BARON RANCH TRAIL & RANCH ROAD SURVEY
Impacts Alisal Fire & Debris Flows
Ray Ford • February 1, 2022

Field Surveys conducted this winter Alisal Fire indicate that ranch roads in the upper canyon, seriously impacted by the loss of vegetation and subsequent winter rainstorms, will require extensive restoration for the upper trails to reopen.

OVERVIEW

While there was significant damage to the Baron Ridge Trail in a few locations, due to its location along a prominent north-south ridgeline, the overall impacts were minimal. Impacts to the upper loop trail were relatively minor as well. In both cases the trails should be able to be restored for public use with minimal cost.

Initial reviews indicate use of a small four-person crew along with tractor support should be able to complete the repairs in from 10-14 days. Currently however, the trail is inaccessible until road conditions improve.

Due grading practices designed to inslope the roadways to the inside edge of the ranch roads has caused two major issues:

1. Graded material has built up on the outside of the roadways creating berms that prevent water from sheeting off the roads.
2. Insloping of the roadway has caused all water coming off the hillsides to flow along their inside edges, often for hundreds of yards. With the loss of almost all vegetation during the Alisal Fire, the impact of large amounts of water flowing along the inside edge of the roadways has been enormous.

The result is that the majority of the ranch roads have become seriously gullied and are vulnerable to additional erosion from any significant rainfall.

<u>This impact is especially significant on all of the roadways in the upper half of the watershed and extremely so on the steeper roads along both the east and west portions of the loop.</u>

Past practice has been to bulldoze loose rock and dirt into the gullies created by the insloping as needed on a yearly basis rather than to work towards a more permanent solution. Waste Management is no longer maintaining those roads. As a result it is now County Parks responsibility to maintain these roads for recreational access

AREAS SURVEYED

The following areas were surveyed in October 2021 immediately after the end of the Alisal Fire and then in early and later January 2022 to assess the impacts from the winter rains. These areas include:

1. Main corridor ranch road.
2. Upper Creek Crossing.
3. West ranch road leading up to the ridge trailhead.
4. East ranch road leading past the Chalet to the upper loop trail.

HIGHEST PRIORITY

Of these areas, impacts to the creek crossing may be of top most priority. Fire debris, including a number of large trees have blocked the crossing, have widened and incised the creek bottom, completely blocking the crossing. Major excavation will be required to reopen the crossing and stabilize it.

Joddi Leipner, Senior Engineering Environmental Planner for Resource Recovery and Waste Management has indicated that Parks should determine if permits will be required from the regulatory agencies (CDFW, ACOE, etc.) prior to any work in the creek is done.

Presently the crossing is completely impassable. As a result there is no access to the upper west side of the loop for repairs to the road or the ridge trail. T

This report recommends that County Parks conduct a site visit as soon as possible to determine if permitting will be required to reopen the crossing.

RANCH ROADS

As noted above, the ranch roads leading into the upper Arroyo Quemado watershed have been seriously damaged due to the loss of vegetation during the Alisal Fire and consequent winter storms.

As a result of the insloping all of the ranch roads in the upper part of the watershed are gullied for most of their entire lengths.

1. Water flows unchecked down for hundreds of yards along the roadways before exiting the roadways.
2. Due to the steep gradient of the roads — often exceeding 20% and in some cases 30-35% — deep gullies are formed, on average from 1-4 feet in depth.
3. Where the water does exit the roadways the larger volumes of water cause much more damage both at those locations, including bank failure and watershed damage.

4. Increasingly the roads are becoming more difficult to navigate as the gullies become wider and deeper, the side slope steeper and the usable roadway narrower and narrower.
5. Past practices of grading roadways at Baron Ranch with steep insloping to the inside make it extremely difficult to prevent these impacts.
6. Outside berms created by the grading also makes prevention of erosion and getting water off the roads difficult and in most cases impossible.

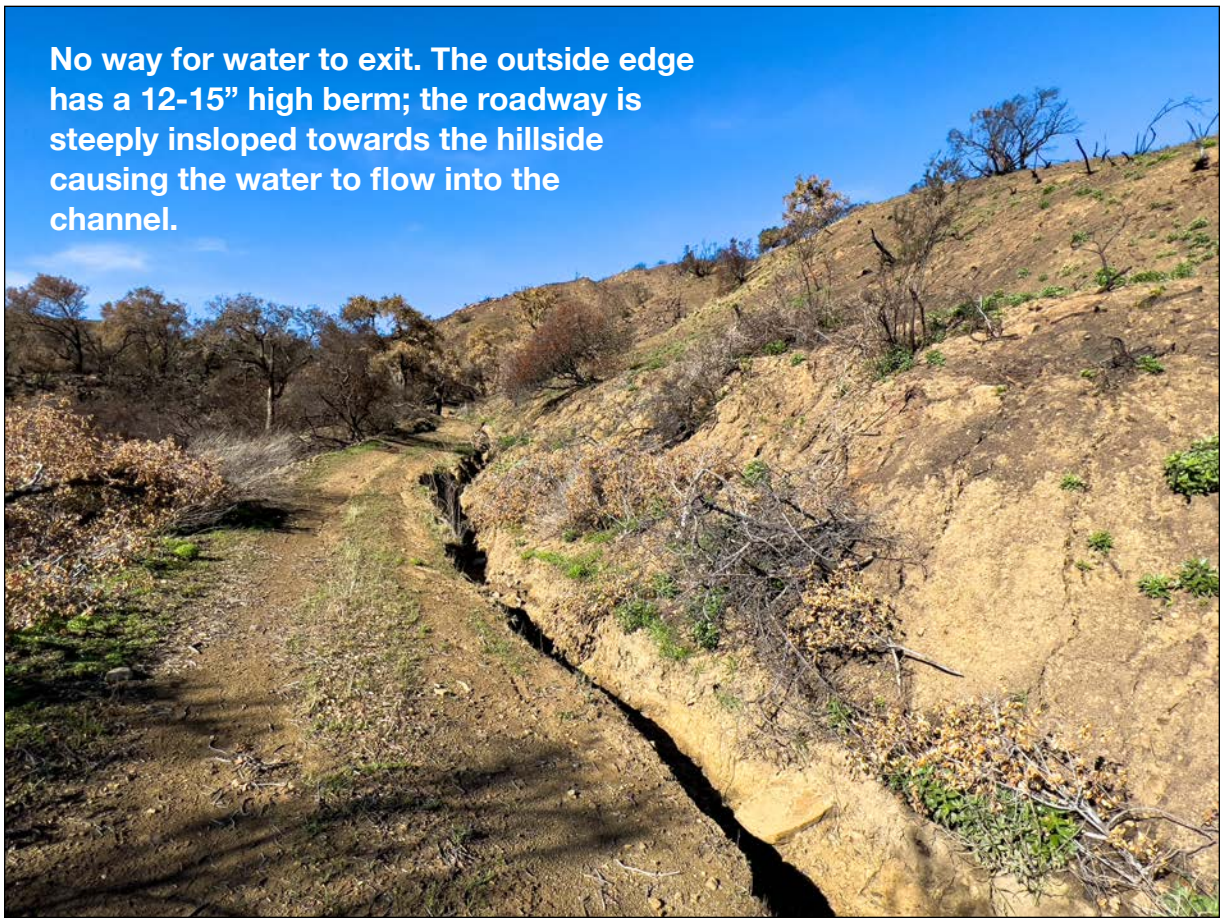
RESTORATION OF THE RANCH ROADS

The issues relating to the roadways is especially acute along the section leading up to the creek crossing because it parallels the boundary of the Covenant and Restoration areas designated for resource protection by Waste Management.

Long-term sustainable maintenance of the roadways will require a new vision for how the ranch roads in the upper watershed are managed.

Re-imaging the Ranch Roads

1. Rethinking the need for 12-14-foot wide roadways in the upper canyon.
2. Considering narrowing the width of the usable roadway to 6-7 feet and primary for UTV-type access. This allows a smaller footprint and roadway that can parallel the inside edge gullies rather than use of them for access.
3. Stabilizing the gullies through the use of nearby rock as a filler to create more of a “swale-like” channel that can handle water flow off the roadway without causing erosion.
4. Removing the berms along the outside edges or cut into them to provide a stable roadway paralleling the stabilized gully channels.
5. Recutting roadways to lessen the insloping from their current 15-20% grades to less than 5% and provide regular intervals for water to flow off.



No way for water to exit. The outside edge has a 12-15” high berm; the roadway is steeply insloped towards the hillside causing the water to flow into the channel.

OBSTACLES TO PROPOSED RESTORATION CONCEPTS

The primary obstacle to the restoration concepts proposed above is the conflict between the basic sustainable practices typically used for most trail-related work and the language contained in the proposed Covenant and Restoration Management Plans proposed by Waste Management.

Discussions with Joddi Leipner during a recent site visit indicate that Waste Management is opposed to restoration work on the roadways paralleling these areas including removal of any outside berm material or erosion control work that would sheet water off the road in new locations.

It appears the primary concern is the movement of horse manure into the creek areas habituated by red-legged frog populations.

While this may not impact restoration work on the east or west parts of the upper loop, restoration of the roadway in the main canyon would be seriously impacted.

In the photo shown above, the steeply unsloped roadway has caused storm flow to create a deep channel along the inside edge of the roadway. To the left side of the phot the 18" high berm makes it impossible for water to flow off the outside edge of the road. Water flows along this channel for more than 250 yards before it reaches an outlet to the nearby creek.

However, restrictions imposed by Waste Management may prohibit this type of restoration.

COVENANT WORDING

"Consistent with the terms and conditions of this Restrictive Covenant, the Restricted Property is and will remain in a Natural Condition as defined herein and is intended to be preserved in its natural, scenic, open condition and to maintain its ecological values (collectively, 'Conservation Values').

The purposes of this Restrictive Covenant are to (1) ensure the Restricted Property will be preserved in a Natural Condition, as defined herein, in perpetuity and (2) prevent any use of the Restricted Property that will impair or interfere with the Conservation Values of the Restricted Property (the 'Purpose'). Declarant intends that this Restrictive Covenant will confine the use of the Restricted Property to such activities that are consistent with this purpose, including without limitation, those involving the

preservation, restoration, and enhancement of native species and their habitats.

Prohibitions
Depositing, dumping or accumulating soil, trash, ashes, refuse, waste, bio-solids or any other material.

Planting, gardening, introducing or dispersing non-native or exotic plant or animal species.

Altering the surface or general topography of the Restricted Property, including but not limited to any alterations to habitat, building new roads or trails, flood control work, walls, drainage facilities, or paving or otherwise covering any portion of the Restricted Property.

Lower end of the gullied sections shown above 250 yards below where the flow first begins

Manipulating, or altering any natural watercourse, body of water or water circulation on the Restricted Property other than as described in the Mitigation Plan, and activities or uses detrimental to water quality, including but not limited to degradation or pollution of any surface or sub-surface waters.

No use shall be made of the Restricted Property, and no activity thereon shall be permitted, that may adversely affect the Conservation Values of the Restricted Property or otherwise interfere with the Purposes of this Restrictive Covenant.

The Conservation Easement area which borders the northern portion of the trail has similar prohibitions. The main issues being that no modifications are allowed within the conserved areas and activities outside of the conserved areas cannot result in

degradation of the conservation values within the protected areas or modify environmental conditions within the protected areas."

Gullied section the Restoration Management Plan proposed language would not allow cutting into the outside berm to create a more sustainable trail.

A closer view of the area provides a better view of the potential for use of the techniques proposed above to deal wit the gullying such as removal of the outside berm to provide a 6-7' wide UTV-style road surface, stabilizing the gullied channels and addition of regularly spaced dips to shed water off the roadway.

SUMMARY

In summary, though the Baron Ranch trails received much less damage from the impacts of the Alisal Fire and winter rains, the interior roadways that provide access to the Upper Loop and Baron Ridge trails were seriously damaged from the flooding.

The damage was exacerbated by the road design used for their construction and used for maintenance thereafter. This consisted of the use of insloping to move water to the inside edge of the roadways and use of large dips to flow water off every 100 yards or so.

As a result, the roadways have become gullied and refilling them with loose rock and dirt every few years has not dealt with the basic issue caused by the insloping. Lack of proper maintenance of the roadways and specifically the lack maintenance of the dips has created a situation where water flows along the inside edge of the roads for hundreds of yards and in some cases as much as a quarter mile.

Because Waste Management has abandoned these roadways and left them to management of County Parks, there is an opportunity to re-vision how they might be restored through use of more sustainable practices as noted above.

However, doing so may conflict with management practices being adopted by Waste Management for their restoration needs.

It is strongly recommended that County Parks work with Waste Management to bring their management requirements in compliance with common, basic practices employed by most other agencies for sustainable roads, trails and watershed areas.

NEXT STEPS

The following issues have been settled before any work can be done to repair road and trail damage due to access issues, the potential need for permitting and potential conflicts with Waste Management policies.

1. Determine if permitting is required to opening up the creek crossing that is currently completely blocked by debris. Work on the roadway and upper trails cannot be undertaken until the creek is re-opened.
2. Conduct site visits with Waste Management to review conflicts between best management practices for restoring the roadway and their conservation management plans.
3. Begin assessing how to fund work needed to restore the roadways. This includes armoring all of the gullied areas and roadway restoration work.
4. Provide guidance for how County Parks would like to proceed with the development of a Road Restoration Plan for the upper canyon roads and trails.