areas	H-3
Limited Surface Use Areas	H-4
Wilderness Areas	H-4
Wilderness Study Areas	H-5
Further Planning Areas	H-5
Wild and Scenic River Study Areas	H-5
No-Lease Areas	H-6
Reserved Areas	H-6
 <u>STIPULATIONS</u>	
GENERAL STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE H-7	
FURTHER PLANNING AREA STIPULATION H-9	
CLASSIFIED AREA STIPULATION H-10	
LIMITED SURFACE USE STIPULATION H-11	
SURFACE DISTURBANCE STIPULATION H-12	
WILD AND SCENIC RIVERS SYSTEM STIPULATIONS H-13	
SURFACE USE STIPULATION H-14	
ACTIVITY COORDINATION STIPULATION H-15	
CONDITIONAL NO SURFACE DISTURBANCE STIPULATION H-16	
WILDERNESS OIL, GAS, GEOTHERMAL STIPULATION H-17	
WILDERNESS MINABLE MINERALS STIPULATION H-18	
SPECIAL AREA STIPULATION H-19	

MINERAL LEASING STIPULATIONS

This appendix displays Standard and Additional stipulations which can be recommended and consented to for inclusion in mineral leases issued by BLM on National Forest System land. The appendix also displays conditions under which these stipulations are to be used.

Forest direction regarding recommendation/consent in favor of or against leasing is contained in Plan Chapter III, Management Activities Minerals Management-Oil, Gas and Geothermal G02 and Minerals Management-Coal, Leaseable Uranium and Non-Energy Common Minerals Materials G03.

REQUIRED STIPULATIONS BY LAND USE CLASSIFICATIONS

The required stipulations for the respective Land Use Classification categories follow:

STANDARD AREAS

These are areas available for mineral leasing where surface resource values can be adequately protected with the STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE (BLM Form 3109-3, June 1971) and Forest Service (R-2) Supplement D to 3109-3, SURFACE DISTURBANCE STIPULATION. The latter stipulation covers areas with unique values, such as cultural resources and endangered and threatened species. These must be adequately protected by site-specific operating requirements in the lessee's operating plan. See Form 3109-3 and Supplement D on pages H-7 and H-12.

The Forest recommends lease issuance with Form 3109-3 (Stipulation for Lands Under Jurisdiction of Department of Agriculture) and Forest Service (R-2) Supplement D to Form 3109-3 (Surface Disturbance Stipulation).

SPECIAL AREAS

These are areas available for leasing but which require additional stipulations to those for Standard Areas in order to adequately protect surface resources and other special resource values. Detailed maps are available at Forest and/or District Ranger Offices for the Special Areas. These areas include the following:

Classified Areas

These are areas which have been designated by the Regional Forester for special management under 36 CFR, Part 294. They include such areas as Scenic Areas, Historical Areas, Geological Areas, Botanical Areas, Zoological Areas, Paleontological Areas, and Archeological Areas.

Experimental forests, experimental ranges, and research natural areas are also considered to be classified areas. However, the authority to respond to BLM lease proposals for these areas is retained by the Chief of the Forest Service. Therefore, these areas are not considered in this analysis.

For areas classified by the Regional Forester, the Forest recommends lease issuance with Form 3109-3 (Stipulation for Lands Under Jurisdiction of Department of Agriculture), Forest Service (R-2) Supplement D to Form 3109-3 (Surface Disturbance Stipulation), and Forest Service (R-2) Supplement B to Form 3109-3 (Classified Area Stipulation).

For areas classified by the Chief, the Regional Forester will recommend to the Chief either approval or rejection of the lease application based on the findings of the environmental assessment. The Chief will make the final recommendation to BLM.

Limited Surface Use Areas

These are major areas which require special restrictions in order to preserve surface resource values. Areas or sites included in this category are recreation sites, critical wildlife habitat, designated areas of State interest, natural history resources, cultural history resources, plantations, research or special study project areas, seed production areas, certain areas identified in Forest Travel Management Plans, areas with extremely sensitive soil, water, or geological situations, areas with extremely sensitive landscape conditions (Visual Quality Objective of Retention), and areas eligible for inclusion in the National Register of Natural Landmarks or National Register of Historic Places. (See FSM 2360 for direction on National Register Sites.)

Also included in this category are areas where a no-lease recommendation would be made according to the reclamation criteria but where the Management Requirements to be applied are located in management area prescriptions 2B, 4D, 6B, 7A, 7C, or 7E.

Surface occupancy in limited surface use areas is limited to sites and activities essential to the minerals operation. Restrictions on use types and occupancy periods may be imposed in these areas.

The Forest recommends lease issuance with Form 3109-3, Forest Service (R-2) Supplement D to Form 3109-3, Forest Service (R-2) Supplement C to Form 3109-3 (Limited Surface Use Stipulation) and any new stipulations which will be developed as needed. New stipulations require the Regional Forester's approval.

Wilderness Areas

These are areas designated by Congress as areas within the National Wilderness Preservation System. These areas will be withdrawn from mineral entry and mineral leasing after December 31, 1983. After this time these lands would be in the Reserved category.

During Fiscal Year 1983, the 1983 Appropriations Act prohibits any action on processing lease applications except for "No-Surface Occupancy" with directional drilling from outside the wilderness boundary.

The Forest recommends lease issuance within $\frac{1}{4}$ mile of exterior of wilderness and where area immediately outside is available for leasing with Form 3109-3 (Stipulation for Lands under Jurisdiction of Department of Agriculture), Forest Service (R-2) Supplement D to Form 3109-3 (Surface Disturbance Stipulation), Forest Service (R-2) Supplement R to Form 3109-3 (Wilderness Oil, Gas, Geothermal Stipulation), and Forest Service (R-2) Supplement F to Form 3109-3 (Surface Use Stipulation).

Wilderness Study Areas

The Fossil Ridge Wilderness Study Area was designated by Congress for study to determine its suitability for inclusion in the National Wilderness Preservation System. Care must be taken during the study period to protect their wilderness characteristics.

Unless there is statutory language to the contrary, the Forest recommends lease issuance, where restoration criteria listed in Forest Direction can be met, with Form 3109-3 (Stipulation from Lands Under Jurisdiction of Department of Agriculture), Forest Service (R-2) Supplement D to Form 3109-3 (Surface Disturbance Stipulation), and Forest Service (R-2) Supplement R to Form 3109-3 (Wilderness Oil, Gas, Geothermal Stipulation) and Special Area Stipulation.

Further Planning Areas

This area (Cannibal Plateau) was identified in the Final Environmental Impact Statement on the Roadless Area Review and Evaluation (RARE II) process. The President made recommendations to Congress on those areas that required further study before it could be determined if they should become part of the National Wilderness Preservation System. The Colorado Wilderness Act retained this designation for Cannibal Plateau FPA.

The Forest recommends lease issuance with Form 3109-3 (Stipulation for Lands Under Jurisdiction of Department of Agriculture), Supplement D to Form 3109-3 (Surface Disturbance Stipulation), and Forest Service (R-2) Supplement A to Form 3109-3 (Further Planning Area Stipulation).

Wild and Scenic River Study Areas

No wild and scenic river currently exists on the Forest. Congress designates certain rivers and their immediate environment for study to determine their suitability for inclusion in the National Wild and Scenic Rivers System (NWSRS). From the time Congress designates a river for study until it is rejected from, or included in, the National System, the Federal minerals in the study area are not usually withdrawn from operations under the mineral leasing laws. Care must be taken during the study period to protect natural characteristics which might make the river area a worthy addition to the System. Usual limits of the study area boundaries are an average of 320 acres per mile on both sides of the river. This area generally coincides with that which would be included in designated rivers of the NWSRS. The Forest Supervisor may, on a case-by-case basis, extend protection to a larger area during the study period. In most cases this larger area would include those lands necessary to protect the scenic values, or water quality in the immediate environment of the river under study.

The Forest recommends lease issuance with Form 3109-3, Forest Service (R-2) Supplement D to Form 3109-3 and Forest Service (R-2) Supplement E to Form 3109-3 (Wild and Scenic Rivers System Stipulations).

No-Lease Areas

These are areas that would be available for leasing but do not meet the reclamation or restoration criteria listed in the Forest Direction in Chapter III. The criteria will be applied on a site-specific basis.

The Forest recommends against consent to BLM for leasing except for a $\frac{1}{2}$ mile area into the "No-Leasing" Area. In the $\frac{1}{2}$ mile area, the Forest recommends lease issuance with Form 3109-3 (Stipulation for Lands Under Jurisdiction of Department of Agriculture), Forest Service (R-2) Supplement D to Form 3109-3 (Surface Disturbance Stipulation), and Forest Service (R-2) Supplement F to Form 3109-3 (Surface Use Stipulation).

Reserved

These are areas usually not available for mineral exploration and development activities because of statute, regulation, withdrawal, and Forest Service policy. The decision on leasing proposals for these areas; if statute, regulation or withdrawal does not preclude leasing; is retained by the Chief and is, therefore, not considered in this analysis.

If statute, regulation or withdrawal does not preclude leasing in the area, a site-specific environmental analysis must be made and a recommendation prepared for review by the Regional Forester and decision by the Chief.

When consideration is given to recommend in a manner different than the above guidelines, a separate environmental analysis must be conducted for the specific BLM leasing proposal. Other approved stipulations that could be considered in these special situations are: Forest Service (R-2) Supplement G to Form 3109-3 (Activity Coordination Stipulation) and Forest Service (R-2) Supplement H to Form 3109-3 (Conditional No Surface Disturbance Stipulation). The Environmental Analysis and recommendation is forwarded to the Regional Forester for decision.

In addition to the above stipulations and-prior to drilling activity being initiated in the lease area, the BLM will forward to the District Ranger a copy of the lessee's proposed operating plan for the authorized Forest Officer's review and concurrence. See FSM 2822.04c for delegated authority. An environmental analysis will be prepared in cooperation with the BLM to assure that the proposed mineral exploration and/or extraction conforms with the lease contract, especially in regard to the use of mitigating measures to minimize adverse effects of the proposed lease activities upon the surface resources. The need for a site-specific environmental impact statement will also be determined by this environmental analysis. The Forest Service Manual displays coordination procedures between BLM and Forest Service during lease operations.

The stipulations are listed on the following pages.

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

at

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

FURTHER PLANNING AREA STIPULATION

The following described lands embraced in this lease/permit/license were identified in the Roadless Area Review and Evaluation (RARE II) decision document as requiring further planning:

Future planning may identify all or part of these lands as suitable for wilderness, and the lands so identified may ultimately be designated as Wilderness. Information made available to the Forest Service regarding discoveries of mineral deposits on these lands will be considered in the planning process and may be key factors in the land allocation.

This clause shall become inoperative in the event this area is determined as not suitable for wilderness.

Any terms of this lease/permit/license to the contrary notwithstanding, the following terms shall apply to the above described lands:

1. Only exploration activities for the purposes of discovering and disclosing the extent of mineral deposits is allowed, until development and production operations are specifically concurred in by the Forest Service based on a land management plan and/or a specific environmental analysis of an operating plan.
2. Exploration plans must be specifically approved by the Geological Survey and concurred in by the Forest Service. Plans for geophysical exploration must be approved by the Forest Service. The Forest Service will agree to reasonable access for conducting necessary exploration operations.
3. Any lands covered by this lease/permit/license which Congress designates as Wilderness shall become subject to the provisions of the applicable Wilderness legislation, and the Secretary of Agriculture's regulations and Forest Service policies pertaining thereto.
4. The lessee/permittee/licensee will be responsible as he deems necessary to protect his interest, for initiating requests to the Department of the Interior for suspension of lease/permit/license terms, rental, or minimum royalties. The Forest Service does not intend that the inclusion of this stipulation be construed as a basis to deny a request for suspension.
5. Until these lands are allocated to non-wilderness purposes, by a land management plan or specific environmental analysis and decision, mineral-related operations are subject to the following terms:
 - (a) Construction of access ways and operation sites will not be permitted in areas of extremely high environmental sensitivity where such construction would cause serious and irreparable environmental damage.
 - (b) Access way construction will be permitted only where existing access ways are inadequate or other methods of access are impractical.
 - (c) Access ways will be built to a standard no higher than required for passage of equipment and support personnel, and to protect surface resources.
 - (d) The access ways and other areas of operation will be reclaimed, as soon as they have served their purpose, to a condition as near as practical to the surface condition existing prior to the authorized use of the lands.

This stipulation is hereby accepted

Date

Signature

CLASSIFIED AREA STIPULATION
(36 CFR 294)

The use of the lands within the external boundaries of the _____
_____ Classified Area as described below, for the purpose
of this license/permit/lease will be restricted to the following unless otherwise
specifically agreed to by the Forest Service in the Operation Plan:

- (a) To conduct prospecting and exploratory activities upon said lands for the purpose of locating and determining the existence of possible mineral resources beneath said lands by the use of such instruments and non-motorized equipment as may be carried by hand or on horseback. No explosives shall be used nor shall any wheeled, mechanized or motorized vehicles or equipment be used or transported upon the surface of said lands for such purposes.
- (b) Operation shall be authorized to drill for, produce, and remove minerals from said lands by methods which will avoid invasion or disturbance of the surface.
- (c) This stipulation is in effect for the following described lands:

Licensee/Permittee/Lessee

Note: The applicant is encouraged to contact the District Ranger for further information regarding the restrictive nature of this stipulation.

LIMITED SURFACE USE STIPULATION

The licensee/permittee/lessee is given notice that all or portions of the license/permit/lease area contain special values, or are needed for special purposes, and require special attention to prevent damage to surface resources. Surface use or occupancy within such areas will be subject to limitations and will be authorized only when it is demonstrated to be essential to operations. Operating plans for these areas must provide for such measures as are satisfactory to the Forest Service for protection of the described special values and existing or planned uses. The operator must have advance approval of the authorized officers of the Minerals Management Service and the Forest Service for surface uses involving significant disturbance to surface resources, including wildlife. After the Forest Service has been advised of the proposed surface use on these lands, and on request of the operator, the Forest Service will furnish further data on such areas, which now include but are not limited to:

Reason for Restriction, and duration: (if less than full-time designate months)

Licensee/Permittee/Lessee

Note: The applicant is encouraged to contact the District Ranger for further information regarding the restrictive nature of this stipulation.

(2/82)

SURFACE DISTURBANCE STIPULATION

1. Notwithstanding any provision of this license/permit/lease to the contrary, any drilling, construction or other operation on the lands covered by this license/permit/lease that will disturb the surface thereof or otherwise affect the environment (hereinafter called "surface disturbing operation") conducted by licensee/permittee/lessee shall be subject, as set forth in this stipulation, to the prior approval of such operation by the authorized officer of the Geological Survey in consultation with the Forest Service, and to such reasonable conditions not inconsistent with the purposes for which this license/ permit/lease is issued, as the authorized officer may require to protect the surface of these lands and the environment.
2. Prior to entry upon the land, or the disturbance of the surface thereof, for drilling or other purposes, the licensee/permittee/lessee shall submit for approval the appropriate number of copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the authorized officer of U.S. Geological Survey and the Forest Service Officer, as shown in Item 12 of 9LM Form 3109-3. The plan of operation must assure adequate protection of drainages, water bodies, springs, or fish and wildlife habitat, steep slopes or fragile soil.
3. An environmental analysis will be made by the Geological Survey, in consultation with the Forest Service, for the purpose of insuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

Upon completion of said environmental analysis, the authorized officer of the Geological Survey shall notify the licensee/permittee/lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

Said conditions may relate to any of the following:

- (a) The location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted.
 - (b) The types of vehicles that may be used and the areas in which they may be used.
 - (c) The manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.
4. The licensee/permittee/lessee agrees that during periods of adverse conditions due to climatic factors such as thawing, heavy rains, or flooding, all activities creating irreparable or extensive damage, as determined by the Forest Service, will be suspended or the plan of operation modified and agreed upon.

5. PROTECTION OF CULTURAL AND PALEONTOLOGICAL RESOURCES

(a) The Forest Service is responsible for assuring that the area to be disturbed on this license/permit/lease is inventoried to determine the presence of cultural resources and to specify those cultural resources requiring protection and/or mitigation measures to be undertaken by the operator.

Unless notified to the contrary by the Forest Service, the operator may, at his discretion and cost, conduct the inventory on the lands to be disturbed. This intensive inventory must be done by, or under the supervision of, a qualified archeologist approved by the Forest Service. Upon review of the inventory report, the Forest Service will specify those cultural resources requiring protection and/or mitigation measures to be undertaken by the operator. All costs of protection and salvage of cultural resource values will be borne by the operator and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

(b) The operator shall bring to the attention of the Forest Service and the authorized officer of the U.S. Geological Survey, significant paleontological values encountered in areas to be disturbed, for evaluation and for instructions as to the appropriate action to be followed by the operator.

(c) The operator shall immediately cease operations in areas in which any antiquities or other objects of historic or scientific interest are discovered and bring the discovery to the attention of the Forest Service and the authorized officer of the U.S. Geological Survey. Any such discoveries shall be left intact until the operator is permitted to proceed by the authorized officer of the U.S. Geological Survey.

6. PROTECTION OF ENDANGERED OR THREATENED SPECIES

The Forest Service is responsible for assuring that the area to be disturbed is examined, prior to undertaking any ground disturbing activities on lands covered by this license/permit/lease, to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow any use and occupancy that would detrimentally affect any of the endangered or threatened plant or animal species.

The 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 Forest Service. An acceptable report must be provided to the Forest Service identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

WILD AND SCENIC RIVERS SYSTEM STIPULATIONS

This stipulation applies to National Forest System lands adjacent to the _____ River, under study for possible inclusion in the National Wild and Scenic Rivers System (82 Stat. 906, as amended).

1. The licensee/permittee/lessee may not use, occupy, or disturb any surface portion of the license/permit/lease application area described in this stipulation without prior specific authorization of the Forest Service while the Congress is considering inclusion of the River into the National Wild and Scenic River System.
 - a. If Congress adds the River to the National Wild and Scenic River System, the Forest Service will prepare a management plan which will specify the particular controls on the lands described below.
 - b. If by the date prescribed by Section 7b of the Wild and Scenic River Act (82 Stat. 906, as amended) or possible amendments, the Congress has not added the River to the National Wild and Scenic River System, the area will be used according to a National Forest Land Resources Management Plan which may specify particular controls or special requirements for mineral development on the license/permit/lease area.
2. This stipulation is in effect for the following described lands:

Licensee/Permittee/Lessee

Note: The applicant should know that there is at this time no assurance that use, occupancy, or disturbance of the surface of the above described land can ever be permitted.

SURFACE USE STIPULATION

Surface use or occupancy that would cause significant surface disturbance is not authorized for the lands described below. This does not apply to casual or other uses which do not significantly disturb surface resources. The operator must have advance approval of the authorized officers of the Geological Survey and the Forest Service for any surface uses related to lease operations.

Reason for restriction:

Lessee/Licensee/Permittee

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 limitations
to spread surface disturbance activities over time and space may be required prior
to approval and commencement of any operations on the lease.

This stipulation is in effect for the following described lands.

Reason for Restriction:

Licensee/Permittee/Lessee

NOTE: The applicant is encouraged to contact the Forest Supervisor for further
information regarding the restrictive nature of this stipulation

(2/82)

CONDITIONAL NO SURFACE DISTURBANCE STIPULATION

The prospective licensee/permittee/lessee is given notice that parts of the lands described are affected by the following conditions:

Check as Applies

- Slopes steeper than 40 percent _____
- High erosion hazard _____
- High hazard for mass slope failure _____
- Threatened or endangered wildlife and its habitat, as follows:
 - Possible Grizzly Bear essential habitat _____
 - Essential habitat for Federally and/or State classified T&E species (_____)
Name of Species _____
 - Critical habitat necessary for recovery of Federally and/or State classified T&E species (_____)
Name of Species _____
- Threatened and endangered Federally and/or State classified vegetation species (_____)
Name of Species _____
- Low visual absorption capacity requiring special measures for mitigation _____

Should the prospective licensee/permittee/lessee accept this contract, this document is his acknowledgement that surface disturbance, including occupancy and use of the surface of those parts of the lands affected by the above-described conditions, will be authorized only if an operating plan can be devised that will provide for the surface resource protection required due to the above-described conditions.

Signature
(Licensee/Permittee/Lessee)

Note: The applicant is encouraged to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this contract and the operator is encouraged to make the same contact well in advance of proposed operations.

WILDERNESS OIL, GAS, GEOTHERMAL STIPULATION

The lessee is given notice that all or portions of the lease area are within or have been recommended for addition to the National Wilderness Preservation System, or have been designated by Congress as Wilderness Study Areas. These lands contain special values, are needed for special purposes, and require special attention to prevent or control damage to surface resources and wilderness character. Any surface use or occupancy of these National Forest System lands shall be subject to special operating restrictions designed to prevent or control adverse impacts on the wilderness character and to restore, as near as practicable, the surface of the disturbed lands as soon as they are no longer needed for oil, gas, or geothermal exploration and development operations.

This stipulation applies to the following described lands:

Legal Description by Section, Township, Range and/or
Metes and Bounds Description as Necessary

Name of Area _____

Any terms of this lease to the contrary notwithstanding, the following terms shall apply to the above-described lands:

1. Geophysical investigations will be performed prior to submission of an Application for Permit to Drill an exploratory well (Geophysical investigations will be authorized by a Forest Service Special Use Permit)

2. Surface disturbing activities, including exploratory drilling, on the leased lands will not be authorized until the Minerals Management Service determines that the lessee's geophysical investigation data indicates that there is a reasonable expectation of finding oil and gas or geothermal resources in the area proposed for drilling

3. All access for operations within the above-described lands related to exploration, including drilling, shall be conducted by non-motorized ground and/or by airlift methods. The staging site shall be outside the above-described lands and must be approved by the Federal land managing agency should such site be on Federally-owned lands. Routes and times of air travel over the above-described lands must have Forest Service approval. Also, exploratory drilling will be authorized only after the lessee submits detailed plans for development of ground-surface access to the drill site should a commercial oil, gas or geothermal discovery be made. These plans must show how adverse impacts on the wilderness characteristics will be prevented or controlled and how the surface of the disturbed lands is to be restored, as near as practicable, as soon as the lands are no longer needed for the purposes of this lease

4. When an operating plan contains all of the measures necessary for occupancy, use, protection, and restoration of the wilderness values, it will be jointly approved by the Forest Service and the Minerals Management Service

5. In the event that the Congress returns any of the lands described above to non-wilderness management, the conditions of these stipulations with respect to such lands are automatically rescinded and other stipulations appropriate to control operations for the protection of surface resources will be imposed

This stipulation is hereby accepted.

(Date)

(Lessee)

Note The applicant is encourage to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this lease.

(2/82)

WILDERNESS MINABLE MINERALS STIPULATION

The prospecting permittee or lessee is given notice that all or portions of the permit/lease area are within or have been recommended for addition to the National Wilderness Preservation System, or have been designated by Congress as a Wilderness Study Area. These lands contain special values, are needed for special purposes and require special attention to prevent or control damage to surface resources and wilderness character. Any surface use or occupancy shall be subject to special operating restrictions designed to prevent or control adverse impacts on the wilderness character and to restore, as near as practicable, the surface of the disturbed lands as soon as they are no longer needed for the purposes of this permit or lease.

This stipulation applies to the following described lands:

Legal Description by Section, Township, Range, and/or
Metes and Bounds Description as Necessary

Name of Area _____

Any terms of this permit/lease to the contrary notwithstanding, the following shall apply to the above-described lands:

1. Operations under prospecting permit or lease

a. When an operating plan contains all of the necessary provisions to prevent or control adverse impacts and to restore, as near as practicable, the surface of the disturbed lands as soon as the lands have served the purposes of this permit/lease, the plan will be jointly approved by the Minerals Management Service and the Forest Service.

b. Access ways using the ground surface, and their construction, will be permitted only when other methods of access are not feasible.

c. Ground-surface access ways and their construction, and operation sites other than the mine itself, will not be permitted in areas of extremely high environmental sensitivity.

d. Ground-surface access ways will be built to a standard no higher than required for safe passage of equipment, products, and personnel, and to protect surface resources.

2. Operations under prospecting permit

a. Initial access for prospecting operations, including drilling, shall be conducted by non-motorized ground and/or by airlift methods. The staging site shall be outside the above-described lands and must be approved by the Federal land managing agency should such site be on Federally-owned lands. Routes and times of air travel over the above-described lands must have Forest Service approval.

b. Upon confirmation by the Minerals Management Service of the discovery of a potentially commercially valuable deposit that would justify construction of ground-surface access for further exploratory and development operations:

(1) The permittee, before construction of ground-surface access can be approved, must submit detailed plans showing where and how such access will be developed, and

(2) Such plans must, to the extent possible, provide that the access route and method be the same as that which will be used for further development and production of the deposit.

3. In the event that the Congress returns any of the lands described above to non-wilderness management, the conditions of these stipulations with respect to such lands are automatically rescinded and other stipulations appropriate to control operations for the protection of surface resources will be imposed.

This stipulation is hereby accepted:

(Date)

(Permittee/Lessee)

Note: The applicant is encouraged to contact the Forest Supervisor for further information regarding the restrictive nature of this stipulation before acceptance of this permit or lease.

SPECIAL AREA STIPULATION

The following described National Forest System lands embraced in this license/permit/lease were identified in the Roadless Area Review and Evaluation (RARE II) decision document as recommended for nonwilderness uses. These lands are being reconsidered for possible recommendation for inclusion in the National Wilderness Preservation System.

(Legal Description of NFS Lands Involved)

The following terms and conditions shall apply to the above described lands until implementation of the Forest Land and Resource Management Plan or until Congress makes a decision to designate the area as part of the National Wilderness Preservation System, as a wilderness study area, or as not suitable for wilderness. Information made available to the Forest Service regarding discoveries of mineral deposits on these lands will be considered in the planning process and may be a key factor in the land allocation.

Any terms of this license/permit/lease to the contrary notwithstanding, the following terms shall apply to the above described lands:

1. Only exploration activities for the purpose of discovering and disclosing the extent of mineral deposits is allowed, until development and production operations are specifically concurred in by the Forest Service based on a land management plan and/or a specific environmental analysis of an operating plan.
2. Exploration plans other than for geophysical activities, must be specifically approved by the Bureau of Land Management and concurred in by the Forest Service. Plans for geophysical exploration must be approved by the Forest Service. The Forest Service will agree to reasonable access for conducting necessary exploration operations.
3. Any lands covered by this license/permit/lease which Congress designates as wilderness shall become subject to the provisions of the applicable wilderness legislation, and the Secretary of Agriculture's regulations and Forest Service policies pertaining thereto.
4. The licensee/permittee/lessee will be responsible, as he deems necessary to protect his interest, for initiating requests to the Department of the Interior for suspension of license/permit/lease term, rental, or minimum royalties. The Forest Service does not intend that the inclusion of this stipulation be construed as a basis to deny a request for suspension.

5. Until these lands are allocated to nonwilderness purposes, by a land management plan or specific environmental analysis and decision, mineral-related operations are subject to the following terms:

- (a) Construction/reconstruction of access ways and operation sites will not be permitted in areas of extremely high environmental sensitivity where such construction/reconstruction would cause serious and irreparable environmental damage.
- (b) Access way construction/reconstruction will be permitted only where existing access ways are inadequate or other methods of access are impractical.
- (c) Access ways will be built to a standard no higher than required for safe passage of equipment and support personnel, and to protect surface resources.
- (d) The access ways and other areas of operation will be reclaimed, as soon as they have served their purpose, to a condition as near as practical to the surface condition existing prior to the authorized use of the lands.

6. These terms shall become inoperative in the event this area is determined as not suitable for wilderness.

This stipulation is hereby accepted.

Date

Signature

APPENDIX I
MINERAL LEASING SUMMARY

MINERAL LEASING SUMMARY

Table I-1 summarizes the land available for mineral leasing for the Plan.

TABLE I-1.

MINERAL LEASING SUMMARY

WILDERNESS and Forest	Recommend Unavailable for Lease		Recommend Available for Lease with Surface Occupancy		Recommend Available for Lease without Surface Occupancy		Total Net Acres
	Acres	Percent*	Acres	Percent*	Acres	Percent*	
BIG BLUE	75,235	76	21,490	22	1,510	2	98,235
LA GARITA							
Rio Grande N. F.	4,320	18	5,509	23	14,335	59	24,164
Gunnison N. F.	21,161	26	32,464	41	26,197	33	79,822
TOTAL	25,481	24	37,973	36	40,532	40	103,986
MOUNT SNEFFELS	10,708	66	0	0	5,492	34	16,200
RAGGEDS							
White River N. F.	13,392	81	0	0	3,186	19	16,578
Gunnison N. F.	35,116	83	880	2	6,531	15	42,527
TOTAL	48,508	82	880	1	9,717	17	59,105
WEST ELK	123,581	70	10,425	6	42,086	24	176,092
CANNIBAL PLATEAU FURTHER PLANNING AREA	2,479	18	5,650	42	5,470	40	13,599
Non-Wilderness	185,494	8	2,041,637	83	210,679	9	2,437,810
TOTALS							
Rio Grande N. F.	4,320	18	5,509	23	14,335	59	24,164
White River N. F.	13,392	81	0	0	3,186	19	16,578
Grand Mesa, Uncompahgre, and Gunnison N. F.	453,774	16	2,112,546	73	297,965	11	2,864,285
GRAND TOTAL	471,486	16	2,118,055	73	315,486	11	2,905,027

* Percentages added horizontally equal 100%.

APPENDIX J

MINERALS WITHDRAWAL AND REVIEW ACTION PLAN

MINERALS WITHDRAWAL AND REVIEW ACTION PLAN

Section 204(1) of the Federal Land Policy and Management Act of 1976 (FLPMA) requires that all withdrawals in the State of Colorado, among others, be reviewed by 1991 to determine whether and for how long, the continuation of each withdrawal would be consistent with the original purpose for which the land was segregated from mineral entry. The purpose of the review required by FLPMA is to reduce the amount of land dedicated to single uses through withdrawal from entry where surface mining regulations (36 CFR 228) can provide adequate protection. The review will be done according to criteria and procedures established in the Secretary of Interiors regulations 43 CFR 2300 and by Bureau of Land Management Organic Act directives. If the review is not done by 1991, withdrawals will be automatically revoked.

Withdrawals on the Forest were made over the years to protect capital investment and planned developments. The majority of the withdrawals were under Executive Order (EO) 10355, which was repealed by FLPMA. In 1982, 27 areas officially were withdrawn under Public Land Order (PLO) and Secretary of Interiors orders. These withdrawals were revoked and the lands have been restored to mineral entry. Table J-1 displays these withdrawal areas. Seven areas temporarily segregated from mineral entry under BLM serial numbers were reviewed. The report was submitted in 1977, and requested the withdrawals be terminated. These sites are itemized in Table J-2.

Comprehensive reviews of all remaining withdrawals for Forest Service purposes, both on National Forest System and BLM land will begin in fiscal year 1984 and will be completed in fiscal year 1986, with some carryover work to fiscal year 1987. The review schedule, by fiscal year, follows in Table J-3.

Three different categories of withdrawals will be considered in the review process. These are: a) Forest Service withdrawals on National Forest System land; b) Forest Service withdrawals on Bureau of Land Management land, and, c) Other Federal agency withdrawals on National Forest System land. Review of and concurrence with the Land Reports of other agencies withdrawal review recommendations will also be part of the Forests' responsibility.

The review process will include a determination of whether continuation, modification, revocation, or partial revocation of each withdrawal is appropriate. The basic steps in the review process are: 1) field examination; 2) preparation of required mineral, threatened and endangered species, and wetlands and floodplains reports; 3) preparation of an Environmental Assessment; and 4) preparation of a Decision Notice and Finding of No Significant Impact. The Environmental Assessments and Decision Notices can cover more than one site if the same action is recommended for a number of sites.

New withdrawal area requests will be processed according to Bureau of Land Management regulations, USDA - Forest Service, Regional Office Working Tool Paper, and Policy Memo dated December 17, 1979. If the proposed Tabeguache and Escalante Creek Research Natural Areas are accepted for management as research natural areas, withdrawals will be requested.

TABLE J-1.

EXISTING WITHDRAWALS
Revoked in 1982*

Name	Location	Acres	Public Land Order
Aspen Cove Campground	T11S R96W	40	2625
Big Meadows Administrative Site	T44N R1E	40	1687
Buzzard Campground	T9S R92W	40	1943
Castleview Campground	T15S R87W	60	4928
Copper Creek Rec. Area	T51N R1E	90	2279
Costo Lake Back Camp	T15S R88W	30	4928
Deep Slough Campground	T12S R95W	130	2625
Five Mile Recreation Area	T15S R83W	410	2279
Griffith Lake Campground	T11S R96W	166	2625
High Picnic Ground	T1S R95W	78	2625
High Point Rec. Area	T14S R82W	640	2976
Lands End Picnic Ground	T12S R97W	20	2625
Lost Lake Back Area	T12S R96W	20	2625
Mesa Creek Winter Sports Area	T11S R96W	260	2625
Mysterious Lake Campground	T13S R83W	150	4579
Reed Reservoir Campground	T12S R94W	56	2625
Sanborn Park Administrative Site	T45N&T46N R12W	60	2624
Second Bridge Rec. Area	T15S R4W	220	2279
Skyway Point Observation Site	T11S R96W	20	2625
Slate River Administrative Site	T14S R36W	40	Sec. Int. 4/11/39**
Soap Creek Administrative Site	T49N R4W	40	2976
South Mesa Back Area	T11S R96W	43	2625
Surface Creek Administrative Site	T12S R94W	160	Sec. Int. 10/26/06
Waterdog Lake Campground	T11S R96W	40	2625
White Deer Park Campground	T11S R94W	40	2625
Willow Administrative Site	T14S R82W	100	Sec. Int. 11/25/07
Willow Creek Recreation Area	T14S R82W	80	2976
TOTAL	(27 Sites)	3,073	

* PLO 6170 on February 19, 1982, effective
March 18, 1982, FR/Vol. 47 No. 34 2/19/82

** PLO 5670 on December 18, 1979, effective
January 16, 1980.

TABLE J-2.

SITES TEMPORARILY SEGREGATED
Recommended for Revocation in 1977

Name	Location	Acres	Serial Number
Alpine Tunnel Portal	T51N R5E	560	C-15960
Hidden Valley Picnic Ground	T44N R2W	40	C-15960
McClure Pass Campground	T11S R89W	100	C-16210
Palmer Roadside Rest	T43N R7W	10	C-11542
Rivers End Campground	T15S R82W	70	C-15142
Willow Creek Campground	T42N R1W	120	C-15960
Windy Point Overlook	T43N R3W	35	C-15960
TOTAL (7 Sites)		935	

TABLE J-3.

WITHDRAWAL SITES REVIEW SCHEDULE

Name	Location	Acres	Public Land Order
(Fiscal Year 1984) Estimated Cost \$30,000			
Anthracite Administrative Site	T13S R88W	34	2302
Black Mesa Experimental Forest	T49N R5W T49N R6W	3,044	1282
Black Mesa Experimental Forest (Addition)	T49N R5W	1,215	4579
Bonham Reservoir Campground	T11S R96W	180	2625
Coon Creek Administrative Site	T11S R96W	160	Sec. Int. 10/26/06
Dyke Creek Campground	T11S R91W	40	2976
Eggleston Lake Campground	T11S R94W T12S R94W	277	2625
Fish Hawk Campground	T12S R94W	58	2625
Fruita Administrative Site	T14S R102W	120	2624

TABLE J-3. (Cont.)

Name	Location	Acres	Public Land Order
(Fiscal Year 1984 Continued)			
Grand Mesa Christian Assn. Campground	T12S R95W	80	2625
Grand Mesa Resort	T12S R95W	118	2625
Haypress Campground	T14S R102W	60	2624
Hightower Administrative Site	T9S R92W	40	Sec. Int. 10/26/06
Hightower Addition	T9S R92W	80	2625
Island Lake Campground	T12S R95W	140	1943
Island Lake S.H.G.	T23S R95W	40	2625
Kiser Creek Campground	T12S R94W	101	2625
Kiwanis Organization Camp	T11S R96W	60	2625
Lakeview Point Campground	T2S R95W	30	2625
Lands End Overlook	T12S R95W	110	2625
Little Bear Campground	T2S R95W	50	2625
Little Gem Campground	T12S R95W	70	2625
Lost Lake Recreation Area	T13S R88W T14S R88W	560	4928
Mesa Campground	T49N R6W	40	5227
Mesa Lake Trailer Park	T11S R96W	90	2625
Mesa Lake Recreation Site	T11S R96W	90	2625
Minnesota Creek Ranger Station	T14S R90W	85	Sec. Int. 1/20/04
NF-ORRR Site 144	T11S R96W	50	2625
Ranger Station #14	T12S R92W	49	Sec. Int. 10/26/06
Smith Fork Campground	T15S R91W	5	2302
Star Lake Campground	T12S R95W	48	2625
State Hwy. 133 Roadside Zone	T11S R89W	346	4579
Steamboat Rock Campground	T12S R97W	80	2625
Trickle Park Campground	T11S R94W	40	2625
Twin Lake Campground	T11S R94W	70	2625
Ute Campground	T49N R5W	30	4928
Ward Lake Administrative Site	T12S R95W	170	2625
Ward Lake Recreation Site	T12S R95W	549	2625
Waterdog Lake Marina	T11S R96W	20	2625
Weir & Johnson Campground	T11S R93W	70	2625
West Muddy Administrative Site	T11S R91W	116	2286
Wild Rose Picnic Ground	T12S R97W	40	2625
TOTAL (43 Sites)		9,275	

TABLE J-3. (Cont.)

Name	Location	Acres	Public Land Order
(Fiscal Year 1985) Estimated Cost \$41,200			
Agate Campground	T48N R5E	190	2976
Almont Recreation Area	T51N R1E	220	2277
Alpine Administrative Site	T46N R5W	160	2624
Avery Park Campground	T12S R86W	40	5227
Beaver Pond Picnic Ground	T14S R87W	120	4928
Big Blue Campground	T46N R5W	60	2624
Cebolla Campground	T44N R2W	40	2976
Cement Creek Add.	T14S R85W	10	2553
Cement Creek Recreation Area	T14S R85W	252	2976
Cement Creek Ranger Station	T14S R85W	80	Sec. Int. 1/31/08
Cold Springs Recreation Area	T15S R83W	180	2279
Commanche Campground	T50N R3E	40	2976
Commissary Campground	T50N R4W	20	2976
Cottonwood Pass Obs. Site	T14S R81W	3	5227
Cottonwood Pass Rest Area	T14S R81W	15	3092
Crested Butte Ski Area (Add)	T13S R85W	830	4928
	T13S R86W		
Crested Butte Winter Sports Area	T13S R85W	1,301	2848
	T13S R86W		
Crystal Lake Back Campground	T44N R4W	160	2624
Deer Lakes Recreation Area	T44N R3W	200	2976
Dinner Station Campground	T13S R82W	130	2302
Dorchester Administrative Site	T12S R83W	80	2284
Dorchester Recreation Area	T12S R83W	50	2279
Emerald Lake Campground	T12S R86W	70	2976
Gold Creek Recreation Area	T51N R3E	285	2976
	T51N R4E		
Gothic Campground	T12S R86W	40	2976
Gothic Research Natural Area	T12S R86W	1,050	2286
Lake Irwin Campground	T13S R87W	115	2302
Lake View Recreation Area	T14S R82W	110	2279
Lodgepole Recreation Area	T15S R83W	197	2279
Long Branch Administrative Site	T47N R5E	113	2302
	T48N R5E		
Long Branch Administrative Site	T47N R5E	128	2976
	T48N R5E		
Lottis Creek Recreation Area	T15S R83W	270	2279
Middle Quartz Campground	T50N R5E	80	5227
Mirror Lake Campground	T15S R81W	130	2976
Nine Mile Hill	T47N R1E	40	3167

TABLE J-3. (Cont.)

Name	Location	Acres	Public Land Order
(Fiscal Year 1985 Continued)			
Old Agency Ranger Station	T46N R1E	40	Sec. Int. 1/16/09
One Mile Recreation Area	T15S R84W	270	2279
Panorama Recreation Area	T14S R82W	303	2976
Pitkin Recreation Area	T50N R4E	197	2553
Poison Gulch Administrative Site	T47N R5E	40	Sec. Int. 2/2/07
Public Water Reserve	T49N R3E	280	Sec. Int. 8/30/34
Quartz Campground	T51N R4E	60	2976
Rainbow Lake Campground	T50N R3W T51N R3W	110	4928
Rivers End Recreation Area	T14S R82W T14S R83W	1,132	2976
Roosevelt Picnic Ground	T50N R4E	30	2976
Ropers Administrative Site	T51N R1E	50	1845
Rosy Lane Recreation Area	T15S R84W	230	2279
Sapinero Guard Station	T9N R4W	60	E01405 8/25/11
Slumgullion Campground	T43N R3W	60	2976
Snowblind Campground	T49N R5E	73	5227
Soap Creek Campground	T50N R4W	40	2976
Spring Creek Campground	T15S R84W	40	2976
Spring Creek Reservoir	T15S R83W T15S R84W	543	4579
Spring Creek Reservoir Rec.	T13S R83W T13S R84W	86	4579
Spruce Campground	T44N R2W	40	2976
Taylor Park Administrative Site	T14S R82W	260	2302
Timberline Overlook	T14S R81W	25	5227
Tomichi Creek Picnic Ground	T48N R5E	102	5227
TOTAL	(59 Sites)	12,070	
(Fiscal Year 1986) Estimated Cost \$20,500			
Alta Lakes Recreation Site	T42N R9W	148	4684
Amphitheatre Campground	T44N R7W	302	2624
Antone Springs Picnic Ground	T47N R12W	60	1378
Beaver Lake Campground	T46N R6W	60	2624
Big Cimarron Campground	T46N R6W	80	2624

TABLE J-3. (Cont.)

Name	Location	Acres	Public Land Order
(Fiscal Year 1986 Continued)			
Canyon Creek Picnic Ground	T43N R8W	20	1378
Carson Hole Picnic Ground	T15S R101W	100	1378
Cobb Spring Picnic Ground	T48N R14W	40	1378
Cold Springs Ranger Station	T51N R16W	40	Sec. Int. 12/15/06
Columbine Administrative Site (Add)	T48N R14W	70	262
Columbine Picnic Ground (Add)	T48N R14W	20	2624
Columbine Picnic Ground	T48N R14W	20	1378
Columbine Ranger Station	T48N R14W	160	Sec. Int. 11/6/07
Divide Fork Campground	T51N R16W	100	2624
Iron Springs Campground (Add)	T47N R12W	10	2614
Iron Springs Picnic Ground	T47N R12W	50	1378
Jackson Ranger Station	T46N R6W	116	Sec. Int. 3/26/08
Lizard Head Pass Rest Stop	T41N R9W	80	2922
Lone Cone Administrative Site	T42N R12W	80	2624
Matterhorn Administrative Site	T41N R9W	20	2624
Ophir Trailer Park	T42N R9W	100	2624
Powderhouse Administrative Site	T51N R12W	30	69
Ranger Station #39	T51N R16W	160	Sec. Int. 11/13/06
Silesca Administrative Site	T47N R11W	120	2624
Smokehouse Picnic Ground	T48N R14W	40	1378
Sunshine Campground	T42N R9W	50	1378
Trout Lake Campground	T41N R9W	200	2624
T-Bone Springs Picnic Ground	T49N R15W	10	1378
25 Mesa Administrative Site	T49N R13W	80	Sec. Int. 11/06/07
<u>TOTAL</u>	<u>(29 Sites)</u>	<u>2,366</u>	

APPENDIX K
LANDOWNERSHIP ADJUSTMENT PROGRAM

LANDOWNERSHIP ADJUSTMENT PROGRAM

Landownership on the Forest includes those activities or functions having to do with:

- Acquiring land or interests in land;
- Disposals;
- Exchanging land;
- Reconveying land erroneously acquired;
- Handling title claims to government land; and
- Jurisdictional land transfers with other federal agencies.

Land adjustment plans, often referred to as land classification plans, were approved for the Grand Mesa, and Uncompahgre National Forests on May 13, 1970, and for the Gunnison on April 29, 1969 by the Regional Forester. These consist of plans five to ten years long. Tabulation of acreages by acquisition, and disposal, and narratives describing the objectives and goals are on file in each District Ranger's office and in the Forest Supervisors office, Land section.

Land ownership planning and land classification are interchangeable terms. Classification for landownership purposes means the act of determining, through analysis, the land which is most suitable for National Forest System purposes and land which is most suitable for other ownership. The fundamental objective of classifying existing National Forest System land is to identify land that should be retained or deleted from the National Forest System with the intent of seeking the optimum landownership pattern and use. Classification planning should reflect the ownership determined to be in the public interest and should not be limited by current land adjustment possibilities. Adjustments will take place over a period of years, based on approved annual action plans, and in conformity with approved classification plans. If a land adjustment proposal (exchange or purchase) does not conform to the approved classification plan, the classification plan will require amendment approval by the Regional Forester.

Landownership adjustment is the actual process of changing title or interest in and to land, to achieve the ownership pattern approved in the land management plan or classification study. The plans are supplemented by an action plan, incorporated in the Supervisor's Staff and District Rangers annual work plans and budgets.

Continued cooperation and coordination with local governments, multi-county, and state Regional planning agencies, and other Federal agencies are essential to identify and consider areas of mutual concern. It is also necessary to identify potential conflicts between National Forest policy and objectives, Federal law and policy, and policy and objectives of other groups. When conflicts are identified, they can then be resolved or explained to the concerned party. The primary concern of the local governments is growth and

development in their area, which is controllable usually through land use zoning.

Landownership adjustments can be made with Federal, State, private landowners, and local government units where the result will significantly increase efficiency in land management and conservation programs. National Forest System land will not be disposed of or other land acquired if the intended or probable use to which the land will be put conflicts with State or local plans. Transfer of land from the National Forest System will not be considered, when after consultation with the affected local agencies, the following situations are expected:

- Substantial additional costs on local governments for social or public services can be expected;
- A significant effect will occur on the use or protection of adjacent public lands; or
- There is an increase in the cost or impedance of probable future public projects.

Conversely, the need to acquire land suitable for National Forest purposes is highest when the adjustment will:

- Reduce or avoid probable increase in local government costs;
- Favorably affect use or protection of adjacent public land; or
- Decrease the cost or facilitate a probable future public project.

In summary, landownership planning or classification is a systematic process to identify and describe the land ownership situation occurring in a particular area, and to prescribe the long-range adjustment goals. This process provides the basic reason for subsequent ownership adjustment actions. Existing National Forest System land will not be acquired if such land is not suitable for National Forest purposes.

In order to accomplish land adjustment programs the existing classification plan must be reviewed and evaluated to determine what the proper classification should be under current guidelines, policy, direction, and pending legislation (Small Tracts Act and the President's Land Sale Program). Table K-1 displays the action plan for land adjustment programs.

TABLE K-1.

ACTION PLAN FOR LAND ADJUSTMENT PROGRAMS
(Except Transfers)

Task	Responsibility	Date
Review and amend existing classification plan in cooperation with local agencies.	District Rangers, Supervisor's Staff	April 1984
Comple amendment request by Forest for Regional Foresters approval.	Supervisor's Staff	August 1984
Prepare fiscal year adjustment action plans, including right-of-way procurement schedules.	District Rangers, Supervisor's Staff	Annually

APPENDIX L

FOREST SERVICE - BUREAU OF LAND MANAGEMENT
JURISDICTIONAL LAND TRANSFER PROGRAM

FOREST SERVICE - BUREAU OF LAND MANAGEMENT
JURISDICTIONAL LAND TRANSFER PROGRAM

GOALS

The goals of this program are improving agency service to the public and reducing agency cost of doing business. Jurisdictional land transfer proposals must have long-term benefits which exceed the costs. The program has high potential in reducing administration costs and in reducing government restrictions on the public.

The goal of the interagency program is to complete 80 percent of the transfers by October 1, 1985 and the entire program by the end of fiscal year 1987.

CRITERIA

Transfer proposals will generally have common criteria and data needs to judge how well criteria are met. The three primary criteria are:

- Improve service to the public.
- Improve administrative efficiency.
- Reduce costs.

Other criteria may be considered, such as:

- Consolidate within political jurisdiction (e.g. counties) where practical.
- Consolidate within watershed drainages where appropriate.

Guidelines in the November 10, 1981 agreement between the Forest Service and the BLM will be followed during the identification of opportunities for transferring jurisdiction and land between the two agencies. Transfers within the State of Colorado have additional criteria to use. These criteria insure that transfers will:

- Not be based on deliberate attempts to balance acreage, personnel or workload.
- Improve service to the public. Consider factors such as:

- Convenience to the user.
- Access for the administering agency.
- Improving public understanding through uniform laws, regulations, and policies.
- Support of user groups, local population, State government, Congressional delegation, and other Federal agencies.
- Protecting existing uses of the land so long as such uses remain in the public interest.

- Improve administrative efficiency.

The program goal is to develop sound and supported legislative proposals for jurisdictional transfer of specific land. Legislation is necessary in order

to modify a National Forest boundary to incorporate BLM land and to transfer National Forest System land to BLM administration. The program does not involve reorganization of the agencies.

The Forest has tentatively identified 89,520 acres for possible jurisdictional land transfer to the BLM. The Forest has also tentatively identified 265,280 acres of BLM administered land for possible jurisdictional land transfer to the Forest. The Regional Office is coordinating this program. A Forest action plan will be developed to correspond with Regional direction.

In addition the Forest has tentatively identified 760' acres for possible jurisdictional land transfer to the National Park Service.

APPENDIX M
RIGHT-OF-WAY ACQUISITION PROGRAM

RIGHT-OF-WAY ACQUISITION PROGRAM

Rights-of-way for the Forest Transportation System will be acquired on a planned basis to eliminate the backlog by 1995. The long-range acquisition plan developed through the Forest planning process will be the determination of needed rights-of-way. Acquisition will always be attempted by negotiation. Where negotiation fails, condemnation will be used. The justification statement for condemnation will be supported by an Environmental Assessment and Decision Notice.

The following priority listing will be used as guides in preparing annual right-of-way acquisition plans.

- Rights-of-way to support program activities outlined in the Plan.
- Rights-of-way to support other programmed activities, including general administration.
- Rights-of-way to provide legal access for existing roads or trails over which the Forest Service has no legal rights, but uses them or allows their use by the public.

The long-range right-of-way acquisition plan consists of mylar overlays to the 2-inch base status right-of-way maps and completed Planning Schedule forms. The mylar overlays are color coded as Forest Service acquisition in orange and other public agencies acquisition in blue. The plan is on file as the Road and Trail Right-of-Way Status Atlas in the Lands Section of the Forest Supervisor's office.

Table M-1 displays the rights-of-way tentatively identified as needed to support the timber sale program.

TABLE M-1.

TIMBER SALE RIGHT-OF-WAY ACTION PLAN

Timber Sale Name	Road No.	Ranger Dist. Location	No. Cases
(Fiscal Years 1984 - 1994)			
Van Boxel	300	Ouray T.46N.,R.6W.	1
Little Cone	820	Norwood T.43N.,R.11W.	2
47 Creek	600	Norwood T.48N.,R.15W.	2
Antelope	818	Taylor River T.51N.,R.2W.	2
Preacher's Hole	534	Norwood T.42N.,R.13W.	2
Armstrong	770	Cebolla T.55N.,R.4E.	6
Long Branch	780	Cebolla T.47N.,R.5E.	1
Cow Creek	888	Cebolla T.49.,R.4E.	1

Other administrative rights-of-way needed are displayed in Table M-2. These action plans will be amended and revised as the Plan is implemented and other rights-of-way needs are identified.

TABLE M-2.

ADMINISTRATIVE RIGHT-OF-WAY ACTION PLAN

Area- Location	Road/Trail No.	Number Cases	Ranger District
T.49N.,R.15W. Kelso Mesa Road	521	1	Grand Junction
T.50N.,R.3E. Willow Creek Road	680	2	Cebolla
T.9S.,R.94W. Hauxhurst Creek Rd.	none	1	Collbran
T.49N.,R.2W. Sun Creek Road	859	4	Taylor River
T.42N.,R.10W. Wilson Mesa Trail	4421	1	Norwood
T.44N.,R.9W. Blue Lakes Trail	4201.1	2	Ouray
T.43N.,R.8W. Mt. Sneffels Trail	4201.11	2	Ouray
T.44N.,R.6W. Wetterhorn Basin	226	2	Cebolla
T.43N.,R.1E. Machin Lake Trail	784	1	Cebolla
T.13S.,R.88W. Dark Canyon Trail	510	1	Paonia
T.12S.,R.97W. Coal Basin Trail	4703	1	Paonia
T.44N.,R.8W. Oak Creek Trail	4207	2	Ouray
T.45N.,R.7W. Nate Creek Trail	4221	1	Ouray
T.15S.,R.90W. Wapiti Trail	521	1	Paonia

TABLE M-2. (Cont.)

Area- Location	Road/Trail No.	Number Cases	Ranger District
T.10S.,R.93W. Silver Spruce Trail	4517	1	Collbran
T.42N.,R.11W. Woods Lake Trail	4406.1	1	Norwood
T.15S.,R.82W. South Lottis Trail	428.1	1	Taylor River

APPENDIX N
SOIL SURVEY ACTION PLAN

SOIL SURVEY ACTION PLAN

The tentative Soil Survey program schedules 200,000 to 250,000 acres to be surveyed each year. Table N-1 displays the soil survey action plan by review site.

TABLE N-1.

SOIL SURVEY ACTION PLAN

Fiscal Year	Review Site
1983	West Elk Area #8660
1984	West Elk Area #8660
1985	West Elk Area #8660
1986	Grand Mesa Area #8661 Ouray Area #8674
1987	Grand Mesa Area #8661 Ouray Area #8674
1988	Cochetopa Area #8663 Ouray Area #8674
1989	Cochetopa Area #8663

* Numbers are soil survey area numbers assigned by the Colorado Soil Conservation Service.

APPENDIX O

FOREST HIGHWAYS AND HIGHWAY CONSTRUCTION

FOREST HIGHWAYS AND HIGHWAY CONSTRUCTION

Regulations governing Forest Highways administration and construction went into effect April 12, 1982. For a Forest road to be designated a Forest highway, it must meet the following criteria:

- It is under the jurisdiction of a cooperator and open to public travel.
- It provides a connection between an adequate and safe public road and the renewable resources of the National Forest System which are essential to the local, regional, or national economy, and/or the communities, shipping points, or markets which depend upon those renewable resources.
- It serves other local needs such as schools, mail delivery, commercial supply, and access to private property within the National Forest System; or serves traffic of which a preponderance is generated by use of the National Forest System and its resources; or serves National Forest System generated traffic volumes that have a substantial impact on roadway design and construction.

Counties send their proposals for Forest highways to the State. The Forest sends its proposal to the Regional Office. It is important to communicate and cooperate at the local level to insure a coordinated and mutually acceptable proposal. The following action plan is a framework to accomplish that needed communication and cooperation.

Table O-1 displays the Forest Highway Recommendations Action Plan. Table O-2 displays designated Forest Highways. In addition to those listed in Table O-2; Trickle Park Road Number 121 and Stevens Gulch Road Number 701 are potential Forest Highway candidates. Table O-3 displays a ten-year arterial/collector road construction/reconstruction program.

TABLE O-1.

FOREST HIGHWAY RECOMMENDATIONS ACTION PLAN

Task	Person Responsible
Letter to all District Rangers and County Commissioners requesting their preliminary recommendations.	Forest Engineer
Preliminary recommendations from District Rangers and County Commissioners to Forest Supervisor.	County Commissioners District Rangers
Analysis of proposals considering developed and dispersed recreation use, timber access, mineral access, cost estimates, benefit-cost ratios, and a narrative description. District Rangers will provide data for their respective districts.	Forest Engineer District Rangers
Meet with all District Rangers to determine Forest priorities from data analysis.	Forest Supervisor
Meet with individual counties and districts to coordinate recommendations to Colorado State Highway Department and Regional Forester respectively. Counties should estimate cost-share they will contribute.	District Rangers County Commissioners Forest Engineer
Submit Forest Highway recommendation to Regional Office with assessment data attached.	Forest Supervisor

TABLE O-2.

DESIGNATED FOREST HIGHWAYS

Forest Highway Route Number	Forest Highway Name	Forest Road Name and Number	Beginning/ Ending*	Length (Miles)
7	South Fork- Lake City	S.H. 149	S.H. 149	64.7
15	McClure Pass	S.H. 133	S.H. 133	25.0
59	Cottonwood Pass	Taylor River Road No. 742 - Cottonwood Pass No. 209	Almont - Buena Vista	45.0
63	Dolores - Norwood	Dolores-Norwood Road No. 610	FDR 610 - Dolores	39.6
70	Naturita - Montrose	Old Hwy 90 Road No. 540	S.H. 90 - S.H. 145	38.0
71	Somerset - Crested Butte	Kebler Pass Road No.12	S.H. 133 - City of Crested Butte	32.0
72	Sanborn Park	Dave Wood Road No. 510	S.H. 90 - S.H. 145	38.0
73	Buzzard Divide	Buzzard Divide Road No. 265	S.H. 133 - Silt Collbran Rd	29.7
74	Divide Road	Divide Road No. 402	S.H. 141 - FDR No. 510	74.6
75	Delta - Nucla	Delta - Nucla Road No. 503	S.H. 348 - FDR No. 402	24.6
76	Cumberland Pass	Cumberland Pass Road No. 765	Pitkin - FDR 742	27.1
77	Los Pinos - Cebolla	Los Pinos Cebolla Road No. 788	S.H. 149 - S.H. 114	43.9
78	Owl Creek - Cimarron	Cimarron Road No. 858	U.S. 550 - U.S. 50	45.1

* Beginning/Ending
SH = State Highway
FDR = Forest Development Road
US = U.S. Highway

TABLE O-3.

TEN-YEAR ARTERIAL/COLLECTOR ROAD CONSTRUCTION/RECONSTRUCTION
ACTION PLAN

Road Name	Road Number	Capital Investment or Timber Sale (T.S.)	Construction (C) or Reconstruction (R)
(Fiscal Years 1984 - 1988)			
Stevens Gulch	701	Capital Investment	C
Surface Creek	125	Capital Investment (Bridge)	C
Sun Creek	859	Capital Investment	C
Lambert	260	Englehart T. S.	C, R
Spring Creek	744	Bear Creek T. S.	C
Hubbard Canyon	704	Capital Investment (Bridge)	C
Owl Creek-Cimmaron	858	Capital Investment	R
Pieplant	742.8F	Illinois Creek T. S.	R
Divide	402	South Divide T. S.	R
Rocky Brook	748	Capital Investment (Bridge)	C
Dave Wood	510	Capital Investment	R
Dallas Creek	851	Dallas T. S.	R
Little Cimarron	864	Failes Creek T. S.	C
Big Creek	403	Big Creek T. S.	C, R
West Antelope	818	Antelope Creek T. S.	C
Divide	402	Capital Investment	R
Overland Reservoir	705	Dyke-Elk Creek T. S.	R
47	600	47 Creek T. S.	R
High Mesa	838	Van Boxel T. S.	C
South Trail Creek	748.1J	South Trail Creek T. S.	C
(Fiscal Years 1989 - 1993)			
West Beaver	615	Capital Investment	R
Lone Cone	534	Devils Hole T. S.	C, R
Old Grand Mesa	123	Skinned Horse T. S.	R
Lost Creek	864	Monchego T. S.	R
Galloway Creek	612	West Sleuth T. S.	R
Cottonwood Divide	480	Cottonwood T. S.	C
Long Branch	780	Long Branch T. S.	C
Los Pinos - Cebolla	788	East Fork T. S.	R
Castle Creek	728	Castle Creek T. S.	R
Fairview	770	Armstrong T. S.	C
North Creek	514	North Creek T. S.	R

APPENDIX P

TEN-YEAR FACILITY CONSTRUCTION PLAN

TEN-YEAR FACILITY CONSTRUCTION PLAN

Table P-1 displays the ten-year facility construction plan.

TABLE P-1.

TEN-YEAR FACILITY CONSTRUCTION PLAN
(All costs in 1982 dollars)

Location	Purpose	Size (GSF) *	Cost (M\$) *	Year
Silesca	Barracks & Admin. Bld.	2200	110	1985
Norwood	Barracks	1000	50	1985
Collbran	Office	2000	100	1985
Grand Junction	Office	6500	325	1986
Montrose	Office	6500	325	1986
Matterhorn	Admin. Bld.	800	30	1986
Crested Butte	Office	1200	60	1987
Crested Butte	Shop	900	27	1987
Old Agency	Dwelling	800	40	1987
Long Branch	Admin. Bld.	1200	60	1987
Ward Lake	Dwelling	600	30	1988
Cold Springs	Bunkhouse	700	35	1988
Lone Cone	Bunkhouse	1600	80	1988
Lone Cone	Garage	700	17.5	1988
Mesa Lakes	Admin. Bld.	1200	60	1989
Mesa Lakes	Dwelling	1900	95	1989
Mesa Lakes	Garage	1100	27.5	1989
Ward Lake	Admin. Bld.	1600	80	1990
North Delta	Shop	2600	104	1990
Cold Springs	Bunkhouse	500	22.5	1990
Montrose	Warehouse	2000	80	1991
Ropers	Warehouse	2000	80	1991
Alpine	Bunkhouse	900	36	1991
Jackson	Barracks	1000	50	1991
Sapinero	Bunkhouse	900	36	1992
Cement Creek	Bunkhouse	600	24	1992
Dorchester	Bunkhouse	600	24	1992

* GSF Size = Gross Square Footage
M\$ = Thousand Dollars

APPENDIX Q

LEVEL I FIRE MANAGEMENT ANALYSIS

LEVEL I FIRE MANAGEMENT ANALYSIS

Table Q-1 displays the historical fire program for the period 1971 through 1980. The annual average 51 fires and 290 acres burned does not represent a complex fire management situation. Therefore, a Level II Fire Management Analysis will not be conducted.

Fire management program projections for planning periods are displayed in Table Q-2. These projections are based on historical data and programmed budget planning. The future program is expected to remain relatively stable and will not vary significantly between time periods. Recent trends show a slight increase in man-caused fires. The expected increase in Forest visitor use equated with population growth will probably increase the percentage of total fire ignitions. Wildfire risk occurrences requiring intensive suppression efforts are expected to generally decrease due to prescribed fuel treatment activities. Prescribed fire in both natural and activity fuels significantly reduce wildfire risks.

TABLE Q-1.

HISTORICAL FIRE PROGRAM DATA

Year	Costs			Acres Burned	Total Number Fires
	Total FFP Budget	Suppression	Total Fire Program		
1971	36,000	8,000	44,000	37	41
1972	73,000	72,000	145,000	53	45
1973	80,000	60,000	140,000	107	24
1974	75,000	112,000	187,000	472	77
1975	72,000	162,000	234,000	55	35
1976	52,000	40,000	92,000	313	50
1977	157,000	120,000	277,000	206	54
1978	137,000	88,000	225,000	488	78
1979	119,000	148,000	267,000	112	50
1980	217,000	394,000	611,000	1062	53
Average 1971-1980	101,800	120,400	222,000	290	51

TABLE Q-2.

PROJECTED FIRE PROGRAM

Forest Plan Time Period	Total FFP Budget M\$*	Suppression- M\$*	Total Fire Program M\$*	Expected Area Burn Acres
1985	226	115	341	50
1986-1990	186	120	306	50
1991-2000	186	120	306	50
2001-2010	186	120	306	50
2011-2020	186	120	306	50
2021-2030	186	120	306	50

*M\$ = Thousand dollars.

APPENDIX R
MISTLETOE CONTROL ACTION PLAN

MISTLETOE CONTROL ACTION PLAN

Mistletoe in lodgepole pine only occurs on the Gunnison National Forest. Table R-1 displays the mistletoe control action plan for the Taylor River Ranger District.

TABLE R-1.

TAYLOR RIVER RANGER DISTRICT MISTLETOE CONTROL ACTION PLAN

PROJECT NAME	MANAGEMENT AREA	LOCATION	TREATMENT TYPE	TSI AND REGENERATION	ACRES	ROAD MILES					
Texas Creek	2A	T13S.R82W Sec. 34, 35, 36 T14S.R82W Sec. 2, 3	Commercial firewood machine dozer, machine pile, prescribed burn	Fiscal year 83-86 50% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	600ac/200ac per year	About 1 mile of temp. road needed.					
	6B	T13S.R82W Sec. 32, 33 T14S.R82W Sec. 4, 5									
	7A	T13S.R82W Sec. 33, 34, 35 T14S.R82W Sec. 3, 4									
	9A	T13S.R82W Sec. 33, 34									
	9B	T13S.R82W Sec. 35, 36									
	Union Park	2A					T14S.R82W Sec. 35, 36 T15S.R82W Sec. 1, 2	Roller chop, machine pile, prescribed burn	Fiscal year 84-86 60% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	600ac/200ac per year	About 3 miles of temp. road needed
6B		T14S.R82W Sec. 26, 35, 36 T15S.R82W Sec. 2 T14S.R82W Sec. 26, 27, 28, 29, 32, 33, 34, 35 T15S.R82W Sec. 1, 2, 3									
9A		T14S.R82W Sec. 26, 27, 34, 35, 36 T15S.R82W Sec. 1, 23									
Reservoir		2B	T14S.R82W Sec. 5, 6	Roller chop, machine pile, prescribed burn	Fiscal year 84-87 60% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	1800ac/600ac per year	About 4 miles of temp. road needed				
		6B	T14S.R82W Sec. 5, 67 T13S.R82W Sec. 18, 19, 29, 30, 31, 32 T13S.R83W Sec. 13								

TABLE R-1. (Cont.)

PROJECT NAME	MANAGEMENT AREA	LOCATION	TREATMENT TYPE	TSI AND REGENERATION	ACRES	ROAD MILES
Reservoir (Cont.)	7A	T13S.R83W Sec. 13, 24, 25, 36 T13S.R82W Sec. 19, 30, 31, 32 T14S.R83W Sec. 1, 12 T14S.R82W Sec. 5, 6, 7				
	9A	T13S.R82W Sec. 19, 30, 31, 32 T13S.R83W Sec. 13, 24, 25, 36 T14S.R82W Sec. 5, 6 T14S.R83W Sec. 1				
Cottonwood	2A	T14S.R81W Sec. 5, 6 T14S.R82W Sec. 23	Commercial firewood Chain saw, machine pile	Fiscal year 84-88 40% of area will need direct seed- ing due to lack of sufficient seed Release and weed all acres	250ac/50ac per year	No roads
	2B	T14S.R82W Sec. 9, 15, 16				
	6B	T14S.R81W Sec. 17, 18, 19 T14S.R82W Sec. 13, 14, 15, 23, 24				
	7A	T14S.R81W Sec. 5, 6, 7, 8, 18, 19, 24 T14S.R82W Sec. 1, 9, 10, 11, 14, 15, 16				
	9A	T14S.R81W Sec. 6, 7, 8, 17 T14S.R82W Sec. 9, 10, 11, 12, 13, 14, 15, 16, 23, 24				
	9B	T14S.R81W Sec. 7, 8, 18 T14S.R82W Sec. 1, 2, 11, 12, 13, 14, 24				

TABLE R-1. (Cont.)

PPOJECT NAME	MANAGEMENT AREA	LOCATION	TREATMENT TYPE	TSI AND REGENERATION	ACRES	ROAD MILES				
Red Mountain	6B	T13S.R82W	Commercial firewood, roller chop, machine pile, prescribed burn, chain saw	Fiscal year 84-88 70% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	500ac/100ac per year	About 2 miles of temp. road needed				
		Sec. 6, 7, 18								
		T13S.R83W								
	7A	Sec. 12								
		T12S.R83W								
		Sec. 35, 36								
	9A	T13S.R83W								
		Sec. 2, 12								
		T13S.R82W								
	9B	Sec. 6, 7								
		T.13S.R82W								
		Sec. 6, 7, 18								
Tin Cup	2A	T15S.R81W	Commercial firewood, chainsaw	Fiscal year 84-88 50% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	250ac/50ac per year	No roads				
		Sec. 5, 6, 7, 8								
	6B	T14S.R81W								
		Sec. 31								
	7A	T14S.R81W								
		Sec. 31								
	7E	T15S.R81W								
		Sec. 5, 6								
	9A	T15S.R81W								
		Sec. 7, 8								
	Illinois	2A					T14S.R81W	Fiscal year 87-88 80% of area will need direct seed- ing due to lack of sufficient seed. Release and weed all acres	500ac/250ac per year	About 3 miles of temp. road needed
							Sec. 29, 30, 31, 32			
7A		T13S.R81W								
		Sec. 30, 31, 32								
7E	T13S.R82W									
	Sec. 14, 15, 23, 24, 25, 36									
9A	T13S.R81W									
	Sec. 19, 30									
	T13S.R82W									
	Sec. 14, 15									
9A	T13S.R82W									
	Sec. 14, 23, 24, 25									
	T13S.R81W									
		Sec. 19, 29, 30, 31, 32								

R-5