

CHAPTER V
IMPLEMENTATION OF THE FOREST PLAN

A. IMPLEMENTATION DIRECTION

While the Dixie National Forest will be guided by existing and future laws, regulations, policies and guidelines, the Forest Plan is designed to replace existing direction. This Forest Land and Resource Management Plan supercedes or supplements all previous land use and land management plans. Subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of Forest lands will be brought into conformance with this Plan by October 1, 1988.

1. Budget Proposals

The Forest Plan provides the management direction for developing multi-year implementation programs. The Plan's scheduled practices, shown in the Implementation Schedule are translated into multi-year program budget proposals which identify the needed expenditures. These processes compliment the Forest planning process as vehicles for requesting and allocating the funds needed to carry out the planned management direction. The Forest's proposed annual program budget is the basis for the requested funding. Upon approval of a final budget for the Forest, the Annual Program of Work is finalized and carried out. The accomplishment of the Annual Program is the incremental implementation of the management direction of the Forest Plan.

2. Environmental Analysis

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

Projects and activities permitted within the Forest Plan will be subjected to environmental analysis as they are planned for implementation. If the environmental analysis for a project shows that: (1) the management area prescription and standards can be complied with, and (2) little or no environmental effects are expected beyond those identified and documented in the Forest Plan final EIS; the analysis may result in a categorical exclusion. A Decision Notice may be used to document the decision.

B. MONITORING AND EVALUATION

The Plan will be monitored to ensure the scheduled activities are implemented and the anticipated outputs are produced. The monitoring plan will assess the adequacy of program costs. The goals, objectives, and standards and guidelines will be evaluated regularly to assess their validity and accomplishment.

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

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

1. Activities, Effects and Resources to be Measured - a specific statement of what will be monitored.
2. Monitoring Method - a description of the technique and sources of information to be employed. To the extent possible, existing reporting systems and standard methods will be used.
3. Expected Precision - the exactness or degree of refinement of collected data. Precision is qualitatively rated as high, moderate or low.

Expected Reliability - a measure of how accurately the parameter monitored reflects the situation. A qualitative system is used to rate reliability (high, moderate, or low).

4. Measurement Frequency - the schedule of monitoring activities.
5. Reporting Period - the reoccurring interval between reports summarizing monitoring results for a particular activity or practice. The sampling period should be long enough for specialists to capture significant information.
6. Variation Which Would Cause Further Evaluation and/or Change in Management Direction - a statement describing the tolerance limits within which actual performance can vary from predicted performance. When these limits are exceeded, further evaluation is triggered.

C. REVISION AND AMENDMENT

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

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

A Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING AND EVALUATION PROGRAM			REPORTING PERIOD	VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION
	MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY	FREQUENCY		
DEVELOPED RECREATION-PUBLIC					
Condition of Facilities (whether the condition of developed facilities is declining from the current situation)	Annual RIM Reports - Total \$ needed to bring facilities to Condition Class I	H/M	Bi-annual	5-Year	Five year average exceeds 1985 by 5%
Soil and Vegetative Loss at Developed Sites	Transects, photo points at selected key sites	H/M	5-Year	5-Year	Campsite condition below Class III using the Limits of Acceptable Impact
Facility Capacity (whether construction and reconstruction of facilities is keeping pace with demand)	PAOT, PAOT-Days	H/H	Annual	5-Year	PAOT and PAOT-Days greater than or equal to 90% of projected demand
Developed Site Service (whether Forest is able to provide service scheduled in the plan)	PAOT-Days FSM (to standard), Mgmt. Attainment Report Item #26...	H/H	Annual	5-Year	PAOT-Days FSM (standard) five year average exceeds or declines from the Forest Plan objective by 10%
Developed Site Use - Amount & Distribution (does demand exceed supply?)	Double sample indicator sites, random sample all fee sites	M/W	Annual	Annual	Use of an individual site exceeds 60% of theoretical capacity for the summer season or daily use exceeds capacity on more than 5% of the days in the summer season. The five-year average developed site use for the Forest varies from projected demand by more demand varies from projected demand by more than 20%
(The monitoring of recreation budgets are reflected in the amount of service provided and recreation facilities reconstructed in items above)					
DEVELOPED RECREATION-PRIVATE					
Downhill Ski Area Use (is it increasing as projected?)	Ski area attendance reports	H/H	Annual	5-Year	Five year average varies from projected demand by more than 20%
Organization Site Use (are existing sites being fully utilized?)	Permittees occupancy plan, pre-season occupancy reports, post-season regular visits to check occupancy	H/H	1st, 5th, 10th year	5-Year	Unreported private sector vacancies on Forest Land exceeding 10% of the summer season or reported and inventoried vacant periods for which no reservations are received

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY FREQUENCY	REPORTING PERIOD	VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION
DISPERSED RECREATION				
Dispersed Visitor Use (summer and winter)	Road counters, parking lot counts, trail counters, annual RIM reports	H/L	Annual	5-Year Visitor use varies from projected demand by greater than 20%
Site Condition (Limits of change)	Photo points, transects key sites adjacent to water	H/M	5-Year	5-Year Campsite condition below Class III using the Limits of Change Table 1.
Trail Condition	Trail condition surveys	H/M	25% annually	4-Years Trail mileage classed as inadequate (substandard) exceeds the current inadequate mileage shown in the AMS
Shifts between ROS Classes	ROS mapping	M/L	10 year	10 year If the change between classes is 5%
Off-Road Vehicle Travel	Acres needing rehabilitation Acres should be closed to resolve conflict	L/M H/M	5-Year 5-Year	5-Year Acres increased by 10% over last inventory Acres increased by 10% over last inventory
CULTURAL RESOURCES				
Completion of cultural resource investigation for all site disturbing projects where no inventory has been completed in the past	Management review	H/R	Annual	Annual Failure to accomplish is a performance problem and does not indicate a need to change management direction.
VISUAL RESOURCE				
Compliance with Visual Quality Objectives	Landscape Architect evaluate one retention corridor selected at random, Landscape Architect evaluate a minimum of two or 10% (whichever is more) of previous year's projects, selection at random from list of previous year's completed projects	H/M	Annual	Annual Corridor contains more than 2% of view area which does not conform to the visual quality objective, more than one sampled project does not meet VQO in a given year, or one or more projects in two successive years do not meet VQO
WILDERNESS				
1. Condition of Campsites and Surrounding Area (are conditions declining from the current situation?)	Limits of Change at key sites	H/M	5-years	5-Years Limit of Change analysis shows that the condition class has declined one class on 25% of inventoried sites

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING AND EVALUATION PROGRAM			REPORTING PERIOD	FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION	VARIATION WHICH WOULD CAUSE HUMAN USE EXCEEDS AREA CAPACITY IDENTIFIED IN THIS PLAN
	MONITORING METHOD	PRECISION / MEASUREMENT RELIABILITY FREQUENCY	M/M			
2. Amount and Distribution of Human Use	Trail registration, trail counters, and trailhead counts with periodic intensive sample	M/M	Annual	Annual	Prior to reaching optimum Forest populations, a downward population trend of 10% over 3 years. Once optimum populations are reached, a 20% total population or hard composition change over a 5-year period.	
WILDLIFE AND FISH						
Management Indicators						
a. Big game (mule deer and elk)	UDNR harvest and classification data, winter range rides, aerial recon., pellet transects	M/M	Annual	Annual	10% total decline in population size over a 3 year period and/or loss of important habitat components; i.e., roost trees in 2 or more areas of essential habitat as designated by UDNR and FS	
b. Wild turkey	UDNR harvest data, sighting records of reliable persons. Habitat evaluation during pre- and post-timber sale reviews and range analysis	M/M	Annual	Annual	10% total declining goshawk population size over a 3 year period	
c. Goshawk, common flicker, yellow-breasted chat	Nest survey for goshawk	M/M	Annual if population near minimum level, or every 2-5 years in project areas	Annual	20% decline in chat population size; 25% decline in flicker population size over a 5-year period	
d. Trout: brook, brown rainbow, cutthroat	Variable strip transect for goshawk, common flicker, yellow-breasted chat; sighting records of reliable persons	L/M	Annual if population near minimum level, or every 2-5 years in project areas	Annual	20% decline in population size over a 5-year period or a major change in size or quality of catch	
e. Bonneville cutthroat	Gill netting, electro-shocking, creel census	M/H	Annual	Annual	10% decline in population size in any one stream in any one year	
Conformance with Standards and Guidelines						
a. Habitat Diversity	Vegetative composition and age class surveys, calculation of Pattern Edge-Shape Index from maps & air photos	M/H	Annual in vegetative manipulation project areas	Annual	Significant variation from Standards and Guidelines specifications; below 7% oldgrowth, less than 7% grass, less than 10% in other age classes.	

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED		MONITORING AND EVALUATION PROGRAM			VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE	
		MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY	FREQUENCY	REPORTING PERIOD	IN MANAGEMENT DIRECTION
b. Snag management	Pre-sale, post-sale, post-fire wood count and condition survey	H/H	Each sale	Annual	Annual	10% below specifications of Standards and Guidelines
c. Fish/Riparian habitat	R-4 GAWS analysis, vegetative composition and age class surveys	H/R	Annual to develop baseline, every 5 years as needed thereafter	As data collected	Annual	20% variation from specifications of Standards and Guidelines
<u>RANGE</u>						
d. Habitat effectiveness for big game species	Road density: map, air photo,	M/M	Annual	Annual	Annual	10% below specifications of Standards and Guidelines
	Hiding, thermal cover: ground survey	H/H	Each Timber Sale	Annual	Annual	10%-15% variation from specifications of Standards and Guidelines
<u>TIMBER</u>						
Range Vegetation Condition and Trend	Measurement of plant composition and vigor, ground cover and soil stability	M/M	As per approved allotment management plans	As per approved allotment management plans	Downward vegetation and/or soil trend	
Forage Utilization	Grazing impact studies by standard Forest Service methods	M/M	As per approved allotment management plans	As per approved allotment management plans	Exceed prescribed utilization by 20% one time or 10% consistently	
Wild Horse Numbers and Habitat Trends	Aerial counts, grazing impact studies	M/M	Annual horse count, habitat assessment as per allotment management plans	Annual	Annual	Horse numbers deviate by 10% or range trend is down
Timber Harvest Area	Review timber program to ensure that harvest area will not exceed 10 year estimate by more than 10%.	H/M	Semi-Annual	Semi-Annual		Planned harvest area exceeded by more than 10% in any given year.

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED		MONITORING AND EVALUATION PROGRAM			VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION	
MONITORING METHOD	PRECISION/MEASUREMENT RELIABILITY	FREQUENCY	REPORTING PERIOD			
Timber Research Needs existing	Document recurring or unusual problems	M/M	Annual	Annual	Inability to solve problems through technology or practices	
Verify Classification of Suitable and Unsuitable Lands	Examine lands during silvicultural H/H exams, timber inventories, and ID team reviews to ground truth capabilities	Project basis	Annual	10% of land area found to be incorrectly identified		
	Complete soil/geologic survey of lands identified as unsuitable because of potential irreversible resource damage by 1990	H/H	On project basis as available, but prior to Forest plan update	5-Years	10% of land found to be incorrectly identified	
Harvest Practices in Retention, Partial Retention and Riparian Areas	Review of silvicultural prescriptions for timber sales and post-sale stand exams	H/H	Project basis	Annual	Violation of visual quality objectives or riparian area damage	
Adequate Restocking of Stands Within a Reasonable Time Period, Generally 5 Years of Final Harvest.	Silvicultural exam (Type 3)	H/H	5-Years after final harvest	Annual	Less than 5th year stocking standards in FSH 2409.26b--5.31-4	
Maximum Size of Openings Created by Clearcuttings	Review timber sale silvicultural prescriptions and post-sale silvicultural exams	H/H	Project basis	Annual	Clearcut sizes either restrict timber harvest practices or adversely affect visuals or other resource values	
Reforestation and Timber Stand Improvement Accomplishment	Review TSI and reforestation needs H/H and accomplishment reports, kW plans	H/H	Annual	Annual	Failure to meet targets or accomplish kW needs in timber sale plans	
Fuelwood Consumption and Supply	Determine supply by fuels inventories and acres available; determine demand by monitoring permits issued and sampling actual removal	H/M	Project basis	Annual	Supply is not meeting or projected to not meet demand within 5 years	
Growth Response of Regenerated Stands, Precommercially Thinned Stands and Cutover Sawtimber (including effects of insects & diseases)	Stage II stand examination, permanent growth plots	H/H	5th Year	Annual	± 10% variance in actual growth measured against assumptions made in growth simulations (PROGNOSIS)	
Timber Supply Projections	Stage II stand examination to complete exam on remainder of commercial Forest land	H/H	Annual in an accelerated basis until completed. Work toward goal of 45,000 acres per year on a continuing basis	Annual	± 10% variation in projections measured against Forest Plan projections	

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Long-Term Soil Productivity	Stage I timber inventory	H/H	1989 or sooner	5 Years or before Forest plan update	$\pm 10\%$ variation in projections measured against Forest Plan projections
SOILS					
Long-Term Soil Productivity	Fabric dams, erosion pins, visual estimates, photo points, and/or other accepted methods	H/M	2 locations per year	Annual	Exceeding established soil loss tolerance levels
Compaction	Measurement of bulk density and/or pore space	H/H	2 timber sales per year	Annual	15% increase in bulk density or 5% decrease in pore space
Upland Areas Adjacent to Riparian Management Areas	Fabric dams, erosion pins, visual estimates, photo points, and/or other accepted methods	H/M	2 locations per year	1st and 5th Exceed Forest Standards and Guidelines year following management practice	
Soil & Water Resource Protection - Project EA Mitigating Requirements	Visual estimates	H/M	1 project per year per Ranger District	Annual	Mitigating requirements not implemented or not working
Soil Survey Activities	Progress reviews, management attainment reports	H/H	Annually, during years of programmed survey work	Annual	$\pm 15\%$ of plan direction
Soil & Water Resource Improvement Needs Inventory	Update	H/H	Annual	Annual	Detection of improvement needs requiring early treatment or of higher priority than on current list.
WATER					
Compliance with State Water Quality Standards	Baseline monitoring as described in Dixie Water Quality Monitoring Plan, coordination with State 208 Agency	M/M	Monthly	Annual	Violation of Utah Water Quality Standards

MONITORING AND EVALUATION PROGRAM					
ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY FREQUENCY	REPORTING PERIOD	FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION	VARIATION WHICH WOULD CAUSE
Effectiveness of Best Management Practices in Meeting Water Quality Objectives and Goals	Project monitoring as described in Dixie Water Quality Monitoring Plan or project plans, to include chemical, physical, bacteriological, invertebrate, sedimentation or other parameters needed to meet monitoring objectives	H/H Variable	Variable	Non-achievement of water quality goals, violation of Utah Water Quality Standards,	
Compliance with Utah Public Drinking Water Regulations	Inspection of drainage and erosion M/M control measures on ground disturbing activities	Annual H/H Every 3 years	Annual Every 3 years	Exceed Forest standards and guidelines	
Water Yield Increases in East Fork of Sevier Watershed	Required chemical analyses	L/M Annual	Annual	Violation of primary maximum contaminant levels	
Stability of Streambanks in East Fork of Sevier River Drainages	WRENSS water yield methodology Sequential photopoints, measure stability rating in representative reaches	M/M Annual	Annual	Exceed minimum management requirements in timber harvest model	
Effectiveness and Maintenance Needs of Watershed Improvements	Visual inspection	L/H Volumetric measurements of retained sediments	1st year after installation, every 5 years thereafter M/M Variable	Annual Variable	Maintenance required or project not accomplishing stated objectives Project not accomplishing stated objectives
Accomplishment of Riparian Area Management Goals	Sequential photopoints, forage utilization level measurements (total and browse), stream channel stability ratings, stream channel morphology measurements, streambed materials measurements	M/H Annual	Annual	Exceed Forest standards and guidelines	
<u>AIR QUALITY</u>					
Compliance With Utah State Air Quality Guidelines and Standards	Compliance with weather forecast, burning index	M/M	Ongoing	As any violation occurs	Adverse public reaction, settling of smoke into inhabited areas

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED		MONITORING AND EVALUATION PROGRAM		VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION	
MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY FREQUENCY	REPORTING PERIOD			
MATERIALS					
Exploration Proposals: Adequacy of Permitting Process	Evaluation of case history	M/M	Evaluate one on each R.D.	Annual	Non-compliance with the Regional standards and direction
Lease/Permit Applications Forms and NEPA Process (Compliance with Regional Standards and Direction)	Inventory pending cases; evaluate adequacy of lease/permit and operating plan requirements, review Eas covering leasing and permits.	M/M	Evaluate one on each R.D.	Annual	Deviation from 1984 FS/BLM Agreement, lease and operating plan requirements are found inadequate to meet multiple resource needs, EAs inadequate
Site Specific Development Proposals and Administration of Operations, Compliance with Terms of Operating Plans and Existing Agreements	Field examination	H/H	Ongoing during operations, outlines in Regional Standards	Annual	Any unacceptable or unexpected results that deviate from the environmental assessment and approved operating plan; inadequacy or unreasonableness of lease/permit terms and operating plan requirements
Reclamation Results: Effectiveness of Work Done	Field examination	H/H	Annual inspection of 25% of operational areas that have been closed 2-3 years	Annual	Any unacceptable or unexpected results that deviate from the Environmental Assessment and approved operating plan
Exercise of Reserved and Outstanding Rights by Owner of Minerals	Monitor mineral-related activity on NFS surface	M/M	Ongoing	As any activity affecting NFS management occurs	Any impacts adverse to NFS management of surface resources
LANDS					
Special Use Permits, Applications, Amendments and Transfers	Land use reports	M/M	Quarterly	As scheduled in FY Action Plan	Deviation from R-4 standards
Land Survey	Management attainment report	H/H	Annually	As scheduled in FY Action Plan	Deviation from R-4 standards
					± 10% of planning period target

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING AND EVALUATION PROGRAM				REPORTING PERIOD	VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION
	MONITORING METHOD	PRECISION/ MEASUREMENT RELIABILITY	MEASUREMENT FREQUENCY			
Land Exchange	Land adjustment plan, management attainment report	H/H	Annually on all acres planned for exchange	As scheduled in FY	Action Plan	± 50% of planning period target
Rights-of-Way	Right-of-way acquisition plan	H/H	Annually on assigned targets	As scheduled in FY	Action Plan	± 50% of planning period target
Construction of Through Utilities	Construction Within approved corridors/windows	H/H	5-Year	Every 5th Year	Environmental analysis determines that a proposed corridor/window is better suited than those approved in the Forest Plan	
FACILITIES						
Road and Bridge Construction and Reconstruction	Accomplishment report	H/H	Annual	5 Year	5% deviation from projected quantities	
Road Management	Road logs condition surveys, and signs	M/M	Continuous	5 Year	5% downward trend in the condition of existing roads	
Buildings	Inspection reports	M/M	Annual	5 Year	Excessive deterioration of existing buildings	
Dam Administration	Inspections	H/H	Annual	Annual	Administrative failure to followup on unsafe dams	
PROTECTION – FIRE						
Adequacy of Fire Prevention Programs	Measure of number and size of person-caused fires	H/H	Annual	5 Years	20% increase in cumulative 5 years average	
Number of Wildfires and Acres Burned	Frequency by size distribution, Intensity level and acres burned	H/H	Annual	5 Years	20% increase in cumulative 5 year average for any of the factors	
Fire management Effectiveness Index (FMEI)	Evaluate cost plus net value change during fire	M/M	Annual	5 Years	20% increase in FMEI (FFF+FFF+NYC)	
Compliance with Fuel Loading Standards	Field measurements after activity or fuel treatment	M/M	Sample 30% of projects	5 Years	Exceeding fuel level guidelines or 10% failure to make targets	

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING METHOD	MONITORING AND EVALUATION PROGRAM			REPORTING PERIOD	VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION
		PRECISION/ MEASUREMENT RELIABILITY, FREQUENCY				
PROTECTION - INSECT DISEASE						
Population Levels of Insects and Diseases	Aerial surveys by R-4 F.P.M.	M/M	Annual	Annual	Building of past populations.	
Effectiveness of Dwarf Mistletoe Suppression Projects to Protect Regeneration	Field reviews	H/H	Follow-up on projects	5 Years	Infestation in regeneration of precommercial thinned areas	
ECONOMICS						
Effects on Local Economies of Forest Outputs	District staff reviews of affected sectors		Annually	Annually	Significant changes in sectors within economic impact areas	

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

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

A P P E N D I X A

**Management Area Maps
(Contained in a Separate Package)**

A P P E N D I X B

Implementation Schedules:

Recreation
Wilderness
Wildlife and Fish
Range Management
Timber Management
Soil and Water
Minerals
Lands
Facilities
Protection

FOREST ACTION SCHEDULE
Recreation

Project Name	Mgmt. area	Proj. Size	Dis-trict	Fiscal Year to Implement						
				86	87	88	89	90	91	92
Steambank Rehabilitation - Ponderosa Picnic Area	1A	100 Feet	D-1	X	X	X	X	X	X	X
Amphitheater rehabilitation - Ponderosa Picnic Are	1A	150 PAOT								
Campsite rehabilitation - Juniper Park Campground	1A	2 Units								
Construct toilet - Juniper Park Campground	1A	1 Each								
Landscape Trailer Dump Station - Four Mile Bench	2B									
Extent boat ramp - Enterprise Reservoir	10A									
Rehabilitate water system - Oak Grove Campground	1A	1 System								
Construct overflow camping - Pine Valley Campground	1A									
Add waste water facilities - Pine Valley Campground	1A	8 toilets								
Construct Blue Springs Point Campground	1A	250 PAOT								
Campground rehabilitation - Navajo Lake	1A		D-2							
Construct overflow camping - Panguitoch Lake	1A			X						
Construct overflow camping - Duck Creek	1A			X						
Construct overflow camping - Navajo Lake	1A			X						
Harden campsites - Spruce Campground	1A	32 Units								
Harden campsites - Cedar Canyon Campground	1A	19 Units								
Construct winter sports parking - Midway	2B	1 Each								
Construct winter sports parking - Navajo Lake	1A	1 Each								
Construct winter sports parking - Strawberry	2B	1 Each								
Construct trailhead facilities - West Fork Hunt Cr	2A		D-3							
Construct trailhead facilities - East Fork Hunt Cr	2A									
Construct campground - Deer Lake Trailhead		50 Units	D-4							
Pine Lake Recreation Plan		1 Plan								
Construct campground protection fences	1A	3 fences	D-5							
Construct water system protection fences	1A	3 fences								
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Wilderness										
Project Name	Mgmt. area	Proj. Size	Dis-trict	Fiscal Year to Implement						
				86	87	88	89	90	91	92
Trail reconstruction - Pine Valley Wilderness	2A	3 miles	D-1	X	X	X	X	X	X	X
Construct trailhead - Forsythe Trail	2B	1 each								
Construct trailhead - New Harmony Trail	5A	1 each								
Trail reconstruction - Ashdown Gorge Wilderness	8A	3 miles	D-2	X	X	X	X	X	X	X
Construct trailhead - Twisted Forest	1	1 each								

Wildlife Project Implementation
Pine Valley District

MH Code	Project Name	Project Description	Neig. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
001	Fish Habitat Survey	Survey Pinto Crk., Reservoir Cyn., Pine Park Cyn., Forsythe Cyn., Straight Cyn., Leads Crk., Santa Clara River, Harmony Crk., Leap Crk., Mill Crk., Main Cyn. Crk., Little Pine Crk., Lost Crk., Rock Cyn., Pine Cyn., West Fork Spring, South Ash Crk., Mill Cyn., Rock Cyn. (Pine Valley), Little Pinto Crk., Holt Cyn., for fish habitat improvement potential.	9A/9B	D-1													To determine fisheries needs.
001	Prescribed Burning Plan	Develop prescribed burning plan for prospective areas on the Dist.	A11	D-1					X								DNR input and priorities needed.
001	Grass Valley Fishery and Water Fowl Development	Investigate possibility of creating reservoir and wet land.	2B	D-1					X								Would need water right. T3TS., R18W, Sec. 33
001	Enterprise Reservoir Waterfowl development	Possible 100 acre wetland development and protection at upper end of reservoir.	2B	D-1				X									Feasibility study. T3TS., R18W., Sec. 33.
002	North Hills Chaining T36S., R18W.	2,000 acre P-J chaining (Joint project with range)	1/5A	D-1			X	X	X								In wild horse negot. area.
002	Browse Release	100 acres/year	4C/5A	D-1		X	X	X	X	X	X	X					For deer/elk.
002	Cedar Beach Chaining	460 acre P-J chaining.	4C/5A	D-1			X	X									T41S., R15W., Sec. 51&6.
002	Holt Canyon Riparian Ecosystem	Establish riparian vegetation, control erosion, grazing negot.	9A	D-1									X				T3TS., R16W.
002	Big Mountain Road Closure	Close 2 miles of road.		1			X										West of Mt. Meadows. T3SS., R16W., Sec. 58.
002	Water Canyon Road Realignment and closure.	Close upper end of road, realign lower part near the creek.	2B/9A	D-1													Try to accomplish in 86 if not, do 87. T39S., R14W., Sec. 78&8.
002	Leap Creek Road closure	1.5 miles above Browse Guard Stn.	4C	D-1													T39S., R13W., Sec. 17.
002	New Harmony Revegetation	Chain and seed 100 ac. on Forest in conjunction with HMF and DNR	5A	D-1													Critical winter range coop. with HMF/DNR. T38S., R13W., Sec. 9.
002	Ox Valley Prescribed Burn	20 acre experimental project. Burn sage within oak type.	1	D-1								X					Feeding habitat of herd unit 61-C. T38S., R17W., Sec. 16.

Wildlife Project Implementation Schedule
Pine Valley District

MH Code	Project Name	Project Description	Wpt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
003	North Hills Water Develop.	Install 2 guzzlers.	5A	D-1			X	X									Done to compliment North Hills chaining. T36S, R16W, Sec. 13 & 36.
003	Mound Valley Water Develop.	Install fiberglass guzzler.	8A	D-1						X							In Pine Valley Wilder- ness. T36S, R15W, Sec. 10.
003	Gordon Spring Meadow Protect. (Near Grants Ranch)	Close 100 yds. of road to dis- courage recreational horse use of meadow.	1	D-1		X											Develop horse watering facility away from the meadow. T36S, R14W, Sec. 36.
003	Trail Spring Pond (Near Pages Ranch)	Develop and fence pond, dispose of existing trough.	6A	D-1		X											Hard Unit 61B in P-J. T27S, R14W, Sec. 15.
003	Cottonwood Guard Station Water Development	Develop pond, repair pipelines.	5A	D-1		X											T24S, R15W, Sec. 9
003	Dry Flat Pond Construction	Build pond. Possible water fowl potential.	1	D-1						X							North of Grass Valley. T36S, R14W, Sec. 17.
003	Wood Branch Water Development	Pond construction and water fowl habitat development.	1	D-1						X							North of Grass Valley. T36S, R14W, Sec. 20.
003	Gunlock Dry Lake Pond Develop.	Pond construction in oak zone or deer hard unit 61-C.	1	D-1							X						Summer deer habitat. T36S, R17W, Sec. 9
003	Oak Spring Water Development	Pond construction in critical falling/summer range of Unit 61-C.	1	D-1								X					On Bull Valley Allot. T36S, R16W, Sec. 21.
003	Dry Lake Guzzler	Guzzler construction	1	D-1								X					Southwest of Cedar City T-37S, R.13W., Section 16.
003	Stabeli Spring Water Develop.	Develop spring and pond.	6A	D-1			X										T36S, R16W, Sec. 3.
003	Paradise Water Development	Guzzler construction.	3A	D-1									X				T37S, R14W, Sec. 33.
003	Cove Water Development	Pond reconstruction	4C	D-1						X							Present pond fills with sediment. South of New Harmony. T36S, R13W, Sec. 14.
003	Maple Spring Water Development	Spring development, protection fencing, and pond.	4C	D-1						X							Near Oak Grove, T40S, R14W, Sec. 17.

Wildlife Project Implementation Schedule
Pine Valley District

MHI Code	Project Name	Project Description	Hgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
003	Aspen Spring Water Development	Spring development, protection fencing, and pond.	1	D-1	X												Terry-Shoal Allot. T38S, R19W, Sec. 12.
003	Big Canyon Spring Development	Spring development and trough.	1	D-1		X											West Pinto Allot. T37S, R15W, Sec. 7&19.
003	Gardner Spring Development	Spring development, protection fencing, and pond.	1	D-1			X										Gunlock Allot. T38S, R17W, Sec. 26.
003	Sheep Corral Spring Develop.	Spring development and pond.	1	D-1				X									Terry-Shoal Allot. T38S, R19W, Sec. 11.
003	Battlesake Spring Develop.	Spring development and meadow seeding.	1	D-1					X								Good improvement potential. 0022003, T38S, R18W, Sec. 6.
003	Stud Horse Guzzler	Guzzler construction and protection fencing.	6A	D-1						X							T36S, R19W, Sec. 19.
003	Telegraph Draw Pond	Pond construction and protection fencing.	1	D-1						X							T36S, R18W, Sec. 16.
003	Human Beach Water Develop.	Road construction.	5A	D-1							X						T10S, R15W, Sec. 6.
003	Cedar Bench Water Develop.	Guzzler construction.	4C	D-1								X					T10S, R15W, Sec. 36.
003	Water Canyon Fish Habitat Improvement	Instream and/or bank structures (15 struc.)	9A	D-1								X					T39S, R14W, Sec. 7.
001	Pinto Creek Bank Stabilization	Bank protections structures.	9A	D-1													Project planning in 87.
003	Rock Springs Water Develop.	Road construction.	1	D-1													Deer Unit 61A north of New Harmony, T37S, R13W, Sec. 28.
003	Horse Valley Water Develop.	Pond construction and protection fencing.	4C	D-1													T38S, R15W, Sec. 16.

Wildlife Project Implementation Schedule
Cedar City Ranger District

MHI Code	Project Name	Project Description	Hgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
001	Blue Spring Creek and Deer Creek Aquatic Habitat Survey	Survey of aquatic habitat and water chemistry to determine contribution of these streams to Pangitch Lake problems.	1/9A	D-2	X											Joint Study with Dixie watershed staff to determine forest's contribution to Pangitch Lake.

Wildlife Project Implementation Schedule
Cedar City Ranger District

MWH Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	Year to Implement								Remarks	
					86	87	88	89	90	91	92	93	94	
C01	Fish Habitat survey and examine project protection	Reeds Lake, Houston Pond, Round Meadow Pond, Red Creek, Little Creek, Bunker Creek, Stout Creek, Sandy Creek, Swains Creek, Castle Creek, Louder Creek, Strawberry Creek, Lars Fork, Pangitch Creek Deep Creek, Ison Creek, Butler Cr., Hendrickson Lakes, Ponds - Yankee Meadow area, Carter Creek, Ponds - Sidney Valley, Bear Creek.	All	D-2	X									To determine fishery needs.
C01	Pangitch Lake Water Quality Management Plan	Prepare plan to correct and control Forest pollutants going into Pangitch Lake.	1A/4A	D-2	X	X								Joint with watershed and staff coop with State.
C02	Bear Valley Prescribed Burn	Burn 300 acres of sagebrush and RJ, Sec. 4, T32S, RW.	1/6A	D-2	X									EA and burn plan to be done 1985.
C01	Duck Creek Pond Improvement Feasibility Investigation	Dredge pond to deeper and improve fish habitat, Sec. 12, T38S, RW.	4A	D-2			X							Dredging may break seal in pond bottom.
C01	Aspen Mirror Lake Improvement Feasibility Investigation	Dredge pond to deeper and improve fish habitat.	4A	D-2				X						Dredging may break seal in pond bottom.
C02	Buckskin Prescribed Burn	Burn 200 acres, Sec. 35, T32S, RW.	1	D-2				X						Need EA and burn plan.
C02	Yankee Meadows Waterfowl Habitat Improvement	Seed and protect 40 acres.	1	D-2					X					FS does not own 40 acres with waterfowl potential.
C02	Brose Release	100/acre/year (Bitter brush release/P-J removal)	1	D-2		X	X	X	X	X	X	X	X	On deer/elk winter ranges.
C02	Cottonwood Road Closure	Close 13 miles of road permanently in deer winter range.	4B	D-2		X								Complementary to Mineral Canyon project.
C02	Five-Mile Chaining	Chain 500 acres of P-J in deer/elk winter range, Sec. 27, 28, 33 & 34, T34S, RW.	6A	D-2		X	X							Needs archeological clearance & EA.
C02	Little Creek Stream Improvement	Bank revegetation and protection, Sec. 8 & 9, T34S, RW.	6A	D-2										X
C02	Mineral Canyon Pinon-Juniper Thin P-J	on 200 acres.	4B	D-2			X							T33S, RW, Sec. 8.
C02	Three Mile Creek Stream Improvement	Bank revegetation and protection, Sec. 7, 8, 9 & 10, T34S, RW	9A	D-2			X							In conjunction with instream and bank structural improvements.

WILDLIFE PROJECT IMPLEMENTATION SCHEDULE
Cedar City Ranger District

MH Code	Project Name	Project Description	Neagt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C01	Navajo Lake Aeration Feasibility Investigation	Examine alternative methods of aeration and costs/benefits, Sec. 7 & 8, T36S, R3W.	4A	D-2	X											In coop. with DMR.
C01	Iron Peak Spring Water Development	Study feasibility of project, Sec. 19, T33S, R7W	1	D-2												X
C02	Willow Creek Chaining	Chain 300 acres of P-J, Sec. 16, T33S, R7W.	4B	D-2												X
C03	Tammy Creek Water Development T37S, R7W.	Guzzler construction, Sec. 8	1	D-2	X											Check KV plan for Tammy Creek Timber Sale.
C03	Dead Lake Fish Habitat Improvement	Raise the lower dam to increase water storage. Construct adequate spillway, Sec. 36, T36S, R3W.	4A	D-2												Spillway repairs made in 1983, work still needed. Coordinate with water shed.
C03	Black Mountain Waterline	Install waterline (approx. 3 miles) and watering troughs.	3A/2B 7A	D-2												T37S, R3W. Good project, but problems. Cost 10 to 15 M\$. Range and wildlife benefits.
C03	Three Mile Creek Structural Improvement	Instream and bank structures for fish habitat and channel stabilization.	7A	D-2												Done in conjunction with revegetation work and grazing agent. T34S, R6W.
C03	Blue Spring Creek Fish Habitat Improvement	Bank and/or instream structures.	1/1A	D-2												Complete after aquatic and water chemistry studies are done. T36S, R7W.
C02	Deer Creek Fish Habitat Improvement	Bank and/or instream structural improvement.	9A	D-2												Complete after aquatic and water chemistry studies are done. RSW, T36S.
C03	Loder Creek Pond Fish Habitat Improvement	Increase storage, improve dam, Sec. 19, T36S, R8W.	2A	D-2												
C03	Twin Lakes Fish Habitat Improvement	Repair dam, Sec. 18, T36S, R7W.	1	D-2												X
C03	Tammy Creek Fish Habitat Improvement and Channel	Control erosion problems in headwaters. Stabilize and protect banks.	9A	D-2												Joint project with watershed staff (Timpes Valley Timber Sale). T37S, R3W.

Wildlife Project Implementation Schedule
Cedar City Ranger District

Hill Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
C03	Butler Spring Protection Fencing	Construct enclosure around spring source.	1	D-2												T35S, R7W, NW& Sec. 10.	
C03	Tippetts Valley Waterfowl Habitat Improvement	Develop waterfowl habitat by pothole construction or diking. Sec. 22 & 23, T37S, R8W.	7A	D-2												X Sec. 22 & 23, T37S, R8W. (Tippets Valley Timber Sale).	
C03	Reeds Valley Waterfowl Habitat Improvement	Develop, improve waterfowl habitat. Sec. 2, T37S, R8W.	2A	D-2												X Done in conjunction with existing improvement.	
C03	Sandy Creek Water Development	Pond construction and protection, Sec. 28, T33S, R6W.	6A	D-2	X											X Done in conjunction with waterfowl improvement work. T33S, R6W, Sec. 2.	
C03	Reeds Lake Fish Habitat Improvement	Raise and improve dam to increase storage and improve the fishery.	2A	D-2												X Schedule after the Five Mile Chaining is done.	
C03	Five Mile Water Development	Guzzler construction, Sec. 34, T34S, R6W.	6A	D-2												X	
C02	Sandy Creek Burn	Burn 300 acres of sagebrush.	6A	D-2												X	
C02	Three Creek Chaining and Seeding	Chain 500 acres of P-J on Deer/Erik winter ranger.	1	D-2												X T33S, R6W, Sec. 22, 14 & 22.	

Wildlife Project Implementation Schedule
Powell Ranger District

Hill Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
C01	Fish Habitat/Project Potential Deer Creek Survey		9A	D-3												During 86-90.	
C01	Fish Habitat/Project Potential Deep Creek Survey		5A	D-3												During 86-90.	
C01	Fish Habitat/Project Potential East and West Hunt Creek Survey		9A	D-3												During 86-90.	
C01	Fish Habitat/Project Potential Cottonwood Creek Survey		9A	D-3												During 86-90.	
C01	Fish Habitat/Project Potential Hancock Creek Survey.		5A	D-3												During 86-90.	
C01	Fish Habitat/Project Potential Kanab Creek Survey.		6A/9A	D-3												During 86-90.	

Wildlife Project Implementation Schedule
Powell Ranger District

MNH Code	Project Name	Project Description	Habit. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C01	Fish Habitat/Project Potential Survey.	Podunk Creek	6A	D-3												During 86-90.
C01	Fish Habitat/Project Potential Survey.	Hubber Creek	2A/9A	D-3												During 86-90.
C01	Fish Habitat/Project Potential Survey.	Badger Creek	9A	D-3												During 86-90.
C01	Fish Habitat/Project Potential Survey.	Robinson Creek	6A	D-3												During 86-90.
C01	Fish Habitat/Project Potential Survey.	Pine Creek	5A/7A	D-3												During 86-90.
C01	Fish Habitat/Project Potential Survey.	Sanford Creek	2A/5A	D-3												During 86-90.
C01	Pronghorn Habitat Improvement	Investigate with DNR, habitat enhancement possibilities.	5A/6A	D-3												Johns Valley.
C01	Sagegrouse Habitat Improvement	Investigate with DNR, habitat enhancement possibilities.	All	D-3												Also transplant potential.
C01	Turkey Habitat Improvement and Transplant potential.	Investigate with DNR, habitat enhancement and transplant possibilities.	All	D-3												
C01	Pat Willis Draw Waterfall Improvement	Investigate development possibilities.	6A	D-3												X
C01	Hubber Creek Enclosure	10 acre enclosure at the mouth of Hubber Creek.	6A/9A	D-3												Investigate wildlife benefits of this project.
C01	Podunk Creek Enclosure	10 acre enclosure at the mouth of Podunk Creek.	6A	D-3												Investigate wildlife benefits of this project.
C01	Fish Habitat/Project Survey	Rocky Ford Creek	5A	D-3												X
C01	East Fork Fish and Riparian Ecosystem Improvement Plan	Long range fish/riparian ecosystem restoration action plan for East Fork Sherrill River and headwater Tributaries.	1B/2B	D-3												Investigate waterfowl opportunities.
C01	Prescribed Burning Plan	District wide presc. burning plan. All To identify areas with burning potential.		D-3												

Wildlife Project Implementation Schedule
Powell Ranger District

MTH Code	Project Name	Project Description	Neagt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C01	Tropic Reservoir Fish Water- Fowl Project Potential Survey	Investigate feasibility of increasing conservation pool, fish growth problems, permanent wetland at upper end.	4A	D-3			X	X								
C01	Aspen Management Plan for Wildlife Habitat Improvement	District wide plan to identify management opportunities to benefit wildlife.	All	D-3			X	X								
C01	Utah Prairie Dog Project Poten- tial Investigation.	Identify project possibilities at transplant sites and other locations.	5A/5A	D-3			X									Coop. with DMR.
C01	Pinon-Juniper Management Plan for Wildlife Habitat Improve- ment.	District wide plan to identify management opportunities to benefit wildlife.	5A/5A													
C02	East Fork Service Bank Stabilization	Non-structural stabilization bank reshaping, revegetation.	1B/2B 4A/6A	D-3		X	X	X	X	X	X	X	X	X	X	
C02	Jones Corral Clearning	500 Acres north of Pole Gyn. (R2N T3S Secs. 10, 11, 12, 13, 14) Isolated tracts.	5A													
C02	Jones Corral/Table Mtn. Prescribed Burning.	2,000 of 3,000 acres in burn plan left to do. Mostly sagebrush, some aspen.	5A	D-3		X	X	X	X	X						
C02	Jones Corral/Table Mtn. Aspen Management.	Clearcut 200 acres.	5A	D-3				X	X	X						Investigate commer- cial harvest.
C02	Mad Spring Watershed Re- habilitation	Joint wildlife/watershed reveget- work. To benefit sage grouse/big game.	5A	D-3												
C02	Hillsdale Browse Release	Remove pinyon-juniper on 100 acres to release bitterbrush understory.	2A/5A	D-3												Commercial Firewood sale. Deer and elk winter and transition ranges.
C03	Mud Flat/Table Mtn. Water Development.	Construct 2 guzzlers.	5A	D-3												
C03	Blue Fly Water Development	Guzzler construction	7A	D-3												
C03	Little Cow Creek Water Dev.	Construct 2 ponds in elk summer range.	5A	D-3												
C03	Marshall Canyon Water Dev.	Guzzler construction	5A	D-3												In 1984 chained area.

Wildlife Project Implementation Schedule
Powell Ranger District

MH Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C03	East Fork Saylor River Structural Bank Stabilization and riparian ecosystem improvements.	Bank and instream structural fish habitat improvements.	2B/4A 6A	D-3	X	X	X	X	X	X	X	X	X	X	X	Work in conjunction with East Fork nonstructural improvement.
C03	East Fork Saylor Raptor Habitat Improvement	Erect raptor perch poles at tropic 4A/6A Res. and locations on East Fork.	4A/6A	D-3												Bolish cooperation from Cartana Power Co.
C03	Hunt Creek Fish Habitat Improvement	Install drop structures to improve pool; riffle ratio and to raise water.	9A	D-3									X	X	X	Possible wildlife/water shed coop. project.
C03	Deep Creek Fish Habitat Improvement	Install drop structures to improve 5A pool; riffle ratio	5A	D-3									X	X	X	
C03	Tum Beat Spring Water Development	Source protection, pond construction.	2A	D-3				X								Waterfowl and other species benefits. Need water right & boundary check.
C03	Aliston Hollow Water Development	Develop water source primarily for sage grouse.	6A													
C03	Beete Spring Pipeline Extension	Extend existing pipeline to provide wildlife water.	6A	D-3				X								Range/Wildlife coop. project.
Wildlife Project Implementation Schedule Escalante Ranger District																
MH Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C01	Fish Habitat/Project Potential Survey	Fine Creek	9A	D-4									X			
C01	Prescribed Burning Plan	District-wide prescribed burning plan to identify areas with burning potential	A11	D-4												Include commercial harvest.
C01	Aspen Management Plan	District-wide plan to identify management opportunities to benefit wildlife.	A11	D-4												Some HM land. Land trade could add acreage.
C01	Long Neck Mesa Renegation	1000 acres of P-J chain or burn, feasibility investigation.	2A	D-4												
C01	Owend Ft. (Pretty Tree Branch) draining	Feasibility investigation.	5A	D-4									X			Coordinate with DNR.

Wildlife Project Implementation Schedule
Escalante Ranger District

MNH Code	Project Name	Project Description	Habit. Area	Ranger Distr.	86	87	88	89	90	91	92	93	94	95	96	Remarks
C01	King's Bench Revegetation	Investigate best method of P-J treatment.	5A	D-4	X											High priority project near wilderness boundary. May have arch sites.
C01	Boulder Creek Meadow Enclosure	Enclosure fence 17 acre wet treatment.	3A	D-4						X						East Fork Boulder Creek.
C01	Auger Hole Lake Fish and/or	Feasibility investigation of improvement possibilities.	9A	D-4						X						
C01	Beaver Pond Enhancement	Cleaning of filled-in beaver ponds to improve fisheries.	3A	D-4					X	X	X					Bear Lake (head of Bear Cr.) an example.
C01	Wet Meadow Enclosure Fencing	Side Hollow, Sec. 5, T33S, R4E.	6A	D-4					X							Feasibility investigation.
C01	Wet Meadow Enclosure Fencing	North Creek. Investigate feasibility.	1A	D-4							X					Barder Lake T33S, R1E, Sec. 19.
C01	Wet Meadow Enclosure Fencing	Shantz Ranch (on Pine Creek). Investigation feasibility.	6A	D-4								X				
C01	Pine Lake Waterfowl Area	Protection fence 30 acres on south side. Investigate feasibility.	1A	D-4								X				T32S, R2E, Sec. 24.
C01	Rock Ranch Revegetation	Treat 300 acres by burning, thinning, etc.	2A/2B	D-4												
C02	Willow Meadows Reservoir Enclosure	Fence 20 acres. Canaan Mountain, 1 Sec. 23, T33S, R1E.	1A	D-4												
C03	Rob's Reservoir Fish Habitat Improvement	Raise dam to increase reservoir size to allow overwintering of fish.	1A	D-4				X								Also rip-rap dam.
C03	Rosey Lake Diversion	Divert water to Rosey Lake to improve water quality.	1A	D-4												X
C03	Pacer Lake Dam Modification	Raise dam to increase reservoir and overwinter fish.	9A													Divert water from John Allen Bottom.
C03	Grimm Spring Water Development	Spring development and source protection, Sec. 26, T33S, R1W.	2B	D-4												Approx. \$8,000 needed to purchase conservation pool.
																On Griffin Top. Need to provide water for livestock also.

Wildlife Project Implementation Schedule
Escalante Ranger District

MTH Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
003	Sweetwater Enclosure	Fence 20 acre stream and wet meadow area east of Midsoe Jct.	2B	D-4		X										Repair of existing enclosure.
003	Cyclone Lake Waterfowl Area	Protection fence 25-100 acre	2B	D-4												X Repair of existing enclosure.
003	Antimony Creek Fence Modification	Modify 5 miles of fence to allow better big game crossing. One/mile year.	9A	D-4		X	X	X	X							
002	Browse Release	100 acres/year Cut intruding P-J releasing bitterbrush.	All	D-4	X	X	X	X	X	X	X	X	X	X	X	For deer/elk.
002	Long Neck Mesa Revegetation	Revegetation in 1000 acres of P-J. 2A/3A	D-4			X										Feasibility study in 1986.
002	Orland Point Revegetation	Chain 600 to 1200 acres.	5A	D-4				X								Feasibility study in 1988.
002	King's Bench Revegetation	800 to 1200 acres.	5A	D-4				X								Feasibility study in 1987.
002	Rock Bench Revegetation	300 acres.	2A/2B	D-4				X								Feasibility study in 1987.
003	Pine Creek Fish Habitat Improv.	Instream and bank structures to improve cover and pool habitat.	9A	D-4					X							Banks need work above Compricher Guard Station.
Wildlife Project Implementation Schedule Teasdale Ranger District																
MTH Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	86	87	88	89	90	91	92	93	94	95	96	Remarks
002	Browse Release	100 acres/year (Bitterbrush release)	2A/5A	D-5	X	X	X	X	X	X	X	X	X	X	X	T31S, REE, Sec. 28.
002	North Big Lake Aspen Treatment Conjunction with Timber Sale	Cut select patches of over mature aspen to stimulate younger aspen sprouts.	2B	D-5						X	X					
002	Browse Planting North and West Sides	Plan Bitterbrush and Saltbrush seedings in select areas on the North slope and West side. 200 ac.	5A	D-5						X	X					T30S, REE, Sec. 8, 9 16, 17.

Wildlife Project Implementation Schedule
Teesdale Ranger District

NHI Code	Project Name	Project Description	Mgmt. Area	Ranger Dist.	Year to Implement										Remarks
					86	87	88	89	90	91	92	93	94	95	
C02	Government Creek Winter Range Improvement	Improve 200 acres of winter range.	5A	D-5			X	X	X	X					T29S, R3E, Secs. 22, 23, 24, 25, 26, 33 & 34.
C03	East Slopes Fence modification	Modify 20 miles of fence to allow better big game passage (2 miles per year).	4B/6A	D-5		X	X	X	X	X	X	X	X	X	
C03	Horsehoe Lake Dam Reconstruction	Redesign dam to raise the outlet works and create a conservation pool.	3A	D-5				X							T31S, R3E, Sec. 21
C03	Logging Grove Water Develop.	Pond construction.	6A	D-5				X							T30S, R3E, Sec. 36
C03	Wide Hollow Water Develop.	Pond construction.	7A	D-5				X							T30S, R3E, Sec. 28
C03	Big Lake Aeration (On Boulder Top)	Construct and install wind powered aerator.	9A	D-5				X							T31S, R3E, Sec. 14
C03	Purple Lake Aeration	Construct and install wind powered aerator.	7A	D-5				X							T31S, R3E, Sec. 33
C03	North Slope Water Development	Pond construction.	10B	D-5					X						T29S, R3E, Sec. 31.
C03	Dark Valley Waterfowl Develop.	Dikes construction and marsh devel.	4A	D-5		X	X								T31S, R3E, Sec. 5
C03	Birch Spring Water Development	Pond construction and protection	5A	D-5				X							T29S, R3E, Sec. 27
C03	Spring Creek Water Development	Pond construction.	7A	D-5					X						T30S, R3E, Sec. 20
C03	Pine Creek Fish Habitat Improvement	Instream and bank structural improvement.	9B	D-5				X							T30S, R3E, Sec. 15.
C03	Pine Creek Reservoir	Dam Reconstruction	9B	D-5					X						T32S, R3E, Sec. 1
C03	Dry Beach Water Development	Construct guzzler on deer and elk winter range.	4B	D-5					X						
C03	Sulphur Creek Water Develop.	Construct guzzler in chained area.	4B	D-5						X					T30S, R3E, Sec. 15.
C03	Rim Lake Aerator	Construct and install wind powered aerator.	2B	D-5							X				T31S, R3E, Sec. 30
C03	Edmond's Hole Water Develop.	Reconstruct Edmond's Hole Pond.	6A	D-5							X				T32S, R3E, Sec. 14
C02	Happy Valley Winter Range	Improve 300 acres.	4B	D-5			X	X	X	X					T30S, R3E, Sec. 31.

Tentative Project Implementation Schedule

MTH Code	Project Name	Project Description	Negev Area	Ranger Dist.	Year to Implement										Remarks
					86	87	88	89	90	91	92	93	94	95	
D01	Range Planning	Annual updating of allotment plans.	A11	A11	X	X	X	X	X	X	X	X	X	X	X
D02	Range Allotment Analysis (RAA)	Annual Update RAA on all allotment.	A11	A11	X	X	X	X	X	X	X	X	X	X	X
D03	North Hills Chaining	Chain and reseed 2,000 acres.	1/5A	D-1	X	X	X								Joint M. project.
	Nondes Weeds Control	Spot control 40 acres of noxious weeds per year.	A11	D-1	X	X	X	X	X	X	X	X	X	X	
	Nondes Weeds Control	Spot control 5 acres of noxious weeds per year.	A11	D-2	X	X	X	X	X	X	X	X	X	X	
	Nondes Weeds Control	Spot control 5 acres of noxious weeds per year.	A11	D-3	X	X	X	X	X	X	X	X	X	X	
	Nondes Weeds Control	Spot control 5 acres of noxious weeds per year.	A11	D-4	X	X	X	X	X	X	X	X	X	X	
	Nondes Weeds Control	Spot control 5 acres of noxious weeds per year.	A11	D-5	X	X	X	X	X	X	X	X	X	X	
D04	Sagebrush/P-J Control	Control of P-J and sagebrush invading reseedings - 300 acres/year.	A11	D-1	X	X	X	X	X	X	X	X	X	X	
	Sagebrush/P-J Control	Control of P-J and sagebrush invading reseedings - 200 acres/year.	A11	D-2	X	X	X	X	X	X	X	X	X	X	
	Sagebrush/P-J Control	Control of P-J and sagebrush invading reseedings - 300 acres/year.	A11	D-3	X	X	X	X	X	X	X	X	X	X	
	Sagebrush/P-J Control	Control of P-J and sagebrush invading reseedings - 200 acres/year.	A11	D-4	X	X	X	X	X	X	X	X	X	X	
	Sagebrush/P-J Control	Control of P-J and sagebrush invading reseedings - 50 acres/year.	A11	D-5	X	X	X	X	X	X	X	X	X	X	
D05	Water Development Construction/Reconstruction	Construct or reconstruct 2 water developments/year.	A11	D-1	X	X	X	X	X	X	X	X	X	X	
	Water Development Construction/Reconstruction	Construct or reconstruct 2 water developments/year.	A11	D-2	X	X	X	X	X	X	X	X	X	X	
	Water Development Construction/Reconstruction	Construct or reconstruct 2 water developments/year.	A11	D-3	X	X	X	X	X	X	X	X	X	X	X

Wildlife Project Implementation Schedule

Ranges

WID Code	Project Name	Project Description	Area	Dist.	86	87	88	89	90	91	92	93	94	95	96	Year to Implement	Remarks
	Water Development	Construct or reconstruct 2 water developments/year.	All	D-4	X	X	X	X	X	X	X	X	X	X	X		
	Water Development Construction/Reconstruction	Construct or reconstruct 1 water developments/year.	All	D-5	X	X	X	X	X	X	X	X	X	X	X		
	Fence Reconstruction	Reconstruct 2 miles of fence/year.	All	D-1	X	X	X	X	X	X	X	X	X	X	X		
	Fence Reconstruction	Reconstruct 2 Miles of fence/year.	All	D-2	X	X	X	X	X	X	X	X	X	X	X		
	Fence Reconstruction	Reconstruct 2 miles of fence/year.	All	D-3	X	X	X	X	X	X	X	X	X	X	X		
	Fence Reconstruction	Reconstruct 2 miles of fence/year.	All	D-4	X	X	X	X	X	X	X	X	X	X	X		
	Fence Reconstruction	Reconstruct 1 mile of fence/year.	All	D-5	X	X	X	X	X	X	X	X	X	X	X		
	Wild Horse Management	Protect, control, manage North Hills wild horses in cooperation with H.M.	All	D-1	X	X	X	X	X	X	X	X	X	X	X		

Timber Project Implementation Schedule
Timber Sale Schedule (MMBF)

No.	Sale Name	Wgmt. Area	Areas to be Cutover	Dis-trict	Miles of Road	Species	Volume	85	86	87	88	89	90	91	92	93	94	95	Tsi	Refor-	Acres
								C	L	P	E	Mixed									
1.	Tommy Creek	1,2B,7A	600,200,1200	2	1.6	9.9	4.0	4.0											500	0	
2.	Sage Valley	7A,2B	1300,210	2	2.8	5.1	4.0	4.0											265	0	
3.	Crawford Creek	7A	200	3	0.0	5.0	1.0	1.0											0	200	
4.	Kings Creek	7A	600	3	0.0	8.0	2.7	2.7											300	50	
5.	Wilson Peak	5A,7A	200,500	3	0.0	6.0	0.5	0.5											300	100	
6.	Side Hollow	7A	1779	4	0.0	5.0	10.6	10.6											1434	306	
7.	Clay Creek	7A	919	4	0.0	1.2	1.2	1.2											699	230	
8.	Garkane	7A	1240	4	0.0	2.0	4.4	4.4											981	259	
9.	Big Lake	7A	423	5	0.5	2.5	1.5	1.5											423	0	
10.	Peterson 4 & 5	7A	157,128	5	0.0	0.0	0.6	0.6											150	0	
11.	Pleasant Creek	2B,4B,7A	50,30,240	5	0.0	1.8	2.0	2.0											213	0	
12.	Adair Hollow	7A,1	1500,300	2	5.0	3.5	8.0	8.0											300	0	
13.	DeLong Flat	1	346	2	0.0	7.1	2.5	2.5											100	0	
14.	Blubber Creek	6A,7A	300,900	3	0.0	70.0	7.0	7.0											1000	0	
15.	Cyclone	7A	1961	4	0.0	1.5	6.2	6.2											1886	68	
16.	Peterson 6 & 7	7A	77,92	5	0.0	0.0	0.5	0.5											169	0	
17.	Pleasant	7A	92	5	0.0	0.0	0.1	0.1											30	10	
18.	Windmill	7A	878	5	1.5	5.0	2.3	2.3											478	100	
19.	Bilowhard	7A,2B	1200,300	2	3.3	9.0	4.0	4.0											300	0	
20.	Lars Fork	7A	1000	2	7.0	6.0	4.0	4.0											250	0	
21.	Deer Mountain	2B,7A	100,713	4	0.0	1.0	4.4	4.4											724	89	
22.	Under Barney	7A	500	4	2.0	2.0	2.7	2.7											704	96	
23.	Lost Creek	4D,7A	100,655	4	0.0	1.0	3.0	3.0											534	66	
24.	Peterson 8 & 9	7A	91,107	5	0.0	0.0	0.5	0.5											100	0	
25.	Lower Oak Creek	7A	69	5	0.0	0.4	0.3	0.3											30	20	
26.	Dave's Hollow	7A	1170	3	0.0	0.3	0.3	0.3													
27.	Upper E. Fork	7A	1000	3	0.0	8.0	3.0	3.0											50	800	
28.	Upper Swains	7A,1	1140,60	2	2.0	1.6	4.0	4.0											250	0	
29.	Kanab Creek	7A	1000	3	0.0	8.0	3.0	3.0											900	900	
30.	Stump Springs	7A	1000	4	0.0	0.5	4.5	4.5											890	110	
31.	Cannan Mt.	1,7A	80,520	4	0.0	1.5	2.0	2.0											3098	422	
32.	Peterson 10 & 11	7A	81,127	5	0.0	0.0	0.5	0.5											104	0	
33.	North Big Lake	7A	664	5	5.0	7.4	3.5	3.0											644	20	
34.	Duck Creek Sinks	7A	2000	2	0.0	7.4	3.5	3.5											350	0	
35.	Tipps Valley	7A,1	1650,350	2	0.0	7.5	4.0	4.0											200	0	
36.	Cooks Pasture	2B,3A,7A	90,40,975	5	0.5	2.1	1.5	1.5											1105	0	
37.	Rosebud	2B,7A	80,160	5	0.0	1.4	0.3	0.3											140	100	
38.	Hancock Peak	1	1500	2	1.0	8.7	3.0	3.0											200	0	
39.	Mt. Dutton	5A,7A	100,900	3	0.0	3.0	3.5	3.5											100	600	
40.	Velvet Lake	7A	1400	4	3.5	2.0	4.0	4.0											1232	16b	
41.	Black Forest	7A	800	4	0.0	3.5	3.6	3.6											2640	360	
42.	Peterson 12	7A	92	5	0.0	0.0	0.2	0.2											46	0	
43.	Bob's Hole	2B,7A	50,218	5	0.0	1.5	0.3	0.3											200	50	
44.	Dark Valley Shelf	7A	1251	5	1.2	7.6	2.0	2.0											1251	0	
45.	North Slope	7A	551	5	0.5	2.5	2.0	2.0											451	100	
46.	Strawberry Ridge	7A	3600	2	0.0	32.0	8.0	8.0											500	125	
47.	Coyote Hollow	7A	1300	4	0.0	3.0	4.0	4.0											1144	156	

Timber Project Implementation Schedule
Timber Sale Schedule (MMBSF)

NO.	SALE NAME	MGMT. AREA	AREAS TO BE CUTOVER	DIS-TRICT	SPECIES	VOLUME	MILES OF ROAD						Year to Implement and TOTAL VOLUME						TST	REFOR-	
							C	L	PP	ES	MIXED	85	86	87	88	89	90	91	92		
48.	Raft Lake	2B,7A	15,1222		5	0.9	3.0		1.8			1.8								1240	0
49.	Sieler Creek	7A	300		3	0.0	4.0			1.5									0	300	
50.	Podunk	7A	400		3	0.0	3.0			1.0									0	400	
51.	Mill Hollow	7A	400		3	0.0	10.0		0.5										100	100	
52.	Gasto Canyon	7A	600		3	0.0	32.0		0.5										100	200	
53.	East Creek	7A	675		3	0.0	15.0		0.5										200	200	
54.	Roundy	7A	1080		4	0.0	0.5		3.0										950	130	
55.	Ice Caves/Willis Creek	7A	4820		2	0.0	32.5			8.0									500	250	
56.	Upper E. Fork /																				
	Kanab	7A	500		3	0.0	3.0			0.5									100	300	
	Dairy Hollow	7A	300		3	0.0	2.0			0.5									100	50	
57.	Badger Creek	7A	200		3	0.0	3.0			0.3									100	100	
58.	Blue Fly	7A	600		3	0.0	2.0		0.7										200	100	
59.	North End	7A	200		3	0.0	2.0			1.0									0	0	
60.	Jacob's Valley	7A	3000		4	9.0	0.5		3.4										2650	360	
61.	Main Ca.	1,7A	200,520		4	0.0	0.5		4.0										641	79	
62.	Purple Lake	7A	1800		5	4.0	5.1			4.5									1800	0	
63.	Dog Lake	2B,7A	30,126		5	0.0	1.0			0.3									156	0	
64.	Stout Canyon	1	6500		2	0.0	6.8		1.0										250	0	
65.	Duck Creek Bench	7A,1A	860,150		2	0.0	7.4			2.0									200	0	
66.	Dry Camp	7A	1920		2	0.0	12.5			4.0									300	0	
67.	Birch Creek	7A	150,350		4	0.0	0.5		4.0										445	55	
68.	Boulder Swale	7A	3520		4	0.0	2.0			3.0									3098	4022	
69.	Dark Valley 1,2																				
70.	3,4,5	7A	1500		5	0.0	9.0			1.5									1600	0	
71.	Donkey Meadows 1,2	7A	710		5	1.4	2.1			1.0									708	0	
72.	Beef Meadows 1,2	7A,2B	1760		5	4.0	5.0			3.0									1763	0	
73.	Radar Ridge		500,100		2	0.0	14.6			2.0									100	0	
74.	Blue Springs	1	1850		2	0.0	16.5			4.0									4.0	350	
75.	Iron Springs	7A	800		4	0.0	0.5			3.5									3.5	350	
76.	Pacer Lake	7A	1400		4	0.0	0.0			3.5									704	96	
77.	Upper Valley	7A	500		4	0.0	0.0			1.0									1232	168	
78.	Lion Mountain	7A,4B	368,92		5	0.0	1.5			1.5									445	55	
79.	Stink Flat	2B,7A	50,1460		5	2.1	4.3			3.0									350	110	
80.	Philo NE	7A	60		5	0.0	0.0		0.1										1513	0	
81.	Haycock Mountain	1	750		2	0.0	20.0		1.0										60	0	
82.	Sidney Valley	1,2A	1620,1080		2	0.0	18.6			4.0									300	0	
83.	Deer Valley	7A,2A	1000,80		2	0.0	34.1			2.0									350	0	
84.	Reeds Valley	2A	900		2	0.0	10.4			2.0									150	0	
85.	The Pockets	7A	1300		4	2.5	1.0			3.0									250	0	
86.	Bug Lake	4D,7A	167,333		4	0.0	1.5			1.0									144	156	
87.	Dipping Vat	5B,7A	60,240		4	0.0	0.0		1.0										440	60	
88.	Griffin Spring	7A	450		4	0.0	0.5			1.0									267	33	
89.	North Park Valley Shelf	7A	1120		5	1.6	6.4			1.0									396	54	
90.	Pleasant Meadows	7A	1800		5	3.0	5.1			3.5									1116	0	
91.	Cross Roads	7A	157		5	0.0	0.5		0.4										1800	0	
92.	Club Spring	1	650		2	0.0	9.5			1.0									157	0	
93.	Yankee Meadow	1,6A	2140,550		2	0.0	17.1			1.0									1.0	100	
94.	Pivemile	1	950		2	0.0	8.7			1.0									350	0	

Timber Project Implementation Schedule
Timber Sale Schedule (MMBF)

NO.	SALE NAME	MGMT. AREA	AREAS TO BE CUTOVER	DIS- TRICT	MILES OF_ROAD			SPECIES C_L	VOLUME PP	ES	MIXED 85	86	87	88	89	90	91	92	93	94	95	TSI ACRES	REFOR- ACRES
					C	L	P																
95.	Beck Hollow	1,7A,4D	80,450,100	4	0.0	0.0	2.0														2.0	56.1	69
96.	South Point	2B,7A	60,2440	5	5.2	7.1															4.5	250.0	0
97.	Grass Lake	7A	600	5	1.0	2.2	0.4														0.4	60.0	0
	Total All Supervisor Sales	99,121																					
	Misc. Small Sales		73.1	79.3	89.7	30.5	26.3	21.5	23.5	20.4	17.8	30.2	19.5	19.6	18.9	13.9							
	Grand Totals					9.3	7.7	7.4	5.8	6.2	1.9	2.4	2.3	2.3	1.9	1.2							
	Allowable Sale Quantity (Average 26.4 MMBF)					39.8	34.0	28.9	29.3	26.6	19.7	32.6	21.8	21.9	20.8	15.1							

1/Include Fuelwood, Poles and Posts

Soil and Water

		Fiscal Year to Implement												
		Proj.	Dis-											
	Project Name	Mgmt. Area	Size	District D-1	86	87	88	89	90	91	92	93	94	95
Watershed Improvements														
Further Water		7 Acres											X	
Iron Town Wash		20 Acres												
Richie Flat		60 Acres												
Water Canyon		10 Acres												
Watershed Improvements														
Billingsley Creek		30 Acres												
Blowhard		3 Acres												
Lake Hollow		15 Acres												
Mexican Hollow		14 Acres												
Pass Creek		20 Acres												
Miller Seep		9 Acres												
Rock Canyon		20 Acres												
Shingle Mill		10 Acres												
Sugarloaf Road		3 Acres												
Swains Creek		28 Acres												
Webster Flat Pit		2 Acres												
Yankee		3 Acres												
Tippets Valley		63 Acres												
Watershed Improvements														
Badger Creek		50 Acres												
Bluefly		50 Acres												
Lower East Fork		9 Acres												
Upper East Fork		12 Acres												
Hancock		20 Acres												
Fanab Creek		20 Acres												
Hud Springs		45 Acres												
Pat Willis		12 Acres												
Skunk Creek		25 Acres												
Upper East Creek		20 Acres												
Ahlstrom Hollow		60 Acres												
Blubber Creek		30 Acres												
Robinson Canyon		15 Acres												
Watershed Improvements														
Cameron Wash		30 Acres												
Cow Puncher		15 Acres												
Hog Ranch		15 Acres												
Horse Creek		20 Acres												
Horse Spring Draw		20 Acres												
Pine Lake		30 Acres												
Sand Creek		2 Acres												
Sweetwater		25 Acres												
Varney Griffin		25 Acres												
Watershed Improvements														
Small gully rehab. projects														
Soil Resource Inventory														
Order 3 Soil Survey Area 646														
A11														
60,000 Acres														
A11														

FOREST ACTION SCHEDULE

Instream Flow Quantification
Priority of Investigation

1ST PRIORITY

Respond to all out-service proposals for stream diversions for hydropower, irrigation purposes, etc.

2ND PRIORITY

Streams in Virgin River Adjudication area (includes as minimum):

Santa Clara River and upper tributaries
Water Canyon Creek
Reservoir Canyon Creek
Mill Creek
Magotsu Creek
Moody Wash
Pine Park Canyon Creek
Harrisburg Creek (Quail Creek)
Leeds Creek
Wet Sandy Creek
South Ash Creek and tributaries
Dam Canyon
Comanche Creek
Pinto Creek
Deep Creek
Mill Creek
East Fork Virgin River
Shingle Mill Creek
Stout Canyon Creek

3RD PRIORITY

Streams tributary to Cedar, Parowan, and Escalante Valleys (includes as minimum):

Crow Creek
Ashdown Creek and tributaries
Center Creek
Bowery Creek
Red Creek
Little Creek
Cottonwood Canyon Creek
Little Pine Creek
Calf Springs - Spring Creek
Holt Canyon Creek
Little Pinto Creek
Pinto Creek

4TH PRIORITY

Streams in South Fork of the Sevier River Basin (includes as minimum):

Asay Creek and tributaries
Duck Creek
Mammoth Creek and tributaries
Panguitch Creek and tributaries
Threemile Creek
Bear Valley
Sanford Creek

5TH PRIORITY

Streams in East Fork of Sevier River Basin (includes as minimum):

East Fork of Sevier River and upper tributaries
Hunt Creek
Prospect Creek
Cottonwood Creek
Deer Creek
Deep Creek
Pine Creek
Forest Creek
Clay Creek
Sweetwater Creek
Horse Creek
Birch Creek
North Creek
Antimony Creek

FOREST ACTION SCHEDULE

Minerals

Project Name	Mgmt. area	Dis-trict	Fiscal Year to Implement							
			86	87	88	89	90	91	92	93
Review Oil and Gas Leasing Status Gold Mine Project - New Harmony/Grants Ranch Inventory and Update Common Variety Management Plan	All 1 All 1	D-1 X	X	X	X	X	X	X	X	X
Review Oil and Gas Leasing Status Inventory and Update Common Variety Management Plan	All 1 All 1	D-2 X	X	X	X	X	X	X	X	X
Review Oil and Gas Leasing Status Reclamation - Arco's Smith Canyon Well Site and East Fork Sevier Well Site Inventory and Update Common Variety Mgt. Plan	All 1 2B/6A All 1	D-3 X	X	X	X	X	X	X	X	X
Review Oil and Gas Leasing Status Woods Knight & Fransen Coal lease Development & Production Mid Continent CO2 Development and Production Rehabilitation of Upper Valley Oil Field Inventory and update Common Variety Management Plan Escalante KGS Environmental Assessment (Leasing)	All 1 8A1/2/2B/6A 1B/2B All 1	D-4 X	X	X	X	X	X	X	X	X
Review Oil and Gas Leasing Status Gypsum Mining - Government Creek Inventory and Update - Common Variety Management Plan	All 1 5A All 1	D-5 X	X	X	X	X	X	X	X	X
—	—	—	—	—	—	—	—	—	—	—

Lands

Project Name	Mgmt. area	Dis-trict	Fiscal Year to Implement							
			86	87	88	89	90	91	92	93
IPP powerline construction and followup work UPL powerline construction and followup work UAMPS transmission line construction Hydropower construction proposals (3) Electronic Site Management Plan - Big Mountain Withdrawal Review Reappraisal of summer home fees Kern Project Natural Gas pipeline Williams Project, fiber optics cable Crystal Mountain Recreation Area construction Reappraisal of summer home fees Electronic Site Management Plan - Blowhard Brianhead Winter sports area expansion	1/5A/6A 1/5A/6A 1/5A/6A 2B/5A/6A/4C 1A/3A/5A/2B 1A 1A/5A/6A 1A/5A/6A 1B 1A 1A/2A/3A/6A	D-1 X	X	X	X	X	X	X	X	X
Electronic Site Management Plan - Wilson Peak Withdrawal Review Withdrawal Review Withdrawal Review	1B/2A/2B/5A D-4 D-5	D-3 X	X	X	X	X	X	X	X	X

FOREST ACTION SCHEDULE
Lands

Project Name	Mgmt. area	Dis-trict	Fiscal Year to Implement							
			86	87	88	89	90	91	92	93
Withdrawl Review										
Electronic Site Management Plan - Henderson Rim	1/1A/2A/2B 2A/5A/6A	D-4	X	X	X	X				
Electronic Site Management Plan - Barney Top	7A									
Electronik Site Management Plan Escalante Ridge	7A									
Upgrade of UP&L Sigurd - Page Powerline	5A									
CO2 Transmission line construction	2B, 8A1/8A2									
Garkane Escalante CO2 - Antimony Powerline Construction	2B/5A/6A/7A	All	D-3							
Review Oil and Gas Leasing Status										
Reclamation - Arco's Smith Canyon Well Site and										
East Fork Sevier Well Site	2A/6A									
Inventory and Update Common Variety Mgt. Plan	All									
Circle Cliffs Tar Sands Oil Pipeline Construction	2B									
Garkane - Boulder Hydroplant Expansion	2B									
Withdrawl Review	—	—	—	—	14/2A/2B/7A	D-5	X	X	X	X
					Facilities	—	—	—	—	—
Pine Valley Bunkhouse										
Duck Creek Bunkhouse	D-1									
Navajo Lake Road	D-2									
Mammoth Creek Road										
Little Valley Bridge										
Escalante Office	D-4									
Aquarius Teasdale Road										
Jacob's Valley Road										
Salt Gulch Bridge										
Hells Back Bone Road										
Teasdale Duplex	D-5									
Cedar City Warehouse	S.O.									

Project Name	Mgmt. Area	Dist- rict	Fiscal Year to Implement							95
			86	87	88	89	90	91	92	
Fire Prevention Plan	All	D-1	X	X	X	X	X	X	X	X
Construct fuel breaks	2B	X	X	X	X	X	X	X	X	X
Treatment of activity fuels	1A/3A	D-2	X	X	X	X	X	X	X	X
Fire Management Area Plan	7A	D-3	X	X	X	X	X	X	X	X
Treatment of Activity fuels	6A	X	X	X	X	X	X	X	X	X
Treatment of Natural fuels	7A	X	X	X	X	X	X	X	X	X
Treatment of Activity Fuels	7A	D-4	X	X	X	X	X	X	X	X
Fuel Management Inventory - Ponderosa, Spruce Fir, and Boulder Top	7A	X	X	X	X	X	X	X	X	X
Fire Plans - Ponderosa, Spruce Fir, and Boulder Top	A11	D-5	X	X	X	X	X	X	X	X
Construct fuel breaks	7A	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
Treatment of activity fuels	7A	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -

A P P E N D I X C

**STANDARD AND SPECIAL STIPULATIONS
Leasing Matrix**

PROCEDURE FOR LEASING

The leasing matrix is provided as a guide for the land manager for leasing recommendations. The manager would use the following procedure when a request for leasing is received:

1. Determine the location of the proposed lease from the proposed lease.
2. Check the management area map to see which management area it is located in. The management areas where restrictions apply will be designated with the "#" symbol.
3. Refer the specific management direction in Chapter IV. Some general direction may be available in the "General Direction"; however, specific standards and guidelines will be found for the specific management area.
4. The manager can then refer to the leasing matrix which gives guidelines for proper stipulations to use in the proposed lease.
5. Copies of the standard and special stipulations are included in Appendix C for reference by the land manager.

An example may be a request to lease 40 acres on Pine Valley Mountain. The Manager would check the map and find for example, the proposal is within the Municipal Watershed Area 10E. He would find a "#" symbol near the 10E. He would then know special stipulations would be needed. A review of the management direction for 10E and the leasing matrix would indicate a "no-surface-occupancy" stipulation would need to be recommended.

LEASING MATRIX

To be used as a guide by land managers for leasing recommendations to Bureau of Land Management. Actual on-the-ground conditions may require some deviation from matrix.

No.	Stipulation Summary	1. No Surface occupancy - entire lease	2. Visual - road, structure etc.	3. No occupancy - legal subdivision	4. No surface occupancy adjacent to road, river, trail, etc.	5. No drilling or storage near reservoirs, archaeological sites, etc.	6. No surface occupancy - steep slopes	7. No surface occupancy, seasonal	8. Prohibit activity - muddy or wet periods	9. Restricted trail/road	10. Visual - painting or camouflage	11. No surface occupancy - (May replace #1, 3, and 6)	12. No drilling, storage, surface disturb next to. . . (May replace #1, 4, and 5)	13. No surface distrib., explor., drill. . . (May replace #7)	14. Controlled or limited surface use	15. Activity Coordination	16. Protection of T&E species	17. Stipulation from Utah Wilderness	18. No new leasing
10B MUNICIPAL WATERSHEDS		x	x			x						x							
10A RESEARCH NATURAL AREAS		x	x			x						x							
9B INTENSIVE RIPARIAN MGT.		x	x	x								x							
9A RIPARIAN AREAS		x	x	x	x							x	x						
8A2 OTHER CO2 AREAS															x				
8A1 ANTONE BENCH CO2 AREA															x				
8A WILDERNESS															x				
7A TIMBER MANAGEMENT									x							x			
6A LIVESTOCK GRAZING					x				x			x				x			
5B BIG GAME WINTER RANGE (FOREST)		x							x			x				x			
5A BIG GAME WINTER RANGE (NON FRST)		x	x	x				x	x		x	x			x	x			
4D WILDLIFE HABITAT (SHRUB AREAS)								x	x										
4C WILDLIFE HABITAT (SHRUB AREAS)							x	x	x						x				
4B WILDLIFE HABITAT MGT. (MIS.)							x	x	x						x				
4A FISH HABITAT EMPHASIS				x										x					
2B RURAL & ROADED RECREATION OPP.		x	x	x	x			x	x		x								
2A SEMI PRIMITIVE RECREATION OPP.		x	x	x				x	x	x				x		x			
1B WINTER SPORTS SITES		x	x				x	x	x				x						
1A RECREATION SITES		x	x	x			x	x	x			x							
1 GENERAL FOREST DIRECTION			x				x		x						x	x			

FOREST SERVICE

SPECIAL STIPULATIONS

STIPULATION FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
DEPARTMENT OF AGRICULTURE

The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the national Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license/prospecting permit/lease. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of the Interior, (2) uses of all existing improvements, such as Forest development roads, within and outside the area licensed, permitted or leased by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed

to

at

Telephone No.:

who is the authorized representative of the Secretary of Agriculture.

Signature of Licensee/Permittee/Lessee

SPECIAL STIPULATIONS - OIL AND GAS

The following special stipulations may be used in addition to the terms on the lease form, and are necessary to protect specific resource values on the lease area. If found to be in the public interest, these stipulations may be made less restrictive when specifically approved in writing by the authorized officer, Bureau of Land Management, with the concurrence of the Federal surface management agency.

1. All of the land in this lease is included in (recreation or special area, etc.). Therefore, no occupancy or disturbance of the surface of the land described in this lease is authorized. The lessee, however, may exploit the oil and gas resources in this lease by directional drilling from sites outside this lease. If a proposed drilling site lies on land administered by the Bureau of Land Management, or by the Forest Service, a permit for use of the site must be obtained from the BLM District Manager or the Forest Service District Ranger, before drilling or other development begins.
2. No access or work trail or road, earth cut or fill, structure or other improvement, other than an active drilling rig, will be permitted if it can be viewed from the (road, lake, river, etc.).
3. No occupancy or other activity on the surface of (legal subdivision) is allowed under this lease.
4. No occupancy or other surface disturbance will be allowed within feet of the _____ (road, trail, river, creek, canal, etc.). This distance may be modified when specifically approved in writing by the authorized officer, Bureau of Land Management, with the concurrence of the Federal surface management agency.
5. No drilling or storage facilities will be allowed within _____ feet of (live water, the reservoir, the archaeological site, the historical site, the paleontological site, etc.) located in (legal subdivision). This distance may be modified when specifically approved in writing by the authorized officer, Bureau of Land Management, with the concurrence of the Federal surface management agency.
6. No occupancy or other surface disturbance will be allowed on slopes in excess of _____ percent, without written permission from the authorized officer, Bureau of Land Management, with the concurrence of the Federal surface management agency.
7. In order to (minimize watershed damage, protect important seasonal wildlife habitat, etc.) exploration, drilling, and other development activity will be allowed only (during the period from _____ to _____, during dry soil period, over a snow cover, on frozen ground). This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer, Bureau of Land Management with the concurrence of the Federal surface management agency.
8. In order to minimize watershed damage, during muddy and/or wet periods, the authorized officer of the Federal surface management agency, through the

authorized officer, of the Bureau of Land Management, may prohibit exploration, drilling, or other development. This limitation does not apply to maintenance and operation of producing wells.

9. The _____ (Trail/Road) will not be used as an access road for activities on this lease, except as follows: (No exceptions, weekdays during recreation season, etc.).

10. To maintain esthetic values, all semi-permanent and permanent facilities may require painting or camouflage to blend with the natural surroundings. The paint selection or method of camouflage will be subject to approval by the authorized officer of the Bureau of Land Management, with the concurrence of the Federal surface management agency.

11. No occupancy or other activity on the surface of the following described lands is allowed under this lease:

Reasons for this restriction are:

Examples of appropriate reasons for this restriction are:

1. Steep slopes.
2. Specific ecosystem, ecological land unit, land type or geologic formation which presents hazards such as mass failure.
3. Special management units such as: Recreation Type I, water supply, administrative site, etc.

() Approximately ____% of lease.

Note: This stipulation could be used in place of stipulations Nos. 1, 3, and 6.

12. No _____ will be allowed within _____ feet of the _____.
This area contains _____ acres and is described as follows:

Reasons:

First blank to be filled in with one or more of the following: drilling, storage, facilities, surface disturbance, or occupancy. Second and third blanks to be filled in with one or more of the following:

1. ____ feet wildlife habitat essential to specific species.
2. ____ feet peripheral or unique vegetative type.
3. 200 feet either side of centerline of roads or highways.
4. 500 feet of normal high waterline on all streams, rivers, ponds, reservoirs, lakes.
5. 600 feet of all springs.
6. 400 feet of any improvements.

Note: Stipulation No. 12 could be used in place of stipulations Nos. 4 and 5.

13. In order to (minimize) (protect) _____, _____ will be allowed only during _____. This does not apply to maintenance and operation of producing wells and facilities. Lands within leased area to which this stipulation applies are described as follows:

Reason:

First blank to be filled in with one or more of the following:

1. Watershed damage.
2. Soil erosion.
3. Seasonal wildlife habitat (winter range, calving/lambing area, etc.).
4. Conflict with recreation.

Second blank to be filled in with one or more of the following:

1. Surface disturbing activities.
2. Exploration
3. Drilling.
4. Development.

Third blank to be filled in with one or more of the following:

1. Period from _____ to _____.
2. Dry soil periods.
3. Over the snow.
4. Frozen ground.

Note: Stipulation No. 13 could be used in place of stipulation No. 7, giving greater definition as to restriction.

14. Controlled or Limited Surface Use Stipulation. This stipulation may be modified when specifically approved in writing by the authorized officer, Bureau of Land Management, with concurrence of the Federal surface management agency. Distances and/or time periods may be made less restrictive depending on the actual onground conditions.

The lessee/operator is given notice that all or portions of the lease area may contain special values, may be needed for special purposes, or may require special attention to prevent damage to surface and/or other resources. Any surface use or occupancy within such special areas will be strictly controlled. Use or occupancy will be authorized only when the lessee/operator demonstrates that the special area is essential for operations in accordance with a surface use and operations plan which is satisfactory to the BLM and Federal surface management agency for the protection of such special areas and existing or planned uses. Appropriate modifications to imposed restrictions will be made for the maintenance and operation of producing oil and gas wells; however, in extremely critical situations, occupancy may only be allowed in emergencies.

After the Federal surface management agency has been advised of specific proposed surface use or occupancy on these lands, and on request of the lessee/operator, the agency will furnish more specific locations and additional information on such special areas which now include:

Description: (Legal land description to lot and/or quarter, quarter section.)

Reason for Restriction:

Duration of Restriction: (year-round, month(s))

15. Activity Coordination Stipulation. This lease includes lands within * _____ which has resource values sensitive to high levels of activity. In order to minimize impacts to these resources, special conditions, such as unitization prior to approval of operations, and/or other limitations to spread surface disturbance activities over time and space may be required prior to approval and commencement of any operations on the lease.

Visually sensitive areas, Areas of Threatened and Endangered Species.

16. Protection of Endangered or Threatened Species. The Federal surface management agency is responsible for assuring that the area to be disturbed is examined, prior to undertaking any surface-disturbing activities on lands covered by this lease, to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. If the findings of this examination determine that the operation may detrimentally affect an endangered or threatened species, some restrictions to the operator's plans or even disallowances of use may result.

The lessee/operator may, at his discretion and cost, conduct the examination on the lands to be disturbed. This examination must be done by or under the supervision of a qualified resource specialist approved by the surface management agency. An acceptable report must be provided to the surface management agency identifying the anticipated effects of the proposed action on endangered or threatened species or their habitat.

SPECIAL STIPULATIONS - COAL

Special stipulations made part of this lease may be waived or amended with the mutual consent of the lessor, lessee, and the surface management agency.

In accordance with Sec. 523(b) of the "Surface Mining Control and Reclamation Act of 1977", surface mining and reclamation operations conducted on this lease are to conform with the requirements of this act and are subject to compliance with Office of Surface Mining regulations, or as applicable, a Utah program equivalent approved under cooperative agreement in accordance with Sec. 523(c) and final determination of suitability for mining. The United States Government does not warrant that the entire tract will be susceptible to mining.

The Authorized Officers, of the Bureau of Land Management, Office of Surface Mining (Regulatory Authority), and the Surface Management Agency (Forest Service) respectively, shall coordinate, as practical, regulation of mining operations and associated activities on the lease area.

Federal Regulations 43 CFR 3400 pertaining to Coal Management make provisions for the Surface Management Agency, the surface of which is under the jurisdiction of any federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. All or part of this lease contain lands the surface of which are managed by the United States Department of Agriculture, Forest Service. The following stipulations pertain to the lessee's responsibility for mining operations on the lease area, and on adjacent areas specifically designated on National Forest Service Lands.

Forest Service Stipulation No. 1

Before undertaking activities that may disturb the surface of previously undisturbed leased lands, the Lessee may be required to conduct a cultural resource inventory and a paleontological appraisal of the areas to be disturbed. These studies shall be conducted by qualified professional cultural resource specialists or recognized qualified paleontologists, as appropriate, and a report prepared itemizing the findings. A plan will then be submitted making recommendations for the protection of, or measures to be taken to mitigate impacts for identified cultural or paleontological resources. If cultural resources or paleontological remains (fossils) of significant scientific interest are discovered during operations under this lease, the Lessee shall immediately bring them to the attention of the appropriate authority. Paleontological remains of significant scientific interest do not include leaves, ferns, or dinosaur tracks commonly encountered during underground mining operations.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation No. 2

If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation No. 3

The Lessee shall be required to perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to lease area. Existing data may be used if such data is adequate for the intended purposes. The study shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation, and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

Forest Service Stipulation No. 4

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to provide adequate protection for raptors and other large birds. When feasible, powerlines will be located at least 100 yards from public roads.

Forest Service Stipulation No. 5

The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate size of the surface area utilized for the mine. A site specific environmental analysis will be prepared for each new mine site development and for major improvements to existing developments to examine alternatives and mitigate conflicts.

Forest Service Stipulation No. 6

All operations will be conducted to protect the aesthetic and scenic values. Consideration will be given to site selection to reduce adverse visual impacts. Where alternative sites are available, the alternative involving the least damage to the scenery and other resources shall be selected if it is comparable from a technical standpoint with the proposed development site. Permanent structures and facilities will be designed to be architecturally compatible and harmonize with the surrounding landscape where possible.

Screening techniques will be employed to reduce scenic impacts, and achieve a final landscape compatible with the natural surroundings. Construction practices requiring the alteration or modification of the existing topography will be compatible with and graded into the adjoining land form. The creation of unusual, objectionable, or unnatural land forms and vegetative landscape features will be avoided.

Forest Service Stipulation No. 7

The Lessee shall be required to establish a monitoring system to locate, measure, and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.

Forest Service Stipulation No. 8

The Lessee shall provide for the suppression and control of fugitive dust on haul roads and at coal handling and storage facilities. On Forest Development Roads (FDR), Lessee may perform their share of road maintenance by a commensurate share agreement if a significant degree of traffic is generated that is not related to their activities.

Forest Service Stipulation No. 9

Except at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to existing surface structures, and (3) damage or alter the flow of perennial streams. The Lessee shall provide specific measures for the protection of escarpments, and determine corrective measures to assure that hazardous conditions are not created.

Forest Service Stipulation No. 10

In order to avoid surface disturbance on steep canyon slopes and to satisfy the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific approved locations.

Forest Service Stipulation No. 11

If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with Forest Service regulations.

Forest Service Stipulation No. 12

The coal contained within, and authorized for mining under this lease shall be extracted only by underground mining methods.

Forest Service Stipulation No. 13

Existing Forest Service owned or permitted surface improvements will need to be protected, restored, or replaced to provide for the continuance of current land uses.

Forest Service Stipulation No.14

In order to protect wintering big game, calving elk and deer fawning areas, sagegrouse strutting areas, and other critical wildlife activities, specific surface uses outside the mine development area may be curtailed during specified periods of the year.

Forest Service Stipulation No. 15

Support facilities, structures, equipment, and similar developments will be removed from the lease area within two years after the final termination of use of such facilities. Disturbed areas and those areas occupied by such facilities will be stabilized and rehabilitated, drainages re-established, and the areas returned to a premining land use.

Forest Service Stipulation No. 16

The Lessee, at the conclusion of the mining operation, or at other times as surface disturbance related to mining may occur, will replace all damaged disturbed or displaced land monuments (section corners, 1/4 corners, etc.) Their accessories and appendages (witness trees, bearing trees, etc.) or restore them to their original condition and location, or at other locations that meet the requirements of the land net. This work shall be conducted at the expense of the Lessee, by a professional land surveyor registered in the State of Utah, and to the standards and guidelines found in the Manual of Surveying Instructions, United States Department of the Interior.

Forest Service Stipulation No. 17

The Lessee at his expense will be responsible to replace any surface water identified for protection, that may be lost or adversely affected by mining operations, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses.

**STANDARD BLM
MINERAL LEASE
FORMS**

Serial No.

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (reverse) offers to lease all or any of the lands in item 2 that are available for lease pursuant to the Mineral Leasing Act of 1920 (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351-359), the Attorney General's Opinion of April 2, 1941 (40 OP. Atty. Gen. 41), or the

Read Instructions Before Completing

1. Name

Street

City, State, Zip Code

2. This offer/lease is for: (Check Only One) PUBLIC DOMAIN LANDS ACQUIRED LANDS (percent U.S. interest _____)

Surface managing agency if other than BLM: _____ Unit/Project: _____

Legal description of land requested:

T.

R.

Meridian

State

County

Total acres applied for: _____

Amount remitted: Filing fee \$ _____

Rental fee \$ _____

Total \$ _____

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T.

R.

Meridian

State

County

Total acres in lease: _____

Rental retained \$ _____

In accordance with the above offer, or the previously submitted simultaneous oil and gas lease application or competitive bid, this lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

Type and primary term of lease:

THE UNITED STATES OF AMERICA

Simultaneous noncompetitive lease (ten years)

by _____ (Signature/Officer)

Regular noncompetitive lease (ten years)

_____ (Title) _____ (Date)

Competitive lease (five years)

_____ (Title) _____ (Date)

Other _____

EFFECTIVE DATE OF LEASE _____

*(Formerly 3110-1, 2, 3, 3120-1, 7, 3130-4, 5, and 7)

4 (a) Undersigned certifies that (1) offeror is a citizen of any State or Territory thereof, (2) all parties holding a lease in either public domain or acquired lands do not exceed in options in either leasing District in Alaska and (4) c
(b) Undersigned agrees that signature to this offer constitutes a separate lease that may include any land described in offer cannot be withdrawn either in whole or part until the land described in the withdrawal has been signed c

This offer will be rejected and will afford offeror no payments. 18 U.S.C. Sec. 1001 makes it a crime for statements or representations as to any matter within

Duly executed this _____ day of _____

Sec 1 Rentals—Rentals shall be paid to proper office of Annual rental rates per acre or fraction thereof are

- (a) Simultaneous noncompetitive lease \$1.00 for it
- (b) Regular noncompetitive lease, \$1.00.
- (c) Competitive lease, \$2.00 or
- (d) Other see attachment

If all or part of a noncompetitive leasehold is determined to be in a favorable petroleum geological province beginning with the lease year following notice of such determination, otherwise be subject to rental of more than \$2.00 shall con-

If this lease or a portion thereof is committed to an applicant who is well capable of producing leased resources, allocation of production royalties shall be paid on the However annual rentals shall continue to be due at the for those lands not within a participating area

Failure to pay annual rental if due on or before the official working day (if office is closed) shall automatically law. Rentals may be waived reduced or suspended by the lessee

Sec 2 Royalties—Royalties shall be paid to proper office in accordance with regulations on production rents

- (a) Simultaneous noncompetitive lease 12½%.
- (b) Regular noncompetitive lease 12½%.
- (c) Competitive lease see attachment or
- (d) Other see attachment

Lessor reserves the right to specify whether royalty is right to establish reasonable minimum values on production opportunity to be heard. When paid in value, royalties of the month following the month in which production occurs shall be delivered, unless otherwise agreed to by lessor premises where produced without cost to lessor. Lessee is to be held liable for loss or damage to storage beyond the last day of the month following occurred, nor shall lessee be held liable for loss or damage to storage from causes beyond the reasonable control of

Minimum royalty shall be due for any lease year after aggregate less than \$1.00 per acre. Lessee shall pay such minimum royalty may be waived, suspended, or reduced for all or portions of this lease if the Secretary determines to encourage the greatest ultimate recovery of the lease

An interest charge shall be assessed on late royalty payments under the Federal Oil and Gas Royalty Management Act. Lessee shall be liable for royalty payments on oil and gas such loss or waste is due to negligence on the part of the operator, regulation, order, or citation issued under

Sec 3 Bonds—Lessee shall file and maintain any bond

Sec 4 Diligence rate of development utilization reasonable diligence in developing and producing and loss of or waste of leased resources. Lessor reserves right to require lessee to within 30 days of notice if deemed necessary for proposed field, or pool embracing these leased lands. Lessee shall protect leased lands from drainage or pay compensation determined by lessor

Sec 5 Documents evidence, and inspection—Lessee is not later than 30 days after effective date thereof, any contract for sale or disposal of production. At such times and in such manner shall furnish detailed statements showing amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost

Sec 6 DOCUMENTS EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost

Lessee shall keep open at all reasonable times for the inspection of any duly authorized officer of lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpiles equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands

Lessee shall allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease

While this lease remains in effect information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552)

Sec 7 DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposits not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to, modification to proposed siting or design of facilities, timing of operations, and specification of interim and final reclamation procedures. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorize future uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec 8 PROTECTION OF DIVERSE INTERESTS AND EQUAL OPPORTUNITY - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase, pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices, restrict the workday to not more than 8 hours in any one day for underground workers, except in emergencies, and take measures necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in this paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec 15 SPECIAL STIPULATIONS -

Sec 9 (a) TRANSFERS

- This lease may be transferred in association or corporation qualified
- This lease may be transferred in public body or to a person who will for the use of, the public body or purpose of creating a security interest to be obligated to mine the coal on
- This lease may only be transferred small business qualified under 13

Transfers of record title, working approved in accordance with the

(b) RELINQUISHMENT - The lessee may time all rights under this lease or any regulations. Upon lessor's acceptance shall be relieved of all future obligations relinquished portion thereof, whichever

Sec 10 DELIVERY OF PREMISES REMOVAL ETC - At such time as all property of lessor, lessee shall deliver up to lessor timbering, and such other supports and preservation of the mine workings on the and place all workings in condition for Within 180 days thereof, lessee shall remove structures, machinery, equipment, tools, or as required by the authorized officer, machinery, equipment, tools, and materials beyond 180 days, or approved extent property of the lessor, but lessee shall property or shall continue to be liable for disposal in the amount actually incurred owned by third parties, lessor shall wait, provided the third parties do not object prior to the termination of bond liability required and in accordance with all applicable laws, reclaim all lands the surface of which has debris or solid waste, repair the offsite lessee's activity or activities incidental roads or trails

Sec 11 PROCEEDINGS IN CASE OF DEFAULT WITH APPLICABLE LAWS, EXISTING REGULATIONS, STIPULATIONS OF THIS LEASE, AND THE NONCE AFTER WRITTEN NOTICE THEREOF, THIS LEASE SHALL BE ENFORCED BY THE LESSOR ONLY BY JUDICIAL PROCEEDINGS, CONSTRUED TO PREVENT THE EXERCISE OF AN EQUITABLE REMEDY, INCLUDING WAIVER OF DEFENSE. WAIVER SHALL NOT PREVENT LATER CANCELLATION OCCURRING AT ANY OTHER TIME.

Sec 12 HEIRS AND SUCCESSORS - IN THE EVENT THIS LEASE IS TERMINATED, IT SHALL EXTEND TO AND BE BINDING UPON THE HEIRS, EXECUTORS, TRUSTS, AND ASSIGNS OF THE RESPECTIVE PARTIES HERETO.

Sec 13 INDEMNIFICATION - Lessee shall indemnify the United States from any and all claims, damages, and expenses arising out of or in connection with the activities and operations under this lease.

Sec 14 SPECIAL STATUTES - This lease is subject to the Pollution Control Act (33 U.S.C. 1151 et seq.), U.S.C. 1857 et seq.), and to all other laws relating to exploration activities, mining operations, and the Surface Mining Control and Reclamation Act (30 U.S.C. 1201 et seq.).

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

COAL LEASE

PART I. LEASE RIGHTS GRANTED

This lease, entered into by and between the UNITED STATES OF AMERICA, hereinafter called lessor, through the Bureau of Land Management, and (Name and Address)

hereinafter called lessee, is effective (date) , for a period of 20 years and for so long thereafter as coal is produced in commercial quantities from the leased lands, subject to readjustment of lease terms at the end of the 20th lease year and each 10-year period thereafter.

Sec. 1. This lease is issued pursuant and subject to the terms and provisions of the:

- Mineral Lands Leasing Act of 1920, Act of February 25, 1920, as amended, 41 Stat. 437, 30 U.S.C. 181-287, hereinafter referred to as the Act;
 Mineral Leasing Act for Acquired Lands, Act of August 7, 1947, 61 Stat. 913, 30 U.S.C. 351-359;

and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the express and specific provisions herein.

Sec. 2. Lessor, in consideration of any bonuses, rents, and royalties to be paid, and the conditions and covenants to be observed as herein set forth, hereby grants and leases to lessee the exclusive right and privilege to drill for, mine, extract, remove, or otherwise process and dispose of the coal deposits in, upon, or under the following described lands:

containing acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliances and the right to use such on-lease rights-of-way which may be necessary and convenient in the exercise of the rights and privileges granted, subject to the conditions herein provided.

PART II. TERMS AND CONDITIONS

Sec. 1. (a) RENTAL RATE - Lessee shall pay lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of \$ for each lease year.

(b) RENTAL CREDITS - Rental shall not be credited against either production or advance royalties for any year.

Sec. 2. (a) PRODUCTION ROYALTIES - The royalty shall be percent of the value of the coal as set forth in the regulations. Royalties are due to lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) ADVANCE ROYALTIES - Upon request by the lessee, the authorized officer may accept, for a total of not more than 10 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty shall be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation.

Sec. 3. BONDS - Lessee shall maintain in the proper office a lease bond in the amount of \$. The authorized officer may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. DILIGENCE - This lease is subject to the conditions of diligent development and continued operation, except that these conditions are excused when operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the lessee. The lessor, in the public interest, may suspend the condition of continued operation upon payment of advance royalties in accordance with the regulations in existence at the time of the suspension. Lessee's failure to produce coal in commercial quantities at the end of 10 years shall terminate the lease. Lessee shall submit an operation and reclamation plan pursuant to Section 7 of the Act not later than 3 years after lease issuance.

The lessor reserves the power to assent to or order the suspension of the terms and conditions of this lease in accordance with, inter alia, Section 39 of the Mineral Leasing Act. 30 U.S.C. 209.

Sec. 5. LOGICAL MINING UNIT (LMU) - Either upon approval by the lessor of the lessee's application or at the direction of the lessor, this lease shall become an LMU or part of an LMU, subject to the provisions set forth in the regulations.

The stipulations established in an LMU approval in effect at the time of LMU approval will supersede the relevant inconsistent terms of this lease so long as the lease remains committed to the LMU. If the LMU of which this lease is a part is dissolved, the lease shall then be subject to the lease terms which would have been applied if the lease had not been included in an LMU.

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee shall keep open at all reasonable times for the inspection of any duly authorized officer of lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpiles, equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee shall allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 7. DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer.

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposits not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to, modification to proposed siting or design of facilities, timing of operations, and specification of interim and final reclamation procedures. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorize future uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8. PROTECTION OF DIVERSE INTERESTS, AND EQUAL OPPORTUNITY - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers, except in emergencies; and take measures necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in this paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec. 15. SPECIAL STIPULATIONS -

Sec. 9. (a) TRANSFERS

- This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.
- This lease may be transferred in whole or in part to another public body or to a person who will mine the coal on behalf of, and for the use of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.
- This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest *must* be approved in accordance with the regulations.

(b) RELINQUISHMENT - The lessor may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon lessor's acceptance of the relinquishment, lessee shall be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC. - At such time as all portions of this lease are returned to lessor, lessee shall deliver up to lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or abandonment. Within 180 days thereof, lessee shall remove from the premises all other structures, machinery, equipment, tools, and materials that it elects to or as required by the authorized officer. Any such structures, machinery, equipment, tools, and materials remaining on the leased lands beyond 180 days, or approved extension thereof, shall become the property of the lessor, but lessee shall either remove any or all such property or shall continue to be liable for the cost of removal and disposal in the amount actually incurred by the lessor. If the surface is owned by third parties, lessor shall waive the requirement for removal, provided the third parties do not object to such waiver. Lessee shall, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations, reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. PROCEEDINGS IN CASE OF DEFAULT - If lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation by the lessor only by judicial proceedings. This provision shall not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Sec. 12. HEIRS AND SUCCESSORS-IN-INTEREST - Each obligation of this lease shall extend to and be binding upon, and every benefit thereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. INDEMNIFICATION - Lessee shall indemnify and hold harmless the United States from any and all claims arising out of the lessee's activities and operations under this lease.

Sec. 14. SPECIAL STATUTES - This lease is subject to the Federal Water Pollution Control Act (33 U.S.C. 1151-1175), the Clean Air Act (42 U.S.C. 1857 et. seq.), and to all other applicable laws pertaining to exploration activities, mining operations and reclamation, including the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et. seq.).

OFFER TO LEASE AND LEASE FOR GEOTHERMAL RESOURCES

Serial No

The undersigned (see reverse) offers to lease all or any of the lands in item 2 that are available for lease pursuant to the Geothermal Steam Act of 1970 (30 U S C 1001-1025).

Read Instructions Before Completing

1 Name

Street

City State Zip Code

2 Surface managing agency if other than BLM _____ Unit/Project _____

Legal description of land requested (segregate by public domain and acquired lands)

T _____ R _____ Meridian _____ State _____ County _____

Total acres applied for _____

Percent U S interest _____

Amount remitted. Filing fee \$ _____ Rental fee \$ _____ Total \$ _____

DO NOT WRITE BELOW THIS LINE

3 Land included in lease:

T _____ R _____ Meridian _____ State _____ County _____

Total acres in lease _____

Rental retained \$ _____

In accordance with the above offer, or the previously submitted competitive bid, this lease is issued granting the exclusive right to drill for extract produce remove utilize sell and dispose of all the geothermal resources in the lands described in item 3 together with the right to build and maintain necessary improvements thereupon for a primary term of 10 years. Rights granted are subject to applicable laws, the terms conditions, and attached stipulations of this lease the Secretary of the Interior's regulations and formal orders in effect as of lease issuance and when not inconsistent with lease rights granted or specific provisions of this lease regulations and formal orders hereafter promulgated.

THE UNITED STATES OF AMERICA

Type of lease

by _____ (Signing Officer)

Noncompetitive

(Title) _____ (Date) _____

Competitive

Other _____

EFFECTIVE DATE OF LEASE _____

4 (a) Undersigned certifies that

(1) Offeror is a citizen of the United States, an association of such citizens, a municipality, or a corporation organized under the laws of the United States, any State or the District of Columbia; (2) All parties holding an interest in the offer are in compliance with 43 CFR 3200 and the authorizing Act; (3) Offeror's chargeable interests, direct and indirect, do not exceed that allowed under the Act; and (4) Offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located.

(b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms, conditions and stipulations of which offeror has been given notice and any amendment or separate lease that may cover any land described in this offer open to lease application at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or part, unless the withdrawal is received by the BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

This offer will be rejected and will afford the offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments. Title 18 U.S.C. Sec. 1001 makes it a crime for any person knowingly and willfully to make to any Department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Duly executed this _____ day of _____ 19_____

(Signature of Lessee or Attorney in fact)

LEASE TERMS

Sec 1 Rentals—Rentals shall be paid to proper office of lessor in advance of each lease year until there is production in commercial quantities from the leased lands. Annual rental rates per acre or fraction thereof are \$1 for noncompetitive leases and \$2 for competitive leases.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a well capable of producing leased resources, and the plan contains a provision for allocation of production royalties shall be paid on the production allocated to this lease. However, annual rentals shall continue to be due for those lands not within a participating area.

Failure to pay annual rental, if due on or before the anniversary date of this lease (or next official working day if office is closed) shall automatically terminate this lease by operation of law. Rentals may be suspended by the Secretary upon a sufficient showing by lessee.

Sec 2 Royalties—Royalties shall be paid to proper office of lessor. Royalties shall be computed in accordance with regulations and orders. Royalty rates on production are 10 percent for steam heat or energy, 5 percent for byproducts, and 5 percent for demineralized water.

Lessor reserves the right to establish reasonable minimum values on production after giving lessee notice and an opportunity to be heard. Royalties shall be due and payable on the last day of the month following the month in which production occurred.

A minimum royalty shall be due for any lease year beginning on or after the commencement of production in commercial quantities in which royalty payments aggregate less than \$2 per acre. Lessee shall pay such difference at the end of lease year. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

Sec 3 Bonds—Lessee shall file and maintain any bond required under regulations.

Sec 4 Diligence rate of development, utilization and drainage—Lessee shall perform diligent exploration as required by regulations and shall prevent unnecessary damage to loss of or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan within 30 days of notice, if deemed necessary for proper development and operation of the area, field, or pool embracing these leased lands. Lessee shall drill and produce wells necessary to protect leased lands from drainage or pay compensation royalty for drainage in amount determined by lessor.

Sec 5 Documents, evidence and inspection—Lessee shall file with proper office of lessor, not later than (30) days after effective date thereof, any contract or evidence of other arrangement for the sale or disposal of production. At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing amounts and quality of all products removed and sold, proceeds therefrom and amount used for production purposes or unavoidably lost. Lessee shall be required to provide plats and schematic diagrams showing development work and improvements and reports with respect to parties in interest, expenditures and depreciation costs.

In the form prescribed by lessor, lessee shall keep a daily drilling record, a log and complete information on well surveys and tests and keep a record of subsurface investigations and furnish copies to lessor when required. Lessee shall keep open at all reasonable times for inspection by any authorized officer of lessor, the leased premises and all wells, improvements, machinery and fixtures thereon, and all books, accounts, maps and records relative to operations, surveys or investigations on or in the leased lands. Lessee shall maintain copies of all contracts, sales agreements, accounting records and documentation, such as billings, invoices, or similar documentation that support costs claimed as manufacturing, preparation and/or transportation costs. All such records shall be maintained in lessee's accounting offices for future audit by lessor. Lessee shall maintain required records for 6 years after they are generated or, if an audit or investigation is underway, until released of the obligation to maintain such records by lessor.

During existence of this lease, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec 6 Conduct of operations—Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee shall take reasonable measures deemed necessary by

lessor to accomplish the intent of this section. To the extent consistent with leased rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-ways. Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessees.

Prior to disturbing the surface of the leased lands, lessee shall contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee shall immediately contact lessor. Lessee shall cease any operations that would result in the destruction of such species or objects.

Sec 7 Production of byproducts—If the production, use, or conversion of geothermal resources from these leased lands is susceptible of producing a valuable byproduct or byproducts, including commercially demineralized water for beneficial uses in accordance with applicable State water laws, lessor may require substantial beneficial production or use thereof by lessee.

Sec 8 Damages to property—Lessee shall pay lessor for damage to lessor's improvements, and shall save and hold lessor harmless from all claims for damage or harm to persons or property as a result of lease operations.

Sec 9 Protection of diverse interests and equal opportunity—Lessee shall maintain a safe working environment in accordance with standard industry practices and take measures necessary to protect the health and safety of the public. Lessor reserves the right to ensure that production is sold at reasonable prices and to prevent monopoly.

Lessee shall comply with Executive Order No. 11246 of September 24, 1965, as amended, and regulations and relevant orders of the Secretary of Labor issued pursuant thereto. Neither lessor nor lessor's subcontractor shall maintain segregated facilities.

Sec 10 Transfer of lease interests and relinquishment of lease—As required by regulations, lessee shall file with lessor any assignment or other transfer of an interest in this lease. Lessee may relinquish this lease or any legal subdivision by filing in the proper office a written relinquishment which shall be effective as of the date of filing, subject to the continued obligation of the lessee and surety to pay all accrued rentals and royalties.

Sec 11 Delivery of premises—At such time as all or portions of this lease are returned to lessor, lessee shall place all wells in condition for suspension or abandonment, reclaim the land as specified by lessor, and within a reasonable period of time, remove equipment and improvements not deemed necessary by lessor for preservation of producible wells or continued protection of the environment.

Sec 12 Proceedings in case of default—If lessor fails to comply with any provisions of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation. However, if this lease includes land known to contain a well capable of production in commercial quantities, it may be cancelled only by judicial proceedings. This provision shall not be construed to prevent the exercise by lessor or any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Whenever the lessee fails to comply in a timely manner with any of the provisions of the Act, this lease, the regulations, or formal orders, and immediate action is required, the Lessor may enter on the leased lands and take measures deemed necessary to correct the failure at the expense of the Lessee.

Sec 13 Heirs and successors-in-interest—Each obligation of this lease shall extend to and be binding upon and every benefit hereof shall inure to the heirs, executors, administrators, successors, or assignees of the respective parties hereto.