

Technical Specialist Report- BAER

Resource: San Jacinto District Trails

Fire Name: Mountain, July 2013

Author: Andrew Smith

Author Duty Station: San Bernardino National Forest

I. Resource Condition Assessment

A. Resource Setting

The Mountain fire began on July 15th, 2013 and burned a total of 26,500 acres on National Forest System (NFS), Bureau of Land Management, State Park and adjacent Tribal and Private Lands. The major plant communities within the fire are mixed chaparral, mixed evergreen forest, montane and sub alpine forest.

5 trails in the San Jacinto Wilderness were affected and three were outside Wilderness. The Pacific Crest National Scenic Trail (PCT) stretches through the San Jacinto Mountain Range for 50 miles and is within the Santa Rosa and San Jacinto Mountains National Monument. High value recreation experiences exist on all the trails that were affected. The Tahquitz Valley area including Tahquitz Meadow, Little Tahquitz Meadow, Skunk Cabbage meadow and Tahquitz Peak are considered to be the focal highlights within the Wilderness. These areas were minimally affected by this fire. The Forest Service system trails within the burn area are classified as Class 3, the designed use is for equestrian and managed use is for equestrian and hikers. Typically, these trails have native tread and widths are between 18"-48". The single rain event on July 20th showed damage and washouts along many miles of trails and inevitable weather events will degrade tread surfaces.

B. Findings of on the ground surveys

Values at risk: Moderate to high intensity burns on the tread surface were not so much the concern rather the impact on the surrounding vegetation, trees and rock features. Standing dead trees and rock fall pose a serious threat to people on the affected trails. The ground adjacent to the system trails that were burned are at risk in that new vegetation growth will be inhibited by the presence of humans. Introduction of non-native invasive species through human presence is also a concern in the burn areas. Additionally, rain and snow events will have negative effects in sustaining the tread and potentially loading sedimentation into stream channels and disturbing downstream water qualities. Organic materials that burned through retention devices could compromise their stability. The PCT is a National Scenic Trail that many "through hikers" travel from Mexico to Canada. Having to close or re-route this section of the trail may have negative effects on hikers experience and the economy of the surrounding communities.

Condition of values at risk:

The following trails that were affected from the burn are as follows.

Pacific Crest Trail (2000.32-35): On the San Jacinto District the southern boundary of the PCT starts at Highway 74 and heads north for 50 miles to Interstate 10. 15.3 miles of PCT is within the burn perimeter and 80% of the trail was burned from low intensity mosaic to high intensity consumption of vegetation and timber. The portion of the trail that burned is between the junction of Cedar Spring trail and Tahquitz Valley. The portion within Murray Canyon burned intensely and the 5 miles from Antsell Rock to Little Tahquitz Valley is impassable. Areas with steep cross-slopes north of Cedar Spring and behind Spitler Peak are also impassable. Affected miles: 11 A closure from Highway 74 to Tahquitz Valley is being proposed possibly with a re-route option. The probability of damage or loss is very likely and the magnitude consequences are major resulting in very high risk.

Cedar Springs trail (4E17): This trail starts at Morris Ranch road continues past the PCT and terminates at Cedar Spring camp. Light to moderate intensity burning is evident on the last 1 mile to Cedar Spring. The spring box and water system here were damaged and will need minor replacement. Affected miles: 1 The probability of damage or loss is likely and the magnitude of consequences are moderate resulting in high risk.

Fobes trail (4E02): 1.7 miles this trail starts at Fobes Ranch Road and terminates at the PCT. The entire length of this trail burned at a high intensity resulting in no ground vegetation and very few standing dead trees. Affected miles: 1.7. The probability of damage or loss is very likely and the magnitude of consequences are major resulting in very high risk.

Spitler Peak trail (3E22): 4.8 miles. This trail starts from Apple Canyon Road and terminates at the PCT. The entire length of this trail burned at a high intensity resulting in no ground vegetation and pockets of dead standing trees. Tread in the steeper sections have already shown signs of erosion and will continue to degrade with additional rain and snow events. Affected miles: 4.8. The probability of damage or loss is very likely and the magnitude of consequences are major resulting in very high risk.

South Ridge trail (3E08.4): This trail starts at highway 243 next to the entrance of the Keenwild Station. The first .5 miles of this trail burned with medium intensity. Numerous Redshank and Manzanita are charred or completely consumed. Affected miles: .5. There is the risk of sediment moving out onto highway 243. Coordination with Cal Trans will be required. The probability of damage is likely and the magnitude of consequences are moderate resulting in a high risk.

Caramba trail (3E04): This trail starts at Saddle Junction and terminates at Caramba Falls. The first 1.25 miles were not burned but beyond this the forest burned at a medium to high intensity resulting in numerous dead standing trees. Affected miles: 3.2. The probability of damage is very likely and the magnitude of consequences are major resulting in a very high risk.

Willow Creek trail (3E02): This trail originates at Saddle Junction and terminates at the State Park boundary. The burn started at the junction of the Skunk Cabbage trail and continued into the State Park for a total of 1.5 miles. This area burned at high intensity the closer you get to Willow Creek and many dead standing hazard trees exist through the length of the trail.

Affected Miles: 1.5. The probability of damage is very high and the magnitude of consequences are major resulting in a very high risk.

Cedar trail (3E16): This trail lies between Laws Junction and Willow Creek trail. The entire trail burned at moderate to high intensity with many standing dead trees along the way.

Affected miles: 1.5. The probability of damage is very high and the magnitude of consequences are major resulting in a very high risk.

II. Emergency Determination

I do not determine there to be an emergency situation for recreational opportunities on the trails that are currently open or ones that had low severity burning within the burn area. There are miles of open trails in the vicinity of Idyllwild and Pine Cove and some of the closed trails will be open in stages over the next months and years. There will be some form of closure/ re-route on the PCT due to the impassable condition it is in. However, there is a threat to human injury and life in a number of the burned areas due to hazard trees, rock falls and landslides. Trail stabilization projects need immediate implementation, no later than spring 2014.

III. Treatments to Mitigate the Emergency

- A. Treatment Type:
 - 1. Closure of trails that pose danger for humans
 - 2. Enforcing the closure
 - 3. Stabilization treatments

- B. Treatment Objective
 - 1. The objective of temporary trail closures by installing warning signs and Forest Service presence is to reduce threats to life/ safety of recreational hikers by warning that they are entering a burned area and warning against access into hazardous areas adjacent to the trails. These signs also serve to accelerate natural recovery by preventing travel off trails. Additional signs to provide warning of increased potential for falling rock and debris are also recommended to lower threats to human life/safety at specific locations along trails within the burned area. Patrols and volunteers will increase awareness about present dangers.
 - 2. Enforcement of the closure area with recreation technicians/Forest Protection Officers to keep public out of burned areas.

3. Stabilization and storm proofing treatments for retention (walls and switchbacks) need to be implemented as soon as possible and no later than spring 2014 to protect downstream water qualities, vegetation recovery and soil productivity. This will allow resource conditions to heal and regenerate, as well as allow a safe passage for hikers when the closure is lifted.

C. Treatment Description

1. Post closure signage on the PCT at Highway 74, Cedar Springs, Fobes and Spitler Peak trailheads. Post closure signage at the junction of the Little Tahquitz Valley trail and the PCT. Additional closure signage posted at Willow Creek trail at Saddle junction, Caramba trail junction with Skunk Cabbage Meadow trail and Skunk Cabbage trail.
2. See objective above.
3. See objective above.

D. Treatment Cost

[REDACTED]

[REDACTED]

[REDACTED]

***25.2 miles of trail were affected by this incident. Approximately 35 retention features are within the affected miles of trail. These costs would go towards storm proofing and rebuilding damaged stabilization structures (switchbacks, retention walls) to protect the downstream water qualities, vegetation recovery and soil productivity. [REDACTED].**

IV. Discussion/Summary/Recommendations

Guidance in FSM 2523.03 provides that any necessary emergency stabilization treatments "are to be consistent with wilderness management objectives". Specific Forest Service Policy regarding BAER activities in wilderness is contained in FSM 2323.43b: "Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of the wilderness resource or to protect life, property, and other resource values outside of wilderness. Normally use hand tools and equipment to install selected land and channel treatments" and in 2323.43a; "Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing."

When wilderness is involved in burned area emergency stabilization assessments, “no treatment” is always the preferred action. FS policy provides for two situations where further investigation may be warranted: 1) unnatural loss of the wilderness resource, or 2) to protect life, property or other resource values outside of wilderness.

My recommendations as the Wilderness and Trails Manager are:

Longer term closures (3+ years)

- Close the PCT at Highway 74 to Tahquitz Valley. Potential re-routes are few and far between because linkages would have to cross non-system trails, burn areas and dangerous points crossing Highway 74 and Highway 243. Closure length could be up to 3+ years.
- Closures at Cedar Spring trailhead, Fobes trailhead, Spitler Peak trailhead, Willow Creek trail at Saddle Junction, Caramba trail at Skunk Cabbage junction, Skunk Cabbage trail and the PCT at Little Tahquitz junction.
- Treatments (see III. Treatments to Mitigate the Emergency).

V. References

2003 BAER Guidance Paper, Treatments in Wilderness.

Forest Service Manual, FSM2523.03