

Barrett 4wd Trail Reconstruction Proposed Action

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El Dorado County, California*

Purpose and Need

The purpose of this project is to analyze and implement corrective actions for the Barrett Lake 4wd Trail to comply with the portion of Standard and Guideline #100 of the 2004 Sierra Nevada Forest Plan Amendment that pertains to meadows.

Standard and Guideline 100 reads,

“Maintain and restore the hydrologic connectivity of streams, meadows, wetlands and other special aquatic features identifying roads and trails that intercept, divert or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.”

This analysis is part of the implementation of the Record of Decision for the 2013 Eldorado National Forest Travel Management SEIS, which identified 18 routes where corrective actions were needed prior to adding the routes back onto the Eldorado National Forest Motor Vehicle Use Map (MVUM) as part of the system of routes designated for motor vehicle use. Three of the meadows on the Barrett Lake 4wd Trail were identified as needing corrective actions.

Barrett Lake 4wd Trail at Meadow 16E21-1

16E21-1 is a small meadow. The area of most concern is on the south side of the meadow where water flowing down a steep segment of the trail has eroded a plume of sediment into the meadow.

Barrett Lake 4wd Trail at Meadow 16E21-5

The Barrett Lake 4wd Trail crosses through the edge of this meadow for about 300'. There are ephemeral stream channels in the meadow on either side of the road. A log structure has been installed at one point where the trail crosses a stream channel. The structure was intended to protect the crossing, but appears to have resulted in some widening of the crossing. At another location water seeps from downhill of the trail into the lower stream. There is some evidence that the trail disrupts connectivity between the two streams and affects the water table in the meadow. One end of a culvert under the trail was visible but the other end buried. There is also a non-motorized trail that comes

from the Van Vleck area and meets the Barrett 4wd trail in the middle of Meadow 16E21-5. This trail is continued as 16E31 Red Peak Stock trail leaving Barrett 4wd Trail south of Meadow 16E21-5 and heads east into Desolation Wilderness.

Barrett Lake 4wd Trail at Meadow 16E21-6

This is the largest of the three meadows, with the Barrett 4wd trail crossing through the edge of the meadow for approximately 0.1 miles. Three ephemeral streams cross the trail within the meadow, and show some signs of stream channel degradation. There is a steep section of trail as it drops into the meadow on the south side where water running down the trail is being channeled into the meadow at the first stream crossing. This meadow has been used as a Cow Camp historically. The impacts from the trail occur in a small portion of the meadow on the eastern edge.

Proposed Action

The Eldorado National Forest proposes to reconstruct three segments of the Barrett Lake 4wd Trail (16E21) that have been found to be affecting the hydrologic connectivity of meadows 16E21-1, 16E21-5 and 16E21-6 respectively. If the proposed action is approved, the following activities would occur:

Barrett Lake 4wd Trail at Meadow 16E21-1:

The proposed action for Meadow 16E21-1 is to construct approximately two rolling dips in the trail to slow and divert water off of the trail before it reaches the meadow. Rolling dips will be constructed by hand or using heavy equipment already nearby for completion of the Barrett 4wd Bridge project. An existing sediment plume in the meadow would be removed using hand tools and wheelbarrows, and the area vegetated as needed by seed and/or plantin plugs of native meadow species. Excess material may be used in other trail repairs in the Proposed Action.

Barrett Lake 4wd Trail at Meadow 16E21-5:

A short reroute of the Barrett Lake 4wd Trail around the east side of Meadow 16E21-5 is proposed. The proposed reroute is approximately 0.27 miles in length. The new segment would be constructed to a similar standard as the rest of the trail (TC2- Four Wheel Drive Trail > 72", native material with limited grading.). Traveling from south to north, the reroute would depart the existing trail before it drops into the meadow. There would be some grading and tree removal required. The number of trees greater than 15" diameter breast height to be removed is estimated at 4 to 8. There is one crossing of an ephemeral stream. The channel at that point is primarily lined with rock, however some armoring of

the channel approach and departure (using linked permeable concrete pavers over drain rock or riprap.) The proposed reroute ties back into the existing trail just north of the meadow.

The original portion of the trail in the meadow would be restored by removing the existing log structure and culvert, scarifying the trail and reseeding it. Where necessary to restore natural drainage, the trail would be regraded to allow water to cross to the other side.

It is anticipated that the work will be constructed either by hand or by a small piece of heavy equipment to be brought in by helicopter. There would be some boulder removal along the reroute to be accomplished by rock drilling and insertion of expansion material to break the rocks. Materials will be brought in up the Barrett 4wd trail by volunteers using 4wd vehicles with trailers or by helicopter.

Relocation of the non-motorized trail leading into Meadow 16E21-5 farther south to align with the Red Peak Stock Trail on the other side of Barrett 4wd Trail will be handled as a separate future project.

Barrett Lake 4wd Trail at Meadow 16E21-6

A number of potential reroutes around Meadow 16E21-6 were explored, however each of them had other resource impacts that were of concern. Therefore, the proposed action for meadow 16E21 is to reconstruct several sections of the trail segment in place.

Rolling dips would be constructed on both the south and north trail approaches to the meadow to divert water now running down the trail. One rolling dip would be constructed on the north end, and several on the south end.

The three ephemeral stream channel crossings located on the trail within the meadow would be stabilized by regrading and hardening with materials such as linked permeable concrete pavers over drain rock, riprap or french drains constructed with geotextile and drain rock, enhancing the subsurface flow of water and promoting hydrologic connectivity of the meadow.

It is anticipated that the work will be completed either by hand or by a small piece of heavy equipment to be brought in by helicopter. Materials will be brought in up the Barrett 4wd trail by volunteers using 4wd vehicles with trailers or by helicopter.