



United States Department of Agriculture

Forest Service Grand Mesa, Uncompangre and Gunnison National Forests

2250 Highway 50 Delta, Cølorado

81/416 970-8/14-7691

(TTY/TDD) **/**874-6660

File Code: 2520-3

Date:

AÚG 28 1996

Route To: Director, Physical Resources

Subject: Emergency Burn Area Rehabilitation

Telephone Fire

To: Regional Forester, R-2

Enclosed is the Emergency Burned Area Rehabilitation Report (FS-2500-8) for the Telephone Fire on the Uncompangre National Forest. Also included are specialists' reports.

This was a relatively intense burn that burned 1100 acres of Pinyon/Juniper, Gambel Oak and some moderately productive Ponderosa Pine.

Based on our evaluation, the result of this burn poses no real watershed emergency. In fact we view this disturbance as providing opportunities to better meet the prescription objectives of 5a and 6b.

Issues that we will be addressing as a result of the burn include:

Salvage of standing dead Ponderosa Pine.

Planting of Pine to sustain a forest vegetation type.

Seeding of adapted native species (grasses, forbs, and shrubs), to prevent invasion of Thistle and other noxious weeds.

Providing more productive forage than had been there previously, and in a shorter time period than would occur naturally.

Any questions or comments should be addressed to Terry Hughes, Team Leader, at (970) - 874 - 7691.

OBERT L. STORCH Forest Supervisor

Enclosures

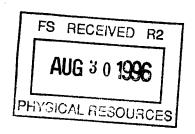
#1 Burn Intensity Map

#2 Soil Observations

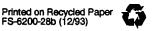
#3 Hydrologic Observations

#4 Silvicultural Evaluation

#5 Photos of area







Date of Report: 8/19/96

BURNED-AREA REPORT (Reference FSH 2509.13)

PART I - TYPE OF REQUEST

Α.	Type of Report
	[] 1. Funding request for estimated EFFS-FW22 funds [] 2. Accomplishment Report [X] 3. No Treatment Recommendation
в.	Type of Action
	[] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)
	[] 2. Interim Report
	() Status of accompitisiments to dute
	[] 3. Final report - following completion of work
	PART II - BURNED-AREA DESCRIPTION
A.	Fire Name: Telephone B. Fire Number: P22110
C.	State: Colorado D. County: Montrose
E.	The same have
	District: Norwood
н.	Date Fire Started: 7/18, detected 7/23 I. Date Fire Controlled: 7/28/96
J.	Suppression Cost: Est. \$550,000
K.	
	1. Fireline waterbarred (miles) Dozer line=5 mi.
	2. Fireline seeded (miles) <u>Dozer line 5 mi</u> .
	3. Other (identify) over all cleanup
L.	Watershed Number: 1403000345
М.	
	Ownership type: (None)State (none)BLM (none)PVT ()
	(None) State (none) bir (none) to the contract of the contr
NT	Vegetation Types: Pinyon/Juniper(798 acres)
N.	Ponderosa pine/Gamble oak(337 acres)
0	" and rely and the manufacture of the complex 3-20%
Ο.	(Major map unit#) #13 Chilson-Delson, mod deep, Beenom Families Complex, 1-20%
	#32 Ustorthents-Ustochrepts-Rockout crop Complex, 4-150%
D	Geologic Types: Cretaceous-Dakota Sandstone
드	Juraggic-Salt Wash Sandstone

Q.	Miles of Stream Channels	by Order or	Class:	
	1 st = 6.36mi	2 nd=2.31 mi	3rd=0.25mi	
R.	Transportation System:			
	Trails: 0 mil	es	Roads:2	miles

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PART III - WATERSHED CONDITION

	Fire Intensity (acres): 278 (low) 209 (moderate) 648 (high) (Map is attachment#1) Water-Repellent Soil (acres): 98% low-mod
C.	Soil Erosion Hazard Rating (acres): 772 (low) (moderate) 341 (high)
D. E.	Erosion Potential: 3.2 tons/acre Sediment Potential: 1,000 cubic yards / square mile
	PART IV - HYDROLOGIC DESIGN FACTORS
B. C. D. E. F.	Estimated Vegetative Recovery Period: 2 years Design Chance of Success: 80 percent Equivalent Design Recurrence Interval: 10 years Design Storm Duration: 6 hours Design Storm Magnitude: 1.4 inches Design Flow: 40 cubic feet per second per square mile Estimated Reduction in Infiltration: 60 percent Adjusted Design Flow: 114 cubic feet per second per square mile

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency/Situation:

The Telephone Fire burned 1135 acres on the western flank of the Uncompanying Plateau. A majority of the fire burned in what could be called "old growth Pinyon-Juniper Woodland". The terrain is a moderately sloping, terraced sandstone plateau sideslope that is moderately dissected at the lower portions. Overall erosion hazard is low to moderate, due to the terrain, the on site soil characteristics, and amount of sandstone cobble and stone on the surface. The nearest perennial stream occurs about one mile downslope from the burn. The San Miguel River is approximately four(4) miles below the fire. That water is classed as "Use Protected", which is not a very high quality rating, with uses being mainly agricultural and recreational. No water diversions exist within the fire or immediately below.

This area is managed under prescriptions 5A(80%), which emphasizes habitat for Big Game, and 6B(20%), which emphasizes grazing by cattle. It occurred within the Ray Springs Pasture and the East Chaining area of the Cottonwood Allotment. Most of the area had been classified as unsuitable for range use, mainly because there is very little useable forage produced under the the heavy Pinyon-Juniper canopy. The Pinyon-Juniper woodland in this area has had very little, if any, commercial use or value, with only occasional use for firewood, or cutting of fence posts. The Ponderosa Pine that burned(337 acres) does have commercial value, and silvicultural options do exist. These are discused in the Silvicultural Rehabilitation Evaluation done by Carol McKenzie, July 1996. Development of a course of action will be ongoing.

B. Emergency Treatment Objectives:

The main objectives of this Rehab Team had were to;

- 1. Determine if there was a watershed emergency.
- 2. Assist the District in rehabilitation of the suppression activities.
- 3. Evaluate and develope if neccessary, an overall rehabilitation strategy that will address the managment prescriptions of the area.

C. Probability of completing treatment prior to first major damage-producing

land channel % roads

other

D. Probability of Treatment Success

	<years after="" treatment=""></years>						
_	11	3	5				
Land	 						
Channel							
Roads							
Other		,					

E.	Cost of No-Action	n (Including Loss	;):	\$
F.	Cost of Selected	Alternative (Inc	luding Loss):	\$
G.	Skills Represent	ed on Burned-Area	Survey Team:	
		[] Wildlife	[] Research	[X] Range [] Engineering [] Archaeology[]
	m Leader: <u>Terry J</u> ne: 970-874			 Lc Address: <u>T.Hughes:R02F04</u> A

H. Treatment Narrative:

After reviewing the situation on the ground and evaluating the soils, watershed, vegetative characteristics and the climatic regimes involved, the Rehab team feels that this burn does not constitute a watershed emergency as defined in FSM 2523, and FSH 2509.13.

However there is an opportunity to do rehab work to:

- 1. Protect the soil productivity.
- 2. Prevent, if possible, a large invasion of thistle.
- 3. Take advantage of this disturbance to get a desirable and productive blend of adapted species (grass, forbs, and shrubs) established in a shorter time span than would occur naturally.

The team developed a list of rehab standards that addressed all areas disturbed by suppression activities. These were handed out and discussed in the Fire shift Plan of July 27,1996. These activities were accomplished by suppression crews from July 27-29th. This work consisted of constructing waterbars on all dozer lines, handlines, breaking apart berms on dozer lines, and seeding all dozer lines with Annual Rye.

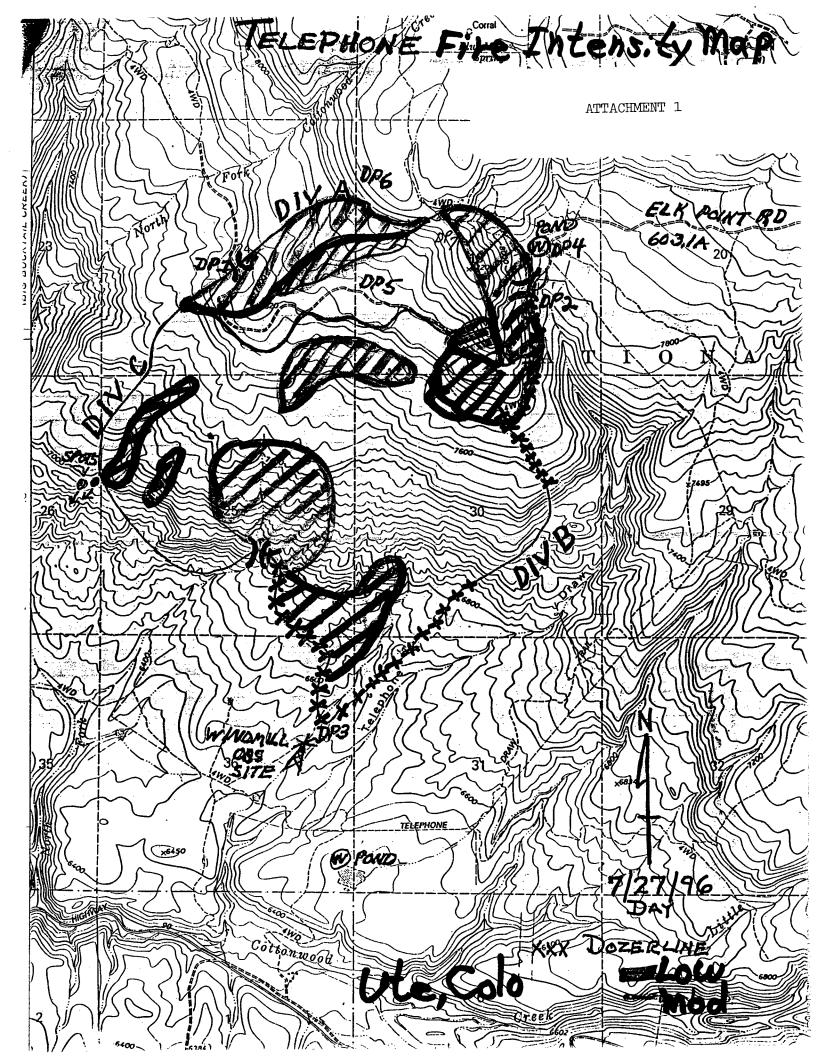
The District is developing a coordinated PWP that will provide for the seeding of adapted species in the fall of 1996. This is planned on being a multi-financed situation involving Range, Wildlife, Watershed and possibly the Colorado Division of Wildlife (DOW).

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For Forest Superv	visor					Da	ate	
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Regional Forester

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Date



Telephone Fire Norwood Ranger District July, 1996

Soil Observations and Recommendations

As part of the Forest Rehab Team on this fire, I observed Soil and watershed characteristics on the Telephone Fire on the Norwood District of the Uncompandere National Forest. Field observations occurred on Friday and Saturday July 26th and 27th, 1996. Included on this team were John Almy, Forest Hydrologist, Carol Mckenzie, Silviculturist, and Kelly Liston, District Range Conservationist. Others consulted were Steve Wells, Acting Norwood District Ranger, and Steve Hemphill, Engineer(concerning Road condition).

The main team of Almy, Mckenzie, and myself viewed the burn aerially Friday afternoon 7/26/96. The team toured the burn on the ground the next day, Saturday, 7/27/96. Atv's were used to get to various parts of the perimeter of the fire. The interior of the fire was traversed by foot.

Soil Field Observations

My traverse of the fire started at the southern most lobe, at DP3, traveling northwest through the center of the burned area to the western flank of Division C, then heading southeast along that perimeter back to DP3. Throughout this traverse I made observations on water repellency and fire intensity as described in FSH 2509.13.

A large portion of the above ground indicators (ash, amount of live fuels consumed, and litter consumed), showed signs of a high intensity burn. Most of the ash was gray or white, all fine fuels were consumed, all of the green canopy was consumed, leaving, in most cases, just the form of the tree or shrub. At the lower parts of the burn, the litter was consumed, leaving just ash, but mid and upper portions, where litter was naturally thicker it was often burnt and blackened, but not completely consumed.

Water repellency and Crusting

Water dropped on the soil throughout my traverse indicated 85-95% fitting into the weak to moderate degree of water repellency and 90-100% fitting within the low to medium classes of water repellency, with a majority of that being low.

No soil crusting was observed in the burned area. Some soft crusting was observed under natural conditions outside of the burn.

Even though the above ground indications show signs of high burn intensities the internal underground impact to the soil showed low to moderate impact from this fire. No rainfall had occurred before or during these observations, so there was no evidence of slope wash or erosion. Ash and soil material can be expected to wash down slope during rainstorm events. How far and how much will depend on the amount and intensity of the event. I feel that there will be very little negative impact off site with this fire. There is no live water within the burn, with the closest being Cottonwood Creek about 1 1/2 mile

below the area. There appear to be no major water holding structures below the

The main issue I feel that is of concern is one of getting a desirable species blend that will protect the soil resource, along with provide forage for cattle and wildlife.

Soils of the Area

The soils within the burn have been identified and documented in the "Soil Survey of the Uncompangre National Forest Area", USDA, 1996.

This report identifies 6 soil delineations, representing 10 identifiable soil families. These soils have formed in the interbedded shales and sandstones on the southwest flank of the Uncompander Plateau. Cretaceous Dakota sandstone and Jurassic Salt Wash Sandstone are the dominate types of sandstones in this area. Most of the soils are identified as having slight to moderate Erosion Hazard ratings, with K values ranging from .20-.32.

The existing soil data was used to estimate potential erosion rates for soils in the burn area. The Universal Soil Loss Equation was used to calculate these rates. The values obtained ranged from 5.3 tons/acre/year to 1.3 tons/acre/year. Undisturbed erosion rates have been estimate at 1.10 tons/acre/year to 0.16 tons/acre/year.

Overall Evaluation and Recommendations

My overall opinion is that this burn has not created a watershed emergency. This is based on my review of the field situations, study of the soils data, training I have had specific to Burned area Evaluations, phone conversation with Jerry Freeouf, Regional Soil Scientist, and direction provided in FSM 2523, and FSH 2509.13, Burned area Emergency Rehabilitation.

There have been impacts to the soils and watershed, that in my opinion will rehab over time without great expenses needed. There should be no great losses in soil productivity, water quality, property, nor should there be any risk for loss of life.

I would recommend making sure all suppression damage is rehabed. Then considering seeding this fall with a desirable and adapted mix. This should help in allowing this area to become as usable as possible for rangeland and wildlife use. From a landscape view point I feel this burn was very desirable. This provided a large disturbance that will provide species variety and diversity that otherwise may not have occurred. It may, however take 200+ years for the Pinyion-Juniper to completely cover the site again. Erosion should staliize in 2-3years and non-forest vegetative recovery should occur in 3-6 years.

Terry Hughes Forest Soil Scientist

Telephone Fire Norwood Ranger District July, 1996

Hydrology - Descriptions and Recommendations

The fire burned at elevations which range from 6600 to 8200 feet. Average annual precipatation ranges from approximately 15 inches in the pinyon-juniper type to 20 inches in the ponderosa pine - oakbrush type. High intensity summer thunderstorms are common and and yet very localized. It is this type of storm which represents the greatest threat to post fire flooding and hillslope erosion concerns. Summers are generally hot and dry. However, summer rains can occur in August and September. Generally significant amounts of moisture do not begin to occur until October, with winter snows arriving in November. Winter snowpack is variable. In most years winter long accumulations occur above 8000 feet in elevation.

The fire is located within the Telephone Draw and North Fork of Cottonwood Creek drainages. These drainages flow into Cottonwood Creek which joins the San Miguel River at Pinion. All the streams within the fire perimeter are either ephemeral or intermittent channels. The lower slopes of the fire are moderately dissected, while the upper slopes are poorly dissected. Highly dissected slopes are very efficient at routing both water and sediment into surface drainage features. Channels inspected during fire rehab survey are very rocky and probably will be adequate to handle expected flood flow increases. No significant debris hazards within the channels will occur as a result of the fire. Very little sediment was stored on slopes above drainages, so the release of those stored sediments is not a significant consideration. Surface water runoff in normally quite high in the pinyon-juniper vegetation types. This is due to ground cover which is often less than 40% and a high degree of impervious surface due to rock exposure. The well dissected slopes are a good indicator of the high surface runoff which occurs. Surface runoff is expected to increase due to the fire. Surface litter accumulations which help retard runoff has been eliminated within most of the fire and some increase in water repellency in the soil in a few areas of the fire were noted. There is some uncertainty as to what erosion will occur with the onset of the first significant precipitation/runoff event. There will most certainly be a immediate flush of ash off the slopes and transported to the channels and eventually moved down into Cottonwood Creek. This ash is not expected to have any significant impacts to water quality.

A perennial stream is not encountered for more than a mile downstream of the fire where Telephone Draw meets Cottonwood Creek. The San Miguel River is approximately 4 river miles below the fire. These waters are classified by the State as "use protected". Meaning water quality must be protected sufficient to perserved the current beneficial uses which are agricultural and recreation. The "use protected" designation acknowledges that these are not high quality waters.

No water diversions exist within the fire or immediately below. There is the

distinct possibility that there may be agricultural diversions on Cottonwood Creek below the National Forest, but this is an unknown. The Telephone Draw road crosses the drainage a short distance below the fire. It is not known if a culvert or ford is used at this crossing. If it is a culvert, it is probably not equipped to handle the additional runoff which is expected to originate on the fire. Highway 90 crosses Cottonwood Creek about 1.5 miles below the fire, which is below the National Forest. This crossing should also be evaluated. However, since the fire has effected a much smaller percentage of the total watershed at this point, compared to the crossing on Telphone Draw there less risk of failure.

Recommendations

- 1. While the situation may not meet the definition of a true watershed emergency due to the lack of hazard to downstream life and property there is a need to take steps to revegetate the burned area. The intensity of the fire was such that natural revegetation may be a lengthy process. Seeding the fire with the objective of reducing erosion hazard, reducing the risk of thistle invasion and replacing big-game winter browse would be appropriate. This would need to be financed with Forest project dollars and could be accomplished this fall. There may be an opportunity to get the D.O.W. to contribute funding for purchase of browse seed.
- 2. All firelines need to be waterbarred where surface runoff down trails is a concern. In some cases waterbarring dozer lines by hand would be preferrable to using equipment because of cost considerations and more importantly the concern for further impacts of taking heavy equipment back into steep terrain working in easily displaced material.
- 3. All dozer firelines, safety zones, drop points, camps and other areas of heavy use should be seeding immediately following termination of use. To increase success scarification by either equipment or hand should preced seeding. Dozer lines and safety zones are already scarified. However, any methods to work seed into the soil after seeding would be beneficial.
- 4. Seeding of hand lines should not be necessary.
- 5. No channel debris removal (within fire perimeter) or in-channel sediment storage structures are recommended. The exception is the removal of tree boles and slash from the helibase at DP 4.
- 6. Drainage crossing culverts should be evaluated below the fire for adequacy to handle increase peak flows. Unstable debris above these pipes should be removed from the channel for a distance of several hundred yards.

TELEPHONE FIRE

Silvicultural Rehabilitation Evaluation

INTRODUCTION

The Telephone Fire began from a lightning strike on July 18, 1996. The fire was not detected until July 23 at around 1500 hours. After the first burning period the fire had grown to approximately 110 acres. On July 24 extreme fire behavior was observed and the fire grew to 1100 acres. By July 26 the fire was contained to it's final size of 1135 acres.

FIRE INTENSITY

Fire intensity was determined by indicators of depth and color of ashes, size and amount of live fuels consumed, litter consumption, plant root crowns and soil crusting (FSH 2509.13,20).

57 percent (648 acres) of the fire area is rated as a high intensity burn. In the high intensity areas the ash color is white, over 80 percent of the plant canopy was consumed, the litter and duff layer is spotty or absent, and the root crowns of Gambell oak were heavily damaged.

19 percent (209 acres) of the fire is rated as a moderate intensity burn. In the moderate intensity areas the ash color was a mix of black to white, between 40 to 60 percent of the plant canopy was consumed, and approximately 50 percent of the litter and duff layer was consumed with the other 50 percent deeply charred.

24 percent (278 acres) of the fire is rated as a low intensity burn. In the low intensity areas the ash color was black, less than 40 percent of the plant canopy was consumed, and the litter and duff layers were only lightly singed with less than 30 percent of the area being exposed to bare mineral soil.

VEGETATION

The major plant cover types within the fire perimeter are ponderosa pine (337 acres) and pinyon/juniper (798 acres). The ponderosa pine cover type was generally composed of mature even-aged stands of trees with heavy Gambell oak and snowberry in the understory. Average site characteristics were timber productivity 49 cubic feet/acre/year, site index of 79, and average diameters of 10 to 12 inches. The pinyon/juniper associations were composed of very mature even-aged trees with Gambell oak, big sage and elk sedge lightly represented in the understory. Much of the pinyon/juniper was 10 to 15 feet in height. Table 1 displays the fire intensity by vegetative cover type.

Table 1: Acres of fire intensity by vegetative cover type.

Cover Type	<u> High</u>	<u>Moderate</u>	Low	<u>Total</u>
Ponderosa Pine	154	30	153	337
Pinyon/Juniper	494	179	125	798
Total	648	209	278	1135

As previously mentioned, 57 percent of the entire fire was a high intensity burn or a stand replacement fire. Over 98 percent of all the vegetative cover (trees, shrubs, grasses and forbs) was consumed. The only trees that may survive are the very large diameter ponderosa pine with at least 15 percent live crown remaining and less than 50 percent of the cambium injured.

within in the moderate intensity burn areas (19 percent) most of the shrubs, grasses and forbs were consumed. Tree mortality will be influenced by diameter, percent crown scorch, percent bole scorch and basal girdling. It is estimated that 50 percent of the trees were killed by the fire.

Within the low intensity burn areas (24 percent) about 30 percent of the shrubs, grasses and forbs were consumed. It is estimated that 10 to 20 percent of the smaller diameter trees (4 to 7 inch) were killed.

Further mortality may occur in the ponderosa pine where the fire burned under low and moderate intensities. Fire damaged trees are weakened physiologically, and for two or more years are more attractive to bark beetles than normal trees (Miller and Keen, 1960). The wounded cambium and remaining green twigs in low to moderate fire intensity areas can attract bark beetles. The following years emerging brood may attack more weakened trees within the fire area or other healthy trees in the surrounding area.

TIMBER VALUE

The ponderosa pine within the fire does contain commercial timber value. Using R2RIS stand information and the percent mortality by fire intensity, it is estimated that 700 MBF of timber greater than 8 inches could be salvaged. This timber will quickly deteriorate over the next 6 months as the wood begins to dry and check. Under the 1995 Rescission Bill (Public Law 104-19) and the existing Norwood Pine Sales Environmental Analysis, most of this volume could be included under the Bramier Timber Sale which is scheduled to sell in fiscal year 1996. The value of the dead timber is approximately 40,700 dollars.

REFORESTATION

A stand replacement fire on a southerly aspect creates problems for the regeneration of ponderosa pine. Successful regeneration is further affected by the following site conditions: grazing management emphasis, proximity to big-game winter range, crest between pinyon/juniper and ponderosa pine types, heavy potential Gambell oak competition, moderate soil depth of 12 to 24 inches, fair soil textures of sandy loam to clay loam, fair soil surfaces with 15 to 35 percent cobbles, and aspects south to southwest (Reforestation Handbook 13.21). Establishing seedlings within the Telephone Fire area will be difficult and costly (\$358/ac) but once seedlings are established the timber productivity and site index indicate that the area is favorable for timber production.

Past experience with planting large scale disturbances (Horsefly Fire, Sanborn Park Fire, Ute Beetle Salvage) has not been very successful. First year survival was less than 30 percent. Besides the harsh site conditions created by these natural disturbances, competing brush and grass established on the sites prior to planting because of delays in available seedlings, funding, and salvage efforts.

SILVICULTURAL RECOMMENDATIONS

- Prevent the build up of <u>Ips</u> beetles and <u>Dendroctonus</u> bark beetles by salvaging fire stressed trees and reducing stand densities in the low and moderate burn areas.
- 2. Remove hazard trees along the Elk Point Road (FSR 603.1A) by salvaging fire killed trees 100 feet on either side of the road within the fire perimeter.
- 3. Retain fire killed trees within the high intensity areas to provide shade and future microsites for seedling establishment.
- 4. Schedule reforestation immediately to take advantage of favorable exposed mineral soil and reduced vegetative competition. A) Reprioritize the 23,000 seedlings scheduled to interplant Ute and Sanborn in 1997 to plant the Telephone Fire; OR, B) Directly seed the fire with 2 to 4 pounds per acre of ponderosa pine seeds after September 20, 1996. This would require the collection of seed in fiscal year 1996 since there is not adequate amounts of seed in the seed bank to cover direct seeding needs.
- 5. Compare the effectiveness of shade cards and mulch mats in enhancing seedling survival.
- 6. Do not seed any ponderosa pine cover types with grass or forb seeds.
- 7. Analyze Norwood District's ten year seed plan and take appropriate action to rebuild the seed bank.

MANAGEMENT OPTIONS

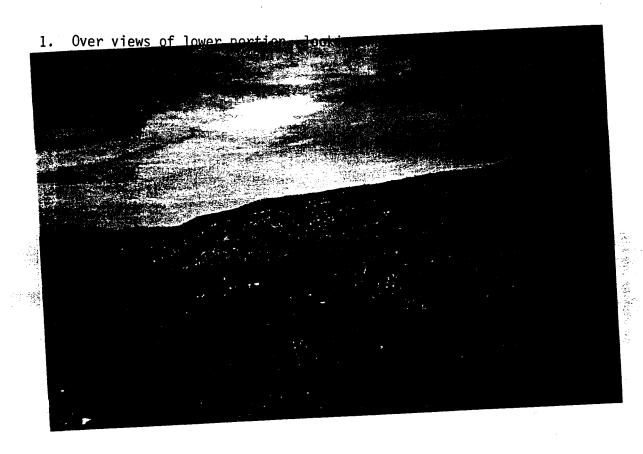
- Prepare a Categorical Exclusion under the 1995 Rescission Bill to salvage the Telephone fire. Include the salvage volume with Bramier Timber Sale and sell by December 1996. Prioritize the salvage units with contract term adjustments allowed in order to release the units by the 1997 planting season. Fund reforestations activities through the collection of KV dollars. This option would require a 30 day scoping period.
- 2. Supplement the Norwood Pine Sales EA to include salvaging volume in the Telephone fire under Bramier Timber Sale. Similar to option 1, the volume would be a priority for removal with contract term adjustments allowed and planting funded through KV dollars. This option would require a 30 day comment period, 30 day appeal period and 15 day decision period.
- 3. Do not salvage any of the volume in the Telephone Fire. Reforest the area with NF dollars by either direct seeding in the fall of 1996 or planting in the spring of 1997.

- 4. Do not salvage any of the volume in the Telephone Fire. Prepare an economic analysis according to FSH 2472.21. If the economic analysis determines a negative present value when these acres are managed for timber management purposes then amend the Forest Plan to remove these acres from the timber base.
- 5. Salvage the volume under options 1 or 2 and do not reforest the fire under option 4.

Carol McKenzie

Silviculturist, GMUG National Forest

TELEPHONE FIRE NORWOOD DISTRICT UNCOMPAHGRE NATIONAL FOREST

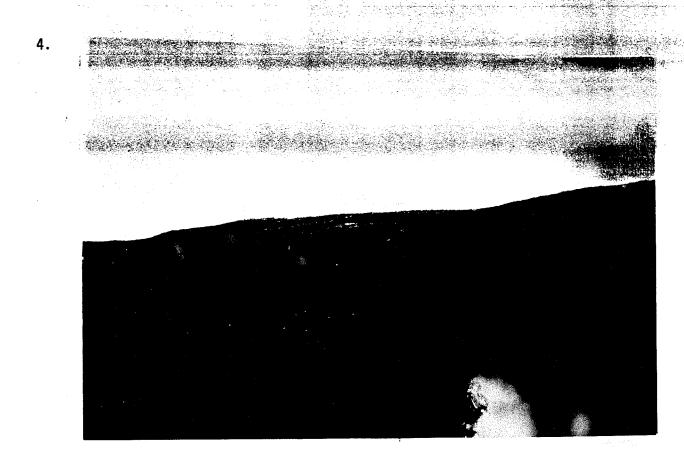




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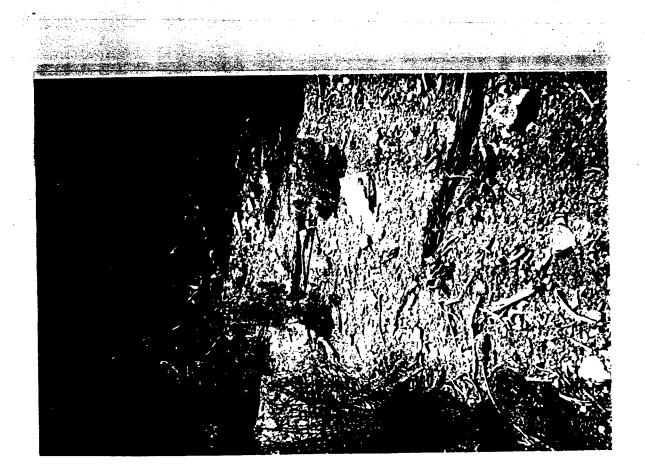
more overviews



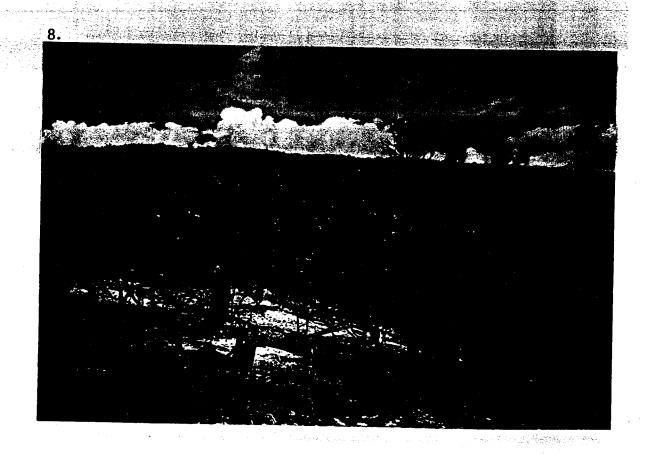
5. Surface conditions in burned areass on lower portions.

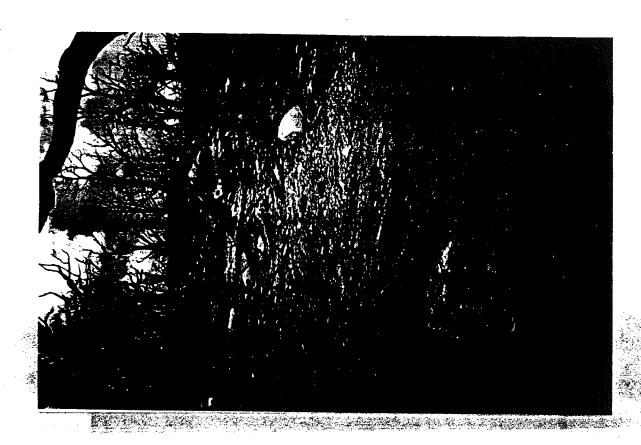


6. Surface conditions on unburned areas.



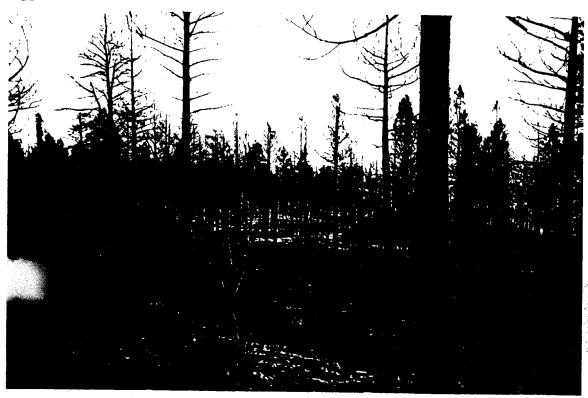
Closer views of lower portions, Pinyon/Juniper





Closer views of steeper-portions on Telephone Fire.





วสารี บอดการเอรีย์ สอ สถุกมีทางขาวรับของรัว ลพลทั้ง การองโป View of Burned Ponderosa Pine/Oak on Telephone Fire.



TELEPHONE FIRE NORWOOD DISTRICT UNCOMPAHGRE NATIONAL FOREST



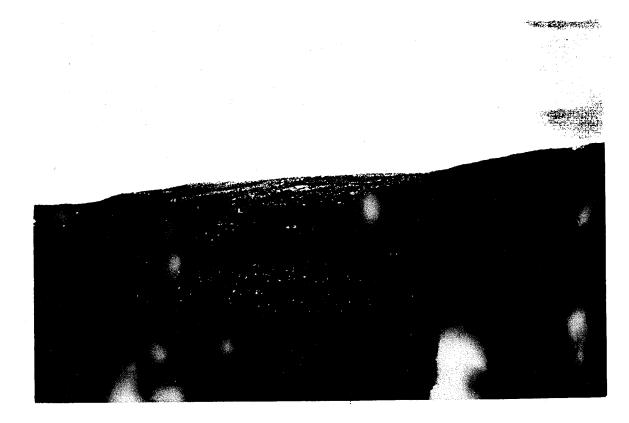


3.



more overviews

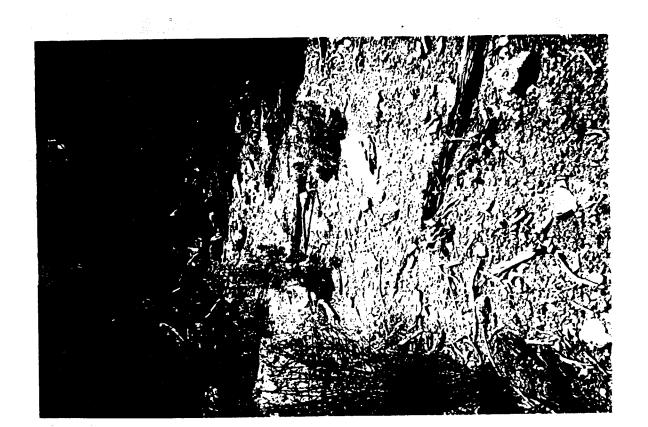
4.



5. Surface conditions in burned areass on lower portions.



6. Surface conditions on unburned areas.





Closer views of lower portions, Pinyon/Juniper





Closer views of steeperprortions on Telephone Fire.





View of Burned Ponderosa Pine/Oak on Telephone Fire.



TELEPHONE FIRE NORWOOD DISTRICT UNCOMPAHGRE NATIONAL FOREST

1. Over views of lower portion, looking west







more overviews



5. Surface conditions in burned areas on lower portions.



6. Surface conditions on unburned areas.





Closer views of lower portions, Pinyon/Juniper





Closer views of steeper portions on Telephone Fire.





View of Burned Ponderosa Pine/Oak on Telephone Fire.

