

Recommendations Report
Change-in-Use Requests

Easy Grade Trail

Mount Tamalpais State Park

Prepared By
California State Parks
Bay Area District and
Roads and Trails Program
Facility Management Division

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Introduction

This report was prepared in response to public requests to allow bicycle use on the Easy Grade Trail in Mount Tamalpais State Park. This request was initiated by the Marin County Bicycle Coalition. To facilitate the evaluation process, the California Department of Parks and Recreation (DPR) has developed a process to objectively review and evaluate all proposed changes-in-use. The process begins with a change-in-use request from staff, the public, or other stakeholders; an on-site trail inspection by a team of staff with expertise in public safety, natural and cultural resource management, maintenance, engineering, and visitor services; evaluation of the trail; and a final recommendation.

Criteria used in the evaluation of change-in-use proposals include:

- Existing trail conditions
- Compatibility with existing trail uses
- Effects to trail circulation patterns within the park unit
- Effects to trail safety
- Effects to trail sustainability
- Effects or impacts to natural and/or cultural resources
- Effects or impacts to maintenance and operational costs

Evaluation Team

Between March and June 2015, a team met to evaluate the change-in-use request against the criteria established by DPR. The review team consisted of:

- Cyndy Shaffer, Environmental Scientist
- Bree Hardcastle, Environmental Scientist
- Mike Nelson, Park Recreation Specialist
- Victor Bjelajac, Park Maintenance Chief (also representing Cultural Resources)
- Roberto Walton, State Parks Peace Officer

Recommendations Summary

The request to add bicycle use to the Easy Grade Trail was approved with design modifications as described in this summary and attachments. The Change-in-use evaluation process determined that the addition of bicycle use on the Easy Grade Trail could be accommodated in a safe and sustainable manner and would not have significant effects to natural or cultural resources if recommended design and management modifications are implemented. The addition of bicycles to the trail would also provide an important non-paved bicycle route connection to surrounding park and other agency non-paved bicycle routes. The intended purpose of this use would be for connectivity and not for the purpose of seeking technical challenges which could be consider attractions unto themselves, and is therefore is consistent with the Departments classification as "State Park". This recommendation would require design and management modifications to be implemented prior to allowing bicycle use on the trail. Additional design details, resources surveys, environmental compliance and

permitting would be required prior to the implementation of design modifications. In addition, necessary funding for project modification would need to be secured.

Effects to Trail Circulation Patterns

The use of the Easy Grade Trail by bikes would provide an important non-paved biking route connecting the Pantoll Ranger station and the Mountain Amphitheater. This connection would facilitate regional non-paved bike connections to the Golden Gate National Recreation Area (GGNRA) property to the south and the Marin Municipal Water District (MMWD) property to the north. The existing bike connection from the Pantoll Ranger Station to MMWD land requires bikes to share use with motorized vehicles on a curving and relatively narrow section of the Pantoll Road. Allowing bike use on easy grade would alleviate safety concerns by eliminating the need to use a large portion of the Pantoll Road when making connections to MMWD property.

Effects to Trail Safety

Easy Grade Trail is currently receives relatively low use from hikers only and safety issues have not been a concern. It is anticipated that the addition of bikes may present safety issues associated with downhill bike travel speeds and encounters with hikers and/or uphill bikers. This would be a particular concern on steeper sections of the trail that will not be rerouted to reduce linear grades. Limited pinch points may be required prior to blind curves in these steeper sections of trail to reduce bike speeds through these low visibility locations. In addition, armored textured rolling grade dips and armored drainages would be installed to both improve trail drainage and protect waterways, but also to slow bike users by roughing the trail surface. The trailhead located at the Mountain Amphitheater also possess a potential safety concerns associated with the convergence of the Easy Grade Trail and the Bootjack Trail and high visitor use during amphitheater special events. In addition there are multiple steps located just prior to the Mountain Amphitheater trailhead which may pose an additional safety concerns for some bikers (depending on technical riding capabilities) and hiker/biker encounters in this area. It is therefore recommended that the last part of the trail connecting to the Mountain Amphitheater be rerouted to a separated trailhead located uphill from the existing one. This will provided separation of use between the trails and allow for more definitive direction and enforcement of allowable use on each trail. In addition, the Easy Grade Trailhead will be separated from potential bootjack trail use associated with special event performances. This trail reroute will also reduce trail linear grades and provide increased trail sinuosity to reduce user's speeds and avoid the need for additional pinch points for speed control.

Effects on Trail Sustainability

Easy Grade Trail is currently a relatively sustainable trail in most locations. It is anticipated that the majority of the trail alignment will remain sustainable with the addition of bike use if trio maintenance (brushing, removing fill slope berms, removing

back slope sloughing) and minor reconstruction (increase outslope) is preformed and maintained on the trail. However, it is anticipated that some steeper locations along the trail will exceed maximum sustainable grades once bikes are added to the trail. It is also unknown how many bikes will use easy grade if use allowed. It will therefore be necessary to re-engine (install rolling grade dips, rock armor trail tread) in step sections of trail to insure sustainability. It is also recommended that the trail be rerouted in approximately three locations to reduce existing linear grades in excess of maximum sustainable grades.

Effects to Natural and Cultural Resources

Initial evaluations indicate there should be no significant impacts to natural or cultural resources associated with the change-in-use and modifications required for change-in-use approval if standard departmental best management practices are implemented. Other agency permits (RWQCB, Army Corps, CA Dept. Fish and Game) will be required for drainage crossing re-engineering necessary for trail sustainability. Plant surveys will also be required as part of project development and implementation. Identified sensitive plant locations, as determined by surveys, will be avoided and/or construction techniques will be modified for minimization of potential impacts.

Effects to Maintenance and Operations Costs

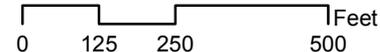
The trail is currently not being maintained on a regular or cyclic basis. Given the lack of regular maintenance the trail has remained in a relatively sustainable condition with the exception of a few locations. Depending on level of use if bikes are added, it is expected that the additional wear and tear on the tread surface cause by the mechanical wear of bike tires and breaking will occur. It is anticipated that this potential additional wear and tear will be mitigated through the proposed design modifications recommended for sustainability and that significant additional resources will not be required to maintain the trail outside of an increase in trio maintenance to maintain sight distances and sufficient outslope for drainage. Maintaining user compliance through signage, education and cooperative efforts with user groups is not expected to create significant additional workload or added cost for park staff.



EASY GRADE TRAIL PROPOSED CHANGE-IN-USE Add bicycle use to hiking trail Mount Tamalpais State Park



Drawn by: Jason Spann



7/21/15

Mountain Theater Rd

Bootjack spur

Relocate Easy Grade Trailhead away from Bootjack Trailhead and Mt. Amphitheater.

Reconstruct drainage crossing to improve trail sustainability and minimize vertical obstructions (e.g. open rock culvert)

Reroute portion of trail to reduce linear grade and accommodate Easy Grade Trailhead relocation.

Relocated water system access infrastructure as necessary.

Reconstruct short section of trail to reduce linear grade.

Reroute short section of Riding and Hiking Trail to create new intersection with Easy Grade Trail with improved sight-lines.

Remove redundant segment (portion on hillslope) of Riding and Hiking Trail once intersection relocation has occurred.

Reroute portion of Easy Grade Trail to reduce linear grade and improve transition to drainage crossing. Remove existing steps down to drainage crossing.

Notes:

1. Proposed trail modifications are preliminary. Final modifications to be determined after official approval to move forward with the project.
2. The majority of existing trail would receive trio maintenance (slough removal, berm removal and brushing) as part of required modifications.
3. Modifications to include the installation of rolling grade dips on steeper trail sections for improve drainage.
4. Modifications to include the installation of approximately 5-7 pinch points to slow users and limited potentially hazardous situations in locations with limited sight distance.
5. Modifications to include rock armoring of all non-elevated drainage crossings along the trail.

Reroute short section of Easy Grade Trail to reduce linear grade. Remove step.

Reroute section of Easy Grade Trail to reduce linear grade and provide a smooth transition to Old Stage Road. Abandon step section of trail.

Legend

- Trail Reroute
- Trail Removal
- Easy Grade Trail
- Local Roads
- State Park Road
- State Park Trail

Old Mine Trl

Easy Grade Trl

Riding & Hiking Trl

Old Stage Rd

Bootjack Trl

Pan Toll Rd

Easy Grade Trl

Old Stage Rd

Matt Davis Trl

Alpine Trl

Trail Use Change Process

