

memorandum

September 11, 1978

REPLY TO
ATTN OF:

Natural Resource Specialist, Division of Natural Resource Management, SWR

SUBJECT:

Trip Report - Bandelier - September 7, 1978

TO:

Chief, Division of Natural Resources Management, SWR

Key Persons Contacted: John Hunter, Superintendent; Kevin McKibben, Chief, I&RM; John Lissoway, Natural Resource Manager; Terri Foxx, Fire Researcher.

Fire Management

The upper Frijoles Watershed east of the Dome Road was inspected for burning conditions and fuels. Most ground fuels are the result of logging during the 1920's. Although there are many heavy concentrations the fuel is very patchy. This area, like the Cerro Grande area, is subject to very infrequent fires. Burning conditions rarely are intense enough to carry fire due to the green grass and high living fuel moisture levels. Small mosaics on the steep slopes indicate that fires were not able to sustain themselves. The mesa tops and ridges probably burned more frequently but still did not support large-scale fires. This high elevation area would best be managed by prescribed burning mosaics over a period of four to eight years then reverting to a natural fire operation, providing a USFS-NPS boundary buffer strip or a mutual natural fire cooperative agreement could be effected.

I would like to see a small (1-2 hectare) research burn plot placed in the mixed-conifer type to include the edge of a mesa top and a portion of a slope. A similar burn should be conducted in the upper Capulin Canyon area. The purpose of these burns would be to determine the effect of a late fall - early winter fire on the mixed-conifers primary and all other vegetation in general. Conifers are especially susceptible to fire damage after frost when sap flow has been reduced. Although late fall is not the time of year natural fire would have occurred it probably the only time of year the area could feasibly be treated to reduce fuel loads to quasi-natural levels.

Herbicide Damage

The dead and dying vegetation around the Tyuonyi and Rainbow House ruins was examined for possible cause. It is quite evident that the use of herbicides on the ruins is the source of the problem. Surface flow and/or ground leaching has evidently transported the herbicide away from the ruins. Several ponderosa pine have been killed and others are fading near Rainbow House. At Tyuonyi box-elder seems to be most affected at this time. Soil samples were taken near the damaged trees at both locations to determine if herbicides are present and in what quantities. If, indeed, the problem proves to be the herbicide then a modification of application practices will be in order.



Spot spraying of emerging vegetation in the spring within the ruins followed by a second application as necessary should adequately do the job. The practice of spraying trailsides outside the ruins should be halted immediately. If any vegetation control is required along trails it should be by cutting and not spraying.

A water sample was taken from Frijoles Creek to determine if any herbicide is present. Samples were taken as follows:

Soil

Tyuonyi: Two samples combined; cross section taken from surface of mineral soil to depth of 15cm; Sample #1 20 meters south of ruin, 40 m. from creek, bottom of draw, dead trees above and below; Sample #2 next draw to west, 5 m. from ruin, 20m. NW of first sample.

Rainbow House: Two samples combined; sample #1 4 m. from SE corner of ruin in bottom of draw; sample #2 4 m. below south side of ruin at base of dead ponderosa pine.

Water

Frijoles Creek: Two samples combined; sample #1 immediately below Tyuonyi fall line; sample #2 15 m. downstream.

Sgd. Gary R. Gregory

Gary R. Gregory

cc:
Superintendent, Bandelier

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ask
about
results