Recommendations Report

Change-in-Use Requests

Humboldt Redwoods State Park

Prepared By:
Roads, Trails, and Resources Maintenance Program
North Coast Redwoods District

August 2016

Introduction

California State Parks has developed a process to facilitate and make consistent the review of change-in-use proposals resulting from individual requests or road and trail planning efforts across the state. As part of the Humboldt Redwoods State Park Road and Trail Management planning effort, the Change-in-Use process is used to evaluate and approve, or disapprove, additional uses on existing recreational roads and trails in the unit. This process is intended to identify those changes that best accommodate accessibility and recreational activities appropriate for each road or trail. Specifically, the process is intended to achieve the following objectives:

- Implement the DPR Trail Policy, including consideration of multi-use trails and trail connectivity;
- Ensure that projects can be implemented in a manner that avoids or mitigates significant impacts to the environment;
- Inform decision-making to include the diversity of resources and users of the unit;
- Ensure that changes are considered in a transparent process; and
- Implement a process for decision making with objective criteria for evaluating proposed changes to trails.

The Change-in-Use Evaluation (see appendix) can provide the planning team with critical information, including:

- Existing conditions
- Compatibility with the park's classification and other trail uses
- Effects to trail circulation patterns
- Effects to trail safety
- Effects to trail sustainability
- Effects or impacts to natural and cultural resources
- Effects or impacts to facility maintenance and operational costs

Recommendations based on survey results typically fall into one of the following categories:

- Conditional approval that includes design modifications or repairs
- Conditional approval that includes management options
- Approval
- Rejected
- Put on hold

When a change-in-use is conditionally approved, all proposed conditions need to be implemented, project specific environmental compliance completed, and funding secured prior to the change taking affect.

A process flow chart has been developed to assist staff in the evaluation process (see appendix). The principle steps are outlined below. The first four steps are completed as part of this RTMP process. The second half is conducted for each individual project.

1. Request for change-in-use submitted to district by a user group, Departmental staff, neighboring agency, or other stakeholder.
2. Inventory of Existing Conditions
3. Change-in-Use Evaluation completed
4. Recommendation by evaluation team
5. Input gathered from the public and stakeholders
6. Final Change-in-Use decision
7. Prepare project plans and designs
8. CEQA and permitting compliance
9. Construction cost estimate prepared
10. Work plan developed
11. Project Implementation

Evaluation Team

Between November 2014 and April 2015, a team met to evaluate each change-in-use request against the criteria established by the Department. The review team consisted of:

- Brian R. Merrill (Senior Engineering Geologist)
- Greg Collins (Associate State Archeologist)
- Michelle Forys (Environmental Scientist)
- Thomas Valterria (State Parks Peace Officer)
- Tarah Balden (Environmental Services Intern)

Recommendations Summary

The following trails were proposed for a Trail Change-in-Use evaluation under the Humboldt Redwoods Road and Trail Management Plan process. The requests originated from public input received during stakeholder meetings and surveys conducted during development of the park's Road and Trail Management Plan.

Add Bicycles

Addie Johnson Trail (2 segments)
Albee Creek Campground-Bull Creek North Connector (1 segment)
Albee Campground-Homestead Connector (1 segment)
Baxter Trail (3 segments)
Baxter Camp 2 Trail (1 segment)
Bull Creek Trail North (7 segments)
Bull Creek Trail South (5 segments)
Dry Creek Horse Trail (3 segments)
Grasshopper Trail (1 segment)
Hidden Springs Beach Trail (3 segments)
Homestead Trail (9 segments)
Homestead-Baxter Trail Connector (3 segments)
Homestead Trail-Bull Creek Trail North Connector (2 segments)

Indian Orchard (1 segment)
Johnson Camp Trail (1 segment)
River Trail (7 segments)
South Prairie Trail (1 segment)
Williams Grove Trail (3 segments)

Add Equestrian
Bull Creek North Trail (7segments)
Bull Creek South Trail (1 segments)
Drury-Chaney Loop Trail (3 segments)
Founder's Grove Trail (8 segments)
Grasshopper Trail (1 segment)
High Rock River Trail (5 segments)
Mahan Plaque Loop Trail (6 segments)
River Trail (7 segments)
Rockefeller Loop Trail (4 segments)

Management Zone Restrictions
Some of the trails for which a change in use was requested are within the Back Country Non-mechanized Zone as identified in the Humboldt Redwoods General Plan, 2002. Because mechanical devices cannot be used in the non-mechanized zone, the following trails were not considered for a change in use (add bicycles):

- Bull Creek Trail South
- Johnson Camp Trail
- River Trail

Trail Segmentation
Roads and trails are segmented at each intersection and designated with unique segment identification numbers. In most cases trails where evaluated as a whole for a proposed change in use. Three trails however, while not entirely suitable for a change in use, had segments that could support a change in use. Surveys were conducted for groups of segments to evaluate its suitability to add a new use. The 3 trails that were evaluated by segment groups were:

- Addie Johnson Trail – 2 segments
- Bull Creek Trail North – 7 segments
- Homestead Trail – 9 segments

Of the 18 trails (54 segments) evaluated for adding bicycle use, 6 segments are approved for change in use without modification, 23 segments were approved for the new use conditional on completion of needed modifications, and 25 segments were not approved for a change in use allowing bicycles.

Of the 9 trails (42 segments) evaluated for adding equestrian use, one segment was conditionally approved and 41 segments were not approved for a change in use allowing equestrian use.

Recommendations by Trail

Addie Johnson Trail – Homestead Trail to Mattole Road
Bicycles conditionally approved (Segment 1)

The Addie Johnson Trail segment from the Homestead Trail to the Mattole Road is conditionally approved for a change in use as it provides improved circulation for bicycles with the Bull Creek Trail North, the Homestead Trail, and the Albee Creek Campground. This trail would eventually tie together with a proposed segment of trail from the Mattole Road to the Bull Creek Trail – North to complete a loop from the Albee Creek Campground. The trail segment descends from the Homestead Trail and would require speed calming devices such as durable pinch points, textured surfaces and signage to limit potential safety issues with other users before a change in use could be approved. Trail surface hardening to protect tree roots would also be required before a change in use could be approved.

Addie Johnson Trail – Homestead Trail to trail end
Bicycles not approved (Segment 2)

The Addie Johnson Trail segment from the Homestead Trail to the end of the trail is not approved for a change in use. The segment is a dead-end and does not enhance circulation in the area. The trail alignment has steep fall-line grades making it difficult to maintain drainage, and overall trail sustainability, with the additional mechanical wear associated with strenuous uphill climbing and downhill braking. The narrow corridor limits the ability to add sinuosity or pinch points for speed calming.

Albee Creek Campground-Bull Creek Trail North Connector
Bicycles conditionally approved (Segment 1)

This short segment provides connectivity from the Albee Creek Campground to the Bull Creek Trail North which then completes a loop via the Homestead Trail. The trail is relatively flat; meandering through a redwood grove then runs along the left bank of Bull Creek atop a rock levy. The trail will require aggregate trail surface hardening in the redwood grove to protect tree roots and prevent trail entrenchment before a change in use could be approved. The trail is relatively flat and should not enable high speeds so speed calming devices will not be required.

Albee Campground – Homestead Connector
Bicycles conditionally approved (Segment 1)

This short segment of trail extends from the western edge of the Albee Creek Campground, southwest to the Homestead Trail. This segment allows campground visitors a direct route to the Homestead Trail and the nearby Thornton Trail. Adding bicycles would add connectivity to the Thornton Trail which is currently a multi-user trail. The trail is entrenched through the soft prairie soils so trail hardening would be required to reduce further entrenchment and poor drainage.

Baxter Trail
Bicycles conditionally approved (Segments 1, 2, 3)
The Baxter Trail connects Grieg Road with the Mattole Road in the vicinity of Hamilton Barn, providing further connectivity to Pole Line Road, Peavine Ridge Road, and Fox Camp Road. Baxter Camp Trail is the most upstream route linking the northern and southern road and trail networks in the upper Bull Creek watershed. The trail is wide, well outsloped and the surface is firm and stable year-around. Due to limited sight distances and long downhill grades, speed calming devices such as durable pinch points, textured surfaces and signage will be required to limit potential safety issues with other users before a change in use could be approved.

Baxter Camp 2 Trail
Bicycles approved (Segment 1)
The Baxter Camp 2 Trail is a 365-foot segment of trail running through the Baxter Camp Environmental Camp connecting the Baxter Trail to the Baxter Homestead Connector Trail. The Baxter Camp 2 Trail is approved for bicycles because cyclists may use the campground to access trails approved for bicycles such as Baxter Trail (see above).

Bull Creek Trail North – East of Blue Slide
Bicycles not approved, Equestrians not approved (Segments 1, 2)

<u>Bicycles</u>
The Bull Creek Trail North east of Blue Slide is a narrow, perched trail constructed between the Mattole Road and Bull Creek. In many locations the trail is situated along steep slopes or rip-rap bank protection and offers little opportunity for widening. Passing between hikers and either bicyclists or equestrians could not be accommodated along many sections of trail. Steep terrain in many locations will not allow pedestrians to retreat off of the trail bed to allow passing. The Bull Creek Trail North east of Blue Slide does not connect with any trails authorized for use by bicycles or equestrians so would not improve circulation but would encourage unauthorized use of the non-approved trails at the Rockefeller Forest Loop.

<u>Equestrians</u>
Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Bull Creek Trail North currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of Bull Creek will also increase nutrient loading in

the creek and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

Bull Creek Trail North – Blue Slide to Homestead Trail-Bull Creek Trail North Connector
Bicycles approved, Equestrians conditionally approved (Segment 3)
This short segment of the Bull Creek Trail North provides access to the Blue Slide parking area from the Homestead Trail-Bull Creek Trail North Connector. Currently this segment is authorized for hikers only. Adding connectivity for cyclists and equestrians to the Blue Slide parking area will provide another trailhead for those user groups wishing to access either the Homestead Trail or the Bull Creek Trail North form the east. Due to the location and confined design of the current trail segment, it will require a minor reroute away from Bull Creek to provide safe passing width prior to use by equestrians.

Bull Creek Trail North – West of Homestead Trail-Bull Creek Trail North Connector
Bicycles approved, Equestrians not approved (Segments 4, 6, 7, 8)
Bicycles
The Bull Creek Trail North provides an opportunity for a loop from the Albee Creek Campground along the Homestead Trail to a short connector trail across the Mattole Road and then return via the Bull Creek Trail North. A loop can also be traversed using the Blue Slide, or the Tall Trees trailheads as starting points. The trail is wide and well armored and along flat terrain. Visibility is good along the trail route and speed calming devices are not required.

Equestrians
The Bull Creek Trail North traverses the Tall Trees day use area, a small, congested parking facility and trailhead. The introduction of equestrian users into that area via the trail will create safety hazards to pedestrians, motorists and riders by putting vehicles, pedestrians, and horses into close contact in the congested area. In addition, there are no parking facilities for trailers at the Tall Trees day use area.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Bull Creek Trail North currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of Bull Creek will also increase nutrient loading in

the creek and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

Bull Creek Trail South – Grieg Road to River Trail
Bicycles not approved (Segments 1, 2, 3, 4, 5)
Bicycles are not approved due to this trail's location in a backcountry non-mechanized zone.

Bull Creek Trail South – Johnson Camp Trail intersection to River Trail
Equestrians not approved (Segment 5)
The Bull Creek Trail South is a narrow, undulating trail constructed along the southern edge of Bull Creek. In many locations the trail is situated along steep slopes or rip-rap bank protection and offers little opportunity for widening. Safe passing between hikers and equestrians could not be accommodated along many sections of trail. Steep terrain in many locations will not allow pedestrians to retreat off of the trail bed to allow passing. The Bull Creek Trail South does not connect with any trails authorized for use by equestrians so would not improve circulation but would encourage unauthorized use of the non-approved trails at the River Trail and Rockefeller Forest Loop.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Bull Creek Trail South currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of Bull Creek will also increase nutrient loading in the creek and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

Drury-Chaney Loop Trail
Equestrians not approved (Segments 1, 2, 3)
The Drury Chaney Loop Trail is a designated accessible trail. The trail is designed and maintained according to the standards set forth in the California State Parks Accessibility Guidelines – 2015 Edition. The guidelines require accessible trails to maintain a firm and stable surface and trail surface cross-slopes of less than 5%. The introduction of equestrian use on the Drury-Chaney Loop Trail would cause accelerated mechanical wear on the trail surface. Maintaining a firm and stable surface and the required cross-slopes would not be possible with periodic cyclic maintenance.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Drury-Chaney Loop Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat.

Dry Creek Horse Trail
Bicycles conditionally approved (Segments 1, 2, 3)
The Dry Creek Horse Trail segment is approved for a change in use as it provides an opportunity for bicycles to access the park from nearby town of Miranda. This trail also provides connectivity with adjacent local roads. The trail has long downhill sections with limited visibility and would require speed calming devices such as durable pinch points, textured surfaces and signage to limit potential safety issues with other users before a change in use could be approved. Brushing low visibility corners to improve sight-lines, and trail surface hardening to protect tree roots would also be required before a change in use could be approved.

Founder's Grove Trail
Equestrians not approved (Segments 1, 2, 3, 4, 5, 6, 7, 8)
The Founder's Grove Trail is a designated accessible trail. The trail is designed and maintained according to the standards set forth in the California State Parks Accessibility Guidelines – 2015 Edition. The guidelines require accessible trails to maintain a firm and stable surface and trail surface cross-slopes of less than 5%. The introduction of equestrian use on the Founder's Grove Trail would cause accelerated mechanical wear on the trail surface. Maintaining a firm and stable surface and the required cross-slopes would not be possible with periodic cyclic maintenance.
The Founder's Grove Trail is one of the busiest trails in the park year-around, with short-stay visitors as well as campers touring the grove. Limited parking, and crowded trail conditions will likely increase user conflicts with the addition of equestrian use.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Founder's Grove Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be

carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat.

Grasshopper Trail
Bicycles not approved, Equestrians not approved (Segment 1)
The Grasshopper trail runs along a steep, fall-line road descending from Grasshopper peak to the River Trail. The road/trail is poorly drained and entrenched along most of its length. Weak geology and steep inner-gorge terrain eliminate practical opportunities for reroutes and no opportunities for re-engineering such as outsloping or drainage structures exist within the existing trail alignment. The introduction of bicycles or equestrians would accelerate mechanical wear on the trail resulting in more rapid entrenchment and disruption of natural drainage patterns. Captured runoff and soft worn soils will result in unsustainable levels of erosion and sedimentation into nearby streams.

Addition of equestrians and bicycles to the Grasshopper Trail will not improve circulation patterns because the trail intersects the River Trail which is not approved for equestrians or bicycles. A dead-end trail at the bottom of a long, steep descent will encourage unauthorized use of the River Trail and other nearby pedestrian-only trails.

Hidden Springs Beach Trail
Bicycles not approved (Segments 1, 2, 3)
The Hidden Springs Beach Trail is a short dead-end trail that provides beach access to the campers staying at the Hidden Springs Campground. Approving use by bicycles would not improve circulation patterns in the park. The lower section of trail consists of flights of stone steps and is not safe for bicycles. Some narrow sections of trail have limited sight lines and do not provide space for retreat from the trail if users meet. Adding bicycle access to the trail would also increase use of an at-grade road crossing at Avenue of the Giants, increasing risk of a vehicle/cyclist collision.

High Rock River Trail
Equestrians not approved (Segments 1, 2, 3, 4, 5)
The High Rock River Trail is a narrow, undulating trail constructed along the western edge of the South Fork Eel River. In many locations the trail is situated along steep slopes and offers little opportunity for widening. Three streams are spanned with narrow bridges not constructed to equestrian standards. Passing between hikers and equestrians could not be accommodated along many sections of narrow trail. Steep terrain in many locations will not allow pedestrians to retreat off of the trail bed to allow passing.

The High Rock River Trail does not connect with any trails authorized for use by equestrians so would not improve circulation but would encourage unauthorized use of the non-approved trails at the Five Allens Trail or Chandler Grove. The trail surface is entrenched native material and is soft, exposing roots in many places. Hardening

required to protect the roots from damage would require frequent maintenance to ensure an adequately drained trail surface and current cyclic maintenance resources could not accommodate the increased workload.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The High Rock River Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of the South Fork Eel River will also increase nutrient loading in the river and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

Homestead Trail - Cuneo to Pole Line
Bicycles not approved (Segment 10)
This section of the Homestead Trail connects the Cuneo Creek Equestrian Campground to Pole Line Road. The trail crosses Cuneo Creek with a series of low water fords that change routinely after high flow events alter the active channel. The banks are non-armored and very erodible. Adding an additional use would increase the mechanical breakdown of the stream banks and allow more sediment to enter the stream. The streambed is very rough and uneven and would not be safe for bike riding. Most riders would likely walk much of this segment. This segment of trail does not improve circulation patterns because Indian Orchard Trail, the potential loop, is not suitable for adding cycling as an additional use. Accessing Pole Line Road from the Hamilton Road area is a preferred alternative, see below.

Homestead Trail – Pole Line to Hamilton e-camps
Bicycles conditionally approved (Segments 7 west of Hamilton e-camps, 8, 9)
This section of the Homestead Trail connects the Hamilton Environmental Camps to Pole Line Road and also provides connectivity via the Mattole Road to Baxter Environmental Camp, the Baxter Camp Trail, and the greater Bull Creek Backcountry. . This trail linkage would provide improved circulation between the northern slopes of Bull Creek (Pole Line Road, Fox Camp Road, and Peavine Ridge Road) and the southern area of Bull Creek (Grieg Road and Grasshopper Road). The trail surface is firm and stable and existing crossings are hardened. There are segments of the trail that will require improved sight lines by additional brushing maintenance and some speed calming devices, such as durable pinch points, textured surfaces, and signage, to limit potential safety issues with other users before a change in use could be approved

Homestead Trail – Hamilton e-camps to Thornton Trail
Bicycles not approved (Segment 7 east of Hamilton e-camps)
This section of the Homestead Trail connects the Hamilton Environmental Camp to the Thornton Trail and Albee Creek Campground beyond. The trail crosses Bull Creek in two locations at low water fords that change routinely after high flow events alter the active channel. The banks are non-armored, deeply entrenched, and very erodible sand and silt. Adding an additional use would increase the mechanical breakdown of the stream banks and allow more sediment to enter the stream. The streambed is very rough and uneven and would not be safe for bike riding. Most riders would likely walk much of this segment. A cycling route out of the Albee Creek Campground is possible to the east toward Tall Trees day-use area and Look Prairie Road, see below.

Homestead Trail – Thornton Trail to East end
Bicycles conditionally approved (Segments 1, 2, 3, 5, 6)
This section of the Homestead Trail provides connectivity from the Thornton Trail and Albee Creek Campground with Look Prairie Road and the Homestead Trail - Bull Creek Trail North Connector forming a loop from the campground. Terrain is moderate to easy and would provide a quality family riding experience. Tread hardening with aggregate would also be required to protect tree roots along forest segments and prairie soils. Numerous locations would require additional trail brushing to improve site distances and speed calming devices such as durable pinch points, textured surfaces and signage to limit potential safety issues with other users before a change in use could be approved.

Homestead Trail-Bull Creek Trail North Connector
Bicycles conditionally approved (Segments 1, 2)
This short section of trail provides connectivity from the Homestead Trail at its intersection with Look Prairie Road to the Bull Creek Trail North, forming a loop from the Albee Creek Campground. This segment would direct users across the Mattole Road, on-grade. Numerous locations would require additional trail brushing to improve site distances and tread hardening with aggregate would also be required to protect forest soils and tree roots before a change in use could be approved.

Homestead-Baxter Trail Connector
Bicycles not approved (Segments 1, 2, 3)
The Baxter Homestead Connector Trail connects the lower end of the Baxter Trail to the Homestead Trail via Hamilton Barn Road. Most of the trail is built on shifting alluvium in the active channel of Bull Creek and the route of the trail can vary year-to-year. The trail approaches to the low flow channel are deeply incised, fall-line segments with abundant sediment transport into the stream. There are no design alternatives that can be used to create stable multi-use access points at the stream channel. Adding an additional use will increase sediment transport into the channel, resulting in negative impacts to the aquatic and riparian habitats in the creek.

Indian Orchard
Bicycles not approved (Segment 1)
The Indian Orchard Trail connects the Cuneo Creek Equestrian Campground to Peavine Ridge Road and Fox Camp Road. The trail crosses Cuneo Creek with a series of low water fords that change routinely after high flow events alter the active channel. The banks are steep, non-armored and very erodible sands and gravel. Adding an additional use would increase the mechanical breakdown of the stream banks and allow more sediment to enter the stream. The trail is severely entrenched and has numerous seeps that are captured and run down the trail exacerbating the entrenchment. The trail tread is not firm and stable in many locations and cannot support an additional use. Sight distances are limited in many locations and the trail is narrow along most of its length. The trail does not connect to any other authorized bicycle trails so approving the change in use would not improve circulation patterns. Allowing bicycles would create a new trailhead for that use within the equestrian campground and may lead to increased user conflicts on the trail and at the trailhead.

Johnson Camp Trail
Bicycles not approved (Segment 1)
Bicycles are not approved due to this trail's location in a backcountry non-mechanized zone.

Mahan Plaque Loop Trail
Equestrians not approved (Segments 1, 2, 3, 4, 5, 6)
The Mahan Plaque Loop Trail is a short loop trail through old-growth redwood groves along the Avenue of the Giants. The trail is currently designated as hiking only and has no connectivity to nearby trails that support equestrian use. There are no parking or staging facilities near the trailhead that can safely accommodate horse trailers and there is not sufficient land base to develop the necessary parking and staging facilities to provide safe loading and unloading of horses. The trail surface is entrenched native material and is soft, exposing roots in many places. Hardening required to protect the roots from damage would require frequent maintenance to ensure an adequately drained trail surface and current cyclic maintenance resources could not accommodate the increased workload.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Mahan Plaque Loop Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure. Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat.

Introduction of manure and urine near the riparian corridor of the South Fork Eel River may also increase nutrient loading in the river and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

River Trail
Bicycles not approved, Equestrians not approved (Segments 1, 2, 3, 4, 5, 6, 7)
Bicycles are not approved due to this trail's location in a backcountry non-mechanized zone.

The River Trail is a narrow, undulating trail constructed along the western edge of the South Fork Eel River. In many locations the trail is situated along steep slopes or rip-rap bank protection and offers little opportunity for widening. Numerous deep canyons are spanned with small narrow bridges. Passing between hikers and equestrians could not be accommodated along many sections of trail and the terrain in many places is too steep for pedestrians to retreat off of the trail. The River Trail does not connect with any trails authorized for use by equestrians so would not improve circulation but would encourage unauthorized use of the non-approved trails at Grasshopper Trail and river crossing points along the South Fork Eel River.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The River Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of the South Fork Eel River will also increase nutrient loading in the river and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

Rockefeller Loop Trail
Equestrians not approved (Segments 1, 2, 3, 4)
The Rockefeller Loop Trail is a designated accessible trail. The trail is designed and maintained according to the standards set forth in the California State Parks Accessibility Guidelines – 2015 Edition. The guidelines require accessible trails to maintain a firm and stable surface and trail surface cross-slopes of less than 5%. The introduction of equestrian use on the Rockefeller Loop Trail would cause accelerated mechanical wear on the trail surface. Hardening required to maintain required cross-

slopes would require frequent maintenance and current cyclic maintenance resources could not accommodate the increased workload.

Circulation patterns in the park would not be improved because no adjacent or nearby trails accommodate equestrian use. The Rockefeller Loop itself is a short loop trail and does not provide access to any notable destination or other route.

The Rockefeller Loop Trail is one of the busiest trails in the park year-around, with short-stay visitors as well as campers touring the grove. Limited parking, no trailer parking, and crowded trail conditions make this an unsafe trail/trailhead to introduce equestrian use.

Humboldt Redwoods State Park contains hundreds of acres of pristine wildland where there are currently no invasive non-native plants. The Rockefeller Loop Trail currently does not allow equestrian use and is generally free of invasive, non-native plant species. The potential negative impacts associated with equestrian use include the introduction of invasive, non-native plants from horse manure, feed, and hooves, and nitrogen loading into the soil from horse manure Horse manure is high in nitrogen and can carry invasive non-native plants seeds. It is common to observe non-native plants growing out of horse manure. In addition, seeds from invasive non-native plants can be carried on the horse's hooves and in their feed. Over loading the soil with nitrogen may enable both non-native and native plants that are not normally found along this trail to colonize the area. By allowing horses on this trail there is a high potential that invasive non-native plants will be introduced into pristine native habitat. Introduction of manure and urine along the riparian corridor of Bull Creek will also increase nutrient loading in the creek and will result in algal blooms during periods of low flow and warm temperatures. Algal blooms are known to have fatal consequences for young salmonids and other aquatic species.

South Prairie Trail
Bicycles conditionally approved (Segment 1)
The South Prairie Trail connects upper Grieg Road with the lower section of Grieg Road in the Bull Creek backcountry. The South Prairie Trail is presently the most remote route in the upper Bull Creek watershed and gets very little use from any user group. The trail can be used to form a loop with Grieg Road and will eventually link into the proposed Grasshopper Saddle Trail to provide a link from the lower Bull Creek watershed to the upper watershed. The trail is wide and well outsloped with a firm and durable surface that can accommodate multi-use. Due to limited sight distances and long downhill grades, speed calming devices such as durable pinch points, textured surfaces and signage will be required to limit potential safety issues with other users before a change in use could be approved.

Williams Grove Trail
Bicycles conditionally approved (Segments 1, 2, 3)
The William's Grove Trail connects the Hidden Springs Campground with the William's Grove day use area and the south fork Eel River. The trail descends from the upper

end of the campground to the east side of Highway 101 then levels off and roughly follows contour until it crosses under US 101. The trail then drops again west of the highway and crosses the Avenue of the Giants at the William's Grove day-use area. The trail has long downhill sections with some limited visibility so speed calming devices such as durable pinch points, textured surfaces and signage will be required to limit potential safety issues with other users before a change in use could be approved. A steel cable support spans the trail in one location, limiting overhead clearance. This potential hazard would require evaluation and possible modification prior to adding bicycles. Many sections of the trail surface are still native material and those sections will have to be hardened to protect the surface from deformation cause by wheel loading or downhill braking.

Appendices

Change in Use Evaluation Form

Change in Use Process Flowchart

Trail Use Change Survey

Park (Including Classification): _____

Trail Name: _____

Location in Unit: _____

Current Use Designation(s): _____

Proposed Use Type Change: _____

Use Change Initiated By: _____

Evaluation Date: _____

Evaluation Criteria

	Yes	No
Based on Criteria, is this Use Change Compatible?		
Based on Criteria, does this Use Change Enhance Circulation?		
Based on Criteria, will this Use Change Decrease Trail Safety?		
Based on Criteria, is the Trail Sustainable Under Existing Use Conditions?		
With the Proposed Use Change Will the Trail be Sustainable		
Based on Criteria, will the Proposed Used Change Create Negative Impacts to the Natural or Cultural Resources?		
Will the Proposed Use Change and/or Modifications to the Existing Trail Create Significant Facility Maintenance or Operational Work Load?		
Are there other Routes in the Unit or on Nearby Public Lands that Adequately Accommodate the Type of Trail Use Proposed?		
Would needed modifications trigger outside agency permits?		

Recommendation Based on Evaluation Criteria - Substantiate in Comment Box

Recommend that the Park's General Plan or Road and Trail Management Plan be Developed or Amended to Evaluate this Change in Use		
Recommend that the Proposed Change in Trail Use be Approved		
Recommend that the Proposed Change in Trail Use be Approved After Design Modifications are Implemented:		
Recommend that the Major Reroute be Considered to Accommodate Proposed Change in Use		
Recommend that the Proposed Change in Trail Use be Approved with Management Options such as: Alternating Days of Use, One Way Travel, Seasonal Closures etc.		
Recommend that the Proposed Change Use be Put on Hold - See Comment Box Below		

Summary Criteria Evaluation on Based on the Synthesis of Data from the Following Pages

Insert Map of Area of Proposed Use Change

Trail Use Change Survey

Comments:

Evaluation Team Members: _____ _____

_____ _____

Multiple trail route use change proposals in one unit may recommend development or amendment of a unit wide road and trail transportation management plan.
Qualified Department District Staff, including a DPR Trained Trail Coordinator will complete this survey and checklist to:

(1) Determine the sustainability, trail user safety and feasibility of a proposed change in allowed uses for a single existing trail.

(2) Determine the appropriateness of proposed use change in relation to cumulative impacts to the existing uses (users, routing, hiking opportunities, etc)
(3) Support and Document the Request with a Project Evaluation Form and associated CEQA document.
(4) Validate the existing conditions described on the attached trail log. The trail log should address typical log elements and positive and negative attributes related to the evaluation criteria.

	Evaluation Criteria	Yes	No	Comments
	#1 Existing Conditions			Describe positive and negative impacts of the proposed change and any other details related to the question to assist decision is made . Put N/A in "No" section for criteria not applicable to trail evaluated.
	Check any existing conditions:			
1.1	Does the Park Unit have a General Plan?			
1.2	If Yes, does it address specific trail uses or other management directive supporting the proposed use change			
1.3	Is the "Trail" Proposed a Controlled Access Road			
1.4	Does the Park have an approved road and trail management plan?			
	Trail or Road Surface Type:	**Check Applicable**		
1.5	Asphalt			
1.6	Concrete			
1.7	Gravel			
1.8	Native Material			

Trail Use Change Survey

	Evaluation Criteria	Yes	No	Comments
	Trail and Road Facility Use Type			
1.9	Public			
1.10	Administration			
1.11	Fire Break			
1.12	Motorized Recreation			
1.13	Non-Motorized Recreation			
1.14	ADA Accessible Route of Travel			
1.15	Does the proposed route connect to a Trail Head or other Accessible Facility?			
1.16	Road Used as Trail Route			
	Trail Specific Facility Use Type			
1.17	Trail Class I, II, III, IV			Enter Trail Classification Here - Not Yes or No
	Current Trail Uses Allowed (on road or trail)	**Yes**	**No**	
1.18	Pedestrian			
1.19	Mountain Bike			
1.20	Equestrian			
1.21	Other - Specify in Comment Box			
	#2 Compatibility for Multi-User Trails			
	Check any existing conditions:			
2.1	Would the proposed use change create incompatible conflict with existing facilities (trail heads, stables, campgrounds etc)?			
2.2	Is it located on a trail already in a high use area and are there resource impacts?			
2.3	Is there significant user conflict?			
2.4	Is there evidence of unauthorized use?			
2.5	Is it consistent with park classification?			
2.6	Does the Proposed Use Currently Exist in the Park?			
2.7	Is there documented survey or statistical information that identifies a need for proposed additional use designation?			
2.8	Is the existing trail considered ADA accessible by US Access Board?			
2.9	Based on Above Criteria, Is this Use Change Compatible?			

Trail Use Change Survey

	Evaluation Criteria	Yes	No	Comments
	#3 Affects to Trail Unit User Circulation Patterns			
	Check any existing conditions:			
3.1	Does the proposed use change provide a loop or semi loop connection?			
3.2	Does the change provide a legal or legitimate route for existing unauthorized trail uses or user created trail?			
3.3	Does the change provide a connection to adjacent land agency which allows similar use?			
3.4	Does it improve circulation or relieve congestion on other high use or at capacity trails?			
3.5	Does it create potential additional use changes on surrounding/adjacent or connecting trails or facilities?			
3.6	Does it require a seasonal closure to mitigate resource impacts?			
3.7	If yes, will seasonal closures disrupt circulation patterns?			
3.8	Based on Above Criteria, Does this Use Change Enhance Circulation			
	#4 Effects to Trail Use Safety			
	Check any existing conditions:			
4.1	With standard cyclic trail brushing (as required by the trail Class), is there adequate site distance for safe warning for the proposed use change?			
4.2	With standard cyclic slough and berm removal, is there adequate tread width for safe passage for the proposed multi-user designation?			
4.3	With equestrian mutli-use, are tread widths safe for the pedestrian, mobility devices and/or bike user to retreat to the downhill side of trail?			
4.4	If tread widths for equestrian use is narrow, are the fill slopes gentle, firm and stable for the pedestrian, mobility devices and/or bike user to retreat to the downhill side of trail?			
4.5	Does the trail have sinuosity that slows bike users?			
4.6	Can sinuosity be designed into existing trail tread alignment to slow bike users?			

Trail Use Change Survey

	Evaluation Criteria	Yes	No	Comments
4.7	Does the use change require removal of special concern plant species to maintain adequate trail widths and sight distances?			
4.8	Would use type change existing conditions or cause problems for enforcement of park rules and regulations?			
4.9	Would use type change existing conditions or cause problems for emergency response?			
4.10	Would alternating days of use reduce the change of use impacts to reduce safety concerns?			
4.11	Based on Above Criteria, Will this Use Change Decrease Trail Safety?			
	#5 Effects on Trail Sustainability			
	Check any existing conditions:			
5.1	Are trail grades commensurate with soil types, use type, season use and facilitate natural hydrologic drainage patterns such as sheet flow?			
5.2	Is the trail drainage being captured and released on hillsides and not at natural topographic drainage features?			
5.3	Trail tread firm and stable?			
5.4	Are there abrupt changes in trail running grade?			
5.5	Is the fill slope stable?			
5.6	Is the back slope/cut bank stable?			
5.7	Does the trail tread remain firm and stable in wet conditions?			
	Supporting Data From Trail Log			
5.8	Number of Water Bars required for proper drainage			
5.9	Lineal Footage of Berms			
5.10	Lineal Footage of Ditches			
5.11	Lineal Footage Rills and Ruts			
5.12	Lineal Footage log Entrenched Trail			
	Describe the locations and different types of soil types and matrix encountered on trail			
	% of			
5.13	Rocky			
5.14	Rocky/Partial Soil Profile			
5.15	Full Soil Profile			

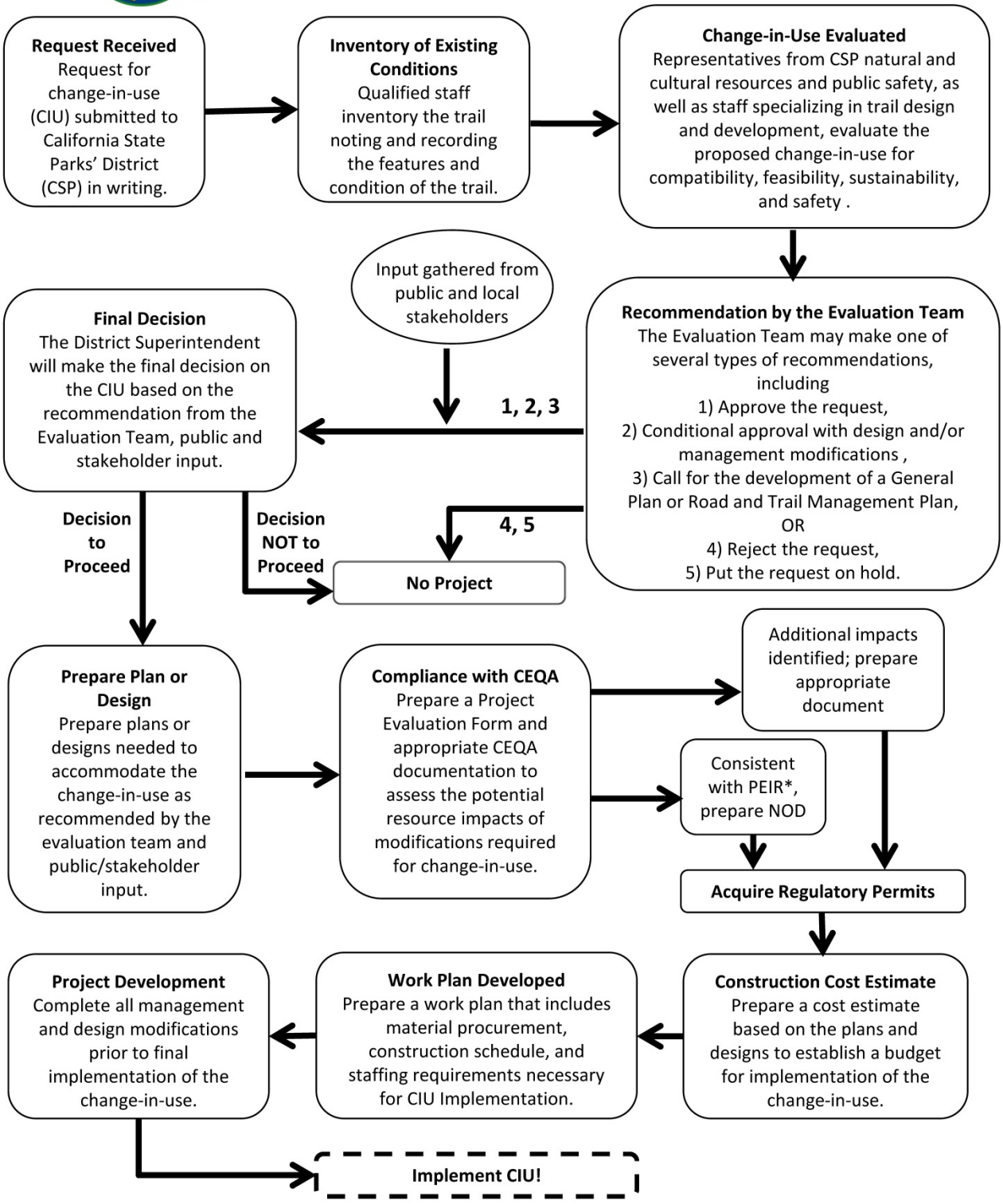
Trail Use Change Survey

	Evaluation Criteria	Yes	No	Comments
5.16	Partial Soil Profile/Sandy			
5.17	Sandy			
5.18	Based of Above Criteria, is the Trail Sustainable Under Existing Use Conditions?			
5.19	With the Proposed Use Change, will the Trail be Sustainable?			
	If Not Sustainable, Can Any of the Following Measures be Implemented to Make the Trail Sustainable for the Proposed Use Change?			
	Minor reconstruction of trail tread would:			
5.20	Correct lack of outslope			
5.21	Eliminate abrupt grade changes			
5.22	Stabilize unstable cut bank			
5.23	Stabilize unstable fill slope			
5.24	Correct rilling, rutting			
	Provide for firm and stable surfaces			
5.25	Minor realignment of trail within immediate existing trail proximity would:			
5.26	Stabilize unstable cut bank			
5.27	Stabilize unstable fill slope			
5.28	Eliminate abrupt grade changes			
5.29	Correct unsustainable grades			
5.30	Correct Lack of sinuosity			
5.31	Based on Above Criteria, Can the Trail be Made Sustainable for Proposed Use Conditions?			
5.32	Can wet weather closures establish or maintain Sustainability?			
5.33	Should a Major Reroute be Considered to Establish Sustainability?			
	#6 Effects or Impacts to the Natural or Cultural Resources			
	Would proposed use change and/or needed modifications significantly impact:			
6.1	erosion of existing Trail Tread?			
6.2	geologic conditions?			

Trail Use Change Survey

	Evaluation Criteria	Yes	No	Comments
6.3	sensitive wildlife habitat?			
6.4	sensitive vegetation habitat?			
6.5	a riparian or stream environment zone			
6.6	a sensitive historic feature?			
6.7	Is the Trail a historic feature?			
6.8	Based of Above Criteria, Would the Proposed Used Change Create Negative Impacts to the Natural or Cultural Resources?			
	#7 Effects or Impacts to the Facility Maintenance and Operational Costs			
	Would proposed use change and/or needed modifications:			
7.1	Change the current classification of the trail?			
7.2	Create the need for fill slope or cut bank retaining walls?			
7.3	Require aggregate or other trail hardening techniques required to maintain tread stability?			
7.4	Require additional or upgrading of turnpikes or causeways?			
7.5	require additional bridges or puncheons?			
7.6	Require additional maintenance to maintain current existing conditions?			
7.7	Require additional management practices to maintain user compliance?			
7.8	Could the proposed modifications be completed by non-department work forces?			
7.9	Could the proposed modifications be maintained by non-department work forces with no cost to State Parks?			
7.10	Are durable pinch point native materials readily available?			
7.11	If alternating days of use by user type is a management practice, is alternating days of use able to be enforced?			
7.12	Will the Proposed Use Change and/or Modifications to the Existing Trail Create Significant Facility Maintenance or Operational Work Loads?			

Trail Change-In-Use Process at a Glance
California State Parks



*Program Environmental Impact Report (PEIR) is a first-tier document to address the broad environmental effects that could be associated with changes-in-use. For more information, see www.parks.ca.gov.