

September 27, 2005

**BURNED-AREA REPORT**

(Reference FSH 2509.13)

**PART I - TYPE OF REQUEST****A. Type of Report**

- ☐ 1. Funding request for estimated WFSU-SULT funds  
☒ 2. Accomplishment Report  
☐ 3. No Treatment Recommendation

**B. Type of Action**

- ☐ 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)  
☐ 2. Interim Report  
    ☐ Updating the initial funding request based on more accurate site data or design analysis  
    ☐ Status of accomplishments to date  
☒ 3. Final Report (Following completion of work)

**PART II - BURNED-AREA DESCRIPTION**

- A. Fire Name: Crag Fire  
B. Fire Number: CA-SQF-1461  
C. State: California  
D. County: Tulare County  
E. Region: 05  
F. Forest: Sequoia  
G. District: Cannell Meadow  
H. Date Fire Started: 06-16-2004  
I. Date Fire Contained: 06-30-2004  
J. Suppression Cost: \$652,000  
K. Fire Suppression Damages Repaired with Suppression Funds  
    1. Fireline waterbarred (miles): 0  
    2. Fireline seeded (miles): 0  
    3. Other (identify): 792 Cold Trail  
L. Watershed Number: 1803000201  
M. Total Acres Burned: 871  
    NFS Acres (**871**)      Other Federal ( )  
State ( )      Private ( )  
N. Vegetation Types: Jeffery Pine Chaparral Montaine  
O. Dominant Soils: Granitic (DG)  
P. Geologic Types: Granite  
Q. Miles of Stream Channels by Order or Class: Class I/II = 1 mile, Class III/IV = 1 mile  
R. Transportation System  
    Trails: 2 miles PCT adjacent to fire boundary miles, Roads: 0 miles

**PART III - WATERSHED CONDITION**

- A. Burn Severity (acres): 621 (low)    \_\_\_ (moderate)    250 (high)  
B. Water-Repellent Soil (acres): 250  
C. Soil Erosion Hazard Rating (acres): \_\_\_ (low)    \_\_\_ (moderate)    821 (high)  
D. Erosion Potential: 90-360 (low-high severity) tons/acre  
E. Sediment Potential: 43,000-172,000 (low-high severity) cubic yards / square mile

#### **PART IV - HYDROLOGIC DESIGN FACTORS**

A. Estimated Vegetative Recovery Period, (years):	<u>15</u>
B. Design Chance of Success, (percent):	<u>na</u>
C. Equivalent Design Recurrence Interval, (years):	<u>1.5-2 years</u>
D. Design Storm Duration, (hours):	<u>2hr</u>
E. Design Storm Magnitude, (inches):	<u>1 inch</u>
F. Design Flow, (cubic feet / second/ square mile):	<u>10 cfs</u>
G. Estimated Reduction in Infiltration, (percent):	<u>30%</u>
H. Adjusted Design Flow, (cfs per square mile):	<u>36 cfs</u>

#### **PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency:

The Watershed Emergency only exists if the fire area is directly affected by an average annual summer thunder storm this year and possibly next year. It is assumed that the following effects have the potential to occur under these conditions. This fire is located in the South Sierra Wilderness.

- ✓ This fire has the potential to affect endemic habitat for California golden trout which is a Forest Service sensitive species which has been petitioned for listing under the ESA.
- ✓ The fire also has the potential to affect the Pacific Crest Trail (PCT), a National Scenic Trail, which runs parallel to the base of the fire and is crossed by the only perennial channel in the fire area. The drainage for this channel comprises approximately 90 % of the high severity burned landscape.
- ✓ It is a concern that summer thunder storms have the potential to cause flooding and mudflows in the perennial stream and become intercepted by the PCT and flow into the Wild and Scenic South Fork of the Kern and or into Beck Meadow and result in gully erosion and or channel degradation in an already recovering river.

B. Emergency Treatment Objectives:

At this time the only emergency treatment would be storm patrol to evaluate the possibility of affecting meadow stability, channel stability and the trail resource as a result of the increase in runoff rates following summer thunder storms this year and next. It is very important that drainage control along the affected reach of the PCT is functioning before and after rainstorms. Last year the forest experienced 8 average annual thunder storms. This estimate of time is based on the affect summer thunder storms have had on the recent McNally fire as landscape conditions in the Crag Fire are similar to those of the McNally.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:

Land na % Channel na % Roads na % Other 90 % (storm patrol)

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Channel			
Roads			
Other	90	95	

E. Cost of No-Action (Including Loss):\_ \$204,649

F. Cost of Selected Alternative (Including Loss):\_ \$49,381

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology (Terry Kaplan-Henry)	<input checked="" type="checkbox"/> Soils (Fletcher Linton)
<input type="checkbox"/> Geology	<input type="checkbox"/> Range
<input type="checkbox"/> Forestry	<input type="checkbox"/> Wildlife
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology
<input checked="" type="checkbox"/> Fisheries (Phil Strand)	<input type="checkbox"/> Research
<input type="checkbox"/> Fire Mgmt.	<input type="checkbox"/> Engineering
<input type="checkbox"/> Botany	<input type="checkbox"/> Archaeology
<input type="checkbox"/> Landscape Arch	<input type="checkbox"/> GIS

Team Leader:\_\_\_ Terry A. Kaplan-Henry

Email: [tkaplanhenry@fs.fed.us](mailto:tkaplanhenry@fs.fed.us) Phone: 559-784-1500 ex 1181 FAX: 559-781-4744

**H. Treatment Narrative:**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments: None at this time

Channel Treatments: None at this time

Roads and Trail Treatments: Trail treatment is comprised exclusively of storm patrol. Storm patrol would occur in response to summer thunderstorm events that affect the fire area. It is estimated from RAWS stations in this area that roughly 8 thunderstorms occurred in the summer of 2004. It is assumed that this summer's weather would be similar to last summer. Therefore it is expected 8 storm patrol reconnaissance would need to be funded. This action is recommended in order to maintain trail drainage function and reduce the potential for gully erosion to occur in Beck Meadow, stream capture of the drainage by the PCT trail, and detrimental affects to the Wild and Scenic South Fork Kern River endemic habitat for the California golden trout. Because this area is located in the South Sierra Wilderness, access is limited and would require stock or hiking to get to the affected portion of the PCT.

Accomplishment: Trail maintenance occurred on the Pacific Crest Trail in August 2004 in the area that could potentially be affected by resultant erosion of the Crag Fire (2004). Trail drainage structures (water bars and rolling dips) were either reconstructed or constructed on the Pacific Crest Trail to move water off of the trail and to prevent gully erosion. In September 2005, the Pacific Crest Trail was reassessed for storm damage. It was observed, that at that time, no future trail maintenance was required on the Pacific Crest Trail and the drainage structures constructed in 2004 held during the 2005 summer thunderstorm season.

Structures: None at this time.

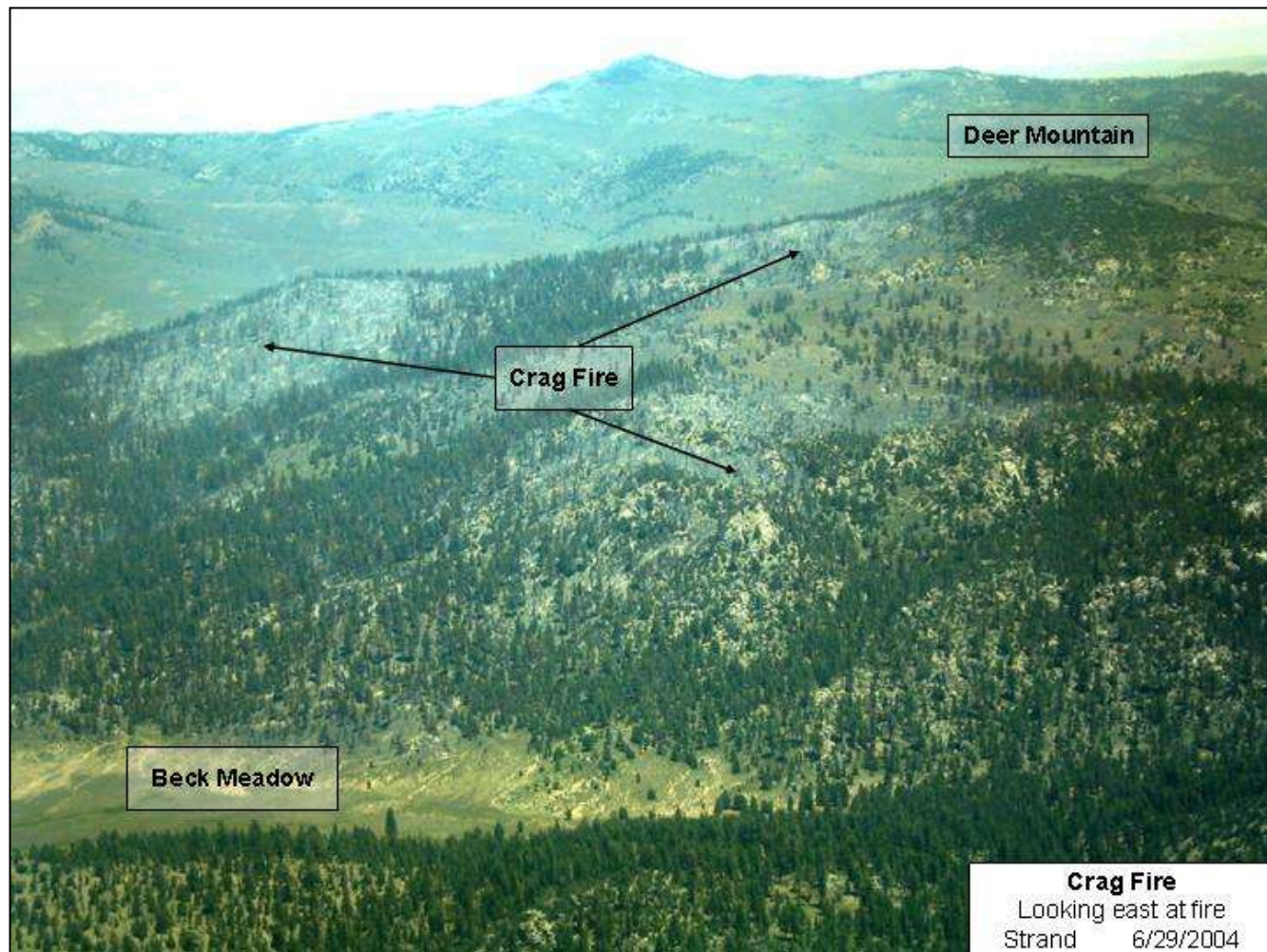
**I. Monitoring Narrative:**

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Storm Patrol documentation would be performed by the storm patrol crew to monitor the affects of storms and document actions taken to maintain drainage. This documentation would also provide the

information to determine if any resource damage is occurring from summer thunderstorms. Storm Patrol forms provided by Riverside Fire Lab. Please see attachment.

Accomplishment: Trail monitoring occurred in August 2004 after the Crag Fire (2004) was declared out. Consultation with the District's Range Officer, he and the permittee did not observe trail damage from summer thunderstorms during the summer of 2005. In 2005, there were several flyovers Beck Meadow and the Crag Fire (2004) while monitoring the Crag Fire (2005) fire use fire. Observers of the fly-overs did not see observable effects of the Crag Fire on the Pacific Crest Trail, South Fork Kern River, and Beck Meadow. In September 2005, the Pacific Crest Trail in Beck Meadow was checked on the ground and no storm damage was observed on the Pacific Crest Trail due to the Crag Fire (2004). This area (Beck Meadow and Pacific Crest Trail) was checked because it had the highest potential for damage from storms over the Crag Fire (2004).





**Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership**

Line Items	Units	Unit Cost	NFS Lands		Other		Other Lands			All Total
			# of Units	WFSU SULT \$			# of units	Fed \$	# of Units Non Fed \$	
<b>A. Land Treatments</b>										
				\$0				\$0	\$0	\$0
				\$0				\$0		
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
<i>Subtotal Land Treatments</i>				<i>\$0</i>				<i>\$0</i>	<i>\$0</i>	<i>\$0</i>
<b>B. Channel Treatments</b>										
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
<i>Subtotal Channel Treat.</i>				<i>\$0</i>				<i>\$0</i>	<i>\$0</i>	<i>\$0</i>
<b>C. Road and Trails</b>										
Storm patrol	ea	3500	8	\$28,000				\$0	\$0	\$28,000
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
<i>Subtotal Road &amp; Trails</i>				<i>\$28,000</i>				<i>\$0</i>	<i>\$0</i>	<i>\$28,000</i>
<b>D. Structures</b>										
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
				\$0				\$0	\$0	\$0
<i>Subtotal Structures</i>				<i>\$0</i>				<i>\$0</i>	<i>\$0</i>	<i>\$0</i>
<b>E. BAER Evaluation</b>										
Aquatics team (fish+ Hydrology)	day	650	6	\$3,900				\$0	\$0	\$3,900
soils	day	271	1	\$271				\$0	\$0	\$271
Perdiem	day	100	1	\$100						
<b>F. Monitoring</b>				\$0				\$0	\$0	\$0
<b>G. Totals</b>				<b>\$32,271</b>				<b>\$0</b>	<b>\$0</b>	<b>\$32,171</b>

**PART VII - APPROVALS**

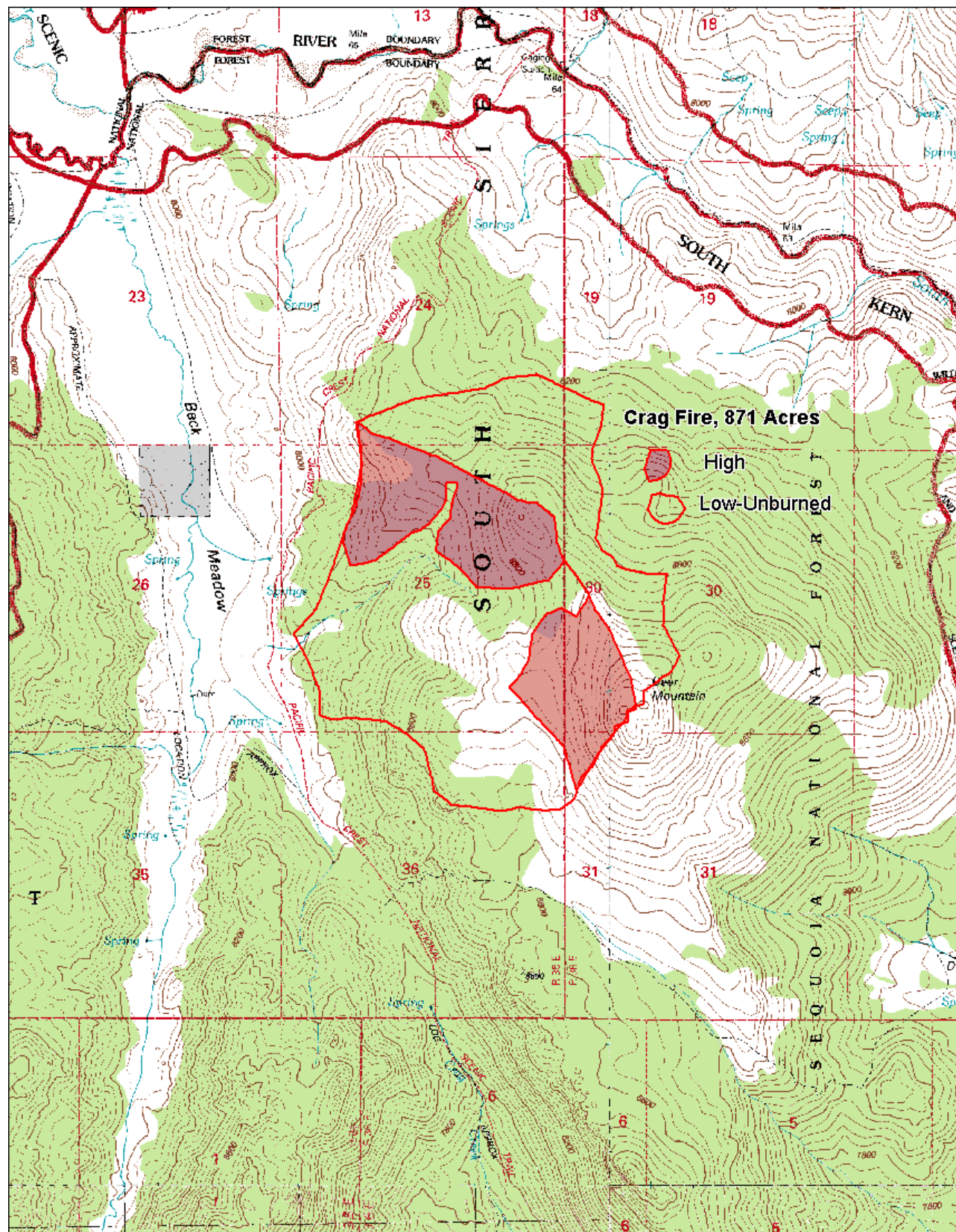
1. /s/ Arthur L. Gaffrey  
Forest Supervisor (signature)

July 1, 2004  
Date

2. \_\_\_\_\_  
Regional Forester (signature)

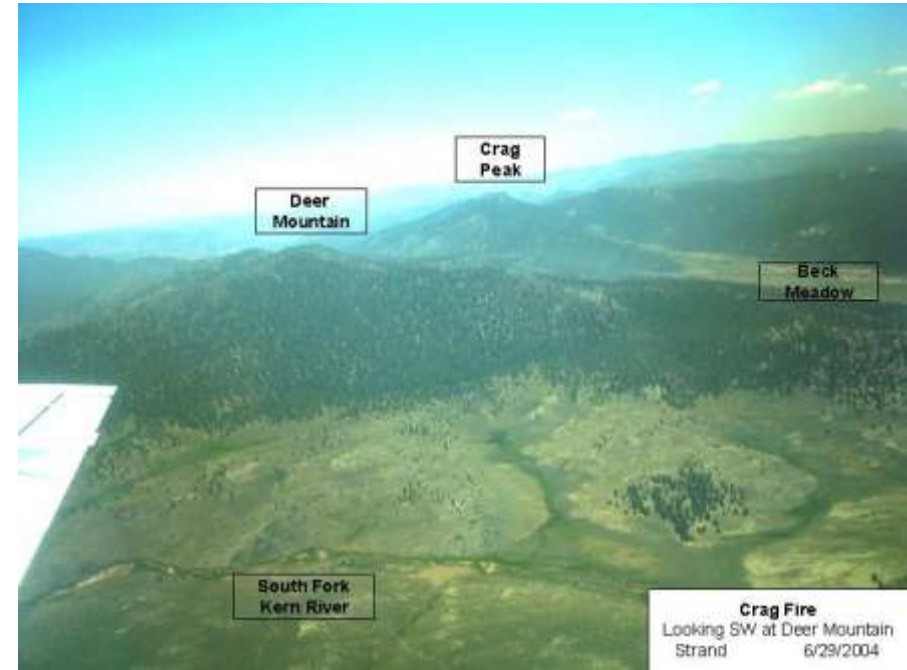
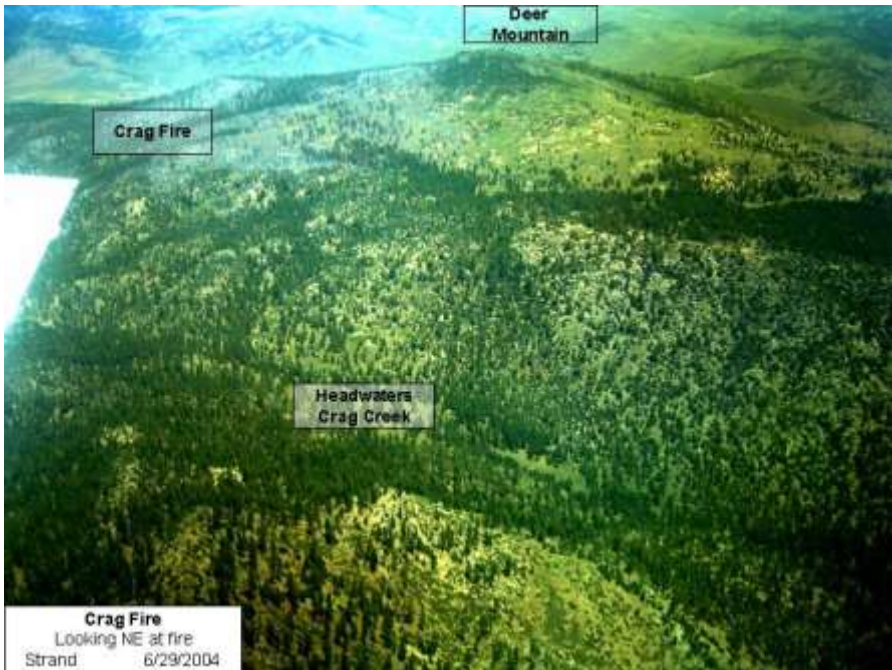
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Date

# Crag Fire Burn Severity Map

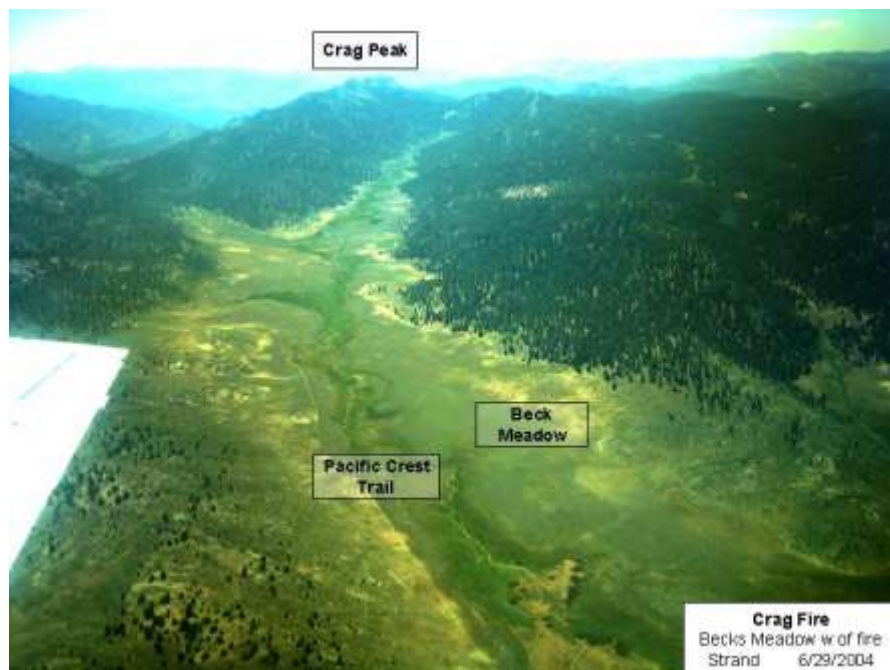




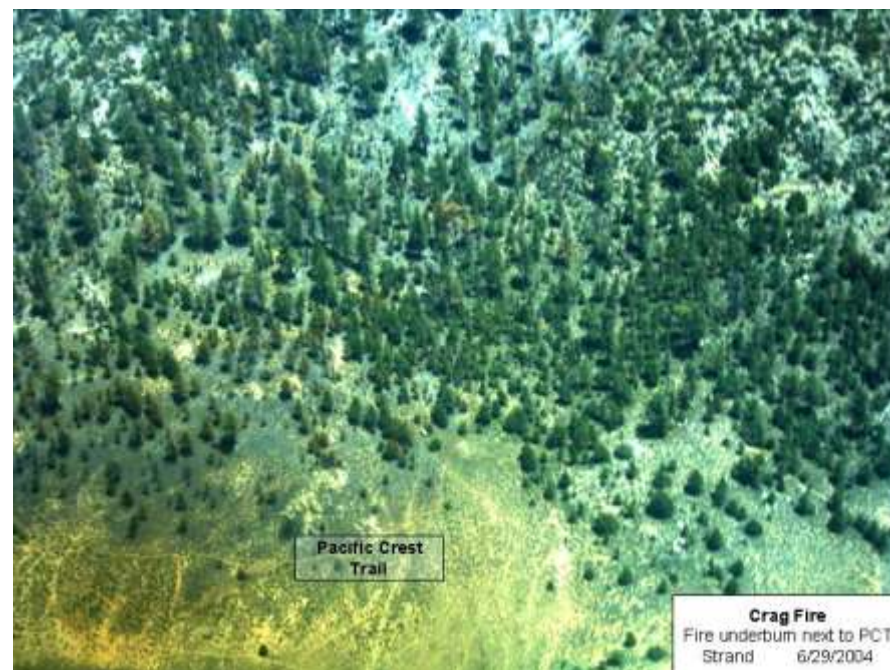
Attachments: Photos from Aquatics review.



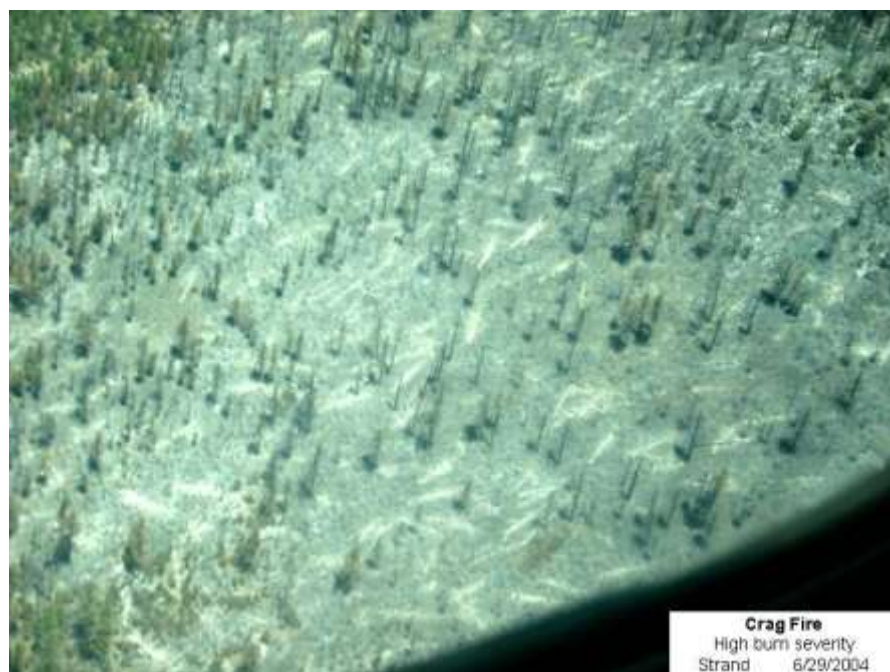




**Crag Fire**  
Beck Meadow w of fire  
Strand 6/29/2004



**Crag Fire**  
Fire underburn next to PCT  
Strand 6/29/2004



**Crag Fire**  
High burn severity  
Strand 6/29/2004



**Crag Fire**  
Looking east from fire  
Strand 6/29/2004