



United States
Department of
Agriculture

Forest
Service

Los Padres
National Forest

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File Code: 2520

Date: July 16, 2002

Route To:

Subject: Plaskett II Final BAER Report

To: Regional Forester

Enclosed is the final Plaskett II Burned Area Emergency Rehabilitation Report (Form FS-2500-8). This fire occurred during August of 2000 on the Monterey District, and the Los Padres received a letter authorizing expenditure of \$76,107 for analysis and watershed treatments.

An interim request dated March 23, 2001, stated that the total expenditure to date was \$59,664, and that \$15,000 more were needed for additional work. This additional work was accomplished with other funds, or dropped. Therefore, the final expenditure for the Plaskett II BAER effort is \$59,664.

In summary, the following projects have been completed:

- The Willet Creek gully water diversion.
- Willett's property flood damage prevention.
- Upper Plaskett Road overside drains.
- Kinder Mine creek crossing reinforcements.
- Hwy 1 culverts (completed by CALTRANS).
- Pacific Valley fire station flood prevention treatments.

If you have any questions, please contact Kevin Cooper, Plaskett II BAER Team Leader, at (805) 925-9538 x 216 (kccooper@fs.fed.us) or Linda Riddle, Forest BAER Coordinator, at (805) 961-5735 (lriddle@fs.fed.us).

/s/ Jeanine A. Derby
JEANINE A. DERBY
Forest Supervisor



cc: Gary Schmitt, MRD DR

USDA-FOREST SERVICE
Date of Report: 4/8/02

FS-2500-8 (7/00)

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: Plaskett II

B. Fire Number: LPF1000

C. State: CA

D. County: Monterey

E. Region: 5

F. Forest: Los Padres

G. District: Monterey

H. Date Fire Started: July 22, 2000

I. Date Fire Controlled: August 9, 2000

J. Suppression Cost: 6.0 million

K. Fire Suppression Damages Repaired with Suppression Funds

- 1. Fireline waterbarred (miles): 25
- 2. Fireline seeded (miles): 0
- 3. Other (identify): erosion protection on 0.5 acres that was cleared around a house

L. Watershed Number: HUC 1806000604

M. Total Acres Burned: 5830

NFS Acres(5461) Other Federal () State () Private (369)

N. Vegetation Types: Oak/chaparral, Douglas Fir, Grassland, Coulter Pine, Ponderosa Pine, Tan Oak-Madrone, Redwood, Coastal Sage Scrub.

O. Dominant Soils: Plaskett-Reliz complex, Sur-Plaskett complex, Millsholm-Gazos complex, Gamboa-Sur complex, Rock Outcrop-Xerorthent.

P. Geologic Types: Sedimentary and metasedimentary with some metamorphic.

Q. Miles of Stream Channels by Order or Class: Perennial = 4 miles, intermittent = 41 miles

R. Transportation System Trails: 1 miles Roads: 12 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 3829 (low) 545 (moderate) 1050 (high)

B. Water-Repellent Soil (acres): 583

C. Soil Erosion Hazard Rating (acres): 0 (low) 693 (moderate) 5137 (high)

D. Erosion Potential: 16 tons/acre

E. Sediment Potential: 3034 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 1 for grassland, 3-5 for chaparral

B. Design Chance of Success, (percent): 72.5%

C. Equivalent Design Recurrence Interval, (years): 10 yrs.

D. Design Storm Duration, (hours): 24

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E. Design Storm Magnitude, (inches): 8.0

F. Design Flow, (cubic feet / second/ square mile): 264

G. Estimated Reduction in Infiltration, (percent): 10%

H. Adjusted Design Flow, (cfs per square mile): 298

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Plaskett II Fire burned 5,830 acres between July 22, and August 1, 2000, and was started accidentally by a camper. The fire burned along the Santa Lucia Mountains, a north-south coastal range. Elevations within the burn area range from 300 to 3,275 feet. Steep drainage networks and sharp, narrow ridgelines dominate the landscape within the fire area. Erosion processes occurring within the project area include rill and sheet erosion, dry ravel, and mass wasting. In many areas, these processes have been accelerated by human impacts to the watershed, such as road construction, or previous fires. Pre-fire erosion hazard ratings for most of the burned area were high or very high.

Low intensity or unburned areas constituted **75%** of the fire area. A few areas of moderate and high intensity did occur, particularly in the very upper headwaters of the North Fork Willow Creek and the Pacific face drainages.

The 10-year, 24-hour storm was used to model runoff and sedimentation. For a period of 1 year following the fire, flows could increase by a factor of 1.0 to 1.8. Sedimentation rates could increase by a factor of 1.0 to 16.0. The greatest increases in peak flow and sediment yields occur in the small (less than 150 acres apiece) face drainages (the 0.5 to 1 mile long drainages that flow directly into the ocean at a steep angle from the hills above the coastline). The peak flow and sedimentation analysis are contained in the Hydrology Specialist Report. Increased flows, sediment bulking, and/or sediment deposition could create threats to property and aquatic threatened and endangered species as outlined below.

The team has determined that the following emergencies exist as a result of the expected watershed response to the Plaskett II fire.

Threat to Human Life:

- No threats to human life resulting from the predicted watershed response to the fire exist.

Threat to Property:

Willits

- Loss of control of water/flooding to Willet's homes & other outbuildings
- Trailers at PV Station at risk of flooding

Plaskett

- Residence walkways and retaining walls
- Plaskett Road
- Hwy 1 culverts

Willow

- Lower 1.5 miles of Kinder Mine Road

Threat to Soil Productivity:

A threat to soil loss exists in relatively small areas of the fire which experienced high burn intensities. Because these areas amount to only 18% of the entire fire area and vegetation types within these areas are fire adapted species (mostly chaparral) which are likely to revegetate quickly, it was determined that an emergency due to soil loss and productivity does not exist.

Threat to Water Quality:

A threat to water quality exists. This concern is primarily related to effects on aquatic threatened and endangered species and is outlined in the following section.

Threat to Threatened and Endangered Species:

Aquatic

Primary drainages of concern to aquatic species within the fire area are: North Fork Willow Creek and its tributaries, Plaskett Creek, and a tributary of Prewitt Creek (named Willett's Creek in this document). These streams are of concern to aquatic species because they have perennial flow (year-round) and support California south-central steelhead. The California South-Central Steelhead is listed as threatened (NMFS 1997). Water yields for two of the three fish bearing streams (Willett's and Plaskett) are projected to show a very small increase in peak stream flow, both for 2-year and 10-year events within the first year following the fire. However, sediments which could clog spawning gravels will increase:

- Drainages near the lower end of Kinder Mine Road were identified as areas which could wash out and contribute sediment to the North Fork of Willow Creek below.
- Sediment increases could reach nine times normal in the North Fork of Willow Creek due to increased erosion on the burned area.
- Sediment into Plaskett Creek could increased up to two times normal due to increased erosion on the burned area.
- A gully of unknown origin at the top of Home Ridge (north side of Willits Creek) is actively eroding and is a major source of sediment to Willett's Creek. The fire burned above the gully in a steep, grassy area. For the first year after the fire, the analysis team expects an increase in erosion through the gully. After one growing season, the grass cover will have grown back, and erosion rates in the gully should return to pre-fire conditions.

Terrestrial

Several species of noxious weeds occur around the perimeter of the fire and pose a threat to native species by invading burned areas. These noxious weeds are: pampas grass, yellow starthistle, giant reed, cape ivy, and french broom. The native seacliff buckwheat, which grows below 2500' along the face drainages, hosts the federally endangered Smith's Blue Butterfly. Invasion of noxious weeds could reduce habitat for the Smith's Blue Butterfly by out competing the butterfly's host plant, the seacliff buckwheat.

Threat to Significant Cultural Resources

The Los Padres Forest Archeologist determined that watershed response to the fire (flooding and soil erosion) will not cause a significant threat to cultural resources. The Forest Archaeologist has also determined that the implementation of proposed watershed treatments will not impact cultural resources.

B. Emergency Treatment Objectives:

To mitigate the effects of the Plaskett II Fire, thus reducing the threat to physical and biological resource values at source areas and downstream, with a variety of previously demonstrated effective treatments. To the maximum extent possible, protect riparian and aquatic TES species which are highly susceptible to sedimentation related impacts by reducing surface erosion associated with roads and gullies.

To provide information to the public concerning risk to property (culverts, roads, and structures) so that they may prepare for higher flows, and to warn residence of storm events that may produce flooding.

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

Land 95 % Channel NA % Roads 95 % Other 95 %

D. Probability of Treatment Success

Years after Treatment			
	1	3	5
Land	80	80	75
Channel	NA	NA	NA
Roads	80	85	90
Other	90	90	95

E. Cost of No-Action (Including Loss): \$265,000

F. Cost of Selected Alternative (Including Loss): \$40,020

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range	<input type="checkbox"/>
<input type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology	<input type="checkbox"/>
<input checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS	

Team Leader: Kevin Cooper
Email: kccooper@fs.fed.us
FAX: (805) 961- 5781

Phone: (805) 925-9538 x 216

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.)

PART VI – EMERGENCY REHABILITATION TREATMENTS AND SOURCES OF FUNDS BY LAND OWNERSHIP

The following areas have been identified for treatment based on field reconnaissance and hydrologic analysis of projected post-fire sediment and flow changes:

A. Land Treatments:

Willits Creek Gully Site:

Where: North ridge of Willits watershed, approximately 1 mile from the Pacific Coast Highway.

Why: Reduce water delivery to and add soil cover to an existing large gully, slowing gully development and protecting a downstream steelhead habitat from potential increased water and sediment delivery from the gully and burned area above the gully.

How: Helicopter 30 bales of rice straw to ridge above the gully and utilize a small hand crew to drop bales into the upper 1/3 of the gully.

Actual After speaking with two geologists and showing them photos and video footage of the slide, we determined that the large gully was far too steep and had too much energy for hay bales to be effective. We instead took 10 firefighters down the dozer line to the top of the gully and hand-built water bars to divert any water moving down the dozer line away from the gully and down the other side of the ridge. We also pulled back the berms on the dozer line to spread native seed on the line, and scattered limbs and branches out on the dozer line to augment the dozer rehab work that had previously been done after the fire. Furthermore, we seeded the dozer line and the very top end of the gully with native seed we had hauled down to the site. This work will help ensure that excess water from the doze line will not enter the gully. Actually diverting the water from the slope above the gully may alter the hydrology of the soils, according to the geologist, and increase the risk of further sliding. Soils in the area are very prone to sliding.

North Fork Willow Creek:

Where: Private residence at the lower end of the Kinder Mine Road (#23S14).

Why: To reduce on site soil erosion and protect a downstream steelhead habitat from potential increased sediment delivery.

How: Dig waterbars at the base of a dozer clearing next to the house to stabilize and protect the disturbed area.

Note: The residence owner has been contacted and will assume responsibility for the cost and implementation of the project.

No land treatments were prescribed to reduce sediment into steelhead streams from soil erosion enhancement in the high intensity burned areas in Upper North Fork of Willow Creek. The analysis team did not feel that seeding would be more effective than natural regeneration in this ecosystem, and very little of the high intensity burn areas fit the seeding criteria for the Los Padres National Forest (see appendix A).

B. Channel Treatments: NONE

C. Roads and Trail Treatments:

Upper Plaskett Road Drainage Improvements

Where: One half mile stretch of road downslope from Drop Point 1 (DP1) on Plaskett Ridge Road (23S02).

Why: Improve road drainage to compensate for excess flows; prevent gully erosion beside the road.

How: Install three additional overside drains and energy dissipators. USFS personell from Pacific Valley fire station will monitor these drains to ensure they remain effective during the first winter, but not later than the first year since the area is a native grassland, and grass cover should be re-established during after the first year.

Actual: These three drains were installed as planned. Two adjacent drains were combined into one large drain.

Highway 1 Culverts

Where: Two 3'diameter culverts between Plaskett Creek and Prewitt Creek.

Why: To prevent debris from clogging culverts under Hwy 1, reducing the risk of flooding above culverts and culvert failure.

How: Caltrans employee will be responsible for monitoring culverts and removing debris, and for installing risers to keep debris from clogging the culverts.

North Fork Willow Creek

Where: Kinder Mine Road, approximately 2 mi. from intersection with South Coast Ridge Rd (20S05.4).

Why: To reduce risk of sediments from Kinder Mine Road entering North Fork Willow Creek.

How: Remove fill from crossings, place 20 drivable dips at drainages, allowing for sediment stabilization and flow, and armor the crossings and outlets with Geoweb and gravel.

Actual: This project was completed as planned.

D. Structures

Willits house and outbuildings

Where: Private residence in Willits watershed.

Why: To protect a home and outbuildings near creek

How:

- Improve existing rock work along channel bank to prevent scour and associated threats to structures.
- Remove bridges in first year following fire to prevent debris from accumulating behind them.
- Provide resident access to an existing early warning system for floods.
- Remove hazardous materials from flood prone areas.
- Remove existing debris from culvert and upstream from the residence and monitor throughout first year.

Note: Private resident has been notified and will be responsible for this work.

Actual: As of 11/27/00 the resident has informed us that he has completed this work.

Plaskett residence

Where: One mile up the Plaskett Drainage from the Highway at the residence adjacent to the creek.

Why: To repair possible damage to the walkway footings and retaining walls before these structures fail and become a safety hazard.

How: Monitor footings & retaining walls.

Note: Private resident has been notified and will be responsible for this work.

Pacific Valley Station

Where: Trailers and women's barracks at USFS Pacific Valley Ranger Station.

Why: To protect trailers from flooding.

How:

- Plant willows and place sandbags along creek bank near top trailer.
- Forest Service employee will be responsible for monitoring culverts near women's barracks and removing debris.

Actual: This project has been completed as planned, with additional sandbagging around the women's barracks, and clearing of the culverts near the women's barracks.

Total BAER Funding Requested \$40,020

H. 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.)

The gully control work on the north slope of Willett's Creek will be monitored to determine the effectiveness of the straw bale work. The district resource officer will visit the site three times for a total cost of 750 dollars. This will benefit the district resource shop by providing information on a possible treatment for other gullies in the same area that may fall within a future burn perimeter. There is no back up plan for two reasons: first, the grassland around the gully will re-establish itself by the time it can be determined if the treatment works, and secondly, because all other option discussed by the analysis team were either too dangerous for workers, or exorbitantly expensive.

The sandbag and willow plantings at the Pacific Valley trailers will be monitored for effectiveness by a resident fire fighter who lives in one of the trailers. This employee will also monitor the culvert near the women's barracks to make sure it is clear of debris. The monitoring cost associated with this project is \$300.

The upper Plaskett Road will be monitored regularly before storms to clear debris from culverts and overside drains. Storm patrol will not be possible during storms because of slippery road conditions. This will help ensure that over flow from blocked drains do not cause gullying in the road. The total cost for this monitoring will be \$2050.

The Kinder Mine channel crossing work will be monitored for implementation and effectiveness. A district biologist and resource officer will examine the channel work before, during , and immediately after the work has been accomplished, and also after the first rainy season to determine if the channel crossings eroded and brought sediment into the North Fork of Willow Creek, a steelhead stream. The resident at Kinder Mine will monitor the channels and do minor repair to the hardened crossings during the winter to maintain their effectiveness. The monitoring cost associated with this project totals \$1750.

District funds will be used to monitor for the invasion of noxious weeds into the burned area, especially in the endangered Smith's Blue Butterfly habitat. BAER funds are not available since they cannot be expended in the emergency time period; the invasion of noxious weeds is not evident until July of the year following the fire.

Monitoring is presently underway for the completed projects. Monitoring for one year after the fire showed that the treatments appeared effective in slowing erosion. The Los Padres will continue to monitor these treatments in the future with other funds.

**PART VI – EMERGENCY REHABILITATION TREATMENTS AND SOURCES OF FUNDS BY
LAND OWNERSHIP- Table of Costs**

			NFS Lands		Actual		Other Lands			All	
		Unit	# of	WFSU	costs		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT \$			units	\$	Units	\$	\$
A. Land Treatments											
Willett's Cr. gully				\$4,150	\$2,000			\$0		\$0	\$4,150
				\$0				\$0			
				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
Subtotal Land Treatments				\$4,150	\$2,000			\$0		\$0	\$4,150
B. Channel Treatments											
None				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
Subtotal Channel Treat.				\$0				\$0		\$0	\$0
C. Road and Trails											
Upper Plaskett Rd.				\$6,740	\$4,318			\$0		\$0	\$6,740
Kinder Mine xings				\$18,950	\$9,137			\$0		\$0	\$18,950
Hwy 1 culverts		\$100,000		\$0				\$0	2	\$200,000	\$200,000
								\$0		\$0	\$0
Subtotal Road & Trails				\$25,690	\$13,455			\$0		\$200,000	\$225,690
D. Structures											
PV station trailer				\$2,980	\$500			\$0		\$0	\$2,980
				\$0				\$0		\$0	\$0
Subtotal Structures				\$2,980	\$500			\$0		\$0	\$2,980
E. BAER Evaluation											
				\$38,437	\$38,859			\$0		\$0	\$38,437
				\$0				\$0		\$0	\$0
G. Monitoring Cost				\$4,850	\$4,850			\$0		\$0	\$4,850
			1								
H. Totals				\$76,107	\$59,664			\$0		\$200,000	\$271,257

Predicted Treatment Cost:

Willits Creek:

Gully work

Initial survey of area and coordination of work crews

District Biologist -1 day @ \$250/day

\$ 250

District Resource Officer - 3 days @ \$250/day

\$ 750

Supplies (including straw, gloves, etc.)

\$ 500

Transport of straw by helicopter

\$ 1,500

Transport of 3 person crew (mileage and gas)

\$ 100

Installation (by crews)

1 crew @ \$500/day for 1day	\$ 500
District Biologist -1day @ \$250/day	\$ 250
District Resource Officer -1 day @ \$250/day	\$ 250
Monitoring by District Resource Officer - 3 days @ 250/day	\$ 750
Subtotal	\$4,850

Protection of Willett's House

Rock work
Channel clearing
Bridge removal
Hazmat removal

Labor for all of the above = 2 person crew for about 10 days. This work will be done by resident.

Protection of Pacific Valley Fire Station Trailers and Women's Barracks

District Biologist @ 250/day for 2 days	\$500
Resource officer @ 250/day for 2 days	\$500
Sand bags	\$ 30
Pacific Valley Fire crew @ 650/day for 3 days	\$1,950
Pacific Valley crew member @ 150 day for 2 days to monitor	\$300
Subtotal	\$3,280

North Fork Willow Creek:

Kinder Mine Road

Initial survey of area and coordination of work crews	
District Road Engineer -10 days @ \$300/day	\$3,000
District Resource Officer - 3 days @ \$250/day	\$ 750
Supplies (Geoweb ** shovels, wheelbarrows, gloves, etc.)	\$6,000
Transport of materials and 3 person crew (mileage and gas)	\$ 300
Installation	
By equipment: 1 backhoe @ \$130/day for 10 days	\$1,300
By crew @ \$800/day for 12 days	\$9,600
Monitoring (Implementation and effectiveness)	
District Biologist @ \$300/day for 5 days	\$1,250
District Resource Officer @ \$250/day for 2 days	\$ 500
Subtotal	\$22,700

**Geoweb is a geotextile fabric suggested by the fisheries biologist and regional minerals coordinator. One company that produces it is Soil Stabilization Products (contact Sam Randolph) at 1-800-523-9992 or visit the web site at www.sspco.com. The cost estimates were based on one 181 sq. ft. panel at each crossing. Materials for each crossing include rope, (15) #4 rebar pins at 18", 1 geoweb panel, geotextile fabric under-lay, T clips for rebar.

Kinder Mine Residence

Crew of 2 for 2 days. This will be done by residents.

Plaskett Creek:

Plaskett Ridge Road

Initial survey of area and coordination of work	
District Road Engineer - 1 day @ \$300/day	\$ 300
District Resource Officer -1 day @ \$250/day	\$ 250
Supplies (Overside drains, energy dissipaters)	\$3,000
Transport of materials and road crew (mileage and gas)	\$ 300
Installation	
By equipment: 1 backhoe @ \$130/day for 3 days	\$ 390
By road crew @ \$500/day for 5 days	\$2,500
Monitoring (Implementation and effectiveness)	
District Road Engineer -1 day @ \$300/day	\$ 300
District Resource Officer -1 day @ \$250/day	\$ 250
Pacific Valley Fire personnel @150/day for 10 days	\$1,500
Subtotal	\$8,790

Plaskett Creek Residence

3 days time over first winter to monitor retaining walls and footings. This is paid for by residents.

Face Drainages:

Construction of risers, clearing culverts, and monitoring by Caltrans \$15,000 (Caltrans cost)

Reporting of treatment effectiveness (2001 & 2002) **\$ 400**

PART VII - APPROVALS

- | | |
|-------------------------------|------------------|
| <u>Jeanine A. Derby</u> | <u>7/16/2002</u> |
| Forest Supervisor (signature) | Date |
- | | |
|-----------------------------------|-------------------|
| <u>/s/ Bernie Weingardt (for)</u> | <u>08/09/2002</u> |
| Regional Forester (signature) | Date |