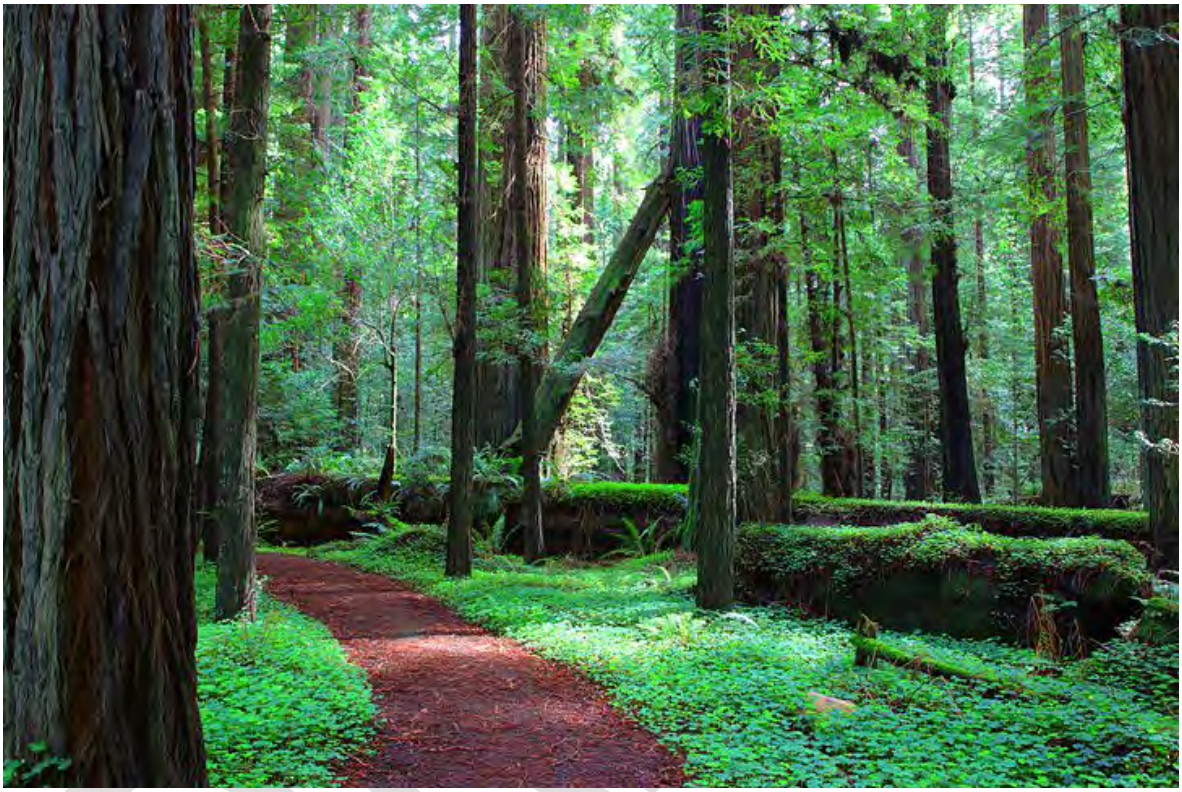
Humboldt Redwoods State Park
Road and Trail Management Plan



Public Draft
April 2017

California State Parks
North Coast Redwoods District
Humboldt Redwoods State Park

Jerry Brown
Governor

John Laird
Secretary
Natural Resources Agency

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Director
California State Parks

California State Parks Mission

The mission of the California Department of Parks and Recreation is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high quality outdoor recreation.

State Park Purpose Statement

The purpose of Humboldt Redwoods State Park is to preserve, protect, and perpetuate the outstanding natural and aesthetic values of the ancient redwood forests and their associated ecosystems found in the lower Eel River watershed. Through careful stewardship, the solitude and grandeur of the park's cathedral-like forests, its inherent wilderness values, and significant cultural features shall remain unimpaired for the enjoyment of current and future generations.

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EXECUTIVE SUMMARY

Trails are fundamental to fulfilling the Department's mission to create opportunities for high-quality outdoor recreation. This Road and Trails Management Plan (RTMP) for Humboldt Redwoods State Park (HRSP) describes the existing roads and trails of the park and provides specific direction for management and operations in the future. The goal is to ensure that recreational trail opportunities are made available at their fullest potential, while protecting the park's cultural and natural resources.

Located in the coastal mountains of southern Humboldt County, HRSP is internationally renowned as home of the world's largest remaining contiguous stands of ancient coast redwoods. The park has over 50 miles of roads and 60 miles of trails for hikers, bikers, and equestrians, which provide access to various sections of the park including into the steep and rugged backcountry.

The RTMP was prepared in accordance with Departmental Notice 2012-06 and applicable state and federal regulations for resource protection and public participation. The planning team consisted of multi-disciplinary staff from the park sector, district and headquarters. A base map was developed and park routes were characterized and categorized per the Department's guidelines. Data was gathered through field studies, park user surveys, and stakeholder meetings.

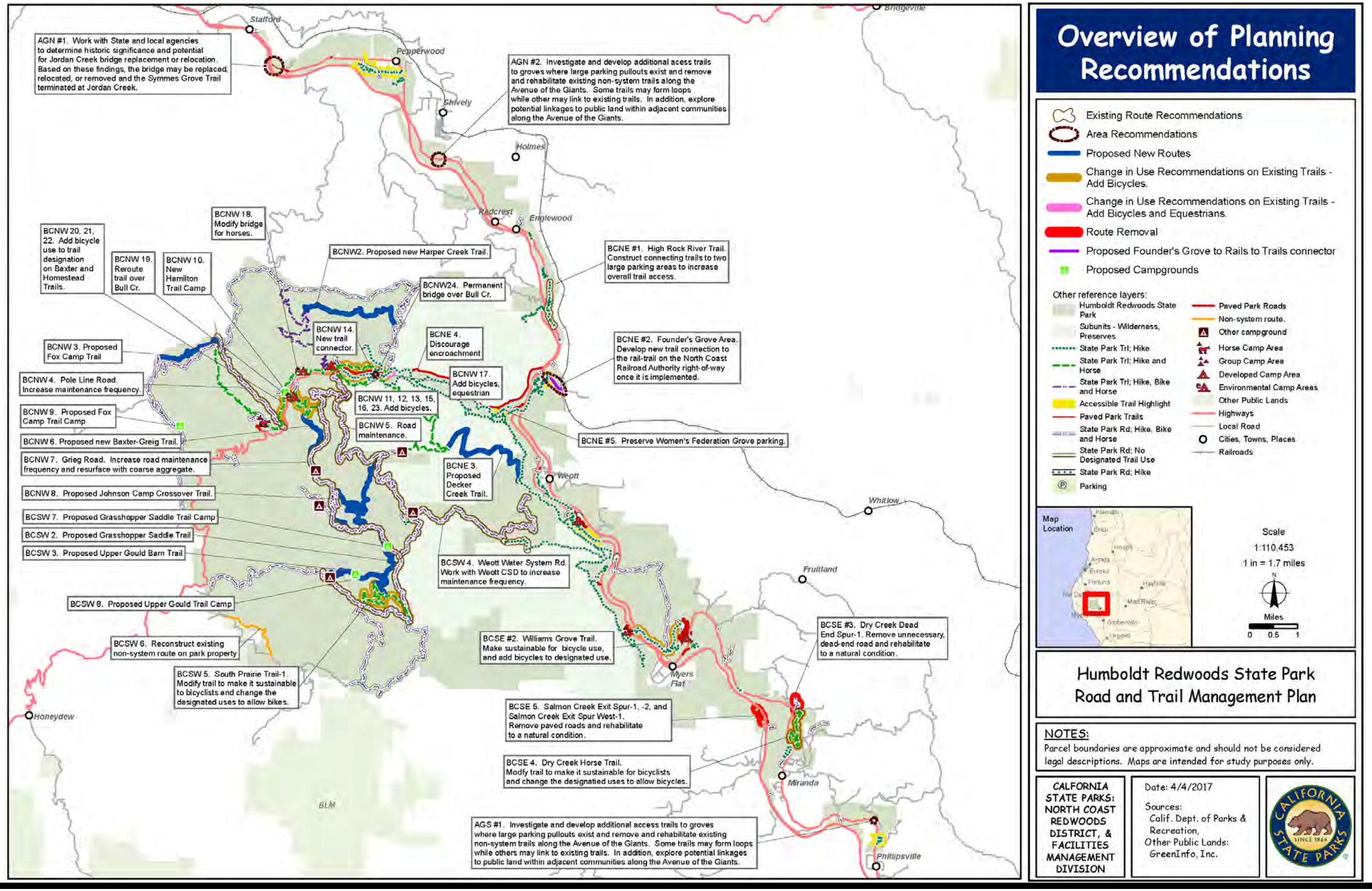
Issues such as trail sustainability, safety, adequate infrastructure, connectivity, land use compatibility, and potential user conflicts were identified. Various plan alternatives were considered and a preferred plan identified. The preferred plan was publicly reviewed and modified, as necessary, to incorporate public comments *(Note: This process will be completed prior to the final draft)*. The final RTMP and related environmental assessment are included herein. *(Note: environmental document is under development and is not included in this Public Draft.)*

The final plan provides over-arching recommendations that apply to the park's entire trail system, such as the need to make all new trails and trail alterations accessible to the extent possible, remove all non-system trails, and maintain all trails to the appropriate standard.

Area-specific recommendations were made for six identified areas of the park: Avenue of the Giants North; Avenue of the Giants South; Bull Creek Northwest; Bull Creek Northeast; Bull Creek Southwest; and Bull Creek Southeast. Within these areas, specific roads and trails were identified for conversion, removal, realignment, and reconstruction to address sustainability and accessibility concerns. Other trails were identified for potential change-in-use to expand recreational opportunities. New and upgraded trails and associated trail amenities, such as trailheads and signage, were also recommended to improve the visitor experience.

Maps that illustrate the existing conditions as well as recommendations for planning and maintenance are included. (*Note: The final draft will include a more detailed summary of the plan's recommendations.)*

Map: Overview of Planning Recommendations



Section 1 INTRODUCTION

Trails are a key component of public recreation and, therefore, are critical to fulfilling the mission of the California Department of Parks and Recreation (Department). The Department is committed to providing the highest quality trails for a diverse user group by planning and developing trails pursuant to the Department's Trails Policy:

> *The Department, through a public planning process, will strive to meet the recreational, educational, and interpretation needs of its diverse trail users by developing trails within state park units, consistent with unit classification, general plan directives, cultural and natural resource protection, public safety, accessibility, use compatibility, and other legal and policy mandates. Multi-use trails and trail connectivity with adjacent public trail systems will be considered in the development of trail plans or individual trails.*

1.1 Purpose

The purpose of a Road and Trails Management Plan (RTMP) is to provide specific guidance and direction for implementing the goals and objectives of the park's approved General Plan (California State Parks Planning Handbook, 2010). It describes the existing road and trail conditions in a park and provides a roadmap for future management including specific actions for individual roads and trails. It takes into consideration the park's values and mission to achieve the following goals.

- Maximize visitor use and experiences;
- Reduce potential safety issues;
- Minimize impacts to natural and cultural resources;
- Coordinate with local and regional planning efforts;
- Provide access to surrounding public lands;
- Reduce maintenance and management costs;
- Provide an appropriate range of recreational opportunities and associated infrastructure;
- Limit impacts on the natural environment to a level acceptable under CEQA;
- Prioritize roads and trails projects.

Developing a comprehensive RTMP is paramount to ensuring that recreational trail opportunities are made available at their fullest potential, while providing sufficient and often enhanced protection for cultural and natural resources. Although planning can be implemented on a single trail basis, park-wide and regional trail system planning remain the preferred and the most effective methods for identifying and establishing linked recreational trail corridors. Comprehensive planning also reduces construction and maintenance costs.

1.2 Planning Need

In most parks, roads and trails are the primary avenue for park visitors to access park features and facilities. Properly sited, designed, constructed, maintained, and managed, roads and trails can provide quality recreational opportunities while also protecting sensitive natural and cultural resources by focusing recreational activity on less sensitive park lands.

Frequently, a park's trail system has evolved from trails and unpaved roads that were on the property when it was acquired. They were constructed to meet the needs of the original property owners, such as ranchers and loggers, and seldom serve the needs of the park unit adequately or meet trail standards currently identified in the Department's Trails Handbook. Old trails are often improperly sited, poorly designed and constructed, or inadequately maintained. Additionally, older trails may have limited accessibility or other deficiencies. Trails also may fail to adequately protect the park's natural or cultural resources.

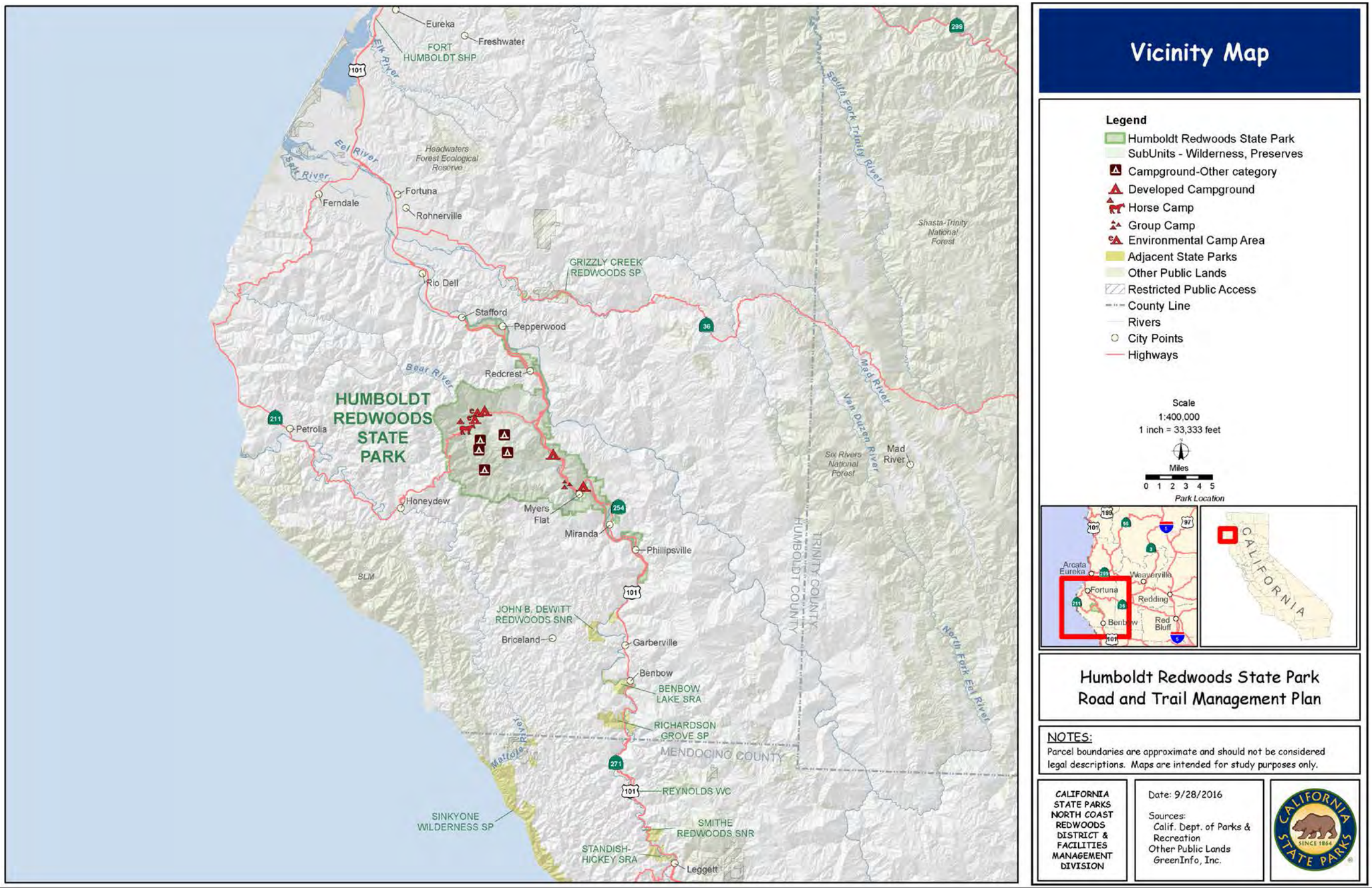
This RTMP provides an opportunity for Department managers to address concerns regarding old roads and trails, propose new trails for development, and revisit, refine, and prioritize previous road and trail management recommendations.

1.3 Project Setting

Located in the coastal mountains of southern Humboldt County, Humboldt Redwood State Park (HRSP) is renowned both nationally and internationally, attracting visitors from around the world. The 53,000-acre complex protects the world's largest remaining contiguous stands of ancient coast redwoods, as well as a diverse mix of open prairies, riparian vegetation, large stands of second growth redwood forest, and ancient Douglas fir and hardwood forests.

The park is situated approximately 40 miles south of Eureka, eight miles north of Garberville, and 240 miles north of San Francisco. Primary access is from Highway 101, which flows through the park's eastern edge. Intertwined with the river and freeway is the old highway, officially designated State Route 254, but better known as the Avenue of the Giants ("The Avenue"). The Avenue and Mattole Road, the other main circulation route in the park, provide close looks at many of the park's beautiful ancient redwood groves, as well as views and vistas of forested lands surrounding the park. Mattole Road winds west through the park to the Pacific Ocean.

Map: Vicinity Map



Vicinity Map

Legend

- Humboldt Redwoods State Park
- SubUnits - Wilderness, Preserves
- Campground-Other category
- Developed Campground
- Horse Camp
- Group Camp
- Environmental Camp Area
- Adjacent State Parks
- Other Public Lands
- Restricted Public Access
- County Line
- Rivers
- City Points
- Highways

Scale
1:400,000
1 inch = 33,333 feet

Miles
0 1 2 3 4 5

Park Location

Humboldt Redwoods State Park Road and Trail Management Plan

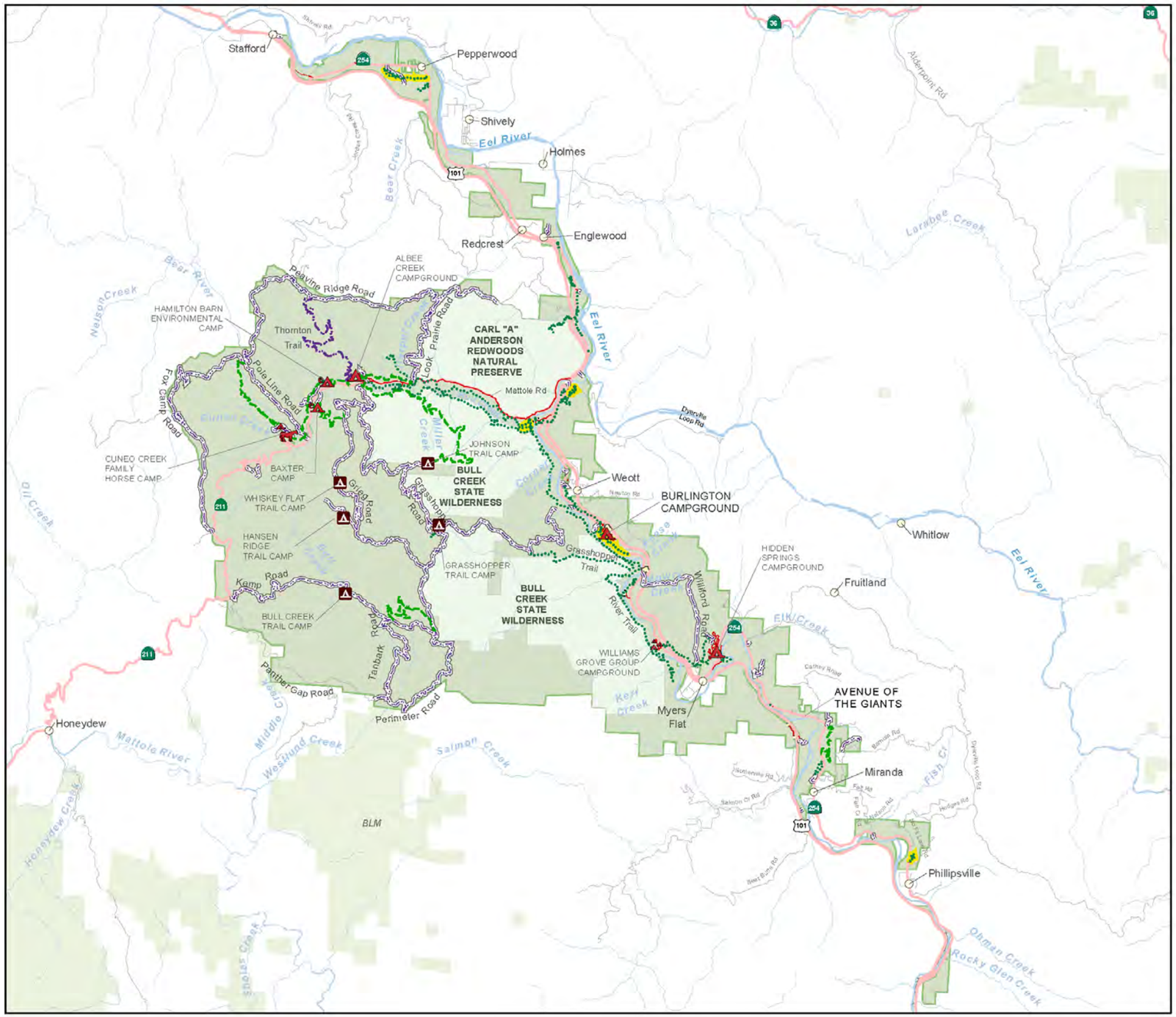
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 9/28/2016

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Existing Roads and Trails at State Park



Parkwide Existing Roads and Trails

Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- Hike, Bike and Horse
- State Park Rd, Hike, Bike and Horse
- State Park Rd, No Designated Use
- State Park Rd, Hike
- Paved Park Roads
- Accessible Trail Highlighter
- Highways
- Local Road
- Humboldt Redwoods State Park
- SubUnits - Wilderness, Preserves
- Campground-Other category
- Campground
- Horse Camp
- Group Camp
- Environmental Camp Area
- Other Public Lands

Parkwide Summary of Existing Unpaved Roads and Trails by Use

Route Type	Use	Miles
Road	Hike, Bike, Horse	72 mi
Trail	Hike,	41 mi
Trail	Hike, Horse	21 mi
Trail	Hike, Bike, Horse	5 mi

Map Page Location

Scale
1:125,872
1 inch = 10,489 feet
Miles
0 1 2

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Section 2 THE PLANNING PROCESS

Developing an RTMP is a dynamic process that can take several years to complete. Per the Department's Trails Policy, opportunities for public participation in the planning process must be provided. Specifically, an RTMP should:

- Meet guidelines provided by the unit's general plan;
- Address stakeholder needs;
- Incorporate and coordinate with local and regional planning documents;
- Adhere to existing laws and regulations;
- Include the public and all potential user groups in the planning process;
- Provide user accessibility;
- Protect resources; and
- Provide a mechanism to monitor outcomes.

2.1 RTMP Planning Process

Preparation of this RTMP followed the process outlined below and was in compliance with Departmental Notice 2012-06 regarding the review and approval of management plans, as well as applicable state and federal regulations for resource protection and public participation.

1. Develop the planning team. The planning team consisted of multi-disciplinary staff from the park sector, district and headquarters.

2. Inventory and Mapping. A road and trail inventory is conducted and a base map with associated attributes is created. This inventory and assessment process was developed to provide an objective and consistent method for determining road and trail infrastructural problems and associated solutions as well as to officially record road and trail information such as physical characteristics and allowed uses. The data collection process relies on easily repeatable and non-controversial measurements of features and conditions. Terminology and methods are standardized and applicable throughout the state and across various environments to provide reliable comparisons between watersheds, parks, or other geographic areas of interest. The base map and route attributes conforms to the Department's established guidelines for categorization, segmentation, and classification of roads and trails.

3. Stakeholder Input. As appropriate to the park, data is gathered from park users and other stakeholders. Typically, data includes information on issues pertinent to road and trail use and sustainability. Public or stakeholder workshops are held to allow those people to assist in identifying needs, suggest routes and restoration opportunities, and provide general comments. Trails use surveys are conducted during different seasons and times to solicit input from trail users.

4. Evaluate and synthesize data. Data is collated, compared, and assessed. Issues such as trail sustainability, safety, adequate infrastructure, connectivity, land use compatibility, and potential user conflicts are identified.

5. Development of proposal and alternatives. To develop alternatives, staff considers stakeholder input, accessibility needs, resource issues, National Historic or Recreation Trail certification and/or nomination, and linkages to transit and other recreational trails and facilities outside the park. Recommendations for plan alternatives may include maintenance strategies, new routes, new or alterations to trailhead facilities, or change-in-use designations.

6. **Administrative Draft RTMP**. A preferred plan is developed for review by departmental staff.

7. **Draft RTMP.** Following review, and necessary revisions, of the Administrative Draft, a Draft RTMP is developed. A public meeting, as determined by plan specifics, may be initiated to solicit comments related to the plan.

8. **Final Draft RTMP/Environmental Document**. The Final Draft Plan is developed to include the appropriate Draft Environmental Document as required by law. Public comments are solicited through the required environmental review process.

9. **Public Review.** Department staff receive and evaluate public comments and respond as appropriate per CEQA guidelines. The draft may be modified, as necessary, to incorporate public comments or concerns.

10. **Final RTMP/Environmental Document.** The final RTMP and associated environmental document, including changes resulting from public comments as required, is produced and recommended for adoption.

HRSP Planning Specifics

For this RTMP, the HRSP staff conducted the road and trail inventory, including components, condition assessment, and preliminary recommendations, in 2012 through 2015. The purpose of this assessment was to:

- Integrate field data into the management process;
- Provide the current status of the roads and trails for decision making purposes; and
- Provide a knowledge-base for ongoing assessment, monitoring, and planning.

The park's roads and trails were evaluated to determine: 1) non-system roads and trails to be decommissioned or incorporated into the system; 2) system roads and trails that require maintenance; and 3) system roads and trails that require redesign, reconstruction, or reroute to meet Departmental standards.

Information was also gathered through an existing conditions assessment in which existing uses of each road and trail were identified. The road and trail inventory and assessment did not address legacy logging roads that are no longer used as transportation routes. Because these roads have not been used as transportation routes for decades, and are degraded and unusable for transportation or recreation, they are now considered cultural and natural resource management issues that will be addressed through future watershed planning efforts.

HRSP held seven stakeholder meetings between October and December 2010 at the HRSP Visitor Center and included representatives from adjacent landowners, local non-profits, equestrian, mountain bike, and hiking groups, and local utilities. In addition, government agencies were consulted including California Department of Fish and Wildlife, CalTrans, and CalFire, and the U.S. Bureau of Land Management, National Oceanic and Atmospheric Administration, and U.S. Fish and Wildlife Service.

Staff conducted visitor trail use surveys in two locations, one in Founder's Grove (frontcountry) and one in Big Trees Day Use Area (backcountry), in May, August, and November 2010, and February 2011. Each survey period consisted of one weekday survey and one weekend survey. Altogether, 465 visitor surveys were collected. For a copy of the survey and details on the survey results, see Appendix 8.2.

2.2 Change-in-Use Evaluation

The Department has developed a process to facilitate and make consistent the review of change-in-use proposals resulting from this planning process that would add or remove uses from existing recreational roads and trails in the state park system. 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:

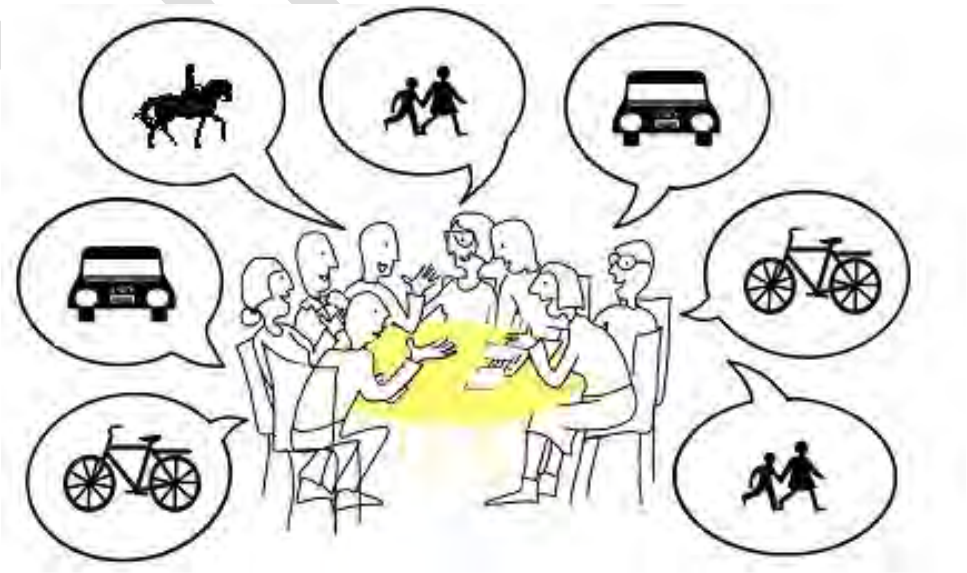
- Implement the Department's Trail Policy, including consideration of multi-use trails and trail connectivity;
- Ensure that projects can be implemented in a manner that avoids or mitigates significant impacts to the environment;
- Inform decision-making to include the diversity of resources and users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

A 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
- Disapproval
- 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 six steps are completed as part of the 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

The Department's CIU process was vetted through a Programmatic Environmental Impact Report (PEIR). The purpose of the PEIR was to evaluate the environmental effects of adoption and implementation of the CIU process and was prepared pursuant to the California Environmental Quality Act (Public Resources Code Section 21000, et seq.). Additional information on the Department's Trail Change-in-Use process and PEIR can be found at http://www.parks.ca.gov/?page_id=28461.

2.3 Plan Consistency

Recommendations in this RTMP are consistent with California Public Resources Code Section 5019.53, which provides the overarching directive on the purpose of improvements, such as trails, in a state park. Specifically, the section stipulates that:

> *Improvements undertaken within state parks shall be for the purpose of making the areas available for public enjoyment and education in a manner consistent with the preservation of natural, scenic, cultural, and ecological values for present and future generations.*

In addition, this RTMP is consistent with the park unit's classification and general plan and follows guidelines and policies established in other management and interpretive plans; departmental manuals; local, regional, and statewide plans; sensitive natural and cultural resources documents; deed restrictions; and control agency policies, including:

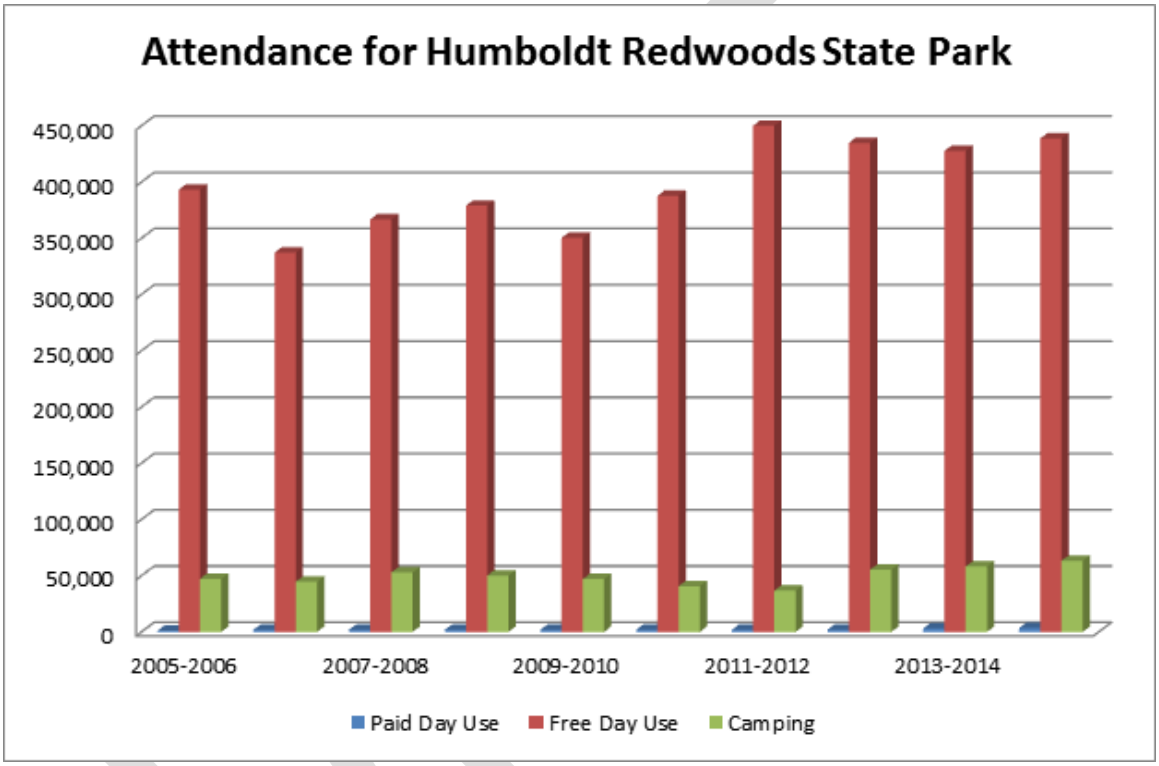
- Humboldt Redwoods State Park General Plan, 2002
- Redwood Pathways Strategy, 2002
- Humboldt County Regional Pedestrian Plan, 2008
- Humboldt County Regional Transportation Plan, 2008
- Humboldt People Powered Pathways, 2008
- Humboldt County Regional Trails Master Plan, draft, 2010
- Humboldt Regional Bicycle Plan - Update, 2012
- California State Parks Trails Handbook, 1991
- California State Parks General Planning Handbook, 2010

The Avenue of the Giants corridor within the park was evaluated for the possible development of a multi-use pathway as envisioned in the Avenue of the Giants Community Plan from 1998 and elsewhere. Due to geographic constraints imposed by the Eel River, State Route 101, State Route 254, and local terrain, a single integrated trail system has been determined to be infeasible in this location. Instead, development of improved access from the Avenue into existing trail facilities is recommended. These improvements would expand the existing trail system to include connector trails to small communities and large existing parking facilities along the Avenue. Specific locations for trailheads and connector trails are not presented in this RTMP. Instead, they will be identified under project specific development and coordination efforts and guided by the RTMP recommendations.

Section 3 PARK CONDITIONS

3.1 Park Visitation

HRSP is an international tourist destination that has hosted over half a million people annually for decades. The majority of visitors come from the San Francisco Bay Area but a significant percentage come from further abroad, including internationally. Because the park is located in a rural area, many visitors stay overnight in one of over 250 campsites. Consequently, visitation is heaviest during the summer months.



3.2 Existing Recreational Resources

HRSP provides a variety of recreational opportunities, including over 250 group, family, horse, and environmental campsites, six backcountry campsites, and nine individual and group picnic sites. The park has over 80 miles of roads and 60 miles of trails that provide access to various sections of the park for hikers, bikers, and equestrians. Most of the park's road and trail system skirts the three large ancient redwood areas, and little access is provided into these practically untouched portions of the park.

HRSP includes a substantial backcountry of steep and rugged terrain, much of which was previously logged. Many old roads and trails access the backcountry and are available for use by hikers, bikers, and equestrians willing to expend the energy and time it takes to enter these remote sections of the park.

Popular Park Destinations

Avenue of the Giants
The Avenue of the Giants is the old alignment of Highway 101 that today is recognized as State Route 254. The road allows visitors to enjoy a 32-mile, 8-stop auto tour through the heart of an old growth stand of redwoods. The road is owned and maintained by CalTrans.

Park Visitor Center
The heart of the park is the Visitor Center, which is offers interpretive exhibits and displays, theatre, bookstore, and limited picnicking sites. It is run by the Humboldt Redwoods Interpretive Association, a not-for-profit organization dedicated to educating the public about the park.

Founders Grove
This old-growth redwood forest is accessible from Highway 101 and the Avenue of the Giants. It hosts some of the tallest trees in the world and offers a half-mile ADA accessible loop trail as well as connections to longer trails in the immediate area.

Mattole Road
Mattole Road is a narrow, winding, single-lane road that traverses old growth and second growth redwood forests between Highway 101 and the Pacific Ocean. It offers limited opportunities to access trails and campgrounds within the park. Beginning at Highway 101, the first 5.26 miles is owned and maintained by the Department. From the intersection with Grasshopper Road west, the road is owned and maintained by Humboldt County.

Rockefeller Forest
The majestic 10,000 acre Rockefeller Forest is the largest remaining contiguous old-growth coastal redwood forest in the world. The forest is accessible from the Mattole Road and offers a half-mile ADA accessible loop trail as well as the longer, 7.5-mile, Bull Creek Loop Trail.

South Fork Eel River
The park offers numerous opportunities for visitors to enjoy the recreational and scenic amenities of the South Fork of the Eel River, which flows through HRSP. Popular river access points include High Rock River Bar at the north end of the park, Gould River Bar near Park Headquarters, and Landsdale River Bar at the south end of the park. Swimming, fishing, canoeing, kayaking, and rafting are all popular summer activities.

Popular Trail Routes
Popular trail routes not listed above as a destination in themselves are listed below. A complete list of park trails and their designated uses is included in the section 8.6 of the appendix. Many of the trails below are popular because they are part of a larger loop or they lead to a visitor or scenic destination.

- Gould Grove Nature Trail (ADA Accessible)
- Drury-Chaney Loop Trail (ADA Accessible)
- Stephen's Grove Loop Trail
- Bull Creek Trails North & South
- River Trail
- Addie Johnson Trail
- Johnson Camp Trail
- Grasshopper Multi-use Trail
- Look Prairie Multi-Use Trail
- Peavine Ridge Multi-Use Trail
- Thornton Multi-Use Trail
- Grieg Multi-Use Trail
- Kemp Multi-Use Trail
- Squaw Creek Multi-Use Trail

Popular Trailheads

Big Trees Day Use Area
The Big Trees Day Use Area provides parking and trailheads for trails both north and south of Bull Creek. A footbridge is installed seasonally to provide access to the south side of Bull Creek. From late September through mid-June, the trailhead only provides access to the north side of Bull Creek. A trailhead located at the lower end of Grasshopper Road provides access to the Bull Creek Trail – South during the wet season.

Lower Grasshopper Road
The parking area and trailhead located at the lower end of Grasshopper Road provide all-season access to the south side of Bull Creek and the west side of the South Fork Eel River. This trailhead also provides access to the Grasshopper Peak area via several routes.

Blue Slide Day Use Area
The Blue Slide Day Use Area is located near the intersection of the Look Prairie Road and the Mattole Road. It provides access to North Bull Creek and Homestead Trails as well as the Look Prairie Road.

Lower Bull Creek Flats Trailhead
The Lower Bull Creek Flats Trailhead provides access to trails both north and south of Bull Creek. Footbridges are installed seasonally to provide access to the south side of Bull Creek and both sides of the South Fork Eel River. From late September through mid-June, the trailhead only provides access to the north side of Bull Creek. A trailhead located at the lower end of Grasshopper Road provides access to the Bull Creek Trail – South and the River Trail during the wet season.

Burlington Campground and Visitor Center
This area serves as the heart of the park with administrative offices, camping, a visitor center, and trailheads to trails along the South Fork Eel River as well as a self-guided interpretive trail.

Williams Grove
The Williams Grove Day Use Area and Campground provide parking and trailheads for trails along the South Fork Eel River. A footbridge is installed seasonally across the Eel River to provide access to the west side of the river via the River Trail. From late September through mid-June, the trailhead only provides access to the east side of the Eel River. A trailhead located at the lower end of Grasshopper Road provides access to the west side of the Eel River during the wet season.

Albee Creek Campground
Many of the park's backcountry trails as well as several loops are accessible from the Albee Creek Campground.

3.3 Adjacent Recreational Opportunities and Connections

The vast majority of land surrounding the park is privately owned and offers limited recreational opportunities. A notable exception is the prevalence of private campgrounds situated along the Avenue of the Giants through the park.

3.4 Natural and Cultural Resources

HRSP is located in the Coastal Mountain Range of Northern California. It consists primarily of steep, forested terrain ranging in elevation from nearly sea level to over 3,300 feet. Its forests are a mix of old growth and second growth stands of coastal redwood, Douglas fir, tanoak and Pacific madrone, including some of the largest remaining old growth redwood tracts in the world. The area receives heavy rainfall during winter months, which drains to over 170 miles of streams and rivers in the park to the South Fork of the Eel River.

While much of the cultural history of the area is known, cultural resources in the park have not been comprehensively surveyed. It is believed that many of the prehistoric Native American villages that were once located in the park have been washed away or buried by winter flooding. However, hundreds of historic sites such as homesteads, orchards, roads and trails, still exist within the park and many are accessible by the park's roads and trails.

A complete discussion of the natural and cultural history of the park, including topography, meteorology, hydrology, geology, ecology, and Native American and Euro-American sites, is included in the park's 2001 General Plan. In addition, the habitat types and associated sensitive species for each region of the park are discussed within the area-specific recommendations herein.

(*Note: The type of environmental document is to be determined and not included in this Administrative Draft. The following text is a placeholder until the document has been completed*.) A Negative Declaration (ND) has been prepared for this plan and is included in the appendix of this document. Additional information about the project location and the natural and cultural resources of the area is included in the Project Description and Environmental Checklist sections of the ND.

3.5 General Plan

The RTMP is intended to be a sub-component of a park's general plan, addressing the specific transportation management issues of the unit within the goals and objectives of the General Plan. The park's 2001 General Plan calls for the development of a trails management plan to evaluate the park's entire trail system and guide the placement and use of future trails and trail camps. In addition, the plan provided a list of trail-related recommendations, which have been incorporated herein as appropriate.

3.6 Wilderness Boundary

This RTMP has updated the park's wilderness boundary since it was delineated in the 2001 General Plan. The boundary is partially based on the location of specific roads and trails within the park, which were originally identified on USGS quadrangle map. Through the inventory process of this RTMP, the location of these roads and trails has been more accurately identified through the use of a global positioning system (GPS). The boundary remains as originally described in the General Plan (see Appendix 8.11), but the accuracy of the map has been improved.

Section 4 DESIGNATIONS AND CLASSIFICATIONS

The following is a summary of guidelines pertaining to the planning, design, layout, and maintenance of roads and trails in the state park system.

4.1 Road and Trail Designations

As part of this planning effort, existing roads and trails and their uses were identified in a geographic information system (GIS) database. Roads and trails were identified using the best available information from topographic and road and trail maps, existing GIS data, global positioning system data, aerial photography, light detection and ranging technology, ground surveys, staff institutional knowledge, and records searches. This information was used to develop a base map that included all system and non-system roads and trails.

All roads and trails were identified as either a "system" or "non-system" route. If the alignment is a system route, then the route was further designated as either a "road" or "trail." System roads and trails are recognized as official routes owned and maintained by the Department and included in the park's facilities inventory. "Non-system" routes (e.g. user-created or volunteer trails) or routes maintained by another agency or landowner are not recognized as owned or maintained by the Department.

"Non-system roads" are located on state park property, but operated or maintained by other agencies or landowners, such as private roads, local roads, county roads and highways. Management and maintenance of these roads may be determined by an easement or legal agreement with the outside agency. "Non-system trails" occur in most parks and can be (1) routes maintained by another agency under a legal agreement, (2) unsanctioned, user created trails, or (3) remnants from historic uses. Non-system routes at HRSP, except for legacy logging roads as described above under "HRSP Planning Specifics," were identified and recommended for removal.

If the route currently accommodates street-legal vehicles or was initially constructed to allow street-legal vehicle access, then it is designated a "road." From here forward the term "vehicle" refers to street legal vehicles and not vehicles specifically designed for off road use only. Roads include routes that were initially constructed as roads and topographically display a road prism profile, but may no longer accommodate vehicles due to erosion, vegetation growth, physical barriers, or use designation. Roads may have trail uses such as hiking, biking, or horseback riding, in addition to vehicle use. Old roads may be difficult to detect due to vegetation overgrowth, lack of use, or geological movement. At first observation, a route may look like a trail (e.g. single-track, three feet wide), but is actually located in the middle of a twelve-foot-wide road prism profile.

Trails on road beds that are no longer passable by vehicles are considered a road in the sub-category of "Trail on Roadbed." This sub-categorization is useful to track the location and condition of old or abandoned roads. This information can then be used to determine if the route should be maintained as a road, converted to a trail, or removed. Work to remove or maintain this type of road requires heavy equipment, not hand labor

typically associated with the removal or maintenance of trails.

The route is a "trail" if it was not initially constructed to allow street-legal vehicle access and currently does not accommodate street-legal vehicles. Unconstructed, informal routes of travel that accommodate recreational and/or vehicle uses may be designated as "routes." Routes include river and stream gravel bars utilized as roads, paths across beaches or through sand dunes, or peak ascent paths in authorized climbing areas. They are often inherited from past land use practices. In some situations, they are designated by staff as the most appropriate place to put roads and trails in dynamic and/or sensitive environments.

4.2 Designated Uses

All trails in California's state parks allow for pedestrian use, although pedestrian access may not be considered the primary use. Once the route is designated as a road or trail, the type of use is assigned. All roads and trails are assigned one of the following uses:

- Hike Only
- Bike
- Horse
- Bike and Horse ("multi-use")
- None/Controlled Access (e.g. residence areas, administrative facilities)
- Road with Bike Lane

A trail designated for hiking only has a much different design than roads and trails designated for bikes or horses. For example, sight distances, abrupt grade changes, turning radii, and linear grades are much more flexible with pedestrian trails than for other types of trails and roads.

A "multi-use" trail is one that allows two or more uses in addition to pedestrian. Thus, a bike trail, which by default allows for pedestrian use, is not considered "multi-use," but a bike and horse trail is considered "multi-use." A multi-use trail designation dictates the most sustainable and least resource-damaging design, which is blended from both horse and bike trail standards.

4.3 Classification of Trails

Once identified, trails are further classified based on intensity of use and location within the park. Classifying trails allows a manager to objectively assign design standards and work priorities that are consistent with the primary function of the trail, environmental sensitivity of the habitat, relationship to developed facilities, and visitor use. Class I trails require the highest trail construction and maintenance standards. The standards for Classes II, III, and IV diminish consecutively. The selection of trails to receive maintenance and rehabilitation is also influenced by their classification. Assuming visitor safety, resource protection, and trail investment concerns are equal; those trails with the highest classifications ("Class I" being the highest) will receive the highest maintenance and rehabilitation priority. The Trail Classification for individual trails are located in the appendix 8.6.

- **Class I** - Includes ADA accessible, bicycle, equestrian, interpretive, and hiking trails within close proximity to developed facilities. Gravel, turnpikes, puncheons or other drainage structures are required for resource protection and visitor safety in areas of trail trenching, trampling, multiple trails, or saturated trail beds.

- **Class II** - Includes hiking, bicycle, and equestrian trails that lead away from developed facilities. Primarily native materials are used for trail tread.

- **Class III** - Includes lightly used hiking trails. Native materials are used for trail tread.

- **Class IV** - Includes special use and access trails. The minimal trail tread necessary to provide safe footing is used.

Section 5 BEST MANAGEMENT PRACTICES

This section provides a summary of the best management practices used by the Department to plan, design, construct, and maintain sustainable roads and trails within the state park system. Additional and more detailed information can be found in the Department's Project Implementation and Best Management Practices, 2009, and the Department's Trails Handbook, 1991. This section is meant to supplement but not replace avoidance, minimization, and mitigation measures located in the environmental document for this plan.

General road and trail design and layout practices include:

- Establish trail user type(s) and identify appropriate design standards.
- Maintain system connectivity and circulation patterns.
- Provide for long-lasting, low-maintenance, and low-erosion (i.e., "sustainable") roads and trails.
- Minimize disruption or alteration of the natural hydraulic flow of the landform.
- Avoid, minimize, or mitigate significant impacts to natural and cultural resources.
- Use inherent aesthetic resources to enhance new trail alignments.
- Design roads and trails so that they meet the needs of the intended user group(s).
- Use standard Departmental project requirements as described in the plan's environmental document.

5.1 Sustainability

A "sustainable" road or trail has been designed, constructed, or re-constructed such that it:

- does not adversely impact natural and cultural resources;
- can withstand the impacts of the intended user groups;
- meets the needs of the intended user to a degree that the user does not deviate from the established road or trail alignment; and
- survives the natural elements while receiving only routine cyclical maintenance.

To design, construct, and maintain sustainable roads and trails requires a thorough understanding of the landform that the road or trail is or will be traversing. It also requires an understanding of the user groups being served, and the needs and design standards that are specific to each user group. Combining this information with high-quality construction materials, results in a sustainable road or trail. Roads or trails that do not meet the sustainable definition but are considered integral to park operations may be constructed with specific trail structures added to help address the problems that lead to the lack of sustainability.

5.2 Resource Considerations

Roads and trails can be considered as park facilities similar to restrooms, campsites, and parking lots. They are developed to provide access to the natural and cultural resources of a park and to enhance the visitor's enjoyment of those resources. Thus, the resources of a park should live in harmony with its facilities and decisions regarding design, layout, and construction of roads and trails should be balanced with what is best for the park's resources. No road or trail shall compromise the integrity of park resources.

If a road or trail cannot be constructed without significantly impacting resources, or if it becomes too costly to construct or maintain a road or trail to avoid impacts to resources, an alternative corridor should be considered or the need for the trail should be reassessed.

5.3 Maintenance Activities

A thorough maintenance program will prevent deferred maintenance problems and reconstruction projects. Maintenance activities can be broken into three types:

1. Annual/Cyclical – Includes drainage maintenance, vegetation clearing, tread maintenance, and brushing performed on a re-occurring basis. Typically, annual trail maintenance tasks require minimal supervision and can be conducted by maintenance staff, a conservation corps, or volunteer crews. Typically, cyclical maintenance is planned for the average life span of a facility. However, weather, vandalism, and other unpredictable events can greatly affect the life span and periodic trail inspections are necessary to keep staff abreast of current conditions.
2. Pro-rated/Deferred – Includes construction, re-construction, re-engineering, and restoration activities performed on a periodic basis and necessary to address road and trail infrastructure deterioration due to age and/or improper initial design.
3. Incident-Related/One-time Repair – Includes construction, re-construction, re-engineering, and restoration activities performed on a project basis to address road and trail infrastructure damaged caused by natural or man-made events such a major storm, wildfire, or vandalism.

5.4 Monitoring

A comprehensive monitoring program is suggested for all roads and trails and required for some road and trail projects. The purpose of a monitoring program is to evaluate the effectiveness of the project and to adapt management of a project to improve its success over time. In addition, monitoring provides valuable data that can be used to improve the success of future road and trail projects, as well as further assess problem areas. Monitoring protocols are described in the Department's Field Guide for Road and Trail Assessment and the Office Manual for Road and Trail Assessment.

5.5 Prioritization Matrix

Usually there are more trail project proposals than there are funds and time to complete them and the project selection process can be contentious. Setting maintenance priorities facilitates allocation of limited resources and provides a focus for fund raising efforts and volunteer work. To make the prioritization of trail projects less subjective, trail projects should be categorized based on the trail's deficiencies and opportunities as well as rating.

To determine the priority of trail projects, trail deficiencies, opportunities, and their associated criteria are assigned a point value. A range of points for each criterion enables staff to determine a score that corresponds with the relative necessity of the improvement. A higher score indicates more deficiencies or opportunities for the trail.

For example, a trail with exposed rocks in the trail tread that could cause someone to trip may receive a rating of two, whereas a trail with a rotted safety railing on a bridge suspended 40 feet above a stream channel

may receive a rating of ten due to its significantly higher potential for creating a health and safety problem. A new trail that provides improved access to a view point may receive a rating of two, whereas a new trail that provides improved access to a view point and creates an important link to other trails may receive a rating of three due to the greater opportunity for recreational benefits.

The range of points for each criterion should allow more points to be awarded for those projects that are essential to the mission of the Department. Stakeholder and public input should be considered in the assignment of point values. Thus, projects that ensure visitor safety, resource protection, or protection of the facility itself may take priority over projects that provide a visitor convenience or provide additional recreational opportunities.

Potential projects can be listed and assigned points for each of the project criterion. Those points can then be totaled and projects ranked from high to low with the highest priority projects receiving the most points.

Project Criteria	Point Rating Example	Example
Visitor Safety	1-10 points	Trail conditions that represent a threat to the safety of park visitors, usually severe enough to warrant barricades, warning signs, or temporary to permanent trail closures.
Resource Protection	1-10 points	Trail conditions that represent a threat to the park's natural or cultural resources, usually severe enough that critical resources are being damaged.
Preservation of Investment	1-7 points	Trail structure conditions that, if not repaired, will result in total loss of the structure.
Visitor Convenience	1-5 points	Trail conditions that make it uncomfortable to use the trail such as overgrown brush or desired improvements to an existing trail such as change-in-use
New Trail Construction	1-3 points	The development of an entirely new trail.

The following charts list the priority and frequency of annual trail maintenance and pro-rated and incident related maintenance.

ANNUAL TRAIL MAINTENANCE	PRIORITY	EXAMPLE MAINTENANCE OCCURRENCE
Emergency drainage	1	Major Water Runoff
Structure repair	2	Annual
Drainage repair	3	Annual
Clearing	4	Annual
Tread repair	5	Annual
Brushing	6	Annual

PRO-RATED OR INCIDENT-RELATED TRAIL MAINTENANCE	PRIORITY	EXAMPLE REPLACEMENTS
Structure construction/re-construction - Bridges - Puncheon - Steps - Retaining walls	1	As Needed 8-15 years 8-15 years 10% of total yearly As Needed
Drainage facility construction/re-Construction	2	As Needed
Trio rehabilitation (Brushing, slough and berm removal, and reshaping the trail tread)	3	Every 5 years
Turnpike construction/re-construction	4	Every 10 years
Trail re-route	5	As Needed

5.6 Reconstruction

"Reconstruction" is construction work on an existing road or trail to bring it back to its original design. Reconstruction can be used to re-establish trail sustainability if the original design was sustainable, or to re-establish an "unsustainable but maintainable" trail. Trail reconstruction also may reshape the backslope of the trail, remove the berm, scarify the tread, and restore tread elevations and drainage structures. Typically, work of this scope also involves repair or reconstruction of other trail structures, such as switchbacks, climbing turns, retaining walls, steps, bridges, and puncheons.

5.7 Re-engineering/Redesign

The term "redesign" can be used interchangeably with the term "re-engineer." Reengineering/ redesign can be used to create a sustainable trail when the existing trail alignment can be sustainable, but improperly designed structures and elements along the trail have created an unsustainable situation. Reengineering/redesign can also be implemented to create an "unsustainable but maintainable" trail when political, cultural, or environmental issues require retaining a sub-standard alignment. Minor re-routes may occur within the original trail corridor. Curvilinear techniques can reduce the linear grade and improve drainage by lengthening the trail and decoupling it from natural drainage features. Linear grades also can also be reduced by cut-and-fill techniques, where appropriate.

5.8 Road-to-Trail Conversion

Road-to-trail conversion is a re-engineering technique used for transforming an existing road, originally constructed for vehicles or currently used by vehicles, into a recreational trail. Similar to road removal, road-to-trail conversion involves excavating road fill from the embankment and placing it against the cut bank to match the slope above. A four- to six- foot wide portion of the original road bench must be retained to serve as the new trail tread.

5.9 Removal

Road and trail removal and site restoration should correct damage or disturbance to natural and cultural resources created by road and trail construction, maintenance, and/or visitor use. When a trail or section of trail is abandoned, steps should immediately be taken to restore the habitat. Typically, the re-route or replacement trail is constructed before the old trail is removed and the site rehabilitated.

During site restoration, the cut bank and bench are de-compacted and the soil aerated to promote re-vegetation of the trail bench and bonding of imported soil, if necessary. Soil from the fillslope is excavated and placed against the cut bank to restore the natural slope or contour and facilitate natural sheet flow drainage. Once the trail bench is re-contoured and gullies are stabilized, vegetation is re-established through management of existing native seed banks, or active transplanting of native species.

5.10 Re-Route

A trail can be "re-routed" outside of its original corridor when the current corridor is determined to be unsustainable. A re-route can be used to by-pass environmentally or culturally sensitive areas, provide a sustainable grade, expand trail width, or improve system connections.

Section 6 THE PLAN

This RTMP includes system-wide and area-specific recommendations. These recommendations shall be implemented in accordance with the Department's Best Management Practices as outlined in Section 5 above to minimize and avoid impacts to resources as well as ensure road and trail sustainability. Standard Project Requirements as outlined in the RTMP's environmental document will also be required if Best Management Practices are insufficient to minimize and avoid impacts to resources and ensure road and trail sustainability. The intent of the RTMP is not necessarily to build all recommendations presented, but to provide options that have been vetted for design and resource feasibility at a planning level to help guide future park management decisions. Recommendation implementation will be dictated by park priorities and funding availability. Additional mitigation measures may also result from subsequent environmental review during specific project implementation.

6.1 Parkwide Recommendations

- All new trails and alterations to existing trails shall follow the Department's Accessibilities Guidelines and the federal accessibility guidelines for outdoor developed areas.
- Within park boundaries, every non-historic, non-system trail shall be removed and rehabilitated, unless otherwise specified in the RTMP. Non-system roads determined to be necessary for legal access will not be removed.
- Every system road and trail shall be on a park maintenance plan and receive cyclical and pro-rated maintenance. If geologically and hydrologically feasible, historically significant roads and trails shall be maintained in a condition reflecting their historic appearance, while remaining unobtrusive as possible to the surrounding natural areas. A qualified archeologist or historian should be consulted when developing prescriptions for historic roads and trail repairs and maintenance. The document "Cultural Resources Study of the Historic-Period Roads and Trails of the Bull Creek Watershed, Humboldt Redwoods State Park, Humboldt County, California," September 2001, should be referenced when planning specific road projects.
- Trail width shall be limited to that required for the type of use and classification of the specific trail. Trail layout, design, and maintenance shall follow the the Department's Trails Handbook.
- Provide adequate staffing to properly maintain, plan, budget, design, and construct the unit's roads and trails system.
- Roads and trails shall be designed, constructed, re-engineered, re-constructed, or re-routed to improve sustainability and drainage, prevent erosion, and reduce future maintenance needs.
- Roads and trails shall provide public access to the park's most popular features.
- Roads and trails shall not fragment large areas of open space or viewsheds. The overall aesthetic quality of the park, including human sounds carried from one road or trail to another, should be a primary consideration of road and trail design and management.
- Consider acquisition of land and/or easements to support local, regional, state, and national trail connections.
- Loops and connections to regional trail systems are preferred, to give users more

choices for the length and duration, as well as a greater diversity of terrain and experiences

- Consider providing additional trails camps throughout the Bull Creek Watershed. The goals and objectives as well as the general location of four trails camps were originally identified in the 2002 HRSP General Plan. The locations have been refined and adjusted based on the additional site selection processes provided in this RTMP. These camps are proposed to offer backcountry hikers, bicyclists, and equestrians opportunities for overnight camping at various locations and in different settings throughout the Bull Creek Watershed. Proposed trail camp locations and summary descriptions are located in the area-specific recommendations section of the RTMP.
- Connections to parking areas and pedestrian access points shall be provided and/or improved.
- Multi-use trails shall be considered in accordance with the Department's 2005-2006 Trails Policy, which states "Multiuse trails and trail connectivity with adjacent public trail systems will be considered in the development of trail plans or individual trails."
- Improve road and trail signage to better facilitate way-finding and interpretive opportunities.
- On a project basis, re-engineer all drainage crossings identified in the Drainage Structure Condition Index Assessment and associated maps contained in the appendices of this document. Implementation shall address the most significantly affected drainage structures first.
- Maintenance activities shall be coordinated with the district environmental staff prior to being scheduled, to avoid adversely impacting rare plants or other sensitive resources. Conservation measures may include flagging individual rare plants for avoidance, scheduling work for a time of year when annual rare plants have already set seed, and carefully pruning rare shrubs instead of full removal.
- Improve data collection regarding trail use and visitation to the park. A number of new technologies available through smart phone applications can be harnessed to help collect, sort, and share data about the volume, frequency, and types of trail uses. In addition, automatic pay parking machines can be used to collect information about the relative use of parking locations around the park.
- Develop new technologies, such as crowd sourcing trail information and providing trail applications for smart phones, to improve public access and information.
- If invasive plant species or other concerns warrant, park managers should consider management actions to restrict the introduction of (contaminated) horse feces, such as the required use of weed-free feed for stock or feces collection devices such as "bun bags" on short trails.
- User-created trails through the redwood groves and at parking areas along the Avenue of the Giants and the Mattole Road are a widespread and significant threat to ecosystem health and function. A comprehensive program should be developed to inform visitors of the impacts associated with off-trail hiking in these sensitive areas. The program could include interpretive elements, improved signage and enforcement where appropriate.
- Annually evaluate the need for seasonal wet-weather closures on non-paved roads to protect against damage from vehicle use in accordance with the North Coast Redwoods District's existing seasonal backcountry road use policy. See Appendix 8.10 Seasonal Road Driving Policy.

6.2 Area-Specific Recommendations and Maps

Six areas of the park were identified for area-specific recommendations. Each area has unique recommendations and accompanying maps. In addition, detailed maps with greater detail have been provided for some sub-areas.

- Avenue of the Giants - North
- Avenue of the Giants -South
- Bull Creek Northwest (including an Albee Creek Campground area detail map)
- Bull Creek Northeast (including a Dyerville area detail map)
- Bull Creek Southwest
- Bull Creek Southeast (including a Burlington and Hidden Springs area detail map)

Existing Roads and Trails Maps

The area specific maps of existing road and trail conditions at the time of planning and include:

- System paved and non-paved roads and their designated uses. Non-paved roads are divided into segments and identified with a unique segment identification number.
- Non-system roads owned and operated by other agencies.
- System trails and their designated uses. These trails are divided into segments and identified with a unique segment identification number.
- Non-system trails.
- Mileage total per area for each designated use.

Maintenance Recommendations Maps

These maps show the recommended maintenance for existing roads and trails. Recommendations are made by road or trail segment. A road or trail is typically segmented where it intersection another road or trail. Recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include multiple locations within the road segment that require maintenance, or reconstruction/ reengineering, or reroute, or any combination thereof). The road and trail inventory conducted as part of this RTMP can assist in determining the location of specific problems and associated treatments. Recommendation types include the following:

- **Reconstruction:** Rebuild existing roads and trails to return them to the original design. These trails typically can be sustainable if annual or cyclical maintenance occurs.
- **Re-engineering:** Apply new or additional structures, design techniques, or modifications to an existing road or trail corridor to improve sustainability.
- **Rerouting:** New sustainable road or trail sections that originate from and return to an existing road or trail. The abandoned, unsustainable section of trail is removed and the site is rehabilitated.
- **Annual or Cyclical Maintenance:** Routine periodic maintenance of existing roads and trails, including brushing, logging out, slough and berm removal, and drainage maintenance. By default, roads and trails that are not designated for reconstruction, re-engineering, or rerouting fall into this category.

- **Road-to-Trail Conversion:** Re-engineer to transform an existing road into a recreational trail. Similar to road removal, road fill is excavated from the embankment and placed against the cut bank to match the slope above. A four- to six- foot wide portion of the original road bench serves as the new trail tread.
- **Removal:** Removal of existing road or trail that may or may not be associated with a road or trail reroute. Removal is generally associated with unsustainable trail alignments that are no longer required or that can be rerouted to more sustainable alignments.

Planning Recommendations Maps

These maps show long-term planning recommendations for roads, trails, and associated infrastructure to include:

- New trails or routes that extend or re-route existing trails to a new destination.
- Access for administration or easements along exiting roads and trails.
- Improvements to existing trailheads or new trailhead locations.
- Resource protection related to road and trail use.
- Removal of existing road or trail routes.
- Road and trail safety improvements.
- Public or administrative road and trail access improvements.
- Interpretative improvements along roads and trails.
- Change-in-use designations.

New Trails and Change-In-Use Map

This map highlights both the new trails and existing trails that will receive a change-in-use designation as recommended in this RTMP. The intent of this map is to illustrate the enhanced connectivity and trail options envisioned in this plan.

Avenue of the Giants - North Area

Significant natural resources:

This area consists of old growth and second growth redwood forests, riparian and riverine habitats, and orchards. The Avenue of the Giants is long and linear with surrounding land uses consisting of commercial timber and agriculture. Marbled murrelets (*Brachyramphus marmoratus*) may occur in old growth forests along the Eel River, such as in the vicinity of Drury-Chaney Loop Trail. Bald eagles (*Haliaeetus leucocephalus*) have been observed foraging up and down the river. Foothill yellow-legged frogs (*Rana boylii*) and western pond turtles (*Actinemys [Emys] marmorata*) are known to occur in and along the Eel River. Willows along the river may provide nesting habitat for the willow flycatcher (*Empidonax traillii*). Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead (*Oncorhynchus mykiss*) all occur in the Eel River and fish bearing tributaries such as Bear, Jordan, and Chadd creeks. Sensitive plant surveys have not been conducted in this area. However, as they occur in similar habitat elsewhere in the park, species such as Howell's montia (*Montia howellii*) may occur in some of the alluvial areas and Humboldt County fuchsia (*Epilobium septentrionale*) can be expected along the Eel River.

Significant cultural resources:

Archaeological: There are historic archaeological sites in this area associated with logging activities and the Old Redwood Highway.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

AGN #1. Symmes Grove Trail

Issue: Symmes Grove Trail vehicle bridge across Jordan Creek has abutments that are being undermined by creek bank erosion. This bridge was constructed in 1933 and may be of historic significance. The bridge may not be stable over the long term due to overall creek and watershed instability.

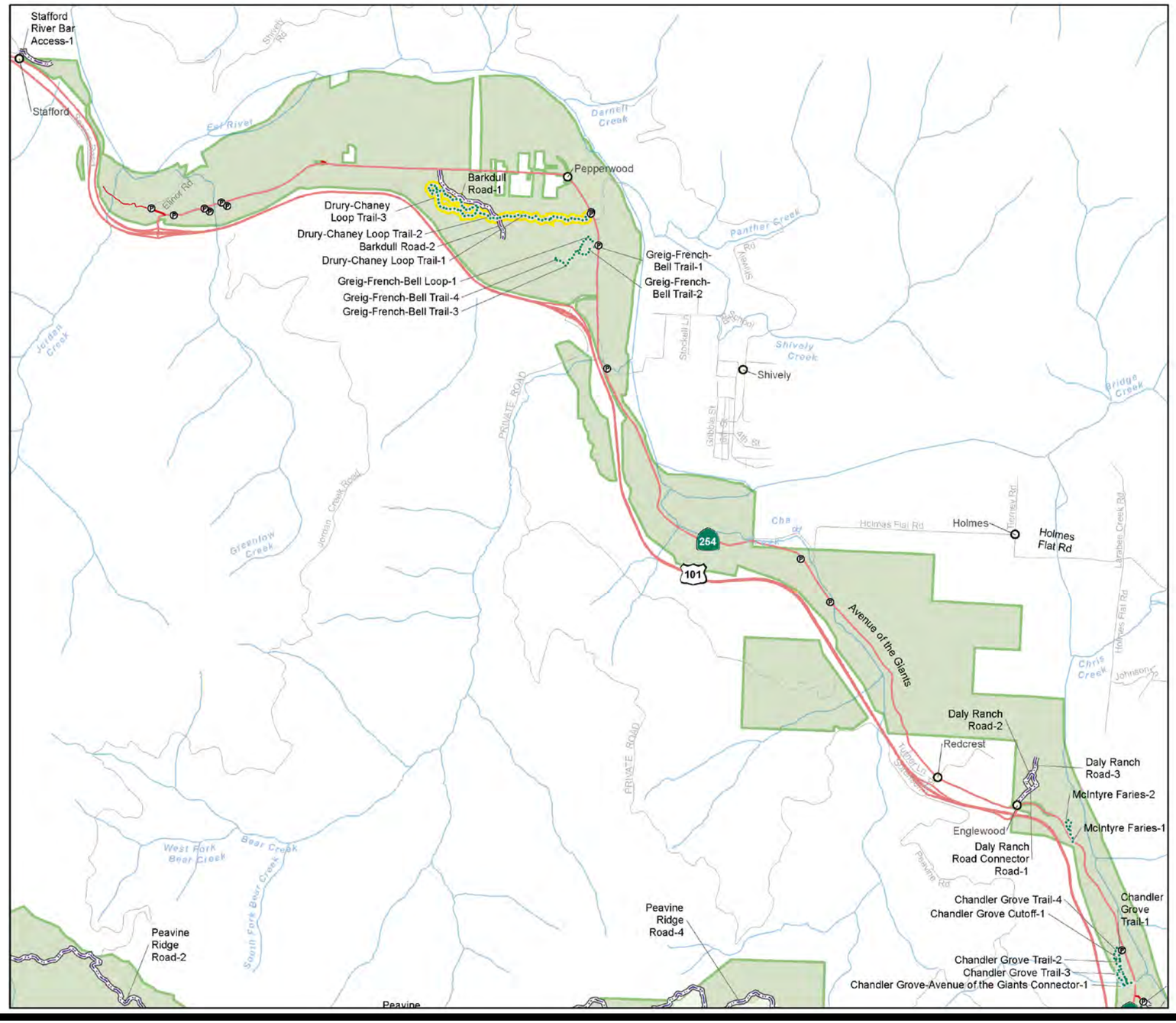
Recommendation: Department staff to work with State and local agencies to determine historic significance and potential for bridge replacement or relocation. Based on these findings, the bridge may be replaced, relocated, or removed and the Symmes Grove Trail terminated at Jordan Creek.

AGN #2. Access from Avenue of the Giants

Issue: The Avenue of the Giants runs the length of the park and is easily accessed from US 101. The Avenue has some existing trailheads that connect to redwood groves; however, many large pullouts exist where there are no system trails.

Recommendation: Investigate and develop additional access trails to groves where large parking pullouts exist and remove and rehabilitate existing non-system trails. Some trails may form new loops while others may link to existing trails. In addition, explore potential linkages to public land within adjacent communities along the Avenue of the Giants.

Map: Avenue of the Giants - North Area - Existing Roads and Trails



Existing Roads and Trails

AVENUE OF THE GIANTS - NORTH

Current Road & Trail Network by Category and Use Designation

- Hike
- State Park Rd, Hike, Bike and Horse
- Paved Park Roads
- Accessible Trail Highlight

Reference Features

- Humboldt Redwoods State Park
- SubUnits - Wilderness, Preserves
- Streams
- Highways
- Local Road
- Cities, Towns, Places
- Parking

Area Location

Scale
1:33,960
1 inch = 2,830 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

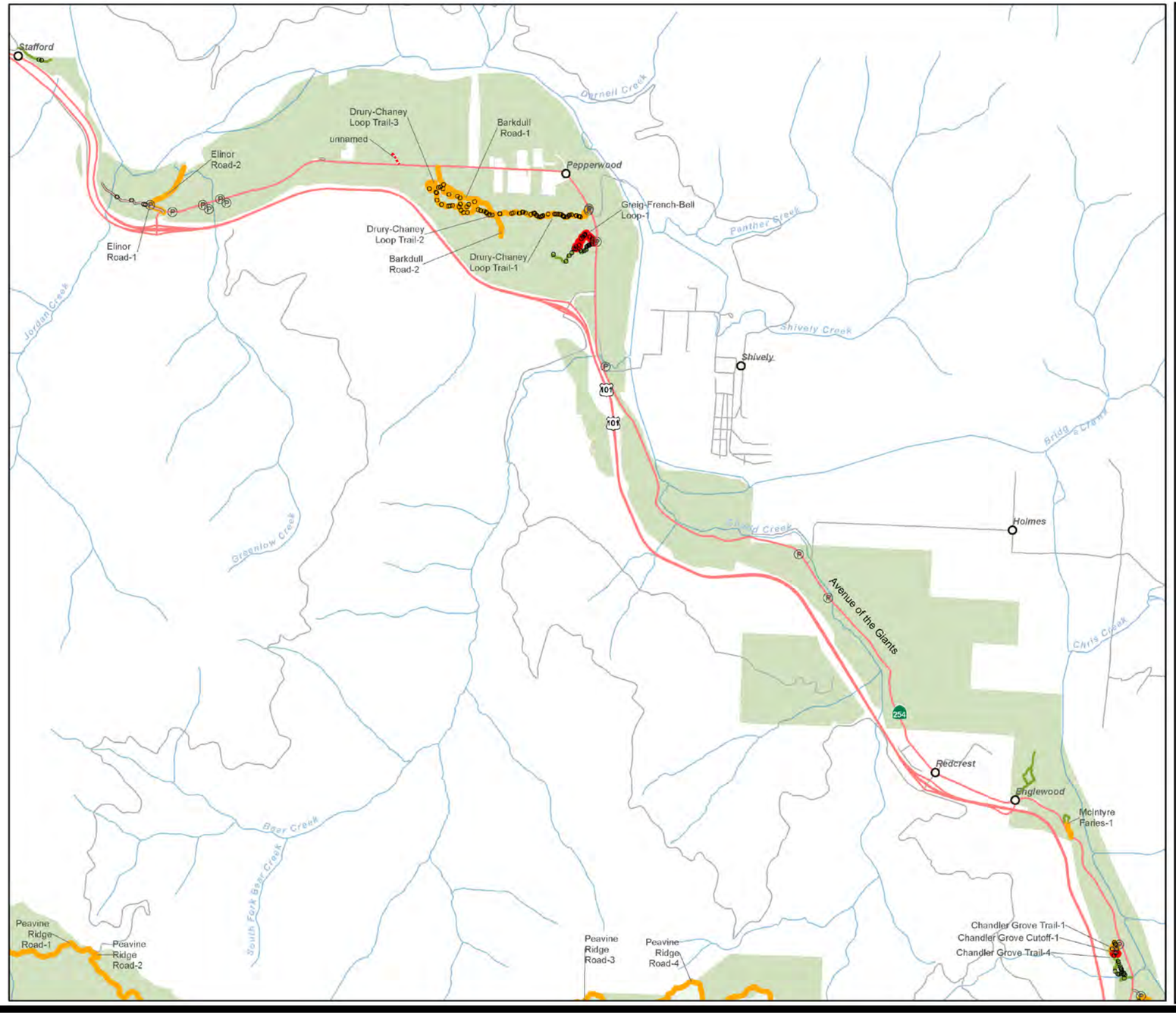
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Avenue of the Giants - North Area - Maintenance Recommendations



Maintenance Recommendations

AVENUE OF THE GIANTS - NORTH

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- User-created Trail Intersections. Remove Trail and Rehabilitate Vegetation.

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:
- Humboldt Redwoods State Park
- Wilderness / Natural Preserve
- Paved State Park Road
- Paved State Park Trail
- Highways
- Local Road
- Streams
- City Points
- Parking

Scale
1:33,760
1 inch = 2,813 feet
N
Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

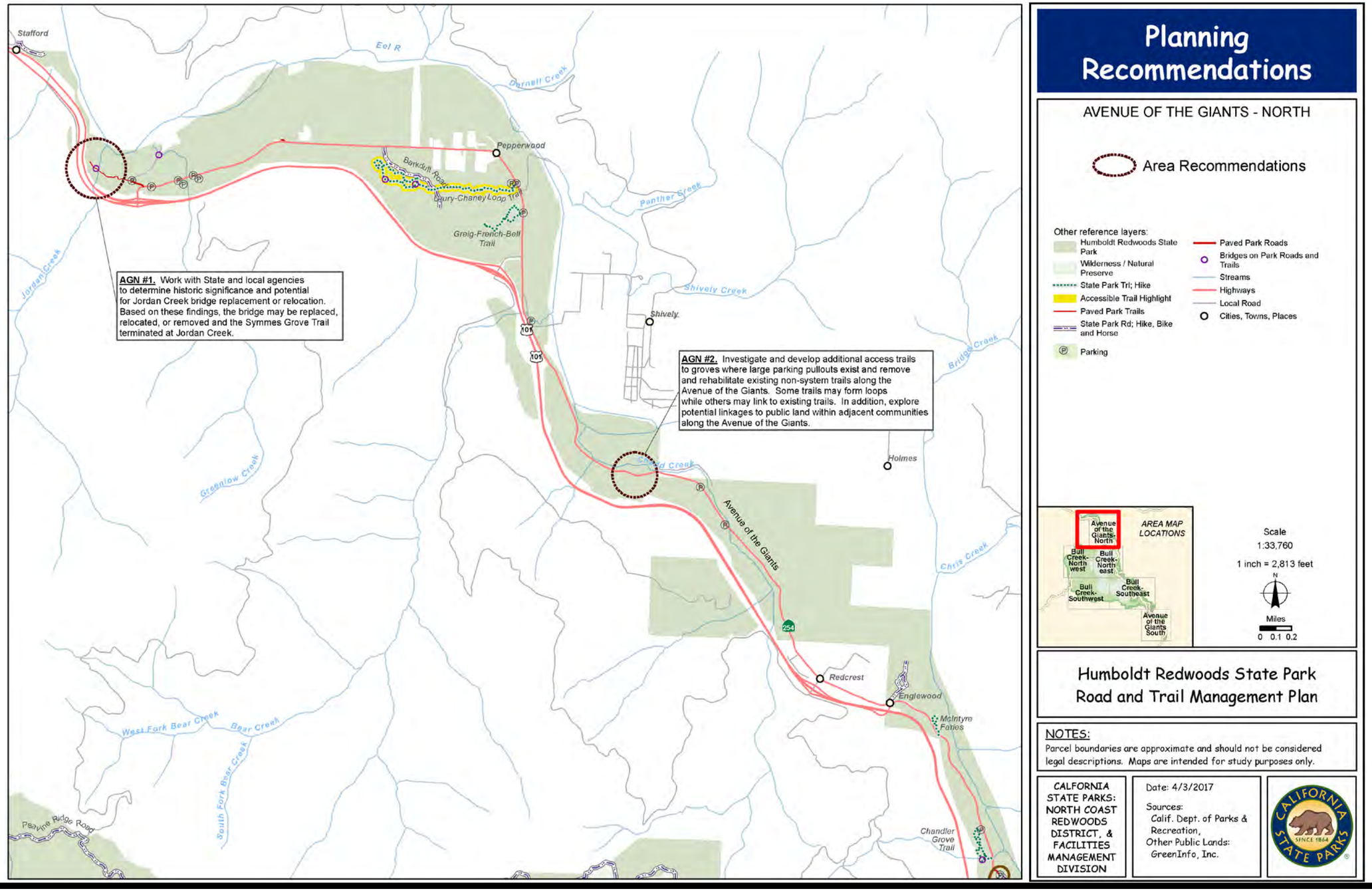
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Avenue of the Giants - North Area - Planning Recommendations



Planning Recommendations

AVENUE OF THE GIANTS - NORTH

Area Recommendations

Other reference layers:

- Humboldt Redwoods State Park
- Wilderness / Natural Preserve
- State Park Trl; Hike
- Accessible Trail Highlight
- Paved Park Trails
- State Park Rd; Hike, Bike and Horse
- Parking
- Paved Park Roads
- Bridges on Park Roads and Trails
- Streams
- Highways
- Local Road
- Cities, Towns, Places

Scale
1:33,760
1 inch = 2,813 feet
N
Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Bull Creek - Northwest Area

Significant natural resources:

Most of this area consists of second growth montane hardwood coniferous and redwood forests interspersed with prairies. In addition, tan oak forests, alder and willow riparian habitats, and orchards can be found in this area. Look and Luke prairies provide an example of a high-quality prairie habitat with a lot of native grass compositions. The Cuneo Creek watershed, which was harvested for timber under previous management, contains very steep and unstable slopes typical of the western Bull Creek Watershed.

The Upper Bull Creek watershed, which includes the Bull Creek – Northwest Area, provides habitat for northern spotted owls (*Strix occidentalis caurina*) with several known activity centers. Pacific fisher (*Pekania pennanti*) are expected to occur throughout the area. Marbled murrelets (*Brachyramphus marmoratus*) occur in areas with old growth forests, such as along portions of the Grasshopper Trail. Townsend's big-eared bats (*Corynorhinus townsendii*) have been detected in the alluvial areas of Bull Creek and may roost and breed in basal hollows in old growth redwoods. Foothill yellow-legged frogs (*Rana boylii*) are common in the cobbles along Bull and Cuneo creeks and northern red-legged frogs (*Rana aurora*) occur throughout the area. Southern torrent salamanders (*Rhyacotriton variegatus*) and coastal tailed frog (*Ascaphus truei*) are known to occur in the higher-quality, lower-order streams that have not been impacted by sediment. Western pond turtles (*Actinemys [Emys] marmorata*) are known to occur in deeper pools in Bull Creek.

One of the last remnant patches of black cottonwood-willow riparian habitat in the watershed occurs in Bull Creek, near the Homestead Trail. Black cottonwood is present in other areas along Bull and Cuneo creeks. Prior to Euroamerican colonization of the Bull Creek watershed, this habitat was common on Bull Creek from Mill Creek up into Cuneo Creek. Chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*) spawn in lower gradient streams like Bull Creek and Squaw Creek, while steelhead (*Oncorhynchus mykiss*) spawn in the higher gradient streams such as Cuneo Creek and Upper Bull Creek.

Coast fawn lily (*Erythronium revolutum),* Pacific gila (*Gilia capitata* ssp*. pacifica*), marsh pea (*Lathyrus palustris*), redwood lily (*Lilium rubescens*), heart-leaved twayblade (*Listera cordata*), Howell's montia (*Montia howellii*), and white-flowered rein orchid (*Piperia candida*) are all known to occur in the Bull Creek watershed. With the exception of Pacific gila, which occurs in prairies, all of these plants primarily occur in coniferous and broadleaf forests.

Significant cultural resources:
Archaeological: There are historic archaeological sites in this area primarily associated with homestead and logging activities. Homestead sites consist of orchards and building foundations from the former community of Bull Creek. There are also prehistoric archaeological sites recorded in this area of the park, including ethnographic sites associated with the Lolangkok Sinkyone.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

BCNW #1. HOMESTEAD TRAIL RE-ROUTE
Issue: Existing trail crosses Bull Creek in two locations. Restoration plans associated with the Bull Creek Floodplain will likely impact the crossing locations and current trail alignment.
Recommendation: Based on the Bull Creek Floodplain Restoration Plan, reroute the trail outside of the Bull Creek Floodplain, as feasible.

BCNW #2. PROPOSED HARPER CREEK TRAIL (NEW TRAIL)
Issue: Desire to provide a non-road alternative to the Peavine Ridge Road.
Recommendation: Develop the new Harper Creek Trail between Thornton Trail and Look Prairie Road. Trail use designation would be hike, bike, horse.

BCNW #3. PROPOSED FOX CAMP TRAIL (NEW TRAIL)
Issue: Desire to provide a non-road alternative to the Fox Camp Road and increase loop opportunities.
Recommendation: Develop the new Fox Camp Trail north of the Fox Camp Road from Indian Orchard Road to Fox Camp Road at the park's western boundary. Trail use designation will be hike, bike, horse.

BCNW #4. POLE LINE ROAD
Issue: This road is used year-around by private property owners and PG&E. Wet season use causes severe damage when driving surface is soft.
Recommendation: Increase maintenance frequency and resurface with coarse aggregate on a regular cycle to maintain firmness during the wet season.

BCNW #5. GRASSHOPPER ROAD
Issue: This road is used year-around by agencies servicing equipment on Grasshopper Peak and the Weott water system. Wet season use causes severe damage when driving surface is soft.
Recommendation: Increase maintenance frequency and resurface with coarse aggregate on a regular cycle to maintain firmness during the wet season.

BCNW #6. PROPOSED BAXTER-GRIEG CONNECTOR (NEW TRAIL)
Issue: Desire to improve access to the Bull Creek backcountry from the Cuneo Equestrian Campground and the Baxter and Hamilton Environmental Camps.
Recommendation: Develop new Baxter-Grieg Connector Trail. Trail use designation will be hike, bike, horse.

BCNW #7. GRIEG ROAD
Issue: This road is used year-around by agencies servicing equipment on Grasshopper Peak and the Weott water system. Wet season use causes severe damage when driving surface is soft.
Recommendation: Increase maintenance frequency and resurface with coarse aggregate on a regular cycle to maintain firmness during the wet season.

BCNW #8. PROPOSED JOHNSON CAMP CROSSOVER TRAIL (NEW TRAIL)
Issue: Desire to improve access to the Bull Creek backcountry from the Cuneo Equestrian Campground and the Baxter and Hamilton Environmental Camps.
Recommendation: Develop a new Johnson Camp Crossover Trail to connect Grieg and Grasshopper roads and the Johnson Camp Trail. It will also provide a non-road alternative to Grasshopper and Grieg roads. Trail use designation will be hike, bike, horse.

BCNW #9. FOX CAMP TRAIL CAMP
Issue: Provide additional remote overnight camping in the Bull Creek Watershed
Recommendation: Provide trail camp located along Fox Camp Road approximately midway between the Indian Orchard Trail and the Mattole Road. This camp would offer an attractive destination for visitors wishing to explore the northern edges of the Bull Creek backcountry and the open prairies of the Fox Camp Ridge. It provides a one-day trip from the Hamilton Camp or the Cuneo Creek Equestrian Campground

BCNW #10. HAMILTON TRAIL CAMP
Issue: Provide additional remote overnight camping in the Bull Creek Watershed
Recommendation: This trail camp would be located at the site of the former Hamilton Barn and provides additional capacity for hikers, bicyclists, and equestrians along the Homestead Trail corridor. The camp will serve as a central location to begin trips north toward Fox Camp or south toward camps located in the upper Bull Creek watershed. Its central location in the Bull Creek watershed provides many opportunities for connections with trails designed for all user groups.

BCNW #11. ALBEE CAMPGROUND-BULL CREEK TRAIL NORTH CONNECTOR - 1 (CHANGE-IN-USE)
Issue: Desire to increase mountain biking opportunities and route connections.
Recommendation: Change the use of the Albee Campground-Bull Creek North Connector Trail to allow bicycle use after implementation of necessary trail modifications. This change-in-use creates a loop trail via the North Bull Creek and Homestead Trails. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specifically, aggregate trail surface hardening in the redwood grove may be necessary to protect tree roots and prevent trail entrenchment.

BCNW #12. HOMESTEAD TRAIL – 1, 2, 3, 5, & 6 (CHANGE-IN-USE)
Issue: Desire to increase mountain biking opportunities and route connections. Currently bicyclists come to a dead end on the south terminus of the multi-use Thornton Trail where it intersects the Homestead Trail, which is designated hike/horse.
Recommendation: Change the use of Homestead Trail – 1, 2 ,3 to add bicycles between the Albee Creek Campground and Look Prairie Road/Bull Creek Trail North to create a loop from the campground after implementation of necessary trail modifications. Change the use of Homestead

Trail – 5, 6 to add a bicycle connection between the Thornton Trail, which is currently multiuse, and the proposed change in use, to add bicycles at Albee Creek Campground, and Look Prairie Road/Bull Creek Trail North loop after implementation of necessary trail modifications.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Brush portions of the trail beyond regular cyclical brushing standards to provide and maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.
3. Harden the trail surface where necessary to protect tree roots.

BCNW #13. ADDIE JOHNSON TRAIL - 1 (CHANGE-IN-USE)
Issue: Desire to increase mountain biking opportunities and route connections.
Recommendation: Change the use of Addie Johnson Trail - 1 (between the Homestead Trail and Mattole Road) to allow bicycle use after implementation of necessary trail modifications.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Brush portions of the trail beyond regular cyclical brushing standards to provide and maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.

BCNW #14. ADDIE JOHNSON-BIG TREE CONNECTOR (NEW TRAIL)
Issue: Desire to provide a non-road link from the Homestead Trail to the Bull Creek Trail - North. This will provide users two loops from the Big Trees Day Use Area and the Albee Creek Campground.
Recommendation: Develop new Addie Johnson-Big Trees Trail Connector. Trail use designation will be hike and bike.

BCNW #15. BULL CREEK TRAIL NORTH – 4, 6, 7, 8 (CHANGE-IN-USE)
Issue: Desire to increase mountain biking opportunities and route connections.
Recommendation: Change the use to allow mountain bikes without modification.

BCNW #16. HOMESTEAD TRAIL-BULL CREEK NORTH CONNECTOR - 1 & 2 (CHANGE-IN-USE)
Issue: Desire to increase connectivity and loop options for bicyclists.
Recommendation: Change the designated use to allow bicycles after required trail modifications are complete.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Brush portions of the trail beyond regular cyclical brushing standards to provide and

maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.
2. Harden the trail surface where necessary to protect tree roots.

BCNW #17. BULL CREEK TRAIL NORTH - 3 (CHANGE-IN-USE)
Issue: Desire to add trailhead options and connectivity for bicyclists and equestrians.
Recommendation: Change the use to allow bicycles without modification. 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 required for equestrian users. Once re-routed, change the designated use to allow for equestrians.

BCNW #18. HOMESTEAD TRAIL MILL CREEK BRIDGE
Issue: The bridge crossing at Mill Creek is not accessible to horses due to steps. Consequently, equestrians cross through Mill Creek just up river of the bridge, impacting natural resources.
Recommendation: Modify bridge approach to remove steps and provide access to equestrians.

BCNW #19. HOMESTEAD-BAXTER TRAIL CONNECTOR
Issue: Restoration of the Bull Creek Floodplain may affect the routing of the trail where it crosses Bull Creek.
Recommendation: Based on the Bull Creek Floodplain Restoration Plan, reroute the trail and Bull Creek crossing as necessary to maintain trail connectivity.

BCNW #20. HOMESTEAD TRAIL - 8 & 9 (CHANGE-IN-USE)
Issue: Desire to increase mountain biking opportunities and route connections.
Recommendation: Change the use of Homestead Trail - 8 between the Hamilton Environmental Campground and Pole Line Road to allow bicycles after implementation of necessary trail modifications. Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points, sinuosity, and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Brush portions of the trail beyond regular cyclical brushing standards to provide and maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.

BCNW #21. BAXTER CAMP 2 TRAIL - 1 (CHANGE-IN-USE)
Issue: Desire to provide bicycle access to Baxter Environmental Camps from Mattole Road.
Recommendation: Change the use of Baxter Camp 2 Trail-1 to allow bikes.

BCNW #22. BAXTER TRAIL - 1, 2, & 3 (CHANGE-IN-USE)
Issue: Desire to increased mountain biking opportunities and route connections.
Recommendation: Change the use of Baxter Trail to allow bicycle use after implementation of necessary trail modifications.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and

management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Brush portions of the trail beyond regular cyclical brushing standards to provide and maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.
2. Harden the trail surface where necessary to protect tree roots.

BCNW #23. ALBEE CREEK CAMPGROUND HOMESTEAD CONNECTOR-1 (CHANGE-IN-USE)

Issue: Desire to increase mountain biking opportunities and route connections. The Thornton Trail is currently designated multiuse. Changing the use of this the Albee Creek Campground Homestead Connector – 1 to allow bicycles would provide a bicycle connection to the Albee Creek Campground by way of Homestead Trail-6. This connection would be contingent on the change of use to add bicycles to Homestead Trail-6.

Recommendation: Change the use of Albee Creek Campground Homestead Connector – 1 to add bicycles between the Albee Creek Campground and the Thornton Trail after implementation of necessary trail modifications.

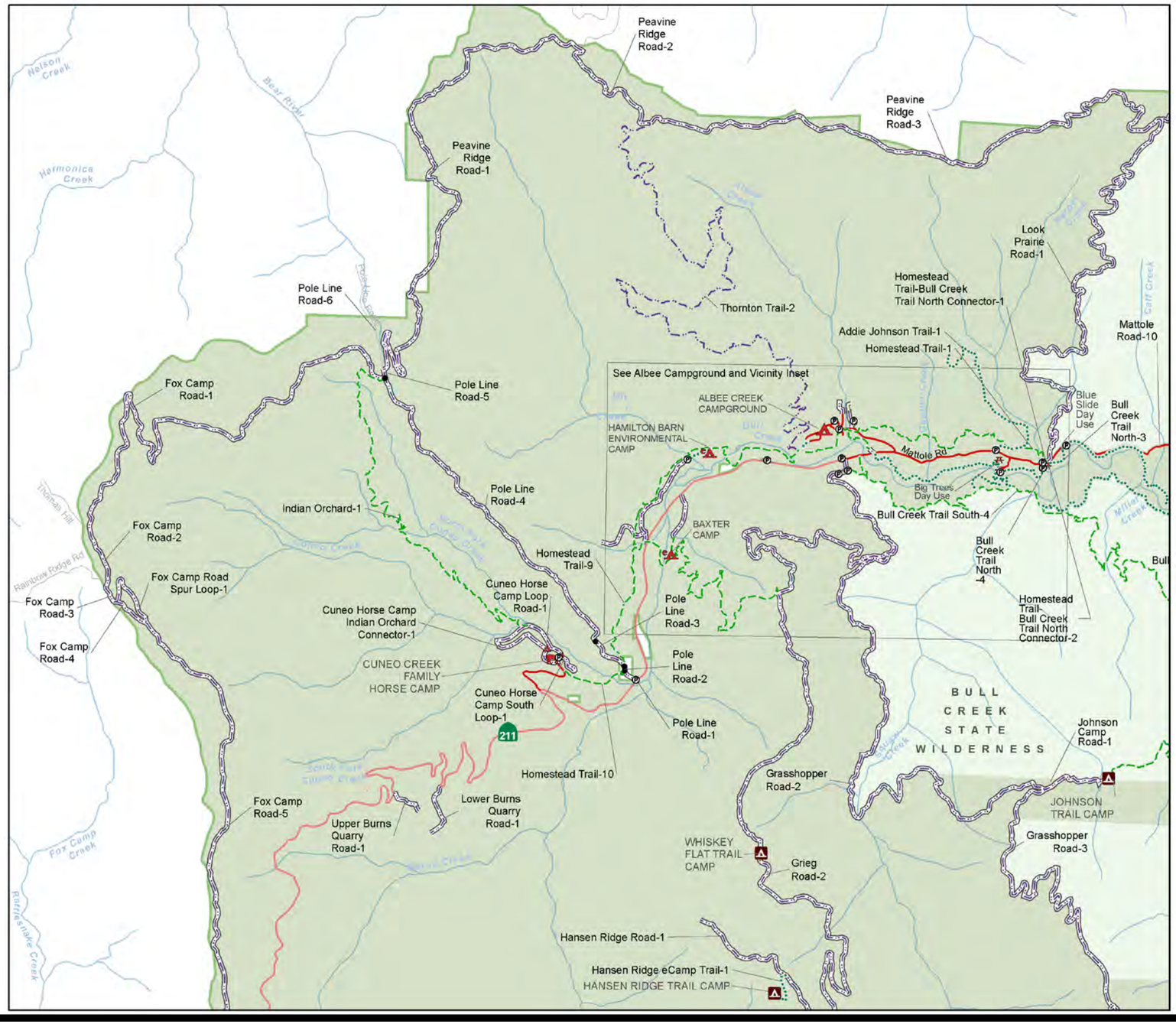
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points, sinuosity, and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Harden the trail surface where necessary to protect tree roots and minimize trail entrenchment.

BCNW #24. BULL CREEK BRIDGE

Issue: Trail connectivity along Bull Creek. Limited access to trails south of Bull Creek.

Recommendation: Install permanent bridge at Bull Creek to provide year-round connection between trails North and south of the river.

Map: Bull Creek - Northwest Area - Existing Roads and Trails



Existing Roads and Trails

BULL CREEK - NORTHWEST

Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- Hike, Bike and Horse
- State Park Rd, Hike, Bike and Horse
- State Park Rd, No Designated Trail Use
- State Park Rd, Hike
- Paved Park Roads

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Picnic Areas
- Campground-Other category
- Horse Camp
- Environmental Camp Area
- Campground
- Streams
- Highways
- Local Road
- Calib_Pts_Rd
- Parking

Area Location

Scale 1:31,690

1 inch = 2,641 feet

Feet 0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

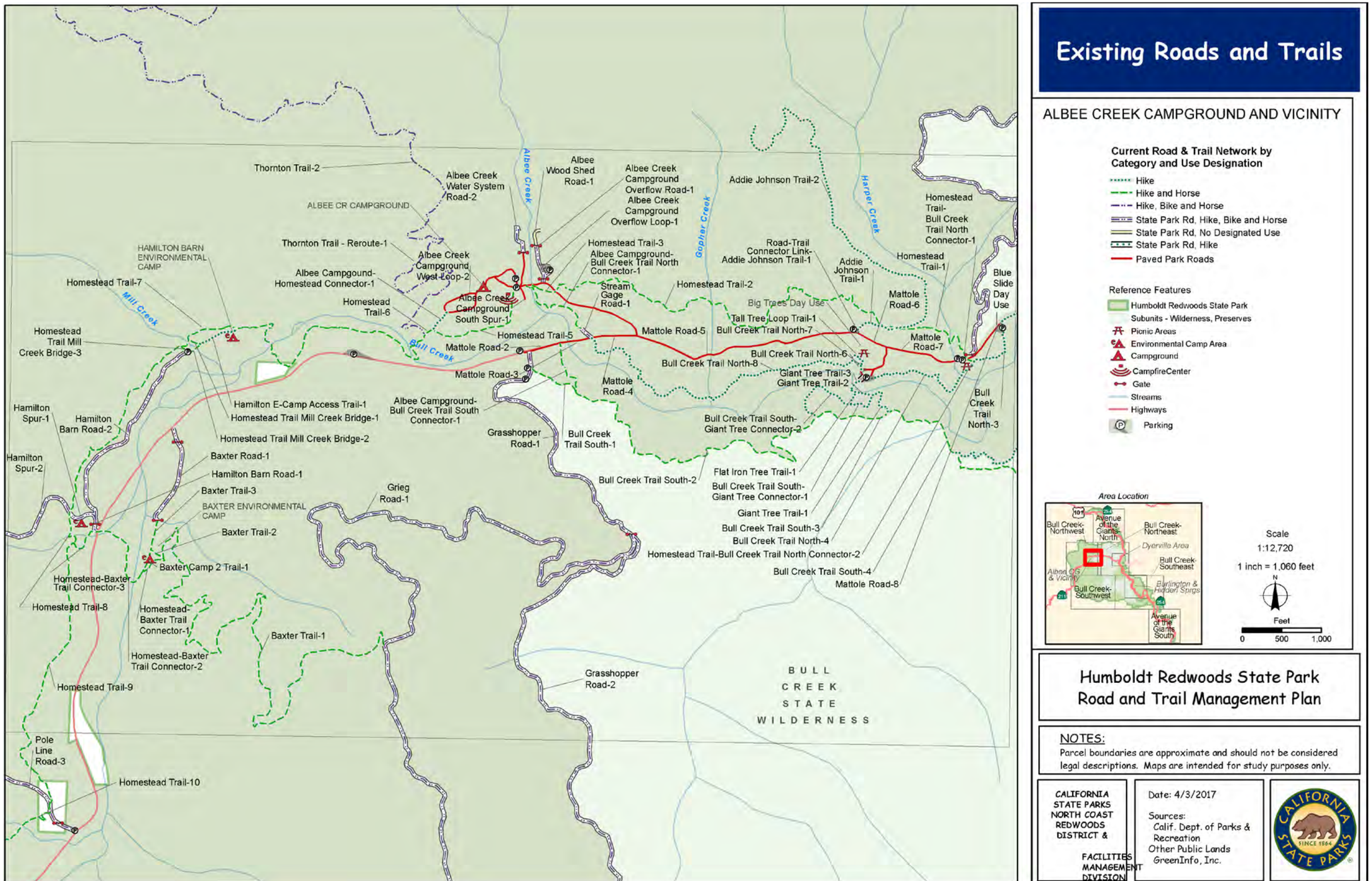
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Albee Creek Campground Detail - Existing Roads and Trails



Existing Roads and Trails

ALBEE CREEK CAMPGROUND AND VICINITY

Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- Hike, Bike and Horse
- State Park Rd, Hike, Bike and Horse
- State Park Rd, No Designated Use
- State Park Rd, Hike
- Paved Park Roads

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Picnic Areas
- Environmental Camp Area
- Campground
- CampfireCenter
- Gate
- Streams
- Highways
- Parking

Scale
1:12,720
1 inch = 1,060 feet
N
Feet
0 500 1,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
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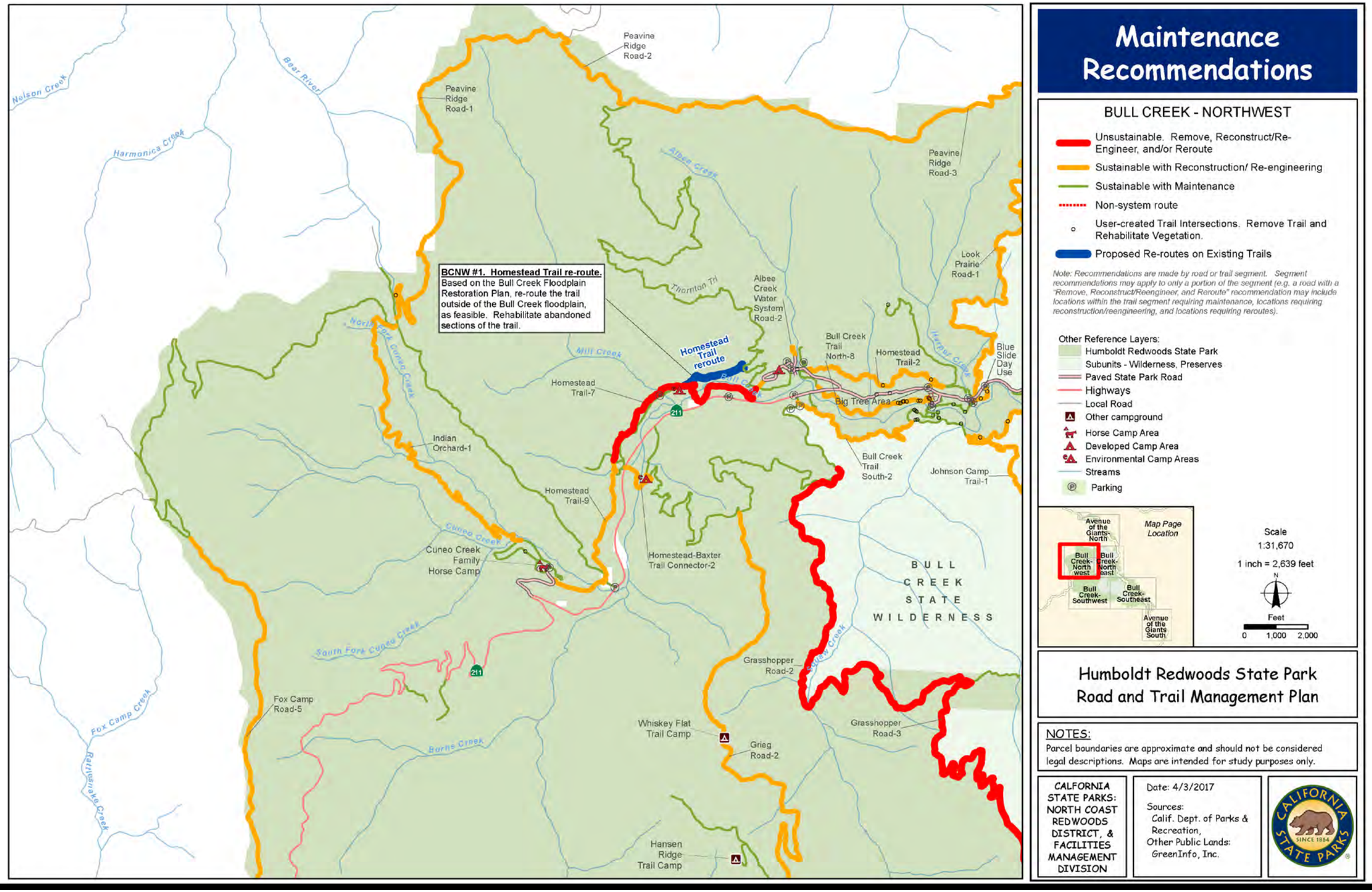
CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT &
FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Bull Creek - Northwest Area - Maintenance Recommendations



Maintenance Recommendations

BULL CREEK - NORTHWEST

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- User-created Trail Intersections. Remove Trail and Rehabilitate Vegetation.
- Proposed Re-routes on Existing Trails

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:
- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Paved State Park Road
- Highways
- Local Road
- Other campground
- Horse Camp Area
- Developed Camp Area
- Environmental Camp Areas
- Streams
- Parking

Scale
1:31,670
1 inch = 2,639 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

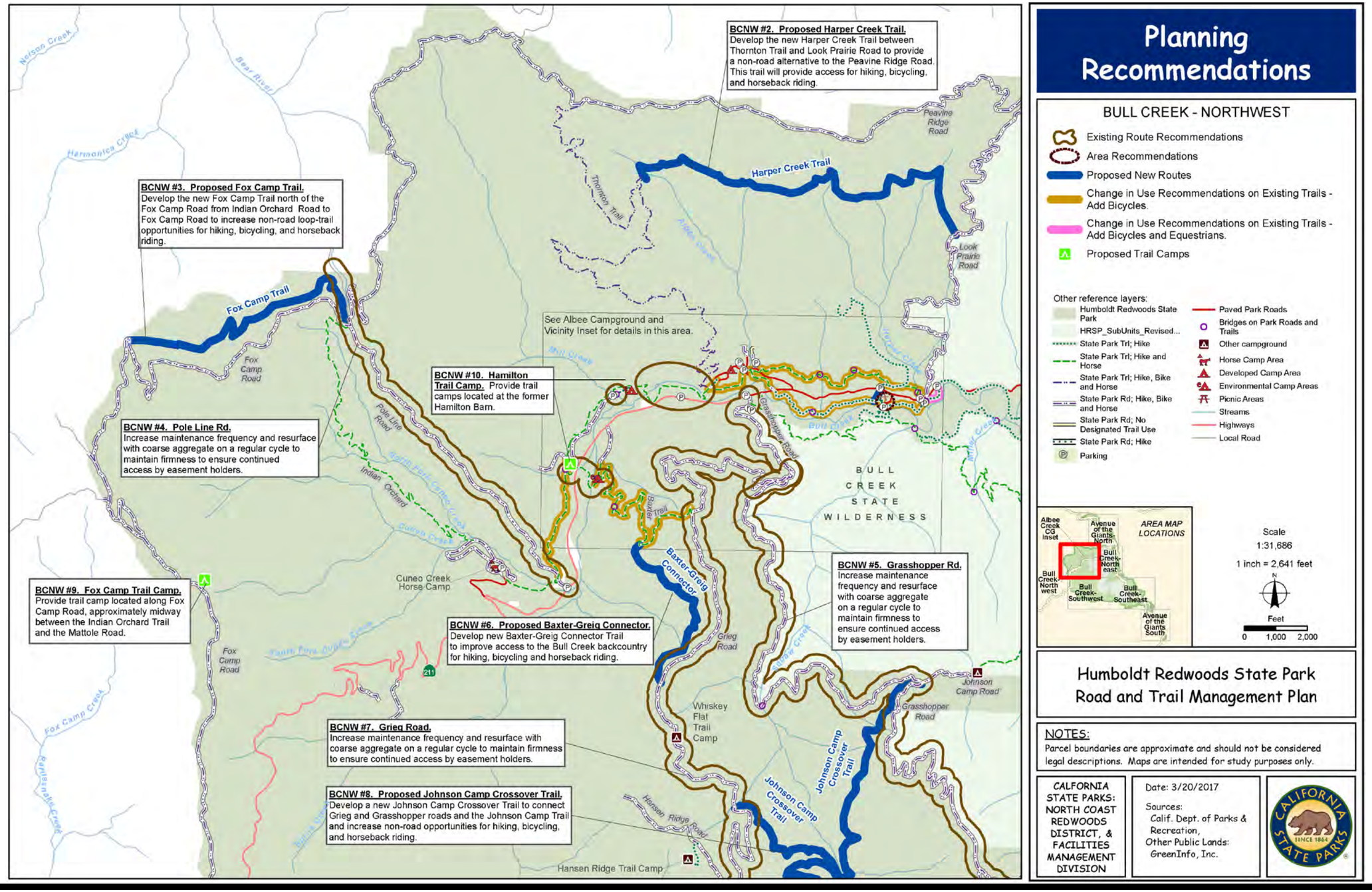
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Bull Creek - Northwest Area - Planning Recommendations



Planning Recommendations

BULL CREEK - NORTHWEST

- Existing Route Recommendations
- Area Recommendations
- Proposed New Routes
- Change in Use Recommendations on Existing Trails - Add Bicycles.
- Change in Use Recommendations on Existing Trails - Add Bicycles and Equestrians.
- Proposed Trail Camps

Other reference layers:

- Humboldt Redwoods State Park
- HRSP_SubUnits_Revised...
- State Park Trl; Hike
- State Park Trl; Hike and Horse
- State Park Trl; Hike, Bike and Horse
- State Park Rd; Hike, Bike and Horse
- State Park Rd; No Designated Trail Use
- State Park Rd; Hike
- Parking
- Paved Park Roads
- Bridges on Park Roads and Trails
- Other campground
- Horse Camp Area
- Developed Camp Area
- Environmental Camp Areas
- Picnic Areas
- Streams
- Highways
- Local Road

Scale
1:31,686
1 inch = 2,641 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

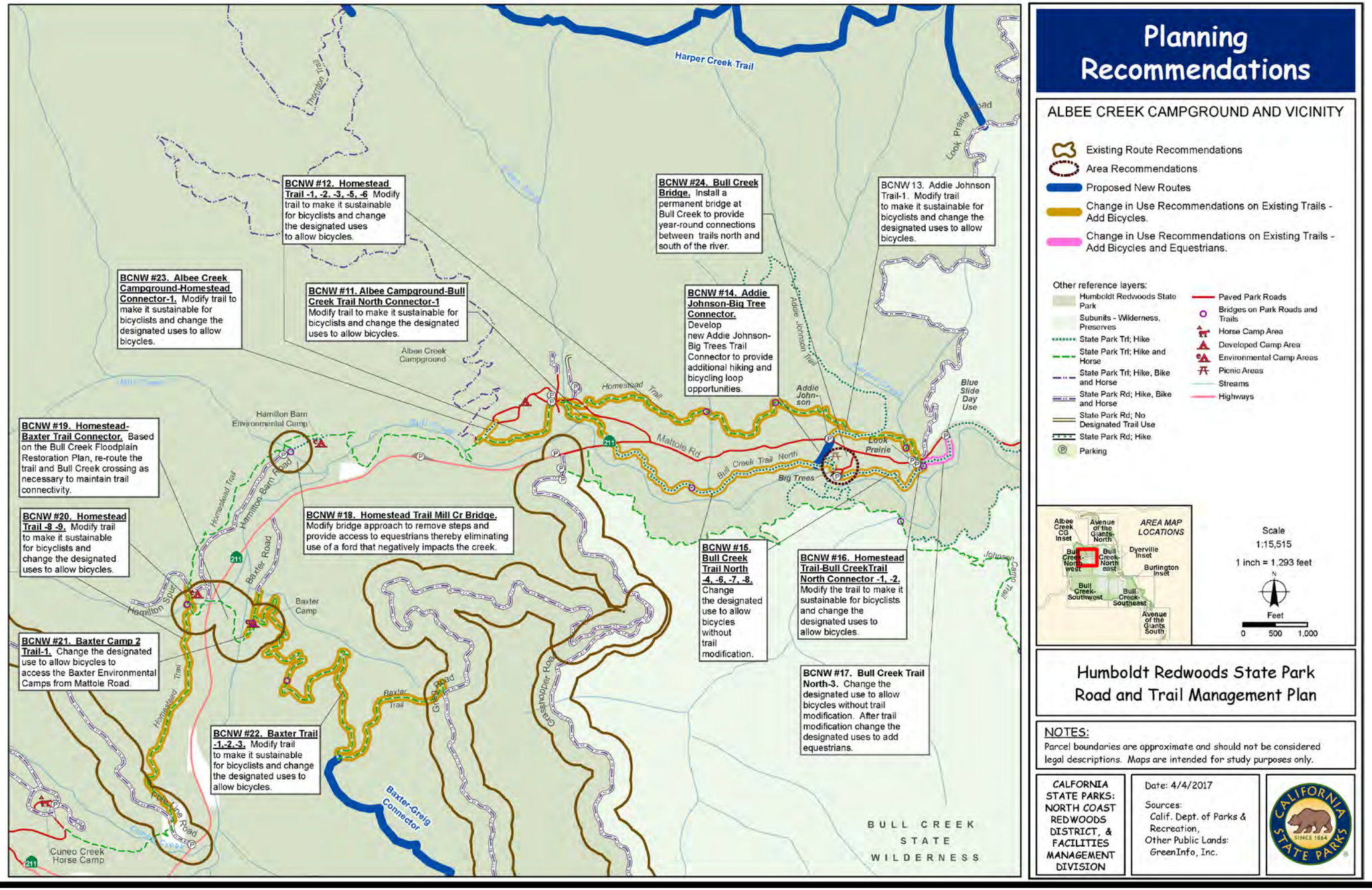
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 3/20/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Albee Creek Campground Detail - Planning Recommendations



Planning Recommendations

ALBEE CREEK CAMPGROUND AND VICINITY

- Existing Route Recommendations
- Area Recommendations
- Proposed New Routes
- Change in Use Recommendations on Existing Trails - Add Bicycles.
- Change in Use Recommendations on Existing Trails - Add Bicycles and Equestrians.

Other reference layers:

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- State Park Trl; Hike
- State Park Trl; Hike and Horse
- State Park Trl; Hike, Bike and Horse
- State Park Rd; Hike, Bike and Horse
- State Park Rd; No Designated Trail Use
- State Park Rd; Hike
- Parking
- Paved Park Roads
- Bridges on Park Roads and Trails
- Horse Camp Area
- Developed Camp Area
- Environmental Camp Areas
- Picnic Areas
- Streams
- Highways

Scale 1:15,515

1 inch = 1,293 feet

Feet 0 500 1,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/4/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Bull Creek - Northeast Area

Significant natural resources:

This area includes the Rockefeller Forest, the largest extant contiguous old growth redwood forest. Also in this area is the Carl A. Anderson Redwoods Natural Reserve and the northern section of the Bull Creek State Wilderness. These areas hold some of the largest unfragmented old growth forest in the park. The Bull Creek – Northeast Area also includes riparian and riverine habitat and prairies.

The old growth redwood forests provide essential habitat for marbled murrelets (*Brachyramphus marmoratus*), which are known to occur here, especially along the alluvial flats of Bull Creek. These forests also contain habitat for the northern spotted owl (*Strix occidentalis caurina*). A bald eagle (*Haliaeetus leucocephalus*) nest occurs along this section of the Eel River. Pacific fisher (*Pekania pennanti*), which can be sensitive to habitat fragmentation, has been documented in Tepee, Cow, and Calf creeks and is expected to occur throughout the Bull Creek Northeast Area. Townsend's big-eared bats (*Corynorhinus townsendii*) have been detected in the alluvial areas of Bull Creek and may roost and breed in basal hollows in old growth redwoods.

Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*) and steelhead (*Oncorhynchus mykiss*) all occur in the main stem and South Fork of the Eel River, and spawn in Bull Creek and some of its anadromous tributaries.

Few botanical surveys have been conducted in this area; however, Humboldt County fuchsia (*Epilobium septentrionale*) and northern bugleweed (*Lycopus uniflorus*) have been documented along the South Fork Eel River where the former occurs in sandy soils along the river and the latter occurs in bogs and wetlands. Heart-leaved twayblade (*Listera cordata*) and white-flowered rein orchid (*Piperia candida*), which primarily occur in coniferous and broadleaf forests, have been documented in the Bull Creek watershed and Howell's montia (*Montia howellii*) occurs in both the South Fork Eel and Bull Creek watersheds.

Significant cultural resources:

Archaeological: There are archaeological sites in this part of the park associated with the historic communities of Bull Creek, Dyerville, and Weott. A historic fireplace designed by architect Julia Morgan is located at the California Federation of Women's Club Grove. There are also historic sites recorded in this area of the park associated with logging activities.

Prehistoric sites recorded in this part of the park include ethnographic village sites associated with the Lolangkok Sinkyone.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

BCNE #1. HIGH ROCK RIVER TRAIL
Issue: This trail provides access to many redwood groves and the Eel River. Currently the trail connects to the Avenue of the Giants in four locations providing opportunities for short hikes along the Avenue. However, lack of parking limits the amount of access the trail can provide.
Recommendation: Construct connecting trails to two large parking areas off the Avenue of the Giants.

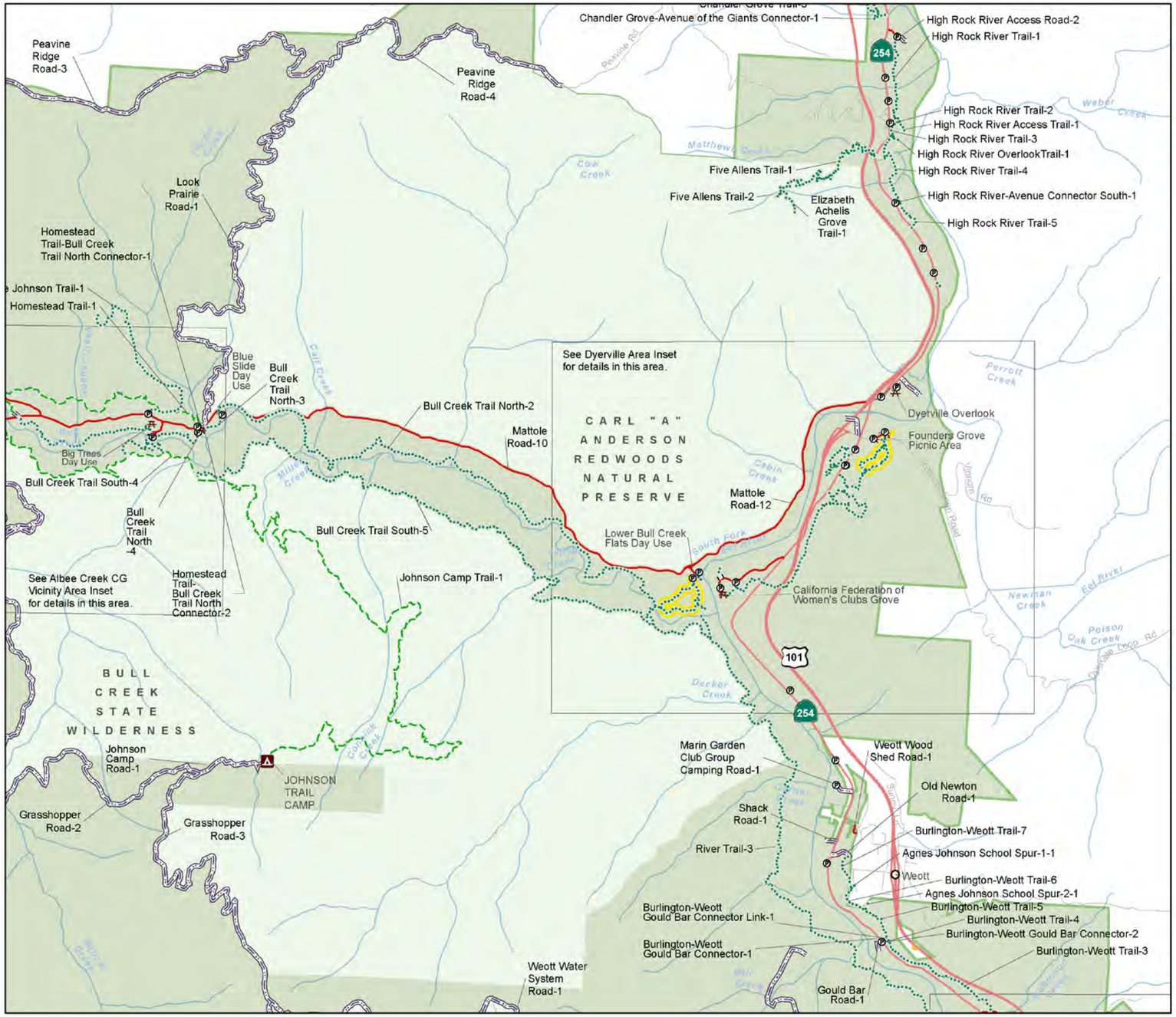
BCNE #2. FOUNDER'S GROVE AREA
Issue: Desire to link to the rail-to-trail on the North Coast Railroad Authority right-of-way as proposed in the 2002 Redwood Pathway Implementation Strategy.
Recommendation: Develop new trail connection to the rail-to-trail once it is implemented.

BCNE #3. PROPOSED DECKER CREEK TRAIL (NEW TRAIL)
Issue: Desire to improve access to the Bull Creek backcountry.
Recommendation: Develop new Decker Creek Trail to connect the Avenue of the Giants to Bull Creek backcountry. Trail use designation will be hike.

BCNE #4. MATOLLE ROAD
Issue: The Matolle Road is a well-traveled narrow road that requires passing pullouts and wide shoulders for safety. Existing pullouts have been expanded for parking by users over the years to gain access to visitor attractions along the road. These unofficial parking areas and associated user-created trails cause resource damage.
Recommendation: Maintain existing established vehicle pullouts and shoulders along the Mattole Road to allow for safe passing on this narrow road. Use natural elements such as large woody debris and live vegetation to discourage further encroachment and establishment of parking pullouts into undisturbed areas. Improve signage and mapping to limit parking to designated day use areas along the road.

BCSW #5. WOMENS FEDERATION PARKING LOT
Issue: Erosion of the right bank of the South Fork Eel River has undercut sections of the parking lot. The erosion, if left untreated, may further encroach on the facility eliminating vehicle use altogether.
Recommendation: The Department will work with local, State, and federal agencies to determine a plan for preserving the parking lot at the Women's Federation Grove.

Map: Bull Creek - Northeast Area - Existing Roads and Trails



Existing Roads and Trails

BULL CREEK - NORTHEAST

Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- State Park Rd, Hike, Bike and Horse
- State Park Rd, Hike
- Paved Park Roads
- Non-system Route
- Accessible Trail Highlight

Reference Features

- Humboldt Redwoods State Park
- Picnic Areas
- Campground-Other category
- Streams
- Highways
- Local Road
- Cities, Towns, Places
- Parking

Area Location

Scale
1:30,050
1 inch = 2,504 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

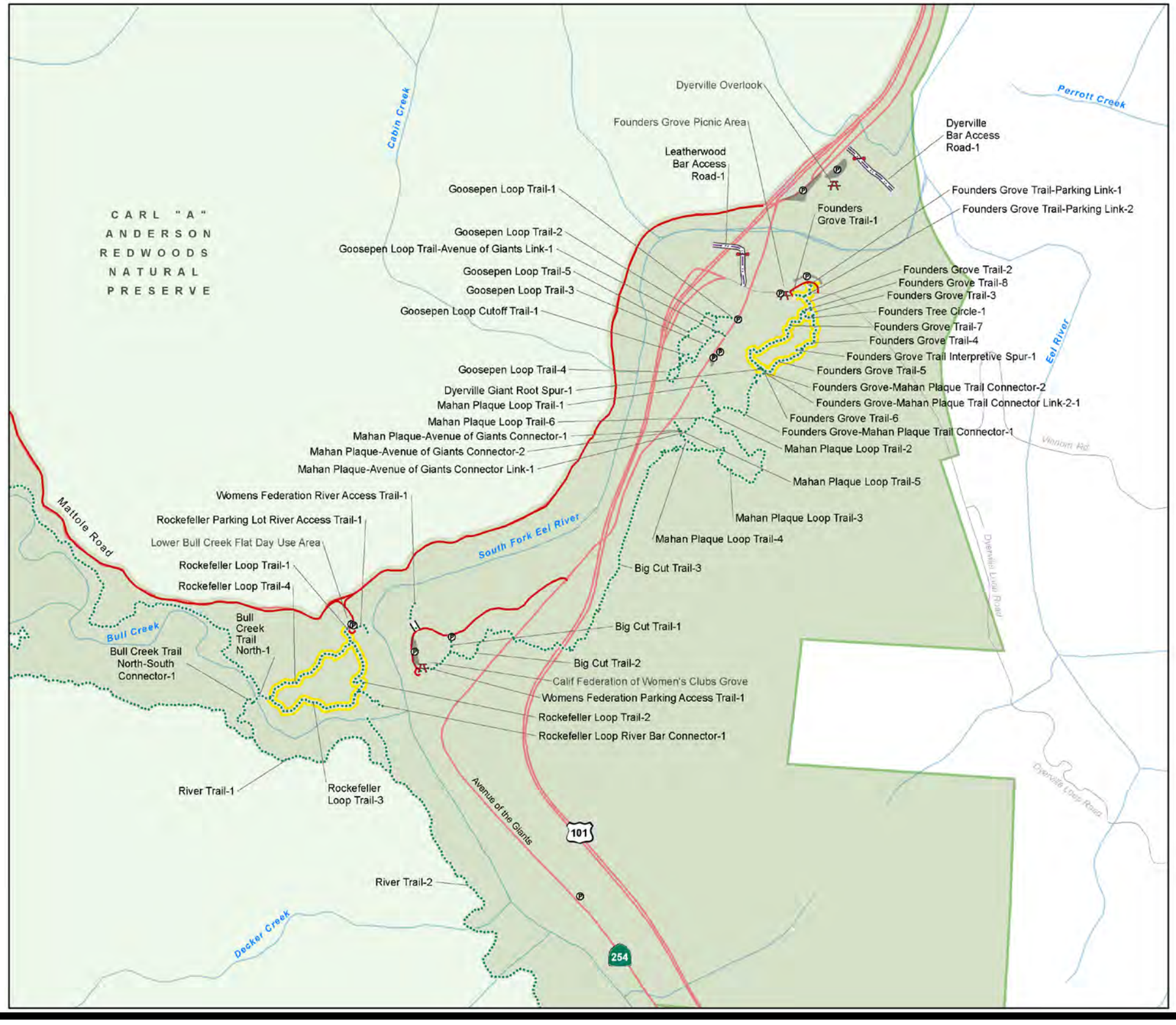
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Dyerville Area Detail - Existing Roads and Trails



Existing Roads and Trails

DYERVILLE AREA

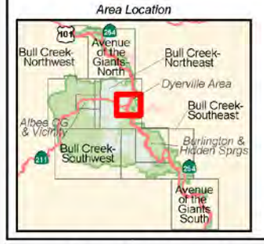
Current Road & Trail Network by Category and Use Designation

- Hike
- State Park Rd, Hike, Bike and Horse
- State Park Rd, Hike
- Paved Park Roads
- Accessible Trail Highlight

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Picnic Areas
- Gate
- Streams
- Highways
- Local Road
- Parking

Area Location



Scale
1:12,460
1 inch = 1,038 feet
N
Feet
0 500 1,000

Humboldt Redwoods State Park Road and Trail Inventory and Assessment

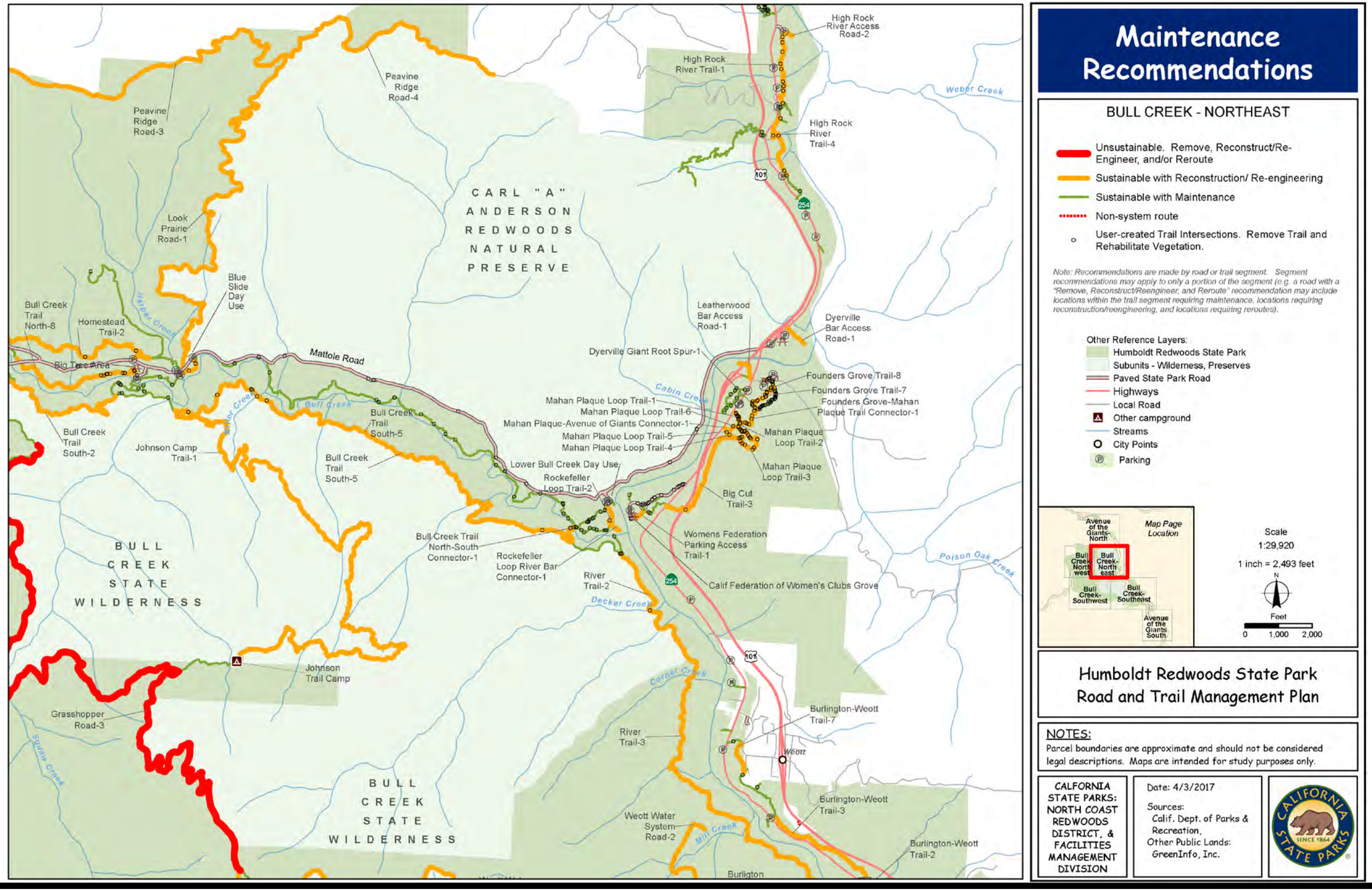
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Bull Creek - Northeast Area - Maintenance Recommendations



Maintenance Recommendations

BULL CREEK - NORTHEAST

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- User-created Trail Intersections. Remove Trail and Rehabilitate Vegetation.

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:
- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Paved State Park Road
- Highways
- Local Road
- Other campground
- Streams
- City Points
- Parking

Scale 1:29,920

1 inch = 2,493 feet

N

Feet

0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:

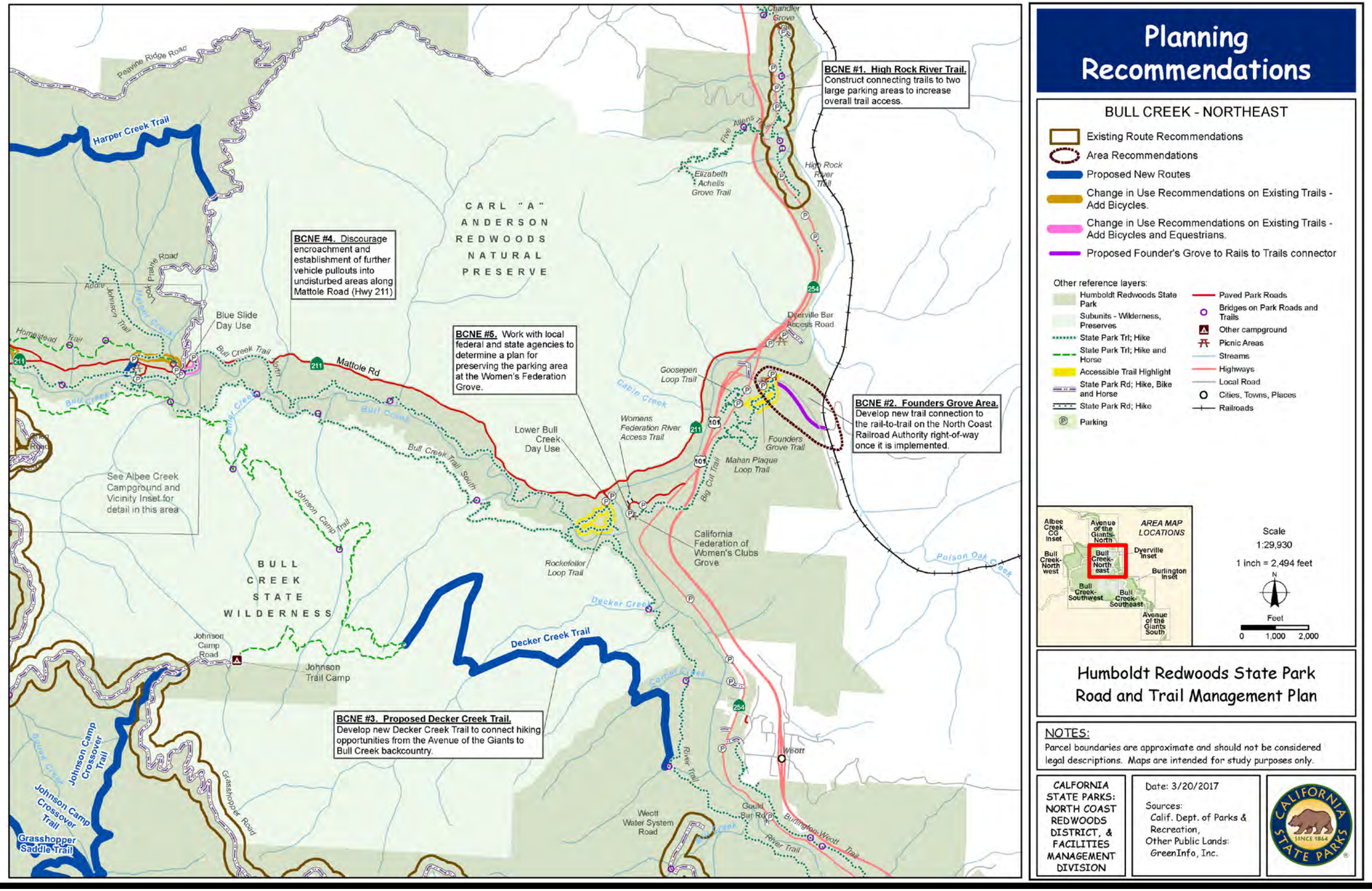
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Bull Creek - Northeast Area - Planning Recommendations



Planning Recommendations

BULL CREEK - NORTHEAST

- Existing Route Recommendations
- Area Recommendations
- Proposed New Routes
- Change in Use Recommendations on Existing Trails - Add Bicycles.
- Change in Use Recommendations on Existing Trails - Add Bicycles and Equestrians.
- Proposed Founder's Grove to Rails to Trails connector

Other reference layers:

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- State Park Trl; Hike
- State Park Trl; Hike and Horse
- Accessible Trail Highlight
- State Park Rd; Hike, Bike and Horse
- State Park Rd; Hike
- Parking
- Paved Park Roads
- Bridges on Park Roads and Trails
- Other campground
- Picnic Areas
- Streams
- Highways
- Local Road
- Cities, Towns, Places
- Railroads

Scale 1:29,930

1 inch = 2,494 feet

N

Feet 0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:

Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 3/20/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands: GreenInfo, Inc.

Bull Creek - Southwest Area

Significant natural resources:
This area is similar to the Bull Creek - Northwest Area and consists of second growth montane hardwood coniferous and redwood forests, interspersed with prairies. There is also a small patch of Chaparral just below the Grasshopper Lookout Tower. Some of the prairies, such as Fox Camp, Grasshopper, Preacher, and Hansen, have been partially converted to forest due to the lack of fire. Much of the Upper Bull Creek watershed was harvested under previous management on steep unstable slopes, which has resulted in high sediment rates in the creeks. Some of these second growth forests have residual scattered old growth trees.

Upper Bull Creek watershed provides habitat for northern spotted owls (*Strix occidentalis caurina*) and there are several known activity centers. Pacific fisher (*Pekania pennanti*) are expected to occur throughout this area in forested habitats. Foothill yellow-legged frogs (Rana boylii) are common in the cobbles along Bull Creek and northern red-legged frogs (*Rana aurora*) occur throughout the area. Southern torrent salamanders (*Rhyacotriton variegatus*) and coastal tailed frogs (*Ascaphus truei*) are known to occur in the higher-quality, lower-order streams. Steelhead (*Oncorhynchus mykiss*) spawn in Upper Bull Creek where efforts have been occurring over several years to restore the cottonwood – willow and alder riparian forests. Few botanical surveys have been conducted in this area; however, species detected elsewhere in the Bull Creek watershed can be expected.

Significant cultural resources:
Archaeological: Archaeological resources are located throughout this region of the park, including the historic Gould Ranch and orchard, the remains of the Quigley Barn, and sites associated with logging activities. The Grasshopper Fire Lookout Station is located at Grasshopper Peak. Prehistoric sites have been recorded in this area of the park.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

BCSW #1. Preacher Gulch Bypass
Issue: Portion of road is unsustainable.
Recommendations: Reroute road to sustainable alignment and rehabilitate the original alignment to a natural state.

BCSW #2. PROPOSED GRASSHOPPER SADDLE TRAIL (NEW TRAIL)
Issue: Desire to improve access to the Bull Creek backcountry from the Cuneo Equestrian Campground and the Baxter and Hamilton Environmental Camps.
Recommendation: Develop the new Grasshopper Saddle Trail to connect the proposed Johnson Camp Crossover Trail to the South Prairie Trail and provide a non-road alternative to Grasshopper and Grieg roads. Trail use designation will be hike, bike, horse.

BCSW #3. PROPOSED UPPER GOULD BARN TRAIL (NEW TRAIL)

Issue: Desire for access to the upper and lower Gould Barn sites and a non-road alternative to Grieg Road in the Southern Bull Creek backcountry.

Recommendation: Develop new Upper Gould Barn Trail to connect Bull Creek and Upper Gould Trail Camps to the South Prairie Trail and/or the Grieg Road. Trail use designation will be hike, bike, horse.

BCSW #4. WEOTT WATER SYSTEM ROAD

Issue: The Weott Water System Road is used year-around by the Weott Community Services District. Wet season use causes severe damage when driving surface is soft.

Recommendation: Work with Weott Community Services District to increase maintenance frequency and resurface with coarse aggregate on a regular cycle to maintain firmness during the wet season.

BCSW #5. SOUTH PRAIRIE TRAIL - 1 (CHANGE-IN-USE)

Issue: Desire to increase mountain biking opportunities and route connections.

Recommendation: Change the use of South Prairie Trail to allow bicycle use after required trail modifications are complete.

Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:

1. Install speed control devices, such as pinch points and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Harden the trail surface where necessary to protect tree roots.
3. Reconstruct drainage crossings for improve sustainability.

BCSW #6. PANTHER GAP ROAD ALTERNATE ROUTE (RECONSTRUCT EXISTING NON-SYSTEM ROAD

Issue: A portion of the existing park road passes through private property.

Recommendation: Reconstruct existing non-system route on park property to improve vehicle administrative and emergency access and provide additional trail access for visitors. Trail use designation will be hike, bike, horse.

BCSW #7. GRASSHOPPER TRAIL CAMP

Issue: Provide additional remote overnight camping in the Bull Creek Watershed

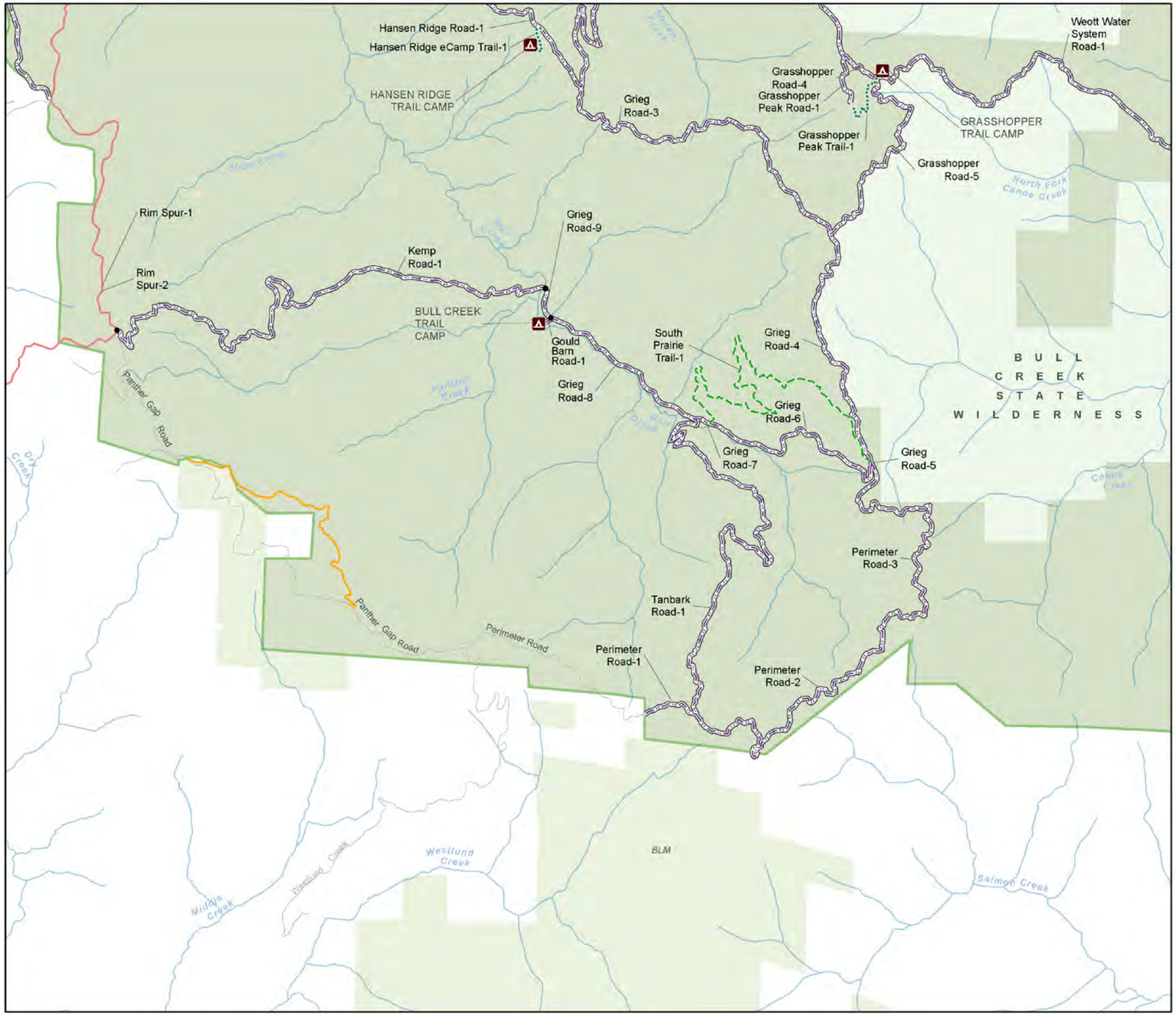
Recommendation: This camp would be located near Grasshopper Peak and is situated between Grieg Road and the proposed Grasshopper Saddle Trail. The trail will serve as part of a loop around Grasshopper Peak and provide a layover camp for those wishing to venture further into the upper Bull Creek Watershed, the proposed Upper Gould Barn Camp, and the Bull Creek Trail Camp.

BCSW #8. UPPER GOULD TRAIL CAMP

Issue: Provide additional remote overnight camping in the Bull Creek Watershed

Recommendation: This camp would be located at the site of the former Bull Creek Ranch along the proposed Upper Gould Barn Trail. It provides a destination for those seeking to explore the deepest backcountry areas of the park. It provides an ideal destination for those seeking to extend their trip beyond the camps around Grasshopper Peak

Map: Bull Creek - Southwest Area - Existing Roads and Trails



Existing Roads and Trails

BULL CREEK - SOUTHWEST

Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- State Park Rd, Hike, Bike and Horse
- Non-system Route
- Selected End-of-Segment Markers

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Other Public Lands
- Campground-Other category
- Streams
- Highways
- Local Road
- Parking

Area Location

Scale
1:34,138
1 inch = 2,845 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

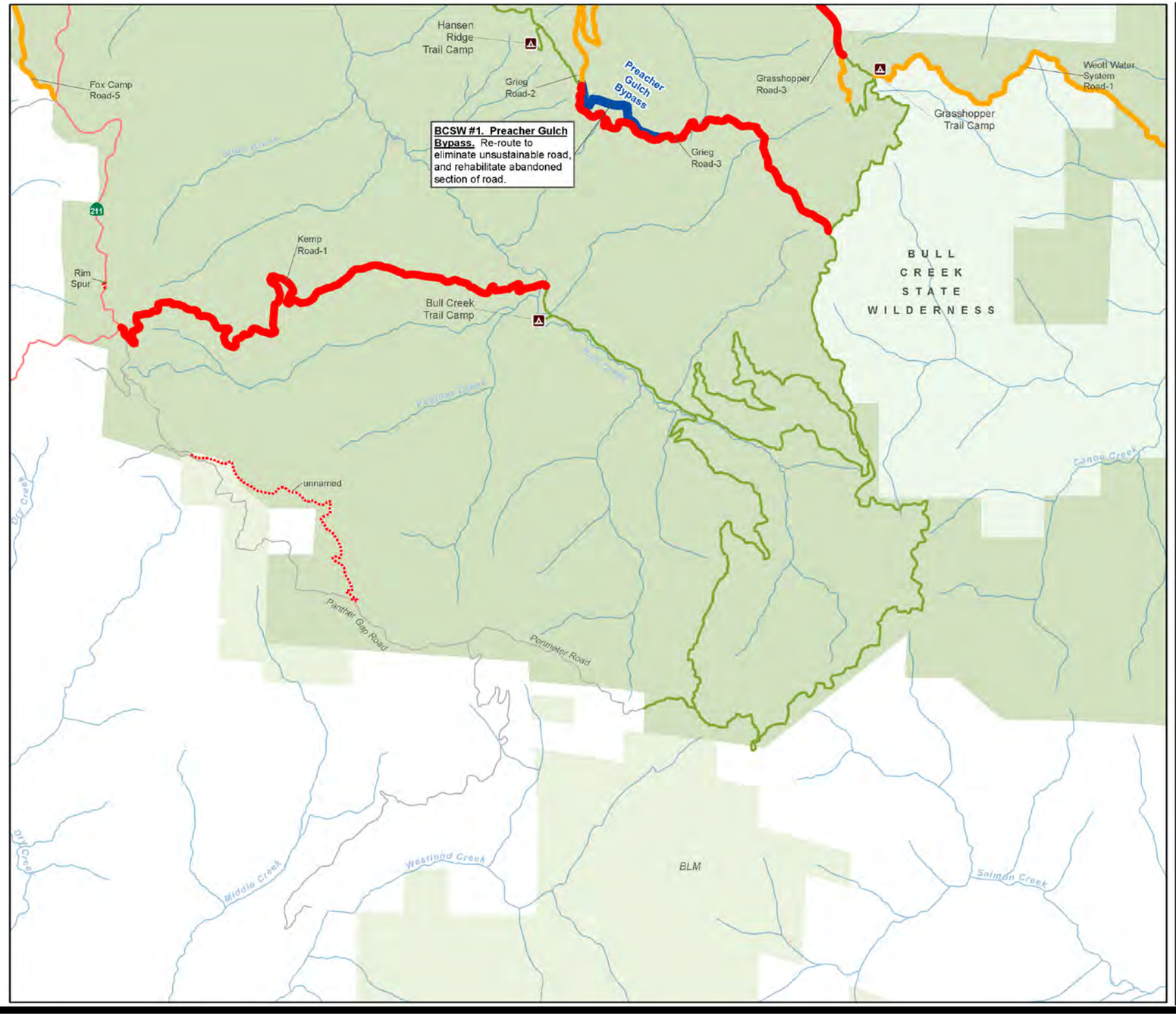
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Bull Creek - Southwest Area - Maintenance Recommendations



Maintenance Recommendations

BULL CREEK - SOUTHWEST

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- Proposed Re-routes on Existing Trails

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:
- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Highways
- Local Road
- Other campground
- Streams
- Parking

Scale
1:33,940
1 inch = 2,828 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park
Road and Trail Management Plan

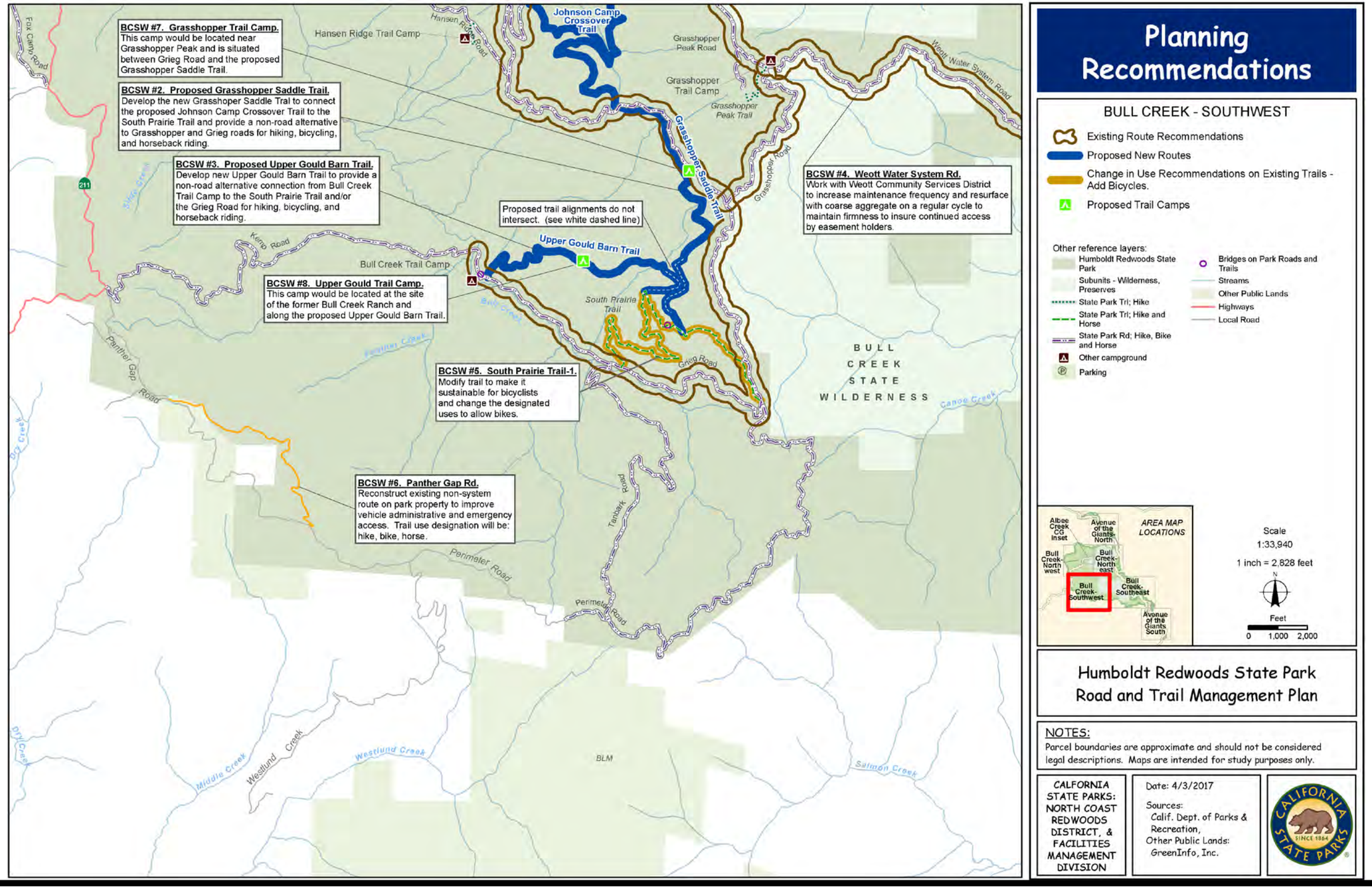
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Bull Creek - Southwest Area - Planning Recommendations



Planning Recommendations

BULL CREEK - SOUTHWEST

- Existing Route Recommendations
- Proposed New Routes
- Change in Use Recommendations on Existing Trails - Add Bicycles.
- Proposed Trail Camps

Other reference layers:

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- State Park Trl; Hike
- State Park Trl; Hike and Horse
- State Park Rd; Hike, Bike and Horse
- Other campground
- Parking
- Bridges on Park Roads and Trails
- Streams
- Other Public Lands
- Highways
- Local Road

Scale
1:33,940
1 inch = 2,828 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park
Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Bull Creek - Southeast Area

Significant natural resources:
This area contains the southern section of Bull Creek State Wilderness. Canoe Creek, which feeds into the South Fork Eel River, is the largest subwatershed in the area. The Canoe watershed also supports one of the largest unfragmented old growth redwood forests in the park. Old growth forests are less common east of U.S. Highway 101 and are primarily concentrated along the South Fork Eel River and the Hidden Springs Campground area. The remainder of the forests on the east side of Highway 101 consist of second growth redwood and montane coniferous hardwood forests.

Old growth redwood forests in Canoe Creek and along the South Fork Eel River support marbled murrelets (*Brachyramphus marmoratus*). Northern spotted owls (*Strix occidentalis caurina*) may occur throughout the forested environments. Pacific fisher (*Pekania pennanti*) are also known from the Canoe Creek watershed and Townsend's big-eared bats (*Corynorhinus townsendii*) may breed in the large basal hollows common in the alluvial areas.

Western pond turtles (*Actinemys [Emys] marmorata*) and foothill yellow-legged frogs occur in the South Fork Eel River. Southern torrent salamanders (*Rhyacotriton variegatus*) and coastal tailed frog (*Ascaphus truei*) may occur in the higher-quality, lower-order streams. Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*) and steelhead (*Oncorhynchus mykiss*) all occur in the South Fork Eel River and Canoe Creek.

Few botanical surveys have been conducted in this area although Humboldt County fuchsia (*Epilobium septentrionale*), which occurs in sandy habitats along the river, and Howell's montia (*Montia howellii*), an ephemeral wetland species, have been documented along the South Fork Eel River. Howell's montia can often be found in compacted soils, such as along roadsides or trails.

Significant cultural resources:
Archaeological: Archaeological sites in this region of the park include abandoned segments of the historic Old Redwood Highway, wagon roads, and sites associated with logging activities. The Holmgren homestead site is in this region of the park and consists of an orchard, historic structures, and a cemetery. Prehistoric sites recorded in this part of the park are mostly associated with historic hunting activities.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

BCSE #1. GRASSHOPPER TRAIL
Issue: Steep grades and entrenchment make portions of the trail unsustainable. A reroute was planned, designed, and evaluated for environmental compliance in 2001 but was not developed due to the 2003 Canoe Creek Fire.
Recommendation: Re-establish the previously identified re-route corridor and construct new trail segment. Remove the abandoned trail alignment and rehabilitate the habitat.

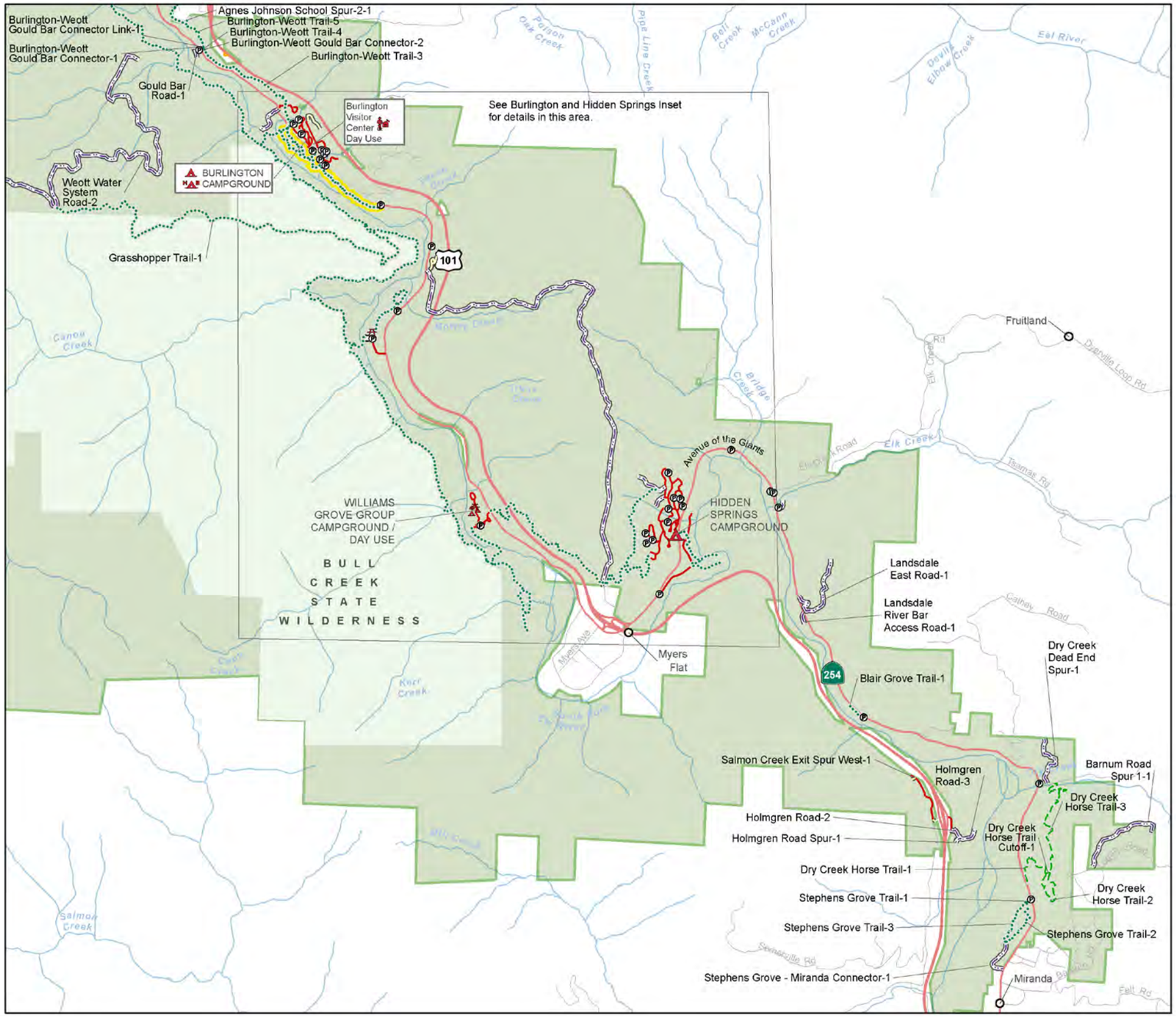
BCSE #2. WILLIAMS GROVE TRAIL - 1, 2, & 3 (CHANGE-IN-USE)
Issue: Desire to increased mountain biking opportunities and route connections.
Recommendation: Change the use of Williams Grove Trail to allow bicycle use after required trail modifications are complete.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Harden the trail surface where necessary to prevent entrenchment and ensure sustainability.
3. Ensure sufficient clearance below power pole support cables.

BCSE #3. DRY CREEK DEAD END SPUR - 1
Issue: This is a dead end overgrown route and does not serve a quality visitor or administrative function.
Recommendation: Remove road and rehabilitate to a natural condition

BCSE #4. DRY CREEK HORSE TRAIL (CHANGE-IN-USE)
Issue: Desire to increase bicycling opportunities and route connections.
Recommendation: Change the use of Dry Creek Horse Trail to allow bicycle use after implementation of necessary trail modifications.
Prescribed Modifications: Design and management modifications shall be performed prior to implementation of the change-in-use. Final modifications will be determined by project-specific design and management recommendations to ensure trail safety and sustainability. Specific modifications and actions could include:
1. Install speed control devices, such as pinch points and textured surfacing, to provide trail safety and minimize mechanical wear.
2. Brush portions of the trail beyond regular cyclical brushing standards to provide and maintain the proper sight distance and trail width necessary for trail safety per the Department's Trails Handbook.
3. Harden the trail surface where necessary to protect tree roots.

BCSE #5. SALMON CREEK EXIST SPUR WEST - 1
Issue: This old asphalt frontage road provides no valuable access to park amenities and is often used for illicit activities and illegal dumping.
Recommendation: Remove road and rehabilitate to a natural condition.

Map: Bull Creek - Southeast Area - Existing Roads and Trails



Existing Roads and Trails

BULL CREEK - SOUTHEAST

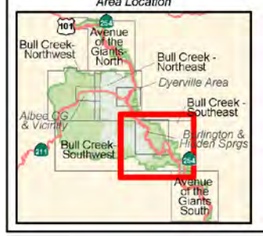
Current Road & Trail Network by Category and Use Designation

- Hike
- Hike and Horse
- State Park Rd, Hike, Bike and Horse
- State Park Rd, No Designated Trail Use
- State Park Rd, Hike
- Paved Park Roads
- Non-system Route
- Accessible Trail Highlight

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Picnic Areas
- Group Camp
- Campground
- Streams
- Highways
- Local Road
- Cities, Towns, Places
- Parking

Area Location



Scale
1:37,670
1 inch = 3,139 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

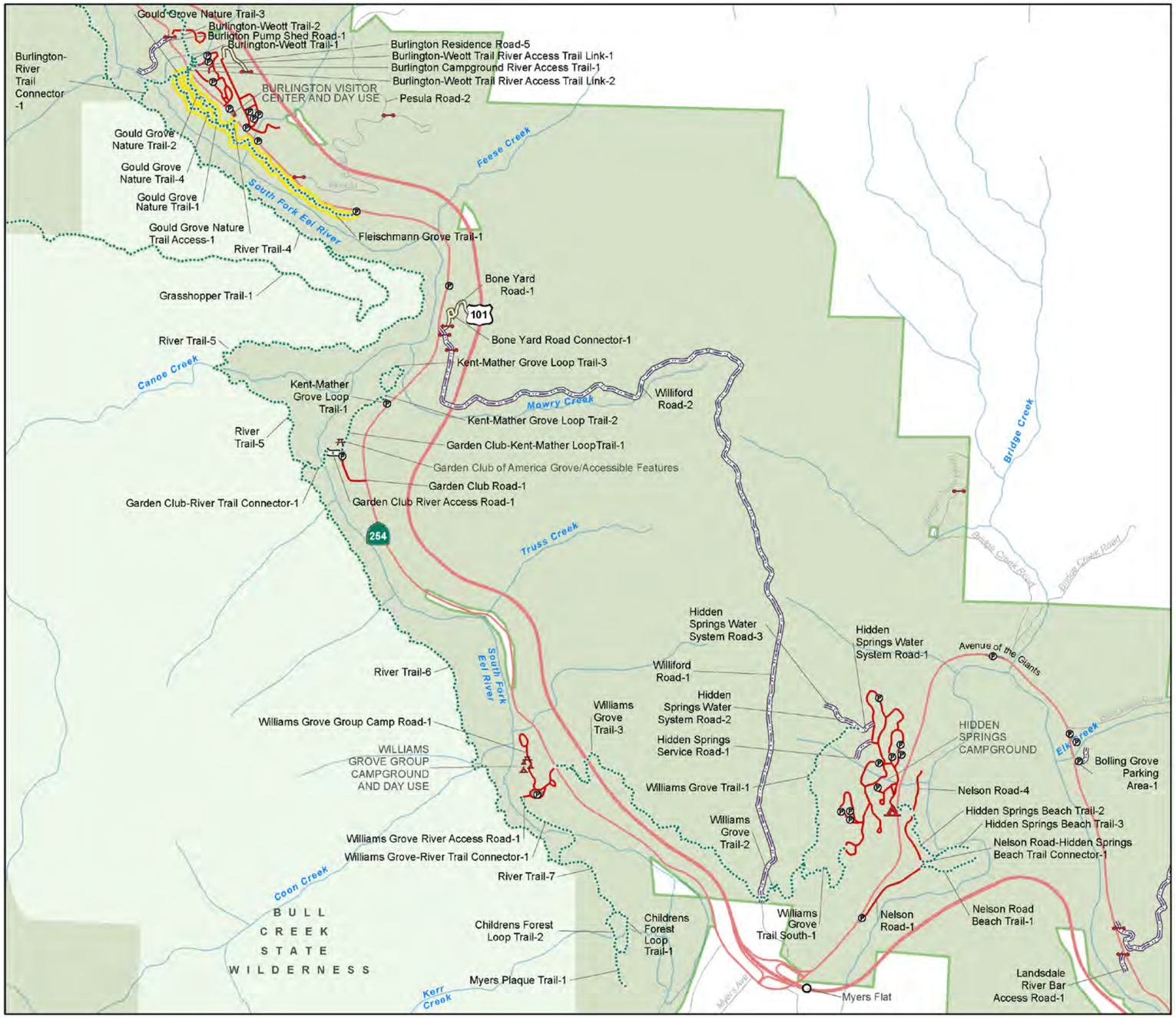
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Burlington and Hidden Springs Area Detail - Existing Roads and Trails



Existing Roads and Trails

BURLINGTON AND HIDDEN SPRINGS

Current Road & Trail Network by Category and Use Designation

- Hike
- State Park Rd, Hike, Bike and Horse
- State Park Rd, No Designated Use
- State Park Rd, Hike
- Paved Park Roads
- Accessible Trail Highlight

Reference Features

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Picnic Areas
- Group Camp
- Campground
- Gate
- Streams
- Highways
- Local Road
- Parking

Scale
1:20,750
1 inch = 1,729 feet
N
Feet
0 500 1,000

Humboldt Redwoods State Park Road and Trail Inventory and Assessment

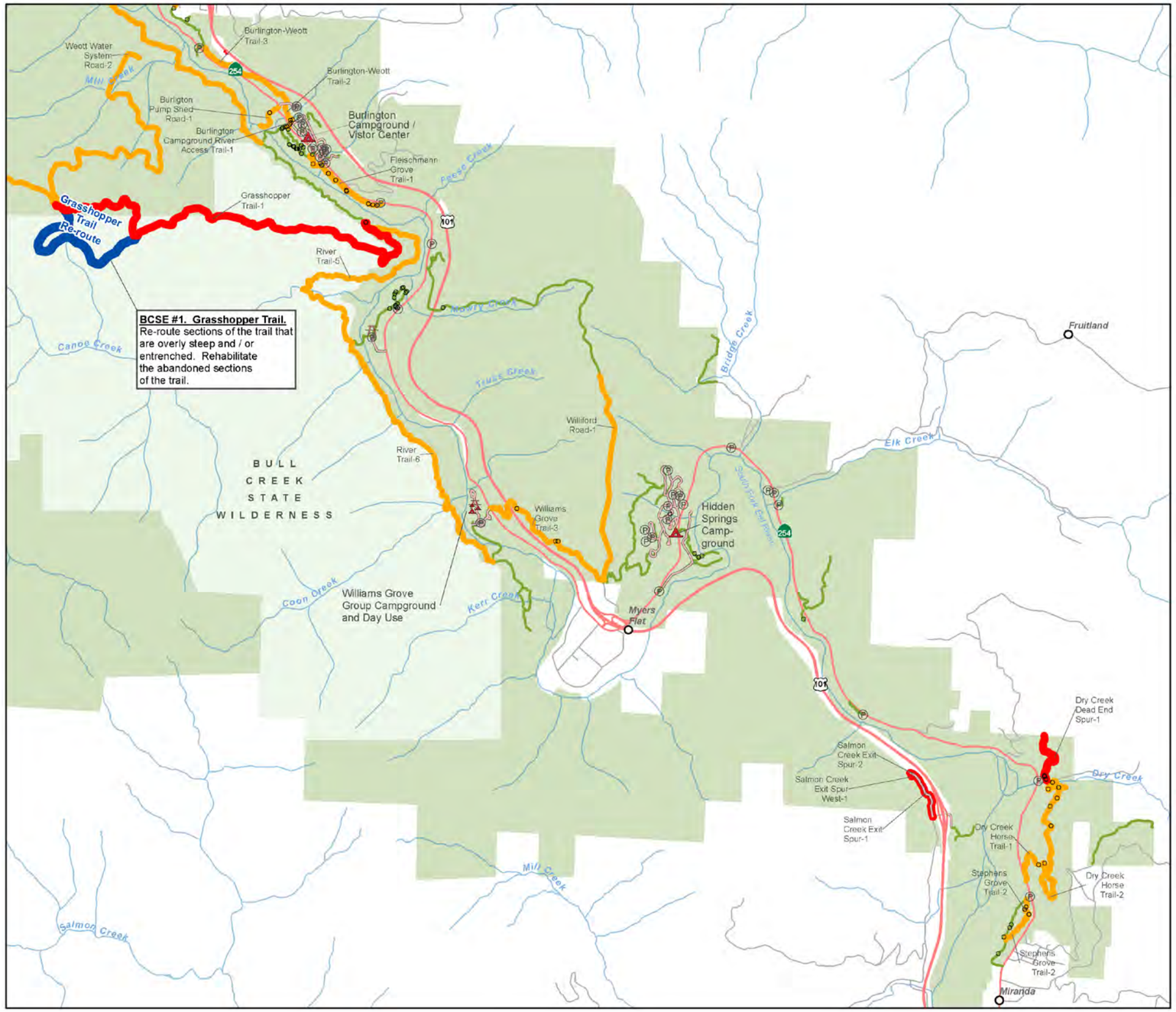
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Bull Creek - Southeast Area - Maintenance Recommendations



Maintenance Recommendations

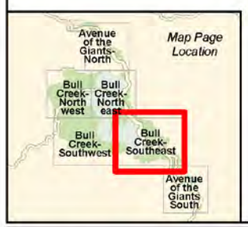
BULL CREEK - SOUTHEAST

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- User-created Trail Intersections. Remove Trail and Rehabilitate Vegetation.
- Proposed Re-routes on Existing Trails

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:

- Humboldt Redwoods State Park
- Wilderness / Natural Preserve
- Paved State Park Road
- Highways
- Local Road
- Group Camp Area
- Developed Camp Area
- Streams
- City Points
- Parking



Scale
1:37,450
1 inch = 3,121 feet
N
Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

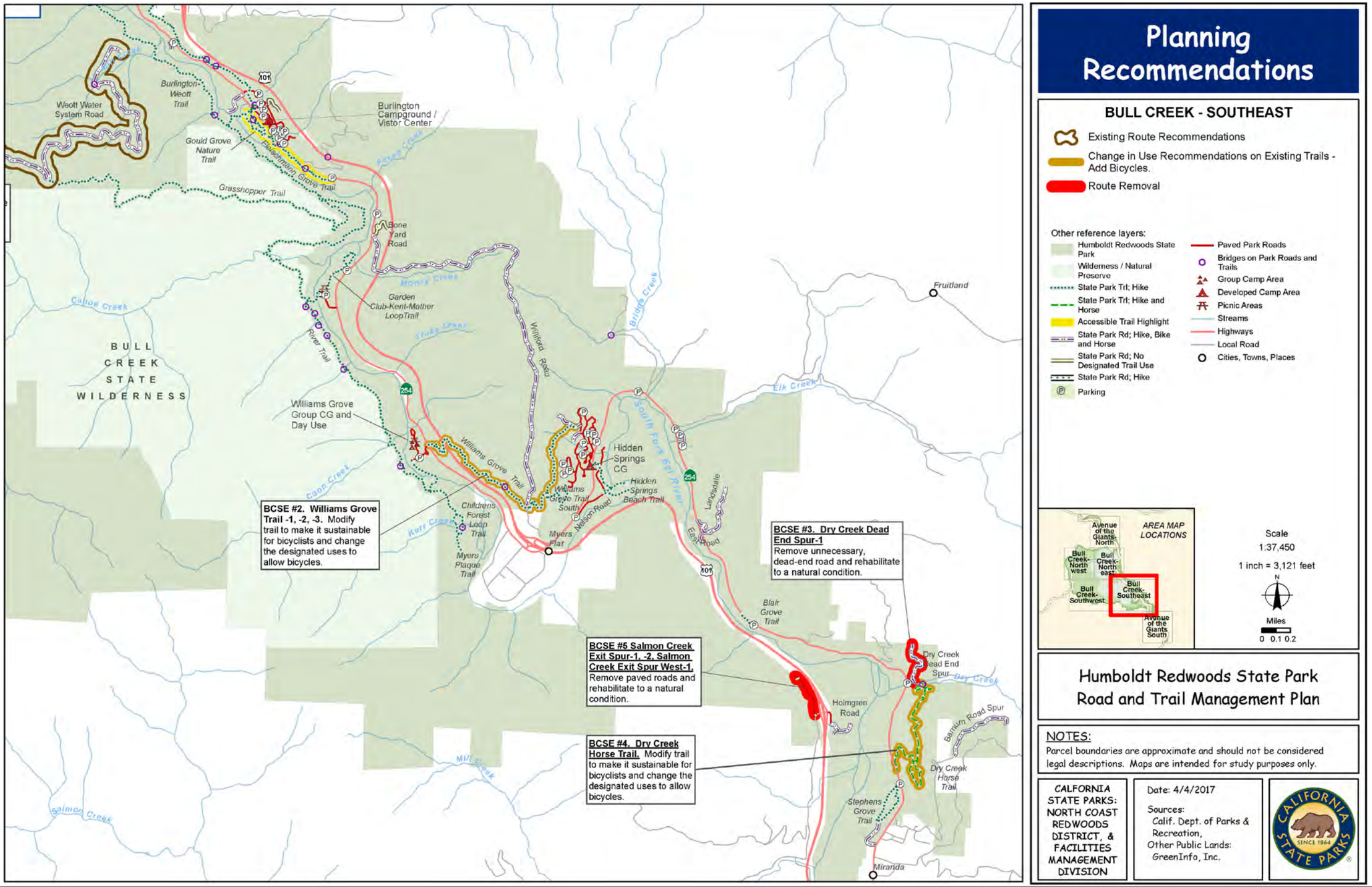
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Bull Creek - Southeast Area - Planning Recommendations



Planning Recommendations

BULL CREEK - SOUTHEAST

Existing Route Recommendations

Change in Use Recommendations on Existing Trails - Add Bicycles.

Route Removal

Other reference layers:

- Humboldt Redwoods State Park
- Wilderness / Natural Preserve
- State Park Trl; Hike
- State Park Trl; Hike and Horse
- Accessible Trail Highlight
- State Park Rd; Hike, Bike and Horse
- State Park Rd; No Designated Trail Use
- State Park Rd; Hike
- Parking
- Paved Park Roads
- Bridges on Park Roads and Trails
- Group Camp Area
- Developed Camp Area
- Picnic Areas
- Streams
- Highways
- Local Road
- Cities, Towns, Places

Scale 1:37,450

1 inch = 3,121 feet

N

Miles 0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/4/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Avenue of the Giants - South Area

Significant natural resources:
This area consists of one small, disconnected portion of the park and linear parcels along the South Fork Eel River. These habitats are fragmented and impacted by adjacent land uses. The old growth forest primarily occurs in small, fragmented patches along the South Fork Eel River.

As with other old growth redwood stands in the park, these areas are expected to support marbled murrelets (*Brachyramphus marmoratus*). The forested areas are expected to support northern spotted owls (*Strix occidentalis caurina*) and possibly Pacific Fisher (*Pekania pennanti*), although the habitat is rather fragmented for the later species. Bald eagles (*Haliaeetus leucocephalus*) forage along the South Fork Eel River.

Western pond turtles (*Actinemys [Emys] marmorata*) and foothill yellow-legged frogs (*Rana boylii*) occur in the South Fork Eel River. Northern red-legged frogs are also expected to occur (*Rana aurora*). Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead (*Oncorhynchus mykiss*) all occur in the South Fork Eel River.

Few botanical surveys have been conducted in this area however; species such as Humboldt County fuchsia (*Epilobium septentrionale*) and streamside daisy (*Erigeron biolettii*) are some of the plants that may occur in this area.

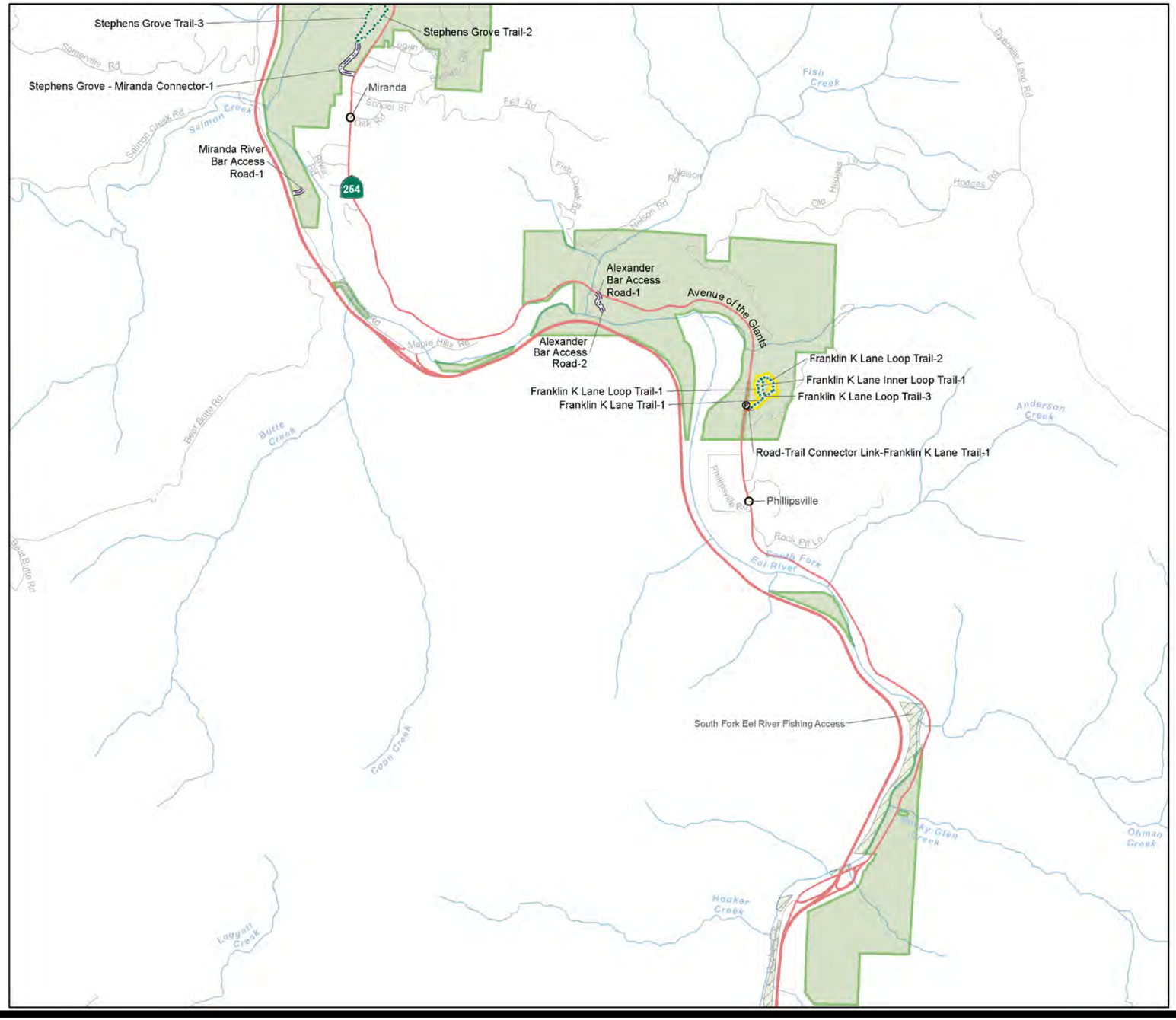
Significant cultural resources:
Archaeological: Archaeological sites in this area include abandoned segments of the historic Old Redwood Highway, homestead sites, and sites associated with logging activities. There are recorded prehistoric archaeological sites within this area of the park.

Paleontological: The area has not been thoroughly surveyed for paleontological resources, which potentially exist throughout the park.

RECOMMENDATIONS

AGs #1. Access from Avenue of the Giants
Issue: The Avenue of the Giants runs the length of the park and is easily accessed from US 101. The Avenue has some existing trailheads that connect to redwood groves; however, many large pullouts exist where there are no trails.
Recommendation: Investigate and develop additional access trails to groves where large parking pullouts exist and remove and rehabilitate existing non-system trails. Some trails may form new loops while others may link to existing trails. In addition, explore potential linkages to public land within adjacent communities along the Avenue of the Giants.

Map: Avenue of the Giants - South Area - Existing Roads and Trails



Existing Roads and Trails

AVENUE OF THE GIANTS SOUTH

Current Road & Trail Network by Category and Use Designation

- Hike
- State Park Rd, Hike, Bike and Horse
- Paved Park Roads
- Accessible Trail Highlight

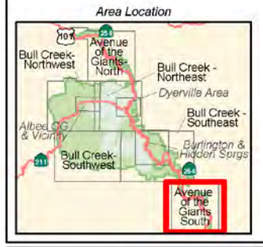
Reference Features

- Humboldt Redwoods State Park
- Other Public Lands

Other Public Lands Access Restrictions

- Restricted Access
- Streams
- Highways
- Local Road
- Cities, Towns, Places
- Parking

Area Location



Scale
1:29,940
1 inch = 2,495 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

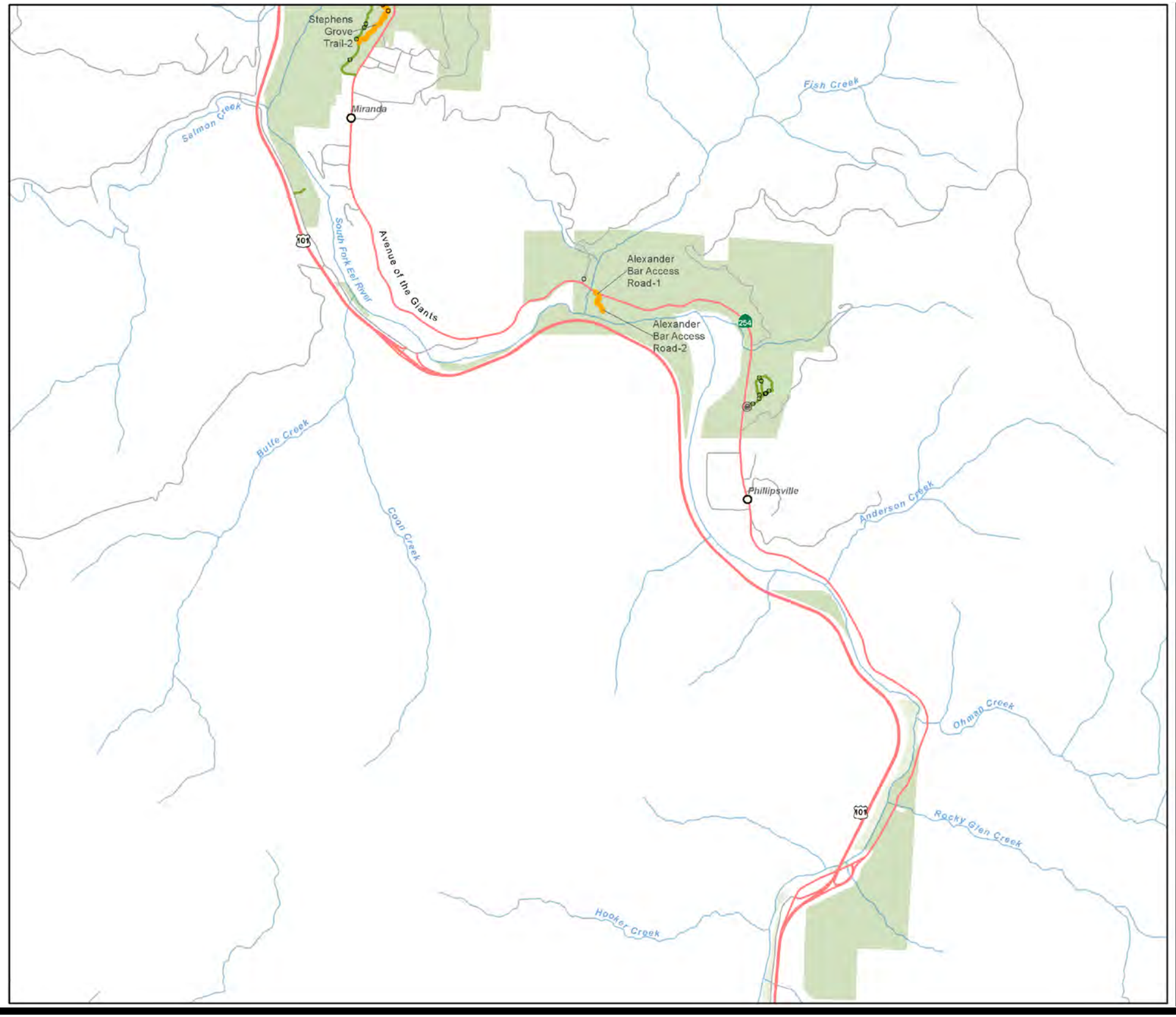
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Avenue of the Giants - South Area - Maintenance Recommendations



Maintenance Recommendations

AVENUE OF THE GIANTS - SOUTH

- Unsustainable. Remove, Reconstruct/Re-Engineer, and/or Reroute
- Sustainable with Reconstruction/ Re-engineering
- Sustainable with Maintenance
- Non-system route
- User-created Trail Intersections. Remove Trail and Rehabilitate Vegetation.

Note: Recommendations are made by road or trail segment. Segment recommendations may apply to only a portion of the segment (e.g. a road with a "Remove, Reconstruct/Reengineer, and Reroute" recommendation may include locations within the trail segment requiring maintenance, locations requiring reconstruction/reengineering, and locations requiring reroutes).

Other Reference Layers:
- Humboldt Redwoods State Park
- Paved State Park Road
- Highways
- Local Road
- Streams
- City Points
- Parking

Scale
1:29,900
1 inch = 2,492 feet
N
Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

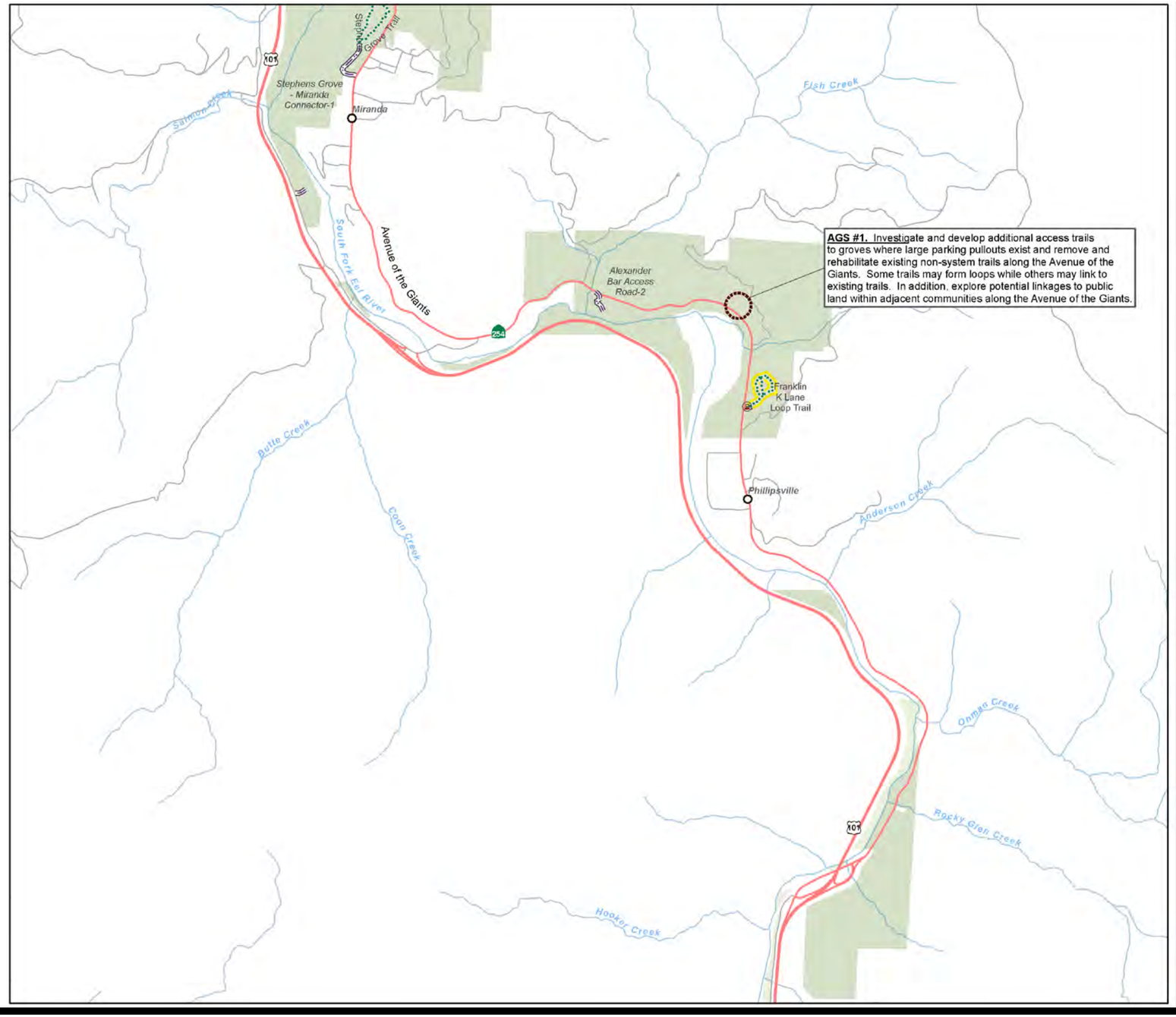
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

Map: Avenue of the Giants - South Area - Planning Recommendations



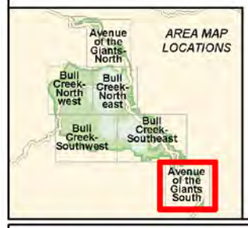
Planning Recommendations

AVENUE OF THE GIANTS SOUTH

Area Recommendations

Other reference layers:

- Humboldt Redwoods State Park
- State Park Trl; Hike
- Accessible Trail Highlight
- State Park Rd; Hike, Bike and Horse
- Paved Park Roads
- Streams
- Parking
- Other Public Lands
- Highways
- Local Road
- Cities, Towns, Places



Scale
1:29,950
1 inch = 2,496 feet
N
Miles
0 0.1 0.2

Humboldt Redwoods State Park
Road and Trail Management Plan

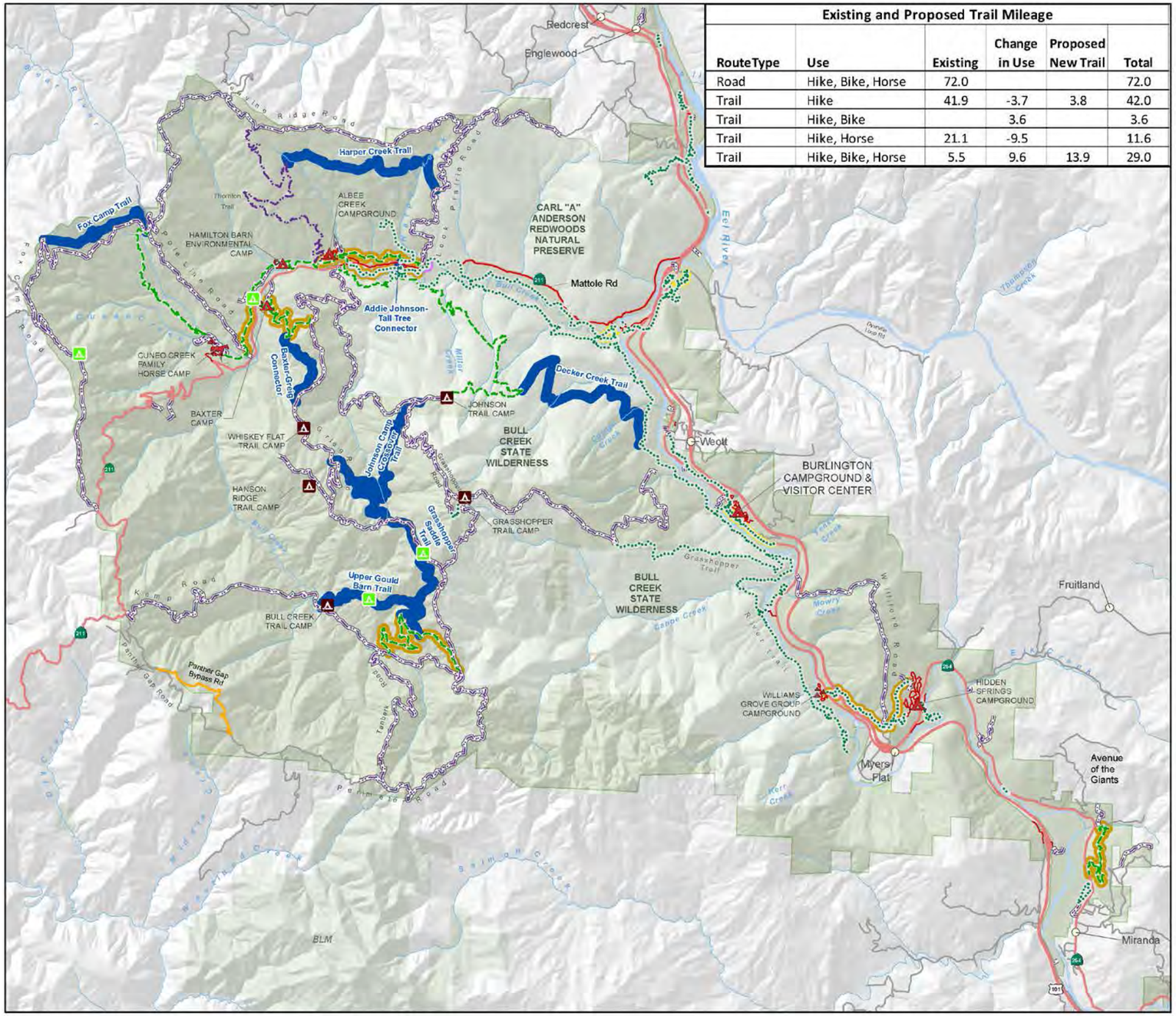
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALFORNIA STATE PARKS: NORTH COAST REDWOODS DISTRICT, & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation,
Other Public Lands:
GreenInfo, Inc.

6.3 Overview of New Trails and Change-in-Use Recommendations Map



Existing and Proposed Trail Mileage

RouteType	Use	Existing	Change in Use	Proposed New Trail	Total
Road	Hike, Bike, Horse	72.0			72.0
Trail	Hike	41.9	-3.7	3.8	42.0
Trail	Hike, Bike		3.6		3.6
Trail	Hike, Horse	21.1	-9.5		11.6
Trail	Hike, Bike, Horse	5.5	9.6	13.9	29.0

Parkwide New Trail and Change in Use Recommendations

Legend

- Proposed New Routes
- Change in Use on Existing Trails - Add Bicycles
- Change in Use on Existing Trails - Add Bicycles and Equestrian
- Non-system route proposed for reconstruction
- Proposed Trail Camps

Reference Features

- Humboldt Redwoods State Park SubUnits - Wilderness, Preserves
- Existing Unpaved Park Trails
- Trail Designation:
  - Hike
  - Hike and Horse
  - Hike, Bike and Horse
  - Accessible Trail Highlight
- Existing Unpaved Park Roads
- Trail Designation:
  - Hike, Bike and Horse
  - Hike
  - Paved Park Roads
- Campground-Other category
- Campground
- Horse Camp
- Group Camp
- Environmental Camp Area
- Highways
- Local Road
- Streams, Rivers
- Cities, Towns, Places

Scale 1:77,270

1 inch = 6,439 feet

N

Miles 0 0.5 1

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Section 7 ENVIRONMENTAL DOCUMENT (PENDING)

Section 8 APPENDICES

8.1 Glossary

ADA
An acronym for the Americans with Disabilities Act of 1990, which is a federal law prohibiting discrimination against people with disabilities and requiring that public facilities be accessible to people with disabilities. For the purposes of this plan, it refers to the standards established for accessibility by the U.S. Access under the Architectural Barriers Act.

CEQA
An acronym for the California Environmental Quality Act, which was established shortly after the federal National Environmental Policy Act in 1969. CEQA requires public involvement in and review of projects that would result in an impact on California's natural and cultural resources.

CLASSIFICATION
The designation indicating the intended use of and maintenance specifications for a particular trail.

EQUESTRIAN TRAILS
Trails that are primarily designated for use by equestrians. Hikers may also use these trails but are not the intended primary user. These trails are designed to meet the requirements of horses and their riders, protect resources, and achieve sustainability. They are not intended to be multi-use or accessible trails. The planning, layout, and design processes included herein apply to these trails, however, there are additional design criteria related to equestrian trails.

HYDROLOGY
The physical properties, distribution, and circulation of water on the surface of the land, in the soil, in underlying rocks, and in the atmosphere.

MITIGATE
Actions that are undertaken to avoid, minimize, reduce, eliminate, or rectify the adverse impacts of a management practice or trail use.

MOUNTAIN BIKE TRAIL (Bicycle Trail)
Trails that have been designated for use by non-motorized bicycles equipped for off-road use. Hikers may also use these trails but they are not the intended primary user. These trails are designed to meet the requirements of mountain bikes and their riders, protect resources, and achieve sustainability. They are not intended to be equestrian, multi-use, or accessible trails.

MULTI-USE TRAILS
For the Department, multi-use trails are designed to accommodate at least two user groups in addition to pedestrians – usually bike and horse riders. Multi-use trails can create linkages between critical access or interest points within a trail network. They are not intended to be the

solution to all trail user dispersion issues. Multi-use trails require fewer resources to construct and maintain and often minimize impacts to cultural and natural resources.

NON-SYSTEM TRAILS
Trails not recognized, designated, nor maintained by the park.

REHABLITATION
Includes all the work that is necessary to bring a trail or trail system up to classification standards, including returning a work site or a damaged area back to its original state. Trail rehabilitation, otherwise known as site restoration, is required to mitigate or correct damage or disturbance to wildlife, cultural resources, vegetation, soils, or water courses created by trail construction, maintenance, or visitor use.

SIGHT DISTANCE
Consists of the visible, unobstructed, forward and rear view as seen by a trail user from any given point on a trail.

SPECIFICATIONS
Standards to which trails and trail structures are built and maintained as determined by the trail's classification.

SUSTAINABLE TRAILS
A sustainable trail has been designed, constructed, or re-constructed to a standard that does not adversely impact natural and cultural resources and can withstand the impacts of the intended user group while receiving only routine cyclical maintenance. A sustainable trail must meet the needs of the intended user group to a degree that they do not deviate from the established trail alignment.

SYSTEM TRAILS
Trails recognized, designated, and maintained by the park.

TRAILHEAD
An access point to a trail often accompanied by various public facilities, such as a parking area, drinking water, restrooms, informational signs, and staging areas.

TRAIL LOG
An inventory of the physical features and conditions of a trail by trail footage.

WATERSHED
A region or area that is joined peripherally by a water parting formation, such as a ridge, hill, or mountain range, and that drains into the same water course or body.

WORK LOG
A detailed listing of existing trail elements and/or specific modifications (re-engineering, reconstruction, etc.) by location designed to improve trail conditions.

8.2 Visitor Survey and Responses

Visitor surveys were conducted during four periods over the course of a year in May, August, and November 2010 and February 2011. A total of 465 responses were collected. Visitors were surveyed at two locations: one in the front-country and one in the backcountry. Each survey period was conducted over two days: one weekday and one weekend.

Humboldt Redwoods State Park Road and Trail Planning Survey

Zip code of home residence: _____

If you want to be on a mailing list, print your name and address. _____

_____

_____

How many people typically accompany you when you make use of HRSP trails and roads?

1-2 ☐ 5+ ☐

3-5 ☐

In the past year, how many times have you used the roads and trails at HRSP:

0-5 ☐ 11-20 ☐

6-10 ☐ 21+ ☐

What is your primary mode of transportation in HRSP:

Street Legal Vehicle ☐

Hiking ☐

Mountain (off-road) Bike ☐

Touring (on-road) Bike ☐

Equestrian/Stock ☐

Your primary use of HRSP is:

Access private property ☐

Recreation (hiking/biking etc.) ☐

Scenic views ☐

Geocaching ☐

Wildlife viewing ☐

Historical interests ☐

Are there enough road and trail opportunities for:

	Yes	No
Hiking	☐	☐
Mountain Bike	☐	☐
Equestrian/Stock	☐	☐
Street Legal Vehicle	☐	☐

Which areas of HRSP do you visit the most? (see map on back)

Section 1 ☐

Section 2 ☐

Section 3 ☐

Section 4 ☐

Section 5 ☐

What type of trails do you use at HRSP?

Hiking Trails ☐

M.U.T's ☐

Hiking/Equestrian ☐

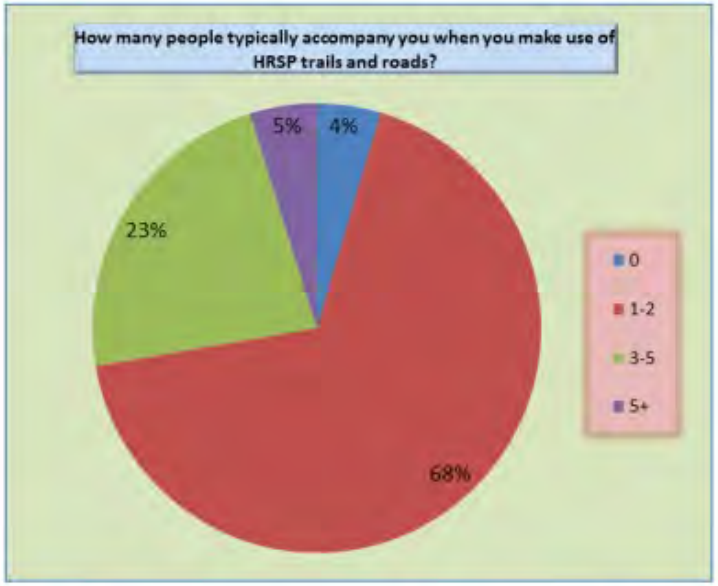
Where 1 is undesirable and 5 is extremely desirable, please indicate the degree of importance for improving/creating trails and roads in HRSP:

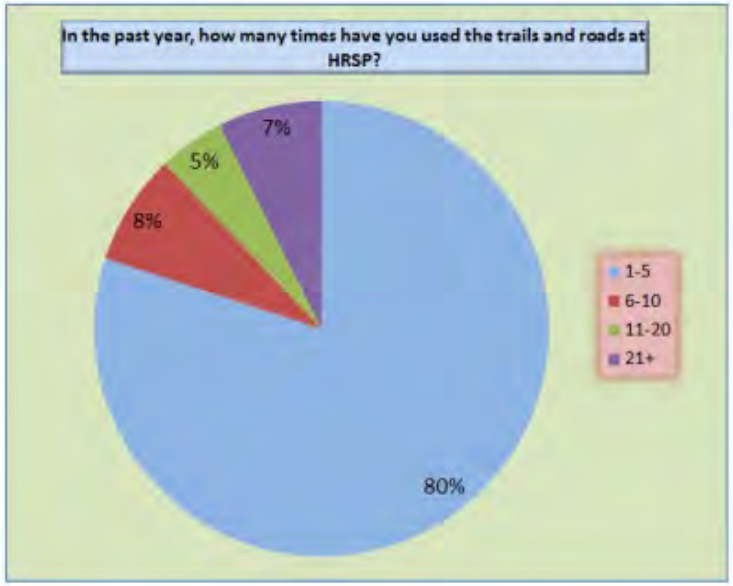
	1	2	3	4	5
Hiking trails					
Mountain bike trails					
Equestrian trails					
Accessible trails					
Access to adjacent private lands					
Trail heads/staging for equestrians					
Trail heads for hiking & mountain biking					
Solitude					
Maps and signs					
Access to views					
Street legal vehicle access					

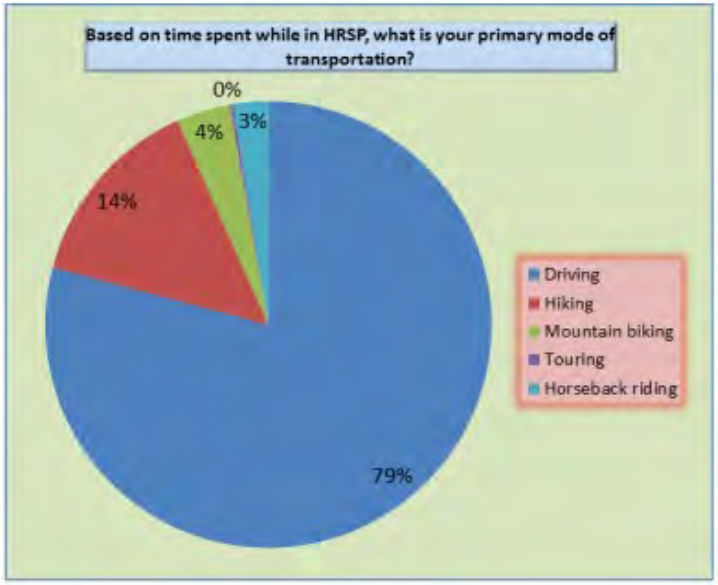
What is your favorite trail in HRSP? _____

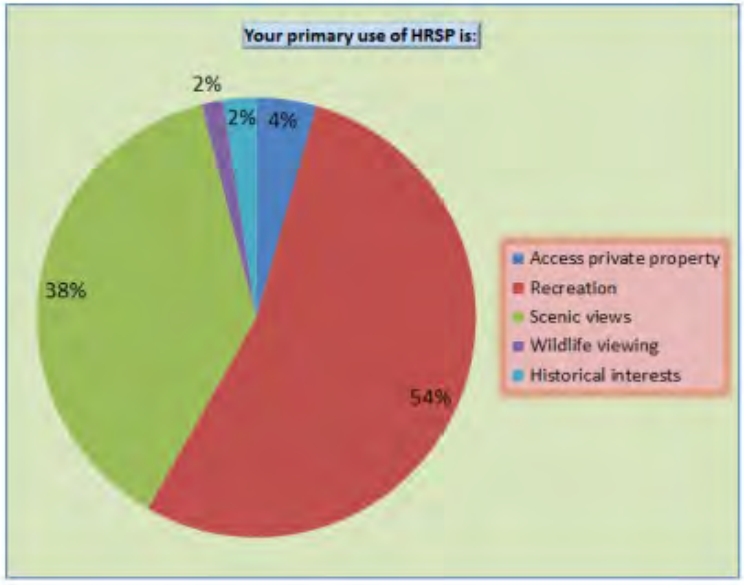
Comments?

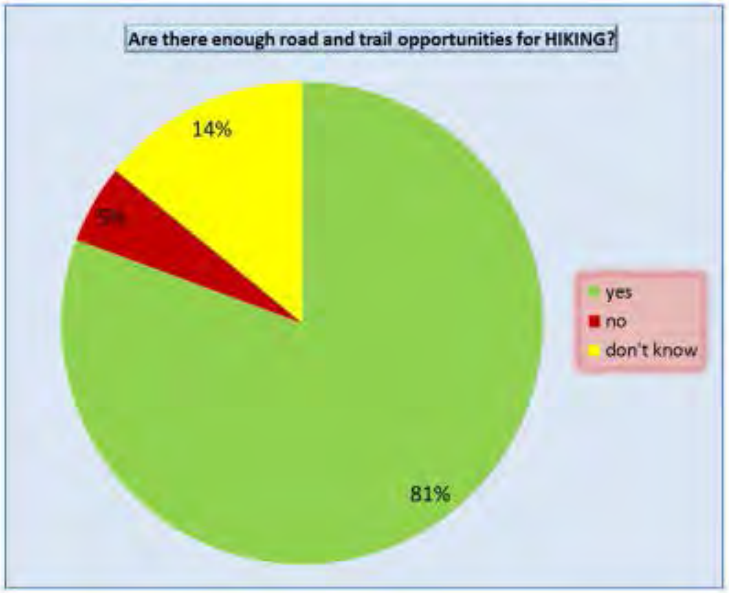
Humboldt Redwoods SP RTMP Data Summary Charts

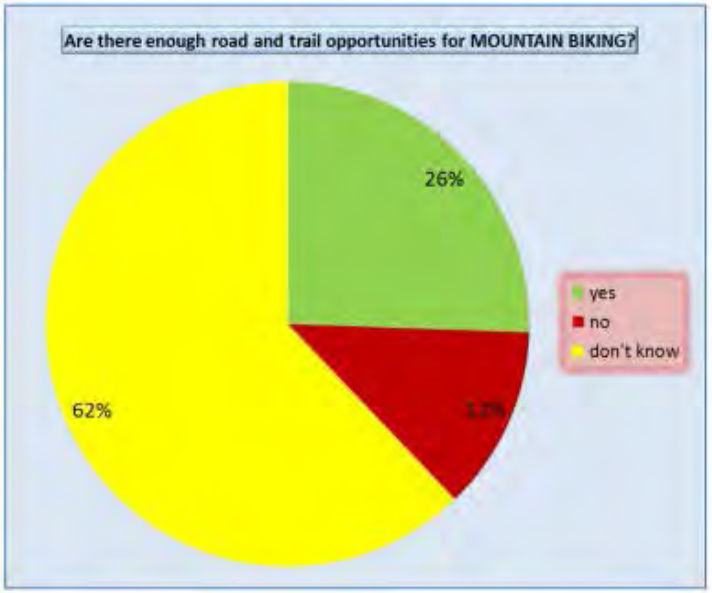


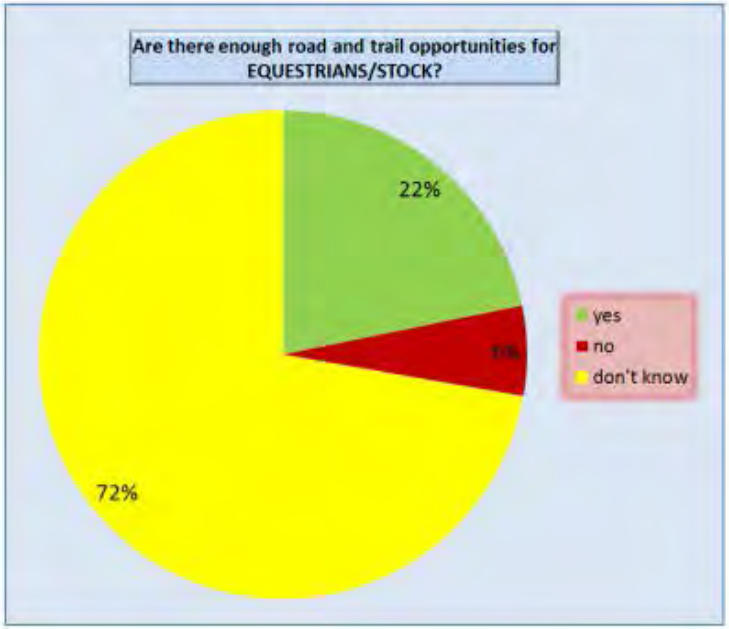


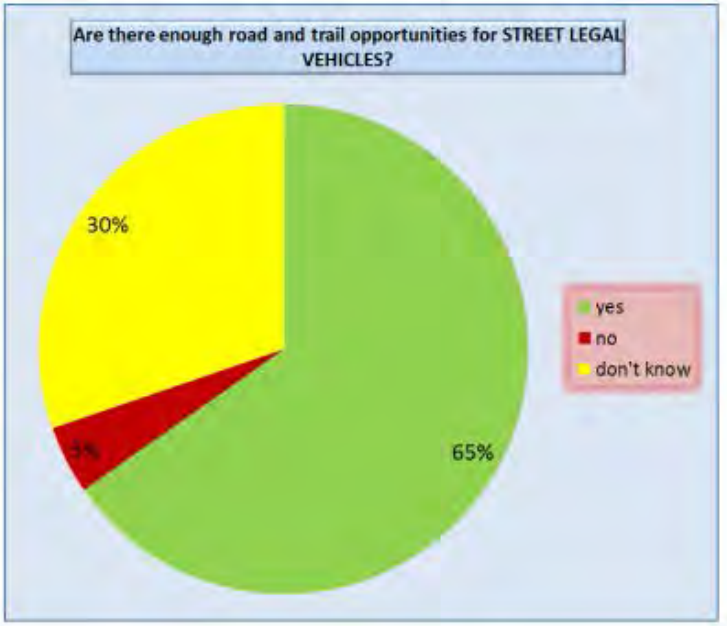


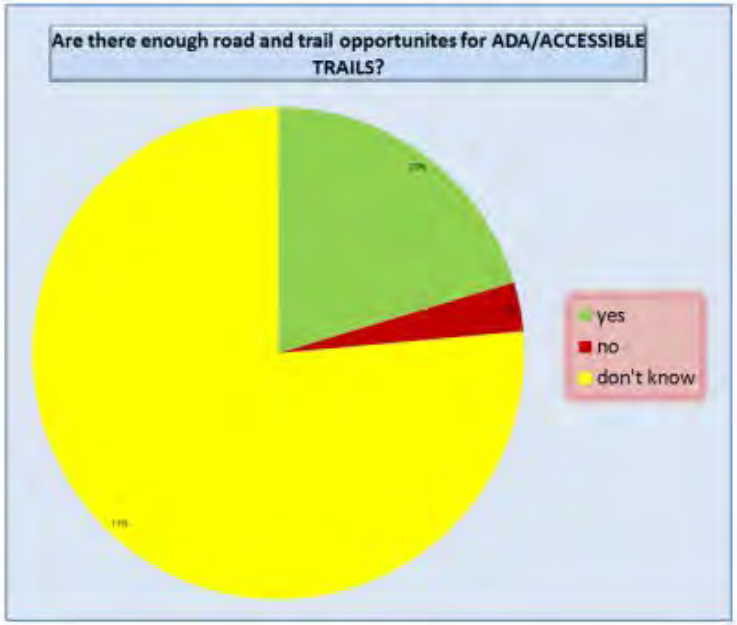


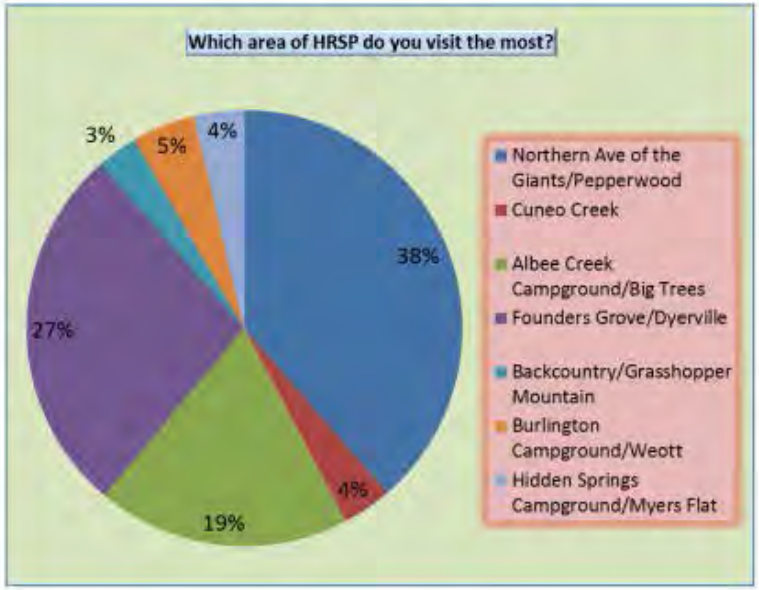

Are there enough road and trail opportunities for HIKING?
14%
5%
81%
yes
no
don't know

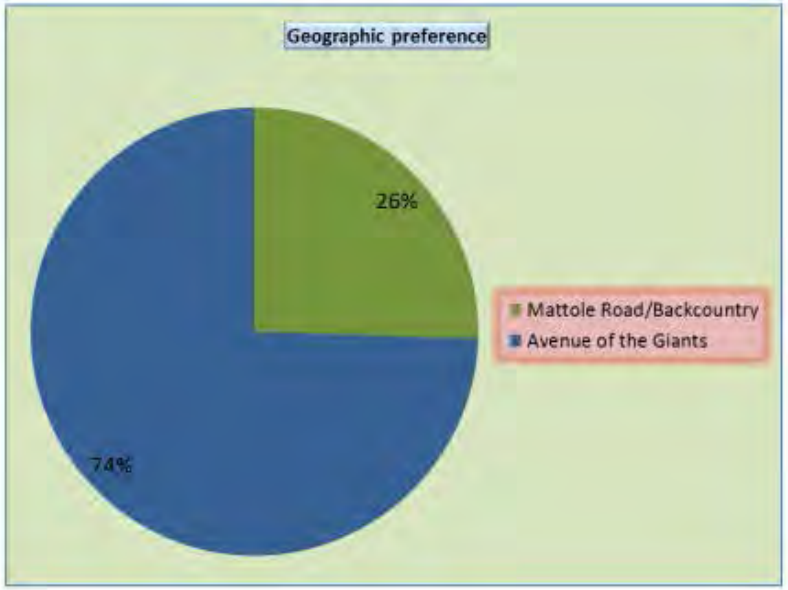

Are there enough road and trail opportunities for MOUNTAIN BIKING?
26%
62%
yes
no
don't know

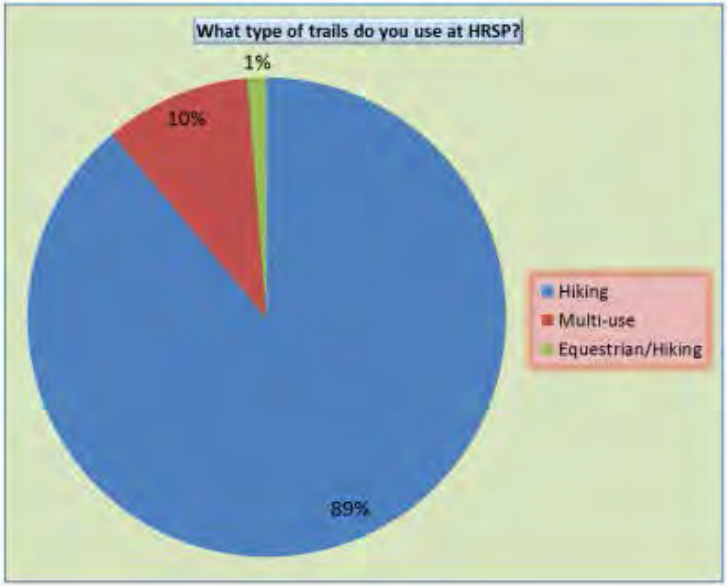

Are there enough road and trail opportunities for EQUESTRIANS/STOCK?
22%
72%
yes
no
don't know


Are there enough road and trail opportunities for STREET LEGAL VEHICLES?
30%
5%
65%
yes
no
don't know

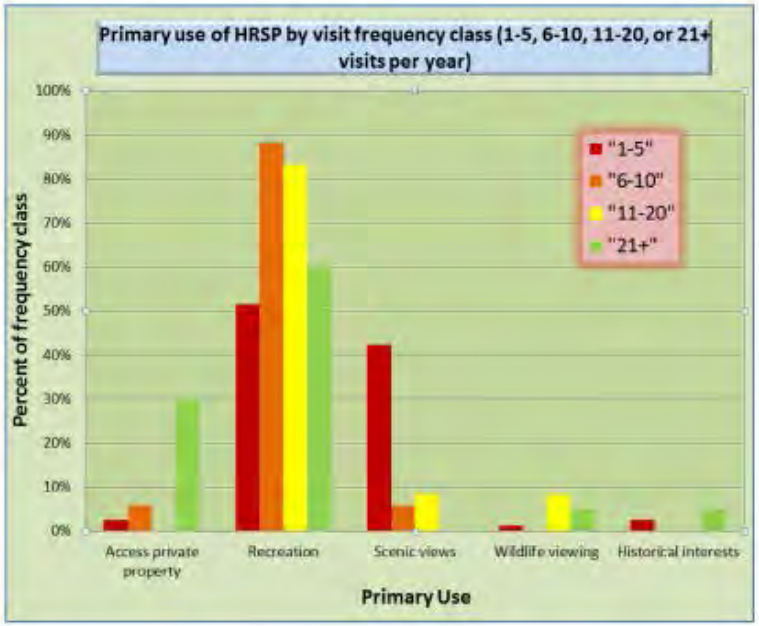

Are there enough road and trail opportunites for ADA/ACCESSIBLE TRAILS?
yes
no
don't know

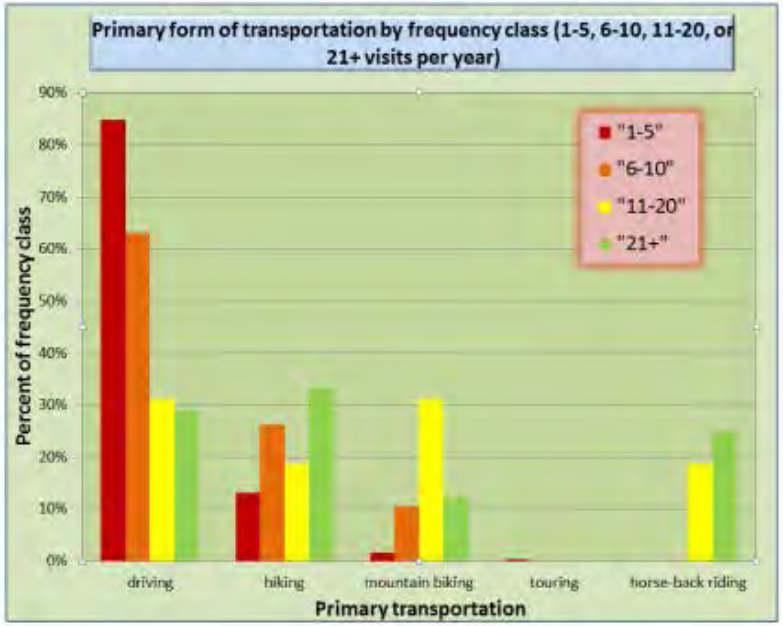

Which area of HRSP do you visit the most?
38%
4%
19%
27%
3%
5%
4%
Northern Ave of the Giants/Pepperwood
Cuneo Creek
Albee Creek Campground/Big Trees
Founders Grove/Dyerville
Backcountry/Grasshopper Mountain
Burlington Campground/Weott
Hidden Springs Campground/Myers Flat


Geographic preference
26%
74%
Mattole Road/Backcountry
Avenue of the Giants

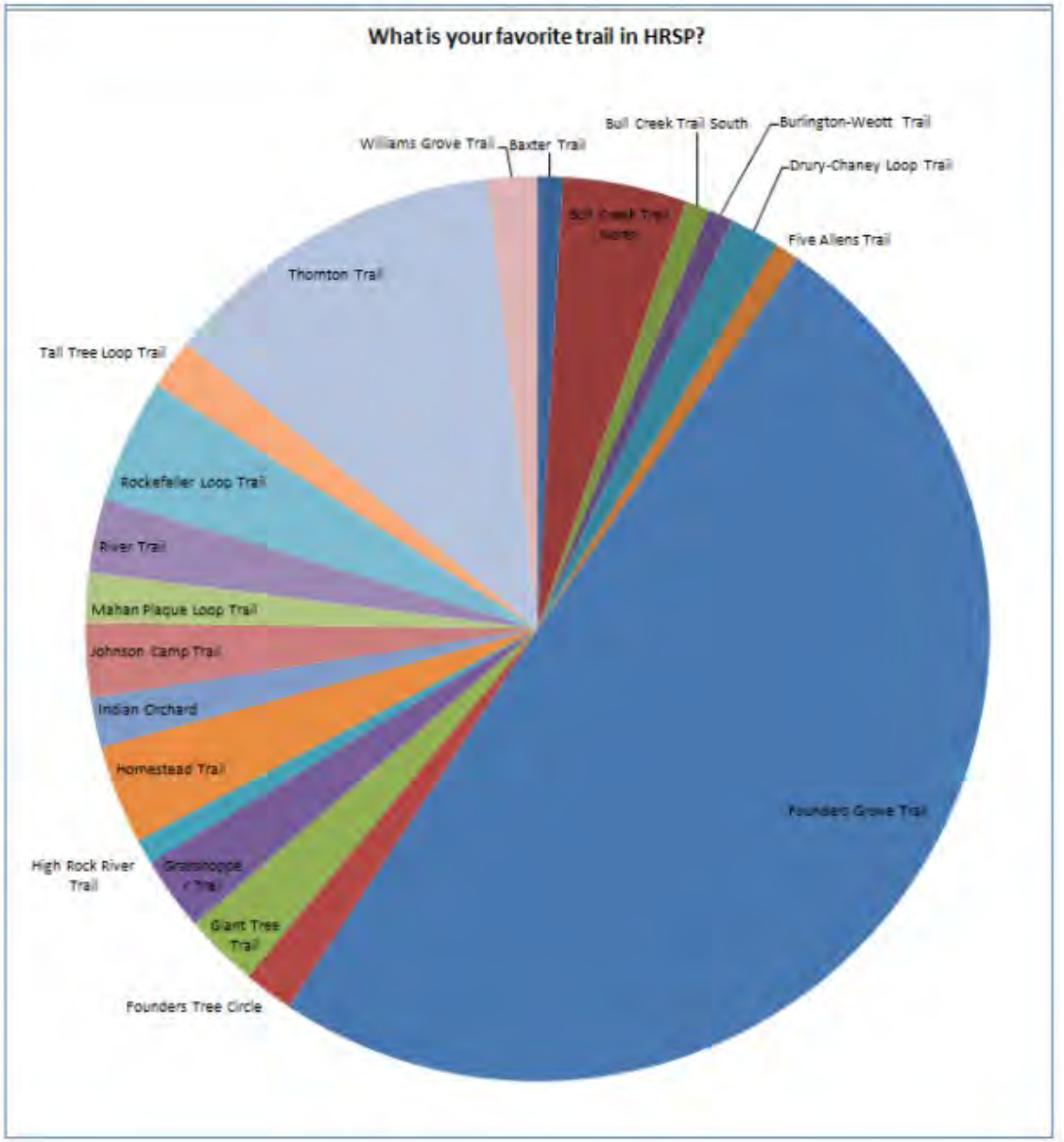

What type of trails do you use at HRSP?
1%
10%
89%
Hiking
Multi-use
Equestrian/Hiking

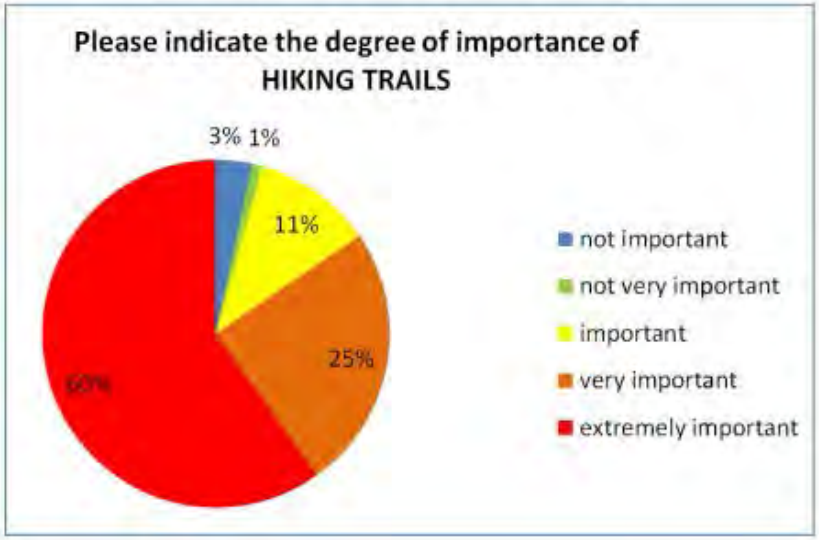

Distance travelled to park
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Percent of visitors
<50mi
50-200mi
200-500mi
>500mi
Distance (miles)

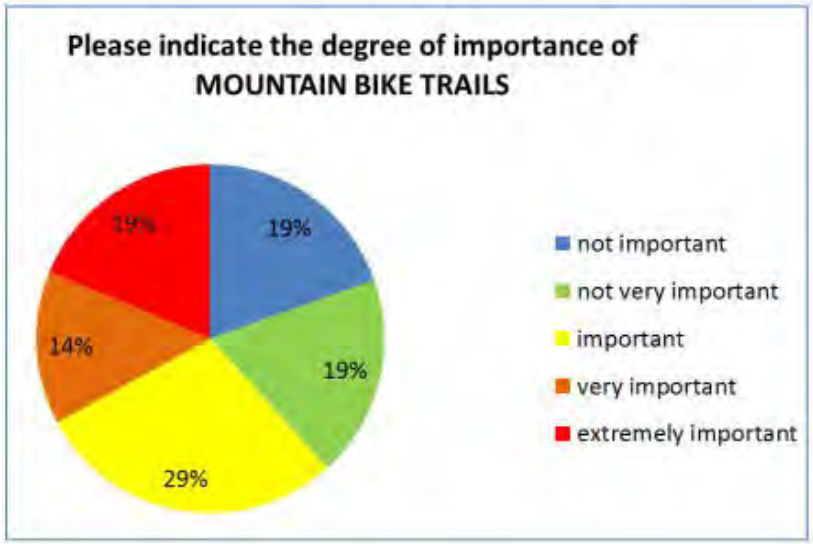

Primary use of HRSP by visit frequency class (1-5, 6-10, 11-20, or 21+ visits per year)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent of frequency class
"1-5"
"6-10"
"11-20"
"21+"
Access private property
Recreation
Scenic views
Wildlife viewing
Historical interests
Primary Use

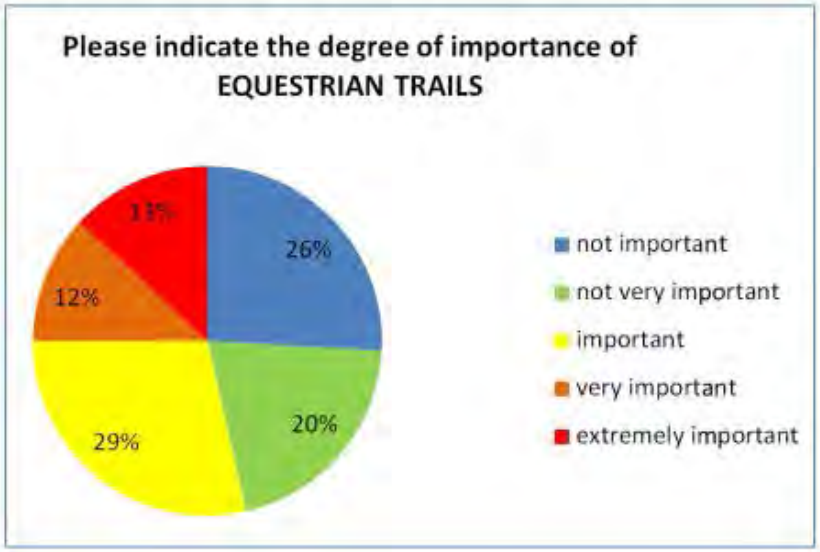

Primary form of transportation by frequency class (1-5, 6-10, 11-20, or 21+ visits per year)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent of frequency class
"1-5"
"6-10"
"11-20"
"21+"
driving
hiking
mountain biking
touring
horse-back riding
Primary transportation

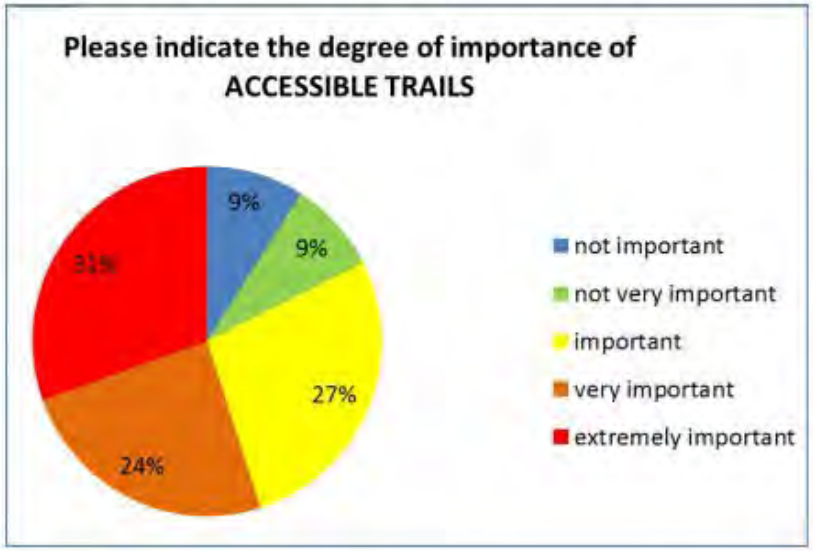
	Frequency	Percent
Baxter Trail	1	0.2%
Bull Creek Trail North	5	1.1%
Bull Creek Trail South	1	0.2%
Burlington-Weott Trail	1	0.2%
Drury-Chaney Loop Trail	2	0.4%
Five Allens Trail	1	0.2%
Founders Grove Trail	56	12.0%
Founders Tree Circle	2	0.4%
Giant Tree Trail	3	0.6%
Grasshopper Trail	3	0.6%
High Rock River Trail	1	0.2%
Homestead Trail	4	0.9%
Indian Orchard	2	0.4%
Johnson Camp Trail	3	0.6%
Mahan Plaque Loop Trail	2	0.4%
River Trail	3	0.6%
Rockefeller Loop Trail	5	1.1%
Tall Tree Loop Trail	2	0.4%
Thornton Trail	14	3.0%
Williams Grove Trail	2	0.4%
(no answer)	352	75.7%
Total	**465**	

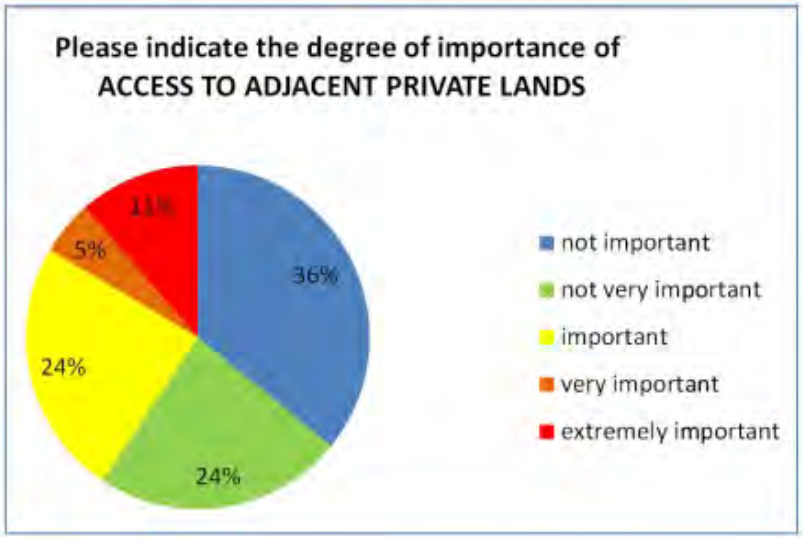


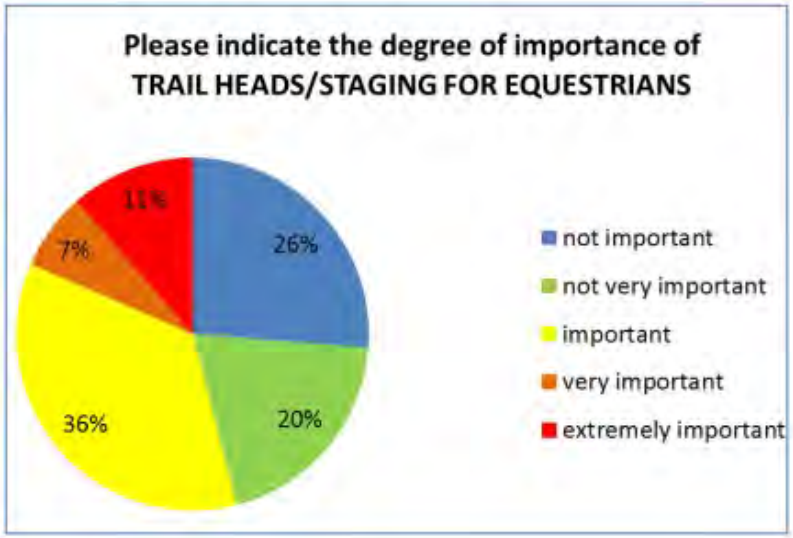

Please indicate the degree of importance of
HIKING TRAILS
3%
1%
11%
25%
60%
not important
not very important
important
very important
extremely important

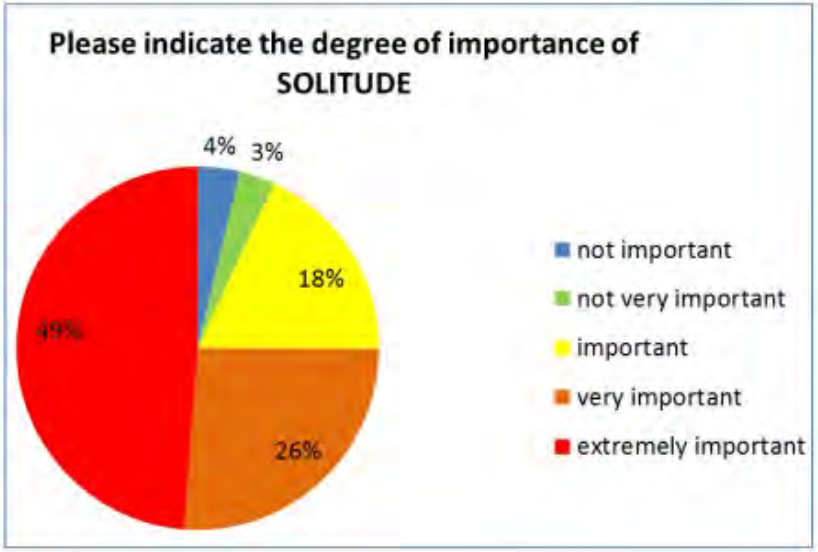

Please indicate the degree of importance of
MOUNTAIN BIKE TRAILS
19%
19%
19%
14%
29%
not important
not very important
important
very important
extremely important

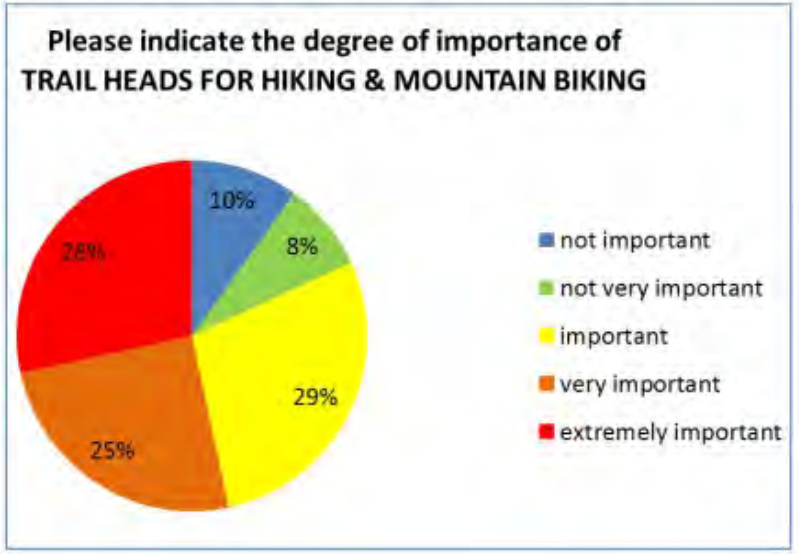

Please indicate the degree of importance of
EQUESTRIAN TRAILS
26%
12%
29%
20%
not important
not very important
important
very important
extremely important

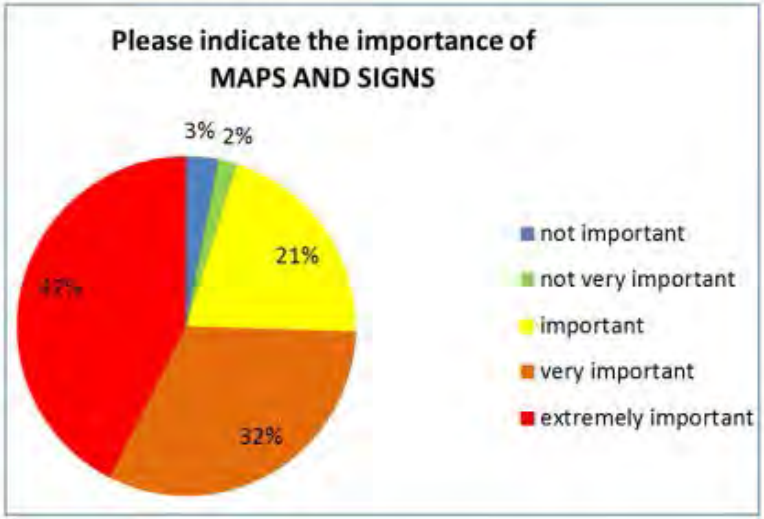

Please indicate the degree of importance of
ACCESSIBLE TRAILS
9%
9%
27%
24%
not important
not very important
important
very important
extremely important

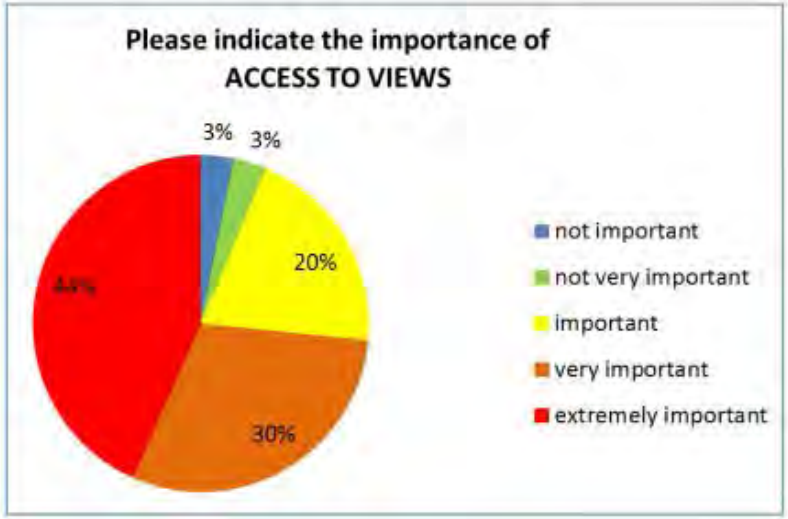

Please indicate the degree of importance of
ACCESS TO ADJACENT PRIVATE LANDS
36%
24%
24%
5%
11%
not important
not very important
important
very important
extremely important

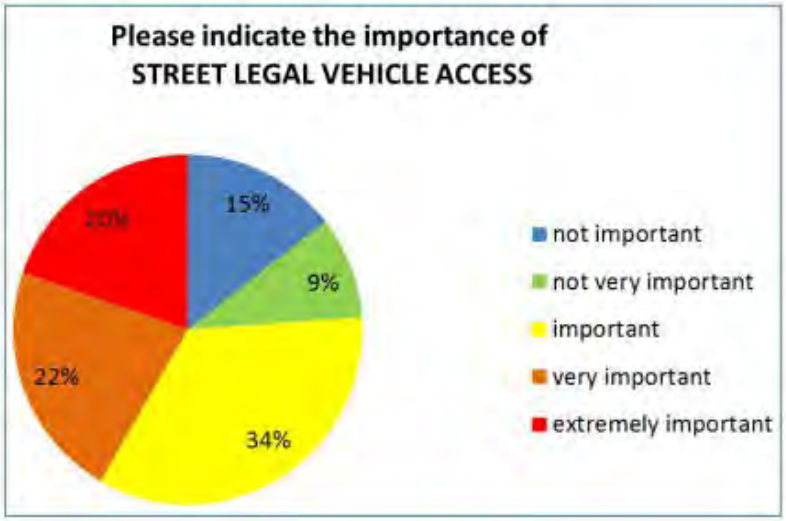

Please indicate the degree of importance of
TRAIL HEADS/STAGING FOR EQUESTRIANS
26%
20%
36%
7%
11%
not important
not very important
important
very important
extremely important


Please indicate the degree of importance of
SOLITUDE
4%
3%
18%
49%
26%
not important
not very important
important
very important
extremely important


Please indicate the degree of importance of
TRAIL HEADS FOR HIKING & MOUNTAIN BIKING
10%
8%
29%
25%
28%
not important
not very important
important
very important
extremely important


Please indicate the importance of
MAPS AND SIGNS
3%
2%
21%
32%
not important
not very important
important
very important
extremely important


Please indicate the importance of
ACCESS TO VIEWS
3%
3%
20%
30%
not important
not very important
important
very important
extremely important


Please indicate the importance of
STREET LEGAL VEHICLE ACCESS
15%
9%
34%
22%
not important
not very important
important
very important
extremely important

Summary of Respondent Comments

The following is a summary of comments received during the trail user survey and stakeholder meetings. Staff has reviewed each comment and incorporated recommendations where feasible.

- Safe bike trail on Avenue of the Giants
- A hike/bike trail along the Avenue of the Giants would allow a safe alternative to driving within the park, especially from campgrounds to towns and trailheads. Might also reduce the temptation to walk in/near the road to take photos, etc. (increase safety)
- Would like to see upper reaches of Bull Creek opened up again to hikers and bikers after Bull Creek Rd closure. No flat areas to ride off road/on trail and difficult for older people to ride up Look Prairie or Squaw Ridge.
- Equestrian trails that come out to and across the Eel River coming towards visitor center
- Bike legal redwoods-to-sea trail connecting HRSP to BLM trails in King Range
- Trails linking Cuneo and Kings Range (from equestrian survey)
- Connect Cuneo Creek to Headwaters
- Trail from Cuneo Creek horse camp to Bull Creek campground
- Trail from the graveyard at Cuneo to Lower Kemp Rd., maybe to the west of Bull Creek Canyon
- Connection (loop) from Fox Creek to Cuneo Creek
- Lower Bull Creek to Baxter or Fox Camp
- Trail to avoid Albee C reek
- Cross the Mattole Rd. from Upper Bull Creek to Homestead or Look Prairie
- Open Bull Creek South Trail to equestrians so you could ride a loop across Mattole Rd. to Homestead
- Bypass for Pole Line that goes down to the Homestead Trail
- Side trails to avoid Pole Line traffic and slippery road
- Trail from Hamilton Barn to Lower Thornton
- More scenic alternative to the little section of Homestead near Mattole Rd. (logging deck)
- Realign Grasshopper trail to avoid wilderness areas for bicycle loop
- Fox Camp, Squaw Creek Ridge, Grieg, Tanbark, Camp M.U.T, Perimeter and Look Prairie all good candidates for conversion to trails
- Develop mountain bike trail system around Williford M.U.T with Hidden Springs Campground as its base
- Williams Grove Trail, River Trail, Dry Creek Horse Trail, South Prairie Trail, Baxter Trail, Homestead Trail and Addie Johnson Trail all candidates to allow bikes with low user conflict.
    - Williams Grove provides moderate climbing
    - River Trail provides mild climbing, good beginner trail
    - Dry Creek Trail is near high school, providing healthy activity alternative
    - South Prairie Trail used to be bike legal and should be again
    - Baxter Trail is a nice route to Squaw Creek Ridge
    - Homestead Trail would make a complete loop connecting Look Prairie MUT, Peavine Ridge MUT, Thornton MUT, and the Homestead Trail
    - Addie Johnson Trail is a short little spur through the redwoods to a historic grave site

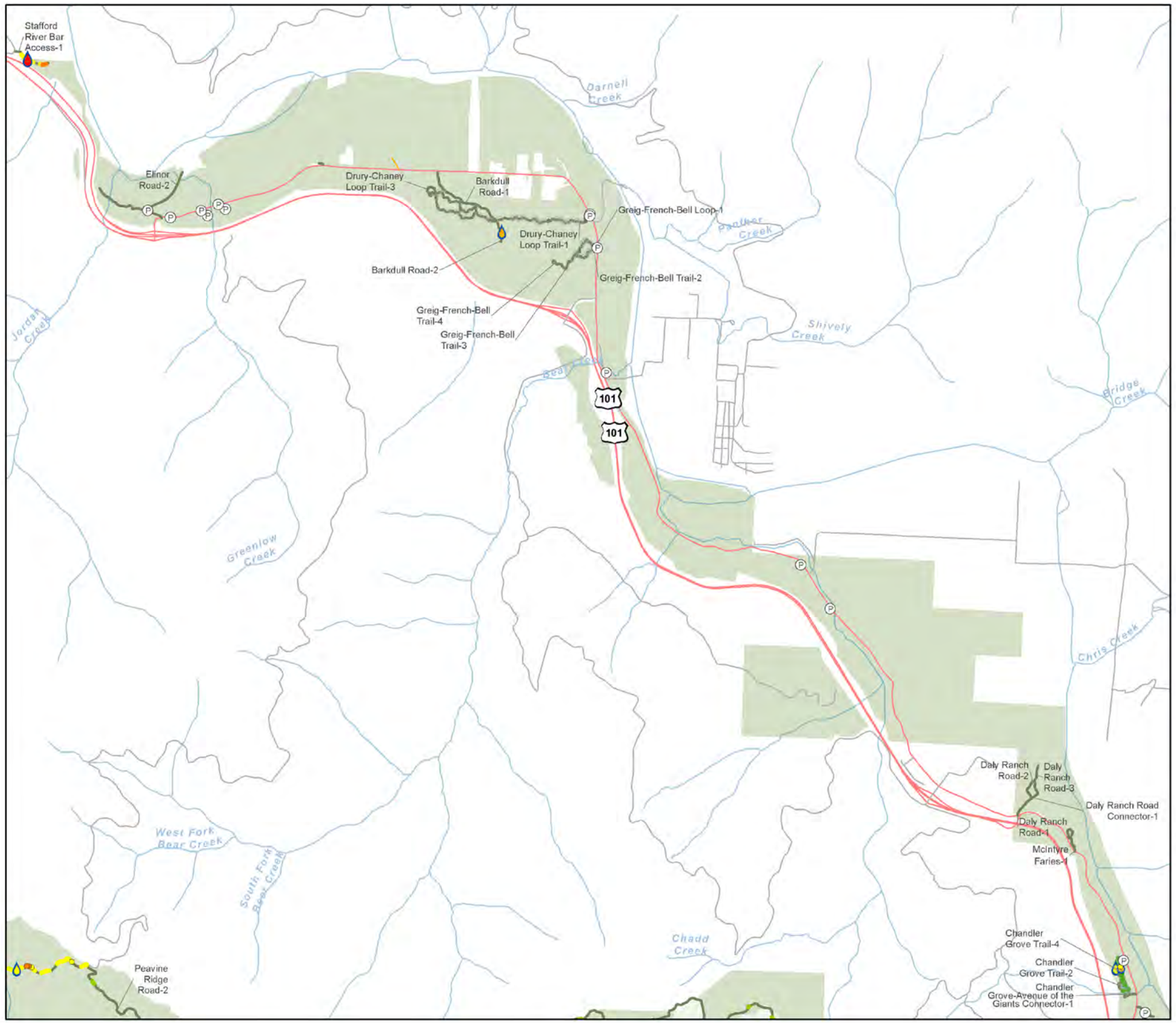
- Homestead (new section) to Look Prairie gets really muddy
- Off-sloping and loose gravel on roads (Grasshopper Peak MUT, Squaw Creek Ridge MUT, etc.) creates dangerous conditions for bicyclists.

8.3 Maps: Potential Significance to Water Resources, Drainage Structure Condition Index, and Erosion Severity

The Potential Significance to Water Resources (PSWR) and Drainage Structure Condition Index (DSCI) maps show the potential for roads and trails to impact water resources through eroding sediment discharge and the condition of drainage structures, respectively. The PSWR is based on erosion severity, proximity/connectivity to water resources, and road or trail width. The higher the PSWR number, the greater the potential of the road or trail to impact water resources. The DSCI is an assessment of conditions observed in the water course or at a drainage structure. A high index indicates poor drainage condition. The Erosion Severity maps show locations of erosion along roads and trails and rates those erosional events as critical, high, moderate and slight.

Avenue of the Giants - North Area

Map: Potential Significance to Water Resources and Drainage Structure Condition Index



Potential Significance to Water Resources and Drainage Structure Condition

AVENUE OF THE GIANTS - NORTH

Potential Significance to Water Resources, and Drainage Structure Condition

Potential Significance to Water Resources (PointFeatures)

- 1 - 5 (least significant)
- 6 - 9 (less significant)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Potential Significance to Water Resources (Line Features)

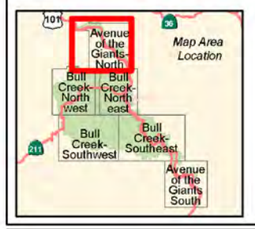
- 1 - 5 (least significant)
- 6 - 9 (less significance)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Drainage Structure Problem Severity (Point Features)

- critical
- high
- moderate

Reference Features:

- Park Property
- SubUnits - Wilderness, Preserves
- Local Road
- Non-system Route
- Park Routes
- Highways
- Parking



Scale
1:33,960
1 inch = 2,830 feet

Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

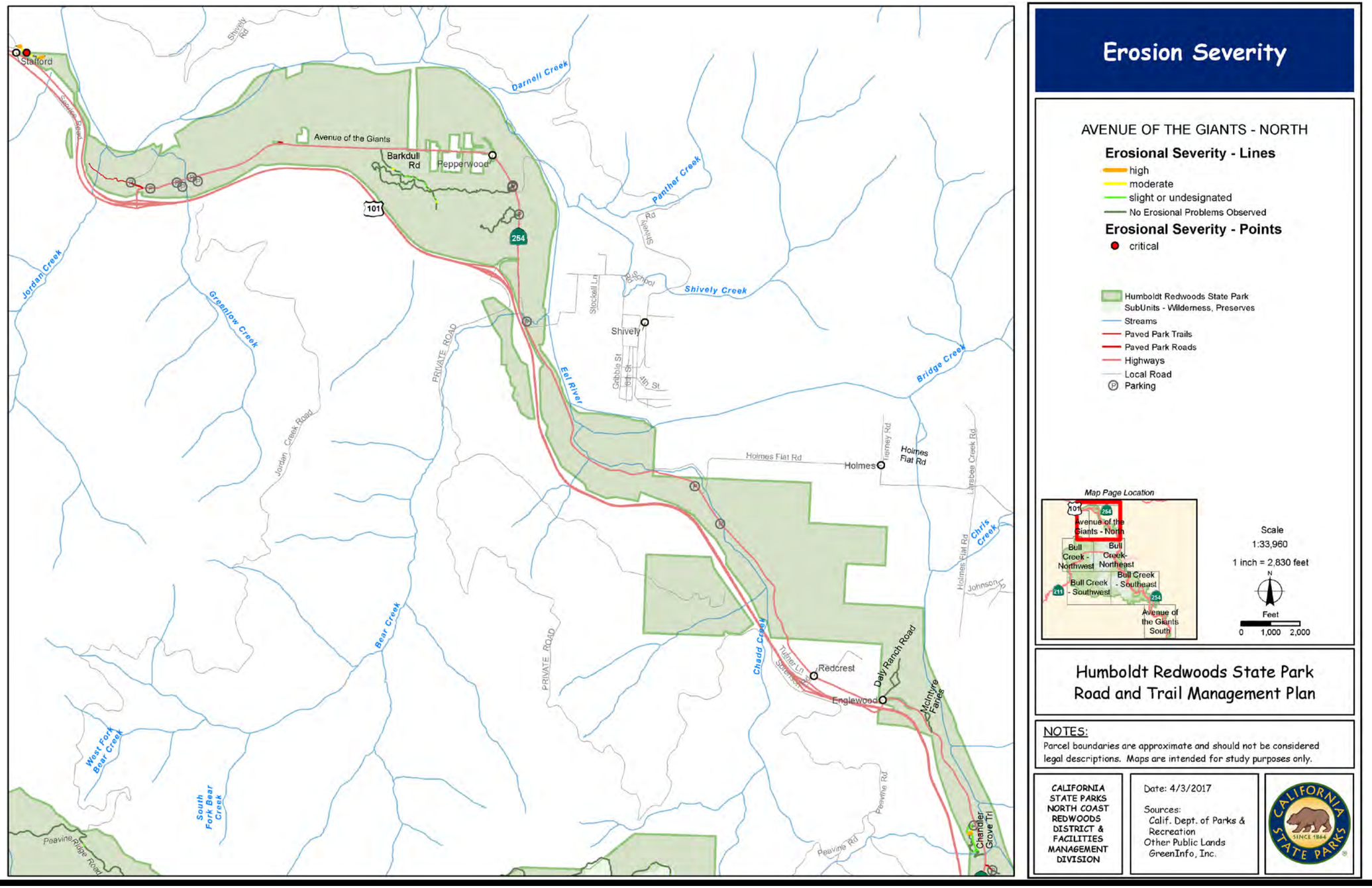
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 1/9/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Erosion Severity



Erosion Severity

AVENUE OF THE GIANTS - NORTH

Erosional Severity - Lines

- high
- moderate
- slight or undesignated
- No Erosional Problems Observed

Erosional Severity - Points

- critical

- Humboldt Redwoods State Park
- SubUnits - Wilderness, Preserves
- Streams
- Paved Park Trails
- Paved Park Roads
- Highways
- Local Road
- Parking

Map Page Location

Scale
1:33,960
1 inch = 2,830 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
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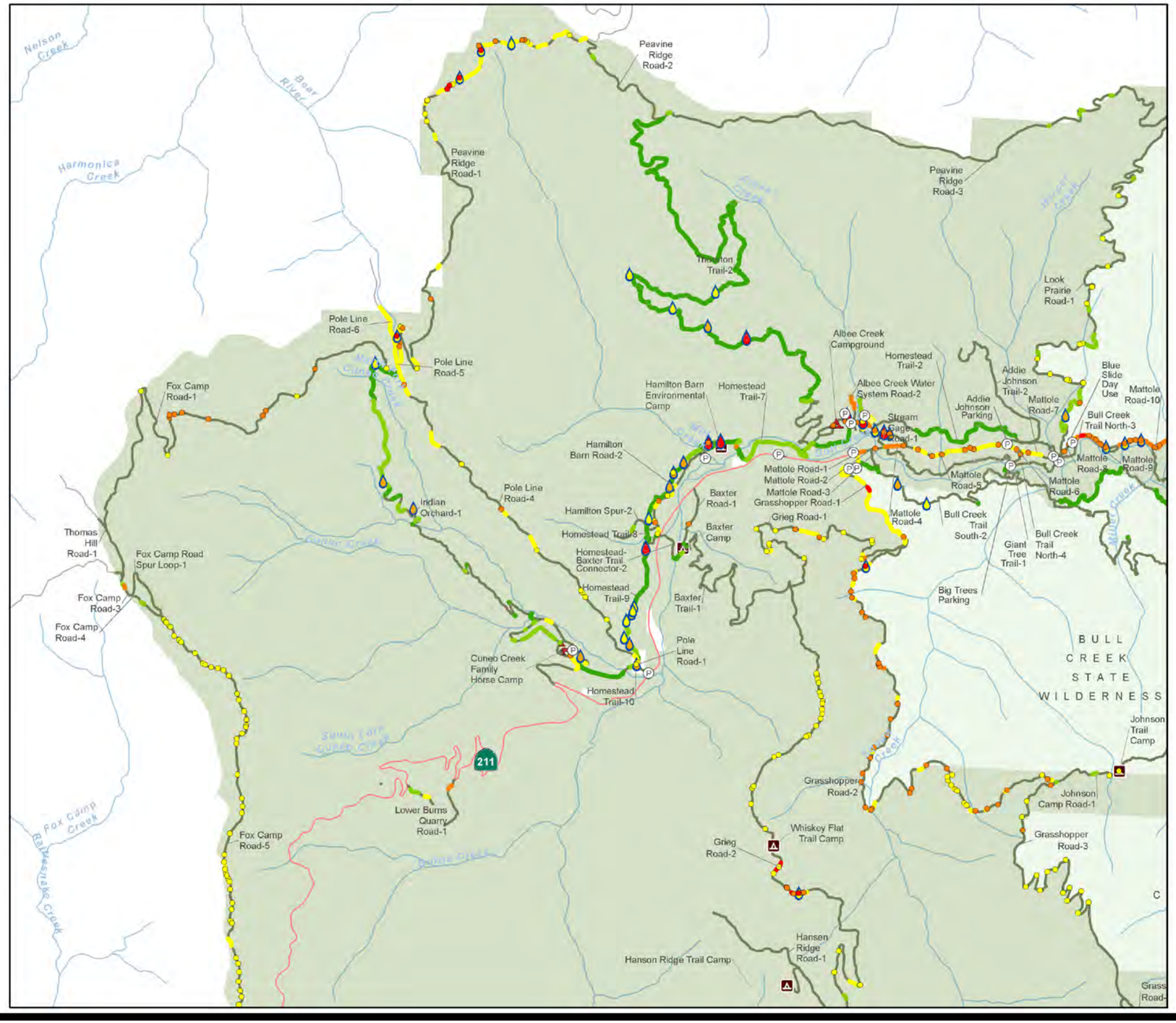
CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Bull Creek - Northwest Area

Map: Potential Significance to Water Resources and Drainage Structure Condition Index



Potential Significance to Water Resources and Drainage Structure Condition

BULL CREEK - NORTHWEST

Potential Significance to Water Resources, and Drainage Structure Condition

Potential Significance to Water Resources (PointFeatures)

- 1 - 5 (least significant)
- 6 - 9 (less significant)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Potential Significance to Water Resources (Line Features)

- 1 - 5 (least significant)
- 6 - 9 (less significance)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Drainage Structure Problem Severity (Point Features)

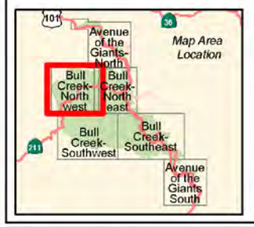
- critical
- high
- moderate

Drainage Structure Problem Severity (Line Features)

- moderate

Reference Features:

- Park Property
- Subunits - Wilderness, Preserves
- Campground-Other category
- Campground
- Horse Camp
- Local Road
- Park Routes
- Highways
- Parking



Scale
1:31,740
1 inch = 2,645 feet

0 1,000 2,000 Feet

Humboldt Redwoods State Park Road and Trail Management Plan

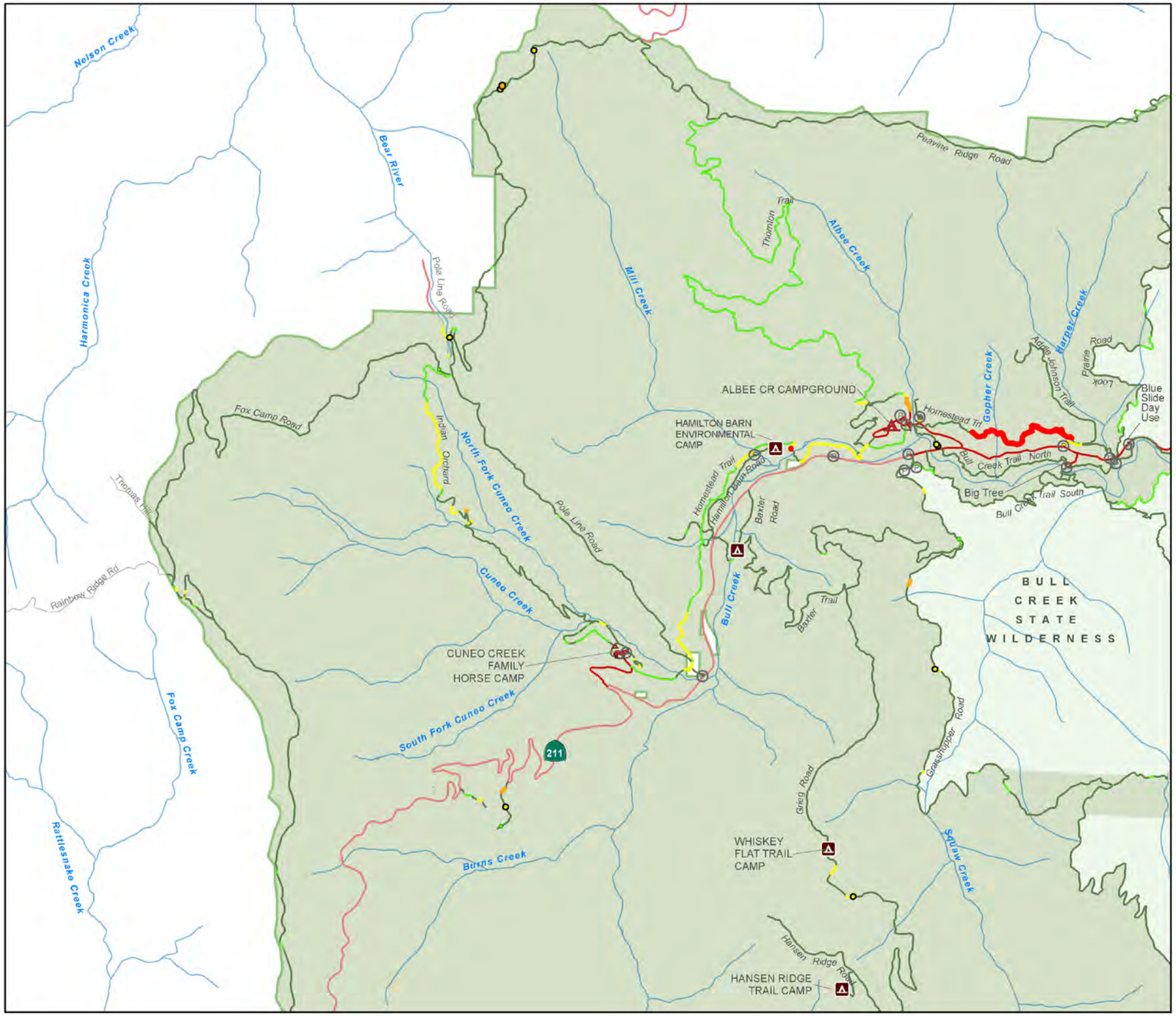
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 3/21/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Erosion Severity



Erosion Severity

BULL CREEK - NORTHWEST

Erosional Severity - Lines

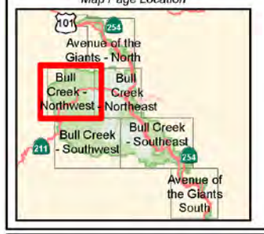
- critical
- high
- moderate
- slight or undesignated
- No Erosional Problems Observed

Erosional Severity - Points

- high
- moderate
- slight or undesignated

- Humboldt Redwoods State Park Subunits - Wilderness, Preserves
- Campground-Other category
- Campground
- Horse Camp
- Streams
- Paved Park Roads
- Highways
- Local Road
- Parking

Map Page Location



Scale
1:31,790
1 inch = 2,649 feet
N
Feet
0 5001,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

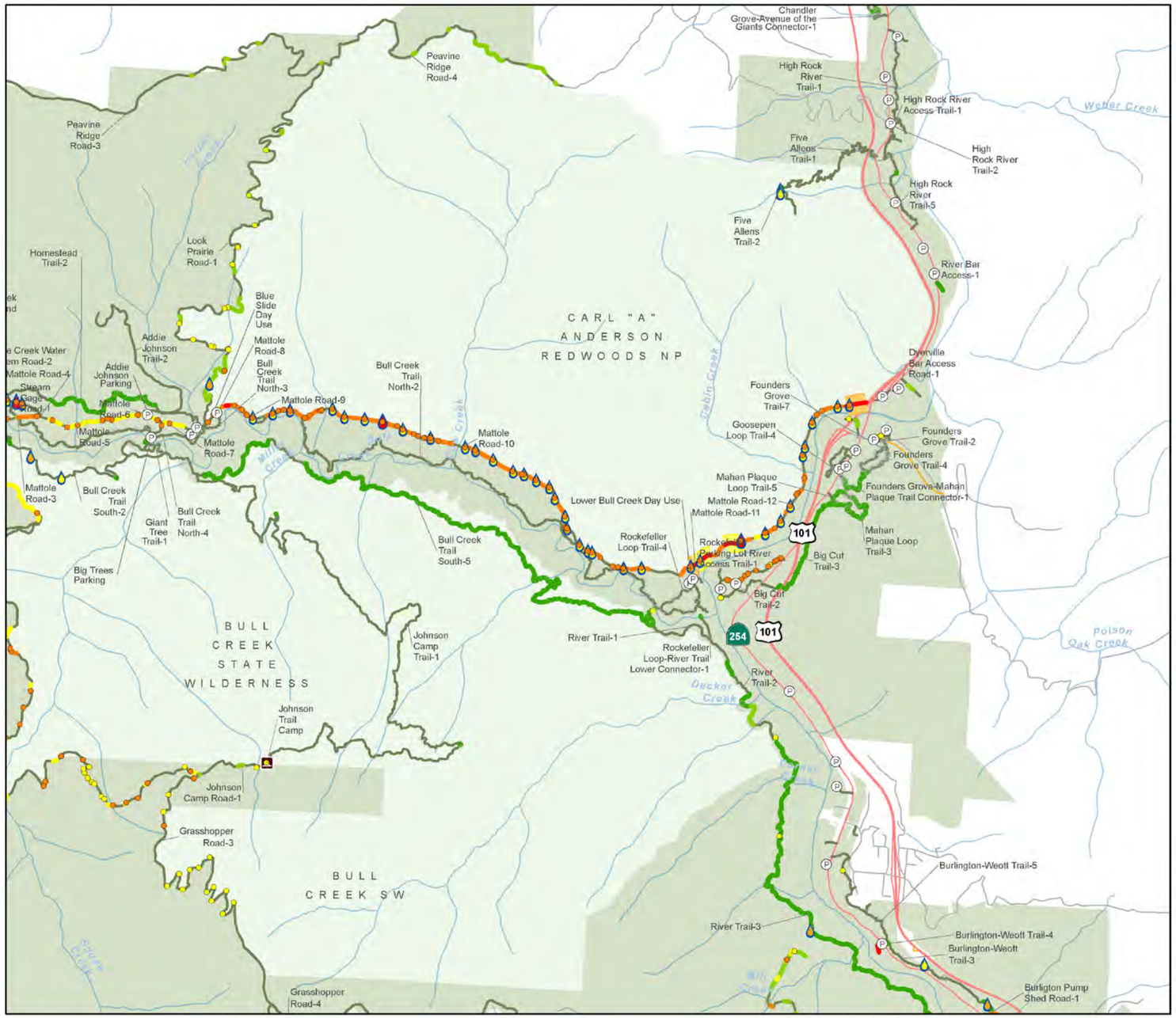
CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Bull Creek - Northeast Area

Map: Potential Significance to Water Resources and Drainage Structure Condition Index



Potential Significance to Water Resources and Drainage Structure Condition

BULL CREEK - NORTHEAST

Potential Significance to Water Resources, and Drainage Structure Condition

Potential Significance to Water Resources (PointFeatures)

- 1 - 5 (least significant)
- 6 - 9 (less significance)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Potential Significance to Water Resources (Line Features)

- 1 - 5 (least significant)
- 6 - 9 (less significance)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Drainage Structure Problem Severity (Point Features)

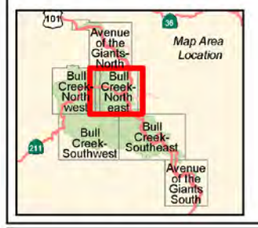
- critical
- high
- moderate

Drainage Structure Problem Severity (Line Features)

- high
- moderate

Reference Features:

- Park Property
- Subunits - Wilderness, Preserves
- Campground-Other category
- Local Road
- Non-system Route
- Park Routes
- Highways
- Parking



Scale
1:29,980
1 inch = 2,498 feet

0 1,000 2,000 Feet

Humboldt Redwoods State Park Road and Trail Management Plan

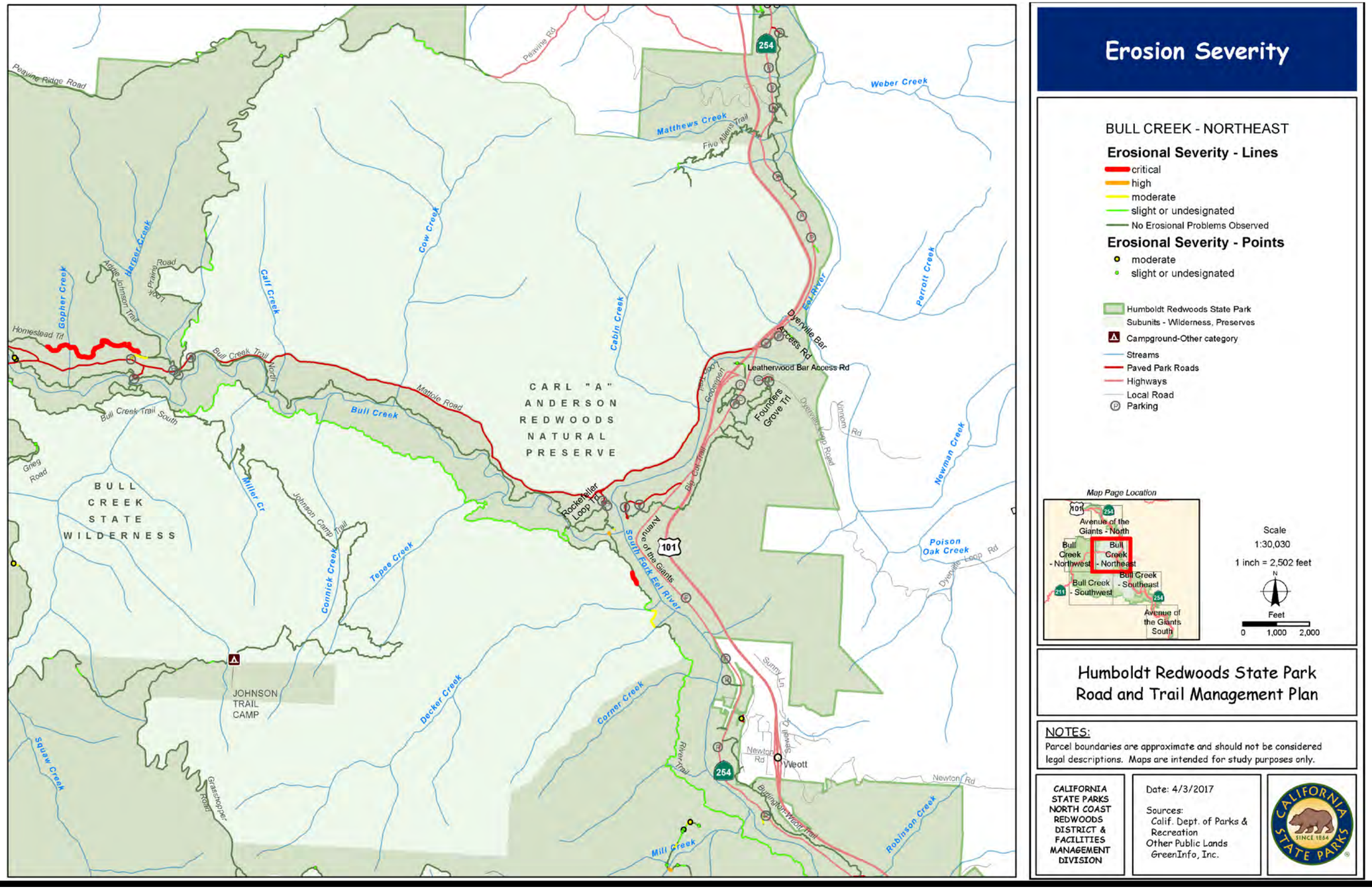
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 3/20/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Erosion Severity



Erosion Severity

BULL CREEK - NORTHEAST

Erosional Severity - Lines

- critical
- high
- moderate
- slight or undesignated
- No Erosional Problems Observed

Erosional Severity - Points

- moderate
- slight or undesignated

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Campground-Other category
- Streams
- Paved Park Roads
- Highways
- Local Road
- Parking

Map Page Location

Scale
1:30,030
1 inch = 2,502 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

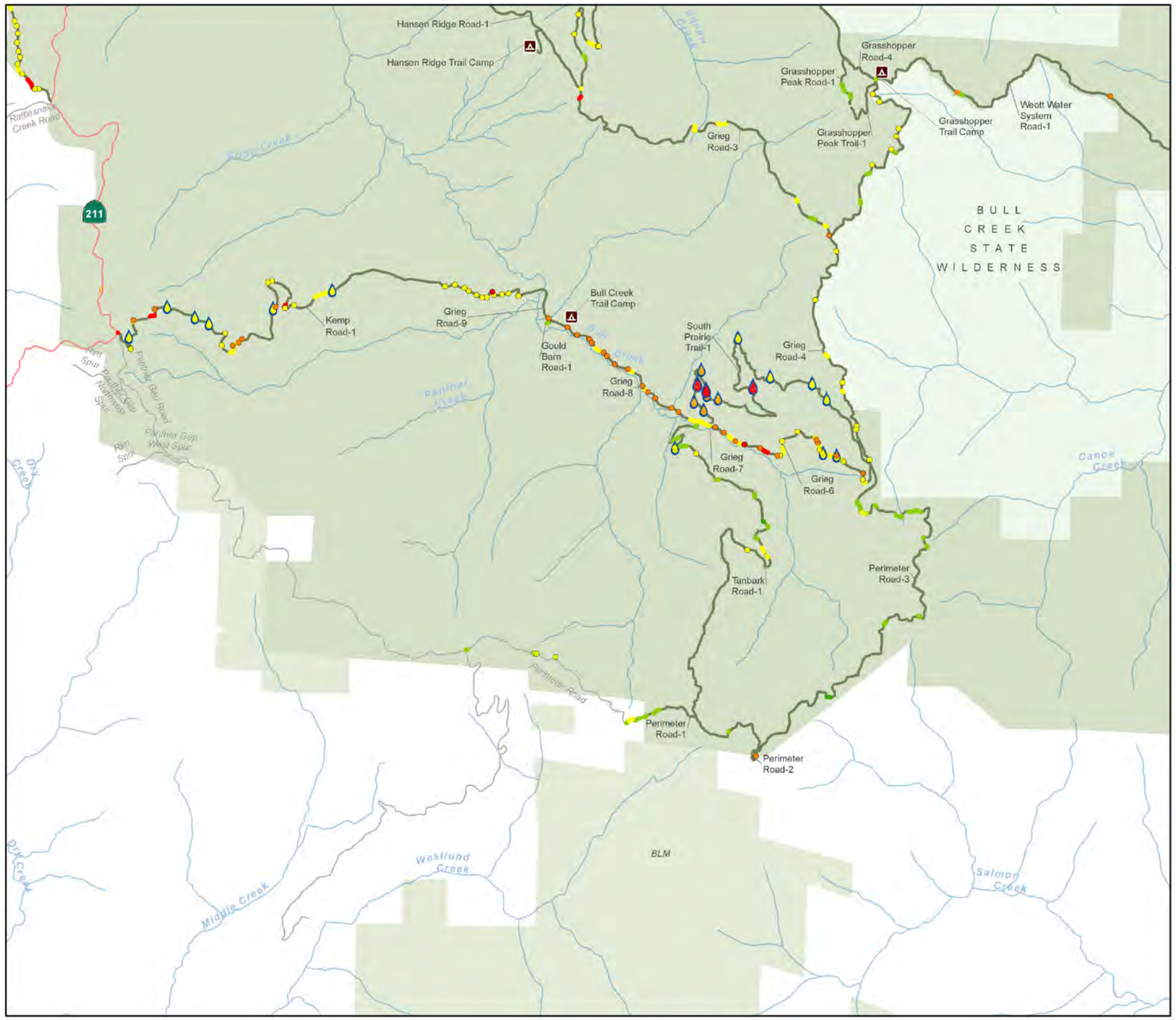
CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

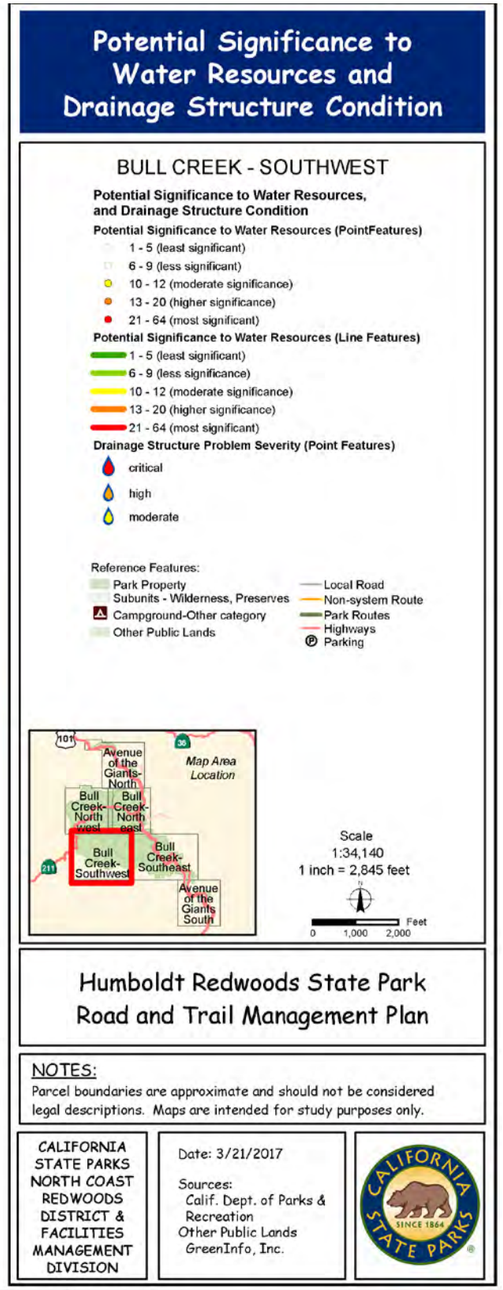
Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

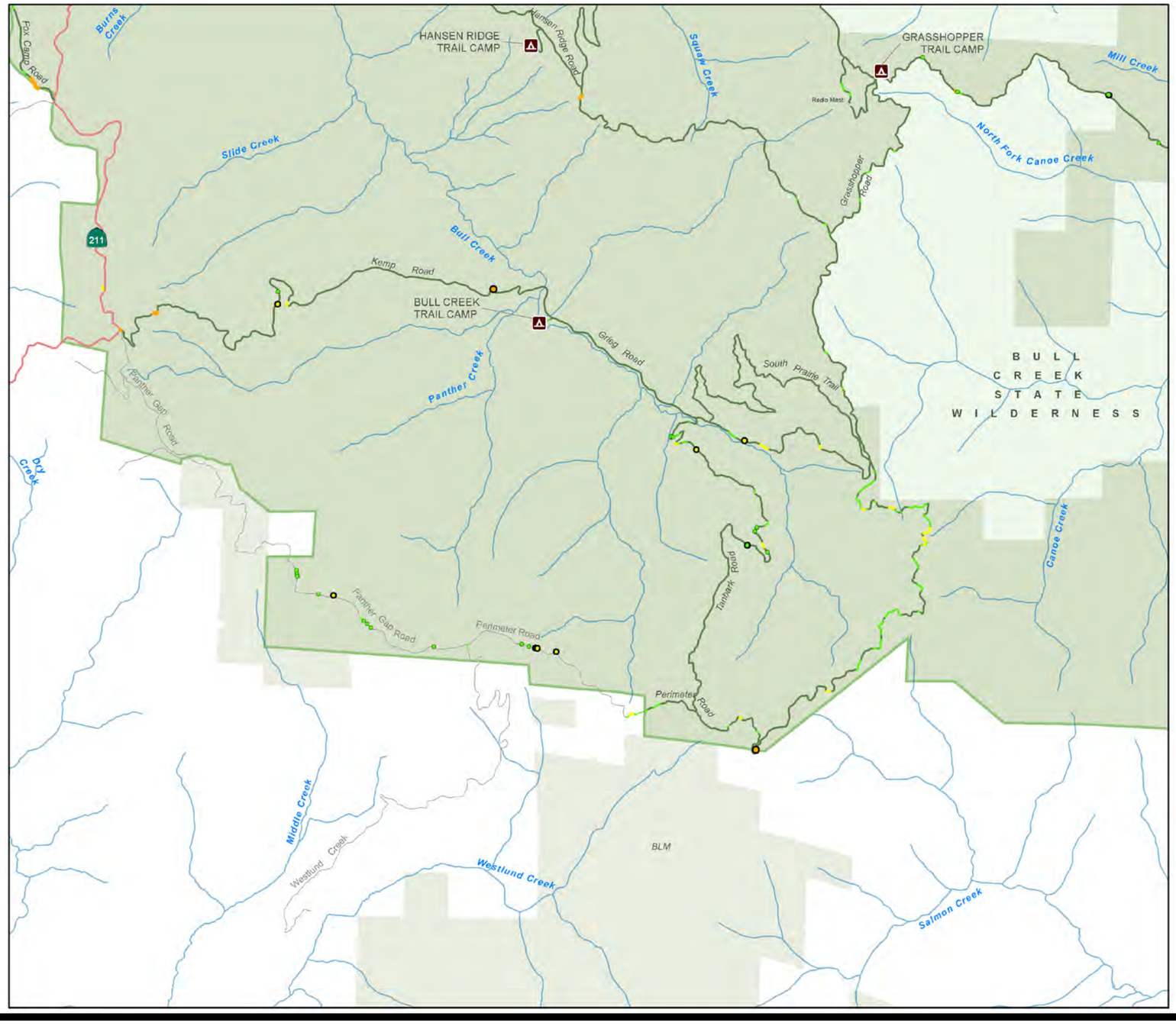
Bull Creek - Southwest Area

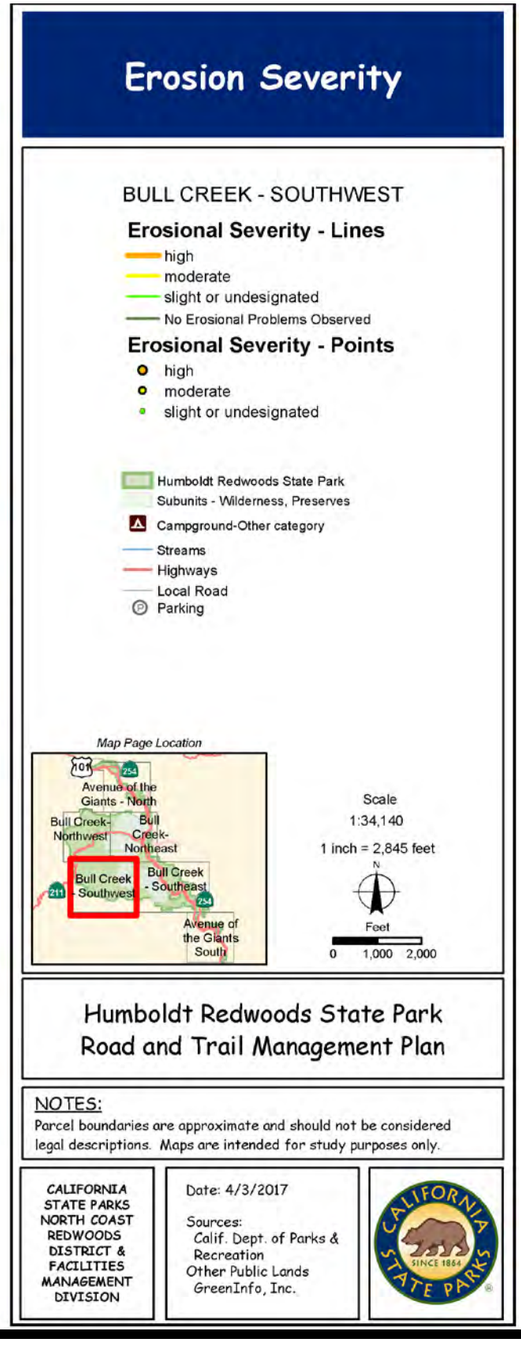
Map: Potential Significance to Water Resources and Drainage Structure Condition Index





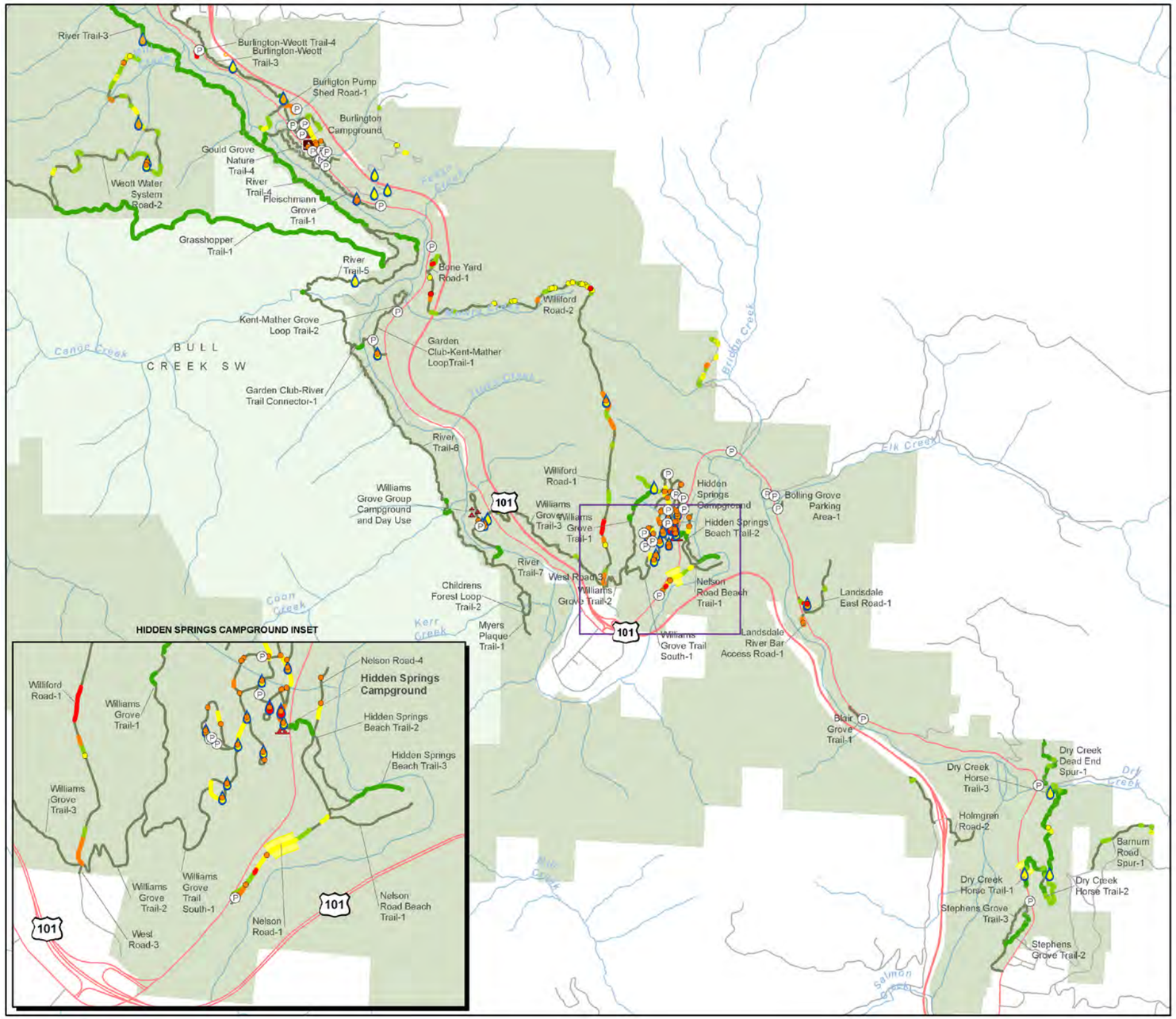
Map: Erosion Severity





Bull Creek - Southeast Area

Map: Potential Significance to Water Resources and Drainage Structure Condition Index



Potential Significance to Water Resources and Drainage Structure Condition

BULL CREEK - SOUTHEAST

Potential Significance to Water Resources, and Drainage Structure Condition

Potential Significance to Water Resources (PointFeatures)

- 1 - 5 (least significant)
- 6 - 9 (less significant)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Potential Significance to Water Resources (Line Features)

- 1 - 5 (least significant)
- 6 - 9 (less significance)
- 10 - 12 (moderate significance)
- 13 - 20 (higher significance)
- 21 - 64 (most significant)

Drainage Structure Problem Severity (Point Features)

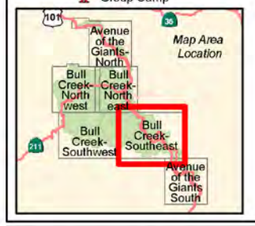
- critical
- high
- moderate

Drainage Structure Problem Severity (Line Features)

- moderate

Reference Features:

- Park Property
- SubUnits - Wilderness, Preserves
- Campground-Other category
- Campground
- Group Camp
- Local Road
- Non-system Route
- Park Routes
- Highways
- Parking



Scale
1:37,670
1 inch = 3,139 feet

Miles
0 0.1 0.2

Humboldt Redwoods State Park Road and Trail Management Plan

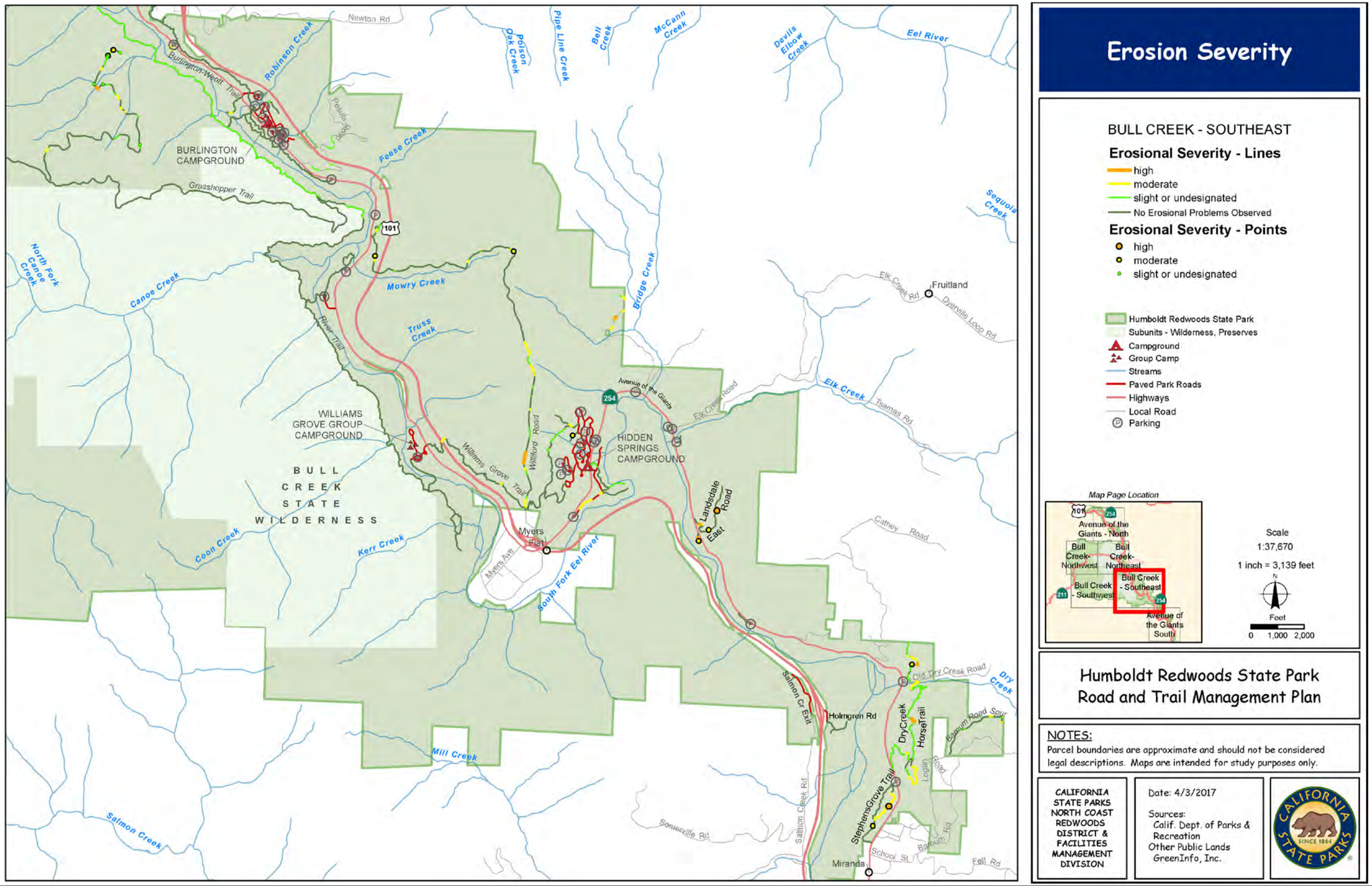
NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 1/9/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

Map: Erosion Severity



Erosion Severity

BULL CREEK - SOUTHEAST

Erosional Severity - Lines

- high
- moderate
- slight or undesignated
- No Erosional Problems Observed

Erosional Severity - Points

- high
- moderate
- slight or undesignated

- Humboldt Redwoods State Park
- Subunits - Wilderness, Preserves
- Campground
- Group Camp
- Streams
- Paved Park Roads
- Highways
- Local Road
- Parking

Map Page Location

Scale
1:37,670
1 inch = 3,139 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

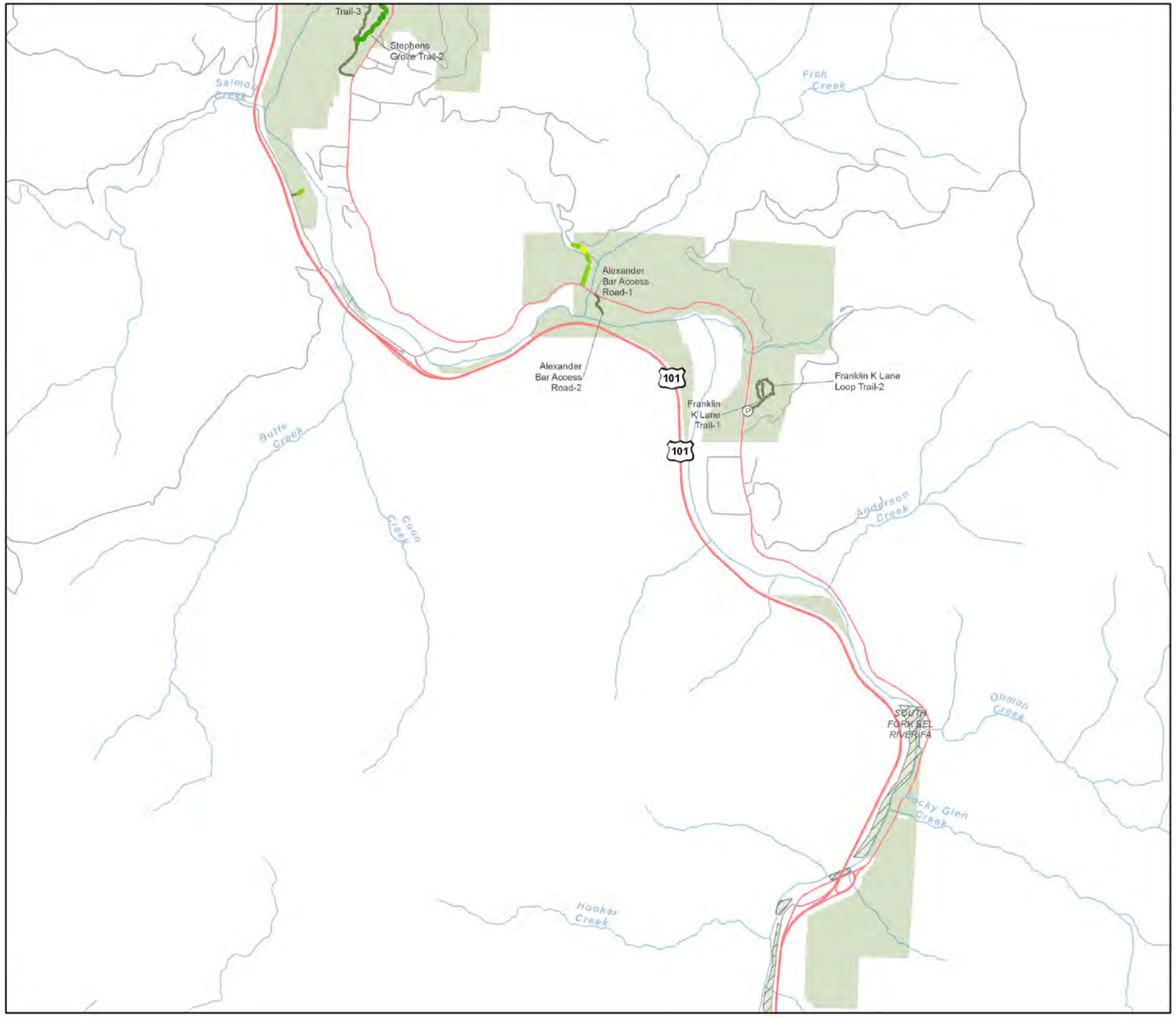
CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

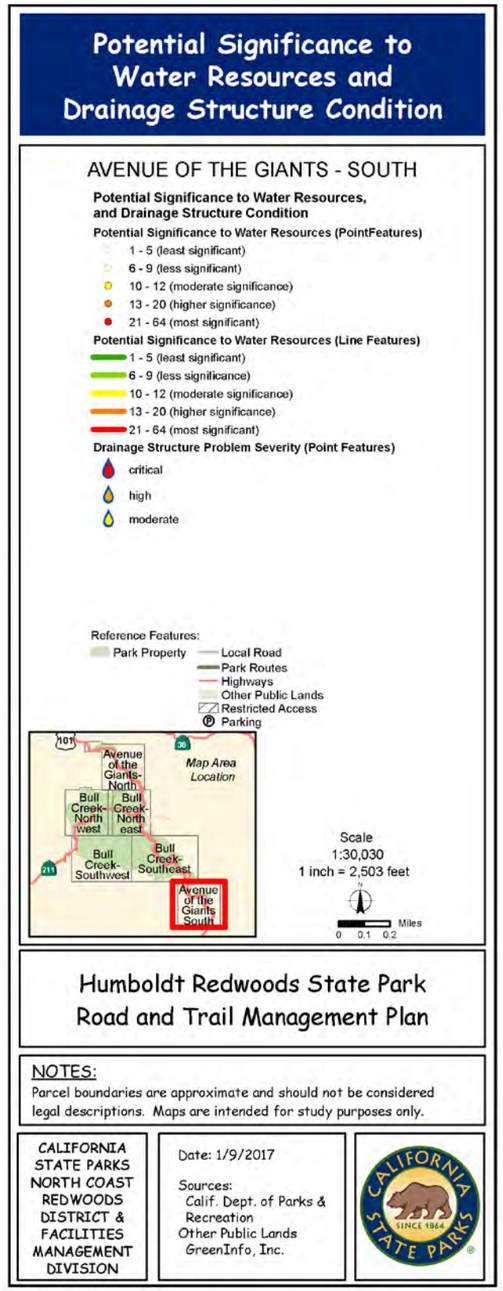
Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

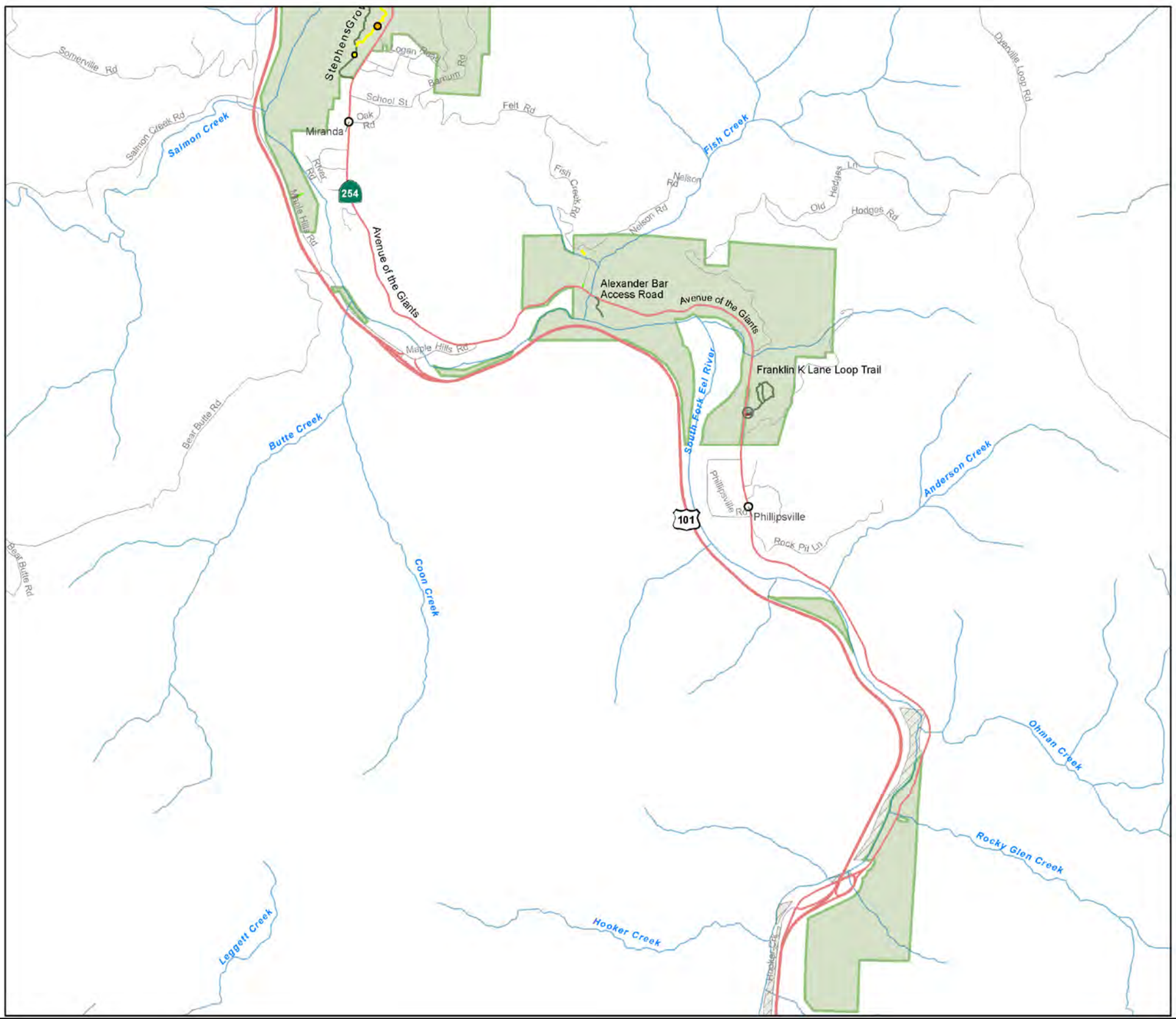
Avenue of the Giants - South Area

Map: Potential Significance to Water Resources and Drainage Structure Condition





Map: Erosion Severity



Erosion Severity

AVENUE OF THE GIANTS SOUTH

Erosional Severity - Lines

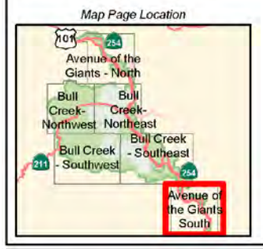
- moderate
- slight or undesignated
- No Erosional Problems Observed

Erosional Severity - Points

- high
- moderate

- Humboldt Redwoods State Park
- Streams
- Paved Park Roads
- Highways
- Local Road
- Parking

Map Page Location



Scale
1:30,030
1 inch = 2,503 feet
N
Feet
0 1,000 2,000

Humboldt Redwoods State Park Road and Trail Management Plan

NOTES:
Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

CALIFORNIA STATE PARKS NORTH COAST REDWOODS DISTRICT & FACILITIES MANAGEMENT DIVISION

Date: 4/3/2017

Sources:
Calif. Dept. of Parks & Recreation
Other Public Lands
GreenInfo, Inc.

8.4 Maintenance Recommendations Matrix

The Maintenance Recommendations Matrix shows individual road and trail segments, length, and associated recommendation. Those segments not identified below for “Reconstruct/Re-engineer” or “Remove” (checked boxes) will be maintained per departmental standards. Recommendations are made by road or trail segment and may apply to only a portion of the segment (e.g. a road with a “reroute” recommendation may only require reroute(s) in specific location(s) and not the whole road segment).

Humboldt Redwoods State Park Road and Trail Management Plan
Maintenance Recommendations by Segment ID

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Addie Johnson Trail-1	521	☑	☐
119-Addie Johnson Trail-2	5,415	☐	☐
119-Agnes Johnson School Spur-1-1	110	☐	☐
119-Agnes Johnson School Spur-2-1	229	☐	☐
119-Albee Campgound-Homestead Connector-1	289	☑	☐
119-Albee Campground-Bull Creek Trail North Connector-1	1,260	☐	☐
119-Albee Campground-Bull Creek Trail South Connector-1	712	☐	☐
119-Albee Creek Campground Overflow Road Loop-1	242	☐	☐
119-Albee Creek Campground Overflow Road-1	486	☐	☐
119-Albee Creek Water System Road-1	414	☐	☐
119-Albee Creek Water System Road-2	443	☑	☐
119-Albee Wood Shed Road-1	254	☐	☐
119-Alexander Bar Access Road-1	230	☑	☐
119-Alexander Bar Access Road-2	407	☑	☐
119-Avenue Pull Out-1	229	☐	☐
119-Barkdull Road-1	2,520	☑	☐
119-Barkdull Road-2	659	☑	☐
119-Barnum Road Spur-1	2,935	☐	☐
119-Baxter Camp 2 Trail-1	384	☐	☐
119-Baxter Road-1	1,268	☐	☐
119-Baxter Trail-1	10,539	☐	☐
119-Baxter Trail-2	207	☑	☐
119-Baxter Trail-3	414	☐	☐
119-Big Cut Trail-1	151	☐	☐
119-Big Cut Trail-2	940	☐	☐
119-Big Cut Trail-3	3,861	☑	☐
119-Blair Grove Trail-1	615	☐	☐
119-Bone Yard Road Connector-1	101	☐	☐
119-Bone Yard Road-1	1,220	☐	☐
119-Bridge Creek Road-3	2,480	☐	☐
119-Bridge Creek Spur Road-1	877	☐	☐
119-Bull Creek Trail North-1	111	☐	☐
119-Bull Creek Trail North-2	17,565	☐	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Childrens Forest Loop Trail-1	1,015	☐	☐
119-Childrens Forest Loop Trail-2	870	☐	☐
119-Cuneo Horse Camp Inner Site Access-1	434	☐	☐
119-Cuneo Horse Camp Loop Road-1	1,413	☐	☐
119-Cuneo Horse Camp South Loop-1	962	☐	☐
119-Cuneo Horse Camp-Indian Orchard Connector-1	3,521	☐	☐
119-Daly Ranch Road Connector-1	230	☐	☐
119-Daly Ranch Road-1	76	☐	☐
119-Daly Ranch Road-2	60	☐	☐
119-Daly Ranch Road-3	530	☐	☐
119-Drury-Chaney Loop Trail-1	3,270	☑	☐
119-Drury-Chaney Loop Trail-2	725	☑	☐
119-Drury-Chaney Loop Trail-3	4,791	☑	☐
119-Dry Creek Dead End Spur-1	2,081	☐	☑
119-Dry Creek Horse Trail Cutoff-1	167	☑	☐
119-Dry Creek Horse Trail-1	2,112	☑	☐
119-Dry Creek Horse Trail-2	2,411	☑	☐
119-Dry Creek Horse Trail-3	5,056	☑	☐
119-Dyerville Bar Access Road-1	671	☑	☐
119-Dyerville Giant Root Spur-1	53	☑	☐
119-Elinor Road-1	474	☑	☐
119-Elinor Road-2	1,598	☑	☐
119-Elizabeth Achelis Grove Trail-1	791	☐	☐
119-Fish Creek Driveway Spur-1	120	☐	☐
119-Fish Creek Road-1	1,205	☐	☐
119-Five Allens Trail-1	5,860	☐	☐
119-Five Allens Trail-2	193	☐	☐
119-Flat Iron Tree Trail-1	169	☐	☐
119-Fleischmann Grove Trail-1	3,325	☑	☐
119-Founders Grove Trail Interpretive Spur-1	92	☐	☐
119-Founders Grove Trail-1	116	☐	☐
119-Founders Grove Trail-2	157	☐	☐
119-Founders Grove Trail-3	100	☐	☐
119-Founders Grove Trail-4	480	☐	☐
119-Founders Grove Trail-5	531	☐	☐
119-Founders Grove Trail-6	53	☐	☐
119-Founders Grove Trail-7	1,195	☑	☐
119-Founders Grove Trail-8	67	☑	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Founders Grove Trail-Parking Link-1	121	☐	☐
119-Founders Grove Trail-Parking Link-2	86	☐	☐
119-Founders Grove-Mahan Plaque Trail Connector Link-2-1	26	☐	☐
119-Founders Grove-Mahan Plaque Trail Connector-1	958	☑	☐
119-Founders Grove-Mahan Plaque Trail Connector-2	30	☐	☐
119-Founders Tree Circle-1	156	☐	☐
119-Fox Camp Road Spur Loop-1	2,197	☐	☐
119-Fox Camp Road-1	16,470	☐	☐
119-Fox Camp Road-2	1,499	☐	☐
119-Fox Camp Road-3	634	☐	☐
119-Fox Camp Road-4	1,081	☐	☐
119-Fox Camp Road-5	13,935	☑	☐
119-Franklin K Lane Inner Loop Trail-1	456	☐	☐
119-Franklin K Lane Loop Trail-1	668	☐	☐
119-Franklin K Lane Loop Trail-2	965	☐	☐
119-Franklin K Lane Loop Trail-3	103	☐	☐
119-Franklin K Lane Trail-1	405	☐	☐
119-Garden Club-Kent-Mather LoopTrail-1	1,466	☐	☐
119-Garden Club-River Trail Connector-1	1,207	☐	☐
119-Giant Tree Trail-1	520	☐	☐
119-Giant Tree Trail-2	200	☐	☐
119-Giant Tree Trail-3	276	☐	☐
119-Goosepen Loop Cutoff Trail-1	104	☐	☐
119-Goosepen Loop Trail-1	185	☐	☐
119-Goosepen Loop Trail-2	201	☐	☐
119-Goosepen Loop Trail-3	430	☐	☐
119-Goosepen Loop Trail-4	714	☐	☐
119-Goosepen Loop Trail-5	761	☐	☐
119-Goosepen Loop Trail-Avenue of Giants Link-1	125	☐	☐
119-Gould Bar Road-1	329	☐	☐
119-Gould Barn Road-1	196	☐	☐
119-Gould Grove Nature Trail Access-1	180	☐	☐
119-Gould Grove Nature Trail-1	214	☐	☐
119-Gould Grove Nature Trail-2	1,333	☐	☐
119-Gould Grove Nature Trail-3	189	☐	☐
119-Gould Grove Nature Trail-4	1,369	☐	☐
119-Grasshopper Peak Road-1	1,906	☑	☐
119-Grasshopper Peak Trail-1	2,250	☐	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Grasshopper Road-1	3,862	☐	☐
119-Grasshopper Road-2	18,304	☑	☐
119-Grasshopper Road-3	12,174	☐	☐
119-Grasshopper Road-4	1,206	☐	☐
119-Grasshopper Road-5	7,547	☐	☐
119-Grasshopper Trail-1	16,901	☐	☐
119-Greig-French-Bell Loop-1	1,100	☐	☐
119-Greig-French-Bell Trail-1	68	☐	☐
119-Greig-French-Bell Trail-2	782	☐	☐
119-Greig-French-Bell Trail-3	1,015	☐	☐
119-Greig-French-Bell Trail-4	278	☐	☐
119-Grieg Road-1	9,510	☐	☐
119-Grieg Road-2	18,828	☐	☐
119-Grieg Road-3	11,806	☐	☐
119-Grieg Road-4	8,066	☐	☐
119-Grieg Road-6	6,942	☐	☐
119-Grieg Road-7	494	☐	☐
119-Grieg Road-8	5,500	☐	☐
119-Grieg Road-9	988	☐	☐
119-Gun Range Loop-1	556	☐	☐
119-Gun Range Road-1	949	☐	☐
119-Hamilton Barn Road-1	225	☐	☐
119-Hamilton Barn Road-2	2,778	☐	☐
119-Hamilton E-Camp Access Trail-1	550	☐	☐
119-Hamilton Spur-1	395	☐	☐
119-Hamilton Spur-2	1,258	☐	☐
119-Hansen Ridge Road-1	5,460	☐	☐
119-Hidden Springs Beach Trail-1	442	☐	☐
119-Hidden Springs Beach Trail-2	1,172	☐	☐
119-Hidden Springs Beach Trail-3	646	☐	☐
119-Hidden Springs Campground Road Entrance Link-1	309	☐	☐
119-Hidden Springs Service Road-1	460	☐	☐
119-Hidden Springs Water System Road-1	265	☐	☐
119-Hidden Springs Water System Road-2	580	☐	☐
119-Hidden Springs Water System Road-3	270	☐	☐
119-High Rock River Access Road-1	320	☐	☐
119-High Rock River Access Road-2	265	☑	☐
119-High Rock River Access Trail-1	561	☐	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-High Rock River OverlookTrail-1	385	☐	☐
119-High Rock River Trail-1	2,383	☑	☐
119-High Rock River Trail-2	310	☐	☐
119-High Rock River Trail-3	350	☐	☐
119-High Rock River Trail-4	2,347	☑	☐
119-High Rock River Trail-5	929	☐	☐
119-High Rock River-Avenue Connector South-1	147	☐	☐
119-High Rock River-Avenue Connector-1	137	☐	☐
119-Holmgren Road Spur-1	247	☐	☐
119-Holmgren Road-1	520	☐	☐
119-Holmgren Road-2	460	☐	☐
119-Holmgren Road-3	700	☐	☐
119-Homestead Trail Mill Creek Bridge-1	164	☐	☐
119-Homestead Trail Mill Creek Bridge-2	210	☐	☐
119-Homestead Trail Mill Creek Bridge-3	111	☐	☐
119-Homestead Trail-1	1,037	☐	☐
119-Homestead Trail-10	2,272	☑	☐
119-Homestead Trail-2	5,431	☑	☐
119-Homestead Trail-3	329	☐	☐
119-Homestead Trail-5	1,474	☐	☐
119-Homestead Trail-6	119	☑	☐
119-Homestead Trail-7	7,323	☑	☐
119-Homestead Trail-8	515	☑	☐
119-Homestead Trail-9	3,939	☑	☐
119-Homestead Trail-Bull Creek Trail North Connector-1	84	☐	☐
119-Homestead Trail-Bull Creek Trail North Connector-2	96	☐	☐
119-Homestead-Baxter Trail Connector-1	420	☑	☐
119-Homestead-Baxter Trail Connector-2	1,139	☑	☐
119-Homestead-Baxter Trail Connector-3	565	☐	☐
119-Indian Orchard-1	14,603	☑	☐
119-Jay Smith Road-1	1,540	☐	☐
119-Johnson Camp Road-1	2,104	☐	☐
119-Johnson Camp Trail-1	26,653	☑	☐
119-Kemp Road-1	19,572	☐	☐
119-Kent-Mather Grove Loop Trail-1	72	☐	☐
119-Kent-Mather Grove Loop Trail-2	186	☐	☐
119-Kent-Mather Grove Loop Trail-3	1,328	☐	☐
119-Landsdale East Road-1	2,929	☐	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Landsdale River Bar Access Road-1	370	☐	☐
119-Leatherwood Bar Access Road-1	700	☑	☐
119-Look Prairie Road-1	18,881	☑	☐
119-Lower Burns Quarry Road-1	1,577	☐	☐
119-Mahan Plaque Loop Trail-1	417	☑	☐
119-Mahan Plaque Loop Trail-2	157	☑	☐
119-Mahan Plaque Loop Trail-3	2,277	☑	☐
119-Mahan Plaque Loop Trail-4	195	☑	☐
119-Mahan Plaque Loop Trail-5	50	☑	☐
119-Mahan Plaque Loop Trail-6	378	☑	☐
119-Mahan Plaque-Avenue of Giants Connector Link-1	60	☐	☐
119-Mahan Plaque-Avenue of Giants Connector-1	130	☑	☐
119-Mahan Plaque-Avenue of Giants Connector-2	86	☐	☐
119-Marin Garden Club Group Camping Road-1	470	☐	☐
119-McIntyre Faries-1	380	☑	☐
119-McIntyre Faries-2	693	☐	☐
119-Miranda River Bar Access Road-1	300	☐	☐
119-Myers Plaque Trail-1	810	☐	☐
119-Nelson Fire Road-1	1,130	☐	☐
119-Nelson Road Beach Trail-1	1,100	☐	☐
119-Nelson Road-Hidden Springs Beach Trail Connector-1	291	☐	☐
119-Newton Road-1	1,780	☐	☐
119-Old Newton Road-1	525	☐	☐
119-Panther Gap Road-1	7,132	☑	☐
119-Peavine Ridge Road-1	17,448	☑	☐
119-Peavine Ridge Road-2	4,049	☑	☐
119-Peavine Ridge Road-3	18,046	☑	☐
119-Peavine Ridge Road-4	9,241	☑	☐
119-Perimeter Road-1	8,828	☐	☐
119-Perimeter Road-2	7,820	☐	☐
119-Perimeter Road-3	12,635	☐	☐
119-Pesula Road-1	4,631	☐	☐
119-Pesula Road-2	1,970	☐	☐
119-Pole Line Road-1	415	☐	☐
119-Pole Line Road-2	135	☐	☐
119-Pole Line Road-3	1,112	☐	☐
119-Pole Line Road-4	10,099	☐	☐
119-Pole Line Road-5	244	☐	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Pole Line Road-6	1,710	☐	☐
119-Rainbow Ridge-1	304	☐	☐
119-Rim Spur-1	61	☐	☐
119-Rim Spur-2	168	☐	☐
119-River Bar Access-1	244	☐	☐
119-River Trail-1	1,951	☐	☐
119-River Trail-2	3,641	☑	☐
119-River Trail-3	13,983	☑	☐
119-River Trail-4	5,095	☐	☐
119-River Trail-5	10,555	☑	☐
119-River Trail-6	10,611	☑	☐
119-River Trail-7	1,603	☐	☐
119-Rockefeller Loop River Bar Connector-1	334	☑	☐
119-Rockefeller Loop Trail-1	156	☐	☐
119-Rockefeller Loop Trail-2	756	☑	☐
119-Rockefeller Loop Trail-3	1,186	☐	☐
119-Rockefeller Loop Trail-4	1,177	☐	☐
119-Rockefeller Loop-River Trail Lower Connector-1	680	☑	☐
119-Rockefeller Parking Lot River Access Trail-1	272	☐	☐
119-RTR Shop Road-1	260	☐	☐
119-RTR Shop Road-2	763	☐	☐
119-Salmon Creek Exit Spur West-1	100	☐	☑
119-Salmon Creek Exit Spur-1	1,601	☐	☑
119-Salmon Creek Exit Spur-2	170	☐	☑
119-Shack Road-1	290	☐	☐
119-South Prairie Trail-1	17,101	☐	☐
119-Spring Canyon Road-1	2,184	☐	☐
119-Stafford River Bar Access-1	1,101	☑	☐
119-Stephens Grove - Miranda Connector-1	1,351	☐	☐
119-Stephens Grove Trail-1	52	☐	☐
119-Stephens Grove Trail-2	1,907	☑	☐
119-Stephens Grove Trail-3	1,757	☐	☐
119-Stream Gage Road-1	152	☐	☐
119-Symmes Grove Trail-1	1,629	☐	☐
119-Tall Tree Loop Trail-1	287	☑	☐
119-Tanbark Road-1	16,079	☐	☐
119-Thomas Hill Road-1	349	☐	☐
119-Thornton Trail-1	1,052	☑	☐

Segment ID	Segment Length (ft)	Reconstruct / Re-engineer	Remove
119-Thornton Trail-2	26,216	☐	☐
119-Upper Burns Quarry Road-1	720	☐	☐
119-Weott Water System Road-1	13,921	☑	☐
119-Weott Water System Road-2	12,534	☑	☐
119-Weott Wood Shed Road-1	306	☐	☐
119-Williams Grove Trail South-1	2,172	☐	☐
119-Williams Grove Trail-1	3,458	☐	☐
119-Williams Grove Trail-2	1,886	☐	☐
119-Williams Grove Trail-3	6,866	☑	☐
119-Williams Grove-River Trail Connector-1	2,161	☐	☐
119-Williford Road-1	7,713	☑	☐
119-Williford Road-2	10,785	☐	☐
119-Williford Road-3	161	☐	☐
119-Womens Federation Parking Access Trail-1	451	☑	☐
119-Womens Federation River Access Trail-1	232	☐	☐

8.5 Special Status Species

Sensitive plants known or with the potential to occur in HRSP. Assessment area defined as the USGS 7.5' quadrangle within which the project is located (Bull Creek) and the eight quadrangles that surround it (Taylor Peak, Buckeye Mtn., Shubrick Peak, Honeydew, Ettersburg, Weott, Redcrest, Scotia) (CNPS Rare Plant Inventory 2011; CNDDB 2011; North Coast Redwoods District Rare Plant Database 2011; NCRD rare plant survey of project area, June 2011). F = federal designation, S = state designation, CNPS = CNPS rare plant rank.

Species	Status			Habitat	Habitat Present?	Species Found?
	F	S	CNPS			
Lilium rubescens redwood lily			4.2	Sometimes serpentinite, sometimes roadsides. Broadleafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. 30-1910 m	Yes	No
Erythronium revolutum coast fawn lily			2.2	Mesic, streambanks. Bogs and fens, broadleafed upland forest, North Coast coniferous forest. 0-1600 m	Yes	No
Lycopodium clavatum running-pine			4.1	Often edges, openings, and roadsides. Lower montane coniferous forest (mesic), marshes and swamps, North Coast coniferous forest (mesic). 45-1225 m	Yes	No
Mitella caulescens leafy-stemmed mitrewort			4.2	Mesic, sometimes roadsides. Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest. 5-1700 m	Yes	No
Montia howellii Howell's montia			2.2	Vernally mesic, sometimes roadsides. Meadows and seeps, North Coast coniferous forest, vernal pools. 0-730 m	Yes	No

Species	Status			Habitat	Habitat Present?	Species Found?
Pleuropogon refractus nodding semaphore grass			4.2	Mesic. Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest. 0-1600 m	Yes	No
Sidalcea malachroides maple-leaved checkerbloom			4.2	Often in disturbed areas. Broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland. 2-730 m	Yes	No
Astragalus agnicidus Humboldt County milk-vetch		CE	1B.1	Openings, disturbed areas, sometimes roadsides. Broadleafed upland forest, North Coast coniferous forest. 180-800 m	Yes	No
Calamagrostis foliosa leafy reed grass			4.2	Rocky. Coastal bluff scrub, North Coast coniferous forest. 0-1220 m	Yes	No
Epilobium septentrionale Humboldt County fuchsia			4.3	Sandy or rocky. Broadleafed upland forest, North Coast coniferous forest. 45-1800 m	Yes	No
Gilia capitata ssp. *pacifica* Pacific gilia			1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland. 5-869 m	Yes	No
Lathyrus glandulosus sticky pea			4.3	Cismontane woodland. 300-800 m	Yes	No
Lilium kelloggii Kellogg's lily			4.3	Openings, roadsides. Lower montane coniferous forest, North Coast coniferous forest. 3-1300 m	Yes	No
Monardella villosa ssp. *globosa* robust monardella			1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, coastal scrub, valley and foothill grassland. 100-915 m	Yes	No

Species	Status			Habitat	Habitat Present?	Species Found?
Packera bolanderi var. *bolanderi* seacoast ragwort			2.2	Sometimes roadsides. Coastal scrub, North Coast coniferous forest. 30-650 m	Yes	No
Piperia candida white-flowered rein orchid			1B.2	Sometimes serpentinite. Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest. 30-1310 m	Yes	No
Pityopus californica California pinefoot			4.2	Mesic. Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. 15-2225 m	Yes	No
Polemonium carneum Oregon polemonium			2.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0-1830 m	Yes	No
Ribes roezlii var. *amictum* hoary gooseberry			4.3	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 120-2300 m	Yes	No
Sidalcea malviflora ssp. *patula* Siskiyou checkerbloom			1B.2	Often roadcuts. Coastal bluff scrub, coastal prairie, North Coast coniferous forest. 15-878 m	Yes	No
Carex arcta northern clustered sedge			2.2	Bogs and fens, North Coast coniferous forest (mesic). 60-1400 m	No	No
Erythronium oregonum giant fawn lily			2.2	Sometimes serpentinite, rocky, openings. Cismontane woodland, meadows and seeps. 100-1150 m	No	No
Listera cordata heart-leaved twayblade			4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. 5-1370 m	No	No
Hesperevax sparsiflora var. *brevifolia*			1B.2	Coastal bluff scrub (sandy), coastal dunes. 0-215 m	No	No

Species	Status			Habitat	Habitat Present?	Species Found?
short-leaved evax						

Sensitive animal known or with the potential to occur in HRSP.

Species	Status	Habitat	Comments
AMPHIBIANS AND REPTILES			
Southern torrent Salamander *Rhacotriton variegatus*	CSC	Springs, seeps, and streams in coastal redwood, Douglas-fir, mixed conifer, montane riparian and montane hardwood-conifer habitats, old growth forest.	Known to occur within HRSP
Tailed frog *Ascaphus truei*	CSC	Montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats.	Known to occur within HRSP
Northern red-legged frog *Rana aurora aurora*	CSC	Humid forests, woodlands, grasslands, and streamside in northwestern California	Known to occur within HRSP
Foothill yellow-legged frog *Rana boylii*	CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Known to occur within HRSP
Western pond turtle *Emys marmorata*	CSC	Marshes, ponds, rivers, and streams	Known to occur within HRSP
BIRDS			
Sharp-shinned hawk *Accipiter striatus*	CWL	Nesting – riparian deciduous and mixed conifer habitats.	Known to occur within HRSP
Cooper's hawk *Accipiter cooperi*	CWL	Nesting – open, interrupted, or marginal woodland.	Known to occur within HRSP
Northern goshawk *Accipiter gentilis*	CSC	Nesting – coniferous forest and surrounding areas	Potential habitat
Golden eagle *Aquila chrysaetos*	FP, CWL	Nesting and wintering – rolling foothill mountainous areas, sage-juniper flats, desert.	Known to occur within HRSP
Bald eagle *Haliaeetus leucocephalus*	CE	Nesting and wintering – ocean shores, lake margins and rivers.	Known to occur within HRSP
Osprey *Pandion haliaetus*	CWL	Nesting – ocean shores, bays, fresh-water lakes and rivers.	Known to occur within HRSP
Peregrine falcon *Falco peregrinus*	FP	Nesting – near wetlands, lakes, rivers; on cliffs, banks, mounds, trees, and human-made structures.	Known to occur with HRSP

Marbled murrelet *Brachyramphus marmoratus*	FT, CE	Old-growth redwood dominated forests, up to six miles inland.	Known to occur within HRSP
Northern spotted owl *Stix ocidentalis caurina*	FT, ST	Old-growth forest or mixed stands of old-growth and mature trees. Occasionally in younger forests with patched of big trees.	Known to occur within HRSP
Purple martin *Progne subis*	CSC	Nesting – low elevation coniferous forest and woodlands.	Potential habitat
Little willow flycatcher *Emidonax traillii brewsteri*	CE	Nesting – willow riparian thickets 2000-8000 elevation.	NDDB nesting record on SF Eel River extirpated; Potential habitat
Bank swallow *Riparia riparia*	ST	Nesting – colonial, vertical banks and cliffs with fine textured sandy soils in riparian and other lowland habitats	Potential habitat
Tricolored blackbird *Agelaius tricolor*	CSC	Nesting – colonial, fresh water marsh, requires open water	Habitat not present
Yellow warbler *Dendroica petechia brewsteri*	CSC	Nesting – riparian plant associations, such as willow, cottonwood, aspen and alders for nesting and foraging.	Known to occur in HRSP
Yellow-breasted chat *Icteria virens*	CSC	Nesting – summer resident, riparian vegetation.	Known to occur in HRSP
MAMMALS			
Townsend's big-eared bat *Corynorthinus townsendii townsendii*	CSC	Roosts in the open often in limestone caves, lava tubes, mines, buildings, and basal cavities in trees etc.	Potential habitat
Pallid bat *Antrozus pallidus*	CSC	Grasslands, shrublands, woodlands and forests. Common in open, dry habitats with rocky areas for roosting.	Potential habitat
White-footed vole *Arborimus albipes*	CSC	Mature coastal forests, prefers small, clear streams with dense alder and shrub vegetation.	Potential habitat
Sonoma tree vole *Arborimus pomo*	CSC	Douglas-fir, redwood, and montane hardwood conifer forests.	Known to occur in HRSP
Humboldt marten *Martes americana humboldtensis*	SCE	Redwood, Douglas-fir, coniferous forest.	Potential habitat, historic records
Pacific fisher *Pekania pennanti*	PT, SCT	Coniferous forests and deciduous-riparian areas.	Known to occur in HRSP

American badger *Taxidea taxus*	CSC	Grasslands and open stages of shrub and forest habitats with friable soils	Potential habitat
FISH			
Coho salmon *Oncorhynchus kisutch*	FT, ST	Coastal waters and anadromous streams.	Known to occur within HRSP
Steelhead *Oncorhynchus mykiss*	FT	Coastal waters and anadromous streams.	Known to occur within HRSP
Summer-run steelhead trout *Oncorhynchus mykiss irideus*	CSC	Coastal waters and anadromous streams	Habitat present
Chinook Salmon *Oncorhynchus tshawytscha*	FT	Coastal waters and anadromous streams.	Known to occur within HRSP

FE – Federally Endangered, FT – Federally Threatened, PE - Proposed Federally Endangered; PT – Proposed Federally Threatened; SE – State Endangered, ST – State Threatened, SCE – State Candidate Endangered, SCT – State Candidate Threatened; FP – California Fully Protected; CSC – California species of Special Concern; CWL – CDFW Watch List

8.6 Parkwide Summary of Trails

PARKWIDE SUMMARY OF EXISTING TRAILS BY USE AND ROUTE DESIGNATIONS		
Use Designation	**Mileage of Road**	**Mileage of Trail**
Hike	0	41.86
Hike and Horse	0	21.14
Hike, Bike and Horse	71.95	5.51

PARKWIDE SUMMARY OF ROADS AND TRAILS

Route Name	Route Type	Use Designation	Miles
Addie Johnson Trail	Trail	Hike	1.10
Agnes Johnson School Spur-1	Trail	Hike	0.05
Agnes Johnson School Spur-2	Trail	Hike	0.05
Albee Campgound-Homestead Connector	Trail	Hike	0.05
Albee Campground-Bull Creek Trail North Connec	Trail	Hike and Horse	0.21
Albee Campground-Bull Creek Trail South Connec	Trail	Hike and Horse	0.14
Albee Creek Campground Overflow Loop	Road	Hike, Bike and Horse	0.05
Albee Creek Campground Overflow Road	Road	Hike, Bike and Horse	0.09
Albee Creek Water System Road	Road	Hike, Bike and Horse	0.08
Alexander Bar Access Road	Road	Hike, Bike and Horse	0.12
Barkdull Road	Road	Hike, Bike and Horse	0.59
Barnum Road Spur	Road	Hike, Bike and Horse	0.56
Baxter Camp 2 Trail	Trail	Hike and Horse	0.06
Baxter Road	Road	Hike, Bike and Horse	0.24
Baxter Trail	Trail	Hike and Horse	1.92
Big Cut Trail	Trail	Hike	0.97
Blair Grove Trail	Trail	Hike	0.11
Bolling Grove Parking Area	Road	Hike, Bike and Horse	0.08
Bull Creek Trail North	Trail	Hike	4.63
Bull Creek Trail North-South Connector	Trail	Hike	0.16
Bull Creek Trail South	Trail	Hike	3.47
Bull Creek Trail South	Trail	Hike and Horse	1.49
Bull Creek Trail South-Giant Tree Connector	Trail	Hike	0.27
Burlington-River Trail Connector	Trail	Hike	0.21
Burlington-Weott Gould Bar Connector	Trail	Hike	0.05
Burlington-Weott Gould Bar Connector Link	Trail	Hike	0.01
Burlington-Weott Trail	Trail	Hike	1.44
Burlington-Weott Trail River Access Trail Link	Trail	Hike	0.05

Burlington Campground River Access Trail	Trail	Hike	0.07
Burlington Pump Shed Road	Road	Hike, Bike and Horse	0.21
Burlington Residence Road	Road	None	0.16
Chandler Grove-Avenue of the Giants Connector	Trail	Hike	0.15
Chandler Grove Cutoff	Trail	Hike	0.03
Chandler Grove Trail	Trail	Hike	0.48
Childrens Forest Loop Trail	Trail	Hike	0.36
Cuneo Horse Camp-Indian Orchard Connector	Road	Hike, Bike and Horse	0.69
Cuneo Horse Camp Loop Road	Road	Hike, Bike and Horse	0.27
Cuneo Horse Camp South Loop	Road	Hike, Bike and Horse	0.18
Daly Ranch Road	Road	Hike, Bike and Horse	0.34
Daly Ranch Road Connector	Road	Hike, Bike and Horse	0.12
Drury-Chaney Loop Trail	Trail	Hike	1.64
Dry Creek Dead End Spur	Road	Hike, Bike and Horse	0.37
Dry Creek Horse Trail	Trail	Hike and Horse	1.76
Dry Creek Horse Trail Cutoff	Trail	Hike and Horse	0.03
Dyerville Bar Access Road	Road	Hike, Bike and Horse	0.13
Dyerville Giant Root Spur	Trail	Hike	0.01
Elinor Road	Road	Hike, Bike and Horse	0.30
Elizabeth Achelis Grove Trail	Trail	Hike	0.17
Five Allens Trail	Trail	Hike	1.26
Flat Iron Tree Trail	Trail	Hike	0.03
Fleischmann Grove Trail	Trail	Hike	0.68
Founders Grove-Mahan Plaque Trail Connector	Trail	Hike	0.19
Founders Grove-Mahan Plaque Trail Connector Li	Trail	Hike	0.01
Founders Grove Trail	Trail	Hike	0.51
Founders Grove Trail-Parking Link	Trail	Hike	0.04
Founders Grove Trail Interpretive Spur	Trail	Hike	0.02
Founders Tree Circle	Trail	Hike	0.03
Fox Camp Road	Road	Hike, Bike and Horse	6.39
Fox Camp Road Spur Loop	Road	Hike, Bike and Horse	0.41
Franklin K Lane Inner Loop Trail	Trail	Hike	0.09
Franklin K Lane Loop Trail	Trail	Hike	0.32
Franklin K Lane Trail	Trail	Hike	0.07
Garden Club-Kent-Mather LoopTrail	Trail	Hike	0.27
Garden Club-River Trail Connector	Trail	Hike	0.20
Giant Tree Trail	Trail	Hike	0.18
Goosepen Loop Cutoff Trail	Trail	Hike	0.02
Goosepen Loop Trail	Trail	Hike	0.46
Goosepen Loop Trail-Avenue of Giants Link	Trail	Hike	0.03
Gould Bar Road	Road	Hike, Bike and Horse	0.06
Gould Barn Road	Road	Hike, Bike and Horse	0.04
Gould Grove Nature Trail	Trail	Hike	0.60
Gould Grove Nature Trail Access	Trail	Hike	0.04

Grasshopper Peak Road	Road	Hike, Bike and Horse	0.30
Grasshopper Peak Trail	Trail	Hike	0.40
Grasshopper Road	Road	Hike, Bike and Horse	8.24
Grasshopper Trail	Trail	Hike	3.07
Greig-French-Bell Loop	Trail	Hike	0.21
Greig-French-Bell Trail	Trail	Hike	0.38
Grieg Road	Road	Hike, Bike and Horse	11.84
Hamilton Barn Road	Road	Hike, Bike and Horse	0.56
Hamilton E-Camp Access Trail	Trail	Hike	0.10
Hamilton Spur	Road	Hike, Bike and Horse	0.32
Hansen Ridge Road	Road	Hike, Bike and Horse	1.02
Hidden Springs Beach Trail	Trail	Hike	0.40
Hidden Springs Service Road	Road	Hike, Bike and Horse	0.08
Hidden Springs Water System Road	Road	Hike, Bike and Horse	0.21
High Rock River-Avenue Connector	Trail	Hike	0.03
High Rock River-Avenue Connector South	Trail	Hike	0.03
High Rock River Access Road	Road	Hike, Bike and Horse	0.05
High Rock River Access Trail	Trail	Hike	0.11
High Rock River OverlookTrail	Trail	Hike	0.07
High Rock River Trail	Trail	Hike	1.24
Holmgren Road	Road	Hike, Bike and Horse	0.21
Holmgren Road Spur	Road	Hike, Bike and Horse	0.04
Homestead-Baxter Trail Connector	Trail	Hike and Horse	0.38
Homestead Trail	Trail	Hike and Horse	4.32
Homestead Trail-Bull Creek Trail North Connecto	Trail	Hike and Horse	0.03
Homestead Trail Mill Creek Bridge	Trail	Hike and Horse	0.09
Indian Orchard	Trail	Hike and Horse	2.60
Johnson Camp Road	Road	Hike, Bike and Horse	0.39
Johnson Camp Trail	Trail	Hike and Horse	5.09
Kemp Road	Road	Hike, Bike and Horse	3.69
Kent-Mather Grove Loop Trail	Trail	Hike	0.32
Landsdale East Road	Road	Hike, Bike and Horse	0.57
Landsdale River Bar Access Road	Road	Hike, Bike and Horse	0.07
Leatherwood Bar Access Road	Road	Hike, Bike and Horse	0.14
Look Prairie Road	Road	Hike, Bike and Horse	3.53
Lower Burns Quarry Road	Road	Hike, Bike and Horse	0.30
Mahan Plaque-Avenue of Giants Connector	Trail	Hike	0.04
Mahan Plaque-Avenue of Giants Connector Link	Trail	Hike	0.01
Mahan Plaque Loop Trail	Trail	Hike	0.66
Marin Garden Club Group Camping Road	Road	Hike, Bike and Horse	0.09
McIntyre Faries	Trail	Hike	0.21
Miranda River Bar Access Road	Road	Hike, Bike and Horse	0.06
Myers Plaque Trail	Trail	Hike	0.15
Nelson Road	Road	Hike, Bike and Horse	0.27

Nelson Road-Hidden Springs Beach Trail Connect	Trail	Hike	0.06
Nelson Road Beach Trail	Trail	Hike	0.20
Old Newton Road	Road	Hike, Bike and Horse	0.10
Peavine Ridge Road	Road	Hike, Bike and Horse	9.26
Perimeter Road	Road	Hike, Bike and Horse	4.26
Pole Line Road	Road	Hike, Bike and Horse	2.65
Rainbow Ridge	Road	Hike, Bike and Horse	0.06
River Bar Access	Trail	Hike	0.05
River Trail	Trail	Hike	8.87
Road-Trail Connector Link-Addie Johnson Trail	Road	Hike, Bike and Horse	0.01
Road-Trail Connector Link-Franklin K Lane Trail	Road	Hike, Bike and Horse	0.03
Rockefeller Loop-River Trail Lower Connector	Trail	Hike	0.13
Rockefeller Loop River Bar Connector	Trail	Hike	0.07
Rockefeller Loop Trail	Trail	Hike	0.64
Rockefeller Parking Lot River Access Trail	Trail	Hike	0.05
Salmon Creek Exit Spur	Road	None	0.01
Salmon Creek Exit Spur West	Road	None	0.02
Shack Road	Road	Hike, Bike and Horse	0.06
South Prairie Trail	Trail	Hike and Horse	3.00
Stafford River Bar Access	Road	Hike, Bike and Horse	0.21
Stephens Grove - Miranda Connector	Road	Hike, Bike and Horse	0.24
Stephens Grove Trail	Trail	Hike	0.68
Stream Gage Road	Road	Hike, Bike and Horse	0.03
Tall Tree Loop Trail	Trail	Hike	0.05
Tanbark Road	Road	Hike, Bike and Horse	3.09
Thomas Hill Road	Road	Hike, Bike and Horse	0.07
Thornton Trail	Trail	Hike, Bike and Horse	4.88
Thornton Trail - Reroute	Trail	Hike, Bike and Horse	0.63
Upper Burns Quarry Road	Road	Hike, Bike and Horse	0.18
Weott Water System Road	Road	Hike, Bike and Horse	5.00
Williams Grove-River Trail Connector	Trail	Hike	0.36
Williams Grove Trail	Trail	Hike	2.18
Williams Grove Trail South	Trail	Hike	0.40
Williford Road	Road	Hike, Bike and Horse	3.40
Womens Federation Parking Access Trail	Trail	Hike	0.08
Womens Federation River Access Trail	Trail	Hike	0.04

8.7 Change-in-Use Evaluations Summary

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

Appendices

Change in Use Evaluation Form

Change in Use Process Flowchart

8.8 Change-In-Use 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

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				

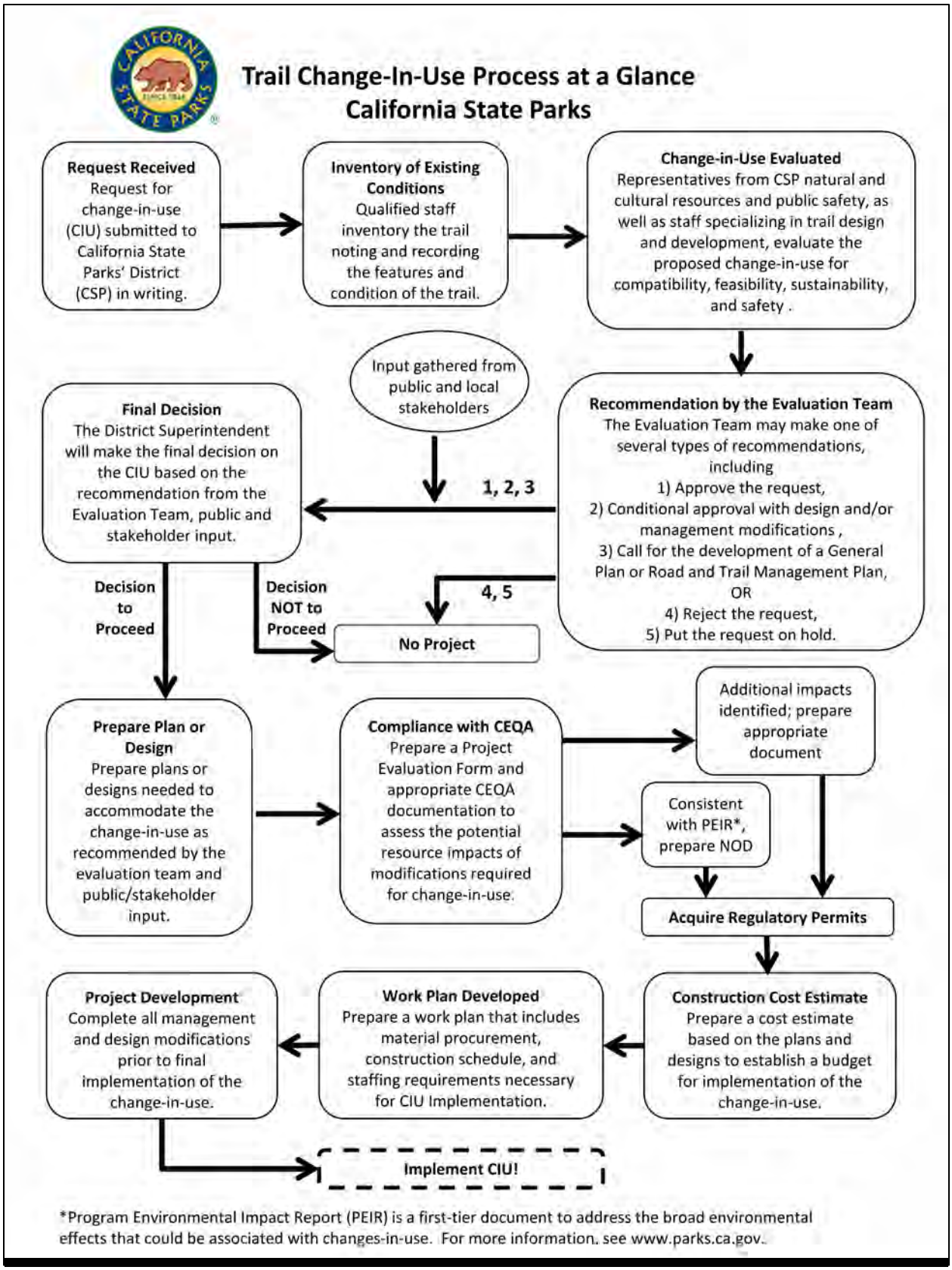
Trail Use Change Survey

	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?			

8.9 Change-In-Use Process Flow Chart



8.10 Seasonal Road Driving Policy

State of California • Natural Resources Agency
Edmund G. Brown Jr., *Governor*
DEPARTMENT OF PARKS AND RECREATION
Lisa Ann L. Mangat, *Director*
North Coast Redwoods District
P.O. Box 2006 Eureka, CA 95502
(707) 445-6547

March 16, 2016

To: North Coast Redwoods District Employees

From: Jeff Bomke, District Superintendent

Subject: Seasonal Road Use in the North Coast Redwoods District

SCOPE AND PURPOSE

The purpose of this Superintendent's Policy is to prevent damage to non-paved park roads from vehicle use during the wet season or other adverse weather conditions, and to protect aquatic resources and water quality in park streams. This policy applies to all North Coast Redwoods District (NCRD) employees, volunteers, agencies, municipalities, utilities, contractors , and cooperators using park owned, non-public (controlled access) backcountry roads, as well as some public use roads within the District, exclusive of units within the Redwood National and State Parks cooperative Management Area. Please refer to the Superintendents' Policy No. 1 dated May 6, 2011, Seasonal Road Use in Redwood National and State Parks (RNSP) for policy related to seasonal road use. Supervisors are responsible for ensuring that their employees, volunteers, contractors and cooperators are familiar with the Seasonal Road Use Policy for roads in the NCRD. This policy does not apply to property owners that have legal, unconditional easements over park property. The North Coast Redwoods District will work cooperatively with landowners to reduce damage to encumbered roads during wet conditions. All-season roads degrade over time, even with proper maintenance. Therefore, roads designated as all-season may be re-designated as seasonal roads if conditions dictate. To improve protection and sustainability of non-paved roads, protect backcountry aquatic resources, and avoid confusion among affected staff, a list of all-season roads will be published annually the first week of October.

BACKGROUND

All-season roads are constructed with compacted gravel or paved surfaces. They have hardened surfaces and can be driven on with standard vehicles during most weather conditions. All-season roads are not designed to accommodate large trucks or crew vehicles during the wet season or other adverse weather periods. Seasonal roads are constructed with a surface consisting of native material or reworked gravel that can deform and erode when conditions are wet. Damage occurs through rutting which compromises the effectiveness of road surface drainage and allows runoff from precipitation to concentrate on the road surface and cause erosion. Erosion and sedimentation from roads impacts aquatic resources and water quality. Use of

backcountry roads during wet weather conditions significantly increases road repair and maintenance workloads and associated costs.

POLICY

No unpaved roads shall be driven on, whether designated seasonal or all-season, if the use causes deformation or displacement of the road surface . Seasonal roads in the park shall not be driven on with any vehicle by any agency or entity, including State Park personnel during the winter period or within 24 hours following rainfall greater than 0.5-inch that occurs outside of the winter period. Seasonal roads may be driven on by ATVs/UTVs providing ATV/UTV use does not deform or rut the road surface . Backcountry roads that have been re-engineered or constructed during the previous dry season shall not be driven on at any time by any vehicle or ATV/UTV during the follow ing rainy season unless there is an emergency. Emergencies are exempt from this policy. Emergencies are defined as medical assistance, search and rescues, law enforcement responses to reported incidents, fires, utility outages and other immediate threats to the public or park resources.

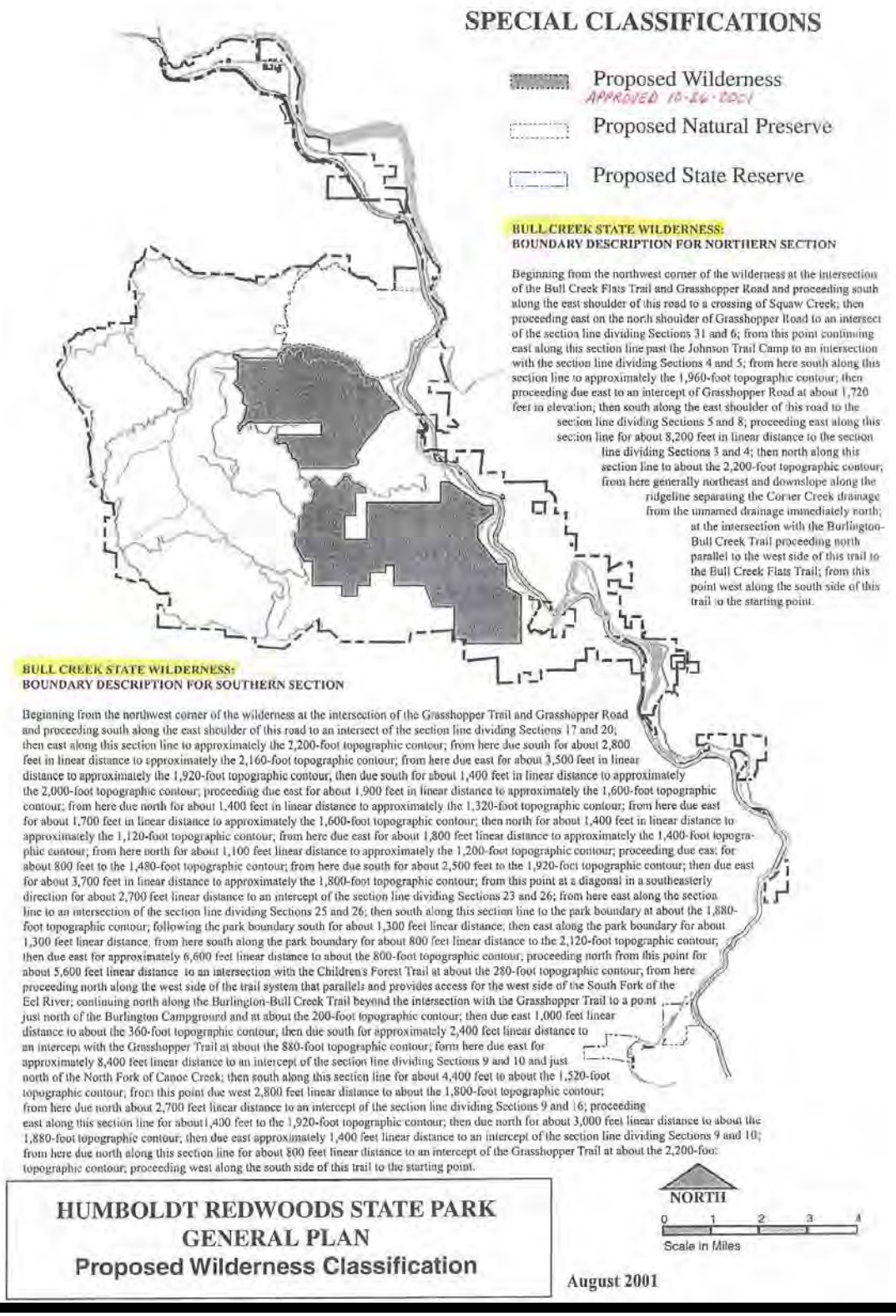
The winter period is defined as October 15 through May 15 or the beginning of the prolonged stormy weather season through the beginning of the prolonged dry weather season on the North Coast. Seasonal road closures can occur before October 15 if sufficient precipitation has occurred , and seasonal closures can extend beyond May 15 if roads have not had sufficient time to dry. Similarly, seasonal road closures can occur after October 15th if the rainy season has not yet produced sufficient precipitation to warrant closures. The NCRD Superintendents or their designee shall determine when seasonal roads are to be closed and re-opened.

As a general practice, vehicles driven on unpaved backcountry roads should have four-wheel drive and be engaged in four wheel drive. Tire chains shall not be used as a means to improve traction in order to gain access and should only be employed in emergencies or situations when extrication is not possible through mechanical assistance (e.g., winch, grip hoist, come-along, or towing by another vehicle).

Under all circumstances , volunteers, agencies, municipalities, utilities, contractors, and cooperators requiring access to non-paved backcountry roads during the wet season or other adverse weather conditions shall contact the Sector Superintendent , who in turn is required to contact the Roads and Trails Section Manager or the Sector RTR Supervisor to discuss road conditions, proposed use and protective BMP's prior to using non-paved roads.

8.11 HRSP Wilderness Boundaries

The following wilderness boundary descriptions was developed during the HRSP General Plan process.



8.12 Planning Team

The planning team for the HRSP RTMP consisted of Departmental staff with a variety of professional backgrounds, including environmental science, maintenance, GIS mapping, recreation, trails, archaeology, landscape architecture, and law enforcement. The following districts, divisions, and unit participated in the development of this plan:

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Thank you to the RTMP team members!

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