

Preliminary

Burned Area Survey of Yellowstone National Park

and Adjoining National Forests

Project Summary and Tabular Areas

December, 1988

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This document was prepared by the

Greater Yellowstone Post-Fire Resource Assessment Committee,
Burned Area Survey Team

COOPERATING AGENCIES

National Park Service - Yellowstone National Park
- Redwoods National Park

Forest Service - Northern Region
- Pacific Northwest Region
- Pacific Southwest Region
- Intermountain Region
- Rocky Mountain Region

Forest Service - National Forest Applic. Project

Forest Service - Geometronics Service Center, Salt Lake City

National Aeronautics and Space Administration

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Introduction

The Greater Yellowstone Area fires of 1988 have received more national attention than any other event in the history of the parks, and are already being described as the cause of the largest fire suppression effort ever undertaken in this country. The fires have provided compelling evidence of the power of nature, and have generated renewed interest in the parks and their management. Fighting the fires has required all of the attention of the concerned agencies, so that no comprehensive overview of the whole fire story has been possible. The Burned Area Survey was initiated to provide a chapter in that story, that being to answer the questions, "how much burned?", "how hot?", and "what is the mosaic of the remainder?", within the Greater Yellowstone Area.

This document is an expanded version of the summary published in October. It includes more details on methods, accuracy, and definitions of soil heating intensity. Burned areas are described in terms of burned acreage and perimeter acreage for administrative unit, fire name, and burn type.

Objectives

The project objective was to produce a systematic, consistent estimate of burned area within the affected part of the Greater Yellowstone Area in a map format, including burn intensities and soil heating. The project duration was 3.5 weeks. The study area includes Yellowstone Park and the contiguous National Forest and National Park lands. This area is about 4 million acres. The Fayette, Corral Creek, and Hunter fires were not mapped. Though they are locally significant, they have a relatively small extent (about 47,000 acres), and were too widely separated to be included in photo coverage in the short time frame of this project.

The project is a reconnaissance level survey. Methods are consistent across the entire burned area, to assure a uniform estimate. A minimum Map Unit size of 200 acres was selected. This size allowed rapid mapping from aerial photography, while obtaining a level of detail adequate for resource assessment and planning. The product is not intended for use in site-specific planning. The acreages given should be regarded as maximums, because the mapped units all contain a certain amount of unburned area.

Methods

Standard soil and vegetation mapping techniques were used. Color infrared photography at a nominal scale of 1:63,360 was selected. Three photographic overflights were needed to provide coverage. Despite this, some areas are still uncovered (a small part of the Targhee National Forest, and the North Fork of the Shoshone River). These areas were estimated. Mapped photographs were sent to the Forest Service Geomtronics Service Center for stereoplotting, digitization, polygon analysis, cartography, and map production.

It was produced by a team of ten scientists experienced in aerial photographic interpretation, soil surveys, and vegetation mapping. There were extensive supporting ground investigations. Over 3000 soil and vegetation sites were investigated using helicopters and ground based vehicles. Sample sites were randomly selected throughout the study area.

Burned areas by fire name and by administrative unit are calculated from proportions calculated from digitized data. Burned area totals and proportions by fire name within administrative units are calculated from estimates of coverage using dot grid techniques. These figures are slightly different from those given in the October report because of additional edits performed after that date.

Results

The map depicts the distribution and character of the burned areas as of September 15, 1988. Following is a general description of Map Units in the legend.

Forested: Canopy Burn; Moderate soil heating

The forest overstory has burned. No unburned duff or litter remains on the forest floor. Soil is charred as deep as 5 cm. Up to two percent of this map unit could have charring from 6-10 cm. These more deeply burned soils may have tan or reddish surface layers, and occur only where large logs have burned out on the surface. Map units on the Shoshone National Forest have up to 15 percent deeper soil charring.

Forested: Surface Burn/ Canopy Burn Complex

This is a mosaic of canopy and surface burns. Each type of burn makes up from 30 to 70 percent of the map unit, and averages 50 percent. It is mapped as a mosaic, because the components are too intertwined to separate at this scale of mapping.

Forested: Surface Burn; Low soil heating

Burning in this unit is largely confined to the surface of the ground. Generally, the tree canopy is not burned. Most needle litter is absent, but most duff remains. Soil heating is not significant. Up to 15 percent of this unit can be unburned.

Non-Forested: Low to Moderate soil heating (sagebrush, shrubland, grassland)

Most of this unit is grassland or sagebrush with small inclusions of aspen. Soil

charring averages 2 cm, but may reach 5 cm where fuels are concentrated. This is designed to be a mosaic of 75 percent burned and 25 percent unburned areas.

Non-Forested: Low soil heating (sedge meadows, alpine turf, salix)

This unit is generally at higher elevations. Soil heating is low (less than 0.5 cm charring). This is designed to be a complex mosaic of 75 percent burned and 25 percent unburned areas.

Soil heating classes were developed from Forest Service sources, research results, and consultation with forest soil scientists. They relate to erosion and revegetation potential. "Low" soil heating intensity does not significantly affect soil erosion or revegetation potential. "Moderate" soil heating intensity affects erosion and revegetation potential to some extent. Erosion potential on steep slopes may be increased somewhat, because of the absence of litter and organic matter just below the surface. Re-emergence of shrubs, grass, and forbs will occur rapidly from deeper plant parts. However, revegetation will be delayed for 1-2 years because surface roots, seeds, and grasses have been destroyed in the surface layer.

Note that no "High" or "Severe" classes are given in the above map unit descriptions. This is because these classes are a very small part of the entire burned area, and are not extensive enough to warrant inclusion in this map.

"High" soil heating is defined as having charring depths greater than 10 cm. Often there will be a surface layer of light reddish soil that has had all organic material volatilized and iron compounds oxidized. This class is rare in the burned area.

"Severe" soil heating is where there is deep char, but also recrystallization or "baking" of soil materials. The soil is hardened. Erosion potential can significantly change, and almost all roots and rhizomes are killed. This class occurs only in unusual fuel load situations, and is much less than one tenth of one percent of the burned area.

Previous estimates of burned area have been based on burn "perimeter" or the line drawn around the extreme edge of the fires. This map depicts burned "area", which is only that area that has burned, disregarding previously drawn "perimeters". Since many areas within the fire "perimeters" are not burned, the area estimates generated by this map are more accurate than earlier estimates.

Comparisons to perimeter acreage are also given. These perimeters are more exact than given previously, since they were generated from this map, rather than from previous fire maps.

Future, more detailed mapping will resolve the total burned area further, with some reduction of the total acreage probable. At this scale of mapping, detailed delineation of the burn patchwork is not possible; thus, all numbers resulting from this first mapping should be regarded as maximum possible acreages and percentages. Also, because this scale of mapping does not permit detailed assessment, as much as 15 percent of the area counted as "burned" may not be actually affected by fire.

The following tables and charts display the burned area in terms of the acreage in canopy burn, surface burn, and non-forested burn classes. Each chart is followed by its source tables. These figures have been calculated from the areas in each map unit. For example, since the Forested Canopy/Surface complex is designed to be fifty percent in each class, the total area in this map unit is proportioned accordingly into the canopy and surface classes.

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Key to Abbreviations

YNP = Yellowstone National Park

GTNP = Grand Teton National Park

BTNF = Bridger Teton National Forest

CNF = Custer National Forest

GNF = Gallatin National Forest

SNF = Shoshone National Forest

TNF = Targhee National Forest

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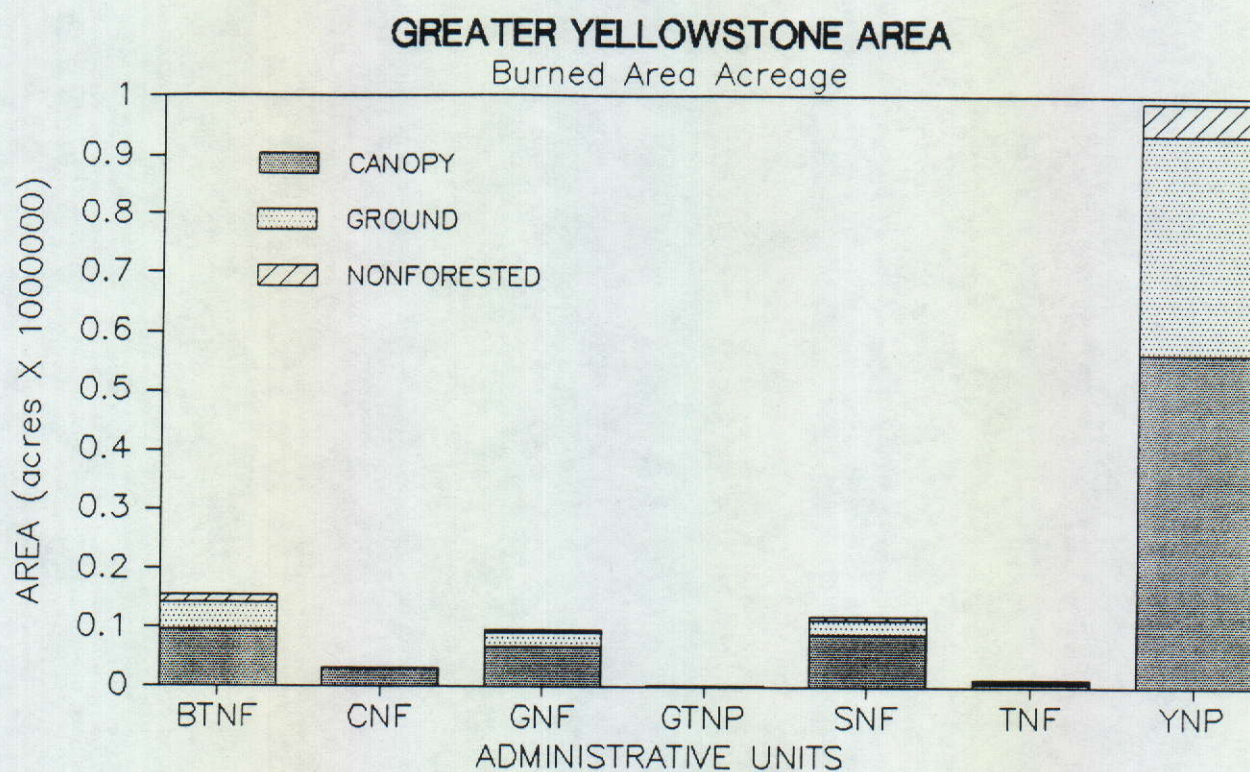


Figure 1. Burned Area Acreage in the Greater Yellowstone Area by Administrative Unit.

* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 1. BURNED AREA ACREAGES WITHIN GREATER YELLOWSTONE AREA

Burn Type	Burned Area (acres)	% of Burned Area	% of Perimeter Area
Canopy	851900.0	60.6	53.6
Surface	473800.0	33.7	29.8
Meadow	46550.0	3.3	2.9
Sage/Grassland	33525.0	2.4	2.1
Unburned	182725.0		11.5
		100.0	100.0
Total in Burned Area	1405775.0		
Total Perimeter Area	1588600.0		
% Burned within fire perimeter			88.5

TABLE 2. BURNED AREA ACREAGES WITHIN BRIDGER TETON NATIONAL FOREST

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	97900.0	62.1	54.6
Surface	46700.0	29.6	26.1
Meadow	13050.0	8.3	7.3
Sage/Grassland	0.0	0.0	0.0
Unburned	21550.0		12.0
		100.0	100.0
Total in Burned Area	157650.0		
Total Perimeter Area	179200.0		
% Burned within fire perimeter			88.0

TABLE 3. BURNED AREA ACREAGES WITHIN CUSTER NATIONAL FOREST

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	29400.0	95.8	95.1
Surface	1300.0	4.2	4.2
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	200.0		0.6
		100.0	100.0
Total in Burned Area	30700.0		
Total Perimeter Area	30900.0		
% Burned within fire perimeter			99.4

TABLE 4. BURNED AREA ACREAGES WITHIN GALLATIN NATIONAL FOREST

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	66000.0	68.9	64.2
Surface	24300.0	25.5	23.7
Meadow	5400.0	5.6	5.3
Sage/Grassland	0.0	0.0	0.0
Unburned	7000.0		6.8
		100.0	100.0
Total in Burned Area	95700.0		
Total Perimeter Area	102800.0		
% Burned within fire perimeter			93.2

TABLE 5. BURNED AREA ACREAGES WITHIN GRAND TETON NATIONAL PARK

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	1900.0	70.4	70.4
Surface	800.0	29.6	29.6
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	0.0		0.0
		100.0	100.0
Total in Burned Area	2700.00		
Total Perimeter Area	2700.00		
% Burned within fire perimeter			100.0

TABLE 6. BURNED AREA ACREAGES WITHIN SHOSHONE NATIONAL FOREST

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	89000.0	74.9	55.2
Surface	22300.0	18.8	13.8
Meadow	3000.0	2.5	1.9
Sage/Grassland	4500.0	3.8	2.8
Unburned	42500.0		26.3
		100.0	100.0
Total in Burned Area	118800.0		
Total Perimeter Area	161300.0		
% Burned within fire perimeter			73.7

TABLE 7. BURNED AREA ACREAGES WITHIN TARGHEE NATIONAL FOREST

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	5350.0	47.3	47.3
Surface	5950.0	52.7	52.7
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	0.0	0.0	0.0
		100.0	100.0
Total in Burned Area	11300.0		
Total Perimeter Area	11300.0		
% Burned within fire perimeter			100.0

TABLE 8. BURNED AREA ACREAGES WITHIN YELLOWSTONE NATIONAL PARK
(FIRE PERIMETER BASIS)

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	562350.0	56.9	51.1
Surface	372350.0	37.7	33.8
Meadow	25200.0	2.5	2.3
Sage/Grassland	29025.0	2.9	2.6
Unburned	111475.0		10.1
		100.0	100.0
Total in Burned Area	988925.0		
Total Perimeter Area	1100400.0		
% Burned within fire perimeter			89.9

TABLE 9. BURNED AREA ACREAGES WITHIN YELLOWSTONE N.P. (TOTAL AREA)

Burn Type	Burned Area (acres)	% of Burned Area	% of YNP Area
Canopy	562350.0	56.9	25.3
Surface	372350.0	37.7	16.8
Meadow	25200.0	2.5	1.1
Sage/Grassland	29025.0	2.9	1.3
Unburned	1232875.0		55.5
		100.0	100.0
Total in Burned Area	988925.0		
Total Park Area	2221800.0		
% Burned of Total YNP Area			44.5

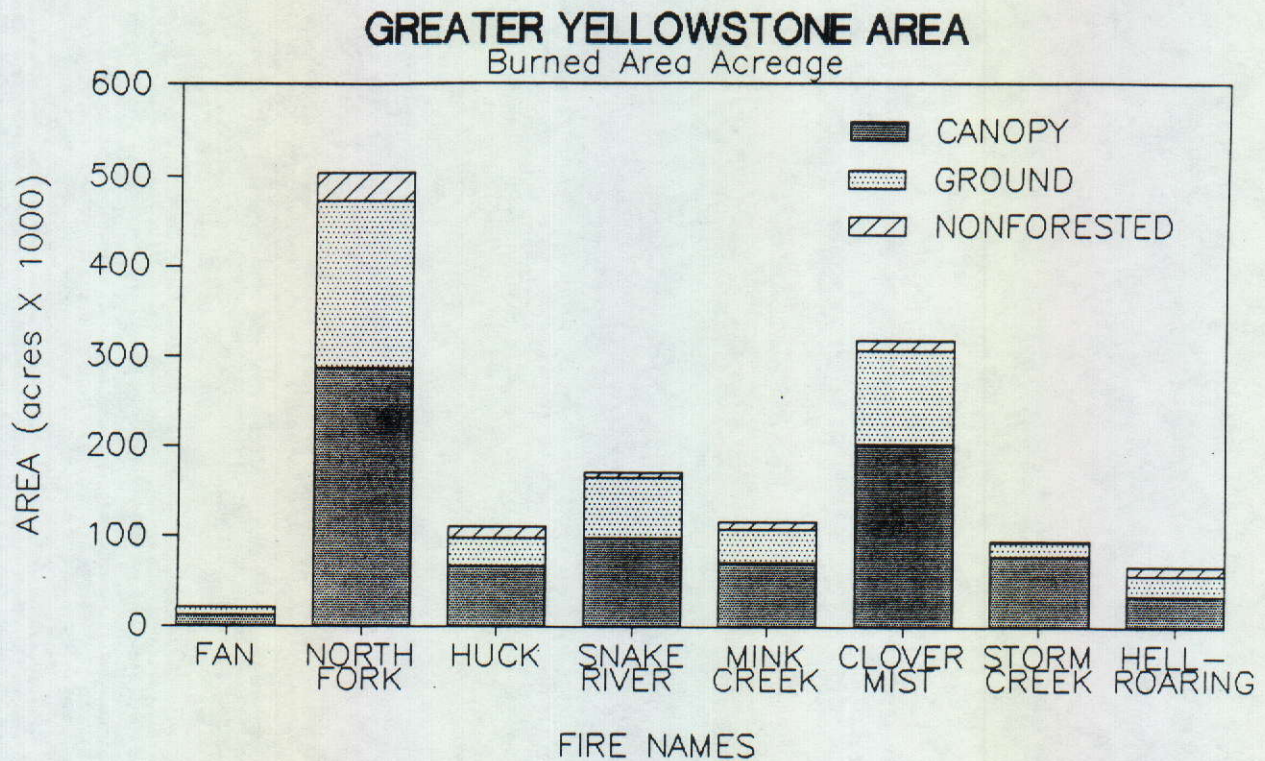


Figure 2. Burned area acreage in the Greater Yellowstone Area by Fire. *These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 10. BURNED AREA ACREAGE WITHIN THE GREATER YELLOWSTONE AREA BY ADMINISTRATIVE UNIT *

FIRE	UNIT							TOTAL
	GTNP	YNP	BTNF	CNF	GNF	SNF	TNF	
Clover Mist		200775				118800		319575
Fan		20900						20900
Hellroaring		19625			47100			66725
Huck	2700	25625	82875					111200
Mink Creek		41550	74775					116325
North Fork		490225			2500		11300	504025
Snake River		172025						172025
Storm Creek		18200		30700	46100			95000
TOTAL	2700	988925	157650	30700	95700	118800	11300	1405775

*excludes Fayette, Hunter, and Corral Creek fires.

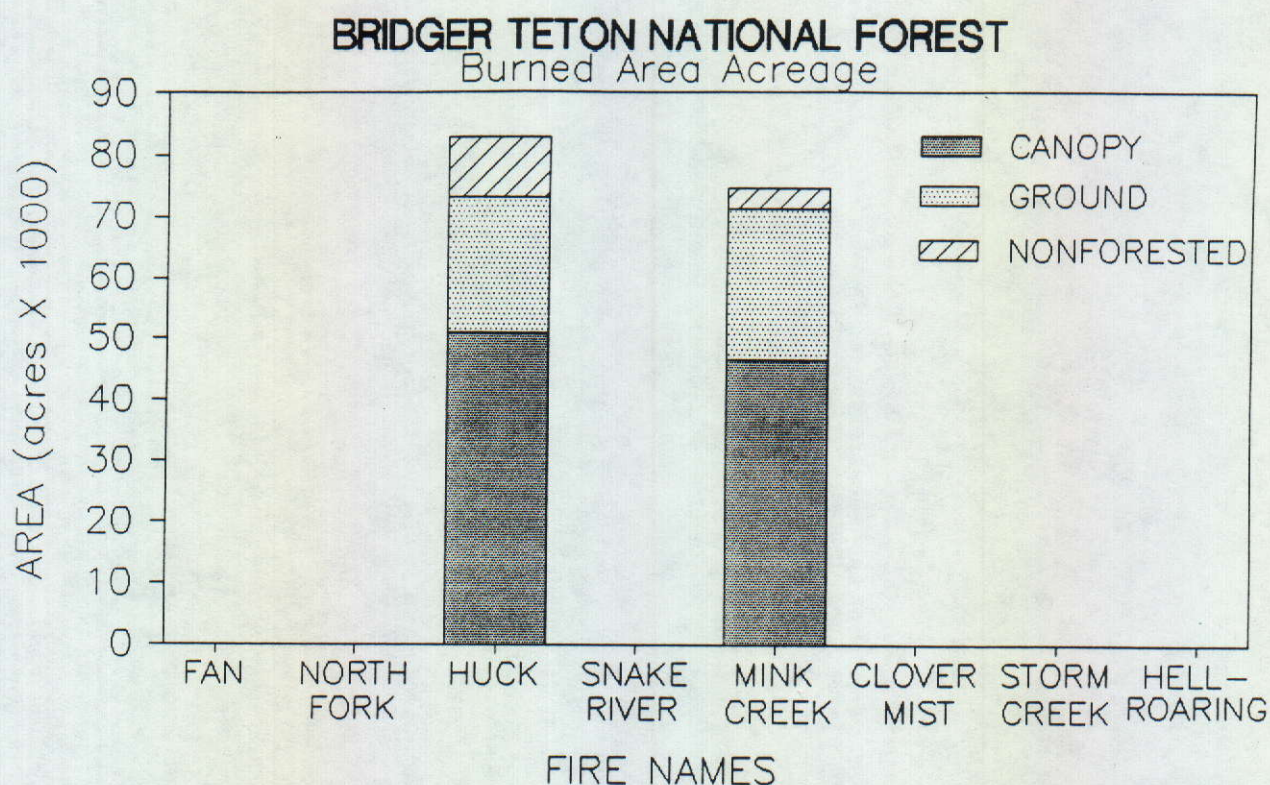


Figure 3. Burned Area Acreage in the Bridger Teton National Forest.
* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 11. BURNED AREA ACREAGES FOR HUCK FIRE WITHIN BTNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	51200.0	61.8	52.3
Surface	22000.0	26.5	22.5
Meadow	9675.0	11.7	9.9
Sage/Grassland	0.0	0.0	0.0
Unburned	15025.0		15.3
		100.0	100.0
Total in Burned Area	82875.0		
Total Perimeter Area	97900.0		
% Burned within fire perimeter			84.7

TABLE 12. BURNED AREA ACREAGES FOR MINK CREEK FIRE WITHIN BTNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	46700.0	62.5	57.4
Surface	24700.0	33.0	30.4
Meadow	3375.0	4.5	4.2
Sage/Grassland	0.0	0.0	0.0
Unburned	6525.0		8.0
		100.0	100.0
Total in Burned Area	74775.0		
Total Perimeter Area	81300.0		
% Burned within fire perimeter			92.0

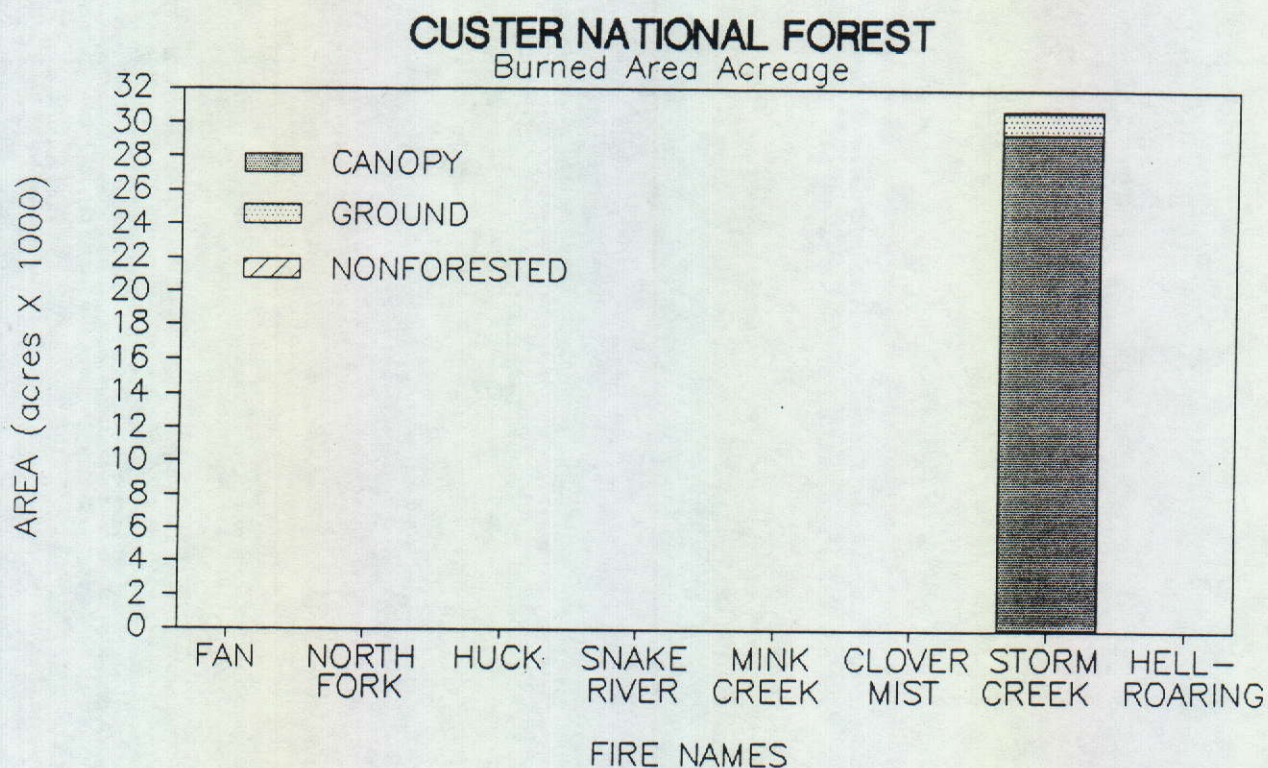


Figure 4. Burned area acreage in Custer National Forest

*These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 13. BURNED AREA ACREAGES FOR STORM CREEK FIRE WITHIN CNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	29400.0	95.8	95.1
Surface	1300.0	4.2	4.2
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	200.0		0.6
		100.0	100.0
Total in Burned Area	30700.0		
Total Perimeter Area	30900.0		
% Burned within fire perimeter			99.4

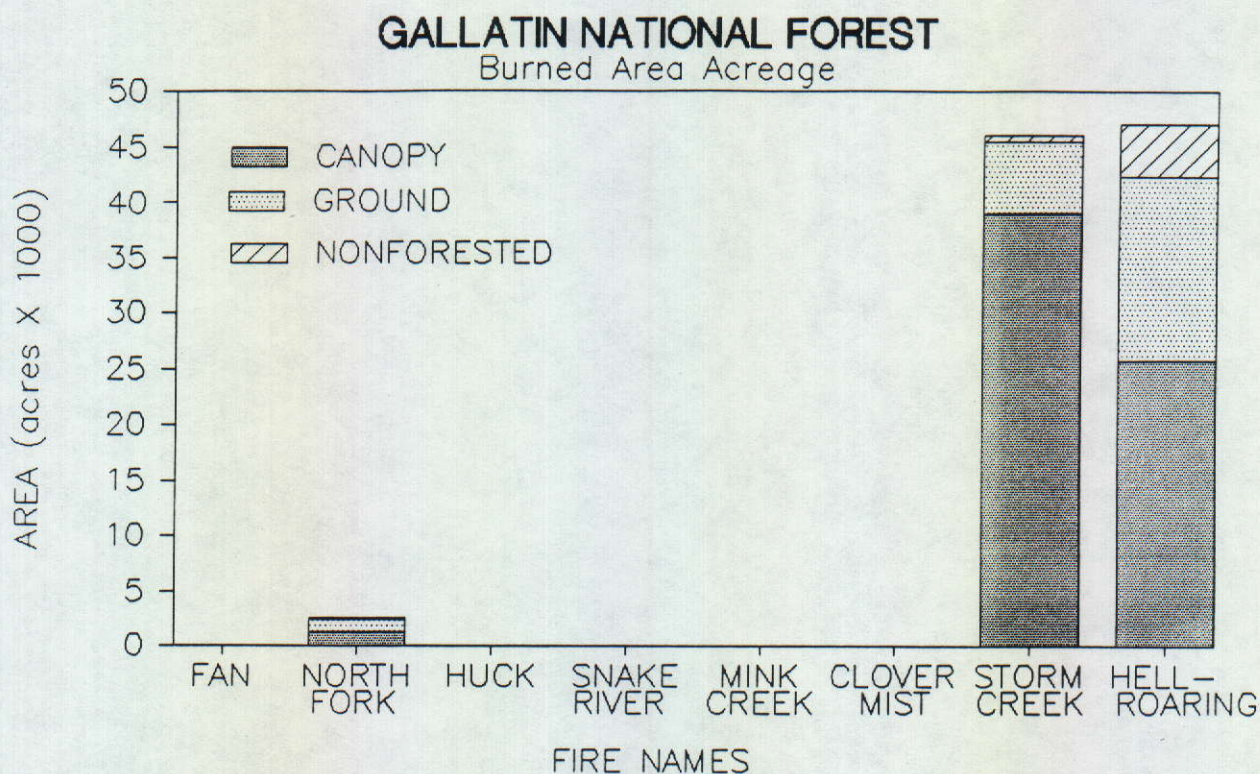


Figure 5. Burned Area Acreage in the Gallatin National Forest
*These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 14. BURNED AREA ACREAGES FOR HELLROARING FIRE WITHIN GNF

Burn Type	Burned Area (acres)	% of Burned Area	% of Perimeter Are
Canopy	25750.0	54.7	50.8
Surface	16550.0	35.1	32.6
Meadow	4800.0	10.2	9.5
Sage/Grassland	0.0	0.0	0.0
Unburned	3600.0		7.1
		100.0	100.0
Total in Burned Area	47100.0		
Total Perimeter Area	50700.0		
% Burned within fire perimeter			92.9

TABLE 15. BURNED AREA ACREAGES FOR NORTH FORK FIRE WITHIN GNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	1250.0	50.0	50.0
Surface	1250.0	50.0	50.0
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	0.0	0.0	0.0
		100.0	100.0
Total in Burned Area	2500.0		
Total Perimeter Area	2500.0		
% Burned within fire perimeter			100.0

TABLE 16. BURNED AREA ACREAGES FOR STORM CREEK FIRE WITHIN GNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	39000.0	84.6	78.8
Surface	6500.0	14.1	13.1
Meadow	600.0	1.3	1.2
Sage/Grassland	0.0	0.0	0.0
Unburned	3400.0		6.9
		100.0	100.0
Total in Burned Area	46100.0		
Total Perimeter Area	49500.0		
% Burned within fire perimeter			93.1

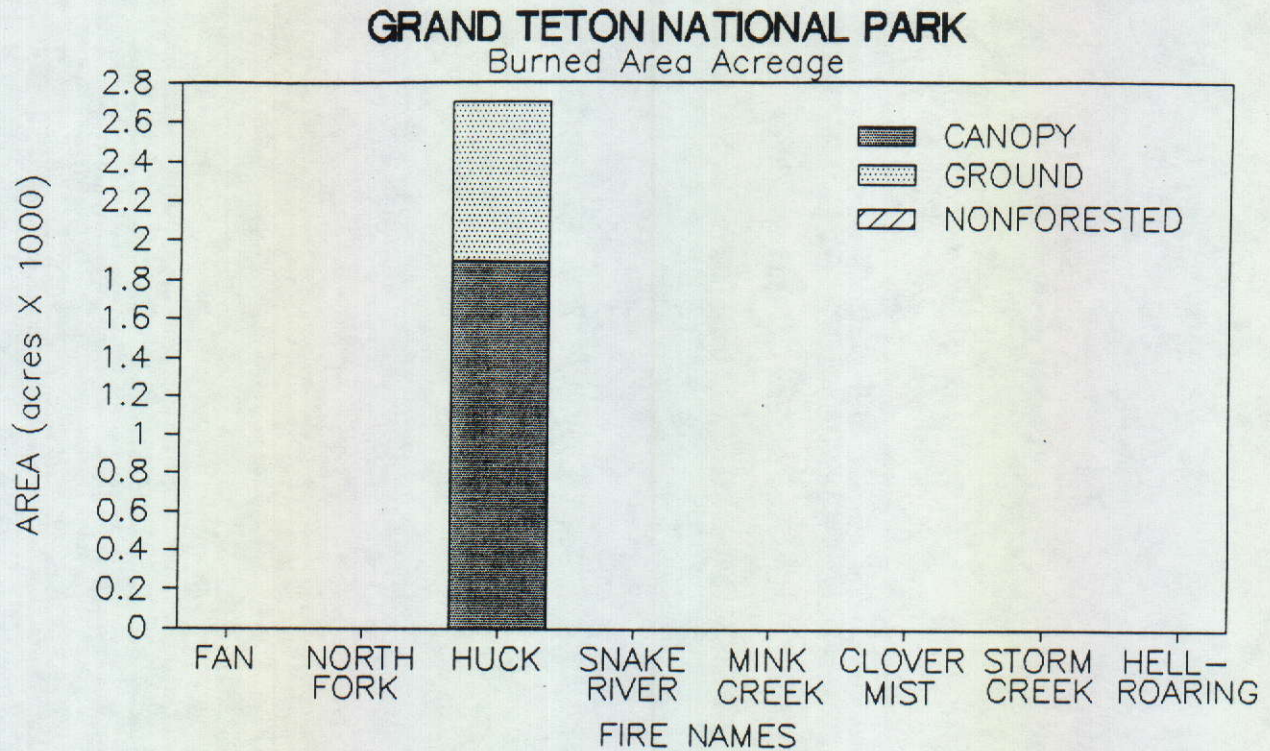


Figure 6. Burned Area Acreage in Grand Teton National Park.

* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 17. BURNED AREA ACREAGES FOR HUCK FIRE WITHIN GTNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	1900.0	70.4	70.4
Surface	800.0	29.6	29.6
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	0.0	0.0	0.0
		100.0	100.0
Total in Burned Area	2700.0		
Total Perimeter Area	2700.0		
% Burned within fire perimeter			100.0

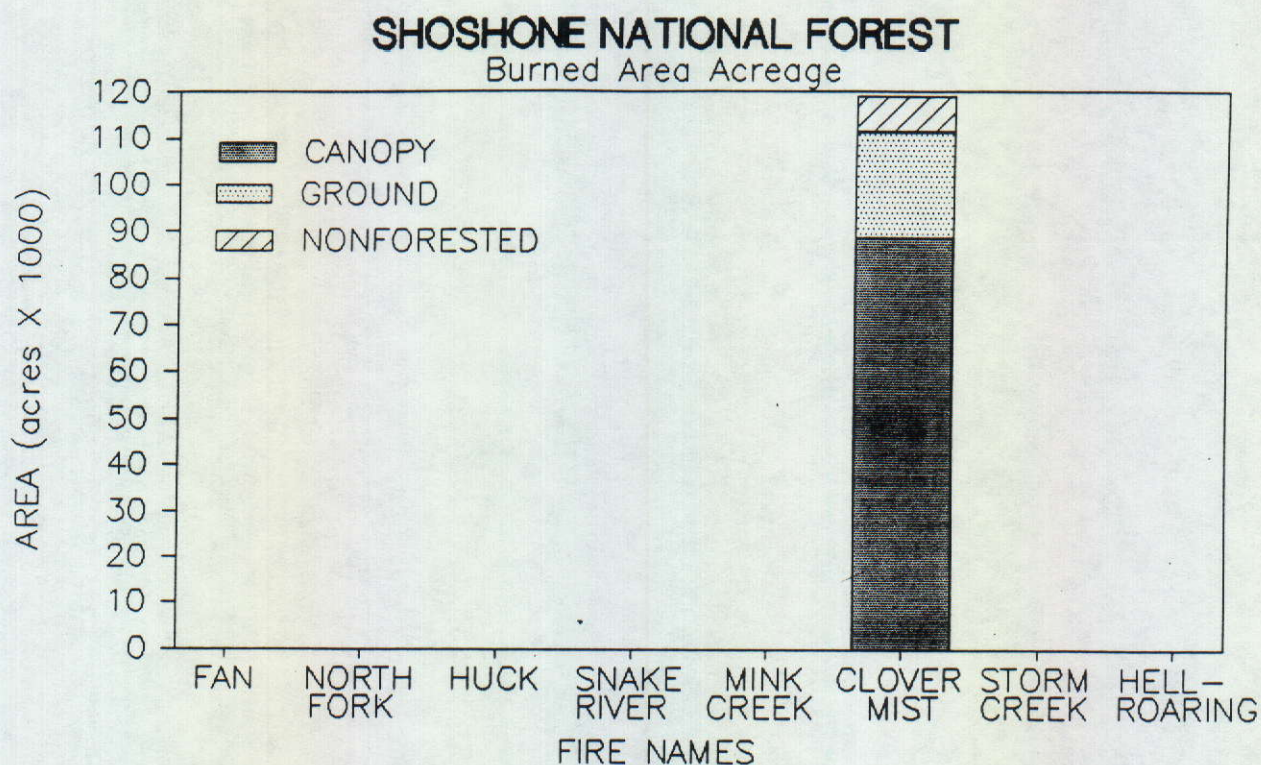


Figure 7. Burned Area Acreage in Shoshone National Forest.

* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 18. BURNED AREA ACREAGES FOR CLOVER MIST FIRE WITHIN SNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	89000.0	74.9	55.7
Surface	22300.0	18.8	14.0
Meadow	3000.0	2.5	1.9
Sage/Grassland	4500.0	3.8	2.8
Unburned	40900.0		25.6
		100.00	100.00
Total in Burned Area	118800.0		
Total Perimeter Area	157900.0		
% Burned within fire perimeter			74.4

TABLE 19. BURNED AREA ACREAGES FOR CLOVER MIST FIRE WITHIN SNF
(NORTHERN PART)

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	56700.0	71.5	49.6
Surface	16100.0	20.3	14.1
Meadow	1950.0	2.5	1.7
Sage/Grassland	4500.0	5.7	3.9
Unburned	34950.0		30.6
		100.00	100.00
Total in Burned Area	79250.0		
Total Perimeter Area	114200.0		
% Burned within fire perimeter			69.4

TABLE 20. BURNED AREA ACREAGES FOR CLOVER MIST FIRE WITHIN SNF
(SOUTHERN PART)

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	32300.0	81.7	72.3
Surface	6200.0	15.7	13.9
Meadow	1050.0	2.7	2.3
Sage/Grassland	0.0	0.0	0.0
Unburned	5150.0		11.5
		100.00	100.00
Total in Burned Area	39550.0		
Total Perimeter Area	44700.0		
% Burned within fire perimeter			88.5

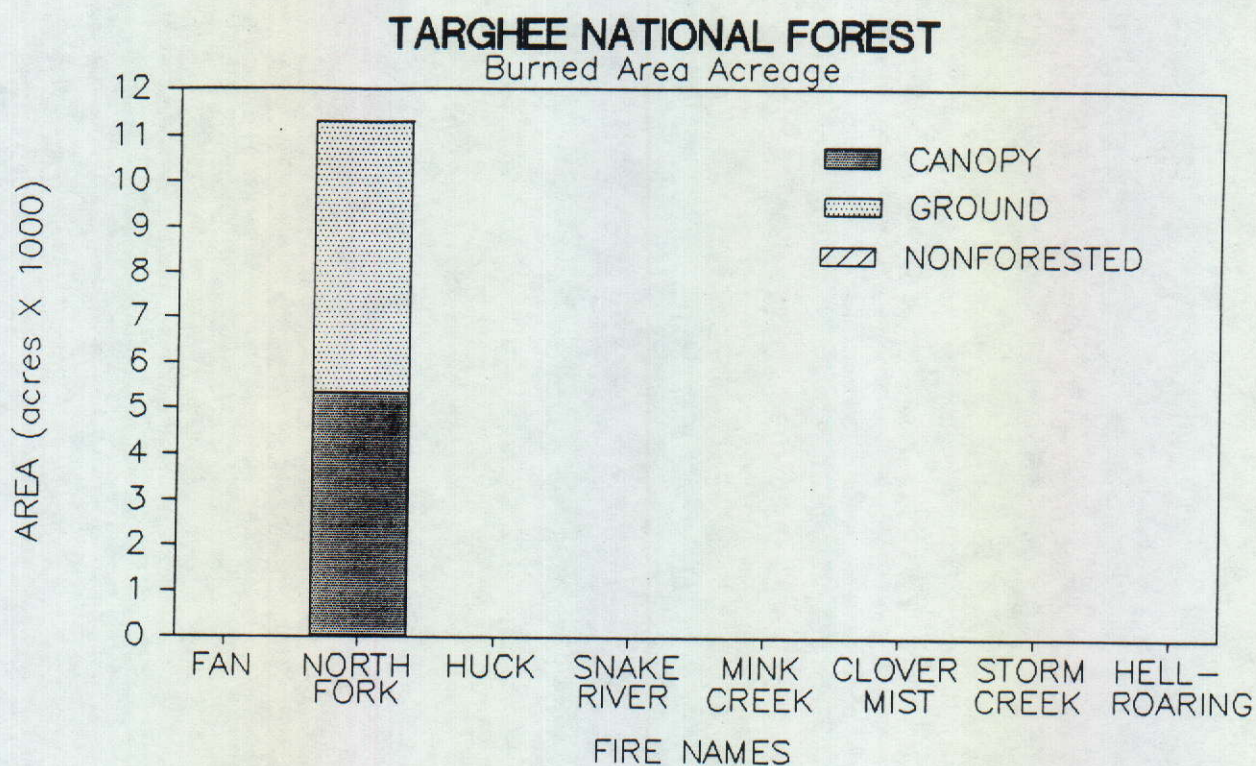


Figure 8. Burned Area Acreage in Targhee National Forest.

* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 21. BURNED AREA ACREAGES FOR NORTH FORK FIRE WITHIN TNF

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	5350.0	47.3	47.3
Surface	5950.0	52.7	52.7
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	0.0	0.0	0.0
		100.00	100.00
Total in Burned Area	11300.0		
Total Perimeter Area	11300.0		
% Burned within fire perimeter			100.0

YELLOWSTONE NATIONAL PARK

Burned Area Acreage

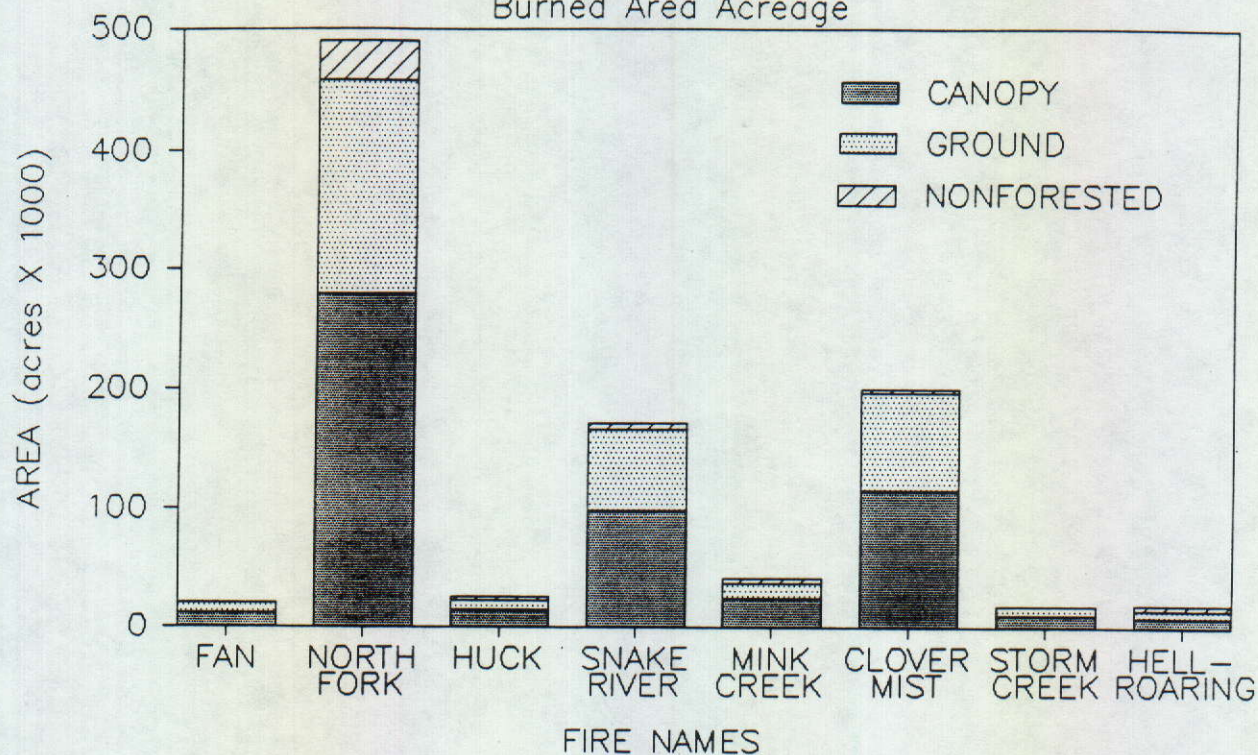


Figure 9. Burned Area Acreage in Yellowstone National Park.

* These figures are preliminary and should be considered maximums. Future mapping will further refine these estimates.

TABLE 22. BURNED AREA ACREAGES FOR CLOVER MIST FIRE WITHIN YNP

Burn Type	Burned Area (acres)	% of Burned Area	% of Perimeter Area
Canopy	115150.0	57.4	52.4
Surface	81950.0	40.8	37.3
Meadow	2850.0	1.4	1.3
Sage/Grassland	825.0	0.4	0.4
Unburned	19125.0		8.7
		100.00	100.00
Total in Burned Area	200775.0		
Total Perimeter Area	219900.0		
% Burned within fire perimeter			91.3

TABLE 23. BURNED AREA ACREAGES WITHIN FAN FIRE PERIMETER IN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	11550.0	55.3	54.2
Surface	9350.0	44.7	43.9
Meadow	0.0	0.0	0.0
Sage/Grassland	0.0	0.0	0.0
Unburned	400.0		1.9
		100.00	100.00
Total in Burned Area	20900.0		
Total Perimeter Area	21300.0		
% Burned within fire perimeter			98.1

TABLE 24. BURNED AREA ACREAGES FOR HELLROARING FIRE WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	8200.0	41.8	35.5
Surface	6700.0	34.1	29.0
Meadow	1050.0	5.4	4.5
Sage/Grassland	3675.0	18.7	15.9
Unburned	3475.0		15.0
		100.00	100.00
Total in Burned Area	19625.0		
Total Perimeter Area	23100.0		
% Burned within fire perimeter			85.0

TABLE 25. BURNED AREA ACREAGES FOR HUCK FIRE WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	14250.0	55.6	47.5
Surface	7850.0	30.6	26.2
Meadow	3525.0	13.8	11.8
Sage/Grassland	0.0	0.0	0.0
Unburned	4375.0		14.6
		100.00	100.00
Total in Burned Area	25625.0		
Total Perimeter Area	30000.0		
% Burned within fire perimeter			85.4

TABLE 26. BURNED AREA ACREAGES FOR MINK CREEK FIRE WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	24250.0	58.4	52.2
Surface	13250.0	31.9	28.5
Meadow	4050.0	9.7	8.7
Sage/Grassland	0.0	0.0	0.0
Unburned	4950.0		10.6
		100.00	100.00
Total in Burned Area	41550.0		
Total Perimeter Area	46500.0		
% Burned within fire perimeter			89.4

TABLE 27. BURNED AREA ACREAGES FOR NORTH FORK FIRE WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	280100.0	57.1	50.3
Surface	178400.0	36.4	32.1
Meadow	7200.0	1.5	1.3
Sage/Grassland	24525.0	5.0	4.4
Unburned	66175.0		11.9
		100.00	100.00
Total in Burned Area	490225.0		
Total Perimeter Area	556400.0		
% Burned within fire perimeter			88.1

TABLE 28. BURNED AREA ACREAGES FOR SNAKE RIVER COMPLEX WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	98150.0	57.1	51.8
Surface	67950.0	39.5	35.8
Meadow	5925.0	3.4	3.1
Sage/Grassland	0.0	0.0	0.0
Unburned	17575.0		9.3
		100.00	100.00
Total in Burned Area	172025.0		
Total Perimeter Area	189600.0		
% Burned within fire perimeter			90.7

TABLE 29. BURNED AREA ACREAGES FOR STORM CREEK FIRE WITHIN YNP

Burn Type Area	Burned Area (acres)	% of Burned Area	% of Perimeter
Canopy	10700.0	58.8	48.9
Surface	6900.0	37.9	31.5
Meadow	600.0	3.3	2.7
Sage/Grassland	0.0	0.0	0.0
Unburned	3700.0		16.9
		100.00	100.00
Total in Burned Area	18200.0		
Total Perimeter Area	21900.0		
% Burned within fire perimeter			83.1

PRELIMINARY SURVEY OF BURNED AREAS: YELLOWSTONE NATIONAL PARK AND ADJOINING NATIONAL FORESTS

GREATER YELLOWSTONE POST-FIRE RESOURCE ASSESSMENT COMMITTEE, BURNED AREA SURVEY TEAM

OCTOBER, 1988
(Burned areas as of Sept. 15, 1988)

COOPERATING AGENCIES

NATIONAL PARK SERVICE

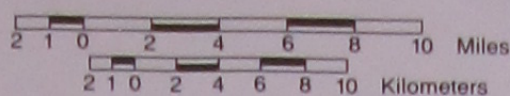
Yellowstone National Park
Redwood National Park

FOREST SERVICE

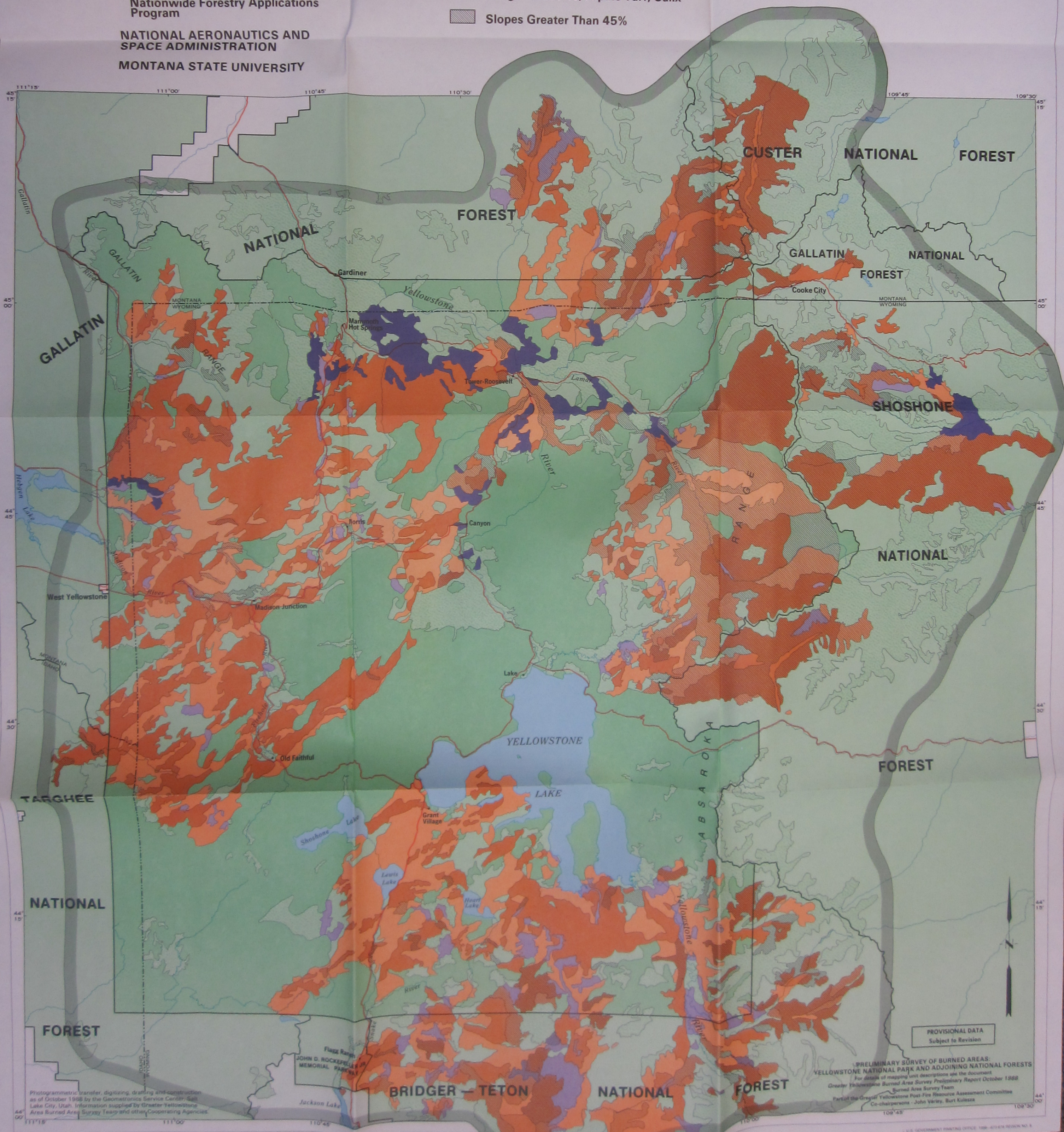
Northern Region
Pacific Northwest Region
Pacific Southwest Region
Rocky Mountain Region
Intermountain Region
Geometronics Service Center
Nationwide Forestry Applications Program

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MONTANA STATE UNIVERSITY



- Forested: Canopy Burn; Moderate Soil Heating
- Forested: Surface Burn/Canopy Burn Complex
- Forested: Surface Burn; Low Soil Heating
- Nonforested: Low to Moderate Soil Heating Sagebrush, Shrubland, Grassland
- Nonforested: Low Soil Heating Sedge Meadows, Alpine Turf, Salix
- Slopes Greater Than 45%
- Forested: Unburned Yellowstone National Park
- Forested: Unburned National Forest
- Forested: Unburned Grand Teton National Park
- Nonforested: Unburned



PROVISIONAL DATA
Subject to Revision

PRELIMINARY SURVEY OF BURNED AREAS:
YELLOWSTONE NATIONAL PARK AND ADJOINING NATIONAL FORESTS
For details of mapping unit designations see the document
Greater Yellowstone Burned Area Survey Preliminary Report October 1988
Burned Area Survey Team
Part of the Greater Yellowstone Post-Fire Resource Assessment Committee
Co-chairpersons - John Varley, Burt Kulasek

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