California Department of Parks and Recreation

BIG BASIN REDWOODS STATE PARK GENERAL PLAN SUPPLEMENTAL EIR for the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

October 2025 | Draft Supplemental Environmental Impact Report

State Clearinghouse No. 2001112104



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for California Department of Parks and Recreation

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This executive summary has been prepared in compliance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. This Draft Supplemental Environmental Impact Report (EIR) addresses the environmental effects associated with the implementation of the proposed Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments (proposed project) for Big Basin Redwoods State Park (BBRSP, park). CEQA requires that local government agencies consider the environmental consequences before acting on projects over which they have discretionary approval authority. An EIR analyzes potential environmental consequences to inform the public and support informed decisions by local and State governmental agency decision makers. This document focuses on impacts determined to be potentially significant in the Initial Study completed for this project (see Appendix A, *Notice of Preparation and Initial Study*).

This Supplemental EIR has been prepared pursuant to the requirements of CEQA and the California Department of Parks and Recreation's (Department's) CEQA procedures. The Department, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on Department technical personnel and review of all technical subconsultant reports.

ES.2 ENVIRONMENTAL PROCEDURES

This Supplemental EIR has been prepared pursuant to CEQA and the CEQA Guidelines to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR, determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a statement of overriding considerations if significant impacts cannot be avoided.

Pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162, after an EIR has been certified for a project and substantial changes occur with respect to the circumstances under

which the project is undertaken, major revisions to the previous EIR may be required leading to the preparation of a supplemental EIR. This is described further in Section ES2.2, *Type and Purpose of this Draft Supplemental EIR*.

ES.2.1 Draft EIR Organization

Executive Summary. Summarizes the background and description of the proposed project, the format of this Draft Supplemental EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and recommended mitigation measures identified for the project.

Chapter 1: Introduction. Describes the purpose of this Supplemental EIR, background on the project, the Notice of Preparation, the use of incorporation by reference, and Final Supplemental EIR certification.

Chapter 2: Project Description. Provides a detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this Supplemental EIR.

Chapter 3: Biological Resources Environmental Analysis. Discusses the applicable regulatory framework; existing conditions; significance criteria used to determine if a significant impact would occur; methodology to identify and evaluate the potential impacts of the project; potential adverse and beneficial effects of the project; the level of impact significance with and without mitigation; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed projects in the area as they relate to biological resources.

Chapter 4: Alternatives to the Proposed Project. Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative, Rebuild Under 2013 General Plan Alternative, and Avoid Development in Old Growth Redwoods Alternative.

Chapter 5: Report Preparers and Organizations Consulted. Includes a list of people and organizations that prepared or were contacted during the preparation of this Draft Supplemental EIR.

Appendices. The appendices for this document include the following supporting documents:

- Appendix A: Notice of Preparation and Initial Study
- Appendix B: Scoping Comments
- Appendix C: Standard Project Requirements
- Appendix D: Marbled Murrelet Literature Review (2012-2025)

ES.2.2 Type and Purpose of this Draft Supplemental EIR

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses.

This Supplemental EIR is the subsequent analysis of an EIR that fulfilled the requirements for a Program EIR. According to Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that can be characterized as one large project. Agencies prepare Program EIRs for programs or a series of related actions that are linked geographically; logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program; or individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. Use of a Program EIR gives the lead agency an opportunity to consider broad policy alternatives and program-wide mitigation measures, as well as greater flexibility to address project-specific and cumulative environmental impacts on a comprehensive scale.

Pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR or negative declaration shall be prepared for the project unless the lead agency determines that one or more of the conditions specified in CEQA Guidelines Section 15162 and 15163 are met. The context of this Supplemental EIR is described further in Section 1.1, *Purpose of the Supplemental EIR,* in Chapter 1, *Introduction.*

ES.3 PROJECT LOCATION

BBRSP encompasses approximately 18,200 acres (28.44 square miles) in the western, coastal portion of the Santa Cruz Mountains between Highways 1 and 9. Most of the park is in Santa Cruz County and a small northern portion is in San Mateo County. Elevations within the park range from sea level to over 2,000 feet. BBRSP is approximately 20 miles north of the City of Santa Cruz, approximately 40 miles south of the City and County of San Francisco, and approximately 20 miles southwest of the City of San José.

The park is surrounded by other parks and open space with communities along Highway 9. Pescadero Creek Park and Portola Redwoods State Park are north; Castle Rock State Park and San Lorenzo Headwaters Natural Preserve are northeast; the neighborhoods along Highway 9 are east; Henry Cowell Redwoods State Park is southeast; Swanton is southwest; Año Nuevo State Park and State Marine Conservation Area, Highway 1, and the Pacific coastline are west; and Butano State Park is northwest of BBRSP.

ES.4 SUMMARY OF THE PROPOSED PROJECT

The proposed project is being prepared due to the 2020 CZU Lightning Complex fire (CZU fire). The proposed project includes the Big Basin Redwoods State Park Facilities Management Plan, which is being prepared to guide the stewardship, management, and use of existing and future park facilities and General Plan Amendments, which are being prepared to create consistency with the park's General Plan. A Facilities Management Plan makes management recommendations and proposes facility use considerations for a specific park unit, portion of a park unit, or project.

The proposed project focuses specifically on areas along Highway 236 and Sky Meadow Road that either hosted pre-fire facilities or have otherwise been identified as suitable facility locations based on sensitive habitat avoidance, access, and slope stability. The California Department of Parks and Recreation (Department, State Parks) is the lead agency for the proposed project.

ES.5 SUMMARY OF PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6(a) states that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives in this Draft Supplemental EIR were based, in part, on their potential to reduce or eliminate the impacts determined to be potentially significant for implementation of the proposed project (see Table ES-1, *Summary of Significant Environmental Impacts and Mitigation Measures*). The project alternatives were not reviewed for financial feasibility. Project alternatives are assessed in further detail in Chapter 4, *Alternatives to the Proposed Project*.

ES.5.1 No Project Alternative

Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, the No Project Alternative presents the "no project" scenario. Accordingly, under this alternative, the park would be rebuilt essentially as a replica of pre-fire conditions.

ES.5.2 Natural Preserve Alternative

Under the Natural Preserve Alternative, the Focus Area within BBRSP would be reclassified as a Natural Preserve with all existing facilities removed. There would be no day-use, overnight facilities, or parking infrastructure provided at BBRSP. Only trails would be provided in the Natural Preserve.

ES.5.3 Old Growth Redwoods Avoidance Alternative

Under the Old Growth Redwoods Avoidance Alternative, there would be no development in areas with old growth redwood habitat, which primarily includes the Old Growth Area and Overnight Areas opportunity zones. Thus, development at Sequoia, Main Day-use Area, North Escape Road, Redwood Loop Trail, Sempervirens Campground, Blooms Creek and Jay Campgrounds, Lower Sky Meadow, Huckleberry and Wastahi Campgrounds would be limited. Therefore, there would be fewer campsites, parking areas, and interpretation included under this alternative.

ES.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. For the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this Supplemental EIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
4. Whether there are other mitigation measures that should be applied to the project besides the mitigation measures identified in the EIR.
5. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

ES.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public. Prior to preparation of the Draft Supplemental EIR, the Department issued a Notice of Preparation (NOP) on June 16, 2025. The CEQA-mandated scoping period for this EIR was between June 16, 2025, and July 18, 2025, during which interested agencies and the public could submit comments about the potential environmental impacts of the proposed project. During this time, the Department received comment letters from several State and local agencies and organizations, including: Amah Mutsun Land Trust, Native American Heritage Commission, State Water Resources Control Board, Monterey Bay Air Resources District, Center for Biological Diversity, California Department of Fish and Wildlife, and Pacific Seabird Group, as

well as spoken comments at the July 10, 2025, public scoping meeting, described further in Section 1.2.1, *Notice of Preparation and Initial Study,* in Chapter 1, *Introduction* by representatives from the Sierra Club and American Bird Conservancy. Appendix B, *Scoping Comments*, of this Draft Supplemental EIR contains comments received by the Department in response to the NOP and attached Initial Study.

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. Though every concern applicable to the CEQA process is addressed in this Draft Supplemental EIR, this list is not necessarily exhaustive but rather attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- The decline of marbled murrelet
- Increased protections for the marbled murrelet
- Loss of old growth redwood habitat
- Post-fire conditions of BBRSP
- Indigenous archaeological sites at Little Basin
- Hydrology concerns in Little Basin
- Additional air quality project requirements
- Artificial nighttime lighting

ES.8 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table ES-1 summarizes the conclusions of the environmental analysis contained in this EIR. Table ES-1 presents significant impacts and mitigation measures, including the impact's level of significance with the imposition of mitigation measures. For a complete description of potential impacts, please refer to Chapter 3, *Biological Resources Environmental Analysis*.

Based on the analysis in the Initial Study prepared for the proposed project and attached to the Notice of Preparation, only one environmental category was identified as having the potential to result in significant impacts: biological resources. All other environmental categories were identified as having less-than-significant or no impact and are therefore not evaluated in this Draft Supplemental EIR. Refer to the Initial Study in Appendix A, *Notice of Preparation and Initial Study,* for an evaluation of all other environmental issues described in Appendix G of the CEQA Guidelines.

Table ES-1 Summary of Significant Environmental Impacts and Mitigation Measures

Environmental Impact	Level of Significance without Mitigation	Mitigation Measures	Level of Significance with Mitigation
BIOLOGICAL RESOURCES			
Impact BIO-1: Given the uncertain nature of marbled murrelet research, a conclusive determination on the effects the proposed project on the marbled murrelet species cannot be made and is thus assumed to be significant.	S	None available.	SU
Impact BIO-2: The proposed project, together with cumulative projects, has the potential to contribute to a significant cumulative impact on marbled murrelet in Zone 6.	S	None available.	SU

S = Significant; SU = Significant and Unavoidable

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1. INTRODUCTION

1.1 PURPOSE OF THE SUPPLEMENTAL EIR

The California Environmental Quality Act (CEQA) requires that all State and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage, and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (CEQA Section 21067). The California Department of Parks and Recreation (Department, State Parks, DPR) has principal responsibility for approval of the proposed Reimagining Big Basin Facilities Management Plan (BBFMP) and General Plan amendments at Big Basin Redwoods State Park (BBRSP). For this reason, the Department is the CEQA lead agency for this project. The proposed BBFMP and General Plan amendments are herein referred to together as the proposed project.

Pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR or negative declaration shall be prepared for that project unless the lead agency determines that one or more of the following conditions are met:

- Substantial project changes are proposed that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified or the negative declaration was adopted shows any of the following:
  - The project will have one or more significant effects not discussed in the previous EIR or negative declaration.

- Significant effects previously examined will be substantially more severe than identified in the previous EIR.
- Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
- Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Where one of the conditions specified in CEQA Guidelines Section 15162[1] are present, the lead agency must determine whether to prepare a Subsequent EIR (CEQA Guidelines Section 15162[b]). A Supplemental EIR, rather than a Subsequent EIR, is appropriate where only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation, and the Supplemental EIR need contain only the information necessary to make the previous EIR adequate for the project as revised (CEQA Guidelines Section 15163).

The 2013 Big Basin Redwoods State Park Final General Plan (2013 General Plan) has been the park's guiding document since 2013. This Supplemental EIR to the 2013 Big Basin Redwoods State Park General Plan Environmental Impact Report (State Clearinghouse No. 2001112104) (2013 General Plan EIR) has been prepared due to the change in circumstance at the park due to the 2020 CZU Lightning Complex fire, which is described further in Chapter 2, *Project Description.*

The overall purpose of this Supplemental EIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the proposed project. This Supplemental EIR addresses effects that may be significant and adverse, evaluates alternatives to the project, and identifies mitigation measures to reduce or avoid adverse effects.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine whether an additional CEQA document is necessary. However, if the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities may be within the Program EIR's scope, and additional environmental documents may not be required (CEQA Guidelines Section 15168[c][2]). The benefits of such documents are that they allow a comprehensive examination of a project and promote "tiering" when later activities within the program are undertaken. The use of tiering can expedite environmental review by eliminating repetitive analysis of issues and potential impacts adequately addressed in the program EIR or mitigated negative declarations. When a

[1] See also Section 15163 of the CEQA Guidelines, which applies the requirements of Section 15162 to Supplemental EIRs.

lead agency relies on a Program EIR for a subsequent activity, it must incorporate feasible mitigation measures and alternatives from the Program EIR into the subsequent activities (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects outside the scope of the Program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or an EIR. Even in this case, this Program EIR serves as the first-tier environmental analysis.

1.2 ENVIRONMENTAL REVIEW PROCESS

1.2.1 Notice of Preparation and Initial Study

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, State Parks has determined that the proposed project could result in potentially significant environmental impacts and that a Supplemental EIR would be required. In compliance with CEQA Section 21080.4, State Parks released the Notice of Preparation of a Supplemental EIR for the proposed project to the public on June 16, 2025. The Notice of Preparation was posted to the Office of Land Use and Climate Innovation's State Clearinghouse and interested agencies and people on June 23, 2025, for a 30-day State agency review period. A public scoping meeting was held on Thursday, July 10, 2025, at 6:00 p.m.

The Notice of Preparation and scoping process solicited comments regarding the scope of the Draft Supplemental EIR from responsible agencies and interested parties. Appendix A, *Notice of Preparation and Initial Study,* of this Draft Supplemental EIR, contains the Notice of Preparation. Appendix B, S*coping Comments*, of this Draft Supplemental EIR, contains the comments received in response to the Notice of Preparation and at the public scoping meeting.

The Notice of Preparation comment process helps determine the scope of the environmental issues to be addressed in the Draft Supplemental EIR. Based on this process and the initial study prepared for the proposed project and attached to the Notice of Preparation, only one environmental category was identified as having the potential to result in significant impacts: biological resources. Biological resource issues considered potentially significant are addressed in this Draft Supplemental EIR. All other environmental categories were identified as having a less-than-significant or no impact and are not evaluated in this Draft Supplemental EIR. Refer to the Initial Study in Appendix A, *Notice of Preparation and Initial Study,* for an evaluation of all other environmental issues described in Appendix G of the CEQA Guidelines. Few updates have been made to Section 3, *Environmental Checklist,* of the Initial Study since its posting on June 16, 2025, which are shown in Appendix A, *Notice of Preparation and Initial Study*; text changes are shown in <u>double underline</u> for additions and ~~strikeout~~ for deletions. Revisions to Section 2, *Project Description,* of the Initial Study have also been made; a revised project description is provided in Chapter 2, *Project Description,* of this Draft Supplemental EIR. The revisions to the

project description do not affect the environmental evaluation in the Initial Study and are thus not included in Appendix A, *Notice of Preparation and Initial Study.*

1.2.2 Draft Supplemental EIR

This Draft Supplemental EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period starting Friday, October 17, 2025, and ending Monday, December 1, 2025. The public is invited to provide written comments on the Draft Supplemental EIR via mail or email to State Parks by 5:00 p.m. on Monday, December 1, 2025. Comments should be submitted as follows:

Written: Santa Cruz District, California Department of Parks and Recreation
303 North Big Trees Park Road
Felton, CA 95018
Contact: Will Fourt

Email: Reimagining.BigBasin@parks.ca.gov with "Big Basin Redwoods State Park General Plan Supplemental EIR" as the subject line

1.2.3 Final Supplemental EIR Certification

After completion of the 45-day review period for the Draft Supplemental EIR, State Parks will review all written comments received and prepare written responses to each comment on the adequacy of the Draft Supplemental EIR. A Final EIR will then be prepared, and will contain all the comments received, responses to comments raising environmental issues, and any changes to the Draft Supplemental EIR. The Final EIR will then be presented to the California State Park and Recreation Commission (Commission) for consideration of the certification as the environmental document for the proposed project. Anyone who comments on the Draft Supplemental EIR and provides contact information will be notified of the availability of the Final EIR and the date of the public hearing, which is tentatively scheduled to be held March 26, 2026.

In compliance with CEQA Section 21092.5, all responses to comments submitted on the Draft Supplemental EIR by agencies will be provided to those agencies at least 10 days prior to certification of the Supplemental EIR. The Commission will make findings regarding the extent and nature of the impacts as presented in the Final Supplemental EIR. The Final Supplemental EIR will need to be certified as having been prepared in compliance with CEQA by State Parks prior to deciding to approve or deny the proposed project. Public input is encouraged at all public hearings before the Commission.

If the Commission certifies the Supplemental EIR, they may then consider action on the proposed project. If approved, the Commission would adopt and incorporate into the project all

feasible mitigation measures identified in the Supplemental EIR and may also require other feasible mitigation measures.

In some cases, the Commission may find that certain mitigation measures are outside the jurisdiction of State Parks to implement, or that no feasible mitigation measures have been identified for a given significant impact. In that case, the Commission, pursuant to CEQA Guidelines Section 15093, may nonetheless determine that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

1.3 LEVELS OF SIGNIFICANCE

The level of significance is identified for each impact in this Draft Supplemental EIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would result in no adverse effect on the environment.
- **Less than significant.** The project would not exceed the established significance criteria.
- **Significant.** The project would exceed the established significance criteria. For each significant impact, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measures would reduce the impact to a less-than-significant level successfully, this is stated in the EIR.
- **Significant and unavoidable.** The project would exceed the established significance criteria, and no feasible mitigation measures are available to reduce the impact to a less-than-significant level.

1.4 SCOPING COMMENTS RECEIVED

During the scoping meeting on July 10, 2025, three participants made public comments. One requested additional information regarding hydrology at Little Basin. Two others spoke regarding the loss of marbled murrelet (*Brachyramphus marmoratus*) habitat and the importance of the species' protection. They noted that a lot of new research has been done since the 2013 General Plan has been certified and that this research should be reflected in the Supplemental EIR.

On June 30, 2025, the Native American Heritage Commission (NAHC) provided written comments related to protecting tribal cultural resources. NAHC provided guidance and recommendations for consultation with California Native American tribes that are traditionally and culturally affiliated with the BBRSP and described the requirements of Assembly Bill 52 and Senate Bill 18.

On July 1, 2025, the Monterey Bay Air Resources District (MBARD) provided written comments related to air quality. MBARD recommended additional Standard Project Requirements that could be incorporated to further mitigate any fugitive dust impacts. MBARD also provided the requirements for asbestos notification, electric vehicle infrastructure, engines, and portable equipment.

On July 17, 2025, the Center for Biological Diversity (Center) provided written comments related to the protection of the marbled murrelet. The Center recommended measures to reduce food subsidies for wildlife and continue the implementation and enforcement of "Crumb Clean" measures. The Center also provided additional recommendations to protect marbled murrelet, such as including project alternatives that would avoid impacts from marbled murrelets in picnic areas, campgrounds, and day use areas; monitoring marbled murrelets and nest predators; and implementing stronger minimization and mitigation measures.

On July 18, 2025, the Pacific Seabird Group (PSG) provided written comments related to the decline of the marbled murrelet. PSG requested an identification of the post-fire conditions at BBRSP, including an assessment of the remaining potential marbled murrelet habitat. PSG also recommended buffer zones around unburned habitat, methods to reduce impacts from nest predators, long-term monitoring of habitat conditions and the effectiveness of Crumb Clean measures, and implementation of the Marbled Murrelet Landscape Management Plan for Zone 6.

The California Department of Fish and Wildlife (CDFW) provided written comments related to wildlife resources on July 18, 2025. CDFW provided a summary of the regulatory and CEQA requirements and recommended that the Supplemental EIR provide baseline habitat assessments for special-status species. CDFW provided recommended methods to avoid marbled murrelet and impacts to marbled murrelet habitat and recommended elimination of all nonessential artificial lighting as it can disrupt the circadian rhythms of wildlife species.

The State Water Resources Control Board (SWRCB) provided written comments related to water infrastructure on July 22, 2025. SWRCB reiterated the permit process for public water systems and recommended the replacement or construction of new domestic water infrastructure. SWRCB would also like the Supplemental EIR to address the potential impact the proposed project would have on wetlands.

On July 29, 2025, the Amah Mutsun Land Trust (AMLT) provide written comments on behalf of the Amah Mutsun Tribal Band (AMTB) related to tribal cultural resources. AMLT requested the tribal cultural resources within the park be avoided and protected. AMLT suggests that the management of Little Basin should prioritize the protection, remediation and restoration of the native habitats and culturally significant contributing elements of the area as an Indigenous cultural landscape.

The full comment letters received during the scoping period are included in Appendix B, *Scoping Comments,* of this Draft Supplemental EIR. Sensitive information has been redacted from the AMLT letter to protect tribal cultural resources and protect private information.

1.5 EVALUATION METHODOLOGY

Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved to the discretion of the lead agency, based on substantial evidence in the record as a whole, including views held by members of the public. An ironclad definition of significant effect is not always possible because the significance of an activity may vary based on the setting. Pursuant to CEQA Guidelines Section 15064(b), the analysis in this Draft Supplemental EIR is based on scientific and factual data that has been reviewed by the lead agency and represents the lead agency's independent judgment and conclusions.

Baseline

Due to the unique circumstances at BBRSP, the environmental analysis for the proposed project uses a split baseline. When evaluating impacts associated with site occupancy and visitor levels, a historical, pre-fire baseline is used. When evaluating impacts to site conditions, current, post-fire conditions are used as the baseline. Use of a historical baseline and more than one baseline is permissible under Section 15125(a)(1) of the CEQA Guidelines, which states:

> "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record."

Many of the environmental topics in the Initial Study (Appendix A, *Notice of Preparation and Initial Study*) use a historic, pre-fire baseline. This Supplemental EIR evaluates the impacts of the proposed project to biological resources and thus the baseline represents the existing conditions on the ground (i.e., physical conditions) at the time that the Notice of Preparation was issued (June 16, 2025).

Potential Effects of the Project on the Environment

The California Supreme Court concluded in *California Building Industry Association vs. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." The *CBIA vs. BAAQMD* ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted:

1. If the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried).
2. If the project qualifies for certain specified exemptions (certain housing projects and transportation priority projects pursuant to Public Resources Code Sections 21159.21 (f),(h); 21159.22 (a),(b)(3); 21159.23 (a)(2)(A); 21159.24 (a)(1),(3); or 21155.1 (a)(4),(6)).
3. If the project is exposed to potential noise and safety impacts on projects due to proximity to an airport (pursuant to Public Resources Code Section 21096).
4. School projects require specific assessment of certain environmental hazards (pursuant to Public Resources Code Section 21151.8).

Therefore, the evaluation of the significance of project impacts under CEQA focuses on the potential impacts of the proposed project on the environment.

1.6 CUMULATIVE IMPACTS

A cumulative impact consists of an impact resulting from the combination of the project evaluated in the Supplemental EIR, together with other reasonably foreseeable projects causing related impacts. CEQA Guidelines Section 15130 requires a Supplemental EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Cumulative effects could occur when future development under the project is combined with development in the surrounding area or, in some instances, in the entire region.

Pursuant to CEQA Guidelines Section 15130(a)(3), where a cumulative impact is significant when compared to baseline conditions, the analysis must address whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant and no mitigation for the project's contribution is required.

CEQA Guidelines Section 15130(b)(1) states that the information used in the analysis of cumulative impacts should come from one or two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or

B. A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

The cumulative impact analysis in this Supplemental EIR uses method A. The geographic area for the cumulative impact analysis of this Supplemental EIR is the California State Parks Santa Cruz District. BBRSP is most closely surrounded by the following State Parks: Año Nuevo State Park, Butano State Park, and Pigeon Point Light Station State Historic Park. Other parks in the District include Castle Rock State Park, Castro Adobe State Historic Park, Forest of Nisene Marks State Park, Henry Cowell Redwoods State Park, Lighthouse Field State Beach, Manresa State Beach, Natural Bridges State Beach, New Brighton State Beach, Santa Cruz Mission State Historic Park, Seacliff State Beach, Sunset State Beach, Twin Lakes State Beach, Wilder Ranch State Park, Bean Hollow State Beach, Burleigh H. Murray Ranch State Park, Gray Whale Cove State Beach, Half Moon Bay State Beach, Montara State Beach, Pescadero State Beach, Pomponio State Beach, Portola Redwoods State Park, and San Gregorio State Beach. Most of these parks have general plans or other guiding documents that may provide for future project needs within the park. The Department would be aware of current or future projects within the parks and would ensure project locations and timelines are considered before implementation of the proposed project to minimize cumulative effects. This is described further in Section 3.4, *Cumulative Impact Analysis,* of Chapter 3, *Biological Resources Environmental Analysis,* of this Draft Supplemental EIR.

Non-park land immediately surrounding BBRSP is considered when reviewing cumulative projects outside of the Department's jurisdiction. Based on a review of major project applications in Santa Cruz and San Mateo Counties, there are no specific projects that would be cumulatively considered with the proposed project (Santa Cruz County 2025; San Mateo County 2025).

1.7 MITIGATION MONITORING

CEQA Section 21081.6 requires that the lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for any project for which it has made findings pursuant to CEQA Section 21081 or adopted a Negative Declaration pursuant to CEQA Section 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. If mitigation measures are required, the

MMRP for the proposed project will be completed congruently as part of the Final Supplemental EIR process.

1.8 INCORPORATION BY REFERENCE

The following document is incorporated by reference into this Draft Supplemental EIR, consistent with Section 15150 of the CEQA Guidelines, and is available for review at California Department of Parks and Recreation:

Big Basin Redwoods State Park Final General Plan and Environmental Impact Report, prepared by State Park and Recreation Commission, May 2013.

1.9 REFERENCES

Santa Cruz County, Community Development and Infrastructure. 2025, June 24 (accessed). Major Project Applications. https://cdi.santacruzcountyca.gov/UPC/GetInvolved/MajorProjectApplications.aspx.

San Mateo County, Department of Public Works. 2025, June 24 (accessed). Public Works Projects. https://www.smcgov.org/publicworks/projects.

2. PROJECT DESCRIPTION

This chapter of the Draft Supplemental Environmental Impact Report (EIR) describes the proposed project. The Reimagining Big Basin Facilities Management Plan (BBFMP) builds on the 2013 General Plan and EIR,[1] the 2022 Reimagining Big Basin Vision Summary,[2] and the 2023 Big Basin Redwoods State Park Cornerstone Document.[3] The proposed project would implement a management plan for facilities in Big Basin Redwoods State Park (BBRSP) to provide guidance and direction for implementing the goals and objectives of these three documents.

This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of BBRSP; components of the proposed BBFMP and General Plan amendments; and required permits and approvals.

This chapter replaces the project description provided in Section 2, *Project Description,* of the Initial Study that is included in Appendix A, *Notice of Preparation and Initial Study,* of this Draft Supplemental EIR.

2.1 PROJECT SITE LOCATION AND CHARACTERISTICS

2.1.1 Project Location

BBRSP, California's first state park, is in the western, coastal portion of the Santa Cruz Mountains between Highways 1 and 9, which both run north to south. Most of the park is in Santa Cruz County and a small northern portion is in San Mateo County, as shown in Figure 2-1, *Regional and Vicinity Map*. The park is surrounded by other parks and open space with communities along Highway 9. Pescadero Creek Park and Portola Redwoods State Park are north; Castle Rock State Park and San Lorenzo Headwaters Natural Preserve are northeast; the neighborhoods along Highway 9 are east; Henry Cowell Redwoods State Park is southeast; Swanton is

[1] The Big Basin Redwoods State Park Final General Plan and Environmental Impact Report was completed in 2013. It is the foundational planning document for long-term planning at the BBRSP.

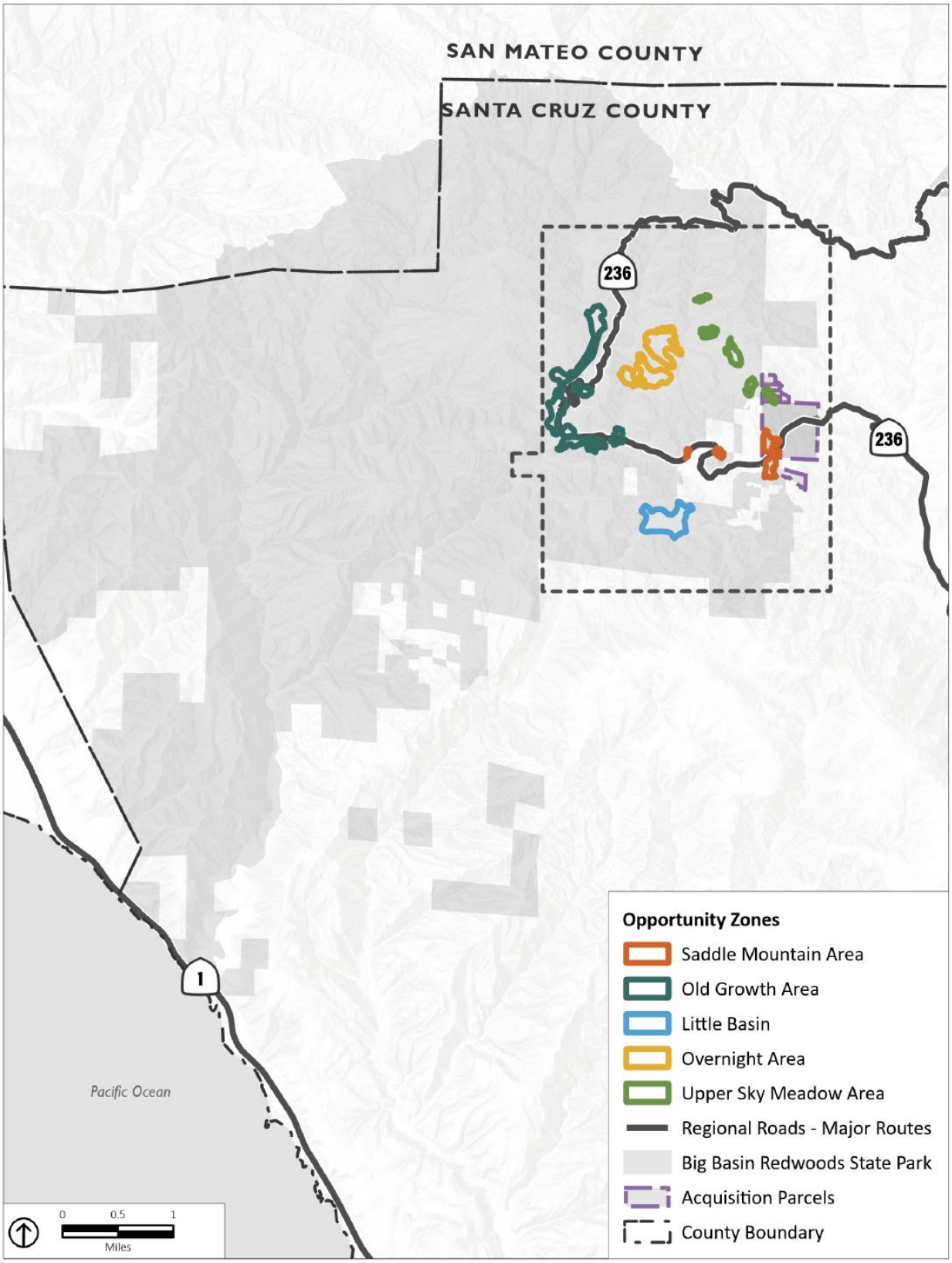
[2] The Reimagining Big Basin Visioning Process was conducted in 2021-2022 and brought together insights from the public, stakeholders, and Tribal representatives together in a high-level vision and set of guiding principles to inform planning decisions for rebuilding of facilities at the park.

[3] The Big Basin Redwoods State Park Cornerstone Document was completed in 2023 and incorporates insights from the Reimagining Big Basin Vision Summary and the effects of the 2020 CZU fire that substantiate relevant revisions and updates to the Park's General Plan.

southwest; Año Nuevo State Park and State Marine Conservation Area, Highway 1, and the Pacific coastline is west; and Butano State Park is northwest of BBRSP. Most of the land between BBRSP and the other state parks is undeveloped and privately owned for timber production. Nearby communities include San Lorenzo Park, Riverside Grove, Redwood Grove, Boulder Creek, Brookdale, Ben Lomond, Glen Arbor, and Felton along Highway 9 and Swanton along Highway 1. Highway 236 (Big Basin Way) is an 18-mile C-shaped loop route that connects to SR 9 and provides access to BBRSP from the east. There is no connecting road through the park for public vehicle access between Highway 1 and Highway 236. BBRSP is approximately 20 miles north of the City of Santa Cruz, approximately 40 miles south of the City and County of San Francisco, and approximately 20 miles southwest of the City of San José.

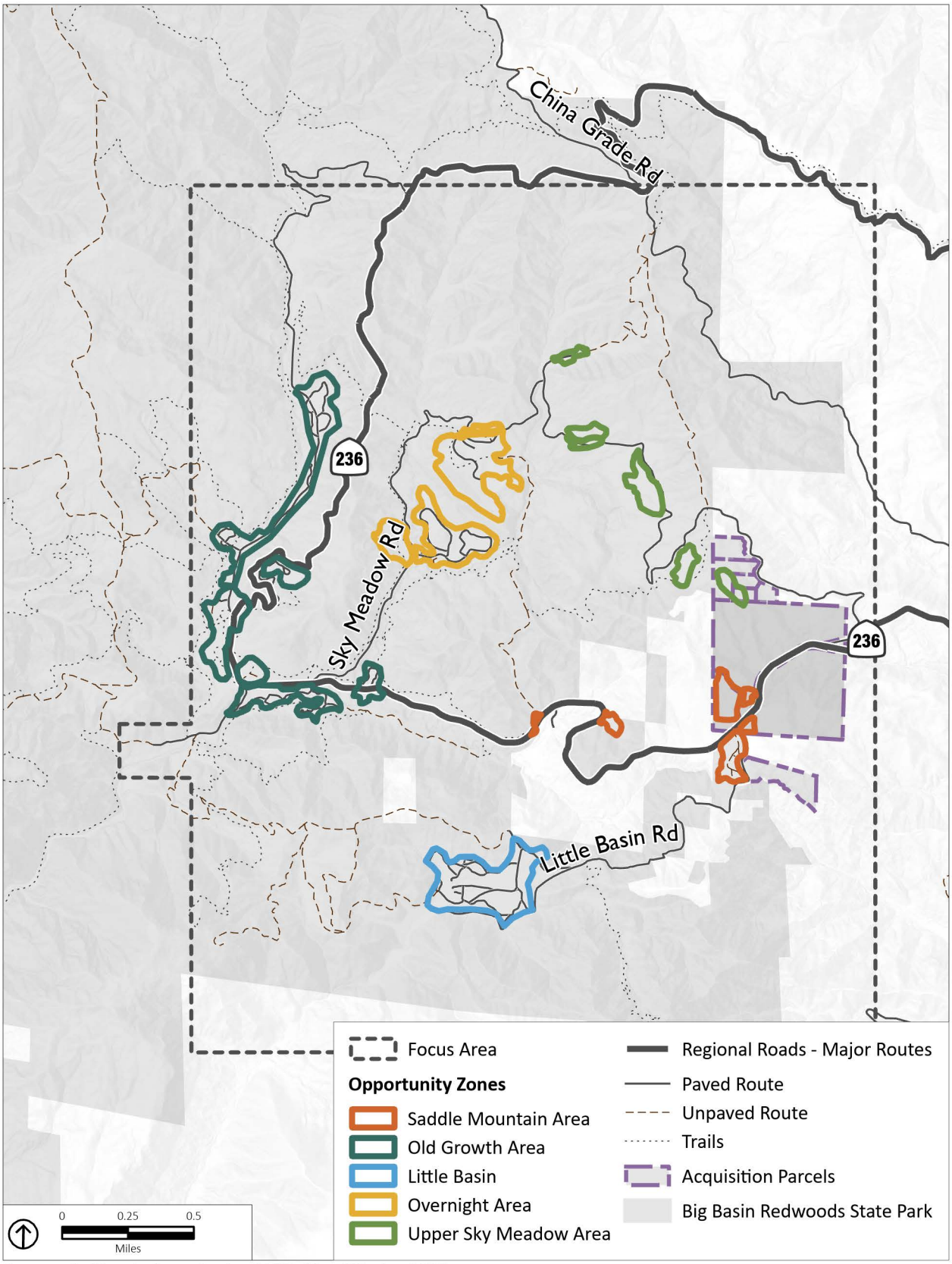
Most of the park is made up of old growth and previously logged coast redwood forests mixed with other conifers, oaks, and chaparral. BBRSP encompasses approximately 18,200 acres (28.44 square miles); however, the proposed project focuses specifically on areas along Highway 236 and Sky Meadow Road encompassing approximately 5,500 acres. This area in the eastern portion of the park is herein referred to as the Focus Area and is the location of the proposed project; this area is mapped in Figure 2-2, *Focus Area Map*.

The Focus Area includes seven parcels planned for acquisition in the Saddle Mountain Area. State Parks currently leases these properties from Sempervirens Fund and is pursuing acquisition of these parcels individually. Consistent with the 2013 General Plan, State Parks will continue to consider acquiring easements or acquisition of additional properties in the Saddle Mountain area, if available from willing sellers, to accommodate facilities development, highway or trail improvements, and/or to ensure long-term compatibility between park-related activities, resource protection, and adjacent land uses (General Plan Guideline Highway 236 – 6). The acquisition of these parcels will undergo separate California Environmental Quality Act (CEQA) evaluation, and the proposed project does not include the acquisition of these properties. The proposed project, however, does include recommendations and plans for facilities to be developed and maintained on these properties if and when they are acquired and become part of the park. After acquiring these parcels, the park size would be 18,400 acres (28.75 square miles). The acquisition parcels are further described in Section 2.1.3, *Existing Site Conditions and Site History*.



Source: California State Parks, 2025; PlaceWorks, 2025

Figure 2-1: Regional Vicinity



Source: California State Parks, 2025; PlaceWorks, 2025

Figure 2-2: Focus Area

The park contains two distinct areas, the uplands and the coastal areas. Elevations within the park range from sea level to over 2,000 feet. Three watersheds—Waddell Creek, East Waddell Creek, and Scott Creek—form the dominant landscape features of the park. Approximately 6,300 acres within BBRSP is designated as State wilderness, known as West Weddell Creek State Wilderness, which is outside of the Focus Area of the proposed project. The climate of the Santa Cruz Mountains varies over relatively short distances because of the diverse topography, although the proximity of the Pacific Ocean moderates some climate extremes. The park is at the southern end of the Marine West Coast Climatic Zone and exhibits some characteristics of the Mediterranean Climatic Zone. Typically, summers are dry and winters are wet, with precipitation beginning in October and continuing through April.

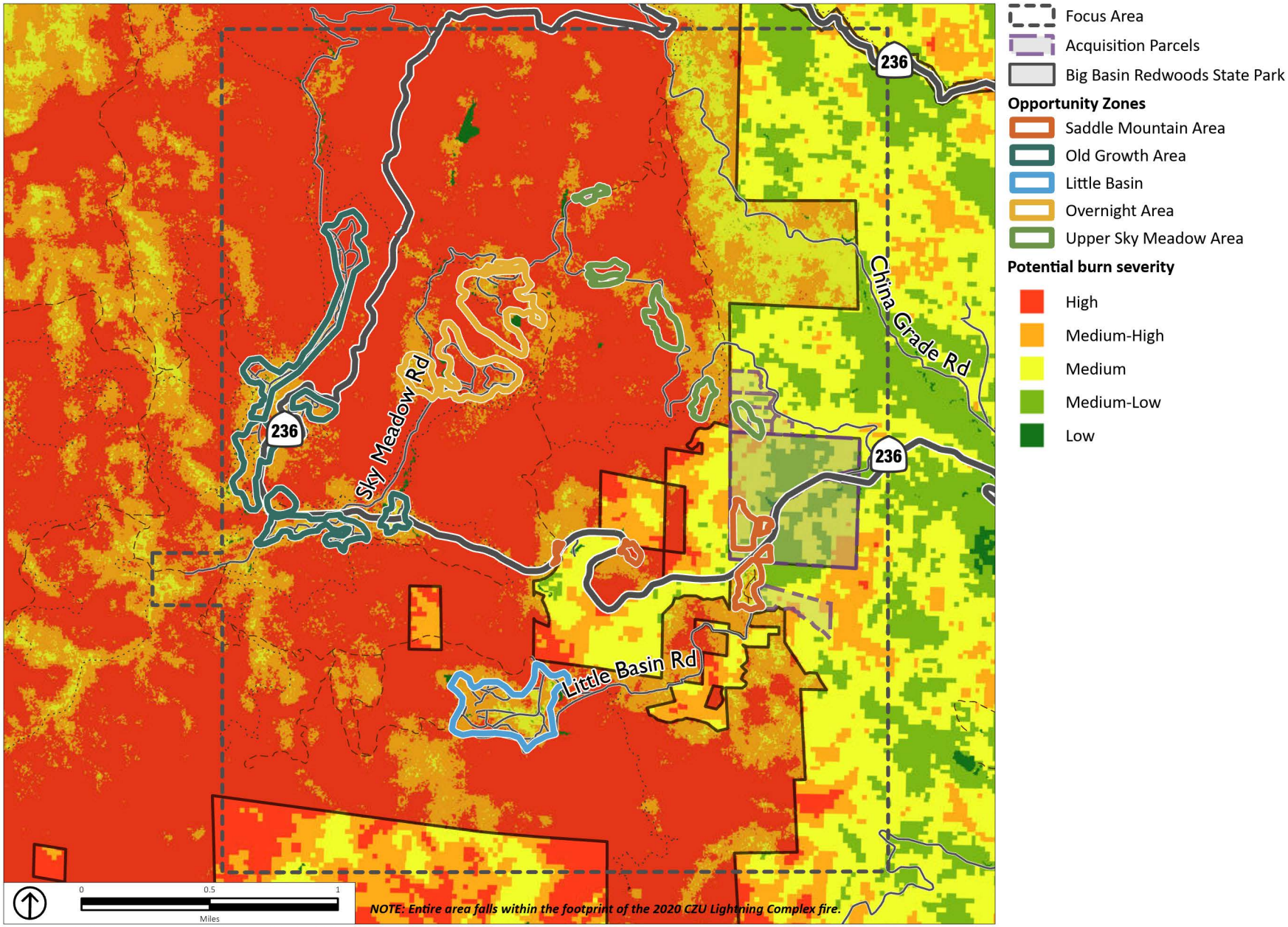
2.1.2 Land Use Designations

The majority of BBRSP is in Santa Cruz County, with a General Plan Land Use designation of Parks, Recreation, and Open Space (O-R) and a zoning of Parks, Recreation, and Open Space (PR). The portion of the BBRSP in San Mateo County is in the Timberland Preserve Zone (TPZ).

2.1.3 Existing Site Conditions and Site History

In 2020, the CZU fire burned approximately 86,500 acres in Santa Cruz and San Mateo Counties, burning 97 percent of BBRSP and its facilities. Though the fire burned through the entire park, Figure 2-3, *CZU Fire Burn Severity Map,* shows the severity of the fire within the Focus Area. Nearly all historic buildings and structures within BBRSP were destroyed, including the visitor center and campfire center amphitheater, which were built by the Civilian Conservation Corps as a part of the 1930's New Deal programs. All overnight facilities, including campground infrastructure (sewer/water) and tent cabins were lost. At least 47 pedestrian bridges, 6 vehicular bridges, and many other trail structures were also destroyed. The park was closed to the public after the CZU fire until partially reopening for limited day-use access with temporary visitor facilities in Summer 2022.

Prior to the CZU fire, the park received an average of 20,000 visitors a month, offered a variety of recreation, and accommodated both campers and day users. Visitor activity was focused primarily in the Headquarters area, in the eastern part of the park, along Highway 236. Here visitors could view interpretive exhibits, attend naturalist programs or events, and visit the camp store, as well as access trails and campgrounds.



Source: California State Parks, 2025; Cal Fire, 2025; PlaceWorks, 2025

Figure 2-3: CZU Fire Burn Severity Map

Immediate recovery from the CZU fire focused on stabilizing the area, clearing hazardous dead trees along roads and trails, and removing burn debris and associated contaminated soils from all damaged facility areas. Many coast redwoods (*Sequoia sempervirens*), including much of the old growth, are still living and sprouting the next iteration of its forest. The wildlife communities supported by the coastal redwood ecosystem are also returning to BBRSP. Thus, the Focus Area is still mostly burned but cleaned up with some new growth and minimal facilities.

The following subsections detail the key use areas of BBRSP prior to the CZU fire and describe the facilities that survived the CZU fire.

PARK ZONES

Saddle Mountain Area

The Saddle Mountain Area is a 17.48-acre property located on Highway 236 approximately four miles southeast of the former Headquarters area. This area included a former motel and restaurant formerly used for environmental education camps and other uses. Facilities included a 2,937-square-foot dining hall/kitchen main building, 12 cabins, a swimming pool with two bath houses, a large open grassy meadow, a campfire center, a small amphitheater, a community garden, a group picnic area, an archery range, trails, parking areas, a 1,577-square-foot manager's residence, a 3,240-square-foot single-story staff residence building, an office trailer, a 693-square-foot maintenance garage, and utilities infrastructure.

The CZU fire destroyed the residence, trailer, garage, and seven of the cabins. The remaining structures are being used for interim operations and staff housing. After the fire, an interim fenced maintenance yard and vehicle storage area were constructed which is used to operate the park, as well as three site host hookups for temporary, mobile staff housing. The former dining hall/kitchen building is used as an interim operations building with staff offices and a training space.

A temporary shuttle parking area and entry kiosk have also been constructed at Saddle Mountain. On summer weekends, a pilot shuttle program brings visitors who park at the overflow parking area at Saddle Mountain to the Main Day-use area.

The Saddle Mountain Area also includes the acquisition parcels, including the Norabella site, Potter property, and the Gatehouse and Upper Blooms sites. Norabella is immediately adjacent to Saddle Mountain and is a 153-acre property on both sides of Highway 236. Old Big Basin Road is a private road that goes through the Norabella site on the north side of Highway 236 and goes to several private residences that have access only by Old Big Basin Road through the Norabella site. Norabella has second-growth redwood and mixed oak woodland areas and did not have any structures prior to the CZU fire.

Upper Blooms is an area along Highway 236 west of Saddle Mountain, which has never had park facilities. A livestock corral was located at this site but has not been used since being part of BBRSP and was destroyed in the fire. This area has never been open to the public.

The Gatehouse was a former residence and garage on Highway 236 at the original entrance to the park boundary. The residence and surrounding infrastructure were lost in the CZU fire.

Old Growth Area

The BBFMP refers to the Old Growth Area, which includes the former park Headquarters (referred to as the Main Day-use Area in the BBFMP), as described in the 2013 General Plan. The Headquarters area was in the eastern portion of the park in an area accessed by Highway 236. This area was part of the original 3,800-acre park acquisition and, due to relatively flat terrain, ease of access, and location within old growth redwoods, it contained the majority of recreational facilities in the park, including the Headquarters Building, park store, Nature Museum, and picnic areas. Activities in the Headquarters area included picnicking, camping, hiking, horseback riding, biking, auto touring, study of the park's natural and cultural resources, staff housing and administrative, and interpretive and maintenance facilities. Day use parking lots were situated near individual and clustered picnic sites. A limited number of parking areas were also available for group or oversized vehicle parking, or a few horse trailers.

An approximately 600-seat campfire center was located in the Headquarters area that was originally constructed in 1911 and reconfigured by the Civilian Conservation Corps in 1936. The center consisted of wooden benches constructed from large redwood logs situated in an amphitheater configuration facing a covered stage and stone fire pit. The campfire center was lost in the fire but some of the log benches remain, and the area has been open to the public since July 2022.

Before the CZU fire, BBRSP had 13 campgrounds (including Little Basin), containing a total of 233 campsites, not including trail camps. Campground infrastructure varied with each campground and ranged from shower facilities and laundry facilities to pit toilets with no running water. With the exception of campground host sites, there were no utility hook-ups in the park. The following campgrounds were found in the Old Growth Area:

- Blooms Creek Campground with 51 campsites directly off Highway 236
- Sempervirens Campground with 31 campsites off Highway 236 from the south
- Jay, Trail Camps with 8 campsites and staff housing located off Highway 236 from the south
- Sequoia Group Camp with 2 campsites northwest of the Headquarters building

The Old Growth Area also contained the North Escape Road picnic areas and day-use parking along North Escape Road and Gazos Creek Road before the fire. Picnic areas included restrooms, parking, and stone barbecues.

The Old Growth Area also includes the Redwood Loop Trail, which was damaged in the fire but reopened with interim trail access in 2022.

After the CZU fire, a temporary kiosk and visitor center have been placed in the Main Day-use Area to allow visitors to access a small part of the park as it reopens. Parking has been limited to the front parking areas inside the kiosk with about 75 parking spaces available. A parking reservation system has been implemented, and visitors can get a guaranteed parking space by making a reservation online before arriving at the park. When the parking areas are full, visitors are not able to access the park without a reservation and vehicles are often turned away on weekends.

Little Basin

Little Basin is a 535-acre property that contained a 40-acre central meadow area, a 150-acre developed campground area with several group-oriented recreation facilities, and 345 acres of scenic woodlands and coast redwoods. The Little Basin campground included tent sites, cabins, and a group camping area that accommodated 50 campers. Each campsite was equipped with a charcoal-burning barbeque grill, a table with benches, a food locker, and a wood-burning fire pit. Recreational facilities included a tennis court, basketball court, baseball field, children's play structures, and game room. A central recreational/conference hall, bandstand, large outdoor kitchen, and picnic area/amphitheater provide space for large group gatherings. Centrally located on the property was an operations center that included a two-story 4,100-square-foot residence, office and workshop, and a five-stall maintenance garage.

All facilities were burned in the CZU fire and there has been no public access to Little Basin since the fire.

Overnight Area

The areas described as the Overnight Area in the BBFMP include the Huckleberry, Wastahi, and Lower Sky Meadow Campgrounds, and the Lower Sky Meadow residential area.

The following campgrounds were found in the overnight areas off Sky Meadow Road, prior to the CZU fire:

- Huckleberry Campground with 35 campsites and 37 tent cabins
- Wastahi Campground with 27 campsites
- Sky Meadow Group Camps with 2 group campsites

All facilities, except one residential structure at Lower Sky Meadow, were lost in the CZU fire. Since the fire, this area has been closed to the public.

Upper Sky Meadow Area

The areas described within the Upper Sky Meadow Area in the BBFMP include the Rogers Road site, Upper Sky Meadow, the Lodge Road area, and acquisition parcels that are on Lodge Road near Saddle Mountain.

The Rogers Road site was the location of the maintenance yard for BBRSP and a staff residence. The area was mostly paved and covered with larger structures used for operations and maintenance activities prior to the fire. All structures were lost in the CZU fire, and the area has been closed to the public since the fire.

Upper Sky Meadow was a staff residential area above Rogers Road on Lodge Road. It was the historic site of the Civilian Conservation Corps camp and some remnants of the staircases for the camp remain. All structures were lost in the CZU fire and there has been no public access to the site since the fire.

The Lodge Road site above Upper Sky Meadow is a second-growth redwood forest area with former road and trail uses. There are no structures or recreational amenities currently at the site.

ROADS AND CIRCULATION

BBRSP contains State highways, County-maintained roads, and State Parks–maintained roads. As described in Section 2.1.1, *Project Location*, Highway 236 bisects the park and provides the main access from Highway 9, east of the BBRSP. Highway 1 provides access to the western part of BBRSP.

China Grade Road connects the northern and southern routes of Highway 236 and is an additional access route into the eastern portion of BBRSP. China Grade Road is not considered a major access route for park visitors due to the steep terrain and narrow road conditions. Lodge Road, which connects to the southern route of Highway 236, provides additional access to the eastern portion of the park and, prior to the CZU fire, was primarily used by park staff to access park residences and maintenance facilities. North Escape Road connects to Highway 236 at the former Headquarters area and previously provided access to trails and campsites in the northern part of BBRSP. Gazos Creek Road, connected to North Escape Road, provides east to west access through the main area of BBRSP.

Visitor circulation within the park prior to the CZU fire revolved primarily around the visitor facilities and old-growth redwood forest in the former Headquarters area and at the beaches and interpretive facilities found at Rancho del Oso. Parking was available in the former Headquarters area, in day-use parking lots, and along North Escape and Gazos Creek Roads. The Santa Cruz Metropolitan Transit District (Metro Transit) also provided seasonal bus service to the Big Basin Headquarters area from the Metro Transit Center in downtown Santa Cruz.

UTILITIES

Many utilities at BBRSP were constructed in the 1930 to 1950s. However, most of the aboveground facilities were damaged in the CZU fire.

Prior to the CZU fire, water collection and treatment for the former Headquarters area was served by an on-site system. Water was collected at Sempervirens Reservoir, which was created in 1952 by damming Sempervirens Creek, and piped to a water treatment plant 1,000 feet downstream. The on-site water system also provided water to Little Basin and Upper Sky Meadow Area. The park's water system was damaged in the fire and improvements—including replacing the treatment plant building, storage, distribution piping, and pump stations—are needed. Saddle Mountain has its own water system supplied by two low-yielding wells on-site and this water system currently serves the site.

A park-wide sanitary sewer collection system was used in BBRSP with a centralized wastewater treatment plant at the southwestern side of the Focus Area. The system consisted of approximately 25,000 linear feet of 6- and 8-inch sanitary sewer segments. A park-wide wastewater system evaluation report was completed in 2001 that recommended a phased upgrade of the wastewater collection system. Thus, some individual segments in the wastewater collection system were rehabilitated on an as-needed basis but no comprehensive upgrade of the entire system has been undertaken since before 2001. The sanitary sewer system in the park was damaged in the fire, further necessitating rehabilitation of the system, including replacing the wastewater treatment facility and replacing or repairing most of the existing collection sewer piping, manholes, and lift stations.

BBRSP also includes a series of culverts and roadside ditches to support stormwater drainage. Some of these stormwater features are still functional or were replaced after the fire, and some were damaged in the fire and need to be repaired or replaced.

Pacific Gas and Electric Company (PG&E) provides electricity to the park through a system of overhead and underground utility lines. Most of PG&E's overhead lines were destroyed in the fire. PG&E has been replacing power lines in the Focus Area, and they are now primarily underground. Propane tanks provide gas to all facilities requiring heat or heated water. AT&T provided telephone service in the park through overhead lines, which were all lost or damaged in the fire.

2.1.4 Visitation

BBRSP is open seven days a week. According to the 2013 General Plan, visitation (including paid day-use and overnight camping) averaged approximately 224,400 visitors per year from 1999 to 2011. Before the CZU fire, between 2012 and 2020, the visitation averaged approximately 295,900 visitors per year. The park was closed due to the CZU fire from August 2020 to July

2022. Since July 2022, only a small day-use area has been open to public access and there has been no camping in the park. From June 2023 through May 2024, there were 74,376 visitors to BBRSP.

2.2 PLANNING BACKGROUND

As previously described, the proposed BBFMP builds on the 2013 General Plan, the 2022 Reimagining Big Basin Vision Summary, and the 2023 Big Basin Redwoods State Park Cornerstone Document. Each of these three documents is described in the next sections.

2.2.1 2013 Big Basin Redwoods State Park General Plan

The 2013 General Plan is the guiding land use document that must be followed when reconstructing park facilities to rebuild and update the park. The facilities outlined in the 2013 General Plan were the existing facilities of the park at the time the General Plan was created and include:

- Headquarters area with the Headquarters Building, park store, Nature Museum, campfire center, and picnic areas
- Rancho del Oso, which includes a nature and history center, beach day-use facilities, a ranger contact station, the Theodore J. Hoover Natural Preserve, and trail facilities
- Twelve campgrounds:
  - Blooms Creek Campground with 51 campsites directly off Highway 236
  - Sempervirens Campground with 31 campsites off Highway 236 from the south
  - Huckleberry Campground with 35 campsites and 37 tent cabins off Sky Meadow Road
  - Wastahi Campground with 27 campsites off Sky Meadow Road
  - Sky Meadow Group Camps with 2 group campsites off Sky Meadow Road
  - Sequoia Group Camp with 2 group campsites northwest of the Headquarters building
  - Jay, Lane, Sunset, Twin Redwoods, and Alder Trail Camps located throughout the park for backpackers
  - Horse Camp with 6 campsites in the Rancho del Oso area
- Saddle Mountain, a 17-acre area on Highway 236 with multiuse dining hall/kitchen main building, 12 rustic cabins, swimming pool and two bath houses, large open grassy meadow, campfire center, small amphitheater, group picnic area, archery range, trails, parking areas, manager's residence, staff residence building, office trailer, maintenance garage, and utilities infrastructure
- Little Basin, a 535-acre area off Highway 236 with Little Basin Campground with cabins and recreational amenities

The 2013 General Plan includes numerous plans with goals to protect vegetation, wildlife, and habitat; meet the park's increasing recreation demand and visitation; improve the park's public access and circulation; and preserve significant historic resources. Among others, these plans include updates to the facilities in the Headquarters Area and Little Basin and increased development at Saddle Mountain. The plans outlined in the 2013 General Plan provide a basis for what has been included in the proposed project and is described in Section 2.3, *Project Components.*

2.2.2 2022 Reimagining Big Basin Vision Summary

With the loss of most park facilities, the Reimagining Big Basin Vision Summary process was completed to establish a future vision for the park and to consider and confirm the relevance and consistency of many of the ideas in the 2013 General Plan. Eight guiding principles emerged from the Reimagining Big Basin Visioning Summary process, and are described in detail in Section 2.4, *Project Objectives*. They were refined based on public input and provide a framework for future planning at BBRSP:

- Prioritize forest health
- Provide equitable, diverse, and evocative visitor experiences
- Diversify transportation and access opportunities
- Practice land stewardship
- Include Indigenous perspectives
- Foster landscape connectivity
- Design with reverence and resilience
- Engage the park community and build partnerships

2.2.3 2023 Big Basin Redwoods State Park Cornerstone Document

The 2023 Big Basin Redwoods State Park Cornerstone Document builds on the Reimagining Big Basin Vision Summary to lay out and formalize the post-fire planning steps needed for reestablishing the park consistent with the 2013 General Plan. The 2023 Big Basin Redwoods State Park Cornerstone Document includes key issues that are addressed by the BBFMP:

- Rebuilding resilient park facilities and trails
- Addressing resource impacts from visitation
- Managing post-fire forest recovery and developing forest management strategy to address future fire
- Creating equitable access and meaningful visitor experience for all

- Addressing historic and archaeological resources

An FMP was listed as a high-priority planning need. The 2023 Big Basin Redwoods State Park Cornerstone Document stated that the FMP can recommend alternative uses for an existing facility, location of a new facility, or a critical path for replacement and/or expansion of all park facilities.

2.3 PROJECT COMPONENTS

The proposed project has been prepared to guide the rebuilding of park facilities after the CZU fire. The BBFMP is a planning document designed to guide the stewardship, management, and use of existing and future facilities. It will also include the development of conceptual design alternatives to evaluate distinctive strategies for site configuration and use. The plan makes management recommendations and proposes facility use considerations for a specific park unit, portion of a park unit, or project. To ensure consistency with the BBRSP General Plan, the proposed project also includes General Plan amendments.

Over the process of creating the BBFMP, three parkwide areas were explored, called “design alternatives,” to house most of the new facilities and development. All three alternatives offered a similar level of development and distribution of visitor amenities and operational space that is consistent with anticipated needs and overall project goals. The design alternatives reflect analysis of opportunity sites and their capacity, balanced with an understanding of visitor services and operational needs, as well as feedback received from the community and multiple project working groups. The preferred components of each design alternative created the basis of the BBFMP.

2.3.1 Proposed General Plan Amendments

The proposed General Plan amendments would incorporate amendments in text to the 2013 General Plan and would add the acquisition parcels to the plan area for the General Plan. The text edits would increase clarity of consistency between the BBFMP and General Plan given the loss of facilities from the CZU fire and the goals to rebuild park facilities in alignment with General Plan recommendations. More specifically, the recommendations for the Lower Sky Meadow and Upper Sky Meadow areas would be clarified for the goals of developing overnight use and camping to replace the camping that was previously located at Blooms and Sempervirens Campgrounds. This change in campground location is consistent with the general recommendations in the General Plan of relocating facilities away from the most sensitive old growth areas, and the proposed General Plan amendments would add clarity by adding specific recommendations for these areas, including developing overnight uses and related facilities. The proposed General Plan amendments include the following clarifications or additions to the 2013 General Plan:

- **Lower Sky Meadow**: The recommendations for Lower Sky Meadow and Sky Meadow Group Camp would be updated to reflect the recommendation to develop new overnight camping facilities, including car-camping, cabins, tent cabins, small-group camps, a campfire center, shuttle stop, and related facilities in and around this zone that contained staff housing and two group camps before the fire.
- **Upper Sky Meadow Area**: The Rogers Road Site (former Maintenance Yard), Upper Sky Meadow site (former park housing site), and Upper Lodge Road area would be added to the description of Sky Meadow. In addition, recommendations would be added to reflect BBFMP plans to develop group camping at Rogers Road, parking and walk-in camping at the Upper Sky Meadow site, and walk-in camping at Upper Lodge Road area.
- **Saddle Mountain**: A recommendation would be added to develop staff housing and staff operation areas on properties owned by State Parks around Saddle Mountain.
- **Little Basin**: Recommendations would be added to provide a mixed Tribal use area with a cultural center for collaboration with Indigenous groups for stewardship, interpretation, and cultural activities, and to provide staff housing.
- **Park Boundary:** The General Plan amendments would reflect the expansion of the BBRSP boundary to include seven parcels planned for acquisition in the Saddle Mountain Area.

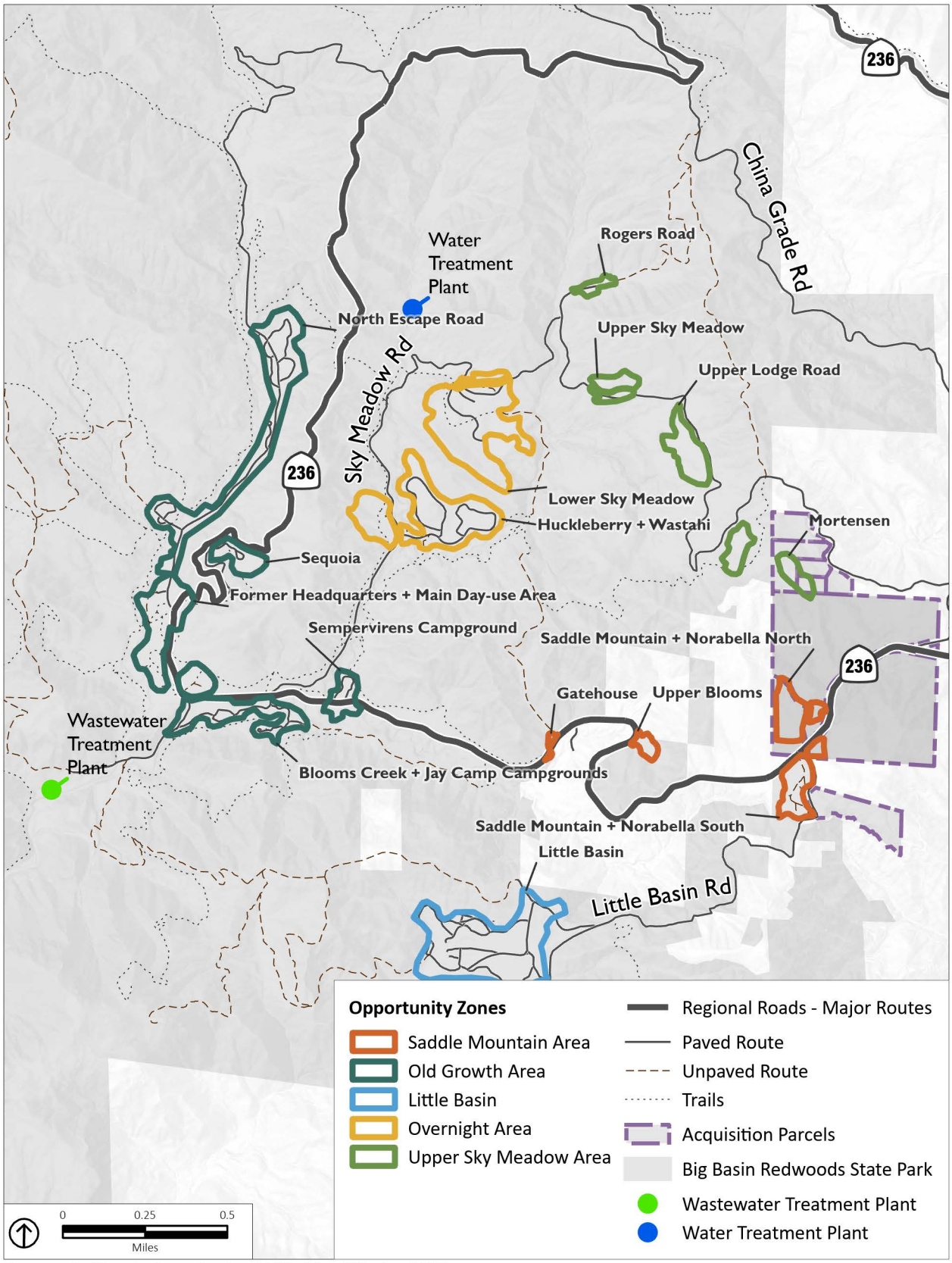
The proposed General Plan amendments are available for review online at: https://reimaginingbigbasin.org/resources/.

2.3.2 Proposed Park Facilities

The BBFMP provides proposed facilities and improvements for 19 identified sites within five proposed zones in the Focus Area, as outlined in Figure 2-4, *Proposed Park Zones Site*s, and listed in Table 2-1, *Proposed Park Zones and Sites*.

Table 2-1 Proposed Park Zones and Sites

Zone	Saddle Mountain Area	Old Growth Area	Little Basin	Overnight Area	Upper Sky Meadow Area
Sites	▪ Saddle Mountain ▪ Norabella ▪ Gatehouse ▪ Upper Blooms ▪ Potter	▪ Sempervirens Campground ▪ Blooms Creek Campground ▪ Jay Camp ▪ Redwood Loop Trail ▪ Main Day-use Area ▪ North Escape Road ▪ Sequoia Group Camp	Little Basin	▪ Wastahi Campground ▪ Huckleberry Campground ▪ Lower Sky Meadow Campground ▪ Sky Meadow Landing	▪ Upper Sky Meadow ▪ Rogers Road ▪ Upper Lodge Road ▪ Mortensen



Source: California State Parks, 2025; PlaceWorks, 2025

Figure 2-4: Proposed Park Zones and Sites

SADDLE MOUNTAIN AREA

The Saddle Mountain Area would be the center of activity at BBRSP and would include the following sites: Saddle Mountain, Norabella, Potter, Gatehouse, and Upper Blooms. It would also serve as the key connective site in the Focus Area with frequent shuttle service.

Saddle Mountain would carry the highest concentration of program areas, including the primary visitor center, the primary concessionaire facility, and the primary operations and administrative hub. This area would include a restored meadow to the west and north, a large visitor porch overlooking this meadow, shuttle parking areas in the south, and operations areas to the east separated by topography and redwood trees. The parking area will either be surface parking on a series of terraces or a single-story parking structure, both supporting long-term, shuttle parking.

Grading, demolition of all existing structures, and removal of paving and some trees would be required at the Saddle Mountain site during the course of implementation of the proposed project. An area of approximately nine acres would be cleared and graded, though some larger existing trees would be retained. Infrastructure such as retaining structures, on-site wastewater treatment systems, water storage facilities, stormwater facilities, fencing, solar canopies over parking, carports and covered parking, signage, equipment and materials storage, landscaping, electric vehicle (EV) chargers, utility upgrades, and other related improvements would also occur at Saddle Mountain. Improvements to Highway 236, such as widening and the addition of a left-turn lane into the new Saddle Mountain driveway, would be subject to future review and approval by Caltrans through the Encroachment Permit process.

The Norabella site is composed of Norabella North and Norabella South, divided by Highway 236. Norabella North would include a cluster of staff housing with a variety of residential types and a parking area. Alternative housing locations may be considered if a more suitable location is found during the design process that can provide the specified amount of staff housing while meeting project goals. Norabella South would provide additional staff parking with vehicle storage and EV chargers.

Grading, demolition of all existing structures, and removal of paving and some trees would also be required at the Norabella site. Both Norabella North and Norabella South would require additional areas where clearing, grading, and tree removal would be necessary to construct new housing, driveways, and parking areas.

Infrastructure such as retaining structures, on-site wastewater treatment systems, water storage facilities, stormwater facilities, fencing, solar canopies over parking, carports and covered parking, signage, equipment and materials storage, landscaping, EV chargers, utility upgrades, and other related improvements would also occur at Norabella, similar to Saddle Mountain.

For the Saddle Mountain, Norabella North, and Norabella South sites, new driveways would be constructed on Highway 236, Little Basin Road, and Old Big Basin Road, in addition to interior circulation roads and new paved parking areas.

The Gatehouse site would be along Highway 236, between Saddle Mountain and the Old Growth Area. This site would include a new trail connection, vault toilet, potable water and horse trough, two shuttle/bus stops, and parking stalls. Development of the Gatehouse site would include grading and construction of retaining walls within a similarly sized footprint to previously developed areas.

The Upper Blooms site would provide overnight accommodation, including a group campsite and spike campsite.

The Potter property is a proposed location for water storage for Saddle Mountain and nearby sites.

OLD GROWTH AREA

The Old Growth Area would include the following sites: Sempervirens Campground, Blooms Creek Campground, Jay Camp, Redwood Loop Trail, Main Day-use Area, North Escape Road, and Sequoia Campground.

The Main Day-use Area, in the heart of the old-growth redwood forest, would serve as an ecologically sensitive hub for day-use activities. Facilities in the Main Day-use Area would include parking, a shuttle/bus stop, and EV charging stations. There would also be additional visitor facilities, like comfort stations, a Redwood Ecology Center interpretive pavilion building with an information desk, an amphitheater, and interpretation stations. This site would include new trails, boardwalks, fencing, signage, picnic areas with water, and wildlife-proof trash and recycling containers. This site would also undergo meadow and channel restoration, the removal of pavement, creation of new paved parking in areas previously developed with structures and paving, the creation of a new vehicle entry point, and circulation improvements to accommodate the new shuttle bus. New utilities and stormwater updates are also proposed at this site. Tree removal would include some (approximately 10 to 20) previously planted trees, including in the median between the existing parking area and Highway 236 but would not include removal of any old-growth redwood trees.

North Escape Road is a paved State Park road that parallels Highway 236 and would serve as an access road, facilitating operations, management, and emergency access to the park's northern recreation facilities. A small trail camp with water, vault restroom, and dishwash station would be located approximately 0.75 miles beyond the road's southern access gate. Two group picnic areas would be reconstructed with vault toilets, potable water, dishwash stations, and wildlife-proof trash and recycling containers along North Escape Road and at Gazos Road near the intersection with North Escape Road, with visitor parking included at each location. Several

landscape restoration efforts will take place alongside North Escape Road, including the removal of spur roads and firepits.

Jay Camp is on the northern side of Highway 236, less than half a mile from the Historic Park Headquarters and Visitor Center, and directly adjacent to Blooms Creek Campground on the southern side of Highway 236. Many facilities were lost in the fire at Jay Camp, including the eight campsites and amenities, and six staff residences, and at Blooms Creek Campground, including all campground amenities. The proposed project includes removing the former Jay Camp and Blooms Creek Campground and implementing ecological restoration efforts, which would be primarily aimed at removing road pavement and damaged camp facilities and establishing native redwood forest habitat in former developed campground areas. Electrical, wastewater, and water utility infrastructure, including a pump station and lift station, to support park utility systems would also be sited at the former Jay Camp and Blooms Creek Campground. The former Jay Camp and Blooms Creek Campground would also include two shuttle/bus stops and trails. The former Blooms Creek Campground would also have an accessible trail and a dry walk-in picnic area with wildlife-proof trash and recycling containers.

Sempervirens Campground was located east of Sky Meadow Road and split roughly in half by Highway 236. Proposed restoration efforts would include the removal of the former campground and all pavement and former campsites. These efforts would help to restore pre-development stream flows and floodplains, which would help enhance the overall redwood habitat. Existing trails in the site would be maintained, and new trail connections would be considered where they are consistent with the values of forest regeneration. Water utility infrastructure would be sited at the Sempervirens Campground area, including a pump station.

Sequoia Campground would be reconstructed similar to its pre-fire design. This includes two group campsites, each with the capacity to hold 50 people. The proposed project includes maintaining existing gravel parking lots with 40 spaces, reconstructing restrooms, potable water supply, dishwash stations, food lockers, and wildlife-proof trash and recycling containers. Minor changes would include replacing combo toilets with vault toilets.

LITTLE BASIN

The Little Basin zone would include only the Little Basin site. Little Basin would be reconstructed for overnight use as well as large-scale events and group camping. The campground would include parking, car campsites, tent cabins, small group sites, and large group sites. Overnight areas would include restrooms, showers, potable water, dishwash stations, food lockers, and wildlife-proof trash and recycling containers. The proposed project also includes tribal and cultural facilities at this site, such as a cultural center building with overnight accommodations for stewardship corps doing work in the park with interpretive exhibition space, outdoor workspace, a sweat lodge and dance corral campfire ring, and an ethnobotanical native plant propagation area. A concessionaire building, kiosk, and park housing would also be constructed

at the site. Restoration work in the meadow and wetland areas would also occur, including the removal of the dam, removing some roads and other paved areas, and restoring the site of the former reservoir. There would also be new roads, trails, and bridges constructed at this site.

Access to Little Basin is via Little Basin County Road. The road requires some improvements to be completed in partnership between State Parks and Santa Cruz County. A secondary emergency one-way route along Tanbark Loop and Pine Mountain Road, or a suitable alternative, would also need to be improved. These road improvements are described in Section 2.3.3, *Proposed Focus-Area Wide Components,* under Road and Circulation Improvements.

OVERNIGHT AREA

The Overnight Area would include the following sites: Lower Sky Meadow and Sky Meadow Landing, Huckleberry, Wastahi.

Lower Sky Meadow, including Sky Meadow Landing, would be the largest campground in the park, and would include car campsites, walk-in tent cabins, group campsites, and hard-sided cabins with an outdoor interpretive area, Campfire Center, comfort stations, combo buildings, potable water, dishwash stations, and wildlife-proof trash and recycling containers. A new trail would be added to this site as well as meadow expansion and a new stormwater retention area. The proposed project would also include constructing new campground loop roads, which would involve site clearing, tree removal, grading, new drainage features, and new paving, as well as constructing new parking at individual sites to accommodate two cars per campsite at tent sites. Parking would include up to three vehicles per cabin site and up to five vehicles at small group sites.

The Huckleberry site would include rehabilitating the existing pre-fire Huckleberry Campground with walk-in campsites, car campsites, and 14 RV campsites. Comfort and combo buildings would be reconstructed, including dishwash stations, and portable water would be restored along with wildlife-proof trash and recycling containers. The existing dump station would also be reconstructed. A new trail is also proposed to be added to this site.

Wastahi would include overnight trail parking and a comfort station with potable water. Infrastructure from the former campground would be removed at this site and the lower portion of the existing paved parking area would be removed.

UPPER SKY MEADOW AREA

The Upper Sky Meadow Area would include the following sites: Upper Sky Meadow, Upper Lodge Road, Rogers Road, and Mortensen and surrounding acquisition parcels. The Upper Sky Meadow Site would include picnic areas and walk-in campsites served by one combination building with dishwash station, food lockers, and wildlife-proof trash and recycling containers

and parking. Meadow restoration and restoration of the former Civilian Conservation Corps steps would also occur at this site.

The proposed project includes the construction of a new trail at Upper Lodge Road. There would be walk-in and bike-in campsites, each with a tent pad, picnic table, and fire ring. Potable water, vault toilets, food lockers, and dishwash stations would be added to serve the new walk-in campground.

Rogers Road is a relatively remote and flat site that would provide an open meadow and Group Camp space for small events. This would include a group campsite and event cabins with an event ramada, with parking lots and with combo building with potable water, dishwash stations, food lockers, and wildlife-proof trash and recycling containers. Some clearing and grading within previously developed areas and removal of existing pavement would occur to develop these facilities. Channel restoration would also occur at this site. Utilities would be brought to the site, including new wastewater and water lines.

The proposed project does not include specific facilities at the Mortensen, Heyl, and Rose acquisition parcels, but the properties could be potential alternative sites for future staff housing, currently proposed at Norabella North, as well as for utilities and trail connections to Lodge Road.

2.3.3 Proposed Focus Area-Wide Project Components

In addition to the facility improvements described in Section 2.3.2, *Proposed Park Facilities*, the proposed project includes Focus Area-wide projects included in the BBFMP. These are project components that will occur on multiple sites throughout the park, but only within the Focus Area.

ROAD AND CIRCULATION IMPROVEMENTS

Road improvements for life safety and emergency response would be required on Sky Meadow, Lodge, Little Basin Road, and portions of Pine Mountain and Tanbark Loop fire roads or a suitable alternative route. The widening of 1.9 miles of Sky Meadow Road between Huckleberry and Upper Sky Meadow to 20 feet is proposed in locations where retaining walls can be under 5 to 10 feet tall or the removal of paving close to large old-growth trees would not be required. In locations where widening is not feasible, paved turnouts would be added where possible. These improvements to Sky Meadow Road would include some site clearing, non-old-growth tree removal, grading, additional paving, and construction of retaining walls.

Lodge Road improvements would include closure to vehicles except for emergency access, maintaining the existing road for a minimum of 12 feet in width, and re-paving the existing paved road with addition of some paved turnouts for improved emergency access for 1.2 miles

between Upper Sky Meadow and the existing park boundary. These improvements would require some grading and retaining structures, the addition of drainage features and culverts, and non-old-growth tree and stump removal (approximately 20 trees and stumps).

Improvements for Little Basin Road, the 2.1-mile County Road, would include working with Santa Cruz County to widen to 20 feet in areas where only minimal grading or retaining is required and adding approximately 20 paved turnouts in other locations where widening is not feasible and where turnouts do not require retaining walls or removal of trees. These improvements would require grading and retaining structures, the addition of drainage features and culverts, the removal of some non-old-growth trees and stumps, and paving.

Pending a future study, Pine Mountain Road, between Hihn Hammond Road and Tanbark Loop Road, and Tanbark Loop Road, between Pine Mountain Road and Little Basin, would be upgraded as a one-way emergency evacuation route. Improvements to these two fire roads would include minor realignments to segments of roads that are over 20 percent grade where feasible. Where infeasible, paving would be done on segments of roads that are over 20 percent grade. Specific environmental review of these improvements would be assessed in a future project phase, pending further assessment, but would include some clearing, grading, tree removal, and paving. Improvement of alternative routes for one-way emergency evacuation routes will be considered as alternatives to the improvements at Tanbark/Pine Mountain Road, pending a future study.

As described in the individual site descriptions in Section 2.3.2, *Proposed Park Facilities*, many road and circulation improvements are proposed within each zone, including new access roads as well as improvements to existing roads for safety and emergency response. This would require connections to the rest of the circulation system in the Focus Area. The proposed project also proposes various safety enhancements, such as speed limit reductions, advanced warning signs, flashing beacons, trimming back foliage, and potential intersection control changes. Life safety improvements would include widening access roads to meet State Fire Marshal standards. Further, the proposed project includes improvements for pedestrian and cyclist safety while promoting non-vehicular travel in the park.

Paved shoulders on Highway 236 are proposed, where feasible without impacts to old growth trees, to be enhanced with visual and tactile separation to create a separate space for bicyclists and pedestrians. To slow vehicle speeds and enhance safety for all visitors, traffic-calming strategies like rumble strips, speed humps, and speed tables are proposed to be implemented on park-owned roadways and on Highway 236.

SHUTTLE PROGRAM

To support visitor access to the Main Day-use Area during periods of high demand, a shuttle program is proposed to reduce vehicle congestion and improve access. The proposed program

would include two new park shuttles in addition to the Scott's Valley Bus already in operation by SCMetro. The Saddle Mountain Shuttle would serve as the primary internal connection between the Saddle Mountain parking area and the Main Day-use Area. The Camper Shuttle would provide transportation for overnight visitors staying at campgrounds, as shown in Figure 2-5, *Shuttle Routes*. Table 2-2, *Shuttle Information,* shows the potential proposed operating times, shuttle stops, and fleet size and type of each shuttle; these details may change based on future visitation levels and funding availability.

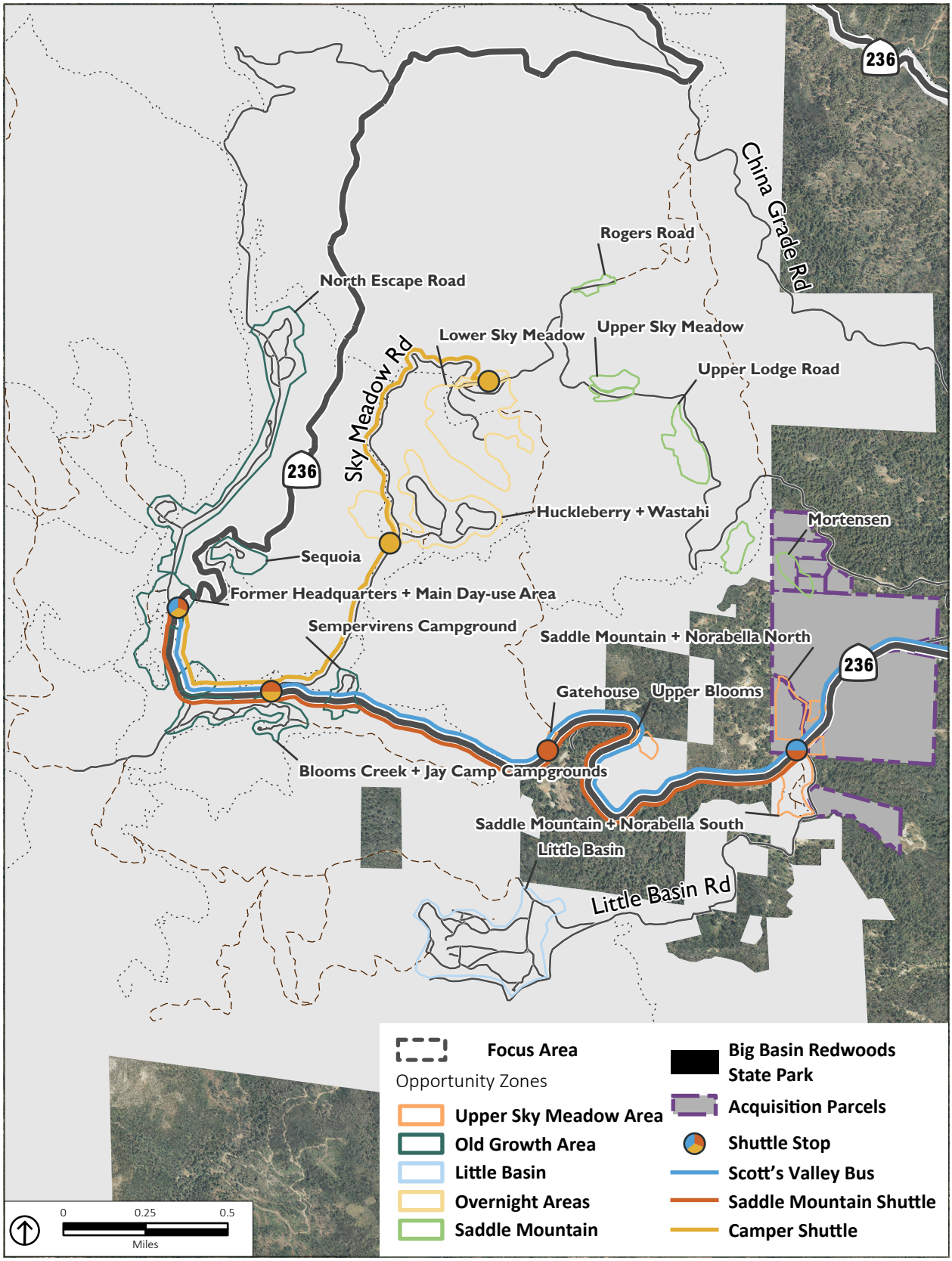
Table 2-2 Shuttle Information

	Saddle Mountain Shuttle	Camper Shuttle	Scott's Valley Bus
Operating Time	10 hours per day (8 a.m.–6 p.m.) on 121 weekend/holiday days year-round.	10 hours per day on 134 days per year, including weekends/holidays April–October and summer weekdays.	Operates during peak periods, aligned with SCMetro schedules (up to 12 trips per day on summer weekends).
Shuttle Stops	Saddle Mountain parking, Gatehouse, Sky Meadow Road, Main Day-Use Area	Lower Sky Meadow, Huckleberry, Sky Meadow Road, Main Day-Use Area.	Scott's Valley Transit Center, Boulder Creek, Saddle Mountain Visitor Center, Main Day-Use Area.
Fleet Size and Type	Two 32-passenger vehicles, plus one spare (electric preferred).	Two 14-passenger vehicles, plus one spare (electric preferred).	Standard transit buses operated by SCMetro.

UTILITY UPGRADES

Because the CZU fire destroyed most of the utility systems in the park, the proposed project includes replacing the necessary utility systems within the Focus Area to meet the estimated water demand, fire water storage, and wastewater generation.

The proposed project includes rehabilitation, reconstruction, and expansion of the park's central domestic and fire water system. Water system improvements would include replacing the water treatment facility building and replacing storage tanks, pumps systems, distribution piping, hydrants, and water service infrastructure throughout the Focus Area. The water system would be expanded to provide water from the central park water system to the entire Focus Area, including new connections to Saddle Mountain and Norabella, Upper Blooms, and Upper Lodge, and re-establishing water service to all pre-fire water service areas except where facilities are being removed. Fire water and domestic water storage would be reconstructed or added where needed for proposed development based on future design of the system and based on fire marshal requirements. Existing wells in the Saddle Mountain Area and acquisition parcels may supplement the central park water system.



Source: California State Parks, 2025; PlaceWorks, 2025

Figure 2-5: Shuttle Routes

The proposed project includes replacing the existing wastewater treatment plant and facility that served the park pre-fire. On-site wastewater treatment systems would be installed at Saddle Mountain, Little Basin, and Upper Sky Meadow. Norabella would be served by the on-site wastewater treatment system at Saddle Mountain. New or rehabilitated sanitary sewer lines would be included between Upper Sky Meadow, Rogers Road, Lower Sky Meadow, Wastahi, Huckleberry, the Main Day-use Area, and the wastewater treatment plant.

The proposed facilities would include repairing, upgrading, and expanding the existing and former stormwater drainage facilities as well as constructing new stormwater management systems with the new development. Bioretention areas, permeable landscaping, and other land restoration improvements, as described in Section 2.3.2, *Proposed Park Facilities*, would be included to support stormwater drainage and minimize runoff.

Energy consumption is expected to be similar to pre-fire conditions as a result of the proposed project. It is anticipated that, at full buildout, on-site renewable energy generation would partially offset reliance on grid-connected electrical power supplied by PG&E. Solar utilities would be included on rooftops and over parking areas at sites with buildings and parking areas with adequate sun exposure such as Saddle Mountain, Little Basin, and Sky Meadow Landing. Details about individual sites' restroom facilities and EV chargers are provided in Section 2.3.2, *Proposed Park Facilities*.

An improved telecommunications system would also be provided in all proposed zones, including installing new underground telecommunications lines between Saddle Mountain and all park zones.

RESTORATION EFFORTS

The proposed project includes habitat restoration projects to protect the riparian corridor, promote wildlife habitat connectivity, remove paved roadways, remove old campground infrastructure, and convert roads to trails. The proposed project also includes efforts to restore pre-development hydrological systems, which includes the restoration further described for each site in Section 2.3.2, *Proposed Park Facilities,* as well as increase in-stream wood in Opal and Blooms Creeks to help retain floodwater, improve groundwater exchange, and stabilize channels.

EMERGENCY RESPONSE AND EVACUATION PLAN

Parks' staff respond to emergencies according to an Emergency Response and Evacuation Plan covering prevention, emergency preparedness and response, and evacuation for BBRSP and the Little Basin sub-unit. The plan is updated as needed and reviewed yearly by the District Superintendent, Public Safety Superintendent, or their designee. To implement this plan, the project includes installing an early warning system containing overhead sirens in three locations

throughout the park: Sky Meadow, the Eagle repeater site, and Oceanview Summit. If an evacuation were required, users in the Focus Area would be directed to Highway 236 toward Boulder Creek. Shuttle operations in the park would be required to evacuate shuttle riders according to the plan. Evacuation signage on trails and evacuation roadways would be installed according to the plan to assist in emergency evacuations.

2.3.4 Facilities Management Plan Implementation

While general plans define an overall framework for a park's future resource stewardship, visitor use and services, and interpretation, more focused planning is required to address the details that a general plan cannot. Management plans are thus used to identify more definitive objectives and methods and/or designs for attaining the goals set in a general plan. The degree of specificity at this second level of planning is shaped by the complexity of the issues being addressed, regulatory and legal requirements, and Department standards.

The BBFMP identifies priority projects to restore public access, including day use and overnight experiences, to BBRSP. These priority projects would undergo a subsequent design and construction phase that would be implemented over approximately 5 to 10 years or longer, depending on the availability of funding and other factors. The BBFMP also includes additional projects that would be further developed once priority projects are underway. These additional projects would be implemented over approximately 10 to 15 years or longer, depending on the availability of funding and other factors. All future construction would be required to comply with State building codes, such as the California Building Code (CBC), California Fire Code (CFC), as well as other State building requirements determined throughout implementation of the proposed project. As the proposed project components are implemented, site preparation would require some leveling to ensure flat surfaces and proper drainage in areas where the trails and proposed structures would be located, as well as trenching for utility infrastructure such as potable water.

For an explanation of the use of this Supplemental EIR as future activities are undertaken, please see Chapter 1, *Introduction*, and Section 2.5, *Intended Uses of this Supplemental EIR*.

2.4 PROJECT OBJECTIVES

The primary purpose for the proposed project is to prioritize reconstruction of park facilities after the 2020 CZU fire, based on guiding principles outlined in the Reimagining Big Basin Vision Summary and the 2023 Big Basin Redwoods State Park Cornerstone Document.

The Department's mission 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. The Department's mission is stated in the California's Recreation Policy adopted by the California State Park and Recreation Commission on September 23, 2005.

The proposed project would provide a framework for the continued stewardship, management, and adaptive use of the project area within BBRSP to improve resource protection, improve the visitor experience, and foster public appreciation of the Focus Area.

Specific Objectives of the BBFMP are as follows and intend to implement the guiding principles identified in the Reimagining Big Basin Vision Summary completed in 2022.

- GUIDING PRINCIPLE 1. Prioritize Forest Health

  Supporting Objectives:
  - Structures and facilities will be sited and designed to allow forest stewardship projects to occur in priority areas and to increase forest resiliency in a changing climate.
  - Structures and utilities will be sited and designed to minimize development within old growth redwood forest areas, to minimize fuel contributions from structures, and to minimize the need to remove hazard trees within old growth areas.
  - Structures, parking, developed areas and trails will be sited and designed to minimize paving and soil compaction and to allow natural ecological processes to occur.

- GUIDING PRINCIPLE 2. Provide Equitable, Diverse, and Evocative Visitor Experiences

  Supporting Objectives:
  - Park facilities will strive to support pre-fire visitation for day-use, trail access, and overnight use while managing visitor use for other project goals.
  - The park will provide diverse camping and overnight experiences, as well as a variety of day-use facilities and will have quality support amenities, programs and activities that support day-use and overnight experiences.
  - Park facilities will be inviting and inclusive to diverse future California communities and educational and interpretive materials will include a variety of languages and perspectives.

- GUIDING PRINCIPLE 3. Diversify Transportation and Access Opportunities

  Supporting Objectives
  - Maximize the efficiency of use, experience quality, and access equity to Big Basin by travel modes that are alternatives to low-occupancy private vehicles.
  - Maximize park access opportunities for lower income and underrepresented communities, and park visitors without access to a vehicle.
  - Minimize vehicle congestion getting to the park, and pedestrian congestion and crowding within the park.

- GUIDING PRINCIPLE 4. Practice Land Stewardship

  Supporting Objectives

  - Facilities will be sited and designed to allow effective long-term maintenance to create sustainable park recreational access for future generations.
  - Park facilities will be sited and designed to consider future stewardship activities and to enable active forest management including Indigenous practices in the context of changing climatic conditions.
  - The park will include adequate facilities needed for active stewardship activities including spike camps for stewardship corps, stewardship training facilities, operation and maintenance facilities and permanent and seasonal staff housing.

- GUIDING PRINCIPLE 5. Include Indigenous Perspectives

  Supporting Objectives

  - Facilities and recreational amenities will be sited and designed with input and consultation with Indigenous leaders and representatives.
  - The siting and design of facilities will include considerations that ensure that all interpretive and educational materials incorporate an Indigenous perspective.
  - Park facilities will provide ceremonial space for cultural use by Indigenous groups and individuals.

- GUIDING PRINCIPLE 6. Promote Landscape Connectivity

  Supporting Objectives

  - Park facilities will allow future connections to surrounding parks and recreation areas to provide regional recreational opportunities.
  - Developed park areas will be sited and designed to promote continuous and connected areas of important habitats and to avoid fragmentation.
  - Planning of facilities will incorporate considerations for a collaborative and regional approach to forest management that engages landowners and land management agencies of nearby properties.

- GUIDING PRINCIPLE 7. Design with Reverence and Resilience

  Supporting Objectives

  - Structures and facilities will be sited and constructed to be resilient to hazards that will become more frequent and intense with climate change including severe winter storms, drought, and high-severity fire.
  - All developed park amenities are aesthetically designed to create experiences that reference the historic character of Big Basin.

- Developed park facilities are planned to minimize carbon emissions associated with park visitation and operation and maintenance, are designed with sustainable materials, and incorporate renewable energy production when feasible.

- GUIDING PRINCIPLE 8. Engage the Park Community and Build Partnerships

  Supporting Objectives
  - Park plans reflect public values and feedback, and the priorities expressed by the community and stakeholders during the facilities planning process, particularly reflecting the voices of under-represented communities.
  - Park plans can be implemented with strong support from partners.
  - Park facilities can be constructed in phases to provide the envisioned recreational experiences with available funds.

2.5 INTENDED USES OF THIS SUPPLEMENTAL EIR

This Supplemental EIR is intended to identify and assess potential environmental impacts associated with the adoption and implementation of the proposed BBFMP and General Plan amendments. As a Supplemental EIR, this EIR, and its accompanying Initial Study (included in Appendix A, *Notice of Preparation and Initial Study,* of this Draft Supplemental EIR), updates the environmental evaluation provided in the 2013 General Plan EIR as necessary to evaluate the proposed BBFMP and General Plan amendments. As a program-level document, this EIR does not evaluate project-level impacts of future activities to be conducted to implement the proposed project. For further discussion on the scope of this Supplemental EIR, please refer to Chapter 1, *Introduction*, of this Draft Supplemental EIR.

The District will evaluate individual future activities using the Department's Project Evaluation Form (PEF or DPR183) to determine if a subsequent project undertaken pursuant to the proposed BBFMP and General Plan amendments was adequately addressed in this Supplemental EIR and to identify appropriate project requirements and best management practices at an individual project location. Individual projects that do not conform to the program requirements will require additional analyses.

2.6 RELATED PROJECTS

Other management plans may be prepared for BBRSP, including a Road and Trail Management Plan, Interpretation Management Plan, and other management plans, as described in the 2023 Cornerstone Document and based on future needs. In 2024, a Forest Management Strategy was prepared for BBRSP, Año Nuevo State Park, and Butano State Park. Management plans and other planning documents that have overlapping project areas would be consistent with each other. Where planned facilities, roads and trails, forest management and interpretation overlap,

coordinated plan development and support would be guided by the 2013 General Plan. Future plans would be considered under separate CEQA review.

2.7 PROJECT REQUIREMENTS

Under the CEQA Guidelines, the Department is in a unique role as both the lead agency and a trustee agency. The lead agency is a public agency that has the primary responsibility for carrying out or approving a project and for implementing CEQA. A Trustee Agency is a State agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. The Department takes this distinction with responsibility to ensure that its actions protect both cultural and natural resources on all projects.

However, the Department is also the project proponent. Because of its unique role as Lead Agency, Trustee Agency, and project proponent, the Department's resource professionals have taken a prominent and influential role during the project conceptualization, design, and planning process consistent with Section 15004(b)(1) of CEQA. Their early involvement during the planning process enables environmental considerations to influence project programming and design. This approach permits the Department, under CEQA Guidelines Section 15065(b)(1), to incorporate project modifications prior to the start of the public review process of the environmental document, to avoid impacts to a point where clearly no significant effect on the environment would occur.

As part of its effort to avoid impacts, the Department also maintains a list of project requirements that are included in project design to reduce impacts on resources. From this list, Standard Project Requirements (SPRs) are assigned, as appropriate to all projects. A full list of SPRs is found in Appendix C, *Biological Resource Standard Project Requirements*.

2.8 REQUIRED PERMITS AND APPROVALS

Implementation of the proposed project would require the following permits and/or approvals, as well as any permits or approvals identified as construction of future projects is proposed:

- Adoption of the proposed BBFMP
- Adoption of the proposed General Plan amendments
- Certification of this Supplemental EIR
- Section 404 Permits (for specific projects)
- Section 401 Permits (for specific projects)
- National Pollutant Discharge Elimination System Permits (for specific projects)
- Section 1602, Streambed Alternation Agreements (for specific projects)

- Office of State Fire Marshal approval
- Encroachment permits from Caltrans and Santa Cruz County
- Sewage Disposal Permit

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3. BIOLOGICAL RESOURCES ENVIRONMENTAL ANALYSIS

This chapter describes the existing biological and wetland resources within Big Basin Redwoods State Park (BBRSP). It evaluates the potential environmental consequences of future development associated with the proposed project, the significance of its effects on common and sensitive resources, and the effectiveness of guidelines and standard practices in addressing these potential impacts.

This chapter is based on a review of available background information for the BBRSP and its vicinity, preparation of detailed mapping of known resources, and an assessment of potential impacts of the proposed project based on anticipated future development associated with the proposed project. Available background information included the 2013 Big Basin Redwoods State Park Final General Plan (2013 General Plan) (DPR 2013); the occurrence data of special-status species and sensitive natural communities maintained by the California Natural Diversity Database (CNDDB) of the California Department of Fish and Wildlife (CDFW); wetlands mapped as part of the National Wetlands Inventory (NWI) maintained by the United States Fish and Wildlife Service (USFWS); mapping of critical habitat for federally listed species maintained by the USFWS; the *Marbled Murrelet Landscape Management Plan for Zone 6* (DPR 2017); the 2024 Progress Report on the *Marbled Murrelet Inland Monitoring Program, Santa Cruz Mountains Region* (Mori 2025); and the Forest Health Initiative Botanical Survey Report (Neubauer 2025). Field reconnaissance surveys were conducted by the Supplemental Environmental Impact Report (EIR) biologist to characterize conditions at each of the Opportunity Sites in the Focus Area and provide input into the alternatives considered in the refinement of the Reimagining Big Basin Redwoods State Park Facilities Management Plan (BBFMP). These included site reconnaissance surveys on June 26 and 27, 2023, as part of the team assembled to evaluate conditions during initiation of the BBFMP planning effort and follow-up reconnaissance surveys on April 3 and May 6, 2024, to review field conditions at the various Opportunity Zones to map sensitive features such as potential wetlands and drainages.

Of the data sources reviewed during preparation of this Supplemental EIR, the 2013 General Plan is particularly relevant as it contains comprehensive descriptions of the biological resources at BBRSP. The natural resources descriptions in Chapter 2, *Existing Conditions*, of the 2013 General Plan provides detailed descriptions of the vegetation types, special plants, animal life, special animals, aquatic life, marine life, and non-native animals frequently with deleterious effects, such as feral pigs (*Sus scrofa)*, bullfrog (*Lithobates catesbeianus*), red fox (*Vulpes vulpes*), eastern gray squirrel (*Sciurus carolinensis*), and European starling (*Sturnus vulgaris*) found in the

park. Appendix I, *Special Status Plant Species Reported to Occur Within Big Basin Redwoods State Park,* of the 2013 General Plan contains a table listing the names and status of all the special-status plant species reported to occur within the park and Appendix J, *Sensitive Wildlife Species (June 2011) That Occur, or For Which Potential Habitat Exists Within Big Basin Redwoods State Park,* contains a table listing the names, status, and potential for occurrence of the special-status animal species that occur or for which potential habitat exists within BBRSP. This information from the 2013 General Plan is incorporated by reference into this Supplemental EIR, with updates provided in this section, where appropriate, based on changed conditions from the August 2020 CZU Lightening Fire Complex (CZU fire) and other factors.

As concluded in the 2013 Big Basin Redwoods State Park General Plan EIR (State Clearinghouse No. 2001112104) (2013 General Plan EIR), compliance with General Plan guidelines would ensure that future development and improvements within BBRSP would not result in significant disturbance or loss of sensitive plant communities, special-status plants, special-status wildlife, or wildlife habitats; thus maintaining any impacts of project implementation at a less-than-significant level. However, State Parks found that there was a significant, unavoidable impact with respect to the speculative nature of research regarding the marbled murrelet (*Brachyramphus marmoratus*), which is federally listed as threatened under the Endangered Species Act and State-listed as endangered under the California Endangered Species Act. This seabird was an ornithological mystery until a nest was first discovered in the former Headquarters Area of BBRSP over four decades ago. It requires old-growth trees with complex canopy structures and suitable platforms (large-diameter horizontal branches in upper canopy of trees with sufficient canopy cover to help conceal the nest from predators). At the time the 2013 General Plan was prepared, it was unclear what was causing the noted decline in numbers of this species, and conversely, it could not be said with certainty that the activity of parks visitors in the old-grove redwoods was the reason for the dwindling numbers. This lack of definitive information led State Parks to make overriding findings for a significant unavoidable impact in the 2013 General Plan on the marbled murrelet population out of an abundance of caution and in recognition of the vulnerability of this species.

After the State Parks and Recreation Commission approved the 2013 General Plan on May 17, 2013, the Center of Biological Diversity (Center) challenged certification of the 2013 General Plan EIR and approval of the 2013 General Plan, alleging that implementation of the 2013 General Plan would have a significant impact on old-growth habitat occupied by the marbled murrelet. Following negotiations between the Center and State Parks, the parties settled. As part of the settlement agreement, State Parks initiated ongoing studies to better understand the nesting status of marbled murrelet on State Park properties and implement programs to improve trash management. Trash and handouts from park visitors attracts corvids[1] and other bird species that are known to prey on marbled murrelet eggs and young. The theory is that by

[1] Any of the stout-billed passerine birds in the family *Corvidea*, including crows, jays, magpies, and raven.

controlling human-generated waste, the predatory bird species would be reduced in numbers and would be less likely to be drawn into the old-growth habitat used by marbled murrelet. The improved trash management included a regular schedule of trash pick-ups, proper storage and disposal of trash, animal-proofing and installing user-friendly trash bins, installing “no dishwashing” signs at all spigots, developing public education measures designed to discourage feeding of wildlife and implementing a “crumb clean” program with the goal of controlling the effects of visitor presence on predatory species and the contribution they have to the decline of marbled murrelet in the park.

The CZU fire burned over 97 percent and dramatically altered conditions at BBRSP, creating shifts in species composition and changes in the structure and pattern of plant communities and species populations. Sensitive habitats, such as old-growth forests and riparian habitat, have been impacted and native plant and wildlife values have declined. The effects of the CZU fire on marbled murrelet nesting habitat in the park are substantial, and while there is a recent decline in inland murrelet activity that could be attributed to the loss of nesting habitat, the full effect on the population may take years to be fully realized. A comprehensive review of data on marbled murrelet was prepared during preparation of this Supplemental EIR, to expand upon the annotated bibliography contained in the 2013 General Plan, reviewing available data from 2012 to present. This literature review includes a chronological listing of each study and a brief summary or excerpts of salient information. It is contained in Appendix D, *Marbled Murrelet Literature Review (2012-2025)*.

The status of marbled murrelet continues to be a primary issue for park visitor use and the proposed project. As described in Chapter 1, *Introduction,* and provided in Appendix B, *Scoping Comments*, of this Draft Supplemental EIR, the majority of comments regarding biological resources received in response to the Notice of Preparation (NOP) on this Supplemental EIR pertain to concerns over marbled murrelet, the long-term effects of the CZU fire, need for further study and monitoring, and adequate controls to protect the viability of this species at BBRSP and other affected locations. These included comments from the CDFW, the Pacific Seabird Group (PSG), and the Center. State Parks' Standard Project Requirements (SPRs) have been refined to further protect marbled murrelet and other sensitive resources that may occur at BBRSP. These SPRs are provided at Appendix C, *Biological Resources Standard Project Requirements,* of this Draft Supplemental EIR. A list of all other SPRs is provided in Appendix A, *Standard Project Requirements,* of the Initial Study prepared for the proposed project that is provided in Appendix A, *Notice of Preparation and Initial Study,* of this Draft Supplemental EIR.

3.1 REGULATORY FRAMEWORK

Federal

FEDERAL ENDANGERED SPECIES ACT

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, *Wildlife and Fisheries*, Part 17, *Endangered and Threatened Wildlife and Plants*, Section 17.3, *Definitions,* of the Code of Federal Regulations (CFR), defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering. Furthermore, Section 17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns, such as breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance of permits or funding. Section 7 requires consideration of the indirect effects of a project on federally listed plants and on critical habitat. The FESA requires that the USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) identify critical habitat to the maximum extent that is prudent and determinable when a species is listed as threatened or endangered. This consultation typically results in a Biological Opinion prepared by the USFWS and/or NOAA Fisheries Service stating whether implementation of the action will result in jeopardy to any federally listed species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided in California by the California Endangered Species Act (CESA) and Native Plant Protection Act.

CLEAN WATER ACT

Under Section 404 of the Clean Water Act, the United States Army Corps of Engineers (USACE) is responsible for regulating the discharge of fill material into waters of the United States. These waters and their lateral limit include streams that are tributaries to navigable waters and their adjacent wetlands.[2] The lateral limits of jurisdiction for a nontidal stream are measured at the line of the ordinary high-water mark[3] or the limit of adjacent wetlands.[4] Any permanent extension of the limits of an existing water of the U.S., whether natural or human-made, results in a similar extension of USACE jurisdiction.

Waters of the United States fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover, such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated water bodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the United States.

Waters and wetlands that cannot trace a continuous hydrologic connection to a navigable water of the United States are not tributary to waters of the United States. These are termed “isolated wetlands.” Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.[5] The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or other waters of the United States. Prior to issuing the permit, the USACE is required to consult with the USFWS and/or NOAA Fisheries under Section 7 of the FESA if the project may affect federally listed species.

All USACE permits require water quality certification under Section 401 of the Clean Water Act. For BBRSP, this regulatory program is administered by the Central Coast Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the United States must apply for water quality certification from the Central Coast RWQCB. The RWQCB has adopted a “no net loss” policy typically requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

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[2] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).
[3] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(e).
[4] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(b).
[5] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).

MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international protection of migratory birds. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. It prohibits, except as permitted by regulations, the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act. The MBTA prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

State

CALIFORNIA ENDANGERED SPECIES ACT

The CDFW has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under CESA.[6] CESA is similar to FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. CESA defines "take" of a species as an activity that would directly or indirectly kill an individual of a species. Unlike FESA's definition, CESA's definition of take does not include "harm" or "harass." As a result, the threshold for take may be higher under CESA than under FESA because CESA does not necessarily consider habitat modification to be take. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

CESA Sections 2081(b) and 2081(c) allow CDFW to issue an incidental take permit for a State-listed threatened and endangered species only if certain criteria are met. Specifically, the take must be incidental to an otherwise lawful activity; the impact of the authorized take must have been minimized and fully mitigated; and the issuance of the permit must not jeopardize the continued existence of a State-listed species.

[6] California Fish and Game Code Section 2050 et seq.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of the CEQA Guidelines, a species not included on any formal list "shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria" for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a "de facto" rare or endangered species.

CALIFORNIA FISH AND GAME CODE

CDFW is responsible for enforcing the California Fish and Game Code (CFGC), which contains several provisions relevant to projects involving habitat modifications or protections from "take" for a variety of species. For example, Section 1602 of the CFGC governs the issuance of Lake and Streambed Alteration Agreements by the CDFW. The CFGC stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

The CFGC also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully protected species are listed in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish), while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42, respectively.

Several provisions in the CFGC provide for the protection of birds and bird nests in active use. Unless the CFGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian (CFGC Section 2000)
- Take, possess, or needlessly destroy the nest or eggs of any bird (CFGC Section 3503)
- Take, possess, or destroy any bird of prey in the orders *Strigiformes* (owls) and *Falconiformes* (such as falcons, hawks, and eagles) or the nests or eggs of such bird (CFGC Section 3503.5)
- Take or possess any of the 13 fully protected bird species listed in CFGC Section 3511
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a game bird, migratory game bird, or fully protected bird) (CFGC Section 3800)

- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the United States Department of the Interior under the MBTA (CFGC Section 3513)
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW (CFGC Section 2050 et seq.)

Non-native species, including European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columba livia*), are not afforded any protection under the MBTA or CFGC.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

Under the Porter-Cologne Water Quality Control Act,[7] the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the USACE. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices (BMPs).

In California, the State Water Resources Control Board (SWRCB) has delegated the authority to grant water quality certification to the nine RWQCBs. The site is under the jurisdiction of the Central Coast RWQCB. Each of the nine RWQCBs must also prepare and periodically update a basin plan in accordance with the Porter-Cologne Act. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution. These actions seek to achieve and maintain the basin plan standards. Basin plans offer an opportunity to protect waterways and wetlands by establishing water quality objectives.

CALIFORNIA NATIVE PLANT PROTECTION ACT

The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, "take" of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA.

[7] California Water Code Sections 13000 through 14920.

In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a nongovernmental conservation organization that has developed a ranking of plants of special concern in California. The following explains the designations for rank of each plant species (CNPS 2025):

- **Rank 1A.** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B.** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A.** Plants presumed extirpated in California, but common elsewhere
- **Rank 2B.** Plants rare, threatened, or endangered in California, but more common elsewhere
- **Rank 3.** Plants about which more information is needed; a review list
- **Rank 4.** Plants of limited distribution; a watch list

CALIFORNIA NATURAL COMMUNITIES

Sensitive natural communities are natural community types considered to be rare or of a "high inventory priority" by the CDFW. Although sensitive natural communities have no legal protective status under FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the CEQA Guidelines identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project's impact on any particular sensitive natural community will depend on that natural community's relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type.

OTHER STATE STATUTES, CODES, AND POLICIES AFFORDING SPECIES PROTECTION

The CDFW maintains an administrative list of species of special concern (SSC), defined as a "species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the State, or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally, but not State-threatened or endangered;

- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for State threatened or endangered status."

The CDFW's Nongame Wildlife Program is responsible for producing and updating SSC publications for mammals, birds, and reptiles and amphibians. Section 15380 of the CEQA Guidelines indicates that SSC should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. In contrast to species listed under the FESA or CESA, however, SSC have no formal legal status.

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

2013 Big Basin Redwoods State Park General Plan and Environmental Impact Report

The 2013 General Plan was developed by California State Parks as part of a regional planning effort, along with General Plans approved for Año Nuevo State Park and Butano State Park. These three parks in proximity to each other share natural, cultural, and visitor demographic characteristics, and face similar issues. Regional characteristics and common issues were researched at the beginning of the planning process and were used as a foundation for the resulting General Plans. The General Plan process also recognized each park's unique assets and needs separately, as well as the close relationship between these park units and other nearby public and private lands and emphasize the potential for regional collaboration in resource management, recreational use, education and interpretation, and park management. Preparation of the 2013 General Plan served as a comprehensive planning effort to create a long-term and visionary General Plan that would be commensurate with the park's significance within the region as well as in the California State Park system.

Key issues and opportunities addressed in the 2013 General Plan include vegetation, wildlife, and habitat protection; recreation demand and visitor opportunities; public access and circulation; and rehabilitation and preservation of significant historic resources. The 2013 General Plan emphasizes the preservation of the old-growth forest and the park's natural resources, using sustainable management practices to improve the ecology and health of the coastal redwood forests and associated habitat. To accomplish this goal, the plan calls for relocating or removing some existing recreation facilities, where necessary, and implementing effective management strategies to protect sensitive resources and avoid or reduce adverse impacts.

Chapter 4, *Park Plan,* of the 2013 General Plan establishes the long-range vision and purpose for the park and continues to provide guidance on resource protection through specific goals and supporting guidelines. The 2013 General Plan contains the following goals and guidelines related to protecting biological and wetland resources, vegetation management, special-status plants, wildlife management, special-status animals, marbled murrelet management and conservation, and regional habitat management. As part of the proposed project, specific amendments are proposed for Chapter 4 of the General Plan. Proposed General Plan amendments are described in Chapter 2, *Project Description*, and are available for review online at: https://reimaginingbigbasin.org/resources/.

Marbled Murrelet Management and Conservation Goal: Coordinate with the U.S. Fish and Wildlife Service and California Department of Fish and Game toward the long-term recovery and survival of the Santa Cruz Mountains marbled murrelet population. Implement actions to minimize marbled murrelet population decline, protect and restore marbled murrelet breeding habitat, reduce the impacts of human presence on the breeding success of this bird, and contribute to the recovery of the species.

Marbled Murrelet Management and Conservation Guidelines:

> **Murrelet 1:** Consult with DFG and USFWS prior to initiating construction activities that may affect murrelets and/or their nesting habitat.
>
> **Murrelet 2:** Control corvid populations and reduce the human influences that support unnaturally high corvid populations and concentrations in certain areas, especially in the Headquarters Area and Rancho del Oso; consider corvid management through direct removal when other control measures prove inadequate, and consult with experts on appropriate methods of corvid control and/or removal. Expand existing trash management measures noted above to include food storage lockers and animal-proof, user-friendly trash bins throughout Little Basin. Expand and emphasize existing corvid management efforts by providing additional training to state park rangers and including corvid management as part of their regular duties.
>
> **Murrelet 3:** Improve waste patrol and cleanup in visitor-use areas.
>
> **Murrelet 4:** Educate visitors about the threatened status of the marbled murrelet and why they should not feed wildlife. Update the current trash education program to include “keep it crumb-free” signage and updated interpretive materials.
>
> **Murrelet 5:** Minimize disturbances, trail building, and maintenance activities in old growth redwood habitat, including the use of loud motorized equipment, during the marbled murrelet breeding season (March–September).

Murrelet 6: Coordinate the park's Tree Safety Program with murrelet habitat protection, especially during the marbled murrelet breeding season.

Murrelet 7: Where possible, consider relocating camping and/or picnic facilities or rotating use in areas with marbled murrelet habitat.

Murrelet 8: Support and participate in marbled murrelet research that will contribute to the conservation of this species. Continue to make every effort to obtain funding for ongoing murrelet monitoring, management, and studies.

Murrelet 9: Formalize existing State Parks marbled murrelet management team for Big Basin Redwoods State Park and develop formal marbled murrelet adaptive management plan for the park. Continue to work with other agencies on solutions to regional challenges in marbled murrelet management.

Regional Habitat Management Goal: Maintain, enhance, or restore the movement of native species through the park and regional ecosystems in order to protect and promote species abundance and diversity.

Regional Habitat Management Guideline:

Regional Habitat 1: Protect known wildlife habitat linkages to permit movement of wildlife (both aquatic and terrestrial) and to increase species abundance and diversity. Collect baseline information to monitor the health and function of core habitat areas and these linkages. Monitor wildlife as necessary to gauge the effectiveness of linkages and to identify wildlife population trends.

Special Status Animals Goal: Protect special status wildlife within the park and manage for their perpetuation.

Special Status Animals Guidelines:

Special Animals 1: Protect all special status native wildlife species and their habitats. Include all taxa that are locally important (including endemic species) as well as those protected by federal and/or state law. A comprehensive list of species requiring special management attention should be prepared and regularly updated. Implement specific programs using sound ecological principles and professionally accepted methods to protect and rehabilitate special status animal populations and their habitats.

Special Animals 2: Monitor marbled murrelet, snowy plover, San Francisco garter snake, California red-legged frog, and other special status animal species to identify population trends and to develop management strategies for their protection and perpetuation.

Special Animals 3: Minimize trail building, roadwork, and park facility maintenance activities in or near breeding areas during the breeding seasons for special status species.

Special Animals 4: Minimize disturbance to special status aquatic species, including California red-legged frog and anadromous fish, when scheduling and implementing activities that may result in streambed alteration or disturbance to wetlands or riparian habitat. This includes the sizing and placement of culverts beneath roads and trails throughout the park to facilitate fish passage. Culvert drainage patterns should follow the natural grade of the stream as much as possible to maximize fish passage.

Special Animals 5: Consider the needs of special status aquatic species into the timing and implementation of any activity that would result in streambed alteration or disturbance to wetlands or riparian habitat. Conduct in-stream work consistent with the requirements of CDFG, NOAA Fisheries, and the Federal Clean Water Act. Apply appropriate Best Management Practices (BMPs) to protect water quality.

Special Animals 6: Inspect structures for special status species, particularly for bat populations, prior to renovation removal or any other actions which could disturb or harm special status species. Take appropriate measures to protect any identified special status species.

Special Animals 7: Manage the Waddell Creek Beach critical habitat to support breeding western snowy plovers, implementing seasonal beach closures, trash management, interpretive signage, and any additional protective measures to ensure habitat suitability for breeding birds. Also, manage Waddell Creek tidewater goby critical habitat to support tidewater goby. State Parks will continue to reintroduce tidewater goby into Waddell Creek, should such efforts be proposed by the USFWS.

Special Status Plants Goal: Protect special status plants within the park and manage for their perpetuation.

Special Status Plants Guidelines:

Special Plants 1: Initiate surveys for special status plant species to document their distribution and abundance.

Special Plants 2: Protect special status plant species to the degree necessary to maintain or enhance populations.

Special Plants 3: Implement appropriate management actions using proven ecological principles and professionally accepted methods for those species identified as “at risk” or “with known threats”.

Wildlife Management Goal: Protect, restore and maintain the wildlife populations at Big Basin Redwoods SP.

Wildlife Management Guidelines:

Wildlife 1: Encourage and support scientific surveys and studies to be conducted in the park to gather more information about the distribution, status, and condition of sensitive natural resources.

Wildlife 2: Cooperate with federal, state, and local agencies and with open space organizations to promote effective and efficient park and regional vegetation, habitat, and wildlife resource management.

Wildlife 3: Prepare and conduct surveys and inventories of natural resources in areas subject to development. Avoid or reduce negative impacts to sensitive resource areas and follow all applicable regulations and guidelines for minimizing adverse impacts from new facilities development.

Wildlife 4: Control and/or eradicate non-native animal species, such as bullfrogs and feral pigs, that have been identified by State Park biologists and/or park managers as creating significant impacts to special status wildlife species such as the federally listed as threatened California red-legged frog. Use methods that are based on sound principles of ecosystem management and that are consistent with the Department's Non-Native Animal Control Policy (DOM, Chapter 0300, Natural Resources, Section 0311.5.7.1). Priority for control efforts will be given to those species most detrimental to the environment and for which there is a reasonable probability of success.

Wildlife 5: Monitor San Francisco garter snake, California red-legged frog, marbled murrelet, western snowy plover, and other special status animal species to identify animal population trends and to develop management strategies for their protection and perpetuation.

Wildlife 6: Reduce and, where possible, eliminate wildlife access to human food and garbage by using wildlife-proof trash containers and dumpsters throughout the park, increasing the frequency of trash collection, and educating the public about the detrimental effects that human food can have on the ecological balance of the park and surrounding regions. Post signs throughout the park informing people not to feed wildlife and to cover and store food and trash appropriately. Also see listed actions for Marbled Murrelet Management and Conservation.

Wildlife 7: Protect common and special status wildlife and their habitats for the purpose of establishing and maintaining self-sustaining populations in a natural ecological setting and/or as required by laws and regulations. Avoid human-induced disturbance and degradation of natural areas. Protect special habitat elements, such as snags, where possible.

Vegetation Management Goal: Protect, restore and maintain the native ecosystems, especially vegetation complexes and the old growth redwood forest habitat, at Big Basin Redwoods SP.

Vegetation Management Guidelines:

Vegetation 1: Prepare and continually update the park's Vegetation Management Statement that identifies goals for vegetation management and desired conditions in each of the park's management units as described in the Department's Natural Resource Condition Assessment database. Re-establish and promote natural ecological processes, such as the use of fire under prescribed conditions, which are essential for the development and maintenance of native plant communities. Maintain sustainable forest management techniques to ensure healthy forests, which may contribute to the reduction of atmospheric carbon through carbon sequestration, especially in conifer tree species.

Vegetation 2: Identify locations in the park that are heavily impacted from past management practices (e.g. agricultural production, logging, and fire suppression) and implement appropriate vegetation and habitat restoration programs. Components of such restoration programs may include prescribed fire, revegetation with native species, fenced enclosures, facility relocations, and other methods. Reforestation, where appropriate, can also help to positively affect climate change by reducing greenhouse gases through carbon sequestration.

Vegetation 3: Manage invasive non-native plant species with appropriate methods to prevent their establishment and spread. Priority for control efforts will be given to those species that threaten native plant species, cause damage to facilities, have the most potential to spread rapidly, and are conspicuous in the park.

Vegetation 4: Prescribed fire should be used as part of a vegetation management strategy, when appropriate, to achieve natural and cultural landscape management goals. This program, including the Unit Prescribed Fire Plan, will be upgraded periodically to reflect the ongoing accomplishments and necessary refinements, changes in prescribed fire science and technology, state and federal regulations, and be reviewed for consistency with other programs affecting vegetation management strategies and public safety.

The 2013 General Plan also has area-specific guidelines for the five planning areas of BBRSP identified in the 2013 General Plan. Each of these has a distinct combination of resource characteristics, visitor experience and activities, types of access and facilities, development potential, and operational requirements. Four of these five planning areas extend within the Focus Area, including what is referred to in the 2013 General Plan as Park Headquarters and Sky Meadow, Saddle Mountain and Highway 236, Little Basin, and Wilderness and Backcountry. The management intent of each park planning area is a more specific application of the broader park vision. Some of these goals and guidelines are no longer relevant, given the effects of the CZU fire, where they include consideration of historic structures and facilities that have been lost, and some are being revised as part of the proposed project. The proposed General Plan amendments include amendments to the recommendations listed below for the Park Headquarters and Sky Meadow planning area, the Saddle Mountain and Highway 236 planning area, and the Little Basin planning area. These amendments relate to the zones referred to in the BBFMP as the Overnight Area, Upper Sky Meadow Area, Saddle Mountain Area, and Little Basin. The 2013 General Plan contains the following area-specific goals and guidelines of relevance to protecting biological and wetland resources for each of the four park planning areas within the Focus Area:

Backcountry Goal: Preserve and protect the wild and remote natural landscape and provide opportunities for backcountry visitor experiences.

Backcountry Guidelines:

> **Backcountry 1:** Preserve the remote natural forested mountain character of the backcountry.
>
> **Backcountry 2:** Manage Santa Cruz cypress and Monterey pine stands for their species protection and preservation.

Headquarters Goal A: Preserve the old growth redwood forest and protect native plants and wildlife habitats.

Headquarters Guidelines:

> **Headquarters A1:** Coordinate with DFG and USFWS toward the long-term recovery and survival of the Santa Cruz Mountains marbled murrelet population.
>
> **Headquarters A2:** Limit new facilities construction in the old growth redwoods and manage visitor activities to protect sensitive resources and achieve long-term management objectives.
>
> **Headquarters A3:** Relocate developed recreation facilities, where necessary, to protect sensitive natural resources and significant cultural resources.

Headquarters A4: Restore forest understory vegetation and reduce soil compaction, where possible, within developed public use areas.

Headquarters A5: Protect sensitive aquatic species, including the California red-legged frog and anadromous fish, and take appropriate measures to minimize disturbances in critical habitats during breeding and spawning seasons.

Little Basin Goal: Establish a public day use and overnight recreation area for group use, and destination for special events.

Little Basin Guidelines:

Little Basin 3: Complete inventories and resource evaluations, and implement resource protection measures as necessary. Remove or relocate existing facilities, as necessary, to preserve and protect sensitive and significant natural and cultural resources.

Little Basin 4: Interpret resource values, site history, and past use of Little Basin property.

Lower Sky Meadow Goal: Protect and preserve historic residences and associated features and structures that contribute to the nominated National Register Historic District located in the Lower Sky Meadow residential area.

Lower Sky Meadow Guideline:

Lower Sky Meadow 1: Conduct site-specific surveys and investigations for sensitive plant and animal species protection, and coordinate with the Sempervirens Fund early in the site planning to locate new facilities and avoid dedicated trees and memorial groves.

Sky Meadow Group Camp Goal: Provide for group recreation and preserve the wet meadow and surrounding old growth redwood and Douglas-fir forest habitats.

Sky Meadow Group Camp Guidelines:

Sky Meadow Group Camp 1: Limit visitor use of the meadow to the existing historic Girl Scout camping platform and adjoining trail.

Sky Meadow Group Camp 2: Upgrade parking and utilities infrastructure to support continued use of existing facilities.

Sky Meadow Group Camp 3: Minimize disturbances to marbled murrelet breeding habitat by locating future visitor amenities outside the old growth forest.

Settlement and Release Agreement for Marbled Murrelet Protection

After the State Parks and Recreation Commission approved the 2013 General Plan on May 17, 2013, the Center challenged the 2013 General Plan EIR and 2013 General Plan approval, alleging that the 2013 General Plan would have a significant impact on the habitat of the marbled murrelet. In January 2014, the parties settled. As part of the settlement agreement, State Parks initiated ongoing studies to better understand the nesting status of marbled murrelet on State Park properties and implement programs to improve trash management. State Parks committed to initiating a trash management plan, which included a regular schedule of trash pick-ups and animal-proof, user-friendly trash bins; "no dishwashing" signs at all spigots; and new signage and public education measures designed to discourage feeding of wildlife (predators) and properly storing and disposing of trash.

Zone 6 Marbled Murrelet Landscape Management Plan

In 2017, State Parks spearheaded the coordination of a plan specific to the protection of the marbled murrelet in the Santa Cruz Mountains with other State and federal agencies, nonprofits, and interested parties: the Zone 6 Marbled Murrelet Landscape Management Plan (Management Plan). The Management Plan includes the following BMPs, which are to be followed by all projects occurring in the plan area, which includes BBRSP.

- Reduce/Eliminate Food and Trash Subsidies
  - All trash receptacles should be animal-proof
  - Trash receptacles should not be allowed to overflow (emptied regularly)
  - Garbage trucks will be housed where animals cannot gain access
  - Animal-proof food storage lockers will be installed in all campsites
  - Dishwashing stations will be installed in all campgrounds (in progress)
  - Water spigots will have grates installed that allow food to fall out of reach of predators
  - Water spigots will have a "no dishwashing" sign on them
  - The camp dishes 101 sign will be placed throughout the campground

- Interpretive Messaging
  - Begins during campsite check-in, campers will sign the Crumb Clean Commitment
  - All food lockers will have the Keep it Crumb Clean sign on them
  - All trail heads will have the Keep it Crumb Clean at their entrance
  - All Kiosks will have the Keep it Crumb Clean sign on them
  - The Crumb Clean Campaign will be used at all park facilities
  - All campers will watch the marbled murrelet video prior to securing a reservation
  - Each picnic table will have the Keep it Crumb Clean sign
  - The murrelet will be a feature during every campfire talk

  - The murrelet will be mentioned during all junior ranger programs, interpretive walks/talks, and interactions
  - Murrelet materials, like stickers and magnets, will be given out to help raise awareness and support for the murrelet.

- Enforcement
  - Campgrounds will be patrolled by park rangers first thing in the morning for enforcement
  - Campgrounds will be patrolled by interpretive rangers in the evening cooking hour for interpretive education

- Active Corvid Removal
  - Ravens and crows may be removed to reduce predation pressure (but see Chapter 3 of the Landscape Zone 6, Marbled Murrelet Management Plan, raven subchapter)

- Forest Management
  - Prescribed fires will be planned and conducted as possible
  - Second-growth forest management will be part of managing forests for murrelets

- Noise Management
  - Adhere to existing USFWS standards for noise reduction during the breeding season while studies to refine the standard are conducted.

- Outside of Parks
  - Work with the surrounding community to implement actions to reduce availability of food subsidies

Reimagining Big Basin Vision Summary

As discussed in Chapter 2, *Project Description*, of this Draft Supplemental EIR, the CZU fire allowed for reconsideration of the vision laid out in the 2013 General Plan and the goal of redistributing much of the visitor services out of the old-growth areas. With the loss of almost all park facilities during the CZU fire, the Reimagining Big Basin Vision Summary process was conducted in 2022 to establish a future vision for the park given the losses in the fire, and to consider and confirm the relevance and consistency of many of the ideas in the 2013 General Plan. This led to preparation of the 2023 Big Basin Redwoods State Park Cornerstone Document, and the BBFMP under consideration in this Supplemental EIR.

Applicable Standard Project Requirements

State Parks requires SPRs for all projects. As provided in Appendix C, *Biological Resources Standard Project Requirements,* the following SPRs are related to biological resources. A list of all other SPRs is provided in Appendix A, *Standard Project Requirements,* of the Initial Study prepared for the proposed project that is provided in Appendix A, *Notice of Preparation and Initial Study*, of this Draft Supplemental EIR.

Construction SPRs

BIO-1: New facilities will preferably be located in prior disturbed areas or in areas of relatively low resource value to minimize disturbance to higher value habitat areas.

BIO-2: As part of planning for new facilities or expanding existing ones, site-specific surveys/mapping of sensitive biological resources (such as special-status species, sensitive natural communities, regulated waters, and active nests or roosts) will be performed by a California Department of Parks and Recreation (DPR)-approved biologist and the location and extent of these resources will be taken into consideration during the planning and design process. Sensitive biological resources will be avoided during planning, design, and construction to the minimum needed to meet project purpose and goals. Where disturbance is to occur within sensitive natural community types such as old-growth redwood forest and riparian woodland, grading and other modifications will be designed to avoid dominant characteristics of the habitat, including mature trees and sensitive root zones. Wildlife-friendly fencing and other methods may be used to exclude public access into environmentally sensitive areas, as necessary. Worker environmental awareness training will be conducted for construction personnel before construction is initiated and appropriate construction restrictions and monitoring provided as necessary to ensure avoidance of sensitive biological resources.

BIO-3: In the event that impacts on a sensitive biological resource are unavoidable, disturbance will be limited to the minimum area necessary to achieve the project purpose. Measures will be identified and implemented to offset impacts in consultation with a DPR-approved biologist and the appropriate resource agencies (e.g., CDFW, USFWS, USACE, and the RWQCB) where warranted, depending on the listing or protection status of the resource, magnitude of the impact, and other factors.

BIO-4: Prior to the start of on-site construction activities, the project manager and DPR-approved biologist will determine the minimum area required to complete the work (project footprint) and define the boundaries of the work area on the project drawings and with flagging or fencing on the ground, as appropriate.

BIO-5: At the discretion of a DPR-approved biologist, project activities will be monitored to ensure that impacts to sensitive resources are minimized.

BIO-6: State-of-the-art science and ecological knowledge will be applied to the management of natural communities and associated habitat functions. Management strategies will take current science and results from ongoing management and research into consideration. DPR will continue to work with the academic community in researching sensitive biological resources and applying knowledge gained to site-specific resource management.

BIO-7: All construction activities that could spread non-native, invasive plant and animal species to new locations will be subject to the latest best management practices particular to each species, where available. Prior to mobilization of equipment, necessary precautions will be taken to avoid introducing invasive species. These will include the following:

- Any equipment from off-site shall be free of mud and vegetation before transport to the site. (Example: Vehicle and equipment tires, tread, feet, undercarriage, wheel wells, steps and bucket/attachments to equipment that contacted dirt, etc.)
- Tools such as chainsaws, hand clippers, pruners, etc. shall be washed and free of mud and vegetation before entering the work location.
- Waders, puddle boots, and other footwear or equipment contacting a water source will be cleaned appropriately between uses to avoid introduction of aquatic invasives across watersheds.
- Fill or imported aggregate must be screened for organic materials and weeds.

BIO-8: New lighting will be limited to the minimum necessary for critical security and safety needs to avoid disrupting natural conditions and wildlife habitat. Where night-time lighting is determined to be necessary, it will be shielded, cast downward, and designed to not spill onto surrounding areas or upwards into the night sky. Permanent structures will be equipped with outdoor light shields that concentrate the illumination downward to reduce direct and reflected light pollution to avoid disrupting natural conditions and wildlife habitat. The direct source of the lighting (bulb, lens, filament, tube, etc.) will not be visible off site and the lighting will be installed as low as possible on poles and/or structures to minimize light pollution of the night sky. The candle power of the illumination at ground level will not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.

Plant-Related SPRs

BIO-9: Protocol-level surveys for special-status plants and sensitive natural communities will be conducted by a DPR-approved botanist at locations of proposed new facilities or expansion of existing facilities where suitable habitat remains to confirm their presence or absence. The surveys will be conducted during the blooming season for all potentially occurring special-status plant species according to the most current methodology recommended by CDFW and USFWS. The results of the surveys will be documented in a written report, together with a map showing the survey limits and the location and extent of all occurrences of special-status plant species and sensitive natural communities encountered, which will be maintained in the DPR Geographic Information System database. If construction of proposed facilities is delayed by more than five years at that location, additional focal surveys for special-status plants will be conducted to ensure that data are current and account for long-term and seasonal variation in population distribution.

BIO-10: No state or federally listed rare or endangered species will be cut, pruned, pulled back, removed or damaged in any way without prior coordination with the appropriate resource agencies (e.g., CDFW, USFWS).

BIO-11: Occurrences of special-status plant species will be avoided and disturbance minimized in siting new facilities or expansion of existing facilities. If special-status plant species are within 50 feet of a proposed project footprint or limits of grading, these locations will be flagged by the DPR-approved biologist, fenced off prior to the start of on-site construction activities, and avoided.

Essential habitat components of sensitive natural communities will be avoided as part of rebuilding and relocating facilities in old-growth and riparian woodlands. Facility improvements such as trails, picnic areas and creek crossings in redwood forest and riparian woodland will be designed to minimize tree removal and protect essential habitat elements of these sensitive natural community types.

BIO-12: Best management practices (BMPs) to avoid creation of dust will be used during all construction activities within 50 feet of special-status plant species occurrences. These may include periodic dust control using water truck spraying, hydromulching, installing straw or jute netting, and other methods.

BIO-13: Locations of native trees with a trunk greater than 24 inches diameter at breast height (DBH) will be considered as part of planning for new facilities or expansion of existing facilities and avoided to the extent possible. At both new and existing facilities, adverse direct and indirect effects on native trees to be retained will be avoided, such as root compaction and physical damage.

BIO-14: To minimize disturbance to tree root zones, no grading, staging, or other activities that could damage the trees to be retained will be allowed within a distance of 5 times the DBH, unless approved in advance by a DPR-approved biologist, forester, or certified arborist.

BIO-15: All herbicides will be handled, applied, and disposed of in accordance with the Material Safety Data Sheet (MSDS Fact Sheet) and all local, State, and federal laws.

BIO-16: To maintain genetic integrity, only plant stock collected within the local region will be used for revegetation.

BIO-17: Contractors will employ best management practices (BMPs) for erosion control to avoid runoff of project-related sediments, vehicle fluids, and other liquids into occurrences of special-status plants, sensitive natural communities, and regulated waters.

BIO-18: Percolation testing, boring for soil investigations or other borings, and trenching will be restricted a distance of five times the DBH of trees to be retained unless performed under the supervision of a DPR-approved biologist, forester, or certified arborist to ensure no major roots are damaged in the process. Excavations will be completed by hand where necessary to avoid damage to larger roots.

Wildlife-Related SPRs

BIO-19: New facilities and expansion of existing facilities will avoid known breeding locations and essential habitat of special-status animal species, such as ponds, streams, and trees known for active nesting and roosting.

BIO-20: In addition to controls related to marbled murrelet in BIO-23 to BIO-28, construction-related vegetation clearing and tree removal will be prioritized to occur between September and February to avoid disturbances to other nesting native birds.

BIO-21: If work is required during the nesting season (March–August), a DPR-approved biologist will conduct a preconstruction survey to identify nests within the project area. The survey will be conducted no more than seven calendar days prior to the beginning of construction. The survey will be completed if construction is not initiated within this seven-day period to confirm that no new nests have been established.

BIO-22: For any bird nests in active use encountered during the preconstruction survey in BIO-21, an appropriate no-disturbance buffer zone will be established to protect the nest from construction activities as determined necessary by a DPR-approved biologist. Construction will be restricted within this no-disturbance buffer zone until any young birds have fledged or the nest is no longer in use, as confirmed by the DPR-approved biologist. The no-disturbance buffer will be flagged or fenced as determined necessary by the DPR-approved biologist, depending on type of proposed construction activities, scheduling, and other factors. Typical setbacks for nests to be used in establishing the no-disturbance buffer consist of 100 feet from the nest passerines, and 500 feet for raptors from the project footprint, although this may be adjusted by the DPR-approved biologist based on topography, existing structures, and other variables. Setbacks related to active marbled murrelet nests and occupied habitat will be established based on coordination with the CDFW and USFWS.

BIO-23: To improve habitat conditions for marbled murrelet, appropriate management activities such as the Crumb Clean Campaign and improved waste patrol and cleanup in visitor-use areas will continue to be implemented by DPR to control corvid food sources and the risks these species pose to marbled murrelet breeding success.

BIO-24: Interpretive programs to educate visitors about the threatened status of marbled murrelet and why they should not feed wildlife will continue.

BIO-25: Trees determined to have suitable elements for nesting by marbled murrelet and screen trees important for nest protection will be retained.

BIO-26: DPR will continue to support and participate in marbled murrelet research that contributes to the conservation of this species, making every effort to obtain funding for and continue ongoing monitoring, management, and studies. The CZU fire significantly changed the vast majority of marbled murrelet habitat in Big Basin. Much of this habitat burned at high intensity and is currently no longer suitable or occupied as it lacks the large limbs required for nesting. DPR will continue to assess the effects of the CZU fire on marbled murrelet habitat to document post-fire habitat conditions and monitoring marbled murrelet presence or absence, effectiveness of predator control programs, and suitability as marbled murrelet nesting habitat as old-growth forest cover regenerates and suitable nesting substrate returns through limb growth, protective canopy development, and creation of broken top platforms. Long-term monitoring of habitat conditions will be used to inform the need for adaptive management over time and additional controls on visitor use and access in occupied habitat, if appropriate.

To determine occupancy of potential habitat stands (trees) within a quarter mile of areas mapped as old-growth redwood forest, DPR will follow the latest Pacific Seabird Group (PSG 2024) protocols[8] and direction obtained through coordination with CDFW and USFWS. If the stand is not occupied, noisy construction activities may occur during the marbled murrelet breeding season. If the stand is occupied, activities will occur as spelled out in BIO-28. In addition to in person Audio-Visual (AV) surveys, DPR will use Audio Recording Units to passively monitor marbled murrelet presence in stands that have marginal habitat to confirm lack of occupancy.

BIO-27: During the marbled murrelet breeding season (March 24–September 15), project activities will minimize human-generated disturbances, trail building, tree removal, and maintenance activities, including the use of loud motorized equipment within a quarter mile of occupied habitat. This may include seasonal closure of trails and other visitor access controls where monitoring and scientific studies indicate a risk for disturbance to an active marbled murrelet nest.

BIO-28: DPR will coordinate with CDFW and USFWS prior to initiating construction activities that may affect marbled murrelet and/or their nesting habitat. Based on site-specific conditions, if construction work must occur within a quarter mile of occupied habitat during the marbled murrelet breeding season (March 24–September 15), the latest USFWS's "Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California" (dated October 1, 2020) may be used by a DPR-approved biologist to allow limited construction activities that do not create noise disturbance that could result in inadvertent take of this species.

If limited activities are allowed during the marbled murrelet breeding season in occupied habitat, work activities will not begin until two hours after sunrise and will cease two hours before sunset each day. Appropriate worker training, vehicle access restrictions, maintenance of a clean site through daily trash removal, and other BMPs will be used to minimize disturbance and avoid attracting corvids and other predatory species.

BIO-29: If construction activities are planned within suitable upland habitat for special-status amphibians such as California red-legged frog, appropriate measures will be developed and implemented to avoid or compensate for potential direct and indirect impacts of project-specific activities. Avoidance and minimization measures may include, but not be limited to, worker training, installation of temporary exclusion fencing, biological monitoring during construction, and restrictions on timing of

[8] Pacific Seabird Group. 2024. A revised protocol for surveying Marbled Murrelets in Forests. *Pacific Seabird Group Technical Publication Number 6*. https://pacificseabirdgroup.org/psg-publications/technical-publications/.

construction. As necessary, these avoidance and minimization measures will be developed in consultation with CDFW and USFWS to ensure compliance with applicable regulations.

BIO-30: Active bat roosts will be avoided for both special-status and common species. Where suitable habitat for roosting bats is present (i.e., large trees with cavities, exfoliating bark, rock outcrops, and unsealed attics) a DPR-approved biologist will conduct a preconstruction survey within 50 feet of the project footprint to confirm presence or absence of any active roosts. The survey will be conducted no more than seven calendar days prior to the beginning of proposed tree removal or construction. The survey will be repeated if construction is not initiated within this seven-day period to confirm that no new roosts have been established, unless no suitable roost habitat was encountered. Where an active roost is detected, appropriate avoidance and minimization measures will be developed by the DPR-approved biologist based on guidance from the CDFW, the best-available science, and status of the species before conducting any construction activity within 50 feet of the roost location. If an active maternity roost is encountered during the maternity season (April 15 to August 31), the CDFW will be contacted for direction on how to proceed and an appropriate exclusion zone established around the occupied roost until young bats are old enough to leave the roost without jeopardy. The size of the buffer would take into account the proximity and noise level of project activities; distance and amount of vegetation or screening between the roost and construction activities; and species-specific needs, if known, such as sensitivity to disturbance.

BIO-31: Prior to the start of on-site construction activities, a DPR-approved biologist will train on-site construction personnel on the life history of special-status wildlife and commonly occurring wildlife, work constraints, and any other pertinent information related to the species.

BIO-32: Immediately prior to the start of work each morning, a DPR-approved biologist or trained project foreman will conduct a visual inspection of the construction zone to confirm that no common or special-status wildlife are present within the project footprint.

BIO-33: If wildlife is found on the project site, work in the vicinity of the animal will be delayed until the species moves out of the site on its own accord or is relocated by a DPR-approved biologist and released in suitable habitat, where appropriate to avoid injury to the animal.

BIO-34: To prevent trapping of wildlife, all holes and trenches will be covered at the end of each working day with plywood or similar materials or will include escape ramps constructed of earth fill or wooden planks; all pipes will be capped. A DPR-approved biologist or trained project foreman will inspect trenches and pipes for wildlife at the beginning of each workday. If a trapped animal is discovered, they will be relocated by the DPR-approved biologist and released in suitable habitat away from the project footprint.

Wetlands and Regulated Waters-Related SPRs

BIO-35: Wetlands and regulated waters such as creeks, ponds, and riparian habitat will be identified and avoided as part of planning for new facilities or expanding existing ones. Where indications of regulated waters are present in the vicinity of proposed improvements, a wetland assessment or delineation will be conducted by a DPR-approved biologist to identify the extent of any state and/or federally regulated waters.

BIO-36: During construction, the contractor will avoid or minimize impacts to regulated waters to the extent practicable by conducting work in upland areas. In the event that disturbing regulated waters is unavoidable, the disturbance will be minimized to the minimum area necessary to achieve the project purpose. Measures will be identified and implemented to offset those unavoidable impacts as defined in consultation with a DPR-approved biologist and the appropriate regulatory agencies (e.g., CDFW, USFWS, USACE, and the RWQCB) where required.

BIO-37: Where impacts to regulated waters are unavoidable, authorizations will be secured from the appropriate regulatory agencies (e.g., CDFW, USFWS, USACE, and the RWQCB). When necessary, compensatory mitigation will be provided through creation and/or enhancement of regulated habitats. Any created or enhanced regulated habitats provided as part of required compensatory mitigation will be monitored and maintained to ensure successful establishment in accordance with the regulatory agency authorizations.

BIO-38: Best management practices (BMPs) will be identified and implemented for all grading within 50 feet of regulated waters. These may include restrictions on the timing of grading to occur outside the typical wet season from October 31 to April 15, installation of temporary silt fencing and/or straw wattles at the limits of grading, and other methods.

3.2 EXISTING CONDITIONS

The following provides a summary of information contained in the 2013 General Plan, with updated descriptions where additional information is available or conditions have changed, in particular, the significant effects of the CZU fire, which had devastating impacts on vegetation cover and associated wildlife habitat at BBRSP. This following includes information on vegetation and wildlife, special-status species, sensitive natural communities, and regulated waters, including updates on mapped resources prepared since the 2013 General Plan.

Vegetation and Wildlife

The iconic old-growth redwoods that characterize and garnered support for the creation and expansion of BBRSP are part of the coast redwoods forest ecosystem that is found in a relatively narrow band along the Pacific Coast, from central California to southern Oregon. This forest ecosystem depends on a maritime climate, which provides the relatively stable temperature, moisture, and fog that coast redwoods (*Sequoia sempervirens*) need. Forests that consist of nearly exclusive canopies of coast redwood are relatively rare, even in the humid north. These stands are confined to alluvial flats and moist slopes. Valley floors that tend to be protected from high-severity fire and wind allow redwoods to grow old, with a potential life span well over 1,000 years, and create conditions that support their ability to grow much taller than other species and gain and retain dominance for centuries.

A codominant of the redwood forest is Douglas fir (*Pseudotsuga menziesii*), another conifer that increases in abundance away from valley floors. This codominance is shared by hardwoods, such as tanoak (*Lithocarpus densiflorus*), madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*) on dry, south-facing slopes and higher elevations. Unlike Douglas fir, these hardwoods and the coast redwood have the ability to resprout after being cut or severely damaged by fire. This sprouting habit is also shared by evergreen huckleberry *(Vaccinium ovatum*) and sword fern (*Polystichum munitum*), two of the dominant understory shrub species in the forest. The ability to resprout by many of the dominant species in a redwood forest typically helps maintain a relatively high degree of vegetational stability after fire, wind, logging, or floods.

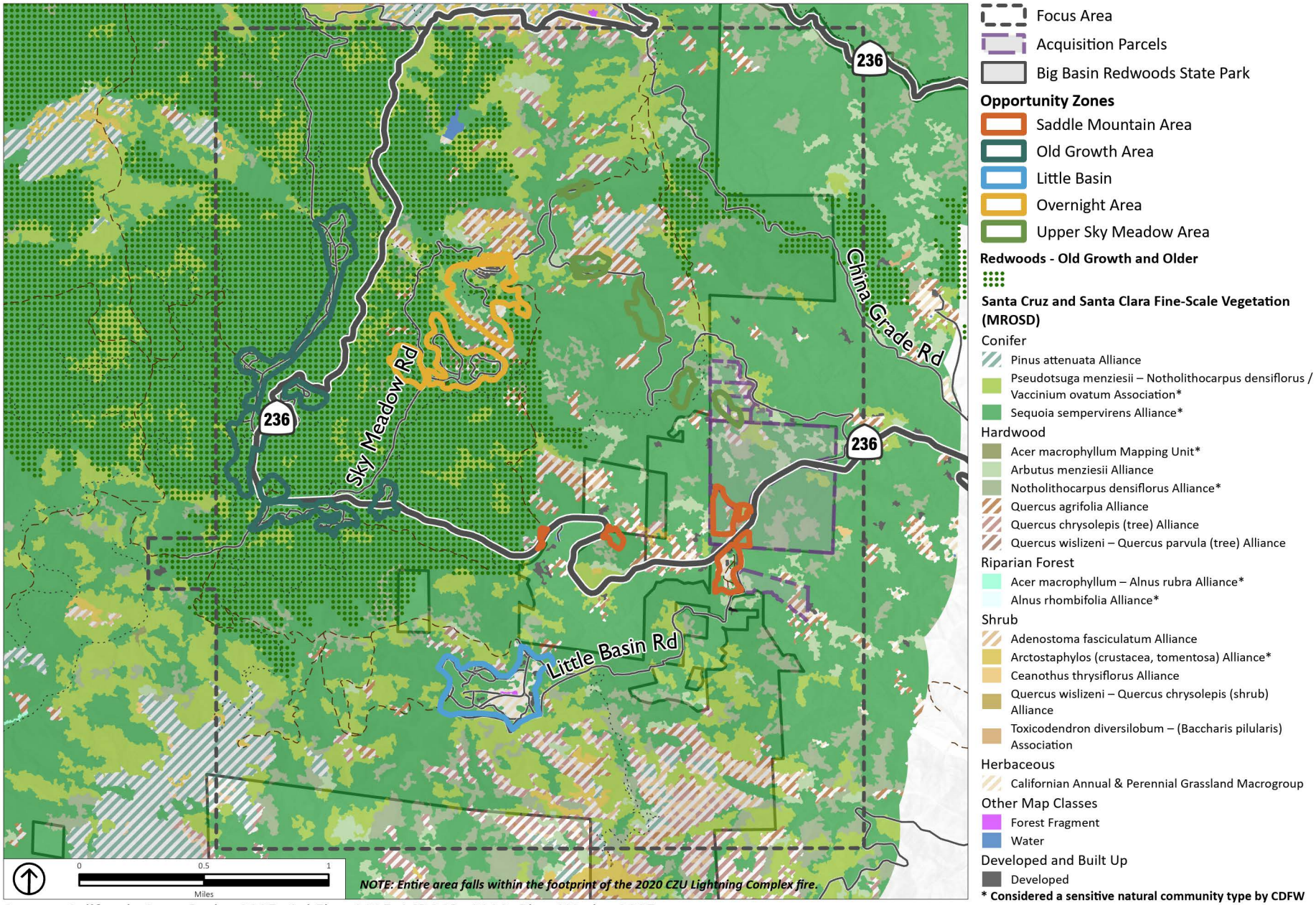
BBRSP contains over 4,400 acres of old-growth redwoods, together with other rare plant communities, and numerous animal and plant species considered special-status or of special concern. The 2013 General Plan provides detailed descriptions of the natural resources within the park, including information on special-status species, sensitive natural communities, creeks, and other wetlands. This includes descriptions of the dominant vegetation types in the park.

Figure 3-1, *Vegetation Types,* shows the vegetation types in the vicinity of the Focus Area using a more recent fine-scale vegetation mapping of Santa Cruz and Santa Mateo Counties, completed in 2023. This mapping effort was led by the Santa Cruz Mountains Stewardship Network, a collaboration of 25 organizations engaged in land stewardship in the Santa Cruz Mountains, including State Parks. Though sampling was mostly conducted before the CZU fire, this mapping effort remains the most accurate reference for natural communities in the region because, despite the unusual intensity of the CZU fire, the species that define these vegetation types have largely persisted and are regenerating. Vegetation mapping was done using a combination of field work, satellite imagery and LiDAR data, object-based image analysis, and machine learning algorithms, plotting minimum mapping units of between 0.25 acre and 1 acre, depending on the type of features. The floristic classification follows protocols compliant with the Federal Geographic Data Committee and National Vegetation Classification Standards (NVCS). Using this standardized classification system is intended to make the data more compatible across administrative boundaries and facilitate conservation and management coordination at the local, regional, and State levels. In addition, using standardized state nomenclature compatible with the NVCS allows agencies to track the rarity and imperilment of vegetation types.

As indicated in Figure 3-1, *Vegetation Types,* vegetation types within the Focus Area consist of three conifer types, six hardwood types, two riparian forest types, five scrub types, and the California Annual and Perennial Grassland Macrogroup. These vegetation types were mapped primarily to the alliance level. The alliance level is based on diagnostic species from the primary layer (e.g., the tree layer in the case of a forest or woodland alliance) and is a finer scale in the NVCS hierarchy than the group level, which is based on formation type (e.g., forest, woodland, scrub) and foliage (e.g., broadleaf, deciduous). The alliance level is coarser than the association level, which is based on diagnostic species in multiple layers, not just the primary layer. The association level may be most appropriate for small, local areas, and the alliance level is usually recommended for consistency with regional or State-level mapping purposes. Where diagnostic species are distinguishable and present in the Focus Area, several alliances were identified to the association level.

Past and present human influences, including logging, agricultural production, fire suppression, wildlife feeding, introduction of non-native plants and animals, intensive visitor activities, and facility development have changed the conditions under which natural ecosystems have developed. The CZU fire burned over 97 percent and dramatically altered conditions at the park. Together, these changes have created shifts in species composition and changes in the structure and pattern of plant communities and species populations. As a result, sensitive habitats, such as old-growth redwoods and riparian and estuarine areas have been impacted and native plant and wildlife values have declined. Opportunistic native and invasive non-native plant species have spread through open areas where they were previously excluded by dense shade and duff. While over 95 percent of redwoods survived the effects of the CZU fire, most of the codominant Douglas fir and other forest trees were lost, and regeneration by seed-dependent species is

uncertain. In combination with trends of warmer temperatures and drier summer conditions observed as part of climate change, these changes could eliminate some plant communities and animal habitats, greatly fragment other habitats, and cause some habitats to shift. The park is an important part of a regional mosaic of preserved lands in the Santa Cruz Mountains that provide valuable native habitats for wildlife.



Source: California State Parks, 2025; Cal Fire, 2025; MROSD, 2023; PlaceWorks, 2025

Figure 3-1: Vegetation Types

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Special-Status Species

Special-status species are plants and animals that are legally protected under CESA and/or FESA or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat (see Section 3.1, *Regulatory Framework)*. Species with legal protection under FESA and CESA often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species.[9]

The primary information source on the distribution of special-status species in California is the CNDDB inventory, which is maintained by the Biogeographic Data Branch of the CDFW. The CNDDB inventory provides the most comprehensive statewide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data is obtained from a variety of scientific, academic, and professional organizations, private consulting firms, and knowledgeable individuals, and entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question; only that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location, where there is evidence of potential occurrence.

For the purposes of this Supplemental EIR, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the FESA;
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the CESA;
- Animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFW;
- Species protected by the Bald and Golden Eagle Protection Act;
- Taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines;

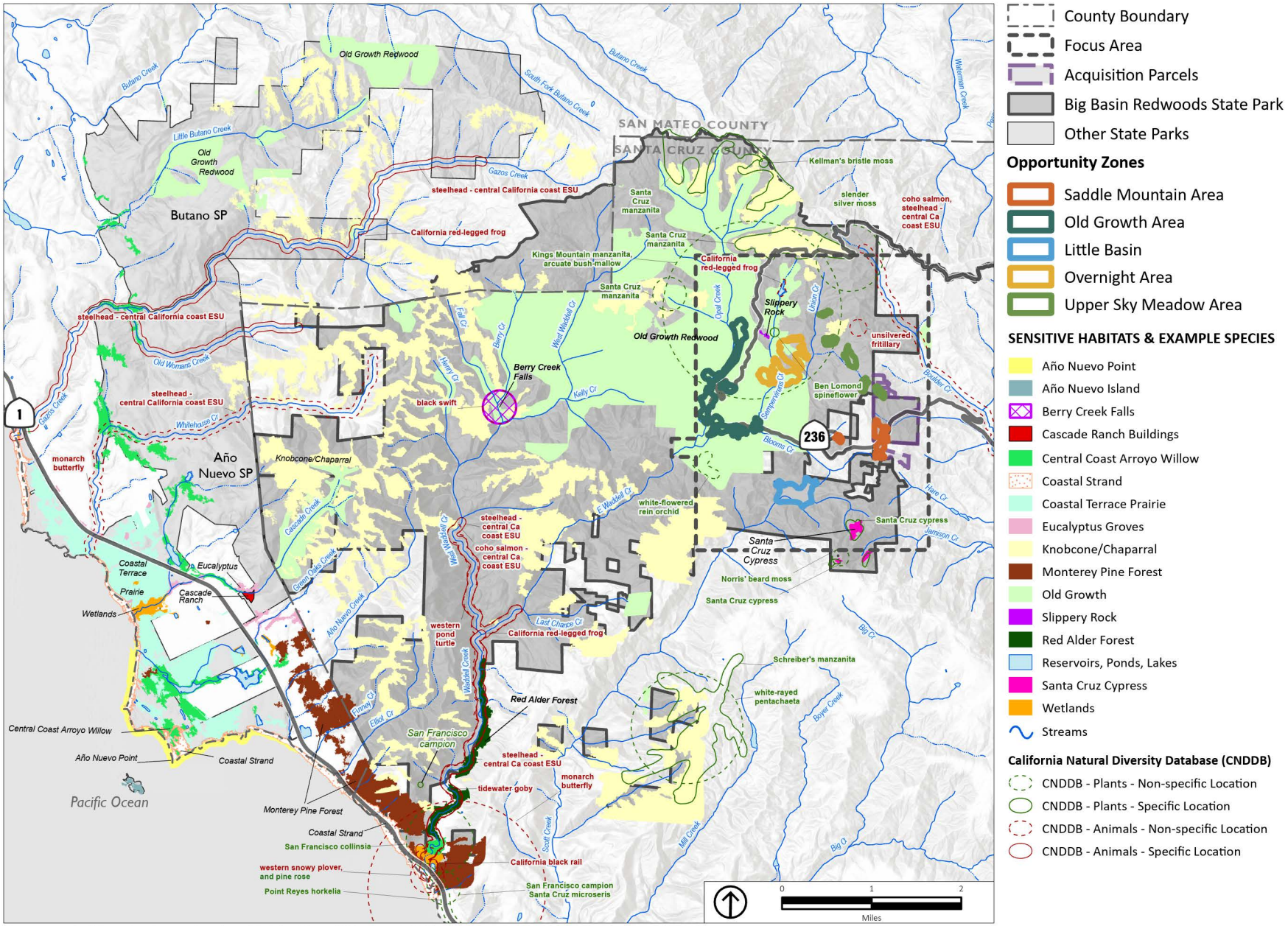
[9] "Take" as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" a threatened or endangered species. "Harm" is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modifications or degradation. The CDFW also considers the loss of listed species habitat as "take," although this policy lacks statutory authority and case law support under the CESA.

Taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR), as defined under "California Natural Communities" in Section 3.1, *Regulatory Framework*. All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all plant taxa inventoried in CDFW's CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, or 2B may qualify as endangered, rare, or threatened species within the definition presented by CEQA Guidelines Section 15380. CDFW recommends and local governments may require that CRPR 1A, 1B, and 2 species be addressed as part of CEQA review for a proposed project. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

CDFW applies the term California Species of Special Concern (SSC) to wildlife species that are not listed under the FESA or the CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and are currently experiencing known threats to their persistence. Fully Protected species may not be taken or possessed except under specific circumstances when authorized by CDFW. These include necessary scientific research, relocation of a Fully Protected bird species to protect livestock, or if the Fully Protected species is listed as a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

The 2013 General Plan provides a thorough review of the potential for special-status species to occur at BBRSP. The CNDDB occurrence records, data from site-specific surveys, and information on the known distribution of individual species and designated critical habitat were used as the primary tools for evaluating the potential for occurrence of special-status species and sensitive habitats at or near BBRSP. Appendix I, *Special Status Plant Species Reported to Occur Within Big Basin Redwoods State Park,* of the 2013 General Plan contains a table listing the names and status of the 25 special-status plant species and Appendix J, *Sensitive Wildlife Species (June 2011) That Occur, or For Which Potential Habitat Exists Within Big Basin Redwoods State Park,* of the 2013 General Plan contains a table listing the names, status, and potential for occurrence of the 50 special-status animal species that occur or for which potential habitat exists within BBRSP.

The record search conducted by the CNDDB during preparation of this Supplemental EIR, together with review of lists from the USFWS and CNPS and other data sources, indicates that occurrences of numerous plant and animal species with special status have been recorded within or are suspected to occur in the vicinity of BBRSP. Figure 3-2, *Natural Resource Sensitivity from 2013 General Plan*, uses data from the 2013 General Plan and shows the distribution of special-status plants and animals reported from the park based on occurrence records of the CNDDB and other data sources at the time. As indicated in Figure 3-2, *Natural Resource Sensitivity from 2013 General Plan*, no occurrences of special-status plants or animals had been reported by the CNDDB in the proposed Opportunity Zones and Sites of the proposed BBFMP.



Source: California State Parks, 2014; PlaceWorks, 2025

Figure 3-2: Natural Resource Sensitivity from 2013 General Plan

However, marbled murrelet is known to nest within some of the old-growth forest in the Focus Area and occurrences of other species are known in the surrounding areas. Updated records of the CNDDB and other data sources were reviewed during preparation of this Supplemental EIR to provide an update on the occurrence of special-status plant and animal species known or suspected to occur at the BBRSP, as summarized below.

SPECIAL-STATUS PLANTS

Figure 3-3, *Special-Status Plant Species in a 5-Mile Radius,* and Figure 3-4, *Special-Status Plant Species in the Focus Area,* provide updates to the occurrence records of special-status plant species reported by the CNDDB in 2025 from five miles around the Focus Area and within the Focus Area, respectively. Locational data from the CNDDB records was simplified to a single point for the most accurate occurrences (Class 1) to generalize their location and reduce possible risk to the population but provides an indication of presence in the vicinity of the point location. As described in the 2013 General Plan, a total of 14 special-status plant species had been reported to occur within the park. Five additional plant species—California bottlebrush grass (*Elymus californicus*), Toren's grimmia (*Grimmia torenii*), Hickman's popcornflower (*Plagiobothrys chorisianus* var. *hickmannii*), Hoffmann's sanicle (*Sanicula hoffmannii*), and Santa Cruz silverpuffs (*Stebbinsoseris decipiens*)—have been reported from within the park since preparation of the 2013 General Plan. Fourteen of these special-status plants reported to occur within the park are CRPR 1B species, two are CRPR 2 species, and three are CRPR 4 species. The CRPR 1B species are arcuate bush mallow (*Malacothamnus arcuatus*), Ben Lomond spineflower (*Chorizanthe pungens* var. *hartwegiana*), Kellman's bristle moss (*Orthotrichum kellmanii*), Kings Mountain manzanita (*Arctostaphylos regismontana*), Monterey pine (*Pinus radiata*), pine rose (*Rosa pinetorum*), San Francisco campion (*Silene verecunda* ssp. v*erecunda*), San Francisco collinsia (*Collinsia multicolor*), Santa Cruz cypress (*Hesperocyparis abramsiana* ssp. *abramsiana*), Santa Cruz manzanita (*Arctostaphylos andersonii*), Santa Cruz Mountains beardtongue (*Penstemon rattanii* var. *kleei*), Santa Cruz silverpuffs (*Stebbinsoseris decipiens*), Toren's grimmia (*Grimmia torenii*), and white-flowered rein orchid (*Piperia candida*). The CRPR 2 species are slender sliver moss (*Anomobryum julaceum*) and Norris' beard moss (*Didymodon norisii*). The CRPR 4 species are California bottlebrush grass, Hickman's popcornflower (*Plagiobothrys chorisianus* var. *hickmannii*), and Hoffmann's sanicle (*Sanicula hoffmannii*). Only two of these species – Ben Lomond spineflower and Santa Cruz cypress – have State and/or federal listing status. The following provides a summary of each of these species.

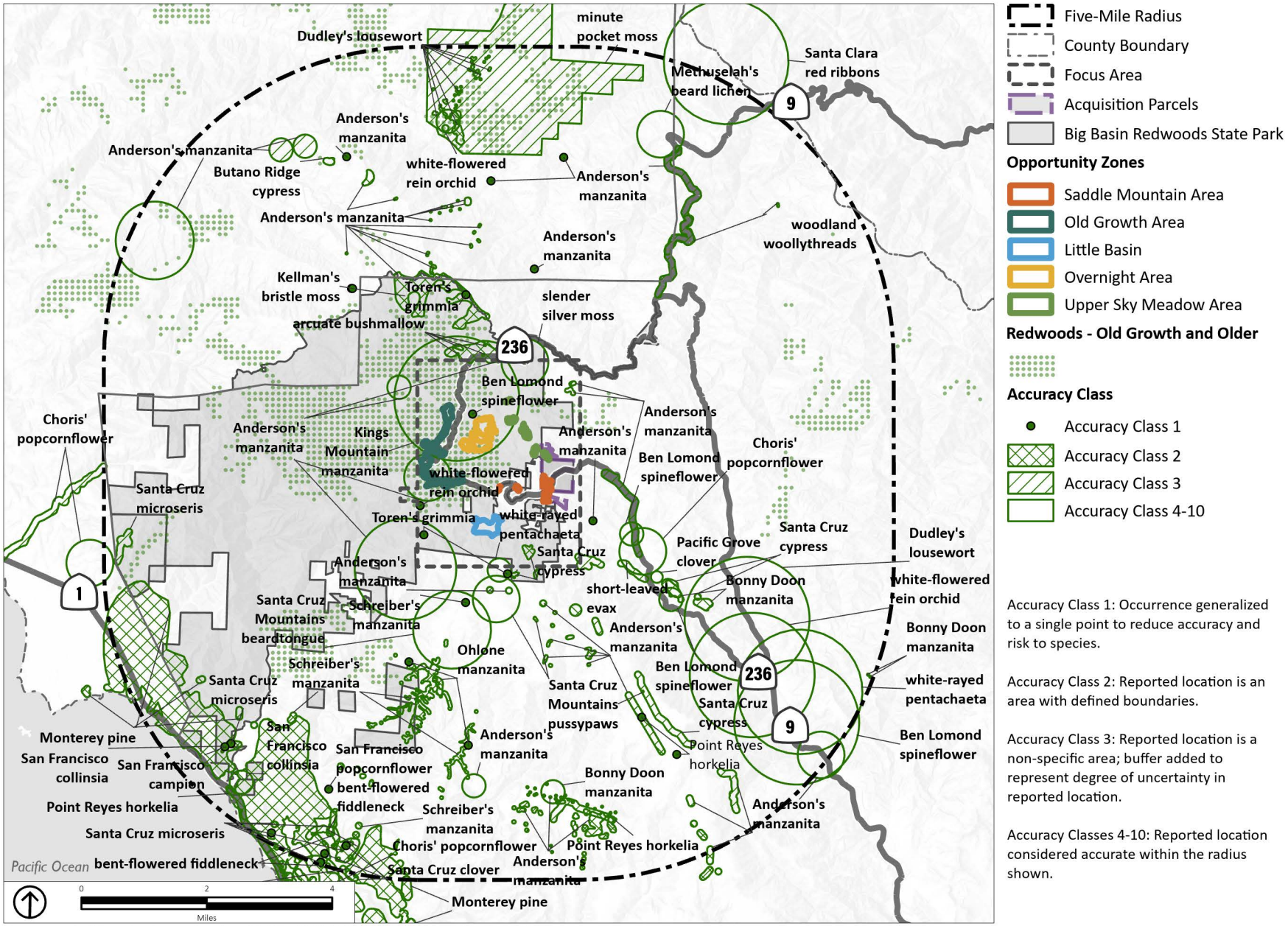
- **Anderson's or Santa Cruz manzanita** is an evergreen shrub that is endemic to the Santa Cruz Mountains. It is an early successional manzanita that germinates in bare mineral soil in a variety of habitat conditions, including openings along road cuts and trails. It does not reproduce vegetatively and is dependent on seed production to create a seedbank that accumulates until fire or other disturbance triggers germination. Numerous occurrences have been located in the park, including an area between open chaparral and redwood/mixed evergreen forest at the junction of Highway 236 and China Grade Road. It

occurs in numerous locations in the Blooms Creek and Opal Creek watersheds of the Focus Area based on surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025).

- **Arcuate bush mallow** is an evergreen shrub that is associated with chaparral habitat. It has been reported from the China Grade area north of former Big Basin Headquarters. Additional occurrences of this species were encountered at the Upper Sky Meadow Area during surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025).
- **Ben Lomond spineflower** is a small annual herb of open lower montane coniferous forest habitat that is listed as federally endangered. It is from the Slippery Rock area near Sempervirens Falls.
- **California bottlebrush grass** is a perennial species that occurs along the coast from Sonoma County to southern Santa Cruz County. It occurs in moist openings in woodlands and forests. About 75 plants of this species were encountered along the trail in the Lower Waddell Creek corridor in a mixed riparian forest habitat during surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025).
- **Kellman's bristle moss** is found in chaparral and cismontane woodland habitats. It has been reported from the Basin Trail near the China Grade area of the park.
- **Kings Mountain manzanita** is an evergreen shrub of broadleaved upland forest, chaparral, and coniferous forest habitats. Although it has been reported from the vicinity of the former Big Basin Headquarters, the taxonomic identification of this 1927 CNDDB occurrence record is questionable.
- **Hickman's popcornflower** is a low-growing annual endemic to central coastal California. It tends to occur more inland than Chori's popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*), and the two varieties can intergrade. It was recently encountered near Slippery Rock and at Sky Meadow in the Focal Area as part of botanical surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025). The new occurrence at Sky Meadow consisted of only five plants in moist gaps between grasses in a partially shaded part of the meadow.
- **Hoffmann's sanicle** is a low-growing biennial or perennial herb typically associated with openings in scrub, forest, and chaparral, often times along roads and trails. It is difficult to distinguish from the more common Pacific sanicle (*Sanicula crassicaulis* var. *crassicaulis*) with which it appears to intergrade. It was recently encountered near Slippery Rock and other locations in the Focus Area as part of botanical surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025).
- **Monterey pine** is a conifer of a closed cone coniferous forest type that is endemic to California. There are only three native mainland populations of Monterey pine, although it has been widely planted in other parts of the world. A small portion of the northernmost population falls within the boundaries of the park at the mouth of Waddell Creek. All

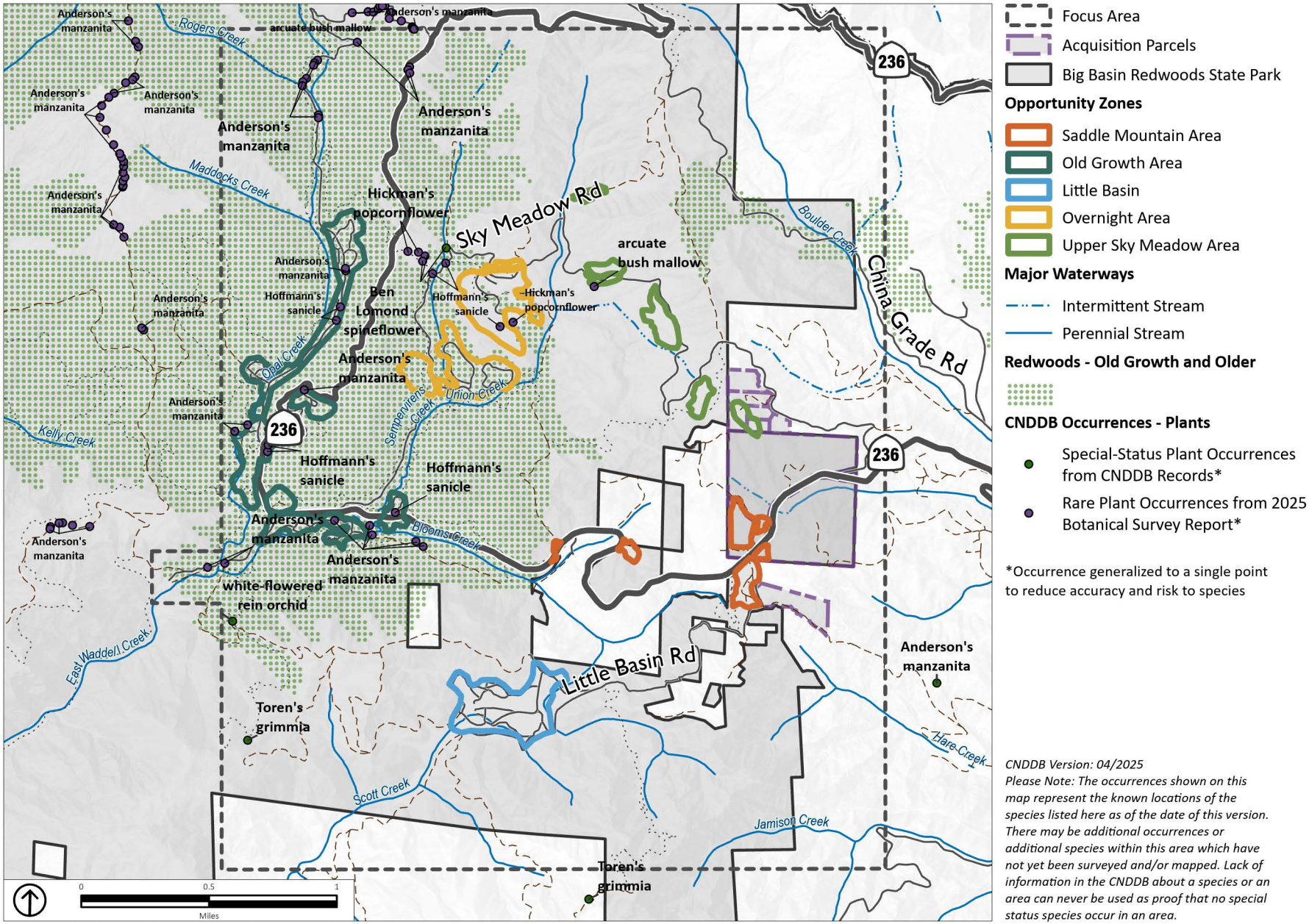
populations of Monterey pine in the state are at risk from a potentially lethal pine pitch canker disease that has infected some trees in this population.

- **Norris' beard moss** occurs in the Eagle Rock area of the park.
- **Pine rose** is associated with closed cone coniferous forest habitat. It was collected in 1932 in pine woods at the mouth of Waddell Creek, but surveys conducted in the late 1990s failed to relocate this historic occurrence.
- **San Francisco campion** is a perennial herb known from fewer than 70 occurrences ranging from San Francisco to northern Santa Cruz County. It occurs in many different habitats, including sand hills and dunes, coastal prairie, valley-foothill grassland, coastal scrub, coastal strand, and chaparral. It is known from a single occurrence on steep eroding slopes alongside the trail between Rancho del Oso and the Alder Trail Camp. However, park biologists have been unable to relocate the noted population and think it is likely extirpated.
- **San Francisco collinsia** is an annual herb of moist, shady locations in coastal scrub and closed cone coniferous forest ranging from San Francisco to the Monterey Peninsula. A small population occurs alongside the trail between Rancho del Oso and the Alder Trail Camp in the general vicinity of the San Francisco campion occurrence.
- **Santa Cruz cypress** is a federally and State-listed endangered conifer species endemic to the Santa Cruz Mountains. It occurs in chaparral and a type of closed cone coniferous forest. In the park it is restricted to three small groves in the Eagle Rock area.
- **Santa Cruz Mountains beardtongue** is a perennial herb of coniferous forest and chaparral habitats that is endemic to the Santa Cruz Mountains. A non-specific location has been reported in the Eagle Rock area.
- **Santa Cruz silverpuffs** is an annual species endemic to central coastal California, known from fewer than 20 occurrences. It typically occurs in shallow soils with grassland cover. An occurrence of about 300 plants was encountered outside the Focus Area during botanical surveys conducted in 2025 as part of forest-health management activities at BBRSP (Neubauer 2025).
- **Slender silver moss** has been collected from the China Grade area of the park.
- **Torens grimmia** is a species of moss known from chaparral, cismontane woodlands, and lower montane coniferous forests, typically found on boulders and rock walls. It has been reported from the Pine Mountain area to the west of Little Basin.
- **White-flowered rein orchid** is a perennial herb of coniferous forest and broadleaved upland forest habitats. This species has been reported from the Pine Mountain area of the park.



Source: California State Parks, 2025; CNDDB, 2025; PlaceWorks, 2025

Figure 3-3: Special-Status Plant Species in a 5-Mile Radius



Source: California State Parks, 2025; CNDDB, 2025; PlaceWorks, 2025; Neubauer, 2025

Figure 3-4: Special-Status Plant Species in the Focus Area

SPECIAL-STATUS ANIMALS

Figure 3-5, *Special-Status Animal Species and Critical Habitat in a 5-Mile Radius,* and Figure 3-6, *Special-Status Animal Species and Critical Habitat in the Focus Area,* provide updates to the occurrence records of special-status animal species reported by the CNDDB in 2025 from within five miles of the Focus Area and within the Focus Area, respectively. Locational data from the CNDDB records was simplified to a single point for the most accurate occurrences (Class 1) to generalize their location and reduce possible risk to the population but provides an indication of presence in the vicinity of the point location. Some locational data, such as nest locations of marbled murrelet, are not shared given the potential for the public to disturb these species. As described in the 2013 General Plan, a total of 49 special-status animal species have been reported from or are suspected to occur within the park. As shown in Figure 3-6, *Special-Status Animal Species and Critical Habitat in the Focus Area*, the Focus Area includes critical habitat for California red-legged frog and marbled murrelet. The following provides a summary of special-status amphibians, reptiles, mammals, and birds, with particular focus on marbled murrelet given the vulnerability of this species and the importance of the old-growth redwoods at BBRSP to its occurrence in the Santa Cruz Mountains.

Special Amphibians

California red-legged frog is a federally threatened species and recognized as an SSC by CDFW. It is found in several locations in the park, including the wetland and riparian habitats of Rancho del Oso and Waddell Creek (outside of the Focus Area), and the lacustrine habitat at Sempervirens Reservoir north of the Overnight Area in the Focus Area, as shown in Figure 3-6, *Special-Status Animal Species and Critical Habitat in the Focus Area*. During certain times of the year, California red-legged frogs can be found in upland habitats as well, when individuals are dispersing to and from their aquatic habitat. California giant salamander (*Dicamptodon ensatus*) is an SSC typically associated with the slow-moving, cold water of streams and other waterbodies. It has been reported west of the Focus Area, as shown in Figure 3-6. Santa Cruz black salamander (*Aneides niger*) is endemic to the Santa Cruz Mountains, is recognized as an SSC by CDFW, and typically occurs in mixed deciduous woodland, coniferous forests, coastal grasslands under rocks near streams, in talus, under damp logs, and other objects. It has been reported from a number of locations in the park, outside the Focus Area.

Special Reptiles

The State and federally endangered San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) is present in the Rancho del Oso area, where it occurs in the wetland areas around the mouth of Waddell Creek. Suitable habitat for this species is absent within the Focus Area. The Coast horned lizard (*Phrynosoma coronatum*), also an SSC, may be present in the coastal scrub and mixed chaparral habitats within the park, including suitable habitat within the Focus Area. The southwestern pond turtle (*Actinemys pallida*), another SSC and now a candidate for federal

listing as threatened, occurs in Turtle Pond and the wetlands in the Rancho del Oso area outside of the Focus Area.

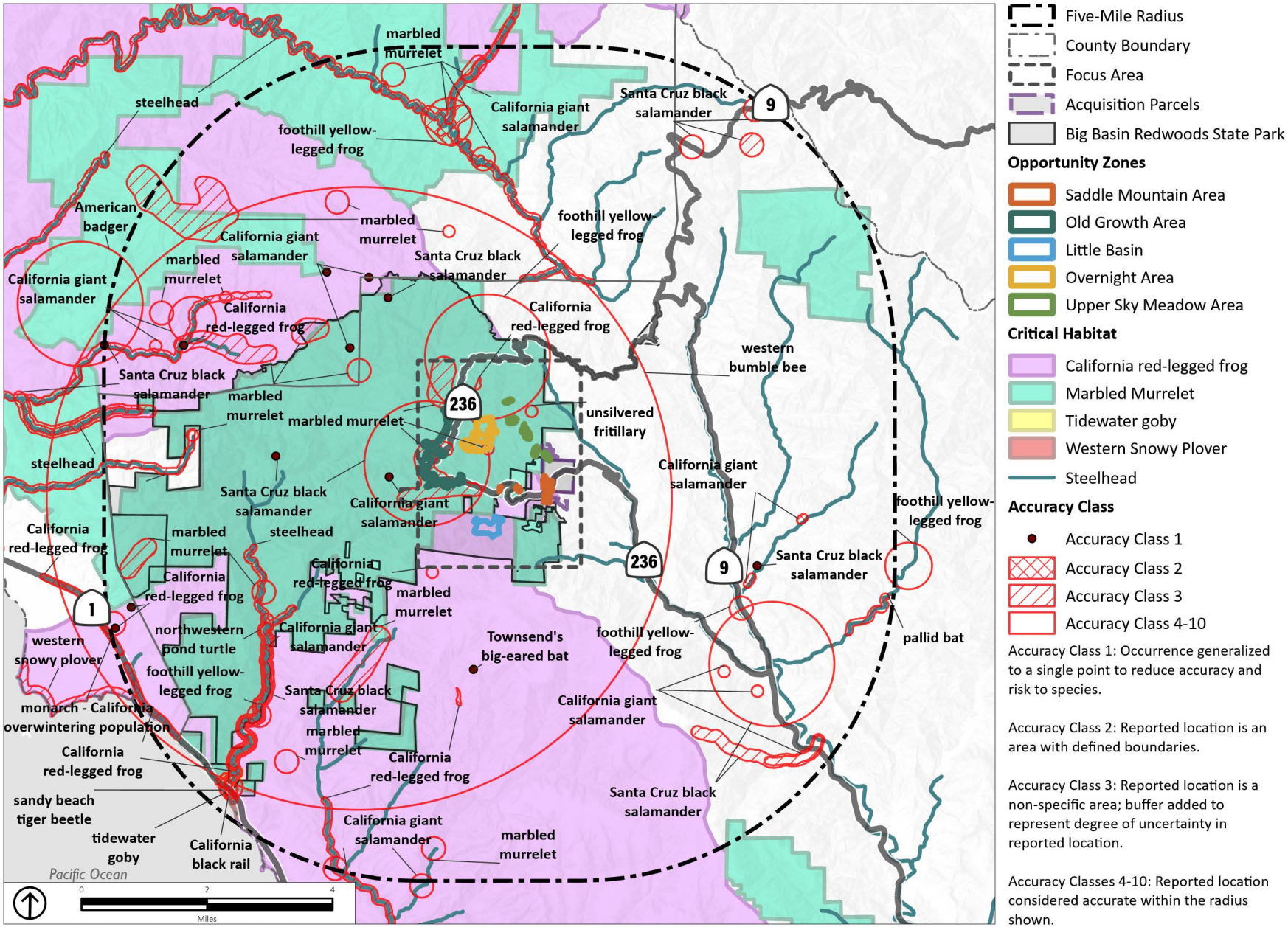
Special Mammals

Mountain lions (*Felis concolor*) are known to occur in the Santa Cruz Mountains region and BBRSP is an important piece of the regional habitat for species like this that are wide-ranging and require large territories. In 2020, the California Fish and Game Commission designated mountain lion within the Southern California/Central Coast evolutionarily significant unit (ESU) as a candidate species under CESA, which includes the Santa Cruz Mountains. San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is recognized as an SSC by CDFW and found in a range of habitats, including coastal scrub, riparian zones, and forests. It was relatively widespread through the park before the CZU fire. Several bat species known or suspected to occur in the park are considered SSC, including the Townsend's western big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis*).

Special Birds

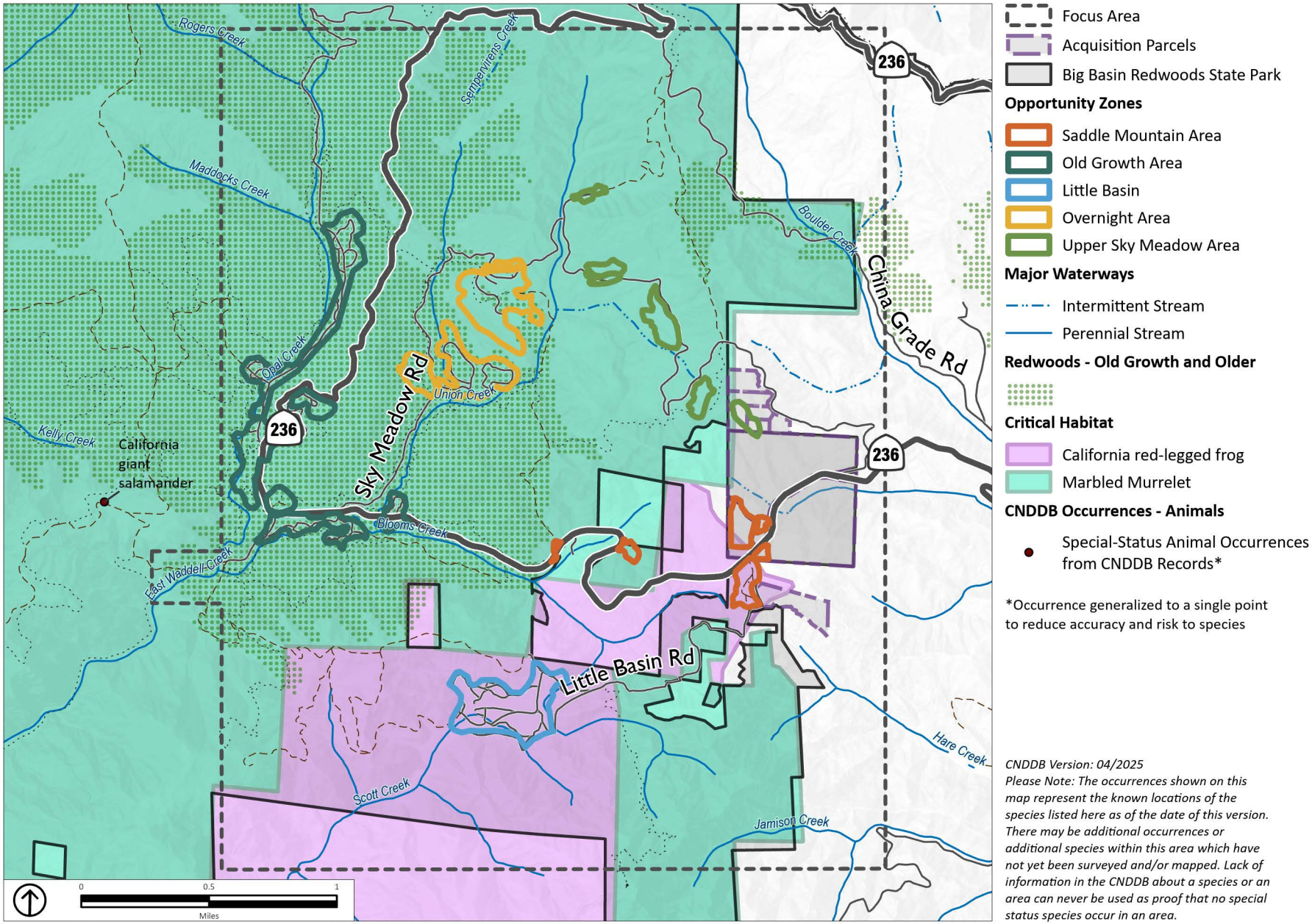
As reported in the 2013 General Plan, a total of 31 bird species with various special statuses are known or suspected from a range of habitats in BBRSP. The status of many of these species has changed since the list in Appendix J, *Sensitive Wildlife Species (June 2011) That Occur, or For Which Potential Habitat Exists Within Big Basin Redwoods State Park,* of the 2013 General Plan was prepared. American peregrine falcon (*Falco peregrinus*), which can be found where there are suitable cliffs and rock outcroppings for nesting, and brown pelicans (*Pelecanus occidentalis*), have both been delisted. The federally threatened western snowy plover (*Charadrius alexandrines nivosus*) nests in small numbers on Waddell Beach. Other sensitive bird species are found in the park and are currently or were previously considered an SSC by CDFW, including Vaux's swift (*Chaetura vauxi*), black swift (*Cypseloides niger*), and yellow warbler (*Setophaga petechia*), among others.

The marbled murrelet, a federally listed threatened and State endangered seabird, was an ornithological mystery until a nest for the species was first discovered at Jay Camp in the former Headquarters area of BBRSP in 1974. It nests almost exclusively on the large-diameter upper branches of old-growth redwood and Douglas-fir trees even though it spends the rest of its life in coastal ocean waters. It requires old-growth trees with complex canopy structures and suitable nesting platforms (large-diameter horizontal branches or broken tops in the upper canopy of trees, with sufficient canopy cover to help conceal the nest from predators). This species was State and federally listed because of population declines throughout its range in California, Oregon, and Washington, primarily due to habitat loss and modification. Current major threats include logging or modification of habitat, oil spills, and predation of eggs by Steller's jays and common ravens. Egg predation has been particularly evident in the Santa Cruz Mountains population.



Source: California State Parks, 2025; CNDDB, 2025; NOAA, 2023; USFWS, 2025; PlaceWorks, 2025

Figure 3-5: Special-Status Animal Species and Critical Habitat in a 5-Mile Radius



Source: California State Parks, 2025; CNDDB, 2025; USFWS, 2025; PlaceWorks, 2025

Figure 3-6: Special-Status Animal Species and Critical Habitat in the Focus Area

A federal Recovery Plan for marbled murrelet was prepared by the USFWS in 1997 that divided the marbled murrelet's breeding range into six conservation zones (USFWS 1997). Zone 6 includes the forested coastal zone from San Francisco south to Point Sur in Monterey County and up to 15 miles inland, including all of BBRSP. Suitable nesting habitat is not evenly distributed throughout the breeding range but is clustered into seven aggregations of habitat stands with old growth and older second growth forests, with intervening non-suitable habitat lands.

The *Marbled Murrelet Landscape Management Plan for Zone 6* (MMLMP) was prepared to provide a comprehensive management plan for the species in Zone 6 with the goal of assisting in the conservation and enhancement of the population (DPR 2017). Figure 3-7, *Important Murrelet Areas,* shows the important areas for marbled murrelet as mapped in Figure 2-16 of the MMLMP, including the location of old growth and older second growth forest, important murrelet areas, and flyways in relation to the Focus Area. The delineation of "Important Murrelet Areas" in the MMLMP was based on several factors, including the degree of habitat fragmentation, stand size, number of stands and their proximity to each other, condition and use of lands in the non-habitat landscape matrix, the location of murrelet flyways, and murrelet activity levels at known nesting stands. The mapped areas had at their core a large, occupied stand, with nearby suitable habitat stands included as long as they were accessed via the same murrelet flyway, there were no high ridges separating the stands, and the intervening non-habitat areas had a compatible land use. As shown in Figure 3-7, *Important Murrelet Areas*, the Old Growth Area and Overnight Area are within the previously identified Important Murrelet Areas and Saddle Mountain Area, Little Basin and Upper Sky Meadow are outside the Important Murrelet Areas.

The CZU fire burned over 97 percent and dramatically altered conditions at BBRSP. The effects of the CZU fire on marbled murrelet nesting habitat in the park are substantial and while there is a recent decline in inland murrelet activity that could be attributed to the loss of nesting habitat, the full effect on the population may take years to be fully realized. The majority of the Opportunity Zones underwent High to Medium-High Burn Severity, as shown in Figure 2-3, *CZU Fire Burn Severity Map,* altering the suitability of the old-growth forest that once characterized the former Blooms Creek Campground, Jay Camp, Headquarters, Huckleberry, Lower Sky, North Escape Road, Sempervirens, Sequoia, and Wastahi areas in the Focus Area for nesting and dispersal by marbled murrelet.

A comprehensive review of data on marbled murrelet was conducted during preparation of this Supplemental EIR, to expand upon the annotated bibliography contained in the 2013 General Plan, reviewing available data from 2012 to present. This literature review includes a chronological listing of each study and a brief summary or excerpts of salient information (see Appendix D, *Marbled Murrelet Literature Review (2012-2025)*, of this Draft Supplemental EIR). The following provides a summary of the current known status of marbled murrelet based on the results of this comprehensive literature review.

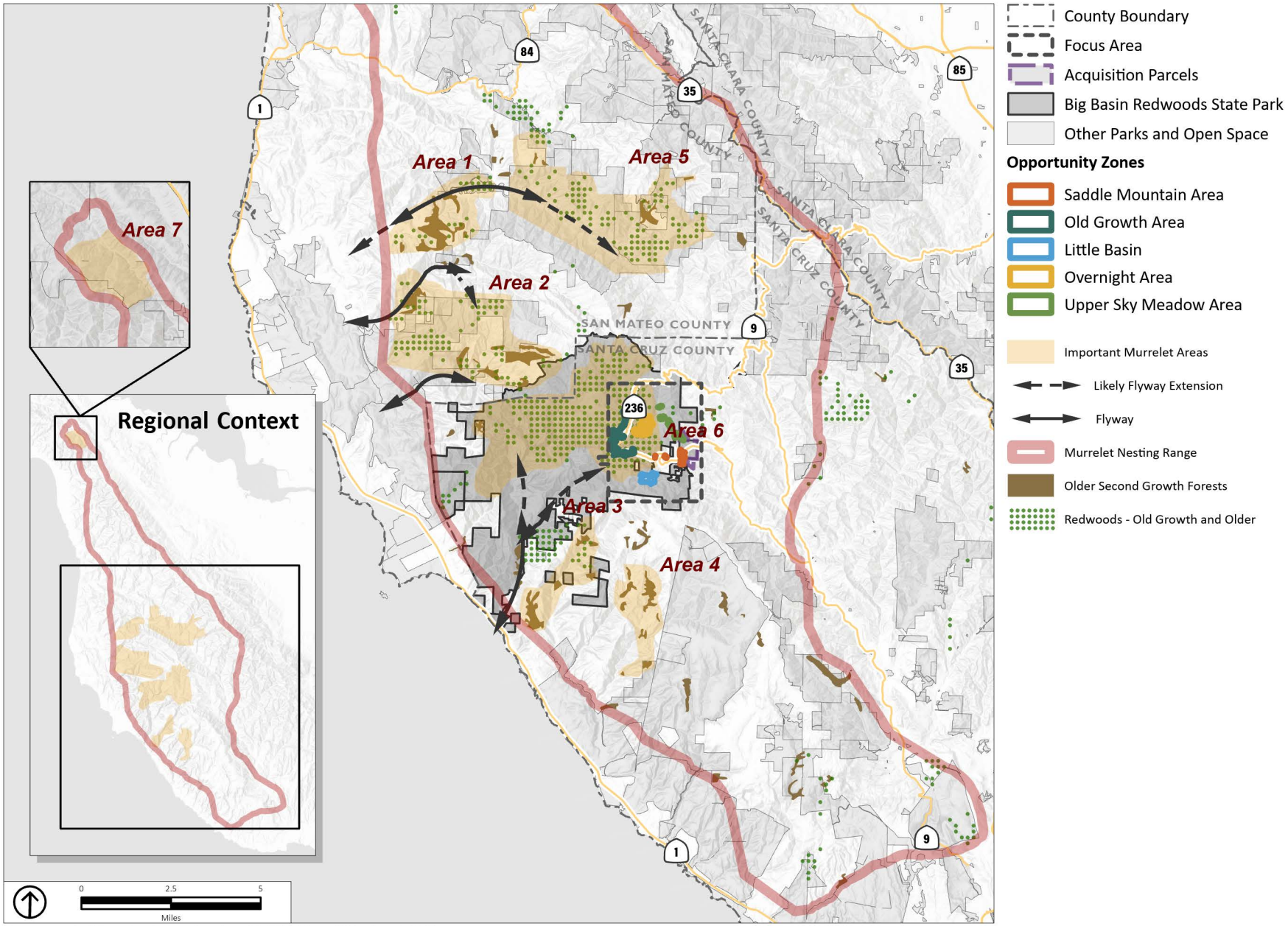
Status of Marbled Murrelet in Zone 6

Marbled murrelets are a challenging species to monitor because of the difficulty in observing them, variability of information that can be obtained from each survey type, and the high degree of temporal variability in murrelet activity, such that no one survey method is able to paint the complete picture of murrelet status. Various types of monitoring of the Santa Cruz Mountains population of murrelets have been conducted in some form every year since the late 1980s (Patton and Ralph 1990), and rigorous monitoring beginning in the early 1990s documented higher inland murrelet activity levels than observed in the region today (DPR 2017).

At-sea surveys between Half Moon Bay and Santa Cruz have provided annual population estimates based on adult abundance. There are no statistically significant trends in adult abundance since the inception of at-sea surveys in 1999, and adult abundance since 2012 appears to be stable, even after the CZU fire in 2020 (Felis et al. 2023; White et al. 2024).

Inland monitoring since 1991 has included AV surveys at many locations across the Santa Cruz Mountains and, more recently, passive acoustic monitoring. From the early 1990s to the early 2000s, there was a significant long-term decline in inland murrelet activity where AV surveys were performed (Suddjian 2010); although, since 2012, there appears to be no discernable trend in inland activity (Mori 2025). Beginning in 2022, inland activity at some locations has been lower than in previous years and may be the first indication of change in the population as a result of habitat loss from the CZU fire (Mori 2023a, 2023b, 2025).

The effects of the CZU fire on murrelet nesting habitat are profound and lasting (Singer and Rinkert 2025), and its true impact on the population may take additional years to be clearly discerned. Passive acoustic monitoring is increasingly being relied upon for monitoring inland activity, although an analysis of trends using data collected with this technology has yet to be undertaken. An analysis of trends in passive acoustic data, continued AV and at-sea surveys, and further determination of the habitat loss incurred from the CZU fire and its effects on murrelet occupancy are needed to more conclusively determine the current status of the murrelet population breeding in the Santa Cruz Mountains.



Source: California State Parks, 2017; PlaceWorks, 2025

Figure 3-7: Important Murrelet Areas

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Corvid Research and Monitoring in Zone 6

Corvid surveys, focusing on Steller's jay and common raven, first began in 1995 and has been performed on a regular basis since 2003, have been conducted within murrelet nesting habitat in the Santa Cruz Mountains in about half (43 percent) of the years since 2012. There is a long-term decline in Steller's jays, especially at campgrounds, as well as a less pronounced decline in adjacent low-impact areas (Rinkert 2021a, 2022a, 2022b). Raven abundance has also declined significantly in some areas since 2003 to 2013, while American crows—a nascent threat to murrelets in the Santa Cruz Mountains—were recently documented breeding in murrelet habitat for the first time (Rinkert 2021a, 2022a, 2022b).

Intensive research on Steller's jays in murrelet habitat from 2011 to 2019 revealed important information about their ecology, behavior, and space use that can be used to manage their populations to benefit murrelets. Numerous studies have now demonstrated how jay populations benefit from food subsidies within campgrounds. Food subsidies in campgrounds were found to increase the reproductive output of jays (West and Peery 2017), and high densities of jays in campgrounds were maintained by dominant jays attempting to exclude subdominant birds (Brunk et al. 2022). Campgrounds also served as source populations for jays, which would breed at campgrounds and then disperse up to dozens of kilometers away to take advantage of human food subsidies outside of the park in fall and winter (West et al. 2019). Human food subsidies at campgrounds were shown to directly influence jays up to 2 kilometers away (West et al. 2016). In response to inflated corvid populations, State Parks implemented a corvid management program that involved education, enforcement, and infrastructure improvements beginning in 2013; jays became less abundant and consumed less human food subsidies as a result (Brunk et al. 2022).

Conditioned taste aversion treatments to dissuade Steller's jays from predating murrelet eggs were implemented at various parks in the Santa Cruz Mountains from 2012 to 2016 (Gabriel et al. 2013, 2014a, 2014b, 2016, 2017). These studies documented a slight but significant decline in the predation of mimic eggs and apparent carryover of aversion to predation, especially where eggs were deployed across large, contiguous areas and where there were at least two deployments of mimic eggs in a season. While there were few actual documented predations of mimic eggs by Steller's jays, most predation of mimic eggs was attributed to this species.

Recent Research and Observations of Human-Related Disturbance on Marbled Murrelets

Very limited information is available regarding how human-caused disturbance affects murrelets. Recent research and observations have focused on how noise (i.e., unwanted sound in an environment) can disturb murrelets by altering the behavior of nestlings and adults attending nests. Murrelets are generally sensitive to sound (Smith et al. 2023), and disturbance-causing noise could result in adverse impacts to murrelets when they are performing critical

behaviors, such as feeding nestlings (USFWS 2020). If a nestling is fed an intermediate- or low-quality diet, it is estimated that just one missed feeding can adversely impact the nestling's development and survival (Nelson and Fitzgerald 2024).

Prior to the CZU fire, the ambient noise in murrelet nesting habitat at BBRSP was unusually elevated compared to noise levels in typical nesting habitat, and additional construction noise exceeded thresholds of acceptable noise near murrelet nests until modifications to equipment and work areas were implemented (Singer and Houston 2012). The USFWS (2020) recently issued updated temporal and spatial noise restrictions in and near murrelet nesting habitat to avoid adverse impacts to the species, and based on a new analysis of local inland murrelet activity and noise attenuation, Halbert (2022) has recommended further refinement of temporal restrictions for restorative forest treatments following the CZU fire.

Sensitive Natural Communities

Sensitive natural communities are those of limited distribution that are often vulnerable to loss and environmental effects from disturbance. The list of California Terrestrial Natural communities maintained by CDFW indicates the sensitivity of natural communities using NatureServe's Heritage Methodology, the same system used to assign global and State rarity ranks for special-status plant and animal species in the CNDDB. This list of natural communities is updated periodically using a rank calculator that is reviewed as part of the VegCAMP and CNPS Vegetation Program. Natural Communities with State ranks of 1 to 3 ranks are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA.

The latest rankings of California Natural Community List indicates that seven of the natural community types found in the vicinity of the Focus Area are considered "sensitive" (CDFW 2025a). These consist of: *Acer macrophyllum* mapping unit*, Acer macrophyllum – Alnus rubra* Alliance, *Alnus rhombifolia* Alliance, *Arctostaphylos (crustacea, tomentosa)* Alliance, *Pseudotsuga menziesii – Notholithocarpus densiflorus / Vaccinium ovatum* Association, *Notholithocarpus densiflorus* Alliance, and *Sequoia sempervirens* Alliance. The location of each of these sensitive natural community types is shown in Figure 3-1, *Vegetation Types*. As indicated in Figure 3-1, *Vegetation Types*, much of the Focus Area is occupied by old-growth and younger redwood forest, including the former Headquarters and many of the original campgrounds along Opal, Blooms, Union, and Sempervirens Creeks. Old-growth redwood forest and riparian woodland vegetation along these creeks have been affected by past development activities but continue to serve as important habitat and are a focus of restoration activities being undertaken by State Parks. Younger stands of second- and third-growth redwoods are relatively abundant in the coast region of Santa Cruz County and are therefore considered to be of less sensitivity as a natural community type. State Parks has developed SPRs to protect essential elements of old-growth redwood forest and riparian woodlands, and mature trees with trunk diameters greater than 24 inches. Required project-level environmental review and

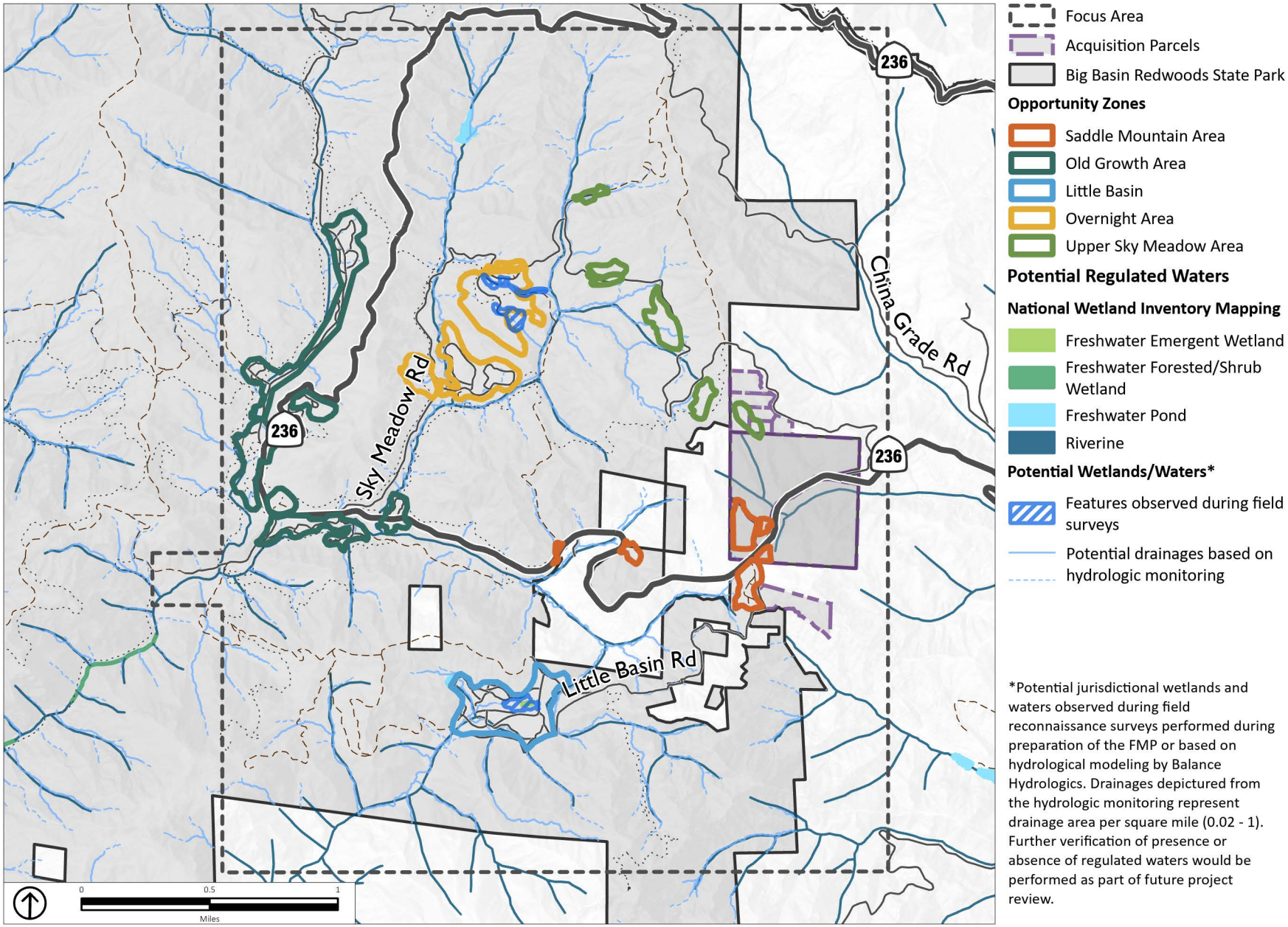
protocol-level surveys for special-status plants and sensitive natural communities for future projects may include recommendations for avoidance of high-quality stands of sensitive natural community types as deemed appropriate for that area and project.

Regulated Waters

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. As described in Section 3.1, *Regulatory Framework*, USACE jurisdiction is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters of the U.S." without a permit. The RWQCB jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver to control discharges in water quality whenever a USACE permit is required under Section 404 of the Clean Water Act, and State waters as regulated under the Porter-Cologne Act. Jurisdictional authority of the CDFW over wetland areas is established under CFGC Sections 1600-1607, which pertain to activities that would disrupt the natural flow or alter the channel, bed or bank of any lake, river, or stream.

Regulated waters in BBRSP vary from the intertidal and marine habitat along the shoreline of the Pacific Ocean, to numerous streams and drainages, to scattered reservoirs, ponds, and wetlands. A formal jurisdictional delineation of wetlands and other waters of the United States and State was not conducted for the Focus Area given its size. However, based on information available from the National Wetlands Inventory and other data, numerous features within the Focus Area can be assumed to fall under jurisdiction of the USACE, RWQCB, and CDFW, as described in Section 3.1, *Regulatory Framework*. Figure 3-8, *Potential Regulated Waters,* shows the extent of potential regulated waters in the Focus Area based on the National Wetland Inventory, drainages mapped as part of a watershed assessment of portions of the Focus Area, and observations of potential wetlands made during field reconnaissance surveys by the Supplemental EIR biologist. The majority of regulated waters in the Focus Area are established creeks mapped as riverine habitat in the National Wetland Inventory, including East Waddell Creek, Opal Creek, Blooms Creek, Scott Creek, Union Creek, and Sempervirens Creek. Sempervirens Reservoir, located north of the Overnight Area, and the unused reservoir at Little Basin are mapped as freshwater pond in the National Wetland Inventory. The potential wetlands observed by the Supplemental EIR biologist include the large meadow that once defined "Lower Sky Meadow," scattered seeps and wetlands around the former residences at Lower Sky Meadow, and a large potential wetland meadow at the upper end of Scott Creek in the Little Basin area. During preparation of the draft BBFMP, the Supplemental EIR biologist provided input to refine the location of roadways, campsites, and other facilities to avoid and minimize possible effects on the observed potential wetlands and other regulated waters.

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Source: California State Parks, 2025; Balance Hydrologics, 2024; USFWS, 2025; PlaceWorks, 2025

Figure 3-8: Potential Regulated Waters

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3.3 STANDARDS FOR ANALYSIS

Significance Criteria

The Initial Study provided in Appendix A, *Notice of Preparation and Initial Study*, of this Draft Supplemental EIR, determined that the proposed project would not result in a significant impact on the following significance criterion; therefore, this criterion is not addressed further in this section:

> Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan?

Appendix G, *Environmental Checklist Form*, of the CEQA Guidelines states that the proposed project would result in a significant impact on biological resources if it would:

a) Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Methodology

The potential impacts resulting from implementation of the proposed project were evaluated based on a review of available data, aerial imagery, and the results of field reconnaissance surveys by the Supplemental EIR biologist of proposed facilities within the Focus Area. The field reconnaissance surveys served to provide an indication of the possible presence of sensitive resources that should be considered during preparation and refinement of the proposed BBFMP. Conformance with the goals and guidelines from the 2013 General Plan were

considered with regard to the identification and protection of natural resources at BBRSP. SPRs used by the Department during implementation of the various components of the proposed project would serve to protect sensitive natural resources, as discussed further in Section 3.4, *Project Impact Analysis*. The location of sensitive natural resources observed by the Supplemental EIR biologist during the field reconnaissance surveys were mapped and used in refinement of proposed improvements associated with the proposed project to maximize avoidance. The Supplemental EIR biologist also worked with the Department's resources professionals to refine the SPRs to ensure sensitive resources were identified and adequately addressed and protected.

Protection and effective management of the natural resources of the park is one of the major goals of the proposed project, especially the protection of special-status plant and animal species, and management of regional habitat and linkages in the Santa Cruz bioregion. The protection and perpetuation of native habitats and wildlife species is contingent on the adequate avoidance of sensitive natural resources and habitats, together with successful rehabilitation and restoration to address the effects of past development, threats from non-native, invasive plant and animal species, and control of human influence on native animal behaviors. These include measures to prevent wildlife feeding and encourage the secure storage of human food to help prevent the disruption of natural wildlife processes and facilitate the health and existence of native wildlife species. Recovery from the effects of the CZU fire will require ongoing study, monitoring, and likely continued intervention.

The proposed project has been designed to be consistent with the 2013 General Plan goals and guidelines to avoid and minimize disturbance to sensitive natural resources in siting new facilities: avoiding occurrences of special-status plant and animal species, natural drainages, other wetlands, and high-quality stands of sensitive natural communities. These include guidelines for minimizing recreational facility development in areas of marbled murrelet nesting habitat, controls on noise-producing activities such as construction or maintenance activities during the marbled murrelet breeding season, and continued containment of human food and garbage with a strong public education program that addresses the detrimental effects they have on wildlife behavior and sensitive species. The devastating impacts on old-growth forest habitat from the CZU fire has further complicated factors affecting the continued presence of marbled murrelet at the park. Continued research, adequate restrictions, and careful management in old-growth forests are considered important steps for recovery of this indicator species at the park.

3.4 PROJECT IMPACT ANALYSIS

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

State and federal regulations provide varying levels of protection for special-status species, depending on a number of factors, including legal protective status, rarity, distribution, the magnitude of the potential impact on essential habitat, specific occurrence, overall population levels, and take of individual plants or animals. Activities requiring discretionary approvals by State and federal resource agencies provide for the greatest oversight because each potential future activity that could occur from implementation of the proposed project must be evaluated for their potential impact on special-status species and other sensitive biological resources.

As discussed in Chapter 2, *Project Description*, of this Draft Supplemental EIR, potential future development from implementation of the proposed project is expected to occur in various locations within the Focus Area but are generally to be sited in locations that have previously been disturbed or were developed before the CZU fire. The potential for occurrence of special-status species is typically low in previously developed areas in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of special-status plant and animal species. While the potential for adverse impacts on most special-status species is relatively low, there remains a varying potential for loss or disruption due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance. Unless appropriate restrictions are implemented, grading and other construction disturbances to existing natural habitat could eliminate occurrences of special-status plants and individuals or occurrences of special-status animal species or further isolate them from other occurrences where development creates barriers between the remaining areas of natural habitat. This includes possible loss or disturbance to bird nests in active use, conflicting with both the MBTA and CFGC, and roosts of several species of bats considered SSC by CDFW. Further detailed investigation is typically necessary to determine whether any occurrences of special-status species are present in undeveloped locations with natural habitat and appropriate habitat conditions.

Goals and policies in the 2013 General Plan call for avoidance of sensitive natural resources, such as special-status species, and require that surveys be conducted to confirm presence or absence and that appropriate avoidance be taken as part of project refinement. These include General Plan Guidelines Special Plants 1, 2, and 3; General Plan Guidelines Wildlife 1, 3, 5, 6, and 7; General Plan Guidelines Special Animals 1, 2, 3, 4, 5, and 6; and General Plan Guidelines Murrelet 1, 2, and 5. These practices are implemented by Department resource staff in advance

of construction and would serve to identify occurrences of special-status species, nests in active use, and roosts for special-status bat species.

To reinforce these practices called for in the 2013 General Plan, SPRs BIO-1 through BIO-5, BIO-9 through BIO-11, BIO-19 through BIO-22, and BIO-29 through BIO-34 have been refined by the Department to ensure occurrences of special-status species are identified and adequately protected as part of implementing the proposed project.

Implementation of the relevant guidelines from the 2013 General Plan, together with the above SPRs, would serve to identify occurrences of special-status species and active nests and roosts, and ensure their protection during refinement of new facilities associated with the BBFMP. Where complete avoidance of essential habitat is not feasible, coordination would take place with CDFW and USFWS, authorizations would be secured where necessary, and adequate controls and possibly compensatory mitigation would be provided that would address any potential impact on special-status species. For all species except marbled murrelet, compliance with these existing regulatory procedures would serve to minimize and compensate for potential impacts, ensuring a less-than-significant impact.

However, it is unclear whether habitat modifications associated with the BBFMP would have a substantial adverse effect on marbled murrelet. While a major focus of the General Plan guidelines for natural resource management is on protecting and improving conditions for marbled murrelet, and the 2014 settlement agreement between the Center and the Department laid out detailed controls and management strategies to reinforce those objectives, the available science is still inconclusive regarding both the factors influencing the stability of the marbled murrelet population in Zone 6 and the effects that visitor use and park activities have on the suitability of occupied habitat in BBRSP. This uncertainty is further compounded by the devastating effects of the CZU fire on habitat suitability in the BBRSP for marbled murrelet and the loss and destruction of potential nest trees and canopy screening, which is believed to be important in avoiding predation by corvids.

The 2013 General Plan includes numerous goals and guidelines related to marbled murrelet, which have been implemented by the Department. The status and success of these are summarized below, with each goal and guideline listed in its entirety for context.

> **Marbled Murrelet Management and Conservation Goal:** Coordinate with the U.S. Fish and Wildlife Service and California Department of Fish and Game toward the long-term recovery and survival of the Santa Cruz Mountains marbled murrelet population. Implement actions to minimize marbled murrelet population decline, protect and restore marbled murrelet breeding habitat, reduce the impacts of human presence on the breeding success of this bird, and contribute to the recovery of the species.

Summary: The Department has taken a leading role in coordinating with USFWS and CDFW in identifying BMPs related to disturbance in occupied habitat for marbled murrelet and conducting habitat assessments and surveys used to inform efforts to secure the long-term recovery and survival of the population in Zone 6. Projects that could potentially impact marbled murrelets and their habitat are routinely reviewed and often permitted by these two agencies. The entire focus of the marble murrelet program is on implementing actions to minimize population decline, restoring habitat, reducing impacts to murrelets as a result of human activities or behaviors that encourage their predators, and generally contributing to the recovery of the species. Each of the individual guidelines below describes more specifically the activities that the Department has undertaken. The marbled murrelet program currently supports multiple park functions, including maintenance, interpretive services, and natural resource management.

General Plan Guideline Murrelet 2: Control corvid populations and reduce the human influences that support unnaturally high corvid populations and concentrations in certain areas, especially in the Headquarters Area and Rancho del Oso; consider corvid management through direct removal when other control measures prove inadequate, and consult with experts on appropriate methods of corvid control and/or removal. Expand existing trash management measures noted above to include food storage lockers and animal-proof, user-friendly trash bins throughout Little Basin. Expand and emphasize existing corvid management efforts by providing additional training to state park rangers and including corvid management as part of their regular duties.

Summary: As part of this murrelet program, the Department developed and implemented the “Crumb Clean” campaign. The Crumb Clean campaign is an educational program designed to change visitor behavior to reduce the amount of food subsidies available to corvids, the primary predator of marbled murrelets. The program involves a three-pronged approach—engineering, education, and enforcement:

- Engineering consists of identifying and securing the appropriate trash receptacles that prevent opportunistic foraging by corvids and other predatory species and installing them at locations that reinforce their use and likelihood of uncontained trash that would attract predators. Trash cans and dumpsters have been upgraded within the three State Parks known to support marbled murrelet—BBRSP, Portola State Park, and Butano State Park. Park visitors have been provided with food storage lockers at every campsite to allow visitors with an easy way to store food while camping and reducing the likelihood of unintentionally feeding animals by leaving food unattended at the camp site. The Department has expanded this program District-wide and intends to install food storage lockers and animal-proof trash cans throughout the District by 2026.

- Education consists of the Crumb Clean campaign. This campaign was designed to instruct visitors on the vulnerability of marbled murrelet and what they need to do to help protect the species. Interpretive signage was developed based on a multiple-year sociological study that looked at the current efforts to ensure compliance with marble murrelet regulations in the California State Parks North Coast Redwood District. This effort also included educational programs involving campfire presentations, junior rangers, stickers, magnets, and posters that shared this message, as well as interpreters roving the campgrounds around dinner time talking to the public about keeping their food secure.
- Enforcement is essential to an effective campaign. In the years after implementing the Crumb Clean campaign, the District began to ticket visitors who left trash out, and this practice has been successfully defended in court multiple times.

Only after all the above programs were implemented did the Department engage in predator control. For several years, the District held a contract with the United States Department of Agriculture's (USDA's) Wildlife Services Program to do predator control. Because of costs and effectiveness, the predator control program was taken on by District ranger staff.

General Plan Guideline Murrelet 3: Improve waste patrol and cleanup in visitor-use areas.

Summary: As part of the Clean Crumb campaign, the Department evaluated efficiencies and modified pickup schedules. The trash education program was updated and modifications were made with receptacles, signage, changes at drainage inlets, and trash removal schedules.

General Plan Guideline Murrelet 4: Educate visitors about the threatened status of the marbled murrelet and why they should not feed wildlife.

Summary: Interpretive signage related to the Crumb Clean campaign is now prevalent in the park. Places where posters and signs were likely to be found in facilities before the CZU fire included bathrooms, kiosks, the former Headquarters Buildings, each picnic table in the picnic areas, and all food storage lockers. As these types of facilities are rebuilt, they would also include posters and signs related to the Crumb Clean campaign.

General Plan Guideline Murrelet 5: Minimize disturbances, trail building, and maintenance activities in old-growth redwood habitat, including the use of loud motorized equipment, during the marbled murrelet breeding season (March–September).

Summary: Because of the noise restriction requirements, the District generally plans to avoid doing any kind of construction work in the Old Growth Area during the marbled murrelet breeding season. When that is not possible, the District has worked with the USFWS and CDFW to design the project in a way that minimizes noise impacts. The program has led to changes in equipment such as the use of electric chainsaws for the trail crew and battery-powered leaf blowers for the maintenance staff.

General Plan Guideline Murrelet 6: Coordinate the park's Tree Safety Program with murrelet habitat protection, especially during the marbled murrelet breeding season.

Summary: The Tree Safety Program at the District no longer removes trees during the breeding season. The Hazard Tree Program that is focused on powerline issues must consult with District resources staff to ensure that no habitat is lost.

General Plan Guideline Murrelet 7: Where possible, consider relocating camping and/or picnic facilities or rotating use in areas with marbled murrelet habitat.

Summary: This has been a major focus of the proposed project, under which overnight camping would be moved out of the former Headquarters area, with the exception of the Sequoia Group Camp and the trail camp on North Escape Road, and relocated to the Overnight Area, which has little to no suitability for nesting by marbled murrelet following the CZU fire.

General Plan Guideline Murrelet 8: Support and participate in marbled murrelet research that will contribute to the conservation of this species. Continue to make every effort to obtain funding for ongoing murrelet monitoring, management, and studies.

Summary: The District is involved in ongoing corvid surveys, looking at marbled murrelet predators, tracking Audio Recording Units (ARU) for passive monitoring of calls in the forest, and inland audiovisual surveys at five established locations across the Santa Cruz Mountains. The District financially supports at-sea surveys, which is the only standardized method for determining status of the marbled murrelet population. The District is exploring options for conducting a social attraction project in locations that are currently unutilized by marbled murrelet and is considering conducting a 10-year program to implement radar surveys in the Santa Cruz Mountains.

General Plan Guideline Murrelet 9: Formalize existing State Parks marbled murrelet management team for Big Basin Redwoods State Park and develop formal marbled murrelet adaptive management plan for the park. Continue to work with other agencies on solutions to regional challenges in marbled murrelet management.

Summary: The District has worked consistently with other agencies and partners to document and better understand the status of marbled murrelet in Zone 6. A formal marbled murrelet adaptive management plan has not been prepared, but District staff use an adaptive management strategy in evaluating needs and adjusting strategies. Funding for the marbled murrelet program at the District provides funding for both visitor services and maintenance operations given the critical role they provide in accomplishing the overall program.

The Department has undertaken or is participating in detailed surveys and assessments at BBRSP and other locations in Zone 6 to better characterize the changes in habitat suitability for marbled murrelet following the CZU fire. Of the estimated 10,520 acres of old growth and older second-growth forest that provided nesting habitat identified in the 2017 Marbled Murrelet Landscape Management Plan for Zone 6, 6,458 acres burned, representing an estimated 61.4 percent of the known habitat (Singer and Rinkert 2025; Leal and Halbert 2025). Burn severity estimates developed by Cal Fire indicate that most of the Focus Area was burned at High to Medium-High level (see Figure 2-3, *CZU Fire Burn Severity Map*, in Chapter 2, *Project Description,* of this Draft Supplemental EIR*)*. Based on inspections of stand in BBRSP and using a modified Complex Burn Index Scale that included an "extreme" category to reflect the extreme burn conditions from the CZU fire, Singer estimates that the burn intensity to areas on or east of Middle Ridge ranged from Extreme (25 percent of the mapped area), High (50 percent), and Moderate (25 percent), with almost no areas of Low Intensity burn and almost no refugia or areas that did not burn (Keys and Bentsen 2006; Singer and Rinkert 2025). Of the accessible potential nest trees in BBRSP, almost half have died (34 of 63 potential nest trees) as a result of the CZU fire and, of those that survived, most "…will not likely provide optimal nest sites for a year or two until foliage can grow enough to screen the nest platform, as ravens are still present in the park although in reduced numbers" (Singer and Rinkert 2025). Suitable nesting habitat in BBRSP and at other locations that underwent intense burning during the CZU fire has been severely affected.

The 2013 General Plan EIR concluded that, given the speculative nature of marbled murrelet research, a conclusive determination on the effects of implementing the 2013 General Plan could not be made. It was unclear what was impacting marbled murrelet at the time but, conversely, that there was no clear evidence demonstrating that the decline was as a result of park visitors in the old-growth forest. This lack of definitive information led the Department to make overriding findings for a significant unavoidable impact on the marbled murrelet population as a result of implementing the 2013 General Plan.

The comprehensive literature review (see Appendix D, *Marbled Murrelet Literature Review [2012-2025]*, of this Draft Supplemental EIR) conducted during preparation of this Supplemental EIR updates the review performed during preparation of the 2013 General Plan. As noted above, it provides no more definitive understanding of the complex factors affecting the status of marbled murrelet at BBRSP and throughout its range in Zone 6, including the effects of visitor

use at BBRSP. The devastating loss and damage to forest habitat because of the CZU fire only complicates the challenges with understanding factors influencing the status of marbled murrelet at the park.

The primary goal of the proposed project is to relocate most of the overnight camping facilities outside of the old-growth forest habitats. This is consistent with the 2013 General Plan guidelines and will presumably improve conditions for marbled murrelet as suitable habitat returns following the effects of the CZU fire. Thus, the implementation of the proposed project would likely decrease effects from human activity to marbled murrelet when compared to pre-fire conditions or if the park would be rebuilt without the changes included in the proposed project. However, the uncertainty that led the Department to conclude that potential impacts on marbled murrelet were significant and unavoidable remains today. Therefore, this impact is **significant**.

Impact BIO-1: Given the uncertain nature of marbled murrelet research, a conclusive determination on the effects the proposed project on the marbled murrelet species cannot be made and is thus assumed to be significant.

Mitigation Measure: None available.

Significance with Mitigation: Significant and unavoidable. As described above, the District employs a number of measures to protect marbled murrelet and its habitat, and to reduce predator presence in the BBRSP, through implementation of and adherence to 2013 General Plan guidelines, requirements of the 2014 settlement agreement between the Center and the Department, the MAMU Landscape Management Plan, and the District's SPRs. Further, as described above, the proposed project has been designed to generally avoid and restore the areas of the BBRSP that most likely to provided habitat for marbled murrelet. Continued implementation of supportive measures, along with habitat regrowth following the CZU fire, is expected to aid in stabilizing and improving marbled murrelet habitat in the BBRSP concurrent with implementation of the proposed project. Nevertheless, due to the uncertainty in the scientific understanding of marbled murrelet and its status in the project area, it cannot be determined at this time whether the proposed project's impact can be considered less than significant. Therefore, this impact remains significant and unavoidable.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Proposed development and facility improvements in the BBFMP would generally take place in locations that were previously developed and disturbed and contained visitor-serving facilities in advance of the CZU fire. Some of these are located within or in proximity to vegetation types

recognized as sensitive natural communities by the CDFW. These include stands of old-growth redwood in the former Headquarters, North Escape Road, Jay Camp, Sempervirens Campground, Blooms Creek Campground, Huckleberry, Wastahi, and Lower Sky Meadow areas, as shown in Figure 3-1, *Vegetation Types*. Numerous trails, bridge crossings, and other facilities were located within or across creeks and along riparian habitat in the park, many of which have been rebuilt and reopened as part of post-fire activities undertaken by the Department. New trails, picnic facilities, and bus stops are proposed as part of the proposed project, some of which will be located within old-growth forest and in or near other sensitive natural community types in the park.

In addition, an important component of the proposed project includes removal of impervious surfaces associated with paved roads that served former campgrounds and other facilities at Headquarters, North Escape Road, Jay Camp, Sempervirens Campground, Blooms Creek Campground, and other locations as part of habitat restoration efforts to re-establish natural drainage patterns in the old-growth forest, improve conditions for the mature trees, and allow for re-establishment of native understory cover through the forest habitat. These restoration efforts will likely improve the conditions of much of the old-growth forest through the valley floor along Opal, Bloom, and Union Creeks and should greatly improve the habitat conditions of the redwood sensitive natural community type that led to the creation of BBRSP.

Guidelines in the 2013 General Plan call for avoiding development on old-growth forest and other sensitive natural community types and relocation of former facilities to less sensitive locations in the park. These include General Plan Guidelines Murrelet 5 and 7, and General Plan Regional Habitat Management Goal, among others provided in Section 3.1¸*Regulatory Framework,* under "2013 Big Basin Redwoods State Park General Plan and Environmental Impact Report." State Parks has developed additional SPRs specifically to ensure that sensitive natural community types, such as old-growth redwood forest and riparian woodland, are identified, that essential habitat components such as dominant trees and associated root systems are avoided as part of facility planning and refinement in the BBFMP, and that mature trees are protected during construction. These include SPRs BIO-1 through BIO-9, BIO-11, and BIO-13 through BIO-18.

These SPRs would provide for the identification and avoidance of major attributes of the old-growth forest and other sensitive natural communities during refinement of facilities proposed as part of the BBFMP and would serve to protect trees to be retained in the vicinity of new facilities. Proposed habitat restoration activities to be undertaken as part of the BBFMP would likely serve to greatly enhance the existing condition of much of the old-growth forest sensitive natural community at BBRSP. With implementation of the relevant guidelines from the 2013 General Plan and the SPRs developed as part of the BBFMP, potential impacts on sensitive natural communities would be **less than significant**.

Significance without Mitigation: Less than significant.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Proposed development and facility improvements of the proposed project would generally take place in locations that were previously developed and disturbed and contained visitor-serving facilities in advance of the CZU fire. Some of these are in the vicinity of creeks and other drainages, including Opal, Blooms, Sempervirens, Union, Scott, and East Waddell Creeks and their tributaries and the scattered wetland features located in BBRSP. A number of wetlands not identified in the National Wetland Inventory were observed by the Supplemental EIR biologist during refinement of the BBFMP, as indicated in Figure 3-8, *Potential Regulated Waters*. These potential wetland features would be near proposed new campsites, roadways, trails, and other facility improvements in the Overnight Area and Little Basin Opportunity Zones. Fallen trees, damaged and clogged culverts, and chipped limbs and other debris generated during the cleanup following the CZU fire has altered conditions that may be contributing to the formation of seasonal wetlands in some locations of the Focus Area.

As part of the proposed project, fills and impervious surfaces associated with paved roads that served former campgrounds and other facilities at the former Headquarters, North Escape Road, Jay Camp, Sempervirens Campground, Blooms Creek Campground, and other locations will be removed during habitat restoration efforts to re-establish natural drainage patterns through the old-growth forest. This would improve conditions for the mature trees and other habitat in this part of the park. These restoration efforts will likely lead to an increase in wetlands and drainages across the valley floors through the old-growth forests.

Grading to remove old paving, replace existing roadways, and construct new facilities could result in temporary indirect impacts to wetlands and other jurisdictional waters. This includes an increased risk of sedimentation due to construction grading and ground disturbance, an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and an increase in the potential for water quality degradation due to increased levels in nonpoint pollutants. However, this potential for water quality degradation would be avoided by establishing adequate setbacks from wetlands and unvegetated channels and using BMPs to control the risk of sedimentation and introduction of pollutants into receiving waters.

Guidelines in the 2013 General Plan call for avoiding creeks and wetlands and the important habitat they provide for wildlife. These include General Plan Guideline Special Animals 5 and General Plan Sky Meadow Group Camp Goal, which has been amended as part of the proposed project, among others provided in Section 3.1¸*Regulatory Framework*, under “2013 Big Basin Redwoods State Park General Plan and Environmental Impact Report.” Additional SPRs were developed specifically to ensure that native wildlife and essential habitat features, such as nest and roost locations, are protected and to address the possible changes that can occur from human activity at the park. These include SPRs BIO-17 and BIO-35 through BIO-38.

These SPRs would provide for the identification and avoidance of regulated waters during implementation of the proposed project and would include use of appropriate BMPs to control potential indirect impacts associated with grading and other disturbance in the vicinity of creeks and other regulated waters. Where complete avoidance is not feasible, authorization for impacts on regulated waters would be secured from the regulatory agencies, and appropriate compensatory mitigation provided, where necessary. All conditions in the authorizations from these regulatory agencies would be implemented by the Department and would serve to fully address any unavoidable impacts on these regulated waters. With implementation of the relevant guidelines from the 2013 General Plan and SPRs, potential impacts on wetlands and regulated waters would be **less than significant**.

Significance without Mitigation: Less than significant.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Development and land use activities associated with implementation of the proposed project would generally be in areas that have already been developed and utilized as part of BBRSP. Facilities destroyed by the CZU fire would be rebuilt, relocated, or restored as part of the proposed project. A major component of the proposed project is to relocate former campgrounds and other high-intensity visitor services out of the remaining old-growth forest habitat to better improve their condition for marbled murrelet and other native wildlife, consistent with recommendations in the 2013 General Plan. New visitor-serving facilities would be concentrated around Saddle Mountain Area, Little Basin, and the Overnight Area, all of which had various park-related uses in advance of the CZU fire. While implementation of the proposed project would lead to a return of human activity in locations with proposed visitor services, none of these would represent a substantial alteration in opportunities for wildlife movement or use of important wildlife nursery locations.

The 2013 General Plan includes numerous guidelines related to the protection of wildlife habitat at BBRSP, and controlling the adverse effects of development and visitors. These include General Plan Guidelines Wildlife 1, 2, 3, and 6, among others provided in Section 3.1, *Regulatory Framework*, under "2013 Big Basin Redwoods State Park General Plan and Environmental Impact Report." As discussed previously under impact discussion (a), relevant General Plan guidelines and SPRs would serve to address potential adverse effects on special-status animals. Additional SPRs were developed specifically to ensure that native wildlife and essential habitat features, such as nest and roost locations, are protected and to address the possible changes that can occur from human activity at the park. These include SPRs BIO-1 through BIO-7 and BIO-19 through BIO-34.

Night-time lighting can interfere with wildlife behaviors and movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. SPR BIO-8 would ensure that new and replacement artificial lighting would be carefully designed and controlled. These include controls on shielding and spill over to minimize disturbance to surrounding habitat and minimize impacts on the night sky.

Implementation of the proposed project could affect the suitability of the remaining nesting habitat for marbled murrelet in the old-growth forests at BBRSP, but the significance of these effects on occupied habitat for this species is uncertain, as discussed previously in Impact BIO-1. Most of the park would remain available to wildlife for movement and dispersal through the region onto other parklands and remaining undeveloped private lands in the surrounding area, consistent with the General Plan Guideline Regional Habitat 1. With implementation of applicable General Plan guidelines and SPRs, potential impacts on wildlife movement opportunities would be **less than significant.**

Significance without Mitigation: Less than significant.

3.5 CUMULATIVE IMPACT ANALYSIS

The geographic scope of the cumulative analysis for biological resources considers the California State Parks Santa Cruz District, non-park incorporated and unincorporated lands immediately surrounding BBRSP, and the region.

Would the project, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to biological resources?

The impacts of potential future development on biological resources tend to be site-specific, and the overall cumulative effects would depend on the degree to which significant vegetation and wildlife resources are protected at a particular location and relationship to other projects and habitat conditions in the region. This includes the preservation of well-developed native vegetation (e.g., old-growth forest, native grasslands, oak woodlands, and riparian woodland, among others), populations of special-status plant or animal species, and wetland features (e.g., freshwater marsh and seeps, vernal pools and seasonal wetlands, riparian corridors, and drainages). The CEQA review required for future projects proposed on or near sensitive habitats would serve to ensure that important biological resources are identified, protected, and properly managed and should address any significant adverse development-related impacts.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing natural habitat, particularly for larger mammals and birds. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the

remaining suitable habitat retained within parks, public and private open space, and undeveloped properties. New cumulative development in the region, together with timber harvest, fire fuel management, and other broadscale disturbance could result in further modifications to existing natural habitat, reducing or limiting the existing habitat values of the surrounding area. This could include further loss of older-growth forests, wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, and obstruction of important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in the creeks throughout the region where appropriate controls are not implemented. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality.

With the exception of fire fuel management and expansion of open space facilities and public access, the increased development potential in the Focus Area is anticipated to occur primarily in proximity to existing use areas. Potential future development that could occur elsewhere in the region, outside of the Focus Area, is also anticipated to occur largely in use areas. In the event that potential future development in the region is proposed in an undeveloped area, that project would undergo independent environmental review as required by the jurisdiction in which it is proposed. For projects proposed in unincorporated areas, the General Plans of Santa Cruz and San Mateo Counties include goals and policies that call for the identification and protection of important biological and wetland resources as part of environmental review.

Protection and effective management of the natural resources of BBRSP is one of the major goals of the proposed project, including the protection of special-status plant and animal species, and management of regional habitat and linkages in the Santa Cruz bioregion. This protection is contingent on the adequate avoidance of sensitive natural resources and habitats, together with successful rehabilitation and restoration to address the effects of the CZU fire, threats from invasive plant and animal species, and control of human influence on native animal behaviors. The proposed project would be consistent with the 2013 General Plan goals and guidelines to avoid and minimize disturbance to sensitive natural resources in siting new facilities. Further refinement of facility improvements would be provided during design and implementation of the BBFMP to ensure avoidance of special-status plant and animal species, natural drainages and other wetlands, and high-quality stands of sensitive natural communities. The SPRs would serve to reinforce these important resource protections and together with the relevant General Plan guidelines would serve to minimize potential impacts on sensitive biological resources to a less-than-significant level.

However, because of the uncertainty regarding the potential impacts of the proposed project on marbled murrelet and the determination that impacts on this species could be significant and unavoidable, there is a possibility that the proposed project could have a substantial contribution to the cumulative impacts on marbled murrelet in the Zone 6 region. As discussed previously, the 2013 General Plan includes multiple guidelines that call for further study and

monitoring of marbled murrelet, coordination with resource agencies and other partners to better understand the status of this species, and to identify appropriate management activities to address its vulnerability. The SPRs would serve to reinforce this effort to better understand the status of marbled murrelet in Zone 6, the consequences of the CZU fire, and mechanisms needed to provide better protection for this species. Consistent with its conservation role, the Department plays a key role in this effort to better understand the status and vulnerabilities of marbled murrelet in Zone 6 and will continue in that capacity, as required under the 2013 General Plan, the relevant SPRs, and the 2014 settlement with the Center. No additional mitigation is available to address this possible substantial contribution of the project to a potentially significant cumulative impact on marbled murrelet. Thus, the proposed project would contribute to a **significant** cumulative impact with respect to marbled murrelet.

Impact BIO-2: The proposed project, together with cumulative projects, has the potential to contribute to a significant cumulative impact on marbled murrelet in Zone 6.

Mitigation Measure: None available.

Significance with Mitigation: Significant and unavoidable. As described in the discussion of Impact BIO-1, the District employs a number of measures to protect marbled murrelet and its habitat, and to reduce predator presence in the BBRSP. Additionally, as described previously, the proposed project has been designed to avoid the areas of the BBRSP that are most likely to provide habitat for marbled murrelet. Nevertheless, due to the uncertainty in the scientific understanding of marbled murrelet and its status in the project area, it cannot be determined at this time whether these factors can be considered to reduce the project's contribution to this significant cumulative impact to a less-than-significant level. Therefore, this cumulative impact is considered significant and unavoidable.

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4. ALTERNATIVES TO THE PROPOSED PROJECT

4.1 INTRODUCTION

This chapter presents the alternatives analysis for the proposed project, as required by the California Environmental Quality Act (CEQA). CEQA requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6[a]).

The discussion includes an explanation of the methodology used to select alternatives to the proposed project, with the intent of identifying potentially feasible alternatives that could avoid or substantially lessen the significant impacts identified for the proposed project while still meeting most of the basic project objectives, pursuant to CEQA Guidelines Section 15126.6(a).

This chapter identifies a reasonable range of alternatives that meet these criteria, and these alternatives are evaluated with respect to minimizing adverse environmental effects when compared to the proposed project. It also describes other alternatives and alternative concepts that were considered but eliminated from detailed consideration and the reasons for their elimination. For the alternatives selected for analysis, this chapter evaluates the impacts of the alternatives against baseline environmental conditions and compares the potential impacts of the alternatives with those of the proposed project. Finally, as required under CEQA Guidelines Section 15126.6(e), based on this analysis, this chapter then discusses the Environmentally Superior Alternative.

The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. Section 15126.6, *Consideration and Discussion of Alternatives to the Proposed Project*, of the CEQA Guidelines states that:

> An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required

to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

4.2 FACTORS CONSIDERED WHEN DEVELOPING ALTERNATIVES

This section describes the basis for determining the range of CEQA alternatives and identifies the specific alternatives that are analyzed in this Draft Supplemental EIR. The primary factors considered when determining feasible alternatives to the proposed project are the identified project objectives and those significant impacts that have been identified for the proposed project. Therefore, these two considerations are summarized below.

4.2.1 Project Objectives

Chapter 2, *Project Description*, provides objectives that have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts. These objectives are further discussed in Section 2.4, *Project Objectives*.

4.2.2 Significant Impacts

As described, apart from the No Project Alternative, other alternatives to a project should be evaluated because of their ability to feasibly attain most of the basic objectives of the project and avoid or lessen the project's identified significant impacts. The proposed project would result in two significant impacts. These impacts would be significant and unavoidable.

- Impact BIO-1: Given the uncertain nature of marbled murrelet research, a conclusive determination on the effects the proposed project on the marbled murrelet species cannot be made and is thus assumed to be significant.
- Impact BIO-2: The proposed project, together with cumulative projects, has the potential to contribute to a significant cumulative impact on marbled murrelet in Zone 6.

4.3 ALTERNATIVES CONSIDERED BUT REJECTED

As described in Section 4.1, *Introduction*, CEQA Guidelines Section 15126.6(c) requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as

infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. CEQA Guidelines Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. This section summarizes the alternatives considered and rejected, along with the reasons that alternative was not included in the analysis.

4.3.1 Alternate Planning Areas

While creating the Reimagining Big Basin Facilities Management Plan (BBFMP), three parkwide design alternatives were explored to house most of the new facilities and development. All three design alternatives offered a similar level of development and distribution of visitor amenities and operational space that is consistent with anticipated needs and overall project goals. Through analysis of the different sites, as well as feedback received from the community and multiple project working groups, the option presented in the proposed project was chosen. The alternative options were not selected for analysis since they are not substantially different in a way that would reduce significant impacts when compared to the proposed project.

4.3.2 Alternate No Project Alternative: No Rebuild

An alternate "No Project Alternative" was considered under which BBRSP would remain in its existing condition. No new activities would occur to rebuild the park or restore it to its pre-fire conditions, aside from the safety improvements and minimal restoration already completed to partially reopen the park.

This alternative was not selected for analysis because it would not meet any of the project objectives. In addition, this alternative would not achieve the vision in the 2013 General Plan that is currently in effect and is considered inconsistent with the 2013 General Plan. Therefore, this alternative was not selected for analysis.

4.3.3 Rebuild Under the 2013 General Plan

This alternative, like the proposed project, would include many of the proposed facilities under the BBFMP; however, the proposed General Plan amendments to the 2013 General Plan would not be incorporated. Thus, the General Plan would not be amended to be consistent with the proposed BBFMP. Under this alternative, the following recommendations that would make the 2013 General Plan consistent with the BBFMP would not be included, and thus these facilities would not be included.

- Overnight camping facilities at Lower Sky Meadow and Upper Sky Meadow.

- The Rogers Road Site (former Maintenance Yard), Upper Sky Meadow site (former park housing site), and Upper Lodge Road included in the description of Sky Meadow.
- Staff housing and operation areas at Saddle Mountain.
- Tribal use area with a cultural center for collaboration with Indigenous groups for stewardship, interpretation, and cultural activities at Little Basin.
- Staff housing at Little Basin.
- Expansion of the BBRSP boundary to include seven parcels planned for acquisition in the Saddle Mountain area.

The purpose of this alternative would be to identify the impacts associated with just the BBFMP and park facilities consistent with the existing 2013 General Plan, which would exclude the components listed above. This alternative would not include new overnight facilities at Lower Sky Meadow and Upper Sky Meadow, thus reducing the number of overall camping facilities available at BBRSP, and the amount of staff housing would be less than under the proposed project. Lastly, the Department would continue leasing and using the acquisition parcels, but these areas would not be incorporated into BBRSP.

This alternative would not reduce or avoid the significant impacts associated with the proposed project and would lead to an inconsistency between the 2013 General Plan and the proposed BBFMP. Thus, this alternative was not selected for analysis.

4.3.4 Alternate Site

The central purpose of the proposed project is to rebuild the BBRSP due to the damage that occurred from the CZU fire. An alternate site alternative was not considered as such an alternative would not meet the fundamental objective of the proposed project. Thus, an alternate site alternative was not selected for analysis.

4.4 ALTERNATIVES SELECTED FOR ANALYSIS

The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the proposed project and that may avoid or substantially lessen any of the significant impacts of the proposed project.

- Alternative A: No Project Alternative
- Alternative B: Natural Preserve Alternative
- Alternative C: Old Growth Redwoods Avoidance Alternative

4.5 ALTERNATIVE A: NO PROJECT ALTERNATIVE

Pursuant to CEQA Guidelines Section 15126.6(e)(1), the No Project Alternative is required as part of the "reasonable range of alternatives" to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), when the project is the revision of a plan, as in this case, the No Project Alternative would use the existing 2013 General Plan as its guiding document. Under this alternative, BBRSP would be rebuilt to pre-fire conditions, without a Facilities Management Plan or General Plan amendments (or any other new governing document).

As described in Chapter 2, *Project Description,* BBRSP has partially reopened after the CZU fire for limited day-use access and temporary visitor facilities. The Focus Area is still mostly burned but cleaned, with some new growth and minimal operating facilities. At Saddle Mountain, the remaining few structures are being used for temporary staff housing, offices, and operations. An interim fenced maintenance yard and vehicle storage area has been constructed. A temporary shuttle parking area and entry kiosk have also been constructed at Saddle Mountain. On summer weekends, a pilot shuttle program brings visitors who park at the overflow parking area at Saddle Mountain to the Main Day-use area. In the Old Growth Area, a temporary kiosk and visitor center have been placed in the Main Day-use Area, with 75 available parking spaces. There are no overnight facilities or campgrounds available.

Alternative A would continue rebuilding the park to pre-fire conditions. This would include rebuilding or restoring the facilities described in Section 2.1.3, *Existing Site Conditions and Site History,* of Chapter 2, *Project Description,* of this Draft Supplemental EIR. Visitor activity would remain focused in the Headquarters Area (Main Day-use Area). The dining hall, cabins, swimming pool, staff residences, and other facilities would be rebuilt at Saddle Mountain. The 13 campgrounds available throughout the park before the fire would be restored. Parking infrastructure available before the fire would be provided, but the shuttle program would not be included.

The Department would continue leasing and using the acquisition parcels, but these areas would not be incorporated into BBRSP, and new facilities would not be developed on them.

This analysis assumes that all applicable Standard Project Requirements (SPRs), General Plan guidelines, mitigation measures, and other requirements included in the 2013 General Plan and 2013 General Plan EIR would apply to Alternative A. The potential environmental impacts associated with Alternative A when compared to the proposed project are described in the sections that follow.

4.5.1 Aesthetics

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to aesthetics and mitigation is not required.

Under the No Project Alternative, facilities would be constructed in the same location as before the CZU fire and would therefore match the aesthetic character of the park, adhering to applicable SPRs, General Plan guidelines, and other requirements in the 2013 General Plan. Neither this alternative nor the proposed project would damage scenic resources or historic buildings, since they are no longer on site. Under the No Project Alternative, the destroyed historic structures would be rebuilt to represent what was there before the fire, although the new buildings would lack historic value. Given the extent of the fire and loss of tree cover, the rebuilt park would not have the same character as existed before the fire. The proposed project and No Project Alternative would have the same sources of light and glare.

Overall, neither the proposed project nor the No Project Alternative would result in significant aesthetic impacts. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.2 Agriculture and Forestry Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to agriculture and forestry resources.

Under the No Project Alternative, as under the proposed project, park facilities would not convert any agricultural or timberland production uses. As described in the Initial Study, local zoning does not apply to State Parks land, which is instead subject to Department policies, regulations, and management. Further, under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines. Therefore, neither the proposed project nor this alternative would conflict with existing zoning for farmland or forestland.

Overall, neither the proposed project nor the No Project Alternative would result in significant agricultural or forestry resources impacts. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.3 Air Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant air quality impacts and mitigation is not required.

Under the No Project Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, leading to similar levels of construction-phase air emissions as under the proposed project. Further, under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent and reduce air quality effects and ensure that neither the proposed project nor this alternative would conflict with an air quality plan, violate air quality standards, result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors.

Under the proposed project, a shuttle program would provide visitor access throughout the park, reduce single-occupancy vehicle use by visitors, and improve overall access in the park. In addition, low-emission staff and maintenance vehicles would be used to reduce emissions in the park and contribute to better air quality. Under the No Project Alternative, the park would not include the shuttle program.

The No Project Alternative would not include the shuttle program. Therefore, overall air quality impacts would be **increased** when compared to the proposed project.

4.5.4 Biological Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not conflict with a Habitat Conservation Plan or Natural Community Conservation Plan. However, as described in Chapter 3, *Biological Resources Environmental Analysis,* significant and unavoidable impacts would occur regarding special-status species.

Under the No Project Alternative, the park would be rebuilt to pre-fire conditions. Thus, visitor activity would remain focused in the Headquarters Area, which is closer to potential marbled murrelet habitat. However, under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent impacts to biological resources.

Because a goal of the proposed project would be to reduce impacts to special-status species and marbled murrelet specifically, and the No Project Alternative would not include the

proposed project's facility siting considerations to protect species, the No Project Alternative would result in **increased** biological resource impacts when compared to the proposed project.

4.5.5 Cultural Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to cultural resources and mitigation is not required.

Under the No Project Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, leading to similar ground-disturbing activities, as under the proposed project. Further, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent impacts to cultural resources. Under the proposed project, a tribal cultural center at Little Basin would house a number of tribal and cultural facilities that would honor the millennia-long connection that Indigenous people have had with the land. The proposed project would partner with California Native American Tribes to incorporate more tribal perspectives into the park's design. Since the No Project Alternative does not include new development outside of what was at the park before the fire, Little Basin would not include these proposed improvements and expanded facilities to honor and incorporate tribal history and perspectives.

Overall, the No Project Alternative would result in **increased** cultural resource impacts when compared to the proposed project.

4.5.6 Geology and Soils

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to geology and soils and mitigation is not required.

Under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable building codes, SPRs, and General Plan guidelines intended to prevent geology, soil, and seismic hazards and effects. Both the proposed project and No Project Alternative would restore visitation to pre-fire levels, thus exposing the same number of people to existing hazards.

Overall, neither the proposed project nor the No Project Alternative would result in significant geological impacts. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.7 Greenhouse Gas Emissions

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to greenhouse gas (GHG) emissions and mitigation is not required.

Under the No Project Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, leading to similar levels of construction-phase GHG emissions as under the proposed project. Further, under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent GHG effects.

The proposed project intends to rebuild park facilities in a way that leads to reduced operational emissions when compared to pre-fire facilities. The proposed project includes the proposed shuttle program, use of electric vehicles, and increased building efficiency and technology. The No Project Alternative would not include these project features intended to reduce GHG emissions.

Therefore, the No Project Alternative would result in **increased** GHG emissions impacts when compared to the proposed project.

4.5.8 Hazards and Hazardous Materials

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to hazards and hazardous materials, and mitigation is not required.

Under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent hazards, hazardous materials, and wildland fire effects. Like the proposed project, the No Project Alternative would not substantially change the operations and maintenance of the park and staff would continue to use, transport, store, and dispose of hazardous materials consistent with OSHA regulations. Further, since park facilities would be reconstructed in the same location as before, and the fire and visitation would be restored to pre-fire levels, the No Project Alternative would not interfere with an emergency response plan and, as under the proposed project, would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires beyond baseline conditions.

Overall, neither the proposed project nor the No Project Alternative would result in significant impacts associated with hazards and hazardous materials. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.9 Hydrology and Water Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant hydrology and water quality impacts and mitigation is not required.

Under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent hydrology and water quality effects. As under the proposed project, development under the No Project Alternative would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement best management practices (BMPs) during future construction to minimize potential impacts to water quality. Additionally, facilities constructed under the No Project Alternative would be within the same area as the proposed project, which is an area with moderate to low risk for flooding and not subject to seiche, tsunami, or mudflow. However, the proposed project includes beneficial hydrologic restoration at Little Basin and the Main Day-use Area that would not be included in the No Project Alternative.

Overall, neither the proposed project nor the No Project Alternative would result in significant hydrology and water quality impacts. However, the No Project Alternative would not include the hydrologic restoration benefits that the proposed project would include and thus would result in **increased** impacts when compared to the proposed project.

4.5.10 Land Use and Planning

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not physically divide an established community or conflict with any land use plan.

As under the proposed project, physical improvements under the No Project Alternative would occur within the park boundary and therefore would not have the potential to divide an established community. Additionally, both the proposed project and the No Project Alternative would be consistent with applicable State and local land use plans, policies, and regulations.

Therefore, neither the No Project Alternative nor the proposed project would result in significant land use impacts, and this alternative would result in **similar** impacts when compared to the proposed project.

4.5.11 Mineral Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to mineral resources.

As described in the Initial Study, BBRSP does not contain mineral resources, and commercial exploitation of mineral resources is prohibited within the State Park System. Therefore, neither the proposed project nor the No Project Alternative would result in impacts to mineral resources, and this alternative would result in **similar** impacts when compared to the proposed project.

4.5.12 Noise

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant noise impacts and mitigation is not required.

Under the No Project Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, leading to similar levels of construction noise as under the proposed project. Further, noise generated by on-site construction equipment would be based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent and reduce noise effects.

Under both the proposed project and the No Project Alternative, operational noise impacts at BBRSP would be related to vehicular traffic, facility operations, and visitors. Under this alternative, visitor levels would be the same as under the proposed project. Unlike the proposed project, this alternative would focus visitor activity to the Headquarters Area; however, overall visitation and therefore noise at the park would therefore be similar.

Overall, neither the proposed project nor the No Project Alternative would result in significant noise impacts. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.13 Parks and Recreation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to parks and recreation, and mitigation is not required.

Under the No Project Alternative, the park would be rebuilt to pre-fire conditions using the 2013 General Plan as its guiding document. As under the proposed project, facilities would be constructed in adherence with applicable SPRs and General Plan guidelines. Both the 2013 General Plan and the proposed BBFMP recommend an adaptive management process that

would provide an ongoing method to evaluate and avoid or reduce impacts associated with recreational uses, visitor experiences, and park resources. Using the adaptive management process, any potentially significant impacts would be minimized to ensure protection of the park's important resource values and visitor opportunities.

Overall, neither the proposed project nor the No Project Alternative would result in significant impacts related to parks and recreation. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.14 Population and Housing

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not induce population growth or displace substantial numbers of existing people or housing.

Under the No Project Alternative, as under the proposed project, the only housing component includes minimal staff residences and facilities that would be constructed in adherence with applicable SPRs and General Plan guidelines. The proposed project includes slightly more staff residences than under the No Project Alternative; however, the slight decrease in housing compared to the proposed project would not result in the displacement of a substantial number of people. Further, as under the proposed project, physical improvements under the No Project Alternative would occur within the park boundary and would not lead to unplanned population growth or displacement. Therefore, the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.15 Public Services

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts associated with the provision of new or physically altered governmental facilities.

Both the proposed project and No Project Alternative would restore visitation to pre-fire levels. Therefore, public service demand would be the same under both the proposed project and this alternative, and the No Project Alternative would result in **similar** impacts when compared to the proposed project.

4.5.16 Transportation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant transportation impacts and mitigation is not required.

Under the No Project Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent transportation effects. However, the No Project Alternative would not implement the shuttle program included in the proposed project that would provide transportation to key connective sites and would only include the buses provided by SCMetro that were operating before the fire. The shuttle program would reduce single-occupancy vehicles and improve overall access in the park. Further, to reduce vehicle speeds and enhance safety for all visitors, the proposed project would also implement traffic-calming strategies such as speed limit reductions, advanced warning signs, flashing beacons, and potential intersection-control changes. These features would not be included in the No Project Alternative. Therefore, the No Project Alternative would result in **increased** transportation impacts when compared to the proposed project.

4.5.17 Utilities and Service Systems

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to utilities and services systems, and mitigation is not required.

Under the No Project Alternative, the park would be rebuilt to pre-fire conditions and no new utility connections to off-site utilities would be needed. Construction of replacement utilities and infrastructure would be required under both this alternative and the proposed project, and would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent utilities and services systems effects. Both the proposed project and No Project Alternative would restore visitation to pre-fire levels. Therefore, utility demand would be the same under both the proposed project and this alternative.

Therefore, the No Project Alternative would result in **similar** utility and service system impacts when compared to the proposed project.

4.6 ALTERNATIVE B: NATURAL PRESERVE ALTERNATIVE

Under Alternative B, the Focus Area within BBRSP would be reclassified as a Natural Preserve. Natural Preserves are areas within State Parks that are specifically designated to protect unique or sensitive resources.[1] This subclassification would be created within the Focus Area to protect the old growth redwood habitat and surrounding ecosystems.

[1] Public Resources Code Section 5019.71

Under Alternative B, all existing facilities would be removed from the Focus Area. There would be no day-use, overnight facilities, or parking infrastructure provided at BBRSP. Therefore, this alternative would result in reduced visitation when compared to the proposed project.

Trails would be provided in the Natural Preserve only to connect BBRSP to the existing trail system so improvements to only existing trails would be included. Publicly accessible trailheads for these trails would be outside of the Focus Area, since trailhead parking would not be included in this alternative. The ecological restoration efforts, as described in the proposed project, would be included in Alternative B. The purpose of this alternative would be to protect the habitat within BBRSP that is important for biological resources, including the marbled murrelet population.

Under this alternative, the 2013 General Plan would need to be amended to include a subclassification for the Focus Area as a Natural Preserve. The General Plan guidelines would also need to be amended to remove extensive visitor uses and facilities from the Focus Area.

Construction activities under the Natural Preserve Alternative would be limited to demolition, clearance, and trail improvement activities. This analysis assumes that all applicable SPRs, mitigation measures, and other requirements recommended for the proposed project would apply to Alternative B. The potential environmental impacts associated with Alternative B when compared to the proposed project are described in the sections that follow.

4.6.1 Aesthetics

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to aesthetics and mitigation is not required.

Under the Natural Preserve Alternative, all existing development would be removed from the Focus Area and no facilities would be provided at BBRSP. The scenic views and character within the park would be improved without development blocking the natural landscapes or scenic vistas. Though historic buildings were once in the Focus Area, all have been destroyed by the CZU fire, so removing all structures under this alternative would not damage historic buildings or represent an adverse effect to aesthetics. Without any development, the sources of light and glare would be less than under the proposed project.

Overall, neither the proposed project nor this alternative would result in significant aesthetics impacts. However, because no development would occur under the Natural Preserve Alternative, aesthetics impacts would be **reduced** when compared to the proposed project.

4.6.2 Agriculture and Forestry Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to agriculture and forestry resources.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Under this alternative, the 2013 General Plan would need to be amended to include a subclassification for the Focus Area as a Natural Preserve. However, as described in the Initial Study, local zoning does not apply to State Parks land, which is instead subject to Department policies, regulations, and management.

Overall, neither the proposed project nor the Natural Preserve Alternative would result in significant impacts to agriculture and forestry resources. Therefore, the Natural Preserve Alternative would result in **similar** impacts when compared to the proposed project.

4.6.3 Air Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant air quality impacts, and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Thus, the only construction-level air quality impacts under the Natural Preserve Alternative would be from the removal of existing structures in the Focus Area. No new construction would occur under this alternative apart from improvements to existing trails.

Under the proposed project, a shuttle program would be provided to improve visitor access throughout the park that would not be included under the Natural Preserve Alternative. Though the shuttle program would reduce single-occupancy vehicles and improve overall access in the park, it is expected that visitation would substantially decrease through the Focus Area, under the Natural Preserve Alternative, without visitor-serving development or parking areas.

Because the Natural Preserve Alternative does not involve any new development and only demolition, clearing, and trail improvements would occur, construction air quality emissions would be reduced when compared to the proposed project. Without the inclusion of facilities and parking lots, vehicle trips and emissions would be also reduced. Therefore, the Natural Preserve Alternative would result in **reduced** air quality impacts when compared to the proposed project.

4.6.4 Biological Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not conflict with a Habitat Conservation Plan or Natural Community Conservation Plan. However, as described in Chapter 3, *Biological Resources Environmental Analysis,* significant and unavoidable impacts would occur regarding special-status species.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Therefore, sensitive habitat, including marbled murrelet habitat, in the Focus Area would not be impacted by new development. Additionally, there would be no day-use, overnight facilities, or parking infrastructure provided at BBRSP and trails would be provided only to connect the Focus Area to the existing trail system. With fewer visitors, there would be less opportunity for nest predators to be attracted to the Focus Area for crumbs and food scraps, when compared to the proposed project.

Therefore, the Natural Preserve Alternative would result in **reduced** biological resource impacts when compared to the proposed project. However, due to uncertainty regarding the impacts to marbled murrelet, the significant and unavoidable impact with respect to special-status species would remain.

4.6.5 Cultural Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to cultural resources and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Though historic buildings were once in the Focus Area, all have been destroyed by the CZU fire, so removing all structures under this alternative would not damage historic resources. Only removal of existing structures would occur, which would not involve significant ground-disturbing activities. Thus, no ground-disturbing activities would occur under the Natural Preserve Alternative and potential archeological resources or human remains would have less potential to be damaged than under the proposed project.

Under the proposed project, a tribal cultural center at Little Basin would house a number of tribal and cultural facilities that would honor the millennia-long connection that Indigenous people have had with the land. The proposed project would partner with California Native American tribes to incorporate more tribal perspectives into the park's design. Since the Natural Preserve Alternative does not include new development, a tribal cultural center would not be included under this alternative.

Because no development would occur under the Natural Preserve Alternative, it would not adversely affect subsurface cultural resources, and impacts would be **reduced** when compared to the proposed project.

4.6.6 Geology and Soils

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to geology and soils, and mitigation is not required.

Under the Natural Preserve Alternative, only the removal of existing structures would occur, which would not involve construction or ground-disturbing activities. Without visitor-serving facilities or parking areas, it is expected that visitation under this alternative would be less than the proposed project, thus exposing fewer people to existing hazards.

No development under the Natural Preserve Alternative would ensure that no geological resources would be significantly impacted. Overall, impacts would be **reduced** when compared to the proposed project.

4.6.7 Greenhouse Gas Emissions

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to GHG emissions, and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Thus, the only construction activities that would occur under the Natural Preserve Alternative would be the demolition and removal of existing structures in the Focus Area, and improvements to existing trails, which would lead to less GHG emissions than under the proposed project.

The proposed project intends to rebuild park facilities in a way that leads to reduced operational emissions when compared to pre-fire facilities. Further, the shuttle program, included in the proposed project, would reduce single-occupancy vehicles and improve overall access in the park. Under the Natural Preserve Alternative, no facilities would be rebuilt to provide visitor-serving development or parking areas, and visitation would likely decrease throughout the Focus Area. Thus, operational emissions would be reduced, even without the inclusion of the shuttle program, under the Natural Preserve Alternative, when compared to the proposed project.

Because the Natural Preserve Alternative does not involve any new construction and only demolition, clearing, and trail improvements would occur, construction emissions would be

reduced compared to the proposed project. Without the inclusion of facilities and parking lots, operational emissions would also be reduced. Therefore, the Natural Preserve Alternative would result in **reduced** GHG emission impacts when compared to the proposed project.

4.6.8 Hazards and Hazardous Materials

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to hazards and hazardous materials, and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Removal of existing facilities would require transport, use, and disposal of hazardous materials, as under the proposed project. However, without additional construction activities to rebuild the facilities, there would be less potential for hazardous materials accidents and exposures, when compared to the proposed project. Further, the Natural Preserve Alternative would reduce visitation to the park, thus exposing fewer people to existing hazards or wildland fires.

No development under the Natural Preserve Alternative would ensure that no significant impacts associated with hazards or hazardous waste would occur. Overall, impacts would be **reduced** when compared to the proposed project.

4.6.9 Hydrology and Water Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant hydrology and water quality impacts, and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. This alternative would also remove stormwater drainage and allow the area to return to a more natural state of groundwater recharge, filtration, and runoff. Both the Natural Preserve Alternative and the proposed project would be in an area with moderate to low risk for flooding and not subject to seiche, tsunami, or mudflow. Further, the Natural Preserve Alternative would likely reduce visitation to the park, thus exposing fewer people to existing hazards.

Overall, hydrology and water quality impacts would be **reduced** when compared to the proposed project.

4.6.10 Land Use and Planning

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not physically divide an established community or conflict with any land use plan.

Under the Natural Preserve Alternative, the 2013 General Plan would need to be amended to include a subclassification for the Focus Area as a Natural Preserve and General Plan guidelines would also need to be amended to remove extensive visitor uses and facilities from the Focus Area. However, as with the proposed project, changes made under the Natural Preserve Alternative would occur within the park boundary, and therefore would not have the potential to divide an established community. Additionally, both the proposed project and the Natural Preserve Alternative would be consistent with applicable State and local land use plans, policies, and regulations.

Overall, neither the proposed project nor the Natural Preserve Alternative would result in significant land use impacts and the Natural Preserve Alternative would result in **similar** impacts when compared to the proposed project.

4.6.11 Mineral Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to mineral resources.

As described in the Initial Study, BBRSP does not contain mineral resources, and commercial exploitation of mineral resources is prohibited within the State Park System. Therefore, neither the proposed project nor the Natural Preserve Alternative would result in impacts to mineral resources, and the Natural Preserve Alternative would be **similar** when compared to the proposed project.

4.6.12 Noise

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant noise impacts and mitigation is not required.

Under the Natural Preserve Alternative, construction noise would be limited to the removal of existing development as well as clearance and trail improvement activities. Noise generated from park visitation would be expected to decrease when compared to the proposed project, since the visitor-serving facilities would not be included under the Natural Preserve Alternative.

Overall, the Natural Preserve Alternative would result in **reduced** noise impacts when compared to the proposed project.

4.6.13 Parks and Recreation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to parks and recreation, and mitigation is not required.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur. Under this alternative, the 2013 General Plan would need to be amended to include a subclassification for the Focus Area as a Natural Preserve. The General Plan guidelines would also need to be amended to remove extensive visitor uses and facilities from the Focus Area.

Since the Natural Preserve Alternative would not provide the additional visitor-serving facilities provided in the proposed project, increased demand at other areas of the park or neighboring park facilities may occur that would not be necessary under the proposed project. Therefore, the Natural Preserve Alternative would result in an **increase** in park and recreation impacts when compared to the proposed project.

4.6.14 Population and Housing

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not induce population growth or displace substantial numbers of existing people or housing.

As under the proposed project, physical improvements under the Natural Preserve Alternative would occur within the park boundary and would not lead to unplanned population growth. However, under the Natural Preserve Alternative, all existing facilities, including staff housing, would be removed from the Focus Area. Under the proposed project, some staff residences would be provided. Because the Natural Preserve Alternative does not include any structures, staff would be displaced. Thus, impacts on housing would be slightly increased.

Overall, neither the proposed project nor the Natural Preserve Alternative would result in significant impacts on population and housing; however, no staff housing would be provided under this alternative. Therefore, impacts would be **increased** when compared to the proposed project.

4.6.15 Public Services

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts associated with the provision of new or physically altered governmental facilities.

Under the Natural Preserve Alternative, all existing facilities would be removed from the Focus Area and no development would occur, decreasing visitation and staff needed at the park. Thus, impacts on public services would be reduced when compared to the proposed project.

Overall, neither the proposed project nor the Natural Preserve Alternative would result in significant impacts to public services; however, fewer people would be in the Focus Area under this alternative. Therefore, impacts would be **reduced** when compared to the proposed project.

4.6.16 Transportation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant transportation impacts, and no mitigation is required.

The Natural Preserve Alternative would not include the roads and circulation upgrades described under the proposed project that would improve safety and efficiency throughout the park. However, without visitor facilities or parking areas included in the Natural Preserve Alternative, trips through the Focus Area would likely decrease when compared to the proposed project. Therefore, the Natural Preserve Alternative would result in **reduced** transportation impacts when compared to the proposed project.

4.6.17 Utilities and Service Systems

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to utilities and services systems, and no mitigation is required.

Under the Natural Preserve Alternative, no development or utility infrastructure would be included. The proposed project includes reconstruction of BBRSP's utility systems and infrastructure as necessary to replace systems that were damaged or destroyed in the 2020 CZU fire, which would not be included under the Natural Preserve Alternative.

Because no development would occur under the Natural Preserve Alternative, no new connections or the rebuilding of utility infrastructure would be required. Therefore, impacts would be **reduced** when compared to the proposed project.

4.7 ALTERNATIVE C: OLD GROWTH REDWOODS AVOIDANCE ALTERNATIVE

Alternative C would not incorporate development in areas with old growth redwood habitat; this primarily includes development at the Old Growth Area and Overnight Areas opportunity zones. The General Plan amendments as described in the proposed project would still be included in Alternative C.

Under Alternative C, development at the following sites would be limited:

- Sequoia
- Main Day-use Area
- Sempervirens Campground
- Bloom Creek and Jay Camp Campgrounds
- Lower Sky Meadow
- Huckleberry and Wastahi Campgrounds

Thus, the Redwood Ecology Interpretation Center, the campfire center, approximately 170 campsites and 38 cabins, and approximately 250 parking stalls would not be included in Alternative C. Facilities requiring less intense development in these opportunity zones would still be included in Alternative C, like trails and ecological restoration efforts. Additional campsites, parking areas, and the interpretation and campfire centers could be provided at Saddle Mountain or the Upper Sky Meadow Area. Even with the increase in facilities at alternate locations, Alternative C would provide a significant reduction in campsites and other amenities, including parking facilities, when compared to the proposed project. Therefore, visitation is expected to be reduced when compared to the proposed project.

Most of the Focus Area-wide project components described in Section 2.3.3, *Proposed Focus Area-wide Project Components,* in Chapter 2, *Project Description,* of this Draft Supplement EIR would be included in Alternative C.

The purpose of this alternative is to locate all development farther from areas with a greater potential to contain desirable marbled murrelet habitat. Though the precise relationship between the decline of the marbled murrelet and park facilities in old growth redwood habitat is not fully known, Alternative C would consolidate most new development in areas farther from this habitat.

The alternatives analysis assumes that all applicable SPRs, General Plan guidelines, mitigation measures, and other requirements recommended for the proposed project would apply to Alternative C. The potential environmental impacts associated with Alternative C when compared to the proposed project are described in the sections that follow.

4.7.1 Aesthetics

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to aesthetics, and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, fewer facilities would be constructed under this alternative compared to the proposed project. Facilities would be constructed to match the aesthetic character of the park and would adhere to applicable SPRs, General Plan guidelines, and other requirements in the 2013 General Plan. Neither this alternative nor the proposed project would damage scenic resources or historic buildings, since they are no longer on site. There would be the same sources of light and glare under the Old Growth Redwoods Avoidance Alternative as under the proposed project.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant aesthetic impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.2 Agriculture and Forestry Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to agriculture and forestry resources.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would not convert any agricultural or timberland production uses. As described in the Initial Study, local zoning does not apply to State Parks land, which is instead subject to Department policies, regulations, and management. Further, under this alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines. Therefore, neither the proposed project nor this alternative would conflict with existing zoning for farmland or forestland.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant agricultural or forestry resource impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.3 Air Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant air quality impacts and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project aside from in the Old Growth Area and Overnights Areas, where no construction would occur, leading to slightly lower levels of construction-phase air emissions when compared to the proposed project. Further, under this alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent and reduce air quality effects and ensure that neither the proposed project nor this alternative would conflict with an air quality plan, violate air quality standards, result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, a shuttle program would provide visitor access throughout the park, reduce single-occupancy vehicle use by visitors, and improve overall access in the park. In addition, low-emission park staff and maintenance vehicles would be used to reduce emissions in the park and contribute to better air quality. Under the Old Growth Redwoods Avoidance Alternative, parking would be removed from the Old Growth Area and Overnights Areas, decreasing the amount of parking available at the park.

Because the Old Growth Redwoods Avoidance Alternative does not involve construction in old growth redwood habitat, less construction would occur, and less parking would be made available, resulting in a reduction in emissions associated with park operation. Therefore, impacts would be **reduced** when compared to the proposed project.

4.7.4 Biological Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not conflict with a Habitat Conservation Plan or Natural Community Conservation Plan. However, as described in Chapter 3, *Biological Resources Environmental Analysis,* significant and unavoidable impacts would occur regarding special-status species.

Under the Old Growth Redwoods Avoidance Alternative, the project would avoid development in old growth redwood habitat. Thus, this sensitive habitat would be preserved, and visitor-serving facilities would be in areas farther from potential marbled murrelet habitat. Further, under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent impacts to biological resources.

Therefore, the Old Growth Redwoods Avoidance Alternative would result in **reduced** biological resource impacts when compared to the proposed project. However, the project's significant and unavoidable impacts would not be completely avoided.

4.7.5 Cultural Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to cultural resources and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, aside from at the Old Growth Area and Overnights Areas, where no construction would occur. Thus, this alternative would result in a slight reduction in ground-disturbing activities, when compared to the proposed project. Further, under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent impacts to cultural resources. The tribal cultural center at Little Basin would be included in both the proposed project and this alternative.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant cultural resource impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.6 Geology and Soils

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to geology and soils, and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable building codes, SPRs, and General Plan guidelines intended to prevent geology, soil, and seismic hazards and effects. The Old Growth Redwoods Avoidance Alternative would remove development from the Old Growth Area and Overnight Areas, thus slightly reducing the extent of construction and ground disturbance required, when compared to the proposed project. The Old Growth Redwoods Avoidance Alternative would slightly reduce visitation, when compared to the proposed project and pre-fire levels, thus exposing fewer people to existing hazards.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant geological impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.7 Greenhouse Gas Emissions

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to GHG emissions, and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, aside from at the Old Growth Area and Overnight Areas, where no reconstruction would occur. This would result in overall less construction within the Focus Area and construction-level emissions would be slightly reduced when compared to the proposed project. Further, under this alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent GHG effects.

This alternative would also result in a reduction in available parking, decreasing the number of vehicles that can enter the park, thus reducing operational emissions when compared to the proposed project. As under the proposed project, a shuttle program would be incorporated under this alternative to provide visitor access throughout the park and associated parking areas; however, shuttle stops would not be included in the Main Day-use Area or Lower Sky Meadow.

Because the Old Growth Redwoods Avoidance Alternative does not involve construction in old growth redwood habitat and includes less parking, impacts would be **reduced** when compared to the proposed project.

4.7.8 Hazards and Hazardous Materials

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to hazards and hazardous materials mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent hazards, hazardous materials, and wildland fires effects. Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project, aside from at the Old Growth Area and Overnight Areas, where no reconstruction would occur. Further, because park facilities would be reconstructed to a similar extent as under the proposed project, the Old Growth Redwoods Avoidance Alternative would also not interfere with an emergency response plan. Further, due to the slightly reduced visitation, people and structures would have slightly less of a significant risk of loss, injury, or death involving wildland fires beyond baseline conditions, when compared to the proposed project.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant impacts associated with hazards and hazardous materials. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.9 Hydrology and Water Quality

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant hydrology and water quality impacts and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent hydrology and water quality effects. Thus, as under the proposed project, development under the Old Growth Redwoods Avoidance Alternative would be required to prepare a SWPPP and implement BMPs during future construction to minimize potential impacts to water quality. Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur in a similar location as the proposed project, aside from at the Old Growth Area and Overnight Areas, where no reconstruction would occur. This is an area with moderate to low risk for flooding and not subject to seiche, tsunami, or mudflow.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant hydrology or water quality impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.10 Land Use and Planning

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not physically divide an established community or conflict with any land use plan.

As with the proposed project, physical improvements under the Old Growth Redwoods Avoidance Alternative would occur within the park boundary and therefore would not have the potential to divide an established community. Additionally, both the proposed project and this alternative would be consistent with applicable State and local land use plans, policies, and regulations. Further, the General Plan amendments, as described in the proposed project, would be included under both the proposed project and the Old Growth Redwoods Avoidance Alternative.

Therefore, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant land use impacts and this alternative would result in **similar** impacts when compared to the proposed project.

4.7.11 Mineral Resources

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts to mineral resources.

As described in the Initial Study, BBRSP does not contain mineral resources, and commercial exploitation of mineral resources is prohibited within the State Park system. Therefore, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in impacts to mineral resources, and this alternative would be **similar** when compared to the proposed project.

4.7.12 Noise

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant noise impacts and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, reconstruction of and improvements to park facilities would occur to a similar extent as under the proposed project aside from the Old Growth and Overnights Areas, where no construction would occur, leading to slightly lower levels of construction-phase noise when compared to the proposed project. As under the proposed project, noise generated by on-site construction equipment would be based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Further, under this alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent and reduce noise effects.

Under both the proposed project and the Old Growth Redwoods Avoidance Alternative, operational noise impacts at BBRSP would be related to vehicular traffic, facility operations, and visitors. Under this alternative, visitor levels would be slightly reduced when compared to the proposed project, resulting in slightly reduced operational noise overall and decreased noise in the old growth areas.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant noise impacts. However, noise impacts would be slightly **reduced** when compared to the proposed project.

4.7.13 Parks and Recreation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to parks and recreation, and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, the Redwood Ecology Interpretation Center, the campfire center, approximately 170 campsites and 38 cabins, and approximately 250 parking stalls included in the proposed project would not be provided. Therefore, visitation under the Old Growth Redwoods Avoidance Alternative is likely to be reduced when compared to the proposed project. Both the 2013 General Plan and the proposed BBFMP recommend an adaptive management process that would provide an ongoing method to evaluate and avoid or reduce impacts associated with recreational uses, visitor experiences, and park resources. Using the adaptive management process, any potentially significant impacts would be minimized to ensure protection of the park's important resource values and visitor opportunities.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant park and recreation impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.14 Population and Housing

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not induce population growth or displace substantial numbers of existing people or housing.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, the only housing on-site would be a minimal amount of staff residences that would be constructed in adherence with applicable SPRs and General Plan guidelines. Further, as under the proposed project, physical improvements under this alternative would occur within the park boundary and would not lead to unplanned population growth or displacement. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.15 Public Services

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would not result in impacts associated with the provision of new or physically altered governmental facilities.

Although visitation would be slightly reduced under this alternative, when compared to the proposed project and pre-fire levels, public service demand would be similar overall under both the proposed project and this alternative.

Neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant public service impacts, and this alternative would result in **similar** impacts when compared to the proposed project.

4.7.16 Transportation

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant transportation impacts and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, the Redwood Ecology Interpretation Center, the campfire center, approximately 170 campsites and 38 cabins, and approximately 250 parking stalls included in the proposed project would not be provided. Therefore, vehicle trips to and throughout the site would be slightly reduced.

Under the Old Growth Redwoods Avoidance Alternative, as under the proposed project, park facilities would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent transportation effects.

As under the proposed project, a shuttle program would be incorporated under this alternative to provide visitor access throughout the park and associated parking areas; however, shuttle stops would not be included at the Main Day-use Area or Lower Sky Meadow.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant transportation impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.7.17 Utilities and Service Systems

As described in the Initial Study provided in Appendix A, *NOP and Initial Study*, of this Draft Supplemental EIR, the proposed project would result in less-than-significant impacts to utilities and services systems, and mitigation is not required.

Under the Old Growth Redwoods Avoidance Alternative, the project would avoid development in old growth redwood habitat; this primarily includes development at the Old Growth Area and Overnight Areas opportunity zones. Thus, utility infrastructure would not be needed in these areas but would be required through the rest of the Focus Area. Construction of replacement utilities and infrastructure would be required under both this alternative and the proposed

project, and would be constructed in adherence to applicable regulations, SPRs, and General Plan guidelines intended to prevent utilities and service systems effects. This alternative would involve slightly reduced visitation, but utility demand would be similar overall under the proposed project and this alternative.

Overall, neither the proposed project nor the Old Growth Redwoods Avoidance Alternative would result in significant utility infrastructure impacts. Therefore, impacts would be **similar** when compared to the proposed project.

4.8 SUMMARY OF ALTERNATIVES EVALUATION

Table 4-1, *Comparison of Project Alternative Impacts*, compares the impact of each alternative to impacts of the proposed project. The impacts of each alternative are classified as having a reduced (↓), similar or comparable to (=), or greater (↑) level of impact when compared to the proposed project.

Table 4-1 Comparison of Project Alternative Impacts

Environmental Topic	Proposed Project [1]	Alternative A: No Project Alternative	Alternative B: Natural Preserve Alternative	Alternative C: Old Growth Redwoods Avoidance Alternative
Aesthetics	LTS	=	↓	=
Agriculture and Forestry Resources	NI	=	=	=
Air Quality	LTS	↑	↓	↓
Biological Resources	SU	↑	↓	↓
Cultural Resources	LTS	↑	↓	=
Geology and Soils	LTS	=	↓	=
Greenhouse Gas Emissions	LTS	↑	↓	↓
Hazards and Hazardous Materials	LTS	=	↓	=
Hydrology and Water Quality	LTS	↑	↓	=
Land Use and Planning	NI	=	=	=
Mineral Resources	NI	=	=	=
Noise	LTS	=	↓	↓
Parks and Recreation	LTS	=	↑	=
Population and Housing	NI	=	↑	=

Environmental Topic	Proposed Project [1]	Alternative A: No Project Alternative	Alternative B: Natural Preserve Alternative	Alternative C: Old Growth Redwoods Avoidance Alternative
Public Services	NI	=	↓	=
Transportation	LTS	↑	↓	=
Utilities and Service Systems	LTS	=	↓	=

Notes:
1. The impacts listed in this column represent the highest significance determination for each respective topic.

NI No Impact
LTS Less than Significant
LTS/M Less than Significant with Mitigation
SU Significant and Unavoidable

↓ Reduced impact in comparison to the proposed project
= Similar impact in comparison to the proposed project
↑ Greater impact in comparison to the proposed project

Table 4-2, *Ability to Meet Proposed Project Objectives*, identifies the ability of each of the project alternatives to meet the proposed project's objectives. Section 2.4, *Project Objectives,* of Chapter 2, *Project Description,* of this Draft Supplemental EIR, provides the specific supporting objectives intended to implement the overall guiding principles that are provided in Table 4-2, *Ability to Meet Proposed Project Objectives.*

Table 4-2 Ability to Meet Proposed Project Objectives

Objective	Proposed Project	Alternative A: No Project Alternative	Alternative B: Natural Preserve Alternative	Alternative C: Old Growth Redwoods Avoidance Alternative
Prioritize Forest Health	Yes	Partial	Yes	Yes
Provide Equitable, Diverse, and Evocative Visitor Experiences	Yes	Partial	No	Partial
Diversify Transportation and Access Opportunities	Yes	No	No	Partial
Practice Land Stewardship	Yes	Partial	Yes	Yes
Include Indigenous Perspectives	Yes	No	No	Yes
Promote Landscape Connectivity	Yes	Partial	Partial	Partial
Design with Reverence and Resilience	Yes	Partial	No	Yes

Objective	Proposed Project	Alternative A: No Project Alternative	Alternative B: Natural Preserve Alternative	Alternative C: Old Growth Redwoods Avoidance Alternative
Engage the Park Community and Build Partnerships	Yes	Partial	No	Yes

4.8.1 Summary of Alternative A: No Project Alternative

As shown in Table 4-1, *Comparison of Project Alternative Impacts*, the No Project Alternative would result in mostly similar impacts when compared to the proposed project. Air quality, biological resources, cultural resources, GHG emissions, hydrology and water quality, and transportation impacts would all be greater than the proposed project, and no impacts would be reduced.

As shown in Table 4-2, *Ability to Meet Proposed Project Objectives*, the No Project Alternative would not fully meet any of the project objectives. It would partially meet the objectives to prioritize forest health; provide equitable, diverse, and evocative visitor experiences; practice land stewardship; promote landscape connectivity; design with reverence and resilience; and engage the park community and build partnerships. The No Project Alternative would not meet the other two project objectives.

4.8.2 Summary of Alternative B: Natural Preserve Alternative

As shown in Table 4-1, *Comparison of Project Alternative Impacts*, the Natural Preserve Alternative would result in similar impacts related to agriculture and forestry resources, land use and planning, and mineral resources. There would be greater impacts related to parks and recreation and population and housing. All other impacts (aesthetics, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, and utilities and service systems) would be reduced when compared to the proposed project.

As shown in Table 4-2, *Ability to Meet Proposed Project Objectives*, the Natural Preserve Alternative would meet the objectives to prioritize forest health and practice land stewardship. It would partially meet the objectives to promote landscape connectivity. The Natural Preserve Alternative would not meet the other project objectives.

4.8.3 Summary of Alternative C: Old Growth Redwoods Avoidance Alternative

As shown in Table 4-1, *Comparison of Project Alternative Impacts*, the Old Growth Redwoods Avoidance Alternative would result in mostly similar impacts when compared to the proposed project. Air quality, biological resources, GHG emissions, and noise impacts would all be reduced when compared to the proposed project.

As shown in Table 4-2, *Ability to Meet Proposed Project Objectives*, the Old Growth Redwoods Avoidance Alternative would meet or partially meet all the project objectives.

4.9 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, CEQA Guidelines Section 15126.6 requires that an "environmentally superior" alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative to the proposed project that would be expected to generate the least significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative to the proposed project selected may not be the alternative to the proposed project that best meets the goals or needs of the Department. Because CEQA Guidelines Section 15126.6(c) requires an evaluation of a reasonable range of alternatives to the proposed project, the proposed project under consideration cannot be identified as the environmentally superior alternative. Additionally, in accordance with CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table 4-1, *Comparison of Project Alternative Impacts*, and discussed in Section 4.8, *Summary of Alternative Evaluation*, the Natural Preserve Alternative would reduce impacts for nearly all environmental topics (12 out of 17) and would only create greater impacts for 2 environmental topics when compared to the proposed project.

5. REPORT PREPARERS AND ORGANIZATIONS CONSULTED

This Draft Supplemental Environmental Impact Report (EIR) was prepared by the California Department of Parks and Recreation (Department) in consultation with the following organizations, consultants, and individuals.

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Karen Sinclair.....Biologist, North Coast Division

APPENDIX A:
Notice of Preparation and Initial Study



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State of California – The Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

NOTICE OF PREPARATION

of the Big Basin Redwoods State Park General Plan Supplemental Draft EIR for the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Date: June 16, 2025

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals and Organizations

Subject: Notice of Preparation of a Supplemental Environmental Impact Report to the 2013 Big Basin Redwoods State Park General Plan Environmental Impact Report (State Clearinghouse No. 2001112104) for the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Lead Agency: California Department of Parks and Recreation
PO Box 942896
Sacramento, CA 94296-0001
Contact: Will Fourt

NOTICE IS HEREBY GIVEN that the California Department of Parks and Recreation (the Department), as the lead agency, is preparing a Supplemental Environmental Impact Report (EIR) to the 2013 Big Basin Redwoods State Park General Plan EIR (State Clearinghouse No. 2001112104) (2013 General Plan EIR) for the proposed Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan amendments (proposed project). The Department has prepared this Notice of Preparation (NOP) pursuant to Section 15082 of the California Environmental Quality Act (CEQA) Guidelines. This NOP informs agencies and the public that an EIR is being prepared to address potential impacts resulting from approval and implementation of the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan amendments. Publication of this NOP provides an opportunity for public comments on the potential environmental impacts to be addressed in the Supplemental EIR. Additional information about the proposed project is available at the project's website: https://reimaginingbigbasin.org/facilities-management-plan/. The 2013 General Plan and EIR are available online at the following link: https://www.parks.ca.gov/?page_id=21486.

As mandated by State law, your response must be sent at the earliest possible date, but no later than the close of the 30-day NOP review period at **5:00 p.m. on Friday, July 18, 2025**. If you submit comments on the scope of the Supplemental EIR, you will automatically be added to the distribution list for future notices about the proposed project. Please include ***"Big Basin Redwoods State Park General Plan Supplemental EIR"*** as the subject and submit comments via the mailing address listed above or email Reimagining.BigBasin@parks.ca.gov. Please note that all submitted correspondence and comments become part of the public record.

SCOPING MEETING

State Parks will hold a **virtual** scoping meeting at **6:00 p.m. on Thursday, July 10, 2025**, to provide additional information about the Big Basin Redwoods State Park Facilities Management Plan, General

Plan amendments, and Supplemental EIR process and give interested parties an opportunity to comment on the scope and potential environmental effects of the project to be analyzed in the Supplemental EIR. The meeting can be attended remotely via the Zoom platform at the following link: https://us06web.zoom.us/j/86539841770?pwd=W1rHl93J2zpiuUuTzGxL7sExZaphk0.1

Meeting ID: 865 3984 1770

Passcode: 631900

PROJECT LOCATION

Big Basin Redwoods State Park is in the western, coastal portion of the Santa Cruz Mountains between State Route (SR) 1 and SR 9, which both run north to south. The majority of the park is in Santa Cruz County and a small northern portion is in San Mateo County, as shown in Figure 1, *Regional Vicinity*. The park is surrounded by other parks and open space with communities along SR 9. Big Basin Redwoods State Park encompasses approximately 18,200 acres; however, the proposed project focuses specifically on areas along SR 236 and Sky Meadow Road encompassing approximately 5,500 acres. This area in the eastern part of the park is referred to as the Focus Area and is the location of the proposed project (see Figure 2, *Focus Area*).

PROJECT DESCRIPTION

The proposed project includes amendments to the Big Basin Redwoods State Park General Plan and the adoption of the Reimagining Big Basin Redwoods State Park Facilities Management Plan. The proposed General Plan amendments include text changes to provide clarity in consistency of the 2013 General Plan with the facilities envisioned in the proposed Facilities Management Plan and would expand the park boundary to include parcels that the Department is in the process of acquiring to include in the Big Basin Redwoods State Park. The proposed Facilities Management Plan is a planning document designed to guide the stewardship, management, and use of existing and future facilities consistent with the 2013 General Plan. It would provide guidance and direction for implementing the goals and objectives of the 2013 General Plan EIR, the 2022 Reimagining Big Basin Vision Summary, and the 2023 Big Basin Redwoods State Park Cornerstone Document. Additionally, the proposed project would guide the rebuilding of facilities lost in the 2020 CZU Lightning Complex fire that burned 97 percent of the park and most of its facilities.

The proposed project includes proposed facilities and improvement guidance for 19 identified sites in the five proposed zones in the Focus Area. The sites either hosted pre-fire facilities or have otherwise been identified as suitable facility locations based on sensitive habitat avoidance, access considerations, and slope stability. Facilities included in the proposed project include visitor-serving facilities such as picnic areas, amphitheaters, restrooms, interpretation areas, information desks, a café, and camp stores; overnight facilities like camp sites and cabins; tribal facilities like cultural interpretation sites and centers, outdoor workspaces, and lodging; transportation-related facilities like parking lots, electric vehicle chargers, and shuttle infrastructure; utilities infrastructure like water distribution and storage, wastewater collection and treatment, stormwater, electrical and solar facilities, and

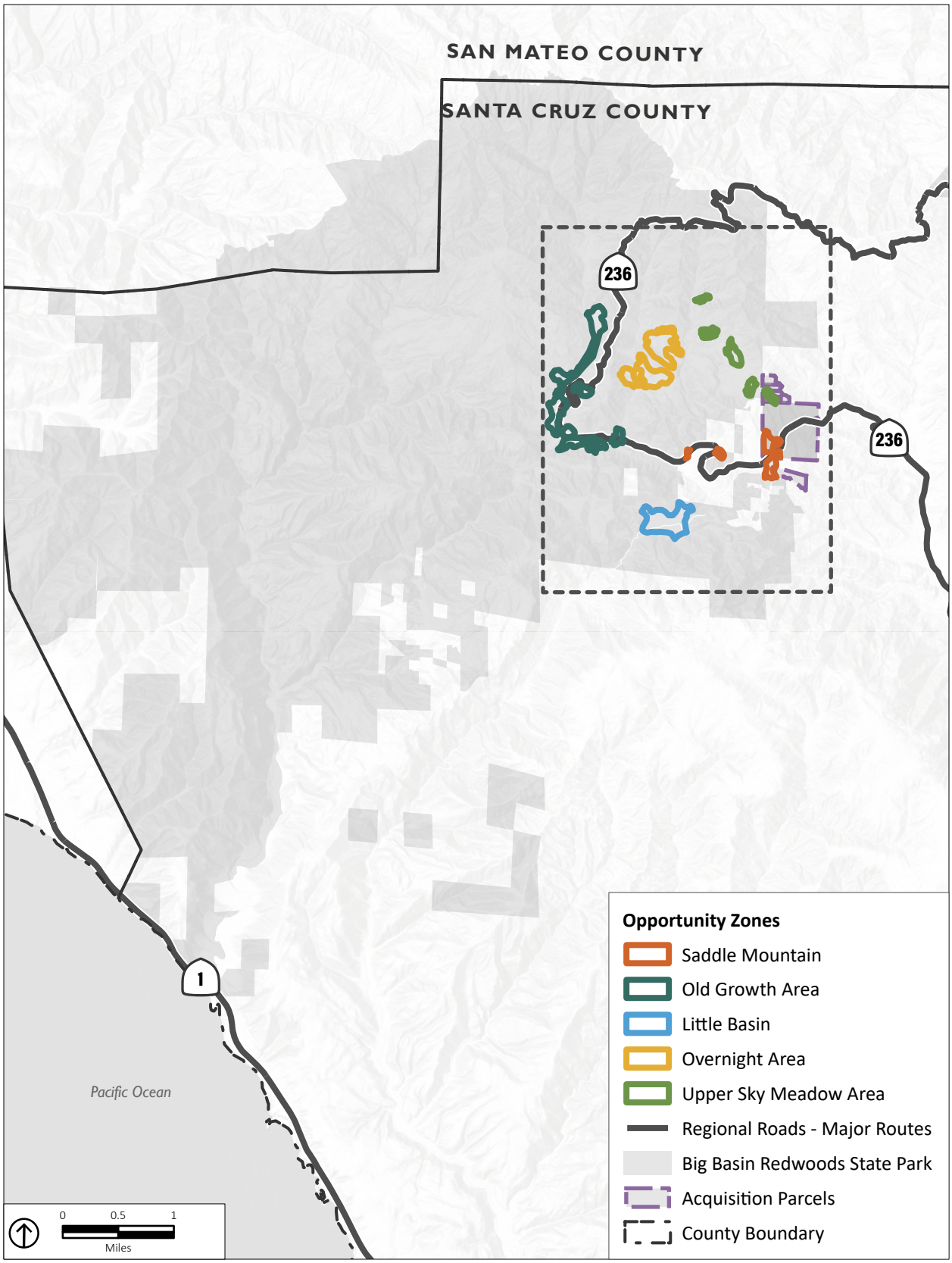
telecommunications; administrative facilities like offices, maintenance shops, and storage; and staff residences. All these facilities would be consistent with the 2013 General Plan and proposed General Plan amendments. Focus Area-wide proposed project components include road and circulation improvements, the introduction of a shuttle program throughout the Focus Area, utility upgrades and replacement, habitat restoration, and an improved emergency response and evacuation plan.

POTENTIAL ENVIRONMENTAL EFFECTS

The Supplemental EIR will determine whether implementation of the proposed project may result in environmental impacts that are new or more severe than those identified in the 2013 General Plan EIR and will use the same significance criteria as used in the 2013 General Plan EIR. CEQA requires that an EIR evaluate alternatives to a project that could reasonably attain the project objectives while reducing any significant impact of the project, as well as considering the "No Project" Alternative (i.e., what could happen if the project were not approved). Attached is an Initial Study comparing the potential environmental effects of the proposed project with those identified in the 2013 General Plan EIR. Based on the analysis completed as part of the attached Initial Study, **biological resources** is the only resource area that will be addressed in the Supplemental EIR.

ATTACHMENTS:

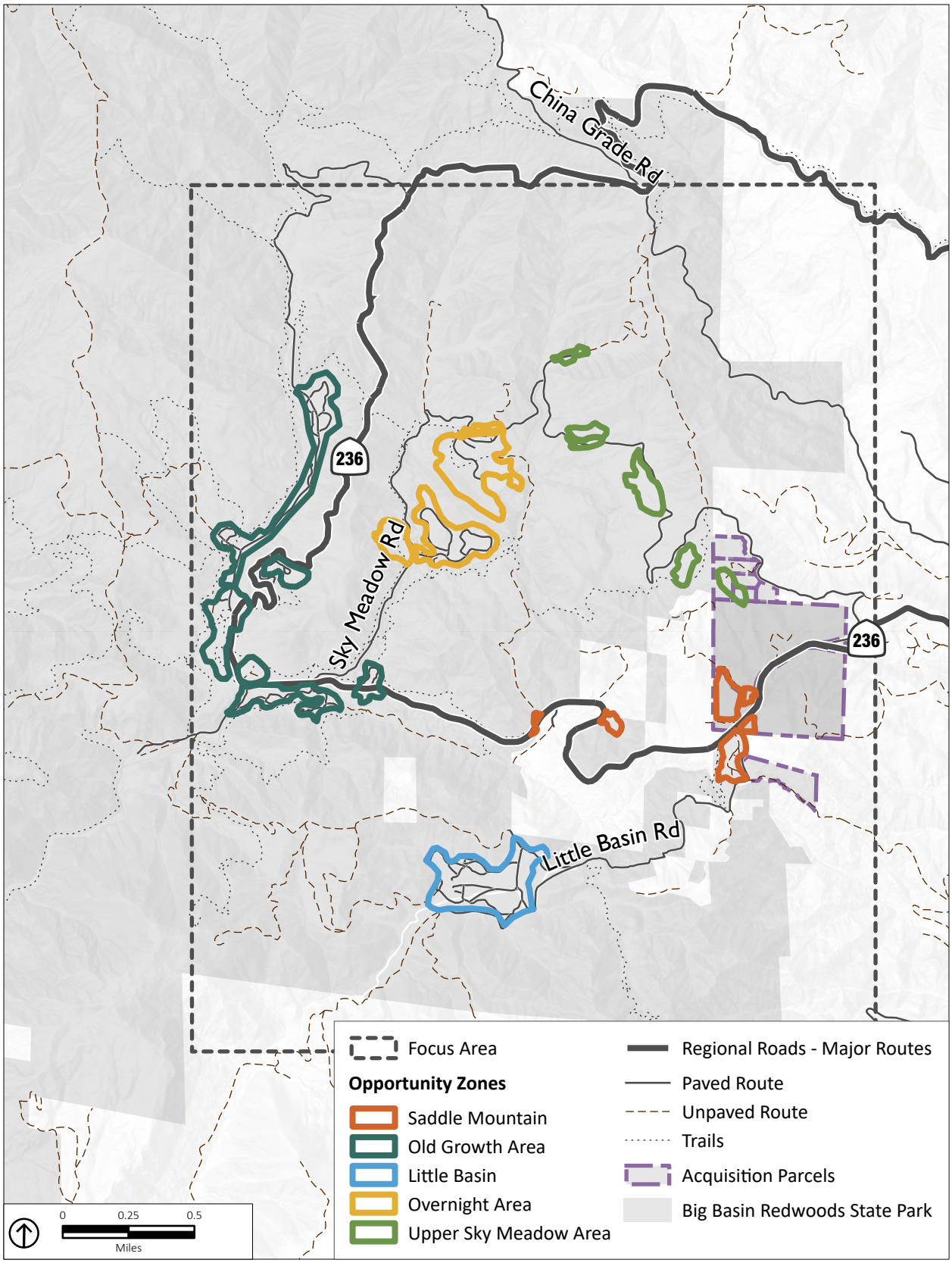
- Figure 1: Regional Vicinity
- Figure 2: Focus Area
- Initial Study, Available at the following locations:
    - https://ceqanet.lci.ca.gov/Project/2001112104
    - Santa Cruz District Headquarters
      Henry Cowell Redwoods State Park
      303 N Big Trees Road
      Felton, CA 95018
    - Boulder Creek Library
      13390 W Park Avenue
      Boulder Creek, CA 95006



Source: California State Parks, 2025; PlaceWorks, 2025

SEE CHAPTER 2, *PROJECT DESCRIPTION*, OF THE DRAFT SUPPLEMENTAL EIR FOR AN UPDATED FIGURE.

Figure 1. Regional Vicinity



Source: California State Parks, 2025; PlaceWorks, 2025

SEE CHAPTER 2, *PROJECT DESCRIPTION*, OF THE DRAFT SUPPLEMENTAL EIR FOR AN UPDATED FIGURE.

Figure 2. Focus Area

June 2025 | Initial Study

REIMAGINING BIG BASIN REDWOODS STATE PARK FACILITIES MANAGEMENT PLAN AND GENERAL PLAN AMENDMENTS

for the California Department of Parks and Recreation

Prepared for:

California Department of Parks and Recreation
Contact: Will Fourt, Senior Park and Recreation Specialist
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INITIAL STUDY

Project: **Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments**

Lead Agency: California State Parks

Availability of documents: The Initial Study is available for review at:

Santa Cruz District Headquarters
Henry Cowell Redwoods State Park
303 N Big Trees Road
Felton, CA 95018

Boulder Creek Library
13390 W Park Avenue
Boulder Creek, CA 95006

Project Description:

The proposed project includes amendments to the Big Basin Redwoods State Park General Plan and the adoption of the Reimagining Big Basin Redwoods State Park Facilities Management Plan (BBFMP), including:

- Guiding the rebuilding of facilities lost in the 2020 CZU Lightning Complex fire that burned 97 percent of the park and most of its facilities.
- Guiding the stewardship, management, and use of existing and future park facilities according to the proposed BBFMP.
- Amending General Plan text to provide clarity in consistency of the 2013 Big Basin Redwoods State Park General Plan with the facilities envisioned in the proposed BBFMP.
- Expanding the park boundary to include parcels that the Department is in the process of acquiring to include in Big Basin Redwoods State Park.

INITIAL STUDY

A copy of the Initial Study is attached. Questions or comments regarding this Initial Study may be addressed to:

Will Fourt
Santa Cruz District
California State Parks
303 N Big Trees Road
Felton, CA 95018
EMAIL: reimagining.bigbasin@parks.ca.gov

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (Department or State Parks) has independently reviewed and analyzed the Initial Study for the proposed project and finds that these documents reflect the independent judgment of the Department.

6.16.2025

Chris Spohrer
District Superintendent

Date

4-16-2025

Linda Hitchcock
Environmental Coordinator

Date

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APPENDICES

Appendix A: Standard Project Requirements
Appendix B: Noise
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SOURCES

In addition to the technical appendices, all documents cited in this report and used in its preparation are hereby incorporated by reference in this Initial Study. Copies of documents referenced herein are available for review at Santa Cruz District Headquarters, Henry Cowell Redwoods State Park, 303 N Big Trees Road, Felton, CA 95018.

1. INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study for the Reimagining Big Basin Redwoods State Park Facilities Management Plan (BBFMP) and General Plan amendments (herein together referred to as the "proposed project") for Big Basin Redwoods State Park (BBRSP), prepared by the California Department of Parks and Recreation (Department) to determine if the proposed project may have a significant effect on the environment. This Initial Study was prepared pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21000 et seq.) and CEQA Guidelines (California Code of Regulations Sections 15000 et seq.). The BBFMP builds on the 2013 Big Basin Redwoods State Park General Plan (2013 General Plan) and Environmental Impact Report (EIR),[1] the 2022 Reimagining Big Basin Vision Summary,[2] and the 2023 Big Basin Redwoods State Park Cornerstone Document.[3] The proposed BBFMP would implement a management plan for facilities in the BBRSP to provide guidance and direction for implementing the goals and objectives of the three documents mentioned above.

Pursuant to CEQA Guidelines Section 15051, the Department is the lead agency for the proposed project. Pursuant to Section 15063, *Initial Study*, of the CEQA Guidelines,[4] an Initial Study can be used to focus an environmental impact report (EIR) on the effects determined to be significant. As described in the Notice of Preparation (NOP), the Department is preparing a Supplemental EIR to the 2013 Big Basin Redwoods State Park General Plan Environmental Impact Report (State Clearinghouse No. 2001112104) (2013 General Plan EIR), which covered the entirety of BBRSP; however, the proposed project focuses specifically on areas along Highway 236 and Sky Meadow Road, including acquisition parcels. This area in the eastern portion of the park is referred to as the Focus Area and is the location of the proposed project, as shown in Figure 2 in the Notice of Preparation (NOP). This Initial Study documents which potential effects of the proposed project are covered by the 2013 General Plan EIR pursuant to

[1] The Big Basin Redwoods State Park General Plan and Environmental Impact Report was completed in 2013. It is the foundational planning document for long-term planning at the BBRSP.

[2] The Reimagining Big Basin Visioning Process was conducted in 2021-2022 and brought together insights from the public, stakeholders, and Tribal representatives together in a high-level vision and set of guiding principles to inform planning decisions for rebuilding of facilities at the park.

[3] The Big Basin Redwoods State Park Cornerstone Document was completed in 2023 and incorporates insights from the Reimagining Big Basin Vision Summary and the effects of the 2020 CZU fire that substantiate relevant revisions and updates to the Park's General Plan.

[4] The CEQA Guidelines are found in California Code of Regulations, Title, 14, Section 15000 et seq.

CEQA Guidelines Section 15168(c), which states that subsequent activities in a program, "must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared."

Pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR or negative declaration shall be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

- Substantial project changes are proposed that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified or the negative declaration was adopted shows any of the following:
  - The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
  - Significant effects previously examined will be substantially more severe than identified in the previous EIR.
  - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
  - Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Where none of the conditions specified in CEQA Guidelines Section 151625 are present, the lead agency must determine whether to prepare a subsequent EIR or whether no further CEQA documentation is required (CEQA Guidelines Section 15162[b]). A Supplemental EIR, rather than a Subsequent EIR, is appropriate where only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation, and the

[5] See also Section 15163 of the CEQA Guidelines, which applies the requirements of Section 15162 to Supplemental EIRs.

Supplemental EIR need contain only the information necessary to make the previous EIR adequate for the project as revised (CEQA Guidelines Section 15163).

This Initial Study summarizes the conclusions of the 2013 General Plan EIR and discusses whether the conditions described in CEQA Guidelines Section 15162 would occur. This Initial Study identifies the significance criteria and environmental topics for which the proposed project would not create any of the conditions described in CEQA Guidelines Section 15162; all other criteria and topics will be addressed in the Supplemental EIR for the proposed project. Because the proposed project is being compared to the 2013 General Plan EIR, the 2013 CEQA Guidelines Appendix G, *Environmental Checklist*, questions are used to guide the following analysis.

Due to the unique circumstances at BBRSP, the environmental analysis for the proposed project uses a split baseline. When evaluating impacts associated with site occupancy and visitor levels, a historical, pre-fire baseline is used. When evaluating impacts to site conditions, current, post-fire conditions are used as the baseline. Use of a historical baseline and more than one baseline is permissible under Section 15125(a)(1) of the CEQA Guidelines, which states:

> "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record."

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is the California Department of Parks and Recreation (Department or State Parks). The contact person for the lead agency regarding specific project information is:

Will Fourt
Santa Cruz District
California State Parks
303 N Big Trees Road
Felton, CA 95018
EMAIL: reimagining.bigBasin@parks.ca.gov
(831) 335-6318

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed project. This Initial Study summarizes the conclusions of the 2013 General Plan EIR and discusses whether the conditions described in CEQA Guidelines Section 15162 would occur. This Initial Study identifies the significance criteria and environmental topics for which the proposed project would not create any of the conditions described in CEQA Guidelines Section 15162; all other criteria and topics will be addressed in the Supplemental EIR for the proposed project.

This document is organized as follows:

- **Chapter 1 - Introduction.** This chapter provides an introduction to the project and describes the purpose and organization of this document.
- **Chapter 2 - Project Description.** This chapter describes the reasons for the project, scope of the project, and project objectives.
- **Chapter 3 - Environmental Checklist.** This chapter identifies the significance of potential environmental impacts as compared to the 2013 General Plan EIR, explains the environmental setting for each environmental issue, and evaluates if the potential impacts identified in the CEQA Environmental (Initial Study) Checklist warrant review in the Supplemental EIR.

1.4 SUMMARY OF FINDINGS

Chapter 3, *Environmental Checklist,* of this document contains the Environmental (Initial Study) Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project. The sections in Chapter 3, *Environmental Checklist,* indicate the baseline conditions considered for each environmental topic.

When compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR for the following issues: aesthetics, agricultural resources, air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

For biological resources, the uncertainty about the marbled murrelet (*Brachyramphus marmoratus*), as described in the 2013 General Plan EIR, remains. As such, the Draft Supplemental EIR will further evaluate this significance criterion related to biological resources.

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2. PROJECT DESCRIPTION

This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of BBRSP; components of the proposed BBFMP and General Plan amendments; and required permits and approvals. Additional descriptions of the environmental setting discussions are included in the sections of Chapter 3, *Environmental Checklist*, by topic.

2.1 PROJECT SITE LOCATION AND CHARACTERISTICS

PROJECT LOCATION

BBRSP is in the western, coastal portion of the Santa Cruz Mountains between Highways 1 and 9, which both run north to south, with most of the park in Santa Cruz County and a small northern portion in San Mateo County, as shown in Figure 1, *Regional and Vicinity Map*. The park is surrounded by other parks and open space with communities along Highway 9. Pescadero Creek Park and Portola Redwoods State Park are north; Castle Rock State Park and San Lorenzo Headwaters Natural Preserve are northeast; the neighborhoods along Highway 9 are east; Henry Cowell Redwoods State Park is southeast; Swanton is southwest; Año Nuevo State Park and State Marine Conservation Area, Highway 1, and the Pacific coastline is west; and Butano State Park is northwest of BBRSP. Most of the land between BBRSP and the other state parks is undeveloped and privately owned for timber production. Nearby communities include San Lorenzo Park, Riverside Grove, Redwood Grove, Boulder Creek, Brookdale, Ben Lomond, Glen Arbor, and Felton along Highway 9 and Swanton along Highway 1. Highway 236 (Big Basin Way) is an 18-mile C-shaped loop route that connects to Highway 9 and provides access to BBRSP from the east. There is no connecting road through the park for public vehicle access between Highway 1 and Highway 236. BBRSP is approximately 20 miles southwest of the City of San José, approximately 20 miles north of the City of Santa Cruz, and approximately 40 miles south of the City and County of San Francisco.

Most of the park is made up of old-growth and previously logged coast redwood forests mixed with other conifers, oaks, and chaparral. BBRSP encompasses approximately 18,200 acres (28.44 square miles); however, the proposed project focuses specifically on areas along Highway 236 and Sky Meadow Road encompassing approximately 5,500 acres. This area in the eastern portion of the park is referred to as the Focus Area and is the location of the proposed project; this area is mapped in Figure 2, *Focus Area Map.*

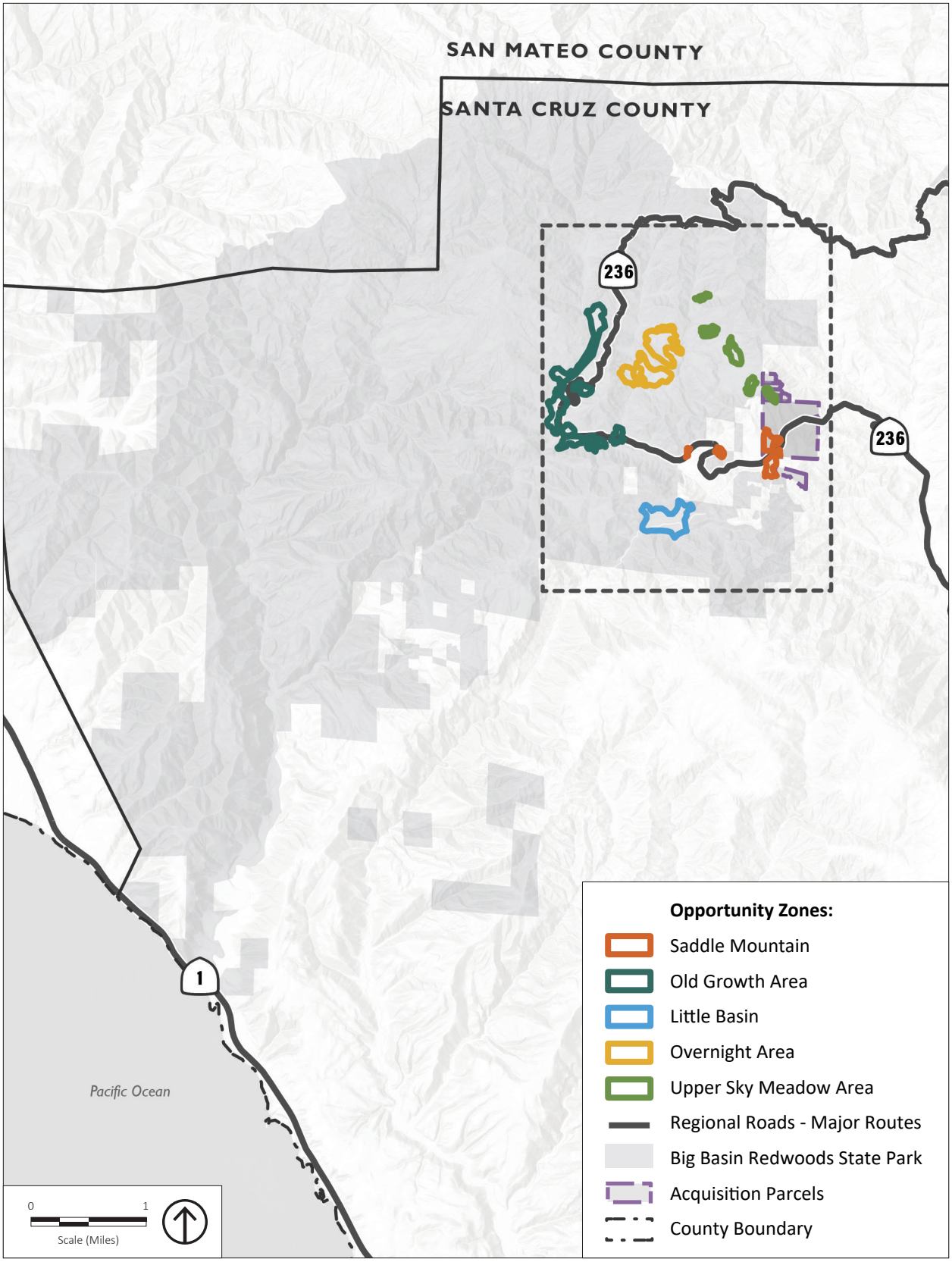
The Focus Area includes seven parcels planned for acquisition in the Saddle Mountain area. State Parks currently leases these properties from Sempervirens Fund and is pursuing

acquisition of these parcels individually. Consistent with the 2013 General Plan, State Parks will continue to consider acquiring easements or acquisition of additional properties in the Saddle Mountain area, if available from willing sellers, to accommodate facilities development, highway or trail improvements, and/or to ensure long-term compatibility between park-related activities, resource protection, and adjacent land uses (General Plan Guideline Highway 236 – 6). The acquisition of these parcels will undergo separate CEQA evaluation and the proposed project does not include the acquisition of these properties. However, the proposed BBFMP includes recommendations and plans for facilities to be developed and maintained on these properties if and when they are acquired, and the proposed General Plan amendments include the expansion of the park boundary to include these parcels once acquired.

After these parcels are acquired, the park size will be 18,400 acres (28.75 square miles). The acquisition parcels are further described in Section 2.1, *Project Site Location and Characteristics* under *Park Zones*.

The park contains two distinct areas, the uplands and the coastal areas. Elevations within the park range from sea level to over 2,000 feet. Three watersheds—Waddell Creek, East Waddell Creek, and Scott Creek—form the dominant landscape features of the park. Approximately 6,300 acres within BBRSP is designated State wilderness, known as West Weddell Creek State Wilderness. The climate of the Santa Cruz Mountains varies over relatively short distances because of the diverse topography, although the proximity of the Pacific Ocean moderates some climate extremes. The park is at the southern end of the Marine West Coast Climatic Zone and exhibits some characteristics of the Mediterranean Climatic Zone. Summers are dry and winters are wet, with precipitation beginning in October and continuing through April.

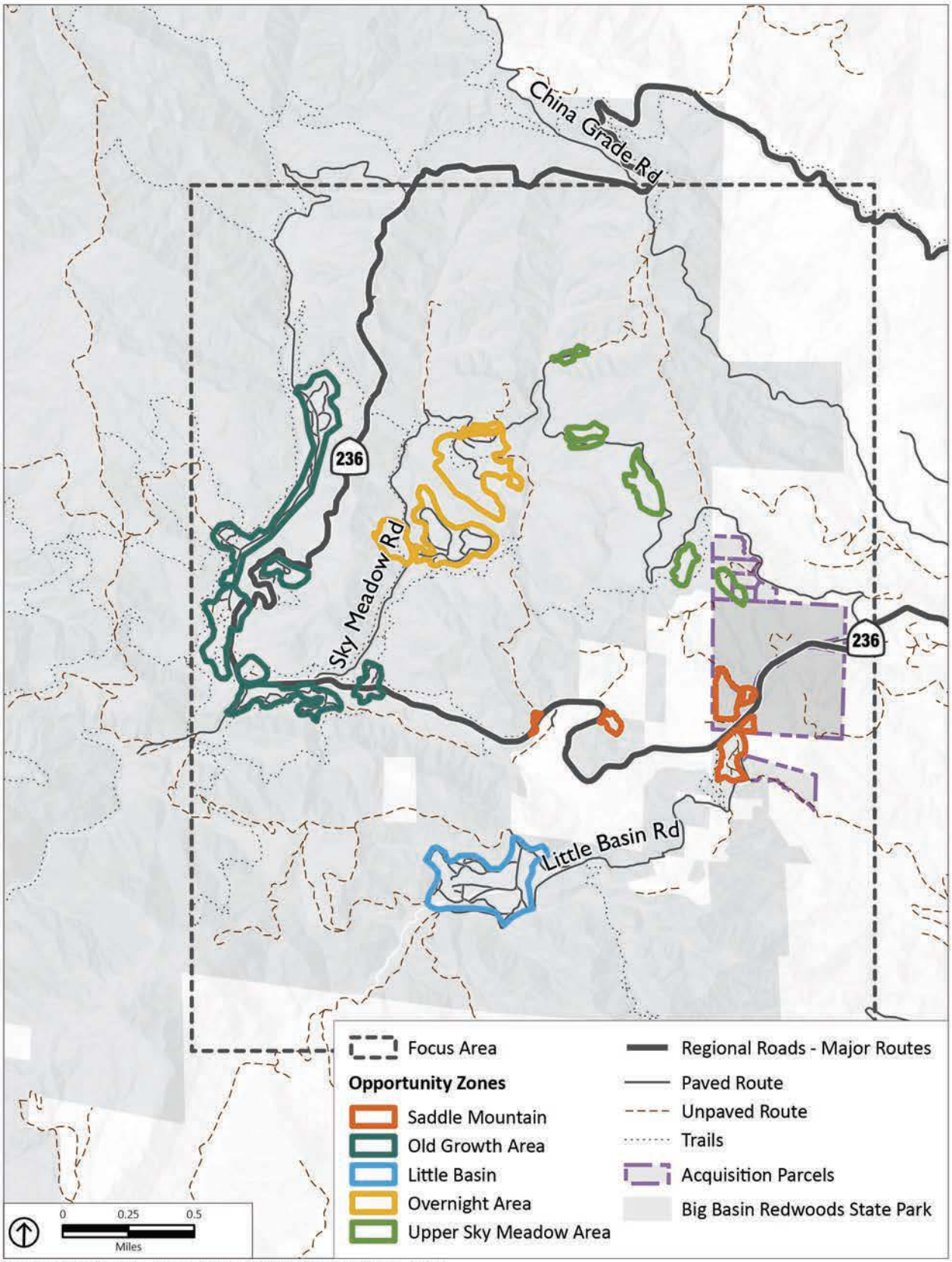
PROJECT DESCRIPTION



Source: California State Parks, 2025; PlaceWorks, 2025.

Figure 1
Regional and Vicinity Map

PROJECT DESCRIPTION



Source: California State Parks, 2025; PlaceWorks, 2025

Figure 2. Focus Area Map

LAND USE DESIGNATIONS

The majority of the BBRSP is in Santa Cruz County, with a General Plan land use designation of Parks, Recreation, and Open Space (O-R), and a zoning of Parks, Recreation, and Open Space (PR).[6] The portion of the BBRSP in San Mateo County is in the Timberland Preserve Zone (TPZ).[7]

EXISTING SITE CONDITIONS AND SITE HISTORY

In 2020, the CZU Lightning Complex fire (CZU fire) burned approximately 86,500 acres in Santa Cruz and San Mateo Counties and 97 percent of BBRSP and its facilities. Nearly all historic buildings and structures within BBRSP were destroyed, including the visitor center and campfire center amphitheater, which was built by the Civilian Conservation Corps (CCC) as a part of the 1930s New Deal programs. All overnight facilities, including campground infrastructure (sewer/water) and tent cabins were lost. At least 47 pedestrian bridges, 6 vehicular bridges, and many other trail structures were destroyed. The park was closed to the public after the CZU fire until partially reopening for limited day-use access with temporary visitor facilities in summer 2022.

Prior to the CZU fire, the park received an average of 20,000 visitors a month, offered a variety of recreation, and accommodated both campers and day users. Visitor activity was focused primarily in the Headquarters area, in the eastern part of the park, along Highway 236. Here visitors could view interpretive exhibits, attend naturalist programs or events, and visit the camp store, as well as access trails and campgrounds.[8]

Immediate recovery from the fire focused on stabilizing the area, clearing hazardous dead trees along roads and trails, and removing the burn debris and associated contaminated soils from all damaged facility areas. Many coast redwoods (*Sequoia sempervirens)*, including much of the old growth, are still living and sprouting the next iteration of its forest. The wildlife communities supported by the coastal redwood ecosystem are also returning to BBRSP. Thus, the project area is still mostly burned but cleaned up with some new growth and minimal facilities.

[6] County of Santa Cruz Community Development and Infrastructure, GISWeb, https://gis.santacruzcounty.us/gisweb/, accessed January 23, 2025.

[7] County of San Mateo Planning and Building, "Find My Zoning, Parcel Map, and Other Property Info," Find My Zoning, Parcel Map, and Other Property Info, http://planning.smcgov.org/find-my-zoning-parcel-map-and-other-property-info, accessed January 23, 2025.

[8] California Department of Parks and Recreation. May 2013. *Big Basin Redwoods State Park Final General Plan and Environmental Impact Report.*

Due to the unique circumstances at BBRSP, the environmental analysis in this EIR uses a split baseline wherein a pre-fire baseline is used for the evaluation of recreational and visitor impacts and current, post-fire conditions are used as the baseline for the evaluation of impacts to site conditions.

The following sections detail the key use areas of BBRSP prior to the CZU fire and describe the facilities that survived the CZU fire.

PARK ZONES

Saddle Mountain

Saddle Mountain is a 17.48-acre property on Highway 236 approximately four miles southeast of the Headquarters area. This area included a former motel and restaurant used for environmental education camps. Facilities included a 2,937-square-foot dining hall/kitchen main building, 12 cabins, a swimming pool with two bath houses, a large open grassy meadow, a campfire center, a small amphitheater, a community garden, a group picnic area, an archery range, trails, parking areas, a 1,577-square-foot manager's residence, a 3,240-square-foot single-story staff residence building, an office trailer, a 693-square-foot maintenance garage, and utilities infrastructure.

The 2020 CZU fire destroyed the residence, trailer, garage, and seven of the cabins. The remaining structures remain and are being used for interim operations and staff housing. After the fire, an interim fenced maintenance yard and vehicle storage area were constructed and used to operate the park, as well as three site host hookups for temporary mobile staff housing. The former dining hall/kitchen building is used as an interim operations building with staff offices and a training space.

A temporary shuttle parking area and entry kiosk have been constructed at Saddle Mountain. On summer weekends, a pilot shuttle program brings visitors who park at the overflow parking area at Saddle Mountain to the Main Day Use area.

The Saddle Mountain Area also includes the acquisition parcels, including the Norabella site, Potter property, and the Gatehouse and Upper Blooms sites. Norabella is immediately adjacent to Saddle Mountain and is a 153-acre property on both sides of Highway 236. Old Big Basin Road is a private road that goes through the Norabella site on the north side of Highway 236 and goes to several private residences that have access only by Old Big Basin Road through the Norabella site. Norabella has second-growth redwood and mixed-oak woodland areas and did not have any structures prior to the CZU fire.

Upper Blooms is an area along Highway 236 west of Saddle Mountain, which has never had park facilities or public access. A livestock corral was located at this site but has not been used since it has been part of the BBRSP. This area has never been open to the public.

The Gatehouse was a former residence and garage on Highway 236 at the original entrance to the park boundary. The residence and surrounding infrastructure were lost in the CZU fire.

Old Growth Area

The BBFMP refers to the Old Growth Area, which includes the former Park Headquarters (referred to as the Main Day-use Area in the BBFMP), as described in the 2013 General Plan. The Headquarters area was in the eastern portion of the park in an area accessed by Highway 236. This area was part of the original 3,800-acre park acquisition and, due to relatively flat terrain, ease of access, and location within old-growth redwoods, it contained the majority of recreational facilities in the park. This area has been the focus of the park's recreation since its inception and includes the Headquarters Building, park store, Nature Museum, and picnic areas. Activities in the Headquarters area included picnicking, camping, hiking, horseback riding, biking, auto touring, study of the park's natural and cultural resources, staff housing and administrative uses, and interpretive and maintenance facilities. Day-use parking lots were situated near individual and clustered picnic sites. A limited number of parking areas were also available for group or oversized vehicle parking, or a few horse trailers.

Near the group campgrounds, described further in Section 2.1, *Project Site Location and Characteristics* under, *Overnight Areas,* was an approximately 600-seat campfire center in the Headquarters Area that was originally constructed in 1911 and reconfigured by the CCC in 1936. The center consisted of wooden benches constructed from large redwood logs situated in an amphitheater configuration facing a covered stage and stone fire pit.

Before the CZU fire, BBRSP had 13 campgrounds (including Little Basin), containing a total of 233 campsites. Campground infrastructure varied with each campground and ranged from shower facilities and laundry facilities to pit toilets with no running water. With the exception of campground host sites, there were no utility hook-ups in the park. The following campgrounds were found in the Old Growth Area:

- Blooms Creek Campground with 52 campsites directly off Highway 236
- Sempervirens Campground with 32 campsites off Highway 236 from the south
- Jay, Trail Camps with 6 campsites and staff housing located off Highway 236 from the south
- Sequoia Group Camp with 2 campsites northwest of the Headquarters building

The Old Growth Area also contained the North Escape Road picnic areas and day-use parking along North Escape Road before the fire. Picnic areas included restrooms, parking, and stone barbecues and included sites along North Escape Road and Gazos Road.

The Old Growth Area also includes the Redwood Loop Trail and campfire center. The Redwood Loop Trail was damaged in the fire but reopened with interim trail access in 2022. The campfire center was lost in the fire but some of the log benches remain, and the area has been open to the public since July 2022.

After the CZU fire, a temporary kiosk and visitor center have been placed in the Main Day-Use area to allow visitors to access a small part of the park as it reopens after the fire. Parking has been limited to the front parking areas inside the kiosk with about 75 parking spaces available. A parking reservation system has been implemented, and visitors can get a guaranteed parking space by making a reservation online before arriving at the park. When the parking areas are full, visitors are not able to access the park without a reservation and vehicles are often turned away on weekends.

Little Basin

Little Basin is a 535-acre property that contained a 40-acre central meadow area, a 150-acre developed campground area with several group-oriented recreation facilities, and 345 acres of scenic woodlands and coast redwoods. The Little Basin campground included tent sites, cabins, and a group camping area that accommodated 50 campers. Each campsite was equipped with a charcoal-burning barbeque grill, a table with benches, a food locker, and a wood-burning fire pit. Recreational facilities included a tennis court, basketball court, baseball field, children's play structures, and game room. A central recreational/conference hall, bandstand, large outdoor kitchen, and picnic area/amphitheater provide space for large group gatherings. Centrally located on the property was an operations center that included a two-story, 4,100-square-foot residence, office and workshop, and a five-stall maintenance garage.

All facilities were burned in the CZU fire and there has been no public access to Little Basin since the fire.

Overnight Areas

The areas described as the Overnight Areas in the BBFMP include the Huckleberry, Wastahi, and Lower Sky Meadow Campgrounds and the Lower Sky Meadow residential area.

The following campgrounds were found in the overnight areas prior to the CZU fire:

- Huckleberry Campground with 35 campsites and 37 tent cabins off Sky Meadow Road
- Wastahi Campground with 27 campsites off Sky Meadow Road
- Sky Meadow Group Camps with 2 campsites off Sky Meadow Road

All facilities, except one residential structure at Lower Sky Meadow, were lost in the CZU fire. Since the fire, these areas have been closed to the public.

Upper Sky Meadow Area

The areas described in the Upper Sky Meadow Area in the BBFMP include the Rogers Road site, Upper Sky Meadow, the Lodge Road area, and acquisition parcels that are on Lodge Road near Saddle Mountain.

The Rogers Road site was the location of the maintenance yard for BBRSP and a staff residence. The area was mostly paved and covered with larger structures used for operations and maintenance activities prior to the fire. All structures were lost in the CZU fire and the area has been closed to the public since the fire.

Upper Sky Meadow was a staff residential area above Rogers Road on Lodge Road. Upper Sky Meadow was the historic site of the CCC camp, and some remnants of the staircases for the camp remain. All structures were lost in the CZU fire and there has been no public access to the site since the fire.

The Lodge Road site is along Lodge Road above Upper Sky Meadow and is a second growth redwood forest area with former road and trail uses. There are no structures or recreational amenities currently at the site.

ROADS AND CIRCULATION

BBRSP contains State highways, County-maintained roads, and State Parks–maintained roads. As described in Section 2.1, *Project Site Location and Characteristics* under *Project Location*, Highway 236 bisects the park and provides the main access from Highway 9, east of the BBRSP. Highway 1 provides access to the western part of BBRSP.

China Grade Road connects the northern and southern routes of Highway 236 and is an additional access route into the eastern portion of BBRSP. China Grade Road is not considered a major access route for park visitors due to the steep terrain and narrow road conditions. Lodge Road, which connects to the southern route of Highway 236, provides additional access to the eastern portion of the park, and, prior to the CZU fire, was primarily used by park staff to access park residences and maintenance facilities. North Escape Road connects to Highway 236 at the former Headquarters area and previously provided access to trails and campsites in the northern part of BBRSP. Gazoz Creek Road, connected to North Escape Road, provided east to west access through the main area of BBRSP.

Visitor circulation in the park prior to the CZU fire revolved primarily around the visitor facilities and old-growth redwood forest in the former Headquarters area and at the beaches and interpretive facilities found at Rancho del Oso. Parking was available in the former Headquarters area, in day-use parking lots, and along North Escape and Gazos Creek Roads. The Santa Cruz Metropolitan Transit District also provided seasonal bus service to the Big Basin Headquarters area from the Metro Transit Center in downtown Santa Cruz.

UTILITIES

Many utilities at BBRSP were constructed in the 1930 to 1950s. However, most of the aboveground facilities were damaged in the CZU fire.

Prior to the CZU fire, water collection and treatment for the former Headquarters area was served by an on-site system. Water is collected at Sempervirens Reservoir, which was created in 1952 by damming Sempervirens Creek, and piped to a water treatment plant located 1,000 feet downstream. The on-site water system also provided water to Little Basin and Upper Sky Meadow Area. The park's water system was damaged in the fire and improvements—including replacing the treatment plant building, storage, distribution piping, and pump stations—are needed. Saddle Mountain has its own water system supplied by two low-yielding wells on-site and this water system currently serves the site.

A park-wide sanitary sewer collection system was used in BBRSP with a centralized wastewater treatment plant at the southwestern side of the Focus Area. The system consisted of approximately 25,000 linear feet of 6- and 8-inch sanitary sewer segments. A park-wide wastewater system evaluation report was completed in 2001 that recommended a phased upgrade of the wastewater collection system. Thus, some individual segments in the wastewater collection system were rehabilitated on an as-needed basis but no comprehensive upgrade of the entire system has been undertaken since prior to 2001. The sanitary sewer system in the park was damaged in the fire, further necessitating rehabilitation of the system, including replacing the wastewater treatment facility and replacing or repairing most of the existing collection sewer piping, manholes, and lift stations.

BBRSP also includes a series of culverts and roadside ditches to support stormwater drainage. Some of these stormwater features are still functional or were replaced after the fire, and some were damaged in the fire and need to be repaired or replaced.

Pacific Gas and Electric Company (PG&E) provides electricity to the park through a system of overhead and underground utility lines. Most of PG&E's overhead lines were destroyed in the fire. PG&E has been replacing power lines in the Focus Area and they are now primarily underground. Propane tanks provide gas to all facilities requiring heat or heated water. AT&T provided telephone service in the park through overhead lines, which were all lost or damaged in the fire.

VISITATION

BBRSP is open seven days a week. According to the 2013 General Plan, before the CZU fire, visitation including paid day-use and overnight camping averaged about 224,394 visitors per year from 1999 to 2011. The park was closed due to the CZU fire from August 2020 to July 2022. Since July 2022, only a small day-use area has been open to public access and there has been no camping in the park. From June 2023 through May 2024, there were 74,376 visitors to BBRSP.

2.2 PLANNING BACKGROUND

As previously described, the proposed BBFMP builds on the 2013 General Plan, the 2022 Reimagining Big Basin Vision Summary, and the 2023 Cornerstone Document. Each of these three documents is described below.

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan is the guiding land use document for reconstructing park facilities, to rebuild and update the park, thus the proposed project, including the proposed General Plan amendments described in Section 2.3, *Project Components* under *Proposed General Plan Amendments*, would be consistent with the 2013 General Plan. The facilities outlined in the 2013 General Plan were the existing facilities of the park at the time the General Plan was created and include:

- Headquarters area with the Headquarters Building, park store, Nature Museum, campfire center, and picnic areas
- Rancho del Oso, which includes a nature and history center, beach day-use facilities, a ranger contact station, the Theodore J. Hoover Natural Preserve, and trail facilities
- Twelve campgrounds:
  - Blooms Creek Campground, with 52 campsites directly off Highway 236
  - Sempervirens Campground, with 32 campsites off Highway 236 from the south
  - Huckleberry Campground, with 35 campsites and 37 tent cabins off Sky Meadow Road
  - Wastahi Campground, with 27 campsites off Sky Meadow Road
  - Sky Meadow Group Camps, with 2 campsites off of Sky Meadow Road
  - Sequoia Group Camp, with 2 campsites northwest of the Headquarters building
  - Jay, Lane, Sunset, Twin Redwoods, and Alder Trail Camps, located throughout the park for backpackers
  - Horse Camp, with 6 campsites in the Rancho del Oso area
- Saddle Mountain, a 17-acre area on Highway 236 with multiuse dining hall/kitchen main building, 12 rustic cabins, swimming pool and two bath houses, large open grassy meadow, campfire center, small amphitheater, community garden, group picnic area, archery range, trails, parking areas, manager's residence, staff residence building, office trailer, maintenance garage, and utilities infrastructure
- Little Basin, a 535-acre area located off Highway 236 with Little Basin Campground with cabins and recreational amenities

The 2013 General Plan includes numerous plans with goals to protect vegetation, wildlife, and habitat; meet the park's increasing recreation demand and visitation; improve the park's public access and circulation; and preserve significant historic resources. Among others, these plans include updates to the facilities in the Headquarters Area and Little Basin and increased

development at Saddle Mountain. The plans outlined in the 2013 General Plan provide a basis for what has been included in the proposed project and described in Section 2.3, *Project Components.*

2022 REIMAGINING BIG BASIN VISION SUMMARY

With the loss of all park facilities, the Reimagining Big Basin Vision Summary process was completed to establish a future vision for the park given the losses in the fire, and to consider and confirm the relevance and consistency of many of the ideas in the 2013 General Plan. Eight guiding principles emerged from the Reimagining Big Basin visioning process. They were refined based on public input and provide a framework for future planning at BBRSP:

- Prioritize forest health
- Provide equitable, diverse, and evocative visitor experiences
- Diversify transportation and access opportunities
- Practice land stewardship
- Include Indigenous perspectives
- Foster landscape connectivity
- Design with reverence and resilience
- Engage the park community and build partnerships

2023 BIG BASIN REDWOODS STATE PARK CORNERSTONE DOCUMENT

The 2023 Cornerstone Document builds on the Reimagining Big Basin Vision Summary to lay out and formalize the post-fire planning steps needed for reestablishing the park that are consistent with the 2013 General Plan. The 2023 Cornerstone Document includes key issues that are addressed by the BBFMP:

- Rebuilding resilient park facilities and trails
- Addressing resource impacts from visitation
- Managing post-fire forest recovery and developing forest management strategy to address future fire
- Creating equitable access and meaningful visitor experience for all
- Addressing historic and archaeological resources

An FMP was listed as a high-priority planning need. The 2023 Cornerstone Document stated that the FMP can recommend alternate uses for an existing facility, location of a new facility, or a critical path for replacement and/or expansion of all park facilities.

2.3 PROJECT COMPONENTS

The proposed project has been prepared to guide the rebuilding of park facilities after the CZU fire. The BBFMP is a planning document designed to guide the stewardship, management, and use of existing and future facilities. It will also include the development of conceptual design alternatives to evaluate distinctive strategies for site configuration and use. The plan makes management recommendations and proposes facility use considerations for a specific park unit, portion of a park unit, or project. To ensure consistency with the BBRSP General Plan, the proposed project also includes General Plan amendments.

Over the process of creating the BBFMP, three parkwide areas were explored, called "alternatives," to house most of the new facilities and development. All three alternatives offered a similar level of development and distribution of visitor amenities and operational space that is consistent with anticipated needs and overall project goals. The alternatives reflect analysis of opportunity sites, and their capacity, balanced with an understanding of visitor services and operational needs, as summarized in the Basis of Design, as well as feedback received from the community and multiple project working groups. The preferred alternative, Alternative 2, Many Connected Experiences, was selected to be the basis of the BBFMP.

The proposed project focuses specifically on areas along Highway 236 and Sky Meadow Road that either hosted pre-fire facilities or have otherwise been identified as suitable facility locations based on sensitive habitat avoidance, access, and slope stability.

PROPOSED GENERAL PLAN AMENDMENTS

The proposed General Plan amendments to the 2013 General Plan would incorporate amendments in text to the 2013 General Plan and would add the acquisition parcels to the plan area for the General Plan. The text edits would increase clarity of consistency between the BBFMP and General Plan given the loss of facilities from the CZU fire and the goals to rebuild park facilities in alignment with General Plan recommendations. More specifically, the recommendations for the Lower Sky Meadow and Upper Sky Meadow areas would be clarified for the goals of developing overnight use and camping to replace the camping that was previously at Blooms and Sempervirens Campgrounds. This change in campground location is consistent with the general recommendations in the General Plan of relocating facilities away from the most sensitive old-growth areas, and the proposed General Plan amendments would add clarity by adding specific recommendations for these specific areas, including developing overnight uses and related facilities. The proposed General Plan amendments include the following clarifications or additions to the 2013 General Plan:

- **Lower Sky Meadow**: The recommendations for Lower Sky Meadow and Sky Meadow Group Camp would be updated to reflect the recommendation to develop new overnight camping facilities, including car-camping, cabins, tent cabins, small-group camps, a campfire center,

shuttle stop, and related facilities in and around this zone that pre-fire had staff housing and two group camps.

- **Upper Sky Meadow Area**: The Rogers Road Site (former Maintenance Yard), Upper Sky Meadow site (former park housing site), and Upper Lodge Road area would be added to the description of Sky Meadow. In addition, recommendations would be added to reflect BBFMP plans to develop group camping at Rogers Road, parking and walk-in camping at the Upper Sky Meadow site, and walk-in camping at Upper Lodge Road area.
- **Saddle Mountain**: A recommendation would be added to develop staff housing and staff operation areas on properties owned by State Parks around Saddle Mountain.
- **Little Basin**: Recommendations would be added to provide a mixed tribal-use area with a cultural center for collaboration with Indigenous groups for stewardship, interpretation, and cultural activities, and to provide staff housing.
- **Park Boundary:** The General Plan amendments reflect the expansion of the BBRSP boundary to include seven parcels planned for acquisition in the Saddle Mountain area.

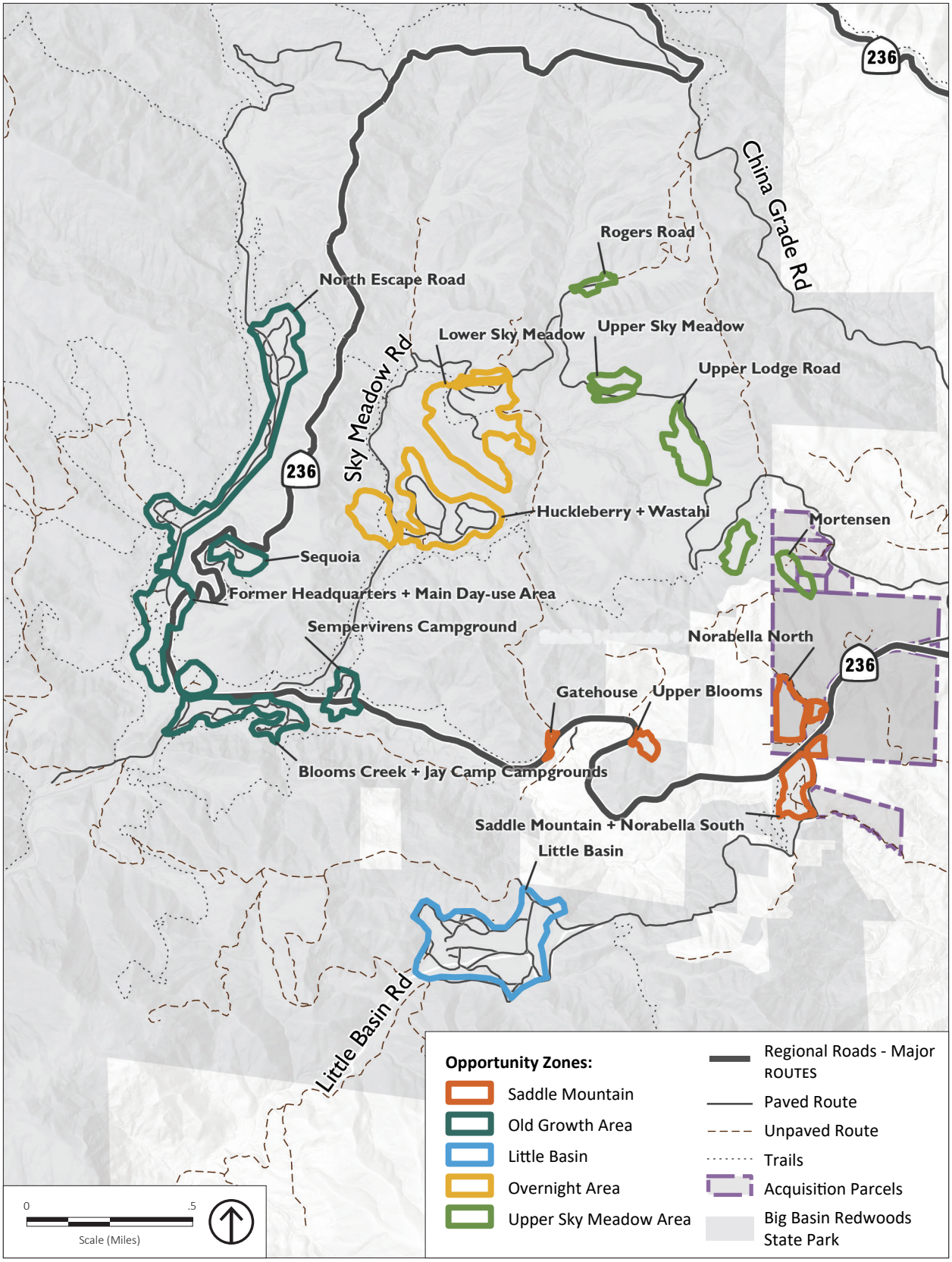
PROPOSED PARK FACILITIES

The BBFMP provides proposed facilities and improvements for 19 identified sites within five proposed zones in the Focus Area, as outlined in Figure 3, *Proposed Park Zones Sites,* and listed in Table 1, *Proposed Park Zones and Sites*.

Table 1 Proposed Park Zones and Sites

Zone	Saddle Mountain Gateway	Old-Growth Area	Little Basin	Overnight Area	Upper Sky Meadow Area
Sites	Saddle Mountain Norabella Gatehouse Upper Blooms Potter	Sempervirens Campground Blooms Creek Campground Jay Camp Redwood Loop Trail Main Day-use Area North Escape Road Sequoia Group Camp	None	Wastahi Campground Huckleberry Campground Lower Sky Meadow Campground Sky Meadow Landing	Upper Sky Meadow Rogers Road Upper Lodge Road Mortensen

PROJECT DESCRIPTION



Source: California State Parks, 2025; PlaceWorks, 2025.

Figure 3
Proposed Park Zones and Sites

SADDLE MOUNTAIN GATEWAY

The Saddle Mountain Gateway would include the following sites: Saddle Mountain, Norabella, Potter, Gatehouse, and Upper Blooms, and would be the center of activity at BBRSP. It would also serve as the key connective site in the Focus Area with frequent shuttle service.

Saddle Mountain would carry the highest concentration of program areas, including the primary visitor center, the primary concessionaire facility, and the primary operations and administrative hub. This area would include a restored meadow to the west and north, a large visitor porch overlooking this meadow, shuttle parking areas in the south, and operations areas to the east separated by topography and redwood trees. The parking area will either be surface parking on a series of terraces or a single-story parking structure, both supporting long-term, shuttle parking. Grading and some tree removal would be required, as well as the demolition of all existing structures and removal of paving. At Saddle Mountain, an area of approximately nine acres would be cleared and graded, including tree removal, though some larger existing trees would be retained in that area. Infrastructure like retaining structures, interior circulation roads, new paved parking areas, new driveway access from Little Basin Road and Highway 236, on-site wastewater treatment systems, water storage facilities, stormwater facilities, fencing, solar canopies over parking, carports and covered parking, signage, equipment and materials storage, landscaping, electric vehicle (EV) chargers, and utility upgrades would also occur at Saddle Mountain. Improvements to Highway 236, such as widening and addition of a left-turn lane into the new Saddle Mountain driveway, would be subject to future review and approval by the California Department of Transportation (Caltrans) through the Encroachment Permit process.

The Norabella site is composed of Norabella North and Norabella South, divided by Highway 236. Norabella North would include a cluster of staff housing with a variety of residential types and a parking area. Norabella South would provide additional staff parking with vehicle storage and EV chargers.

Clearing, grading, and some tree removal would be required at the Norabella site, including Norabella North and South, to construct new housing, driveways, and parking areas. New driveways would be constructed on Old Big Basin Road and Little Basin Road, in addition to interior circulation roads and new paved parking areas. Infrastructure like retaining structures, on-site wastewater treatment systems, water storage facilities, stormwater facilities, fencing, solar canopies over parking, carports and covered parking, signage, equipment and materials storage, landscaping, EV chargers, and utility upgrades would also occur at Norabella.

The Gatehouse site would be along Highway 236, between Saddle Mountain and the Old Growth Area. This site would include a new trail connection, vault toilet, potable water, water system infrastructure (potentially including a pump station), and horse trough, two shuttle/bus stops, and parking stalls. Development of the Gatehouse site would include grading and construction of retaining walls within a similarly sized footprint to previously developed areas.

The Upper Blooms site would provide overnight accommodation, including a group campsite and spike campsite.

The Potter property is a proposed location for water storage for Saddle Mountain and related uses.

OLD GROWTH AREA

The Old Growth Area would include the following sites: Sempervirens Campground, Blooms Creek Campground, Jay Camp, Redwood Loop Trail, Main Day-use Area, North Escape Road, and Sequoia Campground.

The Main Day-use Area, in the heart of the old-growth redwood forest, would serve as an ecologically sensitive hub for day-use activities. Facilities in the Main Day-use Area would include parking stalls, a shuttle/bus stop, and EV charging stations. There would also be additional visitor facilities, like comfort stations, an information desk, an amphitheater, and interpretation stations. This site would include new trails, boardwalks, fencing, signage, and a group picnic area. This site would also undergo meadow and channel restoration, the removal of pavement, creation of new paved parking in areas previously developed with structures and paving, the creation of a new vehicle entry point, and circulation improvements to accommodate the new shuttle bus. New utilities and stormwater updates are also proposed at this site. Tree removal would include some (approximately 10 to 20) previously planted trees, including in the median between the existing parking area and Highway 236, but would not include removal of any old-growth redwood trees.

North Escape Road is a paved State Park road that parallels Highway 236 and would serve as an access road, facilitating operations, management, and emergency access to the park's northern recreation facilities. East and west parking lots would be available at this site. A small trail camp with water would be approximately 0.75 miles beyond the road's southern access gate. Picnic areas with vault toilets and potable water would also be provided along North Escape Road. Several landscape restoration efforts will take place alongside North Escape Road, including the removal of spur roads and firepits.

Jay Camp is on the northern side of Highway 236, less than half a mile from the Historic Park Headquarters and Visitor Center, and directly adjacent to Blooms Creek Campground on the southern side of Highway 236. Many facilities were lost in the fire at Jay Camp, including the six campsites and amenities, and six staff residences, and at Blooms Creek Campground, including all campground amenities. The proposed project includes significant restoration efforts primarily aimed at removing road pavement and damaged camp facilities and establishing native redwood forest habitat, as well as installing electrical and water utility infrastructure, including a pump station to support park utility systems. Jay Camp and Blooms Creek Campground would also include two shuttle/bus stops and picnic areas and trails.

Sempervirens Campground was located East of Sky Meadow Road and split roughly in half by Highway 236. Proposed restoration efforts would include the removal of the former campground and all pavement and former campsites. These efforts would help to restore predevelopment stream flows and floodplains, which would help enhance the overall redwood habitat. Existing trails at the site would be maintained, and new trail connections would be considered where they are consistent with the values of forest regeneration. Water utility infrastructure would be sited at the Sempervirens Campground area, including a pump station.

Sequoia Campground would retain much of its facilities from its pre-fire design. This includes two group campsites, each with the capacity to hold 50 people. The proposed project includes maintaining existing gravel parking lots with 40 spaces. Minor changes would include replacing combo toilets with vault toilets.

LITTLE BASIN

The Little Basin zone would only include the Little Basin site. Little Basin would be used for large-scale events and group camping. The campground would include parking, car campsites, tent cabins, seven small group sites, and large group sites. The proposed project also includes tribal and cultural facilities at this site, such as a cultural center building with overnight accommodations for stewardship corps doing work in the park and with interpretive exhibition space, outdoor workspace, a sweat lodge and dance corral campfire ring, and an ethnobotanical native plant propagation area. A concessionaire building, kiosk, and park housing would also be constructed at the site. Restoration work in the meadow and wetland areas would also occur, including the removal of the dam, removing some roads and other paved areas, and restoring the former reservoir. There would also be new roads, trails, and bridges constructed at this site.

Access to Little Basin is via Little Basin County Road. The road requires some improvements to be completed in partnership between State Parks and Santa Cruz County. A secondary emergency one-way route along Tanbark Loop and Pine Mountain Road, or a suitable alternative, also needs to be improved. These road improvements are described in Section 2.3, *Project Components* under *Road and Circulation Improvements*.

OVERNIGHT AREA

The Overnight Area would include the following sites: Lower Sky Meadow and Sky Meadow Landing, Huckleberry, and Wastahi.

Lower Sky Meadow, including Sky Meadow Landing, would be the largest campground in the park, and would include car campsites, walk-in tent cabins, group campsites, and hard-sided cabins with an outdoor interpretive area, Campfire Center, comfort stations, and combo buildings. A new trail would be added to this site as well as meadow expansion and a new stormwater retention area. The proposed project would also include constructing new campground loop roads, which would involve site clearing, tree removal, grading, new drainage features, and new paving, as well as constructing new parking at individual sites to

accommodate two cars per campsite at tent sites. Parking would include up to three vehicles per cabin site and up to five vehicles at small group sites.

The Huckleberry site would include rehabilitating the existing pre-fire Huckleberry Campground with walk-in campsites, car campsites, and 12 recreational vehicle (RV) campsites. The existing dump station would remain. A new trail is also proposed to be added to this site.

Wastahi would include overnight trail parking and a comfort station with potable water. Infrastructure from the former campground would be removed at this site and the lower portion of the existing paved parking area would be removed.

UPPER SKY MEADOW AREA

The Upper Sky Meadow Area would include the following sites: Upper Sky Meadow, Upper Lodge Road, Rogers Road, and Mortensen and surrounding acquisition parcels. The Upper Sky Meadow Site would include picnic areas and walk-in campsites served by one combination building and parking. Meadow restoration and restoration of the former CCC steps would also occur at this site.

The proposed project includes the construction of a new trail at Upper Lodge Road. There would be walk-/bike-in campsites, each with a tent pad, picnic table, and fire ring.

Rogers Road is a relatively remote and flat site that would provide Event Meadow and Group Camp space. This would include a group campsite and event cabins with an event ramada and parking lots. Some clearing and grading in previously developed areas and removal of existing pavement would occur to develop these facilities. Chanel restoration would also occur at this site. Utilities would be brought to the site, including new wastewater and water lines.

The BBFMP does not propose specific facilities at the Mortensen, Heyl, and Rose acquisition parcels, but there are properties could be potential alternative sites for future staff housing as well as for utilities and trail connections to Lodge Road.

PROPOSED FOCUS AREA-WIDE PROJECT COMPONENTS

In addition to the facility improvements described in Section 2.3, *Project Components* under *Proposed Park Facilities*, the proposed project includes Focus Area-wide projects included in the BBFMP. These are project components that will occur on multiple sites.

ROAD AND CIRCULATION IMPROVEMENTS

Road improvements for life safety and emergency response would be required on Sky Meadow, Lodge, Little Basin Road, and portions of Pine Mountain and Tanbark Loop fire roads or a suitable alternative route. Widening of 1.9 miles of Sky Meadow Road between Huckleberry and Upper Sky Meadow to 20 feet is proposed in locations where it would not require retaining walls over 5 to 10 feet in retained height, or removal or paving close to large old-growth trees.

In locations where widening is not feasible, paved turnouts would be added where possible. These improvements to Sky Meadow Road would include some site clearing, non-old-growth tree removals, grading additional paving and construction of retaining walls.

Lodge Road improvements for the 1.2 miles between Upper Sky Meadow and the existing park boundary would include closure to vehicles except for emergency access, maintaining the existing road for a minimum of 12 feet in width, and re-paving the existing paved road and addition of some paved turnouts for improved emergency access. These improvements would require some grading and retaining structures, addition of drainage features and culverts, and non-old-growth tree and stump removal (approximately 20 trees and stumps).

Improvements for Little Basin Road, the 2.1-mile County Road, would include working with Santa Cruz County to widen to 20 feet in areas where only minimal grading or retaining is required and adding approximately 20 paved turnouts in other locations where widening is not feasible and where turnouts do not require retaining walls or removal of trees. These improvements would require minimal grading and retaining structures, addition of drainage features and culverts, removal of some non-old-growth trees and stumps, and paving.

Pending future study, Pine Mountain Road between Hihn Hammond Road and Tanbark Loop Road, and Tanbark Loop Road between Pine Mountain Road and Little Basin, would be improved as a one-way emergency evacuation route. Improvements to these two fire roads would include minor realignments to segments of road that are over 20 percent grade where possible, and where not possible, paving segments of road that are over 20 percent grade. Specific environmental review of these improvements would be assessed in a future project phase pending further assessment but would include some clearing, grading, tree removal and paving. Improvement of alternative routes for one-way emergency evacuation routes will be considered as alternatives to Tanbark/Pine Mountain Road pending future study.

As described in the individual site descriptions, many road and circulation improvements are proposed in each zone, including new access roads as well as improvements to existing roads for life safety and emergency response. This would require connections to the rest of the circulation system in the Focus Area. The proposed project also proposes various safety enhancements, such as speed limit reductions, advanced warning signs, flashing beacons, trimming back foliage, and potential intersection-control changes. Life safety improvements would include widening access roads to meet State Fire Marshal standards, which would involve additional clearing, tree removal, grading, and paving. Further the proposed project includes improvements for pedestrian and cyclist safety while promoting non-vehicular travel in the park.

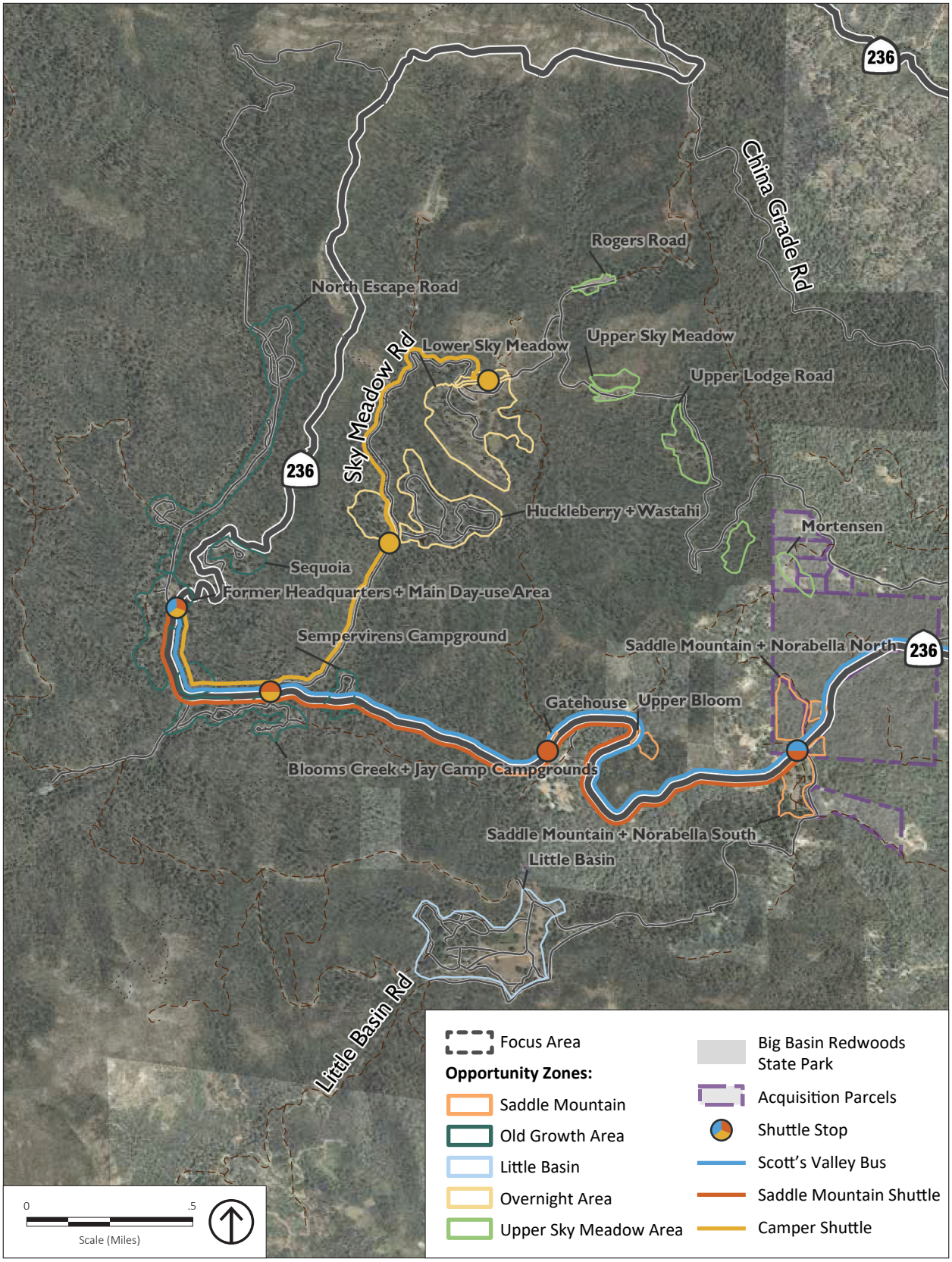
Paved shoulders on Highway 236 are proposed to be enhanced with visual and tactile separation to create a separate space for bicyclists and pedestrians. To slow vehicle speeds and enhance safety for all visitors, traffic-calming strategies like rumble strips, speed humps, and speed tables are proposed to be implemented on park-owned roadways and on Highway 236.

SHUTTLE PROGRAM

To support visitor access to the Main Day-Use Area during periods of high demand, a shuttle program is proposed to reduce vehicle congestion and improve access. This would include two new park shuttles in addition to the Scott's Valley Bus already in operation by SCMetro. The Saddle Mountain Shuttle would serve as the primary internal connection between the Saddle Mountain parking area and the Main Day-Use Area. The Camper Shuttle would provide transportation for overnight visitors staying at campgrounds, as shown on Figure 4, *Shuttle Routes*. Table 2, *Shuttle Information,* shows the potential proposed operating times, shuttle stops, and fleet size and type of each shuttle, but would be based on future visitation and funding availability.

Table 2 Shuttle Information

	Saddle Mountain Shuttle	Camper Shuttle	Scott's Valley Bus
Operating Time	10 hours per day (8 AM–6 PM) on 121 weekend/ holiday days year-round.	10 hours per day on 134 days per year, including weekends/holidays April–October and summer weekdays.	Operates during peak periods, aligned with SCMetro schedules (5 trips per day).
Shuttle Stops	Saddle Mountain parking, Gatehouse, Sky Meadow Road, Main Day-Use Area	Lower Sky Meadow, Huckleberry, Sky Meadow Road, Main Day-Use Area.	Scott's Valley Transit Center, Boulder Creek, Saddle Mountain Visitor Center, Main Day-Use Area.
Fleet Size and Type	Two 32-passenger vehicles, plus one spare (electric preferred).	Two 14-passenger vehicles, plus one spare (electric preferred).	Standard transit buses operated by SCMetro.



Source: California State Parks, 2025; PlaceWorks, 2025.

Figure 4
Shuttle Routes

UTILITY UPGRADES

The CZU fire destroyed most of the utility systems in the park. The proposed project includes replacing the necessary utility systems within the Focus Area to meet the estimated water demand, fire water storage, and wastewater generation.

The proposed project includes rehabilitation, reconstruction, and expansion of the park's central domestic and fire water system. Water system improvements would include replacing the water treatment facility building and replacing storage tanks, pumps systems, distribution piping, hydrants, and water service infrastructure throughout the Focus Area. The water system would be expanded to provide water from the central park water system to the entire Focus Area, including new connections to Saddle Mountain and Norabella, Upper Blooms, and Upper Lodge, and re-establishing water service to all pre-fire water service areas except where facilities are being removed. Fire water and domestic water storage would be reconstructed or added where needed for proposed development based on future design of the system and based on fire marshal requirements. Existing wells in the Saddle Mountain area and acquisition parcels may supplement the central park water system.

The proposed project includes replacing the existing wastewater treatment plant and facility that served the park pre-fire. On-site wastewater treatment systems (OWTS) would be installed at Saddle Mountain, Little Basin, and likely Sky Meadow. Norabella would be served by the OWTS at Saddle Mountain. New or rehabilitated sanitary sewer lines would be included between Upper Sky Meadow, Rogers Road, Lower Sky Meadow, Wastahi, Huckleberry, and Main Day-use Area.

The proposed facilities would be connected to BBRSP's existing stormwater drainage system. Bioretention areas, permeable landscaping, and other land restoration improvements, as described in Section 2.3, *Project Components,* under *Proposed Park Facilities*, would be included to support stormwater drainage and minimize runoff.

Energy consumption is expected to increase as a result of the proposed project. It is anticipated that, at full buildout, on-site renewable energy generation would partially offset reliance on grid-connected electrical power supplied by PG&E. Solar utilities would be included at Saddle Mountain, Little Basin, and Sky Meadow Landing. Details about individual sites' restroom facilities and EV chargers are provided in Section 3.2, *Project Components* under *Proposed Park Facilities*.

An improved telecommunications system would also be provided in all proposed zones, including installing new underground telecommunications lines between Saddle Mountain and all park zones.

RESTORATION EFFORTS

The proposed project includes restoration projects to protect the riparian corridor, promote wildlife habitat connectivity, remove paved roadways, remove old campground infrastructure, and convert roads to trails. The proposed project also includes efforts to restore predevelopment hydrological systems, which includes the restoration further described for each site in Section 3.3.2, *Proposed Park Facilities,* as well as increase in-stream wood in Opal and Blooms Creeks to help retain floodwater, improve groundwater exchange, and stabilize channels.

EMERGENCY RESPONSE AND EVACUATION PLAN

Parks staff respond to emergencies according to an Emergency Response and Evacuation Plan (plan) covering prevention, emergency preparedness and response, and evacuation for BBRSP and the Little Basin sub-unit. The plan is updated as needed and reviewed yearly by the District Superintendent, Public Safety Superintendent, and/or their designee. To implement this plan, the project includes installing an early warning system containing overhead sirens in three locations throughout the park: Sky Meadow, the Eagle repeater site, and Oceanview Summit. If an evacuation were required, users in the Focus Area would be directed to Highway 236 toward Boulder Creek. Shuttle operations in the park would be required to evacuate shuttle riders according to the plan. Evacuation signage on trails and evacuation roadways would be installed according to the plan to assist in emergency evacuations.

PLAN IMPLEMENTATION

While general plans define an overall framework for a park's future resource stewardship, visitor use and services, and interpretation, more focused planning is required to address the details that a general plan cannot. Management plans are thus used to identify more definitive objectives and methods and/or designs for attaining the goals set in a general plan. The degree of specificity at this second level of planning is shaped by the complexity of the issues being addressed, regulatory and legal requirements, and Department standards.

The California Environmental Quality Act (CEQA) allows for the preparation of programmatic environmental impact reports (EIRs) and negative declarations (NDs) when a project includes a series of related actions that can be characterized as one large project. Programmatic analyses are often used for activities that are linked geographically or when an agency wants to evaluate rules or requirements that guide how a program must operate. The programmatic approach works especially well when the program's individual activities have generally similar environmental effects that can be minimized through similar avoidance measures. The benefits of such documents are that they allow a comprehensive examination of a project and promote "tiering" when later activities within the program are undertaken. The use of tiering can expedite environmental review by eliminating repetitive analysis of issues and potential impacts adequately addressed in the program EIR or MND.

The BBFMP identifies priority projects to restore public access, including day use and overnight experiences, to BBRSP. These priority projects would undergo a subsequent design and construction phase that would be implemented over approximately five to ten years or longer, depending on the availability of funding and other factors. The BBFMP also includes additional projects that would be further developed once priority projects are underway. These additional projects would be implemented over approximately 10 to 15 years or longer, depending on the availability of funding and other factors. All future construction would be required to comply with State building codes, such as the California Building Code (CBC), and California Fire Code (CFC), as well as other State building requirements determined throughout implementation of the proposed project. As the proposed project components are implemented, site preparation would require some leveling to ensure flat surfaces and proper drainage in areas where the trails and proposed structures would be located, as well as trenching for utility infrastructure such as potable water.

2.4 PROJECT OBJECTIVES

The primary purpose for the proposed project is to rebuild park facilities after all facilities were lost in the 2020 CZU fire.

The Department's mission is to provide for the health, inspiration, and education of the people of California by helping to preserve California's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. The Department's mission is stated in the California's Recreation Policy adopted by the California State Park and Recreation Commission on September 23, 2005.

The proposed project would provide a framework for the continued stewardship, management, and adaptive use of the Focus Area within BBRSP to improve resource protection, improve the visitor experience, and foster public appreciation of the Focus Area.

Specific objectives of the BBFMP are as follows and intend to implement the guiding principles identified in the Reimagining Big Basin Vision Summary completed in 2022.

GUIDING PRINCIPLE 1. Prioritize Forest Health

Supporting Objectives

a) Structures and facilities will be sited and designed to allow forest stewardship projects to occur in priority areas and to increase forest resiliency in a changing climate.

b) Structures and utilities will be sited and designed to minimize development within old growth redwood forest areas, to minimize fuel contributions from structures, and to minimize the need to remove hazard trees within old growth areas.

c) Structures, parking, developed areas and trails will be sited and designed to minimize paving and soil compaction and to allow natural ecological processes to occur.

GUIDING PRINCIPLE 2. Provide Equitable, Diverse, and Evocative Visitor Experiences

Supporting Objectives

a) Park facilities will strive to support pre-fire visitation for day-use, trail access, and overnight use while managing visitor use for other project goals.

b) The park will provide diverse camping and overnight experiences, as well as a variety of day-use facilities and will have quality support amenities, programs and activities that support day-use and overnight experiences.

c) Park facilities will be inviting and inclusive to diverse future California communities and educational and interpretive materials will include a variety of languages and perspectives.

GUIDING PRINCIPLE 3. Diversify Transportation and Access Opportunities

Supporting Objectives

a) Maximize the efficiency of use, experience quality, and access equity to Big Basin by travel modes that are alternatives to low-occupancy private vehicles.

b) Maximize park access opportunities for lower income and underrepresented communities, and park visitors without access to a vehicle.

c) Minimize vehicle congestion getting to the park, and pedestrian congestion and crowding within the park.

GUIDING PRINCIPLE 4. Practice Land Stewardship

Supporting Objectives

a) Facilities will be sited and designed to allow effective long-term maintenance to create sustainable park recreational access for future generations.

b) Park facilities will be sited and designed to consider future stewardship activities and to enable active forest management including Indigenous practices in the context of changing climatic conditions.

c) The park will include adequate facilities needed for active stewardship activities including spike camps for stewardship corps, stewardship training facilities, operation and maintenance facilities and permanent and seasonal staff housing.

GUIDING PRINCIPLE 5. Include Indigenous Perspectives

Supporting Objectives

a) Facilities and recreational amenities will be sited and designed with input and consultation with Indigenous leaders and representatives.

b) The siting and design of facilities will include considerations that ensure that all interpretive and educational materials incorporate an Indigenous perspective.

c) Park facilities will provide ceremonial space for cultural use by Indigenous groups and individuals.

GUIDING PRINCIPLE 6. Promote Landscape Connectivity

Supporting Objectives

a) Park facilities will allow future connections to surrounding parks and recreation areas to provide regional recreational opportunities.

b) Developed park areas will be sited and designed to promote continuous and connected areas of important habitats and to avoid fragmentation.

c) Planning of facilities will incorporate considerations for a collaborative and regional approach to forest management that engages landowners and land management agencies of nearby properties.

GUIDING PRINCIPLE 7. Design with Reverence and Resilience

Supporting Objectives

a) Structures and facilities will be sited and constructed to be resilient to hazards that will become more frequent and intense with climate change including severe winter storms, drought, and high-severity fire.

b) All developed park amenities are aesthetically designed to create experiences that reference the historic character of Big Basin.

c) Developed park facilities are planned to minimize carbon emissions associated with park visitation and operation and maintenance, are designed with sustainable materials, and incorporate renewable energy production when feasible.

GUIDING PRINCIPLE 8. Engage the Park Community and Build Partnerships

Supporting Objectives

a) Park plans reflect public values and feedback, and the priorities expressed by the community and stakeholders during the facilities planning process, particularly reflecting the voices of under-represented communities.

b) Park plans can be implemented with strong support from partners.

c) Park facilities can be constructed in phases to provide the envisioned recreational experiences with available funds.

2.5 RELATED PROJECTS

Other management plans may be prepared for BBRSP including a Road and Trail Management Plan, Interpretation Management Plan, and other management plans as described in the 2023 Cornerstone Document and based on future needs. In 2024, a Forest Management Strategy was prepared for BBRSP, Ano Nuevo State Park, and Butano State Park. Management plans and other planning documents that have overlapping project areas would be consistent with each other. Where planned facilities, roads and trails, forest management and interpretation overlap, coordinated plan development and support would be guided by the 2013 General Plan. Future plans would be considered under separate CEQA review.

2.6 PROJECT REQUIREMENTS

Under the CEQA Guidelines, the Department is in a unique role as both the Lead Agency and a Trustee Agency. The Lead Agency is a public agency that has the primary responsibility for carrying out or approving a project and for implementing CEQA. A Trustee Agency is a State agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. The Department takes this distinction with responsibility to ensure that its actions protect both cultural and natural resources on all projects.

However, the Department is also the project proponent. Because of its unique role as Lead Agency, Trustee Agency, as well as the project proponent, the Department's resources professionals take a prominent and influential role during the project conceptualization, design, and planning process consistent with Section 15004(b)(1) of CEQA. Their early involvement during the planning process enables environmental considerations to influence project programming and design. This approach permits the Department under CEQA Section 15065(b)(1), to incorporate project modifications prior to the start of the public review process of the environmental document, to avoid impacts to a point where clearly no significant effect on the environment would occur.

As part of its effort to avoid impacts, the Department also maintains a list of project requirements that are included in project design to reduce impacts on resources. From this list, Standard Project Requirements (SPRs) are assigned, as appropriate, to all projects. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

2.7 REQUIRED PERMITS AND APPROVALS

Implementation of the proposed project would require the following permits and/or approvals, as well as any permits or approvals identified as future development of projects are proposed:

- Adoption of the proposed BBFMP
- Adoption of the proposed General Plan Amendments
- Certification of this Supplemental EIR
- Section 404 Permits (for specific projects)
- Section 401 Permits (for specific projects)
- Section 402 Permits (for specific projects)
- Section 1602, Streambed Alternation Agreements (for specific phases)
- Office of State Fire Marshal approval
- Encroachment permits from Caltrans and Santa Cruz County
- Sewage Disposal Permit

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3. ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

Project Title: Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Lead Agency Name and Address: California Department of Parks and Recreation

Contact Person and Phone Number:
Will Fourt
Senior Park and Recreation Specialist
Santa Cruz District
California Department of Park and Recreation
303 N Big Trees Road
Felton, CA 95018

Project Location:
Big Basin Redwoods State Park
21600 Big Basin Highway
Boulder Creek, CA 95006

Project Sponsor's Name and Address:
California Department of Parks and Recreation
Santa Cruz District
303 N Big Trees Road
Felton, CA 95018

General Plan Designation: Parks, Recreation, and Open Space (O-R)

Zoning: Parks, Recreation, and Open Space (PR)

Description of Project:
The proposed project includes amendments to the Big Basin Redwoods State Park General Plan and the adoption of the Reimagining Big Basin Redwoods State Park Facilities Management Plan. The proposed General Plan amendments include text changes to provide clarity in consistency of the 2013 General Plan with the facilities envisioned in the proposed Facilities Management Plan and would expand the park boundary to include parcels that the Department is in the process of acquiring to include in the Big Basin Redwoods State Park. The proposed

Facilities Management Plan is a planning document designed to guide the stewardship, management, and use of existing and future facilities consistent with the 2013 General Plan. It would provide guidance and direction for implementing the goals and objectives of the 2013 General Plan EIR, the 2022 Reimagining Big Basin Vision Summary, and the 2023 Big Basin Redwoods State Park Cornerstone Document. Additionally, the proposed project would guide the rebuilding of facilities lost in the 2020 CZU Lightning Complex fire that burned 97 percent of the park and most of its facilities.

The proposed project includes proposed facilities and improvement guidance for 19 identified sites in the five proposed zones in the Focus Area. The sites either hosted pre-fire facilities or have otherwise been identified as suitable facility locations based on sensitive habitat avoidance, access considerations, and slope stability. Facilities included in the proposed project include visitor-serving facilities such as picnic areas, amphitheaters, restrooms, interpretation areas, information desks, a café, and camp stores; overnight facilities like camp sites and cabins; tribal facilities like cultural interpretation sites and centers, outdoor workspaces, and lodging; transportation-related facilities like parking lots, electric vehicle charges, and shuttle infrastructure; utilities infrastructure like water distribution and storage, wastewater collection and treatment, stormwater, electrical and solar facilities, and telecommunications; administrative facilities like offices, maintenance shops, and storage; and staff residences. All these facilities would be consistent with the 2013 General Plan and proposed General Plan Amendments. Focus Area-wide proposed project components include road and circulation improvements, the introduction of a shuttle program throughout the Focus Area, utility upgrades and replacement, habitat restoration, and an improved emergency response and evacuation plan.

Surrounding Land Uses and Setting:
Refer to Chapter 3 of this document (Section IX, Land Use Planning)

Other Public Agencies Whose Approval Is Required (e.g., Permits, Financing Approval, or Participating Agreement):
Refer to Chapter 2, Section 2.7

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?
Refer to Chapter 3 of this document (Section V, Cultural Resources)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture / Forestry Resources	☐ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology / Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

6·16·2025

Chris Spohrer
District Superintendent

Date

L Hitchcock

6-16-2025

Linda Hitchcock
Environmental Coordinator

Date

I. AESTHETICS

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Have a substantial adverse effect on a scenic vista?	LTS	No	No	No	No
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings?	LTS	No	No	No	No
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	LTS	No	No	No	No
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to aesthetics:

Aesthetics Goal: Identify and protect positive aesthetic values to preserve the fundamental character of the park for future generations.

AESTHETIC GUIDELINES:

Aesthetics 1: Preserve and enhance positive aesthetic resources and remove or screen elements that have negative aesthetic qualities to preserve the parks scenic and recreation values.

Aesthetics 2: Integrate positive aesthetic features into the design of new park facilities, interpretive programs, and maintenance programs. The design style should be site-specific and contextual – reinforcing the colors, shapes, scale, and materials in the surrounding environment to integrate and complement the park's natural setting. Preserve and showcase scenic views, use native (or replicated) building materials where appropriate, use muted colors that reflect the natural surroundings, and take advantage of (or screen) ephemeral conditions (e.g., weather, wind, sunlight, etc.), as appropriate. Historic buildings should retain the Park Rustic style that embodies the harmonious blending of native stone and wood. New construction should be compatible with, but clearly differentiated from, the historic Park Rustic resources to avoid a false sense of history.

Aesthetics 3: Develop and implement design standards or guidelines for park facilities and signage to share similarities in style and/or materials, to create a sense of park identity and visual continuity, and to reflect and preserve positive aesthetic values. Evaluate "first impressions" at park entrances and access points and organize, consolidate, screen, or remove unnecessary, repetitive, or unsightly elements

Aesthetics 4: Where appropriate, visually screen parking lots, roads, operations facilities, and storage areas from primary public use areas. Use native vegetation, rocks, elevation change, berms, and other methods that either use or mimic natural elements to minimize negative visual impacts from these facilities.

Aesthetics 5: Limit artificial lighting to avoid brightening the dark night sky. Restrict night lighting to the more developed areas of the park (e.g. buildings and parking lots) and provide lighting fixtures that focus the light downward. Light levels should be as low as possible, consistent with public safety standards. Refer to the Department's Lightscape Protection Policy (DOM, Chapter 0300, 2004) when evaluating lighting.

Aesthetics 8: Coordinate with local, state, and federal agencies, open space providers and community groups, landowners, and other stakeholders to preserve, protect, and enhance positive aesthetic features and viewsheds. Follow the Local Coastal Program and other applicable standards for aesthetic resources.

Aesthetics 9: Acquire property and conservation easements from willing sources to expand and protect the park's aesthetic resources.

Saddle Mountain Goal: Establish a "front door" park entrance for primary visitor contact and park orientation on Highway 236 at the southern park boundary.

Saddle Mountain Guidelines:

Saddle Mountain 2: Preserve and maintain the scenic quality of Highway 236 and establish appropriate "first impression" treatments that are compatible with the character of the park and create an attractive and welcoming park entry experience into Big Basin.

Saddle Mountain 5: Preserve the meadow and open space qualities in the planning and design of future park facilities, and establish adequate vegetative screening and buffers between administrative and visitor activity areas, and between park development and adjacent properties.

Sustainability Goal: Incorporate sustainable design principles into the design, development, operations, and maintenance of park facilities and programs.

Sustainability Guidelines:

Sustainability 1: Use sustainable design strategies to minimize impacts to the park's natural, cultural and aesthetic resources. Choose low-impact building sites, structures, building, and landscape materials, and maintenance and management practices that avoid the use of environmentally-damaging, waste producing, or hazardous materials. Use natural, renewable, indigenous, and recyclable materials, and energy-efficient design.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires Standard Project Requirements (SPRs) for all projects. The following SPRs are related to aesthetics. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

AES-1: Projects will be designed to incorporate appropriate scenic and aesthetic values of BBRSP, including the choices for specific building sites, scope, and scale; building and fencing materials and colors; use of compatible aesthetic treatments on pathways, retaining walls, or other ancillary structures; location of and materials used in parking areas, campsites, and picnic areas; and development of appropriate landscaping. The park's scenic and aesthetic values will also consider views into the park from neighboring properties.

AES-2: Permanent structures will be equipped with outdoor light shields that concentrate the illumination downward to reduce direct and reflected light pollution. The direct source of the lighting (bulb, lens, filament, tube, etc.) will not be visible off-site and the lighting will be installed as low as possible on poles and/or structures to minimize light pollution of the night sky. The candle power of the illumination at ground level will not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.

BASELINE CONDITIONS

Scenery can be defined as the general appearance of a place and the features of its views or landscapes. It consists of both biophysical elements (landforms, water, and vegetation) and cultural, or human-made, elements. Scenic quality is an important and valuable resource, especially on public lands. Many people value the quality of scenery and have high expectations of scenic quality, especially when visiting California parks. Scenic resources often provide a unique sense of place to an individual park, as well as to specific areas in a park unit. BBRSP has been recognized for its unique scenic qualities and natural beauty.

The visual resources of BBRSP are associated with public views inside the park, especially with regard to old-growth coast redwood trees (*Sequoia sempervirens*), as well as public views from nearby roadways looking toward the park landscape.

BBRSP provides a wide variety of scenic resources throughout the park. The majority of the landscape is characterized by the many ridges running generally southwest from the summit toward the ocean. A variety of vegetation communities occupy these ridges – mixed evergreen forests, oak woodlands, chaparral, and grasslands. In 2020, the CZU fire burned approximately 86,500 acres in Santa Cruz and San Mateo Counties, including 97 percent of BBRSP and its facilities. Impacts from the 2020 CZU fire resulted in fallen trees and burn scars that have changed some of the visual landscapes throughout the park. Though vegetation was impacted by the 2020 CZU fire, most of the old-growth coast redwoods survived and vegetation has been steadily growing back since the fire. BBRSP is still home to the largest continuous stand of ancient coast redwoods south of San Francisco.

Elevations in the park vary from sea level to over 2,000 feet. Vista points and panoramic views are primarily found along areas of higher elevation and open vegetation along the roads and trails in and surrounding the park.

Currently, park visitors can use recreational trails throughout the park. Most of the roads and some of the trails have been partially or fully reopened. Trails and roads lead past redwoods, creeks, and wildlife.

Highway 236 is the gateway into the main entrance and core area of the park. Highway 236 runs through the BBRSP and is an eligible State scenic highway under Caltrans' State Scenic Highway Program. The nearest designated State scenic highways are Highway 1, which borders the Pacific Ocean and is on the western edge of BBRSP in San Mateo County; Highway 35, which runs along the ridge from Highway 9 to Highway 92; and Highway 9, which is designated as a scenic

highway on the east side of Highway 35.[9] Views from these highways and park roads are where many people experience this landscape. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project have a substantial adverse effect on a scenic vista?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, substantial adverse impacts from General Plan buildout to scenic vistas at BBRSP would not occur, thus environmental impacts related to scenic vistas would be less than significant.

Impacts could occur under the proposed project if a road or trail alignment was altered or facility constructed to the degree that the existing scenic views are no longer accessible. Impacts to scenic vistas would also occur if a conspicuous structure were to be placed in a visually prominent location that is currently part of a scenic view, or if the landscape were to be substantially altered (e.g., removal of large sections of vegetation or geologic features), such that the scenic view would be substantially degraded. None of these potential outcomes would occur as a result of the proposed project. The BBFMP and General Plan are planning documents designed to guide the stewardship, management, and use of existing and future facilities. Proposed facilities under the BBFMP are based on consideration to enhance or not detract from the existing scenic resources of the park. This includes the development of park amenities that are aesthetically designed to create experiences that reference historical character with reverence to the park's natural landscape and history. Further, the BBFMP would adhere to the 2013 General Plan guidelines protecting scenic vistas. Although the 2013 General Plan does not officially designate scenic vistas in the Focus Area, it ensures that scenic views and the natural character of backcountry and wilderness areas are preserved.

Pursuant to General Plan Guideline Aesthetics 4, future development would require the use of screening methods with appropriate native plants, rocks, or elevation changes. These elements would soften the visual effect of parking areas, campground facilities, roads, and trails; buffer intrusive or distracting views and activities outside park boundaries; and enhance scenic views. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR for the proposed project.

[9] California Department of Transportation, 2019, California State Scenic Highway System Map, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed March 6, 2025.

b) Would the proposed project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, substantial adverse impacts to scenic resources in BBRSP would not occur and thus environmental impacts related to scenic resources would be less than significant.

BBRSP contains a wide variety of scenic resources. However, there are no officially designated scenic vistas or State scenic highways in or adjacent to the Focus Area. The nearest designated State scenic highways are Highway 9, approximately 5 miles east of the Focus Area; Highway 1, approximately seven miles west of the Old Growth Area; and Highway 35, which runs along the ridge from Highway 9 to Highway 92, approximately 9 miles north of the Focus Area.[10] Proposed facilities and improvements under the proposed project would not be visible from any of these State-designated scenic highways.

The entirety of Highway 236, which provides entrance through BBRSP, is an eligible State scenic highway. Vista points and panoramic views in BBRSP are primarily found along areas of higher elevation and open vegetation along the roads and trails in and surrounding the park. Panoramas of the park and surrounding landscape can also be found on Highways 9, 35, 236 and on China Grade Road. Proposed facilities and improvements would be visible from Highway 236, an eligible (but not officially designated) State scenic highway, and the proposed BBFMP would facilitate improvements along Highway 236.

The BBFMP is a planning document designed to guide the stewardship, management, and use of existing and future facilities. This includes the development of park amenities that are designed to reference historical character and fit within the park's natural landscape and history. Proposed facilities under the BBFMP are based on consideration to enhance or not detract from the existing visual character of the park. Further, the BBFMP would adhere to the 2013 General Plan guidelines protecting scenic resources. Improvements facilitated by the BBFMP would be designed to minimize effects on the physical environment and would not obstruct scenic resources. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

[10] California Department of Transportation, 2019, California State Scenic Highway System Map, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed March 6, 2025.

c) Would the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?

The 2013 General Plan EIR determined that with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, the existing visual character or quality of BBRSP would not be substantially degraded and thus environmental impacts related to visual character and quality would be less than significant.

The visual character of the Focus Area varies greatly with the seasons and generally exhibits high scenic and, in many cases, substantial visual features (e.g., large trees, riparian areas, water bodies, etc.) that enhance the visual character of the park's roads and trails. The BBFMP would serve as a management tool that will be used to guide the stewardship, management, and use of existing and future facilities and minimize impacts to the natural and cultural resources. Future development of new facilities, campgrounds, and parking lots would occur under the BBFMP. Implementation of and adherence to the General Plan's guidelines for preserving scenic quality and appropriate and sustainable setting, design, and selection of materials for park projects (Guidelines Aesthetics 1, Aesthetics 2, Saddle Mountain 2, and Sustainability 1), and screening of facilities (Guideline Aesthetics 4), would further minimize potential impacts.

The proposed project focuses specifically on areas along Highway 236, Sky Meadow/Lodge Road, and Little Basin Road that either hosted pre-fire facilities or have otherwise been identified as suitable facility locations based on sensitive habitat avoidance, access, and slope stability. Proposed uses in the BBFMP are based on consideration to enhance or not detract from the existing visual character of the park. Additionally, adherence to General Plan Guideline Aesthetics 2 would ensure that new park facilities constructed as a result of the proposed plan are designed in an appropriate, site-specific style that complements that park's natural setting and preserves and showcases scenic views. They would also be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. Furthermore, future projects under the BBFMP would not require removal or major alteration of existing landscapes or geologic features and the proposed project would not substantially change visual character. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The 2013 General Plan EIR determined that artificial lighting from new park development could have an adverse effect on the dark night sky, though with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, light and glare would be limited and thus environmental impacts related to light and glare would be less than significant.

As described in the 2013 General Plan EIR, the facilities proposed under the BBFMP would likely include glass materials and nighttime safety lighting that may increase light and glare in the Focus Area over present levels. General Plan Guideline Aesthetics 5 would ensure that artificial lighting would be limited to developed areas of the park, be shielded or focused downwards, and emit the lowest light levels possible while meeting the park's goals for public safety. Further, SPR AES-3 requires that all outdoor lighting be pointed downward and installed as low as possible on poles and/or structures to minimize light pollution of the night sky. Additionally, adherence to SPR AES-1 would ensure that facilities constructed as a result of the proposed project incorporate appropriate building design and materials, thus reducing the potential for glare. Construction facilitated by the implementation of the BBFMP would likely only occur during daytime hours. Therefore, no temporary impacts from construction lighting and glare would occur. In addition, no substantial adverse impact due to light or glare issues would occur.

Overall, light and glare generated by development under the proposed project would be required to follow applicable SPRs and General Plan guidelines. Thus, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the Project:	Level of Impact in the 2013 General Plan EIR	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	NI	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	NI	No	No	No	No
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	NI	No	No	No	No
d) Result in the loss of forest land or conversion of forest land to non-forest use?	NI	No	No	No	No
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guideline related to agricultural and forestry resources:

Vegetation Management Goal: Protect, restore, and maintain the native ecosystems, especially vegetation complexes and the old growth redwood forest habitat, at Big Basin Redwoods SP.

Vegetation Management Guidelines:

> **Vegetation 2:** Identify locations in the park that are heavily impacted from past management practices (e.g., agricultural production, logging, and fire suppression) and implement appropriate vegetation and habitat restoration programs. Components of such restoration programs may include prescribed fire, revegetation with native species, fenced enclosures, facility relocations, and other methods. Reforestation, where appropriate, can also help to positively affect climate change by reducing greenhouse gases through carbon sequestration.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. There are no applicable SPRs related to agricultural and forestry resources. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

BASELINE CONDITIONS

The proposed project area, which includes the upland area of BBRSP, is characterized by mature forest growth, previously logged coast redwood forests, mixed conifers and oaks, chaparral, rugged terrain, and mountain streams. The impact of the 2020 CZU fire is visible in the charred areas of the forest that have been stripped of vegetation (burn scars) and a cleared forest understory; however, fire also creates favorable conditions for coast redwoods by clearing debris on the forest floor, exposing mineral soil, and creating canopy gaps that increase sunlight. Written in the park's purpose "is to protect, restore and perpetuate the outstanding coast redwood forests of the Santa Cruz Mountains and their unique resiliency to fire."

Much of the length of coastline along and adjacent to the park is characterized by broad marine terraces, some of which have long been used for agricultural purposes. Remnants of this agricultural history are still present, with farm operations continuing just outside park boundaries. These areas are outside of the Focus Area.

At this time, no lands in the Focus Area are used or zoned for agricultural purposes, and none of the land is designated under the California Department of Farmland Finder.[11] Additionally, because BBRSP is a State park, there are no Williamson Act conservation lands in the park. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The 2013 General Plan EIR determined that no substantial adverse impacts to agricultural uses or farmland in BBRSP would occur and thus no environmental impacts related to the conversion of farmland to non-agricultural uses would occur.

None of the land in the Focus Area, the area immediately surrounding the Focus Area, or any areas impacted by the proposed project are categorized as any of the Important Farmland categories, as delineated by the California Department of Conservation, under the Farmland Mapping and Monitoring Program.[12] Thus, the proposed project would not lead to any impact to farmland. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The 2013 General Plan EIR determined that no substantial adverse impacts to zoning for agricultural uses in the BBRSP would occur and thus no environmental impacts related to agricultural use or Williamson Act contracts would occur.

The proposed project is in an existing State Park, on Department land, and is not in conflict with existing zoning for agricultural uses or any Williamson Act land contracts. The proposed project is part of the State Parks system and, although some parks contain agricultural leases, the Focus Area does not support any agricultural operations or farmland. Local zoning does not apply to State Parks land, which is instead subject to Department policies, regulations, and management. Thus, there cannot be a conflict of zoning on a State Park property and the proposed project

[11] California Department of Conservation, 2016, California Department of Farmland Finder, available online at https://maps.conservation.ca.gov/DLRP/CIFF/.

[12] California Department of Conservation, California Important Farmland Mapper, 2022, available online at https://maps.conservation.ca.gov/DLRP/CIFF/, accessed April 4, 20225.

would not impact existing agricultural land or Williamson Act contracts. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The 2013 General Plan EIR determined that no substantial adverse impacts to timberland in the BBRSP would occur and thus no environmental impacts related to timberland production would occur.

Commercial extraction of timber is not allowed in units of the State Parks system, pursuant to PRC Section 5001.65. Some of the parcels recently acquired or leased by State Parks are zoned for timber production. However, local zoning does not apply to State Parks land. All land in BBRSP is subject to Department policies, regulations, and management. Thus, there cannot be a conflict of zoning on a State Park property for Timberland Production and, upon acquisition, local zoning will not apply to these lands. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project result in the loss of forest land or conversion of forest land to non-forest use?

The 2013 General Plan EIR determined that no substantial adverse impacts to forest land in BBRSP would occur and, thus, no environmental impacts would occur related to loss of forest land or conversion of forest land to non-forest use.

The proposed project would be implementing the goals provided in the 2013 General Plan and evaluated in the 2013 General Plan EIR. BBRSP includes old growth and previously logged coast redwood forests; however, by preserving and managing these forests, the park is helping to protect this land. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The 2013 General Plan EIR determined that no substantial adverse impacts to agricultural uses, farmland, or forest land in BBRSP would occur and, thus, no environmental impacts related to the conversion of farmland or forest land to nonagricultural or non-forest uses would occur.

No conversion of adjacent agricultural or forest lands to non-agricultural/timber production uses would occur as a result of the proposed project. Although some of the parcels recently acquired or leased by State Parks are zoned for timber production, as described in impact discussion II(c), local zoning will not apply to these lands upon acquisition by State Parks. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

III. AIR QUALITY

Would the Project:	Level of Impact in the 2013 General Plan EIR	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Conflict with or obstruct implementation of the applicable air quality plan?	LTS	No	No	No	No
b) Violate any air quality standards or contribute substantially to an existing or projected air quality violation?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	LTS	No	No	No	No
d) Expose sensitive receptors to substantial pollutant concentrations?	LTS	No	No	No	No
e) Create objectionable odors affecting a substantial number of people?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to air quality:

Geology and Hydrology Goal: Minimize human impacts on natural geologic and hydrologic processes and values while protecting human life and property from these natural processes.

Geology and Hydrology Guidelines:

Geology/Hydrology 5: As appropriate, use standard Best Management Practices (BMPs) for erosion, dust, sediment control, and storm water runoff for park projects, and update regularly.

Sustainability Goal: Incorporate sustainable design principles into the design, development, operations, and maintenance of park facilities and programs.

Sustainability Guidelines:

Sustainability 5: Use low- or zero-emission vehicles, when possible, for park operations and maintenance, and a potential shuttle system. Use low- or zero-emission grounds maintenance equipment, when possible, such as electric trimmers, chain saws, and mowers. Substitution of lower-emission and alternative energy-source tools and vehicles will reduce air quality impacts and heat-trapping emissions, and promote energy efficiency.

Vegetation Management Goal: Protect, restore, and maintain the native ecosystems, especially vegetation complexes and the old growth redwood forest habitat, at Big Basin Redwoods SP

Vegetation Guidelines:

Vegetation 2: Identify locations in the park that are heavily impacted from past management practices (e.g., agricultural production, logging, and fire suppression) and implement appropriate vegetation and habitat restoration programs. Components of such restoration programs may include prescribed fire, revegetation with native species, fenced enclosures, facility relocations, and other methods. Reforestation, where appropriate, can also help to positively affect climate change by reducing greenhouse gases through carbon sequestration.

Vegetation 4: Prescribed fire should be used as part of a vegetation management strategy, when appropriate, to achieve natural and cultural landscape management goals. This program, including the Unit Prescribed Fire Plan, will be upgraded periodically to reflect the ongoing accomplishments and necessary refinements, changes in prescribed fire science and technology, state and federal regulations, and be reviewed for consistency with other programs affecting vegetation management strategies and public safety.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to air quality. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

AQ-1: During dry, dusty conditions, all active construction areas will be lightly sprayed with water or another dust suppressant to reduce dust without causing runoff.

AQ-2: All trucks or light equipment hauling soil, sand, or other earthen materials on public roads to or from the site will be covered or required to maintain at least two feet of freeboard.

AQ-3: All gasoline-powered equipment will be maintained according to manufacturer's specifications, and in compliance with all State and federal requirements.

AQ-4: During construction, paved streets adjacent to the Park shall either be swept or washed at the end of each day, or as required, to remove excessive accumulations of silt and/or mud that could have resulted from project-related activities.

AQ-5: Excavation and grading activities will be suspended when sustained winds exceed 25 miles per hour (mph), instantaneous gusts exceed 35 mph, or when dust occurs from remediation related activities where visible emissions (dust) cannot be controlled by watering or conventional dust abatement controls.

AQ-6: Cover all inactive soil storage piles.

BASELINE CONDITIONS

The California Air Resources Board (CARB) regulates emission sources and oversees the activities of the local Air Pollution Control Districts and Air Quality Management Districts. CARB regulates local air quality by establishing state ambient air quality standards and vehicle emission standards. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is the local agency that regulates air quality in the North Central Coast Air Basin (NCCAB).

The majority of BBRSP is in the northernmost portion of the NCCAB, which includes Santa Cruz, San Benito, and Monterey Counties. A small portion of the park is in San Mateo County and is included in the southern portion of the San Francisco Bay Area Air Basin (SFBAAB) in the Bay Area Air District (Air District, formerly the Bay Area Air Quality Management District [BAAQMD]).

The main emission sources in the NCCAB are the Moss Landing Power Plant, agricultural activities, and vehicle emissions from Highway 101 traffic. Though separated by the Coast Range of the Santa Cruz Mountains to the south, wind can move air pollution from the SFBAAB to the NCCAB. The NCCAB is a nonattainment area for ozone and coarse particulate matter (PM_{10}) for California air quality standards only. The area attains the National Ambient Air Quality Standards for ozone, PM_{10} and fine particulate matter ($PM_{2.5}$). The NCCAB also meets the California standard for $PM_{2.5}$. The nearest air monitoring site was approximately 11 miles south of the park in Davenport but is no longer in operation. However, prior monitoring data from Davenport is useful for describing conditions in the project area. Two air quality components of concern are ozone and particulate matter. Emission sources at BBRSP include park construction, visitor and employee transportation, and prescribed burns. The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

The 2013 General Plan EIR determined that, with implementation of the General Plan's guidelines listed in Chapter 4, *Park Plan*, implementation of the General Plan is not expected to result in significant short- or long-term adverse effects on air quality.

Implementation of the BBFMP would take place over time with the implementation of various projects and plans occurring at different stages from each other. Some projects require only minor construction activity, such as trail construction, road management, or vegetation management using mostly hand tools, and would not result in substantial temporary emissions. Other projects could involve more extensive construction, such as development at Saddle Mountain and other new facility construction. For these projects, the proposed project would include similar SPRs as included in the 2013 General Plan EIR that would limit emissions to similar levels as described in the 2013 General Plan EIR, these include dust-control measures (SPRs AQ-1, AQ-2, AQ-4, ~~and~~ AQ-5, and AQ-6) and requirements for gasoline-powered equipment (SPR AQ-3). The air quality impacts from construction due to implementation of the proposed project would also be substantially reduced using dust-control measures and other construction best management practices (as required by Guideline Geology/Hydrology 5). Site-specific dust-control measures would be developed on a per-project basis, consistent with the General Plan guidelines and SPRs described previously. Further, since the preparation of the 2013 General Plan EIR in 2013, construction practices and equipment have become more efficient and therefore current construction projects are likely to create reduced air quality impacts than in past years.

Air quality may also be temporarily impacted by prescribed burning programs or wildfires in the park. Pursuant to General Plan Guideline Vegetation 4, the Department uses prescribed fire as part of a vegetation management strategy. This strategy has already been occurring in the park and would continue after implementation of the proposed project. The Department would continue to identify conditions under which prescribed burning would be allowed to minimize impacts on air quality, as described in the 2013 General Plan EIR.

An increase in park visitation as a result of the proposed project is not expected to occur, when compared to pre-fire visitation levels. Emissions associated with the number of vehicle trips associated with park usage would therefore be similar to pre-fire uses. Thus, operations as a result of the proposed project would not result in a substantial increase in long-term regional reactive organic gas (ROG), nitrogen oxide (NO_X), PM_{10}, or carbon monoxide (CO) emissions associated with increased vehicle trips. Further, the proposed project includes the addition of a shuttle program throughout the park to reduce single-occupancy vehicles and therefore reduce trips to and within the park in comparison to pre-fire conditions. The 2013 General Plan also

recommends the use of low-emission park vehicles, such as maintenance vehicles, to reduce emissions and contribute to better air quality (Guideline Sustainability 5). Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project violate any air quality standards or contribute substantially to an existing or project air quality violation?

The 2013 General Plan EIR determined that, with implementation of the General Plan's guidelines listed in Chapter 4, *Park Plan*, implementation of the General Plan is not expected to result in significant short- or long-term adverse effects on air quality. CARB regulates local air quality by establishing State ambient air quality standards and vehicle emission standards.

Implementation of the BBFMP is not expected to conflict with, obstruct implementation of, or violate air quality standards set by CARB. Though implementation of the proposed project would lead to construction emissions, compliance with the applicable air quality SPRs required for all projects would minimize air quality impacts during construction. Further, since preparation of the 2013 General Plan EIR in 2013, construction practices and equipment have become more efficient and therefore current and future construction projects are likely to create less impacts to air quality than in past years.

Overall, the proposed project would not result in a new source of emissions that would result in a considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable federal or State ambient air quality standards compared to the projects evaluated under the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable federal or State ambient air quality standard?

The 2013 General Plan EIR determined that, with implementation of the General Plan's guidelines listed in Chapter 4, *Park Plan*, implementation of the General Plan is not expected to result in significant short- or long-term adverse effects on air quality. As described previously, the NCCAB is a nonattainment area for ozone and $PM_{10,}$ which applies to California air quality standards only. The area attains the National Ambient Air Quality Standards for ozone, PM_{10}, and $PM_{2.5}$. The NCCAB also meets the California standard for $PM_{2.5}$.

The major sources of PM_{10}, as described in the 2013 General Plan EIR, are combustion (e.g., wood smoke, emissions from industry, automobiles, and diesel engines) and dust (e.g., airborne soil, road dust caused by vehicle travel), both of which have the potential to be emitted during subsequent maintenance and construction activities due to implementation of the proposed project. Additionally, ozone is a secondary pollutant formed by chemical reactions in the presence of sunlight between pollutants emitted by cars and other sources that could be involved in the proposed project.

Maintenance and construction activities due to implementation of the proposed project would include temporary usage of construction equipment, material transport, and clearing of vegetation or excavation for new trails and facilities; therefore, emissions of ozone precursors and generation of fugitive dust is anticipated, as described in the 2013 General Plan EIR. Maintenance and construction activities are already occurring in the Focus Area and are focused in areas previously disturbed by pre-fire development or otherwise appropriate for new development.

Compliance with applicable air quality SPRs required for all projects would minimize air quality impacts from construction activities. The proposed project would not result in a new source of emissions not already evaluated in the 2013 General Plan EIR that would result in a considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standards. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

The 2013 General Plan EIR determined that, with implementation of the General Plan's guidelines listed in Chapter 4, *Park Plan*, implementation of the General Plan is not expected to result in significant short- or long-term adverse effects on air quality. BBRSP does not contain any sensitive receptors such as schools, hospitals, or hospice care facilities. Furthermore, nearby sensitive receptors within the communities that surround BBRSP are all separated from the park by roadways, freeways, or urban development. Thus, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The 2013 General Plan EIR determined that, with implementation of the General Plan's guidelines listed in Chapter 4, *Park Plan*, implementation of the General Plan is not expected to result in significant short- or long-term adverse effects on air quality. Typically, the type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Future development of new facilities, campgrounds, and parking lots would occur under the BBFMP are not considered to be sources of objectionable odors.

Some of the new development under the proposed project would include pit toilets, which can be a source of odors. These facilities would be out of the main path of travel and are not expected to affect a substantial number of people. The proposed project would also include the installation of fire pits, which could generate odors. Along with pit toilets, fire pits were previously installed in BBRSP (prior to the 2020 CZU fire) and were evaluated in the 2013 General Plan EIR. Thus, the proposed project would not create new objectionable odors for any individuals that were not evaluated in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

IV. BIOLOGICAL RESOURCES

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan,	SU	**Yes**	No	No	**Yes**

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?					
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LTS	**Yes**	No	No	**Yes**
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	LTS	**Yes**	No	No	**Yes**

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LTS	**Yes**	No	No	**Yes**
e) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to biological resources:

Marbled Murrelet Management and Conservation Goal: Coordinate with the U.S. Fish and Wildlife Service and California Department of Fish and Game toward the long-term recovery and survival of the Santa Cruz Mountains marbled murrelet population. Implement actions to minimize marbled murrelet population decline, protect and restore marbled murrelet breeding habitat, reduce the impacts of human presence on the breeding success of this bird, and contribute to the recovery of the species.

Marbled Murrelet Management and Conservation Guidelines:

Murrelet 1: Consult with DFG and USFWS prior to initiating construction activities that may affect murrelets and/or their nesting habitat.

Regional Habitat Management Goal: Maintain, enhance, or restore the movement of native species through the park and regional ecosystems in order to protect and promote species abundance and diversity.

Regional Habitat Management Guidelines:

Regional Habitat 1: Protect known wildlife habitat linkages to permit movement of wildlife (both aquatic and terrestrial) and to increase species abundance and diversity. Collect baseline information to monitor the health and function of core habitat areas and these linkages. Monitor wildlife as necessary to gauge the effectiveness of linkages and to identify wildlife population trends

Regional Planning Goal: Integrate the planning and management programs at Big Basin Redwoods SP with the planning and management programs of other parks and open space providers in the Santa Cruz Mountains.

Regional Planning Guidelines:

Regional Planning 3: Coordinate and collaborate with universities, colleges and other research organizations on natural and cultural resource studies to increase the knowledge of resources in the park and in the Santa Cruz Mountains region. Seek cooperative agreements with adjacent landowners, neighbors, and local jurisdictions responsible for zoning and land use management to provide for open space buffer areas to protect sensitive park resources and to identify and preserve wildlife habitat linkages.

Special Status Animals Goal: Protect special status wildlife within the park and manage for their perpetuation.

Special Status Animals Guidelines:

Special Animals 1: Protect all special status native wildlife species and their habitats. Include all taxa that are locally important (including endemic species) as well as those protected by federal and/or state law. A comprehensive list of species requiring special management attention should be prepared and regularly updated. Implement specific programs using sound ecological principles and professionally accepted methods to protect and rehabilitate special status animal populations and their habitats.

Special Animals 2: Monitor marbled murrelet, snowy plover, San Francisco garter snake, California red-legged frog, and other special status animal species to identify population trends and to develop management strategies for their protection and perpetuation.

Special Animals 3: Minimize trail building, roadwork, and park facility maintenance activities in or near breeding areas during the breeding seasons for special status species.

Special Animals 4: Minimize disturbance to special status aquatic species, including California red-legged frog and anadromous fish, when scheduling and implementing activities that may result in streambed alteration or disturbance to wetlands or riparian habitat. This includes the sizing and placement of culverts beneath roads and trails throughout the park to facilitate fish passage. Culvert drainage patterns should follow the natural grade of the stream as much as possible to maximize fish passage.

Special Animals 5: Consider the needs of special status aquatic species into the timing and implementation of any activity that would result in streambed alteration or disturbance to wetlands or riparian habitat. Conduct in-stream work consistent with the requirements of CDFG, NOAA Fisheries, and the Federal Clean Water Act. Apply appropriate Best Management Practices (BMPs) to protect water quality.

Wildlife Management Goal: Protect, restore and maintain the wildlife populations at Big Basin Redwoods SP.

Wildlife Management Guidelines:

Wildlife 1: Encourage and support scientific surveys and studies to be conducted in the park to gather more information about the distribution, status, and condition of sensitive natural resources.

Wildlife 2: Cooperate with federal, state, and local agencies and with open space organizations to promote effective and efficient park and regional vegetation, habitat, and wildlife resource management.

Wildlife 3: Prepare and conduct surveys and inventories of natural resources in areas subject to development. Avoid or reduce negative impacts to sensitive resource areas and follow all applicable regulations and guidelines for minimizing adverse impacts from new facilities development.

Wildlife 4: Control and/or eradicate non-native animal species, such as bullfrogs and feral pigs, that have been identified by State Park biologists and/or park managers as creating significant impacts to special status wildlife species such as the federally listed as threatened California red-legged frog. Use methods that are based on sound principles of ecosystem management and that are consistent with the Department's Non-Native Animal Control

Policy (DOM, Chapter 0300, Natural Resources, Section 0311.5.7.1). Priority for control efforts will be given to those species most detrimental to the environment and for which there is a reasonable probability of success.

Wildlife 5: Monitor San Francisco garter snake, California red-legged frog, marbled murrelet, western snowy plover, and other special status animal species to identify animal population trends and to develop management strategies for their protection and perpetuation.

Wildlife 6: Reduce and, where possible, eliminate wildlife access to human food and garbage by using wildlife-proof trash containers and dumpsters throughout the park, increasing the frequency of trash collection, and educating the public about the detrimental effects that human food can have on the ecological balance of the park and surrounding regions. Post signs throughout the park informing people not to feed wildlife and to cover and store food and trash appropriately. Also see listed actions for Marbled Murrelet Management and Conservation.

Wildlife 7: Protect common and special status wildlife and their habitats for the purpose of establishing and maintaining self-sustaining populations in a natural ecological setting and/or as required by laws and regulations. Avoid human-induced disturbance and degradation of natural areas. Protect special habitat elements, such as snags, where possible.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The SPRs related to biological resources will be provided in the Supplemental EIR and are not included in this Initial Study.

BASELINE CONDITIONS

As discussed in the 2013 General Plan, BBRSP exhibits a significant diversity of vegetation types, consisting of at least 15 types. Four of these vegetation types are considered by the California Natural Diversity Database (CNDDB) to be of high inventory priority because of their rarity and imperilment. In addition, the Redwood Forest type is of special significance because it provides habitat for listed wildlife species and because protection of remnant old-growth redwood stands was the primary impetus for the park establishment. The park also provides important habitat for a number of unique wildlife species, 22 special-status plant species, and 52 special-status wildlife species, including the marbled murrelet, and is of great importance to regional wildlife populations. The park contains valuable old-growth and older second-growth redwood habitat. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The 2013 General Plan EIR identified a significant impact associated with potential impacts to marbled murrelet (*Brachyramphus marmoratus*), a special-status bird species that is State listed as endangered and federally listed as threatened. The 2013 General Plan EIR found this impact to be significant and unavoidable due to the speculative nature of marbled murrelet research; because it is unclear what is causing the decline in its population, the precise activities under the 2013 General Plan EIR that could contribute to the dwindling numbers cannot be identified and therefore cannot be adequately mitigated. Because of the uncertainty about the marbled murrelet, as described in the 2013 General Plan EIR, further evaluation of this topic is warranted. **As such, the Draft Supplemental EIR will further evaluate this significance criterion.**

b) Would the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The 2013 General Plan EIR identified a significant impact associated with potential impacts to marbled murrelet. Because of the uncertainty regarding the cause of the marbled murrelet's decline, further evaluation of this topic is warranted. **As such, the Draft Supplemental EIR will further evaluate this significance criterion.**

c) Would the proposed project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The 2013 General Plan EIR identified a significant impact associated with potential impacts to marbled murrelet. Because of the uncertainty regarding the marbled murrelet's decline, further evaluation of this topic is warranted. **As such, the Draft Supplemental EIR will further evaluate this significance criterion.**

d) Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The 2013 General Plan EIR found that a significant, unavoidable impact resulted with respect to the speculative nature of the marbled murrelet research, since it is unclear what is causing the decline in its population. This lack of definitive information leads the Department to make overriding findings for a significant unavoidable impact on the marbled murrelet population.

Because of the uncertainty about the marbled murrelet, as described in the 2013 General Plan EIR, further evaluation of this topic is warranted. **As such, the Draft Supplemental EIR will further evaluate this significance criterion.**

e) Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan?

The 2013 General Plan EIR did not describe a Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan that includes BBRSP. The Zone 6 Marbled Murrelet Landscape Management Plan was created in 2017 that includes BBRSP. The proposed project would adhere to the BMPs described in the plan. Because the location of the proposed project is a focused area in the 2013 General Plan EIR study area, the proposed project would not be included in any other conservation plans; however, the "Reimagining Big Basin" process is planning for future conservation efforts. Further, where appropriate, State and federal resource agencies will be consulted to assist with appropriate resource protection, habitat enhancement, and management techniques under the General Plan, as well as for implementation of the proposed project. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

V. CULTURAL RESOURCES

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Cause a substantial adverse change in the significance of historical resources?	LTS	No	No	No	No
b) Cause a substantial adverse change in the significance of an archaeological resource?	LTS	No	No	No	No
c) Disturb any human remains, including those interred outside of formal cemeteries?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to cultural resources:

Archaeological Resources Goal: Identify, document and evaluate prehistoric archaeological resources for long-term protection and preservation.

Archaeological Resources Guidelines:

Archaeological 1: Implement the California State Parks Archaeological Site Condition Assessment (ASCAR) program to regularly inspect and record the status of archaeological sites. Conduct resource surveys and update the documentation and site records of the known archaeological sites to amplify or correct information about a resource, or confirm that the existing record remains accurate at the time of a subsequent field examination. This would include testing through limited excavation and/or collection of selected surface cultural materials, GPS mapping of sites, and establishment of resource sensitivity boundaries

Archaeological 2: Prepare cultural resource management plans, as necessary, to further define a framework to identify, acknowledge, assess, and create effective management procedures for cultural sites within the park.

Archaeological 3: Nominate cultural resources, either as sites, districts or cultural landscapes, which may be eligible for listing in the National Register of Historic Places and/or the California Register of Historical Resources, to provide state and national recognition and context for resource management and protection.

Archaeological 4: Continue consultations with Ohlone representatives consistent with the Department's Native American Consultation Policy, and encourage participation in future park projects.

Archaeological 5: Identify, document, catalogue and curate artifacts and collections that have previously been recovered from archaeological sites within the park, according to the Office of Historic Preservation guidelines**.**

Historic Resources Goal: Protect and preserve important and significant cultural resources, including significant cultural landscapes and those buildings in the park as identified as eligible, or potentially eligible, to the California Register of Historic Resources or the National Register of Historic Places.

Historic Resources Guidelines:

Historic 1: Develop and implement a treatment plan for the historic resources located in the park. Development strategies should include cultural resource treatments, as defined by the Secretary of the Interior's Standards for the Treatment of Historic Properties, for those historic buildings, structures and features that have been identified as significant, combined with the interpretive objectives for the landscape as a whole, including the periods of significance; the integrity of the landscape and its character-defining features; and the existing condition of these individual features.

Historic 2: Complete Historic Structure Reports (HSR) for those existing historic buildings that do not have them, and update existing HSRs as needed. Provide documentation including graphic and physical information about a property's history and existing conditions, recommend appropriate treatments, management actions and goals for preservation or rehabilitation and appropriate adaptive use of the property, and outline the scope of recommended work for current and future resource managers.

Historic 3: Establish compatible uses for historic buildings requiring minimal change to historic fabric and character-defining features. Repair and retain historic fabric, whenever possible, instead of replacing with new materials. If replacement is necessary, use "like-kind" materials, styles, finishes, colors and craftsmanship. Distinctive features, finishes, and

construction techniques or examples of craftsmanship that characterize a historic property should be preserved.

Historic 4: Complete and maintain an inventory of standing buildings and historic structures, roads and trails, historic objects and landscape features, with information including date of construction, significance, and character-defining features. Inventory and archive all historic maps into the Department's archive database.

Historic 5: Include cultural resource surveys in site-specific planning and development, to determine the resource presence, significance, potential impacts, and to provide recommended mitigation, when appropriate.

Historic 6: Document and evaluate historic properties that have changed over time, and determine the appropriate treatment for those property changes that have acquired historic significance in their own right.

Historic 7: Preservation and rehabilitation of historic buildings shall follow the Secretary of the Interior's Standards and Guidelines and the California Historic Building Code.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to cultural resources. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

CUL-1: If forest thinning activities are required in a culturally sensitive area, downed timber and other forest debris will be removed by aerial suspension; no portion of logs, slash, or debris will be dragged across the surface.

CUL-2: Prior to the start of on-site construction work, the **Cultural Resources Supervisor** will be notified, unless other arrangements are made in advance, a minimum of three weeks to schedule a **Cultural Resource Specialist** to monitor work, as necessary, to ensure that removal and reconstruction of historic fabric will occur in a manner consistent with the Secretary of the Interior's Standards.

CUL-3: Before, during, and after construction, a **Cultural Resource Specialist** will photo-document all aspects of the project and will add the photos to the historical records (archives) for the park.

CUL-4: Prior to the start of on-site construction work, and to the extent not already completed, a **Cultural Resource Specialist** will map and record all cultural features in the proposed Area of Potential Effects (APE) to a level appropriate to the Secretary of Interior Standards.

CUL-5: All historic work will comply with the Secretary of the Interior Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

- Historic character will be retained and preserved;
- Where safe, original materials that still maintain structural integrity will be retained; and
- Where replacement is required, materials and features will be replaced "in kind."
- A **Cultural Resource Specialist** familiar with the project site's cultural/historic resources will monitor all construction activities. All historical resources uncovered during the project will be recorded in place with a photograph and/or drawing showing any new material or recovered and archived, at the discretion of the monitor.
- Upon completion of the project, a **Cultural Resource Specialist** will record any modifications to historic buildings or alterations of historic fabric on as-built drawings.

CUL-6: Prior to the start of any ground-disturbing activities, a Department-approved archaeologist will complete preconstruction testing to determine specific avoidance areas.

- If necessary, a Department-qualified Cultural Resource Specialist will prepare a research design, including appropriate trenching and/or preconstruction excavations.
- Based on preconstruction testing, project design and/or implementation will be altered, as necessary, to avoid impacts to archaeological resources or reduce the impacts to a less-than-significant level, as determined in consultation with a Department-qualified archaeologist.

CUL-7: If anyone discovers previously undocumented cultural resources during project construction, work within **100 feet** of the find will be temporarily halted until the archaeologist designs and implements appropriate treatments in accordance with the Secretary of the Interior's Standards and Guidelines for archaeological resource protection.

- The project will be modified to ensure that construction activities will avoid cultural resources upon review and approval of a **Cultural Resource Specialist**.

- If ground-disturbing activities uncover intact cultural features (including, but not limited to, dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic ash), when a Department-qualified cultural resources specialist is not on-site, **the contractor** will contact the Department's State Representative immediately and the **contractor** will temporarily halt or divert work in the immediate vicinity of the find. A Department-qualified cultural resources specialist will evaluate the find and determine the appropriate treatment and disposition of the cultural resource.

CUL- 8: In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate Department personnel. Any human remains and/or funerary objects will be left in place or returned to the point of discovery and covered with soil. The Department's **Cultural Resources Program Manager** (or authorized representative) will notify the County Coroner, in accordance with Section 7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (or Tribal Representative). The Santa Cuz District Tribal Liaison will be responsible for notifying the appropriate Native American authorities. The local County Coroner will make the determination of whether the human bone is of Native American origin.

- If the Coroner determines the remains represent Native American interment, the Native American Heritage Commission in Sacramento will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC Section 5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.
- If it is determined that the find indicates a sacred or religious site, the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representatives will occur as necessary to define additional site mitigation or future restrictions.

BASELINE CONDITIONS

As discussed in the 2013 General Plan, BBRSP hosts a variety of cultural resources. Prehistoric archaeological resources reflecting the past life patterns of Californian Native Americans indigenous to the region are known to occur in the park. Archaeological sites have been documented throughout BBRSP. There is a potential for previously unknown sites to occur throughout the park and the entire park has recently been systematically surveyed for cultural resources; however, initial site investigations have been completed and cultural resources have been mapped in areas proposed for future facilities development under the BBFMP.

Sites relating to California Native Americans, Spanish explorers, logging, conservation, and park development are dispersed throughout the groves, beaches, and meadows of the park. Cultural resource surveys, National Historic Landmark and National Register of Historic Places (National Register) nominations, and artifacts from these locations have in the past allowed researchers and park managers to identify sensitive areas for protection and preservation.

Before the 2020 CZU fire, the park contained multiple National Register–listed resources associated with multiple eras of the park's development, including the park's initial founding (1910s), the involvement of the Civilian Conservation Corps (1930s), and BBRSP's development during the California-wide expansion of State Parks infrastructure in the post-World War II years (1945-1965). The National Register listings reflecting these different eras included individual resources (Headquarters Administration Building), historic districts (Lower Sky Meadow Residential Area), a draft National Historic Landmark nomination for the entire park, along with a Multi-Properties Submission that recognized numerous property groups relating to one or several historic contexts. In addition to these listed resources, the park contained numerous potentially eligible resources that had not been formally evaluated, but were identified as potentially eligible under the multi-properties document for representing development of California State parks between 1941 and 1955.

Unfortunately, nearly all the buildings and facilities in BBRSP were detrimentally impacted in the 2020 CZU fire. Following the fire, the Lower Sky Meadow district and the Headquarters building were withdrawn from the National Register. The previously unrecorded resources that held the potential to be listed as contributors to these districts are no longer eligible for the National Register because of the loss of these cohesive districts. The extant buildings and features that remain may still hold significance enough for listing on a local register, but do not hold enough individual significance to be listed on the National Register.

It is the policy of the Department to engage in open, respectful, ongoing consultation with appropriate California Native American tribes or groups in the proper management of areas, places, objects, or burials associated with their heritage, sacred sites, and traditional cultural properties or cultural traditions in the State Park System. During the 2013 General Plan EIR process, the Native American Heritage Commission was contacted on November 29, 2007, and a Sacred Lands File search was requested. Native American contact lists for San Mateo and Santa Cruz Counties were also requested. No Sacred Lands were identified by the Native American Heritage Commission. On January 30, 2025, individuals on the Native American Heritage Commission contact list were again contacted by mail and telephone and provided an opportunity to consult on the proposed project. There have been responses from two tribes, Amah Mutsun Tribal Band and Costanoan Rumsen Carmel Tribe, both requesting consultation on the proposed project at the time of this Initial Study. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project cause a substantial adverse change in the significance of a historical resource?

The 2013 General Plan EIR determined that with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, substantial adverse impacts to historical resources in BBRSP would not occur and thus environmental impacts related to historic resources would be less than significant.

As described in the previous "Baseline Conditions" section, nearly all of the historic buildings and facilities in BBRSP burned in the 2020 CZU fire, including the Headquarters Area, considered the historic core. As such, there are no historic resources remaining in the Focus Area that could be impacted by the proposed project. New development under the proposed project would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. The spatial arrangement of the new facilities would also be compatible with the previously burned historic facilities.

The proposed project will serve as a management tool that will be used to guide the stewardship, management, and use of existing and future facilities and minimize impacts to natural and cultural resources. New development under the proposed project would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project cause a substantial adverse change in the significance of an archaeological resource?

The 2013 General Plan EIR determined that with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, substantial adverse impacts to archaeological resources in BBRSP would not occur and thus environmental impacts related to archaeological resources would be less than significant.

BBRSP contains potentially significant archaeological resources that could be disturbed, destroyed, or degraded by new development and facility improvements proposed in the General Plan and the proposed project. These resources include prehistoric and ethnographic sites, ethnohistoric resources, and other archaeological resources. Though extensive research and inventory of the park's cultural and tribal cultural resources have occurred over the past several years, it is not considered complete; therefore, the potential exists for the discovery of a previously unknown archaeological resource during facilities construction, rehabilitation, resource management projects, restoration, or maintenance operations.

As described in the 2013 General Plan EIR, areas of high probability for prehistoric archaeological sites will continue to be surveyed and recorded, and criteria of significance developed for each class of resource for sites encountered in the future (Guidelines Archaeological 1, 2, 3, 4, and 5). Additionally, as part of any new development project, the Department would inventory and review areas of potential impact to determine the presence and significance of cultural resources, the potential impact, and recommended mitigation or avoidance measures, if appropriate.

As under the 2013 General Plan EIR, potential impacts caused by implementation of the proposed project may be reduced by project avoidance, site capping, structural stabilization/renovation, project redesign, and data recovery (Guidelines Historic 5 and 6). New facilities developed under the proposed project would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. Implementation of SPR CUL-6 would require preconstruction testing by an approved archaeologist to determine specific avoidance areas. Further, the proposed project incorporates new tribal coordination beyond that conducted for the 2013 General Plan.

Additionally, the BBFMP outlines Planning Objectives to include Indigenous perspectives. New development under the proposed project would be sited and designed with input and consultation with Indigenous leaders and representatives; the siting and design of facilities would include considerations that ensure that all interpretive and educational materials incorporate an Indigenous perspective, and park facilities would provide ceremonial space for cultural use by Indigenous groups and individuals.

Tribal facilities at Little Basin would house a number of tribal and cultural facilities that would honor the millennia-long connection that Indigenous people have had with the land. Facilities would include a cultural center with interpretive exhibition space, outdoor workspace, a sweat lodge and dance corral campfire ring, and an ethnobotanical native plant propagation area. The proposed project would partner with California Native American Tribes to incorporate more tribal cultural resources and perspectives, therefore lessening the impact evaluated in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project disturb any human remains, including those interred outside of dedicated cemeteries?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in General Plan Chapter 4, *Park Plan*, substantial adverse impacts to archaeological resources in the BBRSP would not occur and thus environmental impacts related to human remains would be less than significant.

There are no known human remains in the Focus Area; however, it is possible that unknown human remains could be discovered during ground disturbance associated with construction activities. If human remains are discovered, California Health and Safety Code Section 7050.5 requires that disturbance of the site be halted. If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and PRC Sections 5097.9 through 5097.99, as amended pursuant to Assembly Bill 2641, shall be followed. If human remains are discovered during construction, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains. The Department shall immediately notify the qualified archaeologist, who shall then notify the Santa Cruz County Coroner. The Coroner will make a determination as to whether the remains are Native American. If the remains are believed to be Native American, the Coroner will contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission will then designate a Most Likely Descendant. The Most Likely Descendant will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts. If one of the following conditions occurs, the landowner or their authorized representative shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance. Compliance with existing laws and adherence to SPR CUL-8 would reduce potential impacts to human remains to a less-than-significant level.

Further, as described in the 2013 General Plan EIR, the proposed project would adhere to the 2013 General Plan-provided guidelines protecting cultural and archaeological resources. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

VI. GEOLOGY AND SOILS

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	LTS	No	No	No	No
ii) Strong seismic ground shaking?	LTS	No	No	No	No
iii) Seismic-related ground failure, including liquefaction?	LTS	No	No	No	No
iv) Landslides?	LTS	No	No	No	No
b) Result in substantial soil erosion or the loss of topsoil?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LTS	No	No	No	No
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS	No	No	No	No
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	LTS	No	No	No	No
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to geology and soils:

Geology and Hydrology Goal: Minimize human impacts on natural geologic and hydrologic processes and values while protecting human life and property from these natural processes.

Geology and Hydrology Guidelines:

Geology/Hydrology 1: Monitor and document the geologic and hydrologic processes affecting the park and its resources.

Geology/Hydrology 2: Determine if, where, and how human development or activities may be exaggerating the natural rates or scales of landslides, stream channel erosion, stream debris clogging, and sedimentation. Identify management actions that can reduce or avoid negative human impacts to slope and stream integrity and to water quality. Management actions could include road and trail rehabilitation or removal from highly erosive areas, stream modifications, debris management, and revegetation.

Geology/Hydrology 3: Understand and comply with the surface and groundwater beneficial uses and water quality objectives set forth in the Water Quality Control Plan for the Central Coast Region (Basin Plan) for the Big Basin Redwoods SP watersheds and take appropriate actions to prevent degradation of surface and groundwater within the park. Examples of appropriate actions include ensuring that park sewage treatment meets water quality standards and planning and implementing new park projects so they do not degrade surface or groundwater quality or affect the water production rates of pre-existing nearby wells.

Geology/Hydrology 4: Cooperate with other landowners and regulatory agencies to address and remediate sediment issues affecting the park.

Geology/Hydrology 5: As appropriate, use standard Best Management Practices (BMPs) for erosion, dust, sediment control, and storm water runoff for park projects, and update regularly.

Geology/Hydrology 7: Include professional biological, geological, and engineering evaluations as appropriate when designing and locating permanent structures, campgrounds, roads, utilities, and trails to avoid or reduce potential damage to people and property from unstable soil, landslides, debris flows, floods, and earthquakes.

Geology/Hydrology 7: Construct new structures in the park in conformance with seismic design criteria in the newest edition of the Uniform Building Code or California Building Code.

Interpretation Goal A: Reinforce the Department's mission and inspire people to use the park safely and preserve its resources.

Interpretation Guidelines:

Interpretation A1: Reinforce the Department's strategic initiatives with park interpretation, including interpretation of what California State Parks has done and what visitors can do to help reduce global warming.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to geology and soils. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

GEO-1: After a large earthquake event (i.e., magnitude 5.0 or greater within 50 miles of the project site), **State Parks** will inspect all project structures and features for damage, as soon as possible after the event. Any damaged structures or features will be closed to park visitors, volunteers, residents, contractors, and staff.

GEO-2: No track-mounted or heavy-wheeled vehicles will be driven through non-disturbed areas during the rainy season or when soil is saturated to avoid compaction and/or damage to soil structure.

GEO-3: **State Parks** will develop rehabilitation plans for the decommissioned roads, paved areas, and trails that includes using brush and trees for bio-mechanical erosion control (bundling slash and keying it into soil, filling damaged sections with soil and duff removed, constructing water bars, and replanting native trees and shrubs).

GEO-4: Prior to design and construction of structures and vehicular areas, a soil report will be prepared by a geotechnical engineer and recommendations of the soil engineer will guide structural design to minimize risk of seismic events, landslides, or expansive soils.

BASELINE CONDITIONS

As discussed in the 2013 General Plan, BBRSP is within the boundaries of the Coast Ranges Geomorphic Province and is on the Salinian Block, bounded by the San Gregorio Fault to the west and the San Andreas Fault to the east. The oldest rocks in the project area are Cretaceous age (136-66 million years) quartz diorite, which underlies part of the Pine Mountain area. Geomorphic development of the present BBRSP landscape occurred in the late Pliocene to early Pleistocene era (1-6 million years).

BBRSP is in Soil Region I, Northwestern Coast Ranges. Soil Region I encompasses steep mountain ranges and small valleys of the Coast Ranges from the Santa Cruz Mountains north to the Oregon border. Soils in Region I are primarily derived from sedimentary rocks, alluvium, and granitic rocks. Most soils in BBRSP are moderately deep to very deep. Drainage at BBRSP is quite variable, ranging from somewhat poorly drained to somewhat excessively drained.

Landslides are common in the park; several large landslides have occurred on the northwest side of Pine Mountain and on the north and west sides of Mount McAbee. Many smaller landslides have occurred on the canyon slopes of Waddell Creek and its tributaries. The BBRSP area is in an active seismic zone, between the San Gregorio and San Andreas Fault systems. The Zayante Fault cuts through the east-central portion of BBRSP. Strong seismic shaking can be expected to occur in some areas of BBRSP. Therefore, the possibility of ground rupture exists within BBRSP. Secondary seismic hazards, such as liquefaction and landsliding, may occur during an earthquake. A zone of high potential for liquefaction is identified in the Waddell Creek drainage, which is not in the Focus Area. The liquefaction zone includes the lower reach of Waddell Creek, from the ocean to the intersection of the east and west branches of Waddell Creek. Strong seismic shaking may also trigger movement on any of the many landslides in BBRSP. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides, or other similar hazards?

Current and future facilities and infrastructure in BBRSP could be subject to potentially hazardous geologic and soil conditions, including seismic events. The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, as well as compliance with the California Building Standards Code for future development, this impact would be less than significant.

As described in the 2013 General Plan EIR, the park is susceptible to earthquakes, and has the potential for damage from ground shaking, ground surface rupture, liquefaction, lateral spreading, and landslides. General Plan Guideline Geology/Hydrology 7 directs the Department to conduct professional geologic and engineering evaluations to identify potentially hazardous soils or geologic areas prior to any permanent facility development and to avoid or reduce damage to people and property from unstable soil and seismic hazards. The 2013 General Plan also provides guidelines to protect the public from natural hazards, such as using interpretive

media to educate visitors about natural hazards and how to avoid danger (Interpretation Goal A1).

Future development due to implementation of the proposed project would be in areas that contained pre-fire development or are otherwise appropriate for new development. Infrastructure constructed as part of the BBFMP would be designed to withstand and function during multiple emergency scenarios, including earthquakes and landslides. Additionally, the proposed project would be required to adhere to SPR GEO-1, which would ensure that after any earthquake event (i.e., magnitude 5.0 or greater within 50 miles of the project site), structures would be inspected for damage.

Further, as described in the 2013 General Plan EIR, the proposed project would follow the 2013 General Plan guidelines protecting the public from natural hazards. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project result in substantial soil erosion or the loss of topsoil?

Current and future facilities and infrastructure in BBRSP could be subject to potentially hazardous geologic and soil conditions, including erosion. The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, as well as compliance with the California Building Standards Code for future development, this impact would be less than significant.

The 2013 General Plan EIR describes areas of the park that contain highly erodible soils. Land disturbance, such as grading and trail development, can trigger or accelerate soil erosion. As outlined in the 2013 General Plan EIR, development of the facilities in the BBRSP, as under the proposed project, would decrease permeable areas in the park, potentially leading to greater runoff rates and concentrated flows that have greater potential to erode exposed soils. General Plan Guidelines Geology/Hydrology 3, 4, and 5 direct the Department to follow BMPs to reduce soil erosion and stormwater runoff and to ensure water quality during facility removal, maintenance, or construction. The Department has developed BMPs for road recontouring and rehabilitation, road removal, road-to-trail conversion, and culvert replacement. In addition, the proposed project would also adhere to standard construction BMPs for erosion and sediment control from the California Stormwater Quality Association, where appropriate.

The proposed project includes facility improvements and enhancements that were generally envisioned in the 2013 General Plan. The removal of paved roadways in sensitive ecological areas is a key component of the restoration strategy included in the proposed project. Many roads built prior to modern conservation planning have contributed to soil compaction, habitat fragmentation, and hydrological disruptions. The restoration process would prioritize decompaction of soil, removal of impervious surfaces, and re-establishment of native

vegetation. Additionally, natural drainage features would be restored to ensure proper water flow and reduce erosion risks. Where feasible, select roadways may be converted into trails, providing low-impact access while minimizing environmental disturbance. Thus, implementation of the proposed project could improve the risk of soil erosion or loss of topsoil at BBRSP compared to the 2013 General Plan EIR. Additionally, significant impacts from erosion during routine road and trail maintenance activities would be avoided through implementation of the SPRs GEO-2 through GEO-4.

Further, as described in the 2013 General Plan EIR, the proposed project would adhere to the 2013 General Plan-provided guidelines protecting the public from natural hazards. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project be on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Current and future facilities and infrastructure in BBRSP could be subject to potentially hazardous geologic and soil conditions, including soil instability. The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, as well as compliance with the California Building Standards Code for future development, this impact would be less than significant.

As described in impact discussion VI(a), the Focus Area would potentially be subject to landslides. Additionally, climate change is expected to increase the frequency and severity of landslides due to shifting precipitation patterns and increased wildfire activity. Future development due to implementation of the proposed project would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. Infrastructure constructed as part of the BBFMP would be designed in accordance with the California Building Code and 2013 General Plan guidelines. New facilities as part of the proposed project would avoid placement on steep slopes, historical landslide areas, and locations where soil stability may be compromised by vegetation loss or infrastructure development. Site designs under the proposed project would consider hydrogeomorphic processes, including erosion, water infiltration, and temperature fluctuations affecting soil cohesion. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, as well as compliance with the California Building Standards Code for future development, this impact would be less than significant.

The Focus Area may contain expansive soils; however, the proposed project would be required to follow SPR GEO-4, which would ensure a soil report is prepared by a geotechnical engineer prior to project construction and design. Recommendations made in the report would then guide the structural design to minimize risk caused by expansive soils.

Further, as described in the 2013 General Plan EIR, the BBFMP would also adhere to the 2013 General Plan-provided guidelines protecting the public from natural hazards. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, as well as compliance with the California Building Standards Code for future development, this impact would be less than significant.

Currently, and at the time of the 2013 General Plan EIR, BBRSP is served by a sanitary sewer collection system and on-site wastewater treatment plant, as well as some sites that are served by individual State-owned septic systems. The proposed project would continue to be served by State-owned wastewater treatment systems, as evaluated in the 2013 General Plan EIR. Any septic facilities included due to implementation of the proposed project would be required to follow the same regulations and BMPs as listed in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

f) Would the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The 2013 General Plan EIR determined that implementation of the General Plan guidelines would prevent any adverse impact to any features of paleontological and geologic significance in the park.

As described in the 2013 General Plan EIR and 2013 General Plan, there are no known unique paleontological resources in the BBRSP. If unknown paleontological resources are discovered, they would likely be detected during site-specific inventories conducted to detect cultural resources. If unique resources are detected during future surveys due to implementation of the proposed project, or accidentally discovered during construction, adverse impacts to these resources would be avoided during site-specific design methods, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

VII. GREENHOUSE GAS EMISSIONS

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS	No	No	No	No
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to greenhouse gas emissions:

Sustainability Goal: Incorporate sustainable design principles into the design, development, operations, and maintenance of park facilities and programs.

Sustainability Guidelines:

> **Sustainability 5:** Use low- or zero-emission vehicles, when possible, for park operations and maintenance, and a potential shuttle system. Use low- or zero-emission grounds maintenance equipment, when possible, such as electric trimmers, chain saws, and mowers. Substitution of lower-emission and alternative energy-source tools and vehicles will reduce air quality impacts and heat-trapping emissions, and promote energy efficiency.

Vegetation Management Goal: Protect, restore and maintain the native ecosystems, especially vegetation complexes and the old growth redwood forest habitat, at Big Basin Redwoods SP

Vegetation Guidelines:

> **Vegetation 2:** Identify locations in the park that are heavily impacted from past management practices (e.g. agricultural production, logging, and fire suppression) and implement appropriate vegetation and habitat restoration programs. Components of such restoration programs may include prescribed fire, revegetation with native species, fenced enclosures, facility relocations, and other methods. Reforestation, where appropriate, can also help to positively affect climate change by reducing greenhouse gases through carbon sequestration.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPR is related to greenhouse gas emissions. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

GHG-1: All gasoline-powered equipment will be maintained according to manufacturer's specifications, and in compliance with all State and federal requirements.

BASELINE CONDITIONS

Greenhouse gases (GHGs) in the atmosphere are leading to climate change and changing Earth's weather patterns. GHGs include carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride, among others. Human activities are adding large amounts of GHGs to the atmosphere. Combustion of fossil fuels for heat, electricity, and transportation is the main source of these gases. GHG emissions at the park largely come from vehicle trips, energy and water use, wastewater and solid waste generation, motorized activities, and construction and maintenance.

Continued warming is projected to increase global average temperature between 2 and 6 degrees Fahrenheit (°F) over the next 100 years (some projections go as high as 11°F). Rising temperatures could have a variety of impacts, including increasing emissions of GHGs and criteria pollutants associated with energy generation. Higher temperatures also contribute to sea level rise by expanding ocean water, melting mountain glaciers and small ice caps, and

causing portions of Greenland and the Antarctic ice sheets to melt. According to the December 2009 Staff Report to the California State Lands Commission, sea level is projected to rise 16 inches by 2050, and 55 inches by 2100. The California Resources Agency states that sea level rise can cause damage to coastal communities and loss of land. Regional climate studies indicate that California is likely to see average annual temperatures rise by 3°F to 4°F in the next century, with winters 5°F to 6°F warmer and summers 1°F to 2°F warmer. Winter precipitation will increase, particularly in the mountains, and more will fall as rain than snow. Summer stream flow and soil moisture required for plant growth are likely to decrease. Statewide averages and generalizations cannot tell the whole story, for impacts of climate change are likely to vary greatly from one place to another. The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Based on a program-level environmental assessment, the 2013 General Plan EIR determined that implementation of the General Plan would not result in the generation of substantial short-term construction-related or long-term operation-related emissions of GHGs and development would not be substantial enough to generate significant GHGs.

The proposed project is a planning document stemming from the 2013 General Plan designed to guide the stewardship, management, and use of existing and future facilities and, like the 2013 General Plan, does not provide detailed information to be able to analyze and determine specific GHG generation estimates for individual construction projects. However, a key priority of the proposed project is GHG emissions reduction. The proposed project intends to rebuild park facilities in a way that leads to fewer emissions compared to pre-fire facilities. This goal would be accomplished by the proposed shuttle program, likely using electric vehicles; increased building efficiency and technology when compared to previous on-site facilities; and on-site solar energy production.

Specific future development projects that exceed applicable screening thresholds may require detailed project-specific review to estimate GHG emissions and develop project-specific GHG reduction measures. Future development under the proposed project would include temporary use of construction equipment, transportation of materials, grading and clearing of vegetation, and excavation for new trails, buildings, and parking lots; thus, emissions of ozone precursors and generation of fugitive dust would be anticipated during construction. However, compliance with applicable air quality SPRs would ensure the proposed project would not result in a new source of GHG emissions that was not evaluated in the 2013 General Plan EIR or result, either directly or indirectly, in a significant impact on the environment. Additionally, the proposed project would adhere to SPR GHG-1 requiring that all gasoline-powered equipment be

maintained according to the manufacturer's specifications, and in compliance with all State and federal requirements. Further, the introduction of a shuttle program throughout the Focus Area would decrease the number of visitors coming into and traveling around the park in single-occupancy vehicles, therefore further decreasing the potential GHG emissions generated as part of the proposed project.

As described in the 2013 General Plan EIR, the proposed project would also adhere to the 2013 General Plan Guidelines minimizing GHG emissions. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan. Based on a program-level environmental assessment in the 2013 General Plan EIR, implementation of the 2013 General Plan would not result in the generation of substantial short-term construction-related or long-term operation-related emissions of GHGs and would be consistent with all applicable plans, policies, and regulations for the purpose of reducing GHG emissions.

As outlined in impact discussion VII(a), the proposed project is a planning document designed to guide the stewardship, management, and use of existing and future facilities. Details of specific projects are not yet known; however, conformance with the 2013 General Plan guidelines and applicable SPRs would ensure consistency with CARB's Scoping Plan and all other applicable regulations. Additionally, the proposed project would involve more efficient construction equipment and vehicles than were considered in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	LTS	No	No	No	No
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LTS	No	No	No	No
c) Emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	LTS	No	No	No	No
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	LTS	No	No	No	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	LTS	No	No	No	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	No	No	No	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	LTS	No	No	No	

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to hazards and hazardous materials:

Access and Circulation Goal: Coordinate and maintain visitor access and circulation in order to optimize operations efficiency, security, emergency access, and visitor enjoyment of the park, while maintaining the park's character and avoiding resource degradation.

Operations Goal: Develop adequate infrastructure for efficient use of energy, water, and other resources; protect public health and safety; and reduce waste, pollution, and environmental degradation.

Operations Guidelines:

> **Operations 2:** Continue to work with adjoining landowners for efficient park operations and emergency vehicle access.
>
> **Operations 3:** Provide a well-defined and clearly signed year-around safe park entry for visitors and a variety of recreation and emergency vehicles, especially during peak-use days.
>
> **Operations 4:** Work with CAL FIRE [California Department of Forestry and Fire Protection] and other agencies to ensure that emergency response vehicles can reach most park locations, given the unit's paved roads, bridges, and unpaved fire roads, and that alternative emergency response measures are explored.

Regional Planning Goal: Integrate the planning and management programs at Big Basin Redwoods SP with the planning and management programs of other parks and open space providers in the Santa Cruz Mountains.

Regional Planning Guidelines:

> **Regional Planning 1:** Coordinate natural, cultural, and aesthetic resource management, operations, staff housing, interpretation, visitor and emergency services, and facility development programs at Big Basin Redwoods SP with other state parks in the area to promote healthy ecosystems, protected cultural and aesthetic resources, high-quality recreational opportunities, and operational efficiencies.
>
> **Regional Planning 5:** Coordinate and establish mutual support arrangements or agreements with state, county, city, and local organizations to provide effective and efficient public safety programs in the park, and to maintain emergency evacuation routes to allow safe and immediate exit from areas of the park where people visit, work, or reside.

Sustainability Goal: Incorporate sustainable design principles into the design, development, operations, and maintenance of park facilities and programs.

Sustainability Guidelines:

Sustainability 1: Use sustainable design strategies to minimize impacts to the park's natural, cultural and aesthetic resources. Choose low-impact building sites, structures, building, and landscape materials, and maintenance and management practices that avoid the use of environmentally-damaging, waste-producing, or hazardous materials. Use natural, renewable, indigenous, and recyclable materials, and energy-efficient design.

Wildfire Goal: Protect human lives, property, and sensitive natural resources through the prevention and suppression of destructive wildland fires

Wildfire Guidelines:

Wildfire 1: The Department shall coordinate with appropriate agencies, such as CAL FIRE and the county and volunteer fire departments, to complete and update the Wildfire Management Plan for this unit, addressing all aspects of wildfire planning, including prevention, pre-suppression, and suppression.

Wildfire 2: The Department shall follow the fire management policy, including wildfire management (DOM Section 0313.2.1), and guidelines developed through the interagency agreement with CAL FIRE concerning wildland fire protection.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to hazards and hazardous materials. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

HAZ-1: Prior to the start of on-site construction activities, a **contractor** will inspect all equipment for leaks and regularly inspect thereafter until equipment is removed from the project site. All contaminated water, sludge, spill residue, or other hazardous compounds will be contained and disposed of outside the boundaries of the site, at a lawfully permitted or authorized destination.

HAZ-2: Prior to the start of on-site construction activities, a **contractor** will prepare a Spill Prevention and Response Plan (SPRP) as part of the Stormwater Pollution Prevention Plan (SWPPP) for **Department** approval to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. This plan will include, but not be limited to:

1. A map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment will occur;
2. A list of items required in a spill kit on-site that will be maintained throughout the life of the project;
3. Procedures for the proper storage, use, and disposal of any solvents or other chemicals used in the restoration process; and
4. Identification of lawfully permitted or authorized disposal destinations outside of the project site.

HAZ-3: The **Contractor** will develop a Materials Management Plan to include protocols and procedures that will protect human health and the environment during remediation and/or maintenance activities that cause disturbances to the native soil and/or mine and mill materials causing the potential exposure to metals and dust resulting from materials disturbances. All work will be performed in accordance with a Site Health and Safety Plan. The Materials Management Plan will include the following (where applicable):

- Requirement that staff will have appropriate training in compliance with Title 29 of the Code of Federal Regulations, Section 1910.120;
- Methods to assess risks prior to starting on-site work;
- Procedures for the management and disposal of waste soils generated during construction activities or other activities that might disturb contaminated soil;
- Monitoring requirements;
- Stormwater controls;
- Record-keeping; and,
- Emergency response plan.

HAZ-4: The **Contractor** will set up decontamination areas for vehicles and equipment at park entry/exit points. The decontamination areas will be designed to completely contain all wash water generated from washing vehicles and equipment. Best management practices (BMPs) will be installed, as necessary, to prevent the dispersal of wash water beyond the boundaries of the decontamination area, including over-spray.

HAZ-5: Prior to the start of construction, the **contractor** will develop a Fire Safety Plan for **Department** approval for the entire construction period. The plan will include the emergency calling procedures for both the California Department of Forestry and Fire Protection (CAL FIRE) and local fire department(s).

HAZ-6: All heavy equipment will be required to include spark arrestors or turbo chargers (which eliminate sparks in exhaust) and have fire extinguishers on site.

HAZ-7: Department personnel will have a State Park radio at the park, which allows direct contact with CAL FIRE and a centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

HAZ-8: Prior to the start of on-site construction activities, the **contractor** will clean and repair (other than emergency repairs) all equipment outside the project site boundaries.

HAZ-9: Under dry conditions, a filled water truck and/or fire engine crew will be on site during activities with the potential to start a fire.

HAZ-10: The **contractor** will designate and/or locate staging and stockpile areas to prevent leakage of oil, hydraulic fluids, etc. into surrounding areas.

BASELINE CONDITIONS

HAZARD MATERIALS AND HAZARDOUS WASTE

The types of materials used and stored at BBRSP that could be hazardous include fluids, such as motor vehicle and mechanical equipment fuels, oils, and other lubricants. The Department maintains storage facilities for these fuels and lubricants in the park unit. There is no evidence of industrial use in the park except for limited use as it relates to logging, commercial fishing, ice production, agriculture, and recreation. A review of the Cortese List through EnviroStor as well as GeoTracker provides documentation that there are no active hazardous materials in the park. The park is not within one-quarter mile of any school. The nearest school to the proposed project is Redwood Elementary, approximately five miles east.

AIRPORTS

No airports are within or adjacent to BBRSP. The Las Trancas Airport, a privately owned airstrip, is approximately 0.7 miles south of Rancho del Oso along Highway 1, approximately 6 miles southwest of the Focus Area. The nearest public use airport is the San José Mineta International Airport, approximately 30 miles east of the Focus Area.

WILDFIRE

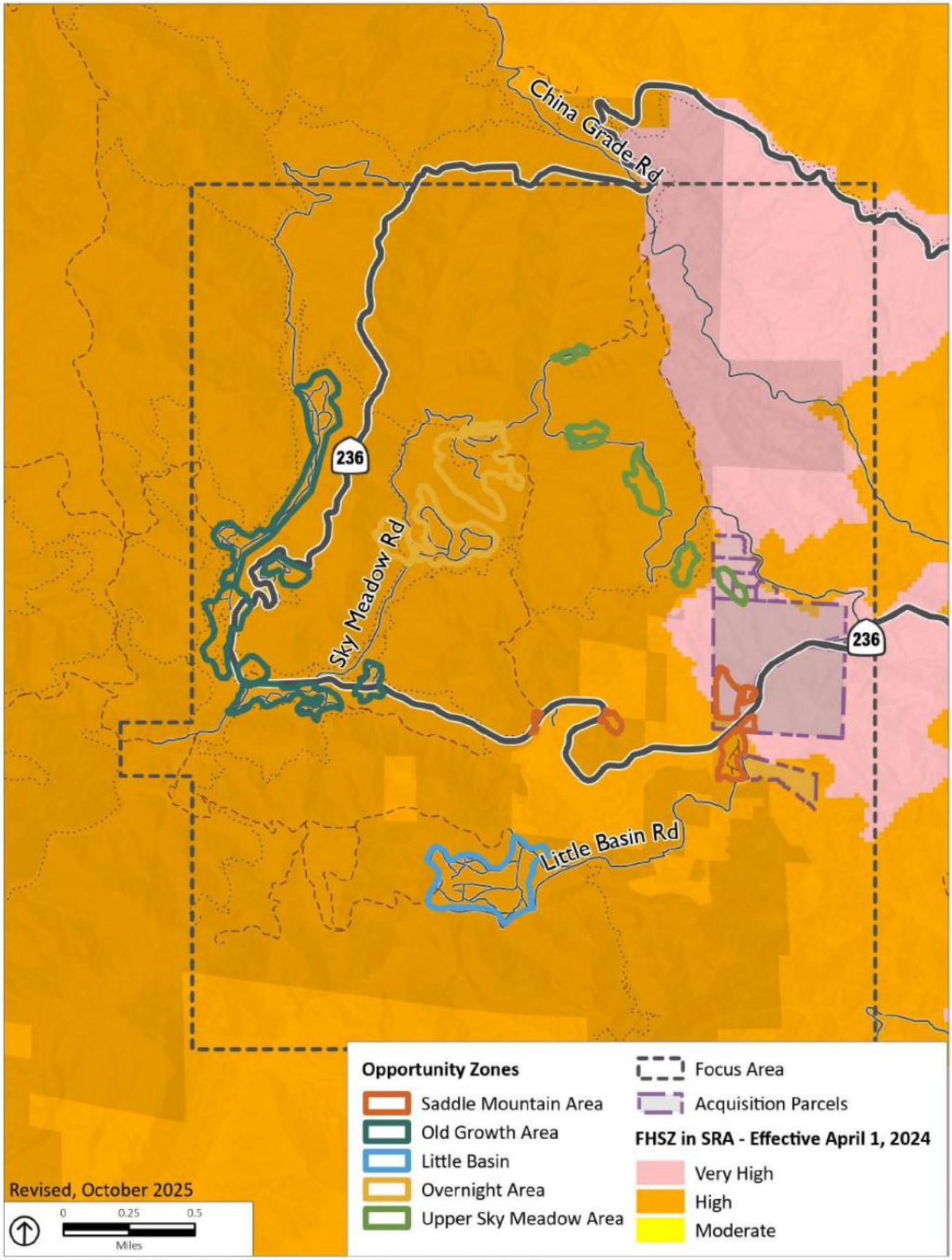
Fires are an integral part of the natural world, but historic human alteration of natural fire cycles allowed unnatural plant succession and fire fuel build-up. Wildland fires can have a significant effect on park resources and operations. BBRSP has recently undergone a large wildfire event, the 2020 CZU fire that destroyed much of the park and is a contributing factor to the need for the proposed project. During the 2020 CZU fire, BBRSP staff successfully evacuated 1,600 campers, residents, and staff from the park. As such, the prevention and suppression of destructive wildland fires threatening human lives, property, and sensitive natural resources is of prime importance.

The Department's Operational Manual Chapter 0300, *Natural Resources*, Section 0313.2, describes the Department's policy on fire management, including wildfire management (Section 0313.2.1) and prescribed fire management (Section 0313.2.2). An Interagency Fire Protection Agreement concerning wildland fire protection between the Department and CAL FIRE outlines the primary agency responsibilities, modified fire-suppression techniques, and post-fire rehabilitation. Primary responsibilities of Department personnel concerning life and safety include the protection and evacuation of visitors and park personnel, area closures, law enforcement, protection of park facilities and resources, and initial fire response. The Department has also prepared guidelines for the protection of buildings and structures near wildland vegetation (*Guidelines for the Protection of Structures from Wildland Fire*, March 2009).

Wildland fire protection in California is the responsibility of the local, State, or federal government. In State Responsibility Areas, the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. CAL FIRE provides a basic level of wildland fire prevention and protection services. CAL FIRE assigns areas to a Fire Hazard Severity Zone (FHSZ) based on factors that influence fire likelihood and behavior. FHSZs range from moderate to high to very high.

As shown in Figure IS-5, *CAL FIRE Fire Hazard Severity Zones*, the project site is in a high to very high FHSZ, as mapped by CAL FIRE for the State Responsibility Area.[13] The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

[13] California Department of Forestry and Fire Protection, 2023, Fire Hazard Severity Zones, https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.



Source: California State Parks, 2025; Cal Fire, 2025; PlaceWorks, 2025

Figure 5. Cal Fire Fire Hazard Severity Zones

DISCUSSION

a) Would the proposed project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The 2013 General Plan EIR determined that implementation of the General Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Typically, the only routine use and transport of hazardous materials are associated with maintenance or construction that requires common hazardous materials such as fuel and lubricants for equipment and vehicles and detergents and solvents for cleaning, as well as pesticides and herbicides for vegetation management, where appropriate. As described in the 2013 General Plan EIR, these hazardous materials are used and stored consistent with United States Environmental Protection Agency and Occupational Safety and Health Administration (OSHA) standards. The proposed project would not substantially change the operations and maintenance of the park and staff would continue to use, transport, store, and dispose of these hazardous materials consistent with OSHA regulations. Additionally, all regulations for hazardous material transport, use, and disposal will be adhered to, following Department policies and procedures (Department Operations Manual, Chapter 0800, *Hazardous Materials*).

Construction activities would adhere to SPRs HAZ-1 through HAZ-4, HAZ-9, and HAZ-11, which require several measures to prevent accidental leaks, spills, or other emissions of hazardous materials into the environment, including frequent leak inspections and maintenance of construction vehicles, spill prevention plans, materials management plans, vehicle wash stations, and suitable staging areas. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The 2013 General Plan EIR determined that implementation of the General Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Ground disturbance as part of construction activities may expose hazardous materials through excavation, especially in previously developed areas. Construction activities may require the use of certain potentially hazardous materials, such as fuels, oils, and solvents for construction equipment. Hazardous materials spills may occur, including into drainages. As described in the 2013 General Plan EIR, if hazardous materials are found in the park, including during

construction and maintenance activities, all regulations for hazardous material transport, use, and disposal will be followed, pursuant to Department policies and procedures (Department Operations Manual, Chapter 0800, *Hazardous Materials*). As under the 2013 General Plan EIR, the proposed project would also be required to implement SPRs HAZ-1 through HAZ-4, HAZ-9 and HAZ-11, as well as 2013 General Plan Guidelines, to minimize potential impacts. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

BBRSP is not near an existing or proposed school, thus the 2013 General Plan EIR determined that implementation of the General Plan would not emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The proposed project is in the project area evaluated in the 2013 General Plan EIR and is not within one-quarter mile of any schools. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

The 2013 General Plan EIR states that BBRSP is not on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as such, this impact would be less than significant.

The proposed project is in the project area evaluated in the 2013 General Plan EIR and an updated search of the Cortese List on GeoTracker and EnviroStor did not reveal the presence of any open or active hazardous material sites in the Focus Area.[14,15] Additionally, as described in the 2013 General Plan EIR, the proposed project would adhere to the 2013 General Plan Guidelines protecting the public from hazardous materials. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

[14] California Water Boards, State Water Resources Control Board, GeoTracker, 2025, https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=big+basin, accessed April 12, 2025.

[15] California Department of Toxic Substance Control, EnviroStor, 2025, http://envirostor.dtsc.ca.gov/public/map/?myaddress=big+basin, accessed April 12, 2025.

e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed project result in a safety hazard or excessive noise for people living or working in the project area?

BBRSP is not within an airport land use plan or near a public airport, thus the 2013 General Plan EIR determined that implementation of the General Plan would not result in a safety hazard or excessive noise for people living or working in the project area. The proposed project is within the project area evaluated in the 2013 General Plan EIR. Further, the nearest public use airport is the San José Mineta International Airport, approximately 30 miles east of the Focus Area. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

BBRSP is not near a private airstrip, thus the 2013 General Plan EIR determined that implementation of the General Plan would not result in a safety hazard or excessive noise for people living or working in the project area. The proposed project is within the project area evaluated in the 2013 General Plan EIR. Further, the Las Trancas Airport, a privately owned airstrip along Highway 1, is located approximately six miles southwest of the Focus Area. Accordingly, the proposed project is outside the vicinity of the private airstrip. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

g) Would the proposed project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The 2013 General Plan EIR determined that implementation of the General Plan would not physically interfere with an adopted emergency response plan or evacuation plan. The 2013 General Plan EIR outlines the Wildfire Management Plan and General Plan Guidelines to prepare for emergency evacuation.

The proposed project will follow all the General Plan Guidelines to support emergency evacuation and preparedness, as described in the 2013 General Plan EIR and includes an updated Emergency Response and Evacuation Plan. Further, to enhance emergency preparedness and response, the proposed project would include improvements to park roadways to ensure reliable ingress and egress. These improvements would enhance connectivity to main evacuation routes, ensuring staff and visitors can exit safely in an emergency. In addition to road enhancements, an early warning system would be installed throughout the park, providing real-time alerts for staff and visitors. Directional emergency evacuation signage would be integrated into park wayfinding systems, offering clear guidance

during emergency situations. These efforts would be complemented by fire-resistant infrastructure, including backup power generators and fire hydrants with proper water pressure.

The park's life safety approach would be guided by best practices outlined in the Big Basin Emergency Response and Evacuation Plan included as part of the proposed project, ensuring that all critical infrastructure is built with long-term resilience in mind, therefore improving upon what was evaluated in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

h) Would the proposed project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The 2013 General Plan EIR found less-than-significant impacts with respect to exposing people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. However, as seen in 2020, this evaluation did not mean wildland fires were not going to happen at BBRSP. The 2020 CZU fire altered the state of the park and has led to the need for the proposed project.

The 2013 General Plan recommends updating and following the current Wildfire Management Plan that addresses potential wildfire risks and specifies emergency actions for public safety, park structures, and adjacent landowner structures (Guideline Wildfire 1). The Wildfire Management Plan also specifies strategies for pre-suppression measures, such as the creation of defensible space around structures, wildfire education programs, and park fire regulations to which the proposed project would also adhere.

As stated in Guideline Wildfire 2, the Department shall follow the fire management policy, including wildfire management (Department's Operational Management Section 0313.2.1) and guidelines developed through the interagency agreement with CAL FIRE concerning wildland fire protection. The Department is also guided by an Interagency Agreement with CAL FIRE concerning wildland fire protection and has prepared a Wildfire Local Operating Agreement, a regional wildfire plan for BBRSP, and developed guidelines for the protection of structures from wildland fire.

The proposed project is the park plan to guide future rebuilding of recreational, administrative, and operational facilities, and to restore public access at BBRSP after the 2020 CZU fire, which destroyed or damaged nearly all former facilities. Future development under the proposed project would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development. Figure IS-5, *CAL FIRE Fire Hazard Severity Zones*, shows the proposed project in a high to very high FHSZ. Given the park's remote location and history of wildfires, infrastructure at BBRSP must be designed to withstand and function during multiple emergency scenarios, including fire events (both structural and wildland fires). As described in

the 2013 General Plan EIR, the proposed project would follow wildfire management policies. The proposed project would also include the implementation of SPR HAZ-5 prior to any construction, which would develop a Fire Safety Plan.

The proposed project would adhere to the 2013 General Plan Guidelines protecting the public from wildfires, as described in the 2013 General Plan EIR, as well as new and improved wildfire guidance and experience gained from the 2020 CZU fire. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

IX. HYDROLOGY AND WATER QUALITY

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Violate any water quality standards or waste discharge requirements?	LTS	No	No	No	No
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	LTS	No	No	No	No
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	LTS	No	No	No	No
e) Otherwise substantially degrade water quality?	LTS	No	No	No	No
f) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	LTS	No	No	No	No
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	LTS	No	No	No	No
i) Inundation by seiche, tsunami, or mudflow?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guidelines related to hydrology and water quality.

Geology and Hydrology Goal: Minimize human impacts on natural geologic and hydrologic processes and values while protecting human life and property from these natural processes.

Geology and Hydrology Guidelines:

Geology/Hydrology 1: Monitor and document the geologic and hydrologic processes affecting the park and its resources.

Geology/Hydrology 2: Determine if, where, and how human development or activities may be exaggerating the natural rates or scales of landslides, stream channel erosion, stream debris clogging, and sedimentation. Identify management actions that can reduce or avoid negative human impacts to slope and stream integrity and to water quality. Management actions could include road and trail rehabilitation or removal from highly erosive areas, stream modifications, debris management, and revegetation.

Geology/Hydrology 3: Understand and comply with the surface and groundwater beneficial uses and water quality objectives set forth in the Water Quality Control Plan for the Central Coast Region (Basin Plan) for the Big Basin Redwoods SP watersheds and take appropriate

actions to prevent degradation of surface and groundwater within the park. Examples of appropriate actions include ensuring that park sewage treatment meets water quality standards and planning and implementing new park projects so they do not degrade surface or groundwater quality or affect the water production rates of pre-existing nearby wells.

Geology/Hydrology 4: Cooperate with other landowners and regulatory agencies to address and remediate sediment issues affecting the park.

Geology/Hydrology 5: As appropriate, use standard Best Management Practices (BMPs) for erosion, dust, sediment control, and storm water runoff for park projects, and update regularly.

Geology/Hydrology 6: Maintain and manage native riparian vegetation bordering streams and springs, where feasible, to filter sediments and other pollutants from runoff that enter water bodies. Use biotechnical methods, where possible, when it is necessary for embankment stabilization.

Geology/Hydrology 7: Include professional biological, geological, and engineering evaluations as appropriate when designing and locating permanent structures, campgrounds, roads, utilities, and trails to avoid or reduce potential damage to people and property from unstable soil, landslides, debris flows, floods, and earthquakes.

Geology/Hydrology 8: Construct new structures in the park in conformance with seismic design criteria in the newest edition of the Uniform Building Code or California Building Code.

Geology/Hydrology 9: Participate with others, such as resource/regulatory agencies and adjacent landowners, to develop watershed management plans or assessments for major watersheds contained in the park. The watershed planning effort will use current information from existing watershed assessments and studies. These watershed plans will analyze the sediment transport functions in the park's stream systems, evaluate impacts of facilities and park use, and provide a scientific basis for selection, design, implementation and monitoring of future fisheries habitat enhancement and sediment reduction projects. Elements of this plan may include, but not be limited to:

- Inventory and prioritize sediment sources, and analyze the sediment transport functions in the stream systems with respect to their impact on in-stream habitat and on sediment delivery to Waddell Creek, its tributaries, and Waddell Beach.
- Determine if fluvial geomorphic analyses are needed and at what level is required for all streams. Coordinate this analysis with the Regional Water Quality Control Board (RWQCB) monitoring efforts.

- Delineate the 100-year floodplain for West Waddell Creek, and other major creeks and tributaries

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to hydrology and water quality. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

HYD-1: Prior to the start of construction involving ground-disturbing activities of an area of at least one acre, the **contractor** will prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) for Department approval that identifies temporary best management practices (BMPs) (e.g., tarping of any stockpiled materials or soil; use of silt fences, straw bale barriers, fiber rolls) and permanent (e.g., structural containment, preserving or planting of vegetation) for use in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, trenching, repaving, or other ground-disturbing activities. The SWPPP will include BMPs for hazardous waste and contaminated soils management and a Spill Prevention and Control Plan (SPCP), as appropriate.

HYD-2: All heavy equipment parking, refueling, and service will be conducted in designated areas outside of the 100-year floodplain to avoid water course contamination.

HYD-3: The project will comply with all applicable water quality standards as specified in the Water Quality Control Plan for the Central Coast Basin, also called the Basin Plan.

HYD-4: Construction activities will be suspended during heavy precipitation events (i.e., at least a half inch of precipitation in a 24-hour period) or when heavy precipitation events are forecast.

HYD-5: If construction activities extend into the rainy season (October 15– April 30), or if an unseasonal storm is anticipated, the **contractor** will properly winterize the site by covering (tarping) any stockpiled materials or soils and by constructing silt fences, straw bale barriers, fiber rolls, or other structures around stockpiles and graded areas.

HYD-6: The **Contractor** will install appropriate energy dissipators at water discharge points, as appropriate.

BASELINE CONDITIONS

BBRSP lies almost entirely in the Central Coast Hydrologic Basin. A small section of the northern part of the park lies in the Pescadero Creek watershed in the San Francisco Hydrologic Unit. The park is under the jurisdiction of the Central Coast Regional Water Quality Control Board (CCRWQCB) and is designated as the Big Basin Hydrologic Unit. This hydrological unit covers 226,240 acres. The CCRWQCB has regulatory authority regarding water quality matters at the park. The CCRWQCB falls within the oversight of the State Water Resources Control Board (SWRCB). The mission of the SWRCB is to ensure the highest reasonable quality of waters in the state, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters. The mission of the Regional Water Quality Control Boards (RWQCBs) is to develop and enforce water quality objectives and implementation plans that will best protect the beneficial uses of the state's waters, recognizing local differences in climate, topography, geology, and hydrology.

Waddell Creek is the main river system in the park and 13,400 acres of the total 17,000 acres of the Waddell Creek watershed falls within BBRSP. As Waddell Creek flows out of the confined mountainous headwaters onto the lower-elevation coastal terrace, it deposits sediment and transitions to a meandering stream before eventually flowing into the Pacific Ocean at Waddell Beach. Opal Creek is a 4.5-mile-long tributary to Waddell Creek with a 2,300-acre watershed.

Groundwater quality in the vicinity of BBRSP is dependent on the composition of the water-bearing materials. In general, the sedimentary rock units in BBRSP are a poor source of groundwater. Groundwater drains quickly and freely through the fractures, and, therefore, the surface detention capacity is low. It is estimated that in the adjacent Scott Creek watershed, 40 percent of the precipitation leaves the system as surface runoff. The Department of Water Resources does not include this area in its list of groundwater basins, due to insufficient groundwater resources. There are three developed spring sources in BBRSP. A spring near Rancho del Oso provides relatively high-quality water for this subunit. Brown House Spring, upstream and across Waddell Creek from the Rancho del Oso spring, provides water to several residences. Pine Mountain Spring, higher in the Waddell Creek watershed, provided potable water to the Big Basin wastewater treatment plant before the development of Sempervirens Reservoir. Most of the park's utilities were lost in the 2020 CZU fire. There are also suspected springs beneath the Sempervirens Reservoir that appear to feed the reservoir. These spring sources indicate that some of the sandstone rock formations in the park provide adequate high-quality groundwater. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project violate any water quality standards or waste discharge requirements?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be at a less-than-significant level and would not violate any water quality standards or waste discharge requirements. Development and recreation of facilities in general have the potential to cause short- and long-term hydrologic and water quality impacts to the park's creeks and wetlands. General Plan Guideline Geology/Hydrology 3 requires the Department to comply with applicable water quality objectives developed by the CCRWQCB.

Potential impacts to the park's water quality from grading, filling, construction equipment use and storage, and mechanical or chemical control would be minimized by implementing General Plan Guidelines Geology/Hydrology 2, 3, 5, 6, and 7, as described in the 2013 General Plan EIR. Guideline Geology/Hydrology 2 also recommends an assessment of human activities on park geological and hydrological processes, and identification of appropriate management actions that would reduce or avoid negative impacts.

The proposed project would also adhere to SPR HYD-1, which would require a SWPPP and implementation of BMPs during future construction to minimize potential impacts to water quality, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be less than significant with respect to groundwater supplies.

The proposed project would not significantly affect groundwater supplies or interfere with groundwater recharge. There would be no change in visitation and, thus, water use when compared to pre-fire levels. Further, General Plan Guideline Geology/Hydrology 3 would require that the proposed project comply with the surface and groundwater beneficial uses and water

quality objectives set forth in the Water Quality Control Plan for the Central Coast Region (Basin Plan) for the Big Basin watersheds and take appropriate actions to prevent degradation of surface and groundwater in the park. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be less than significant with respect to drainage patterns.

The proposed project does not include the alteration of the course of a stream or river. Further, General Plan Guideline Geology/Hydrology 5 recommends the use of BMPs to control erosion and surface runoff. As part of the process for preparation of site-specific plans, resource management plans, or facility construction, site-specific studies of soil conditions and facility siting will be conducted. All new development resulting from implementation of the proposed project would be evaluated to ensure that they do not contribute to degradation of water quality, substantially alter existing drainage patterns, or result in on- or off-site erosion, siltation, pollution, or flooding (Guidelines Geology/Hydrology 1, 3, and 7). As described in the 2013 General Plan EIR, the proposed project would adhere to the 2013 General Plan Guidelines. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be less than significant with respect to runoff.

All new development projects resulting from implementation of the proposed project would be evaluated to ensure that they do not contribute to degradation of water quality, substantially alter existing drainage patterns, or result in on- or off-site erosion, siltation, pollution, or flooding (Guidelines Geology/Hydrology 1, 3, and 7). Further, General Plan Guideline Geology/Hydrology 5 recommends the use of BMPs to control erosion and surface runoff.

Projects that generate runoff pollutants are required under the National Pollutant Discharge Elimination System to develop and implement a Water Quality Management Plan that identifies the site design, source control, and treatment-control BMPs. These BMPs would effectively prohibit non-stormwater discharges from entering the storm drain system and reduce the discharge of pollutants into stormwater conveyance systems to the maximum extent possible. The activities included in the proposed project would likely not result in runoff pollutants. Additionally, SPR HYD-3 would require development under the proposed project to comply with all applicable water quality standards, as specified in the CCRWQCB Basin Plan. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project otherwise substantially degrade water quality?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be less than significant.

The potential future development and recreation facilities evaluated in the 2013 General Plan EIR and included in the proposed project have the potential to cause short-term and long-term hydrologic and water quality impacts to the park's creeks and wetlands. However, impacts to the park's water quality from grading, filling, construction equipment use and storage, and mechanical or chemical control would be minimized by implementing General Plan Guidelines Geology/Hydrology 2, 3, 5, 6, and 7. Adhering to the 2013 General Plan Guidelines would reduce any potential impacts to water quality, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

f) Would the proposed project place housing in a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects would be less than significant with respect to placing housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. A portion of the project area evaluated in the 2013 General Plan EIR, adjacent to Highway 1 and along Waddell Creek, may be subject to flooding, so the General Plan included actions to bring structures inland.

The proposed project does not contemplate construction of new housing in a 100-year flood hazard area. The Focus Area is in Zone X, which indicates a moderate to low-risk area for flooding.[16] Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

g) Would the proposed project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

As described in impact discussion IX(f), the 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects would be less than significant with respect to placing structures within a 100-year flood hazard area, although portions of the project area evaluated in the 2013 General Plan EIR may be subject to flooding. However, the proposed project is in Zone X, which indicates a moderate to low risk area for flooding. Additionally, General Plan Guideline/Hydrology 9 ensures that developed structures would not impede or redirect flood flows. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

h) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

The 2013 General Plan EIR found that a potential source of flooding could be from the failure of the Sempervirens Dam, an earth-fill structure built in 1951. However, implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, would result in a less-than-significant impact with respect to flooding.

As described in the 2013 General Plan EIR, portions of the Focus Area would be subject to flooding should the Sempervirens Dam ever fail. This flooding would extend downstream from the dam along Sempervirens Creek, reaching the Focus Area within approximately 15 minutes. The inundation area is a narrow zone along Sempervirens Creek and therefore would likely not affect future development under the proposed project. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

[16] Federal Emergency Management Agency, 2023, Flood Map Service Center, https://msc.fema.gov/portal/search?AddressQuery=big%20basin%20redwood%20state%20park.

i) Inundation by seiche, tsunami, or mudflow?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines listed in Chapter 4, *Park Plan*, hydrology and water quality effects resulting from implementation of the General Plan would be less than significant with respect to inundation by seiche, tsunami, or mudflow. As described in the 2013 General Plan EIR, a portion of BBSRP may be affected by seiches or tsunamis due to its location near the coast; however, the proposed project is located inland, and the Focus Area does not contain any large bodies of coastal water nor is it in an area subject to seiche or tsunami. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

X. LAND USE AND PLANNING

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Physically divide an established community?	NI	No	No	No	No
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guidelines related to land use and planning:

Regional Planning Goal: Integrate the planning and management programs at Big Basin Redwoods SP with the planning and management programs of other parks and open space providers in the Santa Cruz Mountains.

Regional Planning Guidelines:

> **Regional Planning 2:** Work in partnership with state, regional, and local agencies, private landowners, and other organizations to provide a network of regional open space and a variety of educational and recreational opportunities. Coordinate park planning with local open space planning efforts, such as those of the Midpeninsula Regional Open Space District, the Peninsula Open Space Trust, and other organizations.
>
> **Regional Planning 3:** Coordinate and collaborate with universities, colleges and other research organizations on natural and cultural resource studies to increase the knowledge of resources in the park and in the Santa Cruz Mountains region. Seek cooperative agreements with adjacent landowners, neighbors, and local jurisdictions responsible for zoning and land use management to provide for open space buffer areas to protect sensitive park resources and to identify and preserve wildlife habitat linkages.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. There are no applicable SPRs related to land use and planning. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

BASELINE CONDITIONS

Land use patterns in the Santa Cruz Mountains have not changed significantly in the recent past. The timber industry, parks and open space, and private homes are the major land uses in the area. BBRSP either shares borders with or is in proximity to Castle Rock, Año Nuevo, Butano, and Portola Redwoods State Parks. Nearby, there are several other recreational and open space lands such as Pescadero Creek County Park and land owned by private nonprofit organizations such as the Sempervirens Fund and the Peninsula Open Space Trust. Private ownership patterns around the park generally consist of several hundred-acre parcels that are subdivided into smaller lots that contain homes and cabins or are undeveloped. Most of the area between the State parks surrounding BBRSP remain undeveloped. A significant amount of land surrounding BBRSP is owned by timber companies and is in timber production. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project physically divide an established community?

The 2013 General Plan EIR determined that the General Plan would not physically divide an established community. Therefore, no significant land use and planning impacts would occur

and no further environmental analysis of the effects on land use and planning was necessary in the 2013 General Plan EIR.

The physical division of an established community typically refers to the construction of a physical feature (such as a wall, interstate highway, or railroad tracks) or the removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying areas. The proposed project is a planning document designed to guide the stewardship, management, and use of existing and future facilities. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The 2013 General Plan EIR determined the General Plan would not conflict with applicable land use plans, habitat conservation plans, or the policies or regulations of any agency with jurisdiction over the project. Therefore, no significant land use and planning impacts would occur and no further environmental analysis of the effects on land use and planning was necessary in the 2013 General Plan EIR.

The proposed project is consistent with all applicable State and local land use plans, policies, and regulations, including the 2013 General Plan with the proposed General Plan Amendments, and would be a guideline document for replacing the structures lost in the 2020 CZU fire and improving development in BBRSP, as planned for in the General Plan. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XI. MINERAL RESOURCES

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	NI	No	No	No	No
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

There are no applicable goals and guidelines related to mineral resources in the 2013 General Plan.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects; however, there are no applicable SPRs related to mineral resources. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

BASELINE CONDITIONS

The California Geological Survey classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975 and assists in the designation of lands containing significant aggregate resources. California Geological Survey's Mineral Land Classification (MLC) Project provides objective economic-geologic

expertise to assist in the protection and development of mineral resources through the land use planning process.

BBRSP is in the SMARA Study Area.[17] No minerals are currently mined in BBRSP. PRC Section 5001.65 does not permit commercial extraction of mineral resources on Department property; therefore, all previously existing mining operations have ceased operations. The following discussion uses the existing, post-fire site conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Because BBRSP does not contain any known mineral resources, the 2013 General Plan EIR determined that the implementation of the General Plan would not result in the loss of availability of known mineral resources that would be of value to the region and residents of the state.

The Focus Area in an area already evaluated by the 2013 General Plan EIR and therefore would also not include any mineral resource development. Even so, commercial exploitation of resources in units of the State Park System is prohibited (PRC Section 5001.65.) Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts on the availability of mineral resources, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The 2013 General Plan EIR determined that implementation of the General Plan would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan. The BBRSP has not been classified or nominated as a locally important mineral resource recovery site and the proposed project would be in an area evaluated by the 2013 General Plan EIR and therefore would also not include any mineral resources. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

[17] California Geological Survey, 2021, Mineral Land Classification, California Department of Conservation, https://maps.conservation.ca.gov/cgs/informationwarehouse/mlc/, accessed April 9, 2025.

XII. NOISE

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	LTS	No	No	No	No
b) Cause exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	LTS	No	No	No	No
c) Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	LTS	No	No	No	No
d) Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation;
SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guidelines related to noise:

Aesthetics Goal: Identify and protect positive aesthetic values to preserve the fundamental character of the park for future generations.

Aesthetics Guidelines:

Aesthetics 6: Minimize vehicle noise in heavily-used areas, through screening, separation of use areas, and other appropriate techniques. Locate park administrative and maintenance functions away from public areas, if feasible, and take appropriate measures to minimize construction and maintenance noise.

Aesthetics 7: Restrict levels of sound from radios and other human-made devices and enforce park noise standards, especially during night and early morning hours. Refer to the Department's Soundscape Protection Policy (DOM, Chapter 0300, 2004) when planning new facilities or evaluating noise standards, and comply with federal and state noise ordinances and standards.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to noise. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

NOI-1: Temporary or permanent noise barriers such as berms or walls will be used, as appropriate, to reduce noise levels.

NOI-2: Internal combustion engines used for project implementation will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for project-related activities will use the best-available noise-control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts) whenever necessary.

NOI-3: The **contractor** will locate stationary noise sources and staging areas as far from potential sensitive noise receptors as possible. If they must be near potential sensitive noise receptors, stationary noise sources will be muffled or shielded, and/or enclosed in temporary sheds.

NOI-4: Construction activities will generally be limited to daylight hours Monday through Friday. If work during weekends or holidays is required, no work will occur on those days before 8 a.m. or after 5 p.m.

BASELINE CONDITIONS

The project site is a predominantly wilderness environment with scattered rural residential uses near the Focus Area. The existing noise environment is characterized primarily by traffic noise on Highways 9, 35, and 236. Typical conditions that contribute to the existing ambient noise environment would include noise from parking lot movements, children yelling and playing, dogs barking, birds, wind noise, and typical rural residential activities. No sensitive receptors such as schools, hospitals, or hospice care facilities are within the park boundaries. Furthermore, nearby sensitive receptors within the communities that surround BBRSP are all separated from the park by vegetation, roadways, and existing development. The nearest receptors include the Taungpulu Kaba Aye Monastery, approximately two miles east of the Focus Area boundary and Redwood Elementary and the residences along Highway 9, approximately five miles east of the Focus Area boundary. The following discussion uses pre-fire visitation and conditions as the baseline for analysis; however, current existing conditions are used to evaluate impacts to sensitive receptors.

DISCUSSION

a) Would the proposed project cause expose people or generate noise at levels in excess of standards established in the local General Plan, Noise Ordinance, or applicable standards of other agencies?

The 2013 General Plan EIR described the primary source of noise as noise related to facility operations, construction activities, and vehicular traffic. With implementation of the General Plan guidelines listed in Chapter 4, *Park Plan,* the 2013 General Plan EIR found a less-than-significant impact with respect to generation of noise exceeding applicable standards.

CONSTRUCTION

Noise generated by on-site construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each phase of construction involves different types of equipment and has distinct noise characteristics. Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 A-weighted decibels (dBA) at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment.

Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of 6 dBA per doubling of distance (conservatively disregarding other attenuation effects from air absorption, ground effects, and shielding effects provided by intervening structures or existing solid walls), the average noise levels at noise-

sensitive receptors could vary considerably, because mobile construction equipment would move around the site with different equipment mixes, loads, and power requirements.

The expected construction equipment mix used for future development under the proposed project can be estimated and categorized by construction activity using the Federal Highway Administration Roadway Construction Noise Model (RCNM). Average noise levels from project-related construction activities are calculated by modeling the three loudest pieces of equipment per activity phase. Equipment for grading and site preparation is modeled at spatially averaged distances (i.e., from the acoustical center of the Focus Area) because the area around the center of construction activities best represents the potential average construction-related noise levels at the various sensitive receptors for mobile equipment. Similarly, construction noise from demolition is modeled from the center of the project site. Building construction and architectural coating are measured from the edge of the proposed buildings to the nearest sensitive receptors. Additionally, paving is measured from the edge of the nearest paving areas to the nearest sensitive receptors. Noise levels at receptors in the vicinity of the project site are summarized in Table 3, *Calculated Construction Noise Levels at Nearby Receptors*.

Table 3 Calculated Construction Noise Levels at Nearby Receptors

Construction Activity Phase	Noise Levels in dBA L_{eq}				
	RCNM Reference Noise Level	Receptor at 100 feet	Receptor at 200 feet	Residential Receptor to South	Park Use Receptor to West
Distance in feet	50	100	200	300	400
Demolition	85	79	73	69	67
Site Prep	85	79	73	69	67
Grading	85	79	73	69	67
Building Construction	80	74	68	64	62
Architectural Coating	74	68	62	58	56
Paving	80	74	68	64	62
Finish/Landscaping	80	74	68	64	62
Exceeds FTA's 80 dBA L_{eq} Threshold?		**No**	**No**	**No**	**No**

Source: FHWA's RCNM software.
dBA Leq = Energy-Average (Leq) Sound Levels.
See Appendix B, *Noise*, for construction noise calculations.

As shown in Table 3, construction noise levels would intermittently range from 56 to 79 dBA Leq at the noise-sensitive receptors at 100 feet to 400 feet, when activities are focused near the center of the Focus Area. Potential construction noise levels would not exceed the 80 dBA Leq threshold at park use receptors when construction activities are 100 feet from a sensitive receptor. Provided construction activities are 100 feet or greater from noise-sensitive receptors,

this would be considered a less-than-significant impact. With implementation of General Plan Policy 6.9.7, Zoning Code requirements, SPRs NOI-1 through NOI-6, and General Plan Guidelines Aesthetics 6 and 7, noise impacts due to future development under the proposed project would be reduced to less-than-significant, as described in the 2013 General Plan EIR.

OPERATION

Operational noise impacts at BBRSP are related to vehicular traffic, facility operations, and visitors. Noise generated from park visitation would not increase over 2013 General Plan levels due to implementation of the proposed project. Further, the introduction of the park's shuttle program is designed to reduce visitor trips and therefore traffic noise in the park. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project cause expose people to or generate excessive groundborne vibration or groundborne noise levels?

The 2013 General Plan EIR described the primary source of noise as noise related to facility operations, construction activities, and vehicular traffic; excessive groundborne vibrations were not expected. With implementation of the General Plan guidelines listed in Chapter 4, *Park Plan,* the 2013 General Plan EIR found a less-than-significant impact with respect to groundborne vibration.

Construction operations due to implementation of the proposed project can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches levels that can damage structures.

Like the project evaluated in the 2013 General Plan EIR, future development under the proposed project is not expected to generate or expose people to excessive groundborne vibration or groundborne noise levels. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The 2013 General Plan EIR described the primary source of noise as noise related to facility operations, construction activities, and vehicular traffic. With implementation of the General Plan guidelines listed in Chapter 4, *Park Plan,* the 2013 General Plan EIR found a less-than-significant impact with respect to permanent ambient noise level increases.

To determine if the proposed project would cause a substantial ambient noise increase from project-related traffic, consideration must be given to the magnitude of the increase and the affected receptors. In general, for community noise, a noise level increase of 3 dBA is considered barely perceptible, while an increase of 5 dBA is considered clearly noticeable. A significant noise impact is determined when noise-sensitive receptors along a roadway segment experience an increase of 3 dBA over existing traffic noise levels.

For general traffic noise, a doubling of traffic volumes (i.e., an increase of 100 percent) would be necessary to cause a perceptible noise increase of 3 dBA or more. Likewise, a 58-percent increase in volumes would be needed to result in an increase of 2 dB and a 26-percent increase in volumes would be needed to result in an increase of 1 dBA. Further, park traffic trips would be dispersed along park access roads Highways 9, 35, and 236. On roads leading to BBRSP, existing traffic volumes range from 560 daily trips (Highway 236) to 8,400 daily trips (Highway 9). As described in Section XVI, *Transportation,* implementation would not increase the expected traffic at BBRSP when compared to pre-fire conditions and, because the proposed project includes the introduction of a shuttle program, traffic is expected to decrease compared to what was evaluated in the 2013 General Plan EIR.

Additionally, adherence to SPRs NOI-1 through NOI-6 and General Plan Guidelines Aesthetics 6 and 7 would ensure noise impacts due to future development under the proposed project do not create a significant increase in ambient noise levels. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As described previously, the 2013 General Plan EIR described the primary source of noise as facility operations, construction activities, and vehicular traffic. With implementation of the General Plan guidelines listed in Chapter 4, *Park Plan,* the 2013 General Plan EIR found a less-than-significant impact with respect to temporary or periodic ambient noise level increases.

As described in impact discussion XII(a), short-term on-site construction equipment source noise could expose people to, or generate noise levels in excess of, applicable standards and thus create a substantial temporary increase in ambient noise levels in the project vicinity; however, implementation of General Plan Policy 6.9.7 and adherence to SPRs NOI-1 through NOI-6 and General Plan Guidelines Aesthetics 6 and 7 would ensure this potential impact remains at a less-than-significant level. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XIII. PARKS AND RECREATION

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	LTS	No	No	No	No
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guidelines related to parks and recreation:

Recreation Goal: Provide a range of high-quality recreational opportunities that allow California's diverse population to visit, enjoy, experience, and appreciate the important natural, cultural, recreational and aesthetic resources of Big Basin Redwoods SP

Recreation Guidelines:

Recreation 1: Provide facilities and programs that enhance the public's enjoyment and appreciation of the park's natural, cultural, recreational, and aesthetic resources. Include facilities that support appropriate activities such as hiking, camping, backpacking, nature, and history study, bicycling, surfing, wind surfing, horseback riding, picnicking, and the enjoyment of solitude, including provisions for concession-developed or operated recreation opportunities.

Recreation 2: Relocate, remove, and/or reorganize facilities to preserve and protect park resources, to better serve visitor recreation needs, and to provide efficient park administrative, public safety, and maintenance functions.

Recreation 3: Where appropriate, provide recreation access and program opportunities that expand the visitor use of the park in the spring, fall, and winter months.

Recreation 4: Create diversified recreation opportunities across the region's state parks to disperse recreation, reduce resource impacts, and provide facilities and recreational opportunities that respond to unique site characteristics. Coordinate with federal, state and county agencies and open space and community-based organizations to plan a regional network of recreation opportunities.

Recreation 5: Provide information and facilities to encourage visitation to nearby state parks and regional open space. Methods to encourage this cross-connection include information describing regional resources and the area's historic connections, location maps and park and open space access information, trail connections, and mass transit opportunities.

Recreation 6: Provide additional day use and overnight accommodations outside the old growth forest, to serve the visitor needs reflected by California's changing demographic trends. Develop group recreation facilities, where appropriate, and make provisions to accommodate a wide range of user groups and for special events during year-round seasonal conditions.

Recreation 7: Evaluate new technologies and recreational activities and incorporate those that would enhance visitor experiences and benefit recreation facilities and programs, such as maximizing the use of the Internet for public outreach and providing wireless Internet access.

Recreation 8: Acquire adjacent properties from willing sellers that would provide recreation opportunities and/or improved connections between Big Basin Redwoods SP and other state and regional parks.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects; however, there are no applicable SPRs related to parks and recreation. A full list of SPRs is found in Appendix A, Standard *Project Requirements*.

BASELINE CONDITIONS

The park is a popular destination and has provided many recreation opportunities for over 120 years, as California's first official State park created in 1902. Many recreation facilities were built in the Headquarters Area, in the heart of the old-growth redwood habitat, but were destroyed by the 2020 CZU fire.

Over the years, the amount of leisure time and recreation trends have changed, and thus the facility needs at BBRSP have fluctuated. Since the 1980s, California's population has diversified and increased exponentially. As these trends continue, the demand for outdoor recreation will increase even further, both in the numbers of people desiring an outdoor experience and in the types of recreational activities they seek. In 2019, BBRSP received 570,438 visitors, mainly from California, particularly the Bay Area, Central Coast, and Central Valley. The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

Since BBRSP provides recreational opportunities, the 2013 General Plan EIR found that the General Plan would improve facilities and programs at the park and, with implementation of the General Plan guidelines, would have a less-than-significant impact on recreational facilities. The 2013 General Plan EIR describes population growth and changing demographics having an influence on the Department's efforts to consider new forms of recreation and new technologies to respond to visitor demand and recreation trends (Guidelines Recreation 6 and 7). The environmental impacts associated with the construction of the park facilities under the proposed project are evaluated throughout this Initial Study at the program level. Implementation of the proposed project could result in subsequent projects that have

construction-level impacts as described in Section III, *Air Quality*; Section IV, *Biological Resources*; Section V, *Cultural Resources*; Section VI, *Geology and Soils*; Section VII, *Greenhouse Gas Emissions*; Section VIII, *Hazards and Hazardous Materials*; and Section XII, *Noise*. Any future facilities constructed due to implementation of the proposed project would be subject to the General Plan guidelines and SPRs described throughout this Initial Study to ensure the impacts from the project-level construction would be reduced to a less-than-significant level.

Like the General Plan, the proposed BBFMP recommends the use of an adaptive management process that would help implement the General Plan's vision and desired conditions for natural, cultural, and recreational resources and visitor experiences in the park. The proposed project would serve as a management tool that will be used to guide the stewardship, management, and use of existing and future facilities and minimize impacts to natural and cultural resources. Future development under the BBFMP would be in areas previously disturbed by pre-fire development or otherwise appropriate for new development.

With the proposed General Plan Amendments, the proposed project would be consistent with the 2013 General Plan and would provide an ongoing method to evaluate and avoid or reduce impacts associated with recreational uses, visitor experiences, and park resources. Using the adaptive management process, any potentially significant impacts would be minimized to ensure protection of the park's important resource values and visitor opportunities as expressed in the General Plan. The proposed project promotes the use of regional parks, open space, and public recreation facilities by cooperating with other agencies to encourage regional trail connections and interpretation of the natural, cultural, aesthetic, and recreational resources in the Santa Cruz Mountains region (Guidelines Recreation 4 and Recreation 5). However, this use would not represent an increase in comparison to pre-fire conditions and would not cause or accelerate significant physical deterioration of the other existing facilities.

One of the purposes of the proposed project would be to maximize visitor use and experiences, which is consistent with the General Plan goal of developing new opportunities and facilities for optimizing public enjoyment of the park's natural, cultural, and recreational values, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The 2013 General Plan EIR determined that, with implementation of the General Plan guidelines, the development of recreation facilities at BBRSP would not result in an adverse physical effect on the environment.

Population growth and changing demographics will influence the Department's efforts to consider new forms of recreation and new technologies to respond to visitor demand and recreation trends (Guidelines Recreation 6 and 7) but also calls for restricting or modifying some types of recreation activities, as necessary, to minimize adverse resource impacts (Guideline Recreation 2). Similarly, the proposed project will serve as a management tool that will be used to guide the stewardship, management, and use of existing and future facilities and minimize impacts to natural and cultural resources. The BBFMP would increase opportunities for interpretation and education and expand facilities and programs that allow more recreational opportunities in the spring and fall (Guideline Recreation 3). However, the proposed project is not anticipated to increase park visitation when compared to pre-fire conditions and thus all impacts caused by the construction or expansion of recreational facilities under the proposed project have been evaluated in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XIV. POPULATION AND HOUSING

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	NI	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goal and guideline related to population and housing:

Regional Planning Goal: Integrate the planning and management programs at Big Basin Redwoods SP with the planning and management programs of other parks and open space providers in the Santa Cruz Mountains.

Regional Planning Guidelines:

> **Regional Planning 6:** To expand affordable housing for park employees, coordinate with other parks and agencies in the region to identify and utilize potential shared housing opportunities.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects; however, there are no applicable SPRs related to population and housing. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

BASELINE CONDITIONS

BBRSP is a destination for residents throughout California, although most visitors come from the metropolitan areas of northern and central California. Staff at BBRSP and the people involved in the regional tourist-serving industries primarily live in Santa Cruz and San Mateo Counties. Population within the park boundaries is limited and restricted to temporary population (in campgrounds and cabins) and park staff housing. Before the fire, there were approximately 29 park housing units in the park, and currently there are approximately 16 interim staff housing units at Saddle Mountain. The park does not offer business opportunities within its boundaries, beyond basic recreational services offered by the Department through concessions. The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The 2013 General Plan EIR determined that the General Plan does not include proposals for infrastructure that would generate more growth in the immediate vicinity and there would be no impact.

Like the General Plan, the proposed project's only housing component includes minimal staff residences and it would not induce substantial or unplanned population growth. The proposed BBFMP includes 24 staff residence units compared to 12 available before the CZU fire. This increase is minimal and would not constitute substantial population growth. Additionally, General Plan Guideline Regional Planning 6 encourages cooperation with other agencies to identify and provide potential shared affordable employee housing opportunities in addition to the staff housing provided at the park. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The 2013 General Plan EIR determined that the General Plan does not include proposals for infrastructure or programs that would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Like the General Plan evaluated in the 2013 General Plan EIR, the proposed project's housing component includes minimal staff residences ~~does not have a housing component~~. The proposed BBFMP includes 24 staff residence units, compared to 12 available before the CZU fire, allowing more staff to reside at the park. It would ~~neither modify nor~~ not displace any existing people or

housing ~~and would displace no one~~, either temporarily or permanently. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XV. PUBLIC SERVICES

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
i) Fire protection?	NI	No	No	No	No
ii) Police protection?	NI	No	No	No	No
iii) Schools?	NI	No	No	No	No
iv) Libraries?	NI	No	No	No	No
v) Other public facilities?	NI	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

There are no applicable goals or guidelines related to public services in the 2013 General Plan.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects; however, there are no applicable SPRs related to public services. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

BASELINE CONDITIONS

FIRE PROTECTION

Fire prevention and protection services are administered by CAL FIRE for State lands outside the area of responsibility of local fire agencies. The nearest fire station is CAL FIRE CZU Station 23, at Jamison Creek approximately three miles southeast of the Focus Area.

POLICE PROTECTION
Law enforcement in the park is handled by the Department, specifically by the California State Parks Peace Officers, which may include rangers.

SCHOOLS
The nearest schools to BBRSP are Redwood Elementary, Boulder Creek Elementary School, and Pescadero Middle School. The nearest school to the proposed project is Redwood Elementary, approximately five miles east.

LIBRARIES
BBRSP has no dedicated or nearby libraries.

PARKS AND OTHER PUBLIC FACILITIES
As part of BBRSP, numerous outdoor recreational opportunities, including trails, are available in and near the Focus Area. Although BBRSP is the largest single park in the region, several other State and County parks are near the Focus Area, including the nearby recreation areas of the Midpeninsula Regional Open Space District, and many other public and private open space ownerships.

The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: (i) fire protection, (ii) police protection, (iii) schools, (iv) libraries, or (v) other public facilities?

The 2013 General Plan EIR found that new facilities at the park would supplement existing facilities and uses that require the same level of services for public health and safety, so there would be no impact to public services. Future development under the proposed project would be limited to the Focus Area and would not increase park visitation when compared to pre-fire levels. Therefore, the proposed project would not result in new or a substantial increase in magnitude of impacts to public services, compared to the 2013 General Plan EIR and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XVI. TRANSPORTATION

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transits?	LTS	No	No	No	No
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	LTS	No	No	No	No
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	LTS	No	No	No	No
e) Result in inadequate emergency access?	LTS	No	No	No	No
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to transportation:

Access and Circulation Goal: Coordinate and maintain visitor access and circulation in order to optimize operations efficiency, security, emergency access, and visitor enjoyment of the park, while maintaining the park's character and avoiding resource degradation.

Access 1: Establish a park access system that provides clear direction for visitor arrival to and departure from the park. Ensure that primary visitor contact areas are conveniently located so that their administrative functions proceed efficiently for both visitors and park staff. Where appropriate, provide or improve access to less-visited areas of the park. Coordinate with Caltrans and Santa Cruz and San Mateo counties to ensure that road construction and maintenance will result in safe, convenient, and enjoyable driving experiences for motorists as they access and traverse through the park.

Access 2: Work with state and local transportation agencies to support an integrated and efficient multi-modal transportation system that facilitates visitor access to the park. Coordinate with these agencies to provide facilities that encourage and support a variety of park access transportation modes, including pedestrian, bicycle, equestrian, bus, and shuttle, and that include support facilities, such as bus pullouts and transit shelters.

Access 3: Evaluate and upgrade existing signs along park access routes and in entrance areas to direct and orient visitors arriving at or leaving the park. Provide orientation information at park entrances that will permit visitors to easily access a range of available park experiences. Remove, combine, or relocate signs that are confusing, unnecessary, or negatively impact aesthetic resources. Create a parkwide continuity of placement and design for entrance signs to promote a recognizable park identity.

Access 4: During the peak visitor use season, coordinate with regional transit providers or concessionaires to provide transportation alternatives, such as a shuttle system, between park areas and nearby parks and open space preserves, to achieve more efficient use of existing facilities and to reduce park traffic and the size of parking facilities needed to serve visitor activities. Provide connections to park and regional trails, including connections to the California Coastal Trail, from convenient transit stops.

Access 5: Develop a circulation system that separates vehicular from non-vehicular traffic, where feasible, and public use areas from park administration and maintenance functions in order to reduce potential user conflicts and enhance non-vehicular modes of transportation.

Parking Goal: Provide safe and convenient day use and overnight parking, as well as parking for group use and special events, that minimize negative impacts to natural, cultural, aesthetic, and recreation resources and contribute to positive visitor experiences.

Parking 1: Explore alternatives for accommodating special event parking, such as the use of unpaved areas and satellite parking areas. Reconfigure parking availability where necessary to address public safety concerns and improve visitor experiences. Pursue shared parking arrangements with adjoining municipalities and landowners.

Parking 2: Minimize the number of parking facilities near or adjacent to sensitive resource areas in order to reduce or avoid negative resource impacts.

Parking 3: Conduct periodic parking and circulation assessments in response to future parking demands and changing conditions. These assessments shall identify physical and environmental constraints, design capacity and deficiencies, parking and transportation alternatives, and potential parking to accommodate visitor use during peak visitation periods. Monitor the parking situation during peak use periods to determine and record visitor use patterns and take appropriate management actions to mitigate resource impacts and improve parking efficiencies.

Accessibility Goal: Big Basin Redwoods SP recreation facilities shall become universally-accessible and provide high-quality recreational opportunities for all visitors.

Accessibility 1: Provide universal access to the park's programs, facilities, and resources, where feasible, including buildings and their contents, historic structures and landscapes, roads, walkways and trails, and the park's important natural and cultural resources, in accordance with the *Americans with Disabilities Act (1990)* and California State Park's *Accessibility Guidelines*. Provide universal accessibility for employees in work areas and in park residences as they are developed or renovated.

CALTRANS REGULATIONS

Caltrans is responsible for the maintenance and operation of State routes and highways. In BBRSP, Caltrans facilities include Highway 236.

TRAFFIC IMPACT STUDY GUIDELINES

Caltrans released the *VMT-Focused Transportation Impact Study Guide* that recommends use of the Governor's Office of Land Use and Climate Innovation's (LCI's) recommendations for land use projects and plans. For transportation projects, Caltrans has suggested that any increase in vehicle miles traveled (VMT) would constitute a significant impact. This has been referred to as the "Net Zero VMT threshold." Caltrans also released the *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance* to provide guidance about the analysis of safety on the State highway system.

ROADWAY DESIGN STANDARDS

Caltrans sets standards, policies, and strategic plans for the State's roadway system. The Caltrans *Local Assistance Procedures Manual* (LAPM), Chapter 11, describes the various procedures and establishes design standards required to process federal and State-funded local transportation projects. The Caltrans *Highway Design Manual*, prepared by the Division of Design for Project Delivery, establishes uniform policies and procedures to carry out the highway design functions of Caltrans.

LOCAL DEVELOPMENT INTERGOVERNMENTAL REVIEW SAFETY PRACTITIONERS

In December 2020, Caltrans issued Traffic Safety Bulletin 20-02-R1 announcing the release of the *Interim Local Development Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance*. This guidance material provides instructions to Caltrans personnel, lead agencies, developers, and consultants for conducting safety impact analysis for land use projects and plans to facilitate compliance with CEQA. The guidance sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis with a focus on potential safety impacts affecting the California State Highway System (SHS). Integrating safety in the Caltrans land development and intergovernmental review process helps to solidify a culture of safety in California through the Safe System approach.

Caltrans recommends lead agencies use systemic safety plans, specifically Local Roadway Safety Plans (LRSPs), Systemic Safety Analysis Reports (SSARs), and Vision Zero plans, as models for safety analysis of the local transportation network. These plans can help local jurisdictions obtain resources to improve safety in their communities, and they will now be an input to assessing the potential safety impacts of new land use projects and land use plans.

ENCROACHMENT PERMIT GUIDELINES AND TRAFFIC CONTROL PLANS

Construction within rights-of-way of facilities under Caltrans jurisdiction requires a Caltrans Encroachment Permit, which includes a Traffic Control Plan in compliance with the *Manual on Uniform Traffic Control Devices*. Included in these requirements are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. *Manual on Uniform Traffic Control Devices* requirements also provide for construction work during off-peak hours and flaggers.

CONGESTION MANAGEMENT PROGRAMS

City/County Association of Governments (C/CAG) is the Congestion Management Agency for San Mateo County. As such, C/CAG is responsible for administering the State-mandated Congestion Management Program, setting State and federal funding priorities for improvements affecting the San Mateo Congestion Management Program and preparing the Countywide Transportation Plan. There are no facilities in the Focus Area described in the C/CAG-designated Congestion Management Program roadway system; the nearest facilities are Interstate 280 and Highway 35.

Santa Cruz County does not have a Congestion Management Agency or Congestion Management Program.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPRs are related to transportation. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

TRANS-1: Prior to the start of on-site construction activities that would result in 50 or more construction vehicle trips during peak hours (7:00 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m.) for a period exceeding six months in duration, the **contractor** will prepare a Traffic Impact Study for submittal and approval by agencies with jurisdiction of the applicable roads, including Caltrans, State Parks, and County Department of Public Works. The Traffic Impact Study will include, but not be limited to:

i. Description of traffic-inducing actions
ii. Types of vehicles anticipated
iii. Approximate traffic volumes on-/off-site and roadways to be used
iv. Existing traffic counts
v. Analysis of Project Action traffic volume impacts on intersections and traffic index
vi. Any other Traffic Impact Study requirements as outlined in the appropriate jurisdiction's guidance on Traffic Impact Study preparation

TRANS-2: Prior to delivery and/or removal of project-related equipment or materials that could impede or block access to driveways, cross-streets, or street parking, the **contractor** will coordinate with the local jurisdictions to develop and implement traffic-control measures.

BASELINE CONDITIONS

Except for Rancho del Oso, accessed from Highway 1 and not in the Focus Area, all facilities at BBRSP are accessed from Highway 236. Highway 236 makes a C shape connecting to Highway 9 on both ends: in the north to Highway 9 at Waterman Gap and in the south to Highway 9 at Boulder Creek. The Main Day-use Area and Headquarters Area were on the western part of Highway 236, approximately eight miles along Highway 9 from the north and nine miles along Highway 9 from the south, centrally located in the Old Growth Area. Highway 236 to the south of the Main Day-use Area is a two-lane road that also provides local resident access. To the north of the Main Day-use Area, Highway 236 is narrow, often without a painted centerline. There have been no substantial changes to the roadways in and around BBRSP since the creation of the 2013 General Plan.

Prior to the 2020 CZU fire, visitor circulation in the park revolved primarily around the visitor facilities in the Main Day-use Area. Parking was available in the Main Day-use Area in day-use parking lots and along North Escape Road and totaled 380 parking spaces. Most campsites and cabins were also near the Main Day-use Area, along Highway 236 and Sky Meadow Road, with 148 vehicle-accessible campsites and 37 cabins. Additional camping was available at trail camps (42 sites), Saddle Mountain (12 cabins), and Little Basin (37 sites and 14 cabins).

Prior to the 2020 CZU fire, there was limited transit service to BBRSP. Since the reopening of the park, Santa Cruz Metro has extended its Bus Route 35 to serve the park on weekends and holidays. The bus provides five trips per day between the Cavallaro Transit Center in Scotts Valley and the Main Day-use Area across from the former Park Headquarters. The park has no formal bicycle facilities, although bicycles are permitted on Highway 236, as well as on smaller paved and unpaved fire roads in and around the park. The following discussion uses pre-fire visitation and conditions as the baseline for analysis.

DISCUSSION

a) Would the proposed project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The 2013 General Plan EIR found that the 2013 General Plan would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Further, the 2013 General Plan would guide improvements to roads and circulation. As such, impacts on transportation and traffic resulting from implementation of the General Plan were less than significant.

The proposed project implements many of the elements of the General Plan, including improving park access and circulation, implementing a shuttle bus system, establishing a park-and-ride lot at Saddle Mountain, minimizing the number of parking facilities near sensitive resource areas, and promoting accessibility to parking, roads, and facilities. The 2013 General Plan also references the following regional planning documents, but does not cite any transportation policies within them that may interact with the proposed project:

- Santa Cruz County General Plan and Local Coastal Program
- San Mateo County General Plan and Local Coastal Program
- Midpeninsula Regional Open Space District Master Plan and Regional Open Space Study
- Coast Dairies Long-Term Resource Protection and Access Plan

- Santa Cruz County North Coast Beaches Master Plan
- California Coastal National Monument, Resource Management Plan

The 2013 General Plan EIR describes how changes to roads and circulation made as a result of implementation of the General Plan would better accommodate and manage existing and future uses, improving circulation and visitor safety and providing safe and adequate parking.

The 2013 General Plan EIR was completed prior to the 2018 adoption of CEQA Guidelines Section 15064.3 and, therefore, a VMT analysis was not included in the 2013 General Plan EIR. Further, because the 2013 General Plan EIR was adopted prior to that date, no VMT analysis is required in this subsequent review (*Olen Properties Corp. v. City of Newport Beach* (2023) 93 Cal.App.5th 270, 280-281 (*Olen*). Appendix C, *VMT Memorandum,* presents a review of the multi-modal transportation system features and potential changes to roadway volumes. Proposed project features, such as improving park access and circulation, implementing a shuttle bus system, and establishing a park-and-ride lot at Saddle Mountain align with the intent of Section 15064.3 and the 2013 General Plan goals and policies to support an integrated and efficient multi-modal transportation system that facilitates visitor access to the park. The proposed project does not increase the visitation capacity of the park or include changes that would attract more trips or trips from farther away when compared to pre-fire conditions. The construction of new park housing for staff does not induce regional VMT as it reduces staff trips to and from the park. While the proposed project would move facilities in a manner that would shift some driving routes and distances within Big Basin, the changes would be localized and would not substantially change regional VMT or travel patterns. For example, the increase in facilities at Little Basin would not produce additional trips and would result in a negligible increase in trip distance since many visitors would previously have driven to the Main Day-use Area, which is farther from the southern entrance and Saddle Mountain than Little Basin is.

With the proposed General Plan Amendments, the project features described above are consistent with the General Plan, and the proposed project would not conflict with any applicable plan, ordinance, or policy. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The 2013 General Plan EIR describes how the improvements associated with the 2013 General Plan could result in a minor increase in traffic, but this change would not be substantial enough to exceed level of service standards set forth by a county congestion management agency. As noted previously, there are no roadways or intersections in a countywide congestion

management plan near BBRSP. Further, level of service is no longer used for determining the significance of transportation impacts. Therefore, the proposed project would not create a significant environmental impact, and no additional level of service analysis was conducted for this study. Thus, further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The 2013 General Plan EIR determined that the changes proposed by the General Plan would not result in a change in existing air traffic patterns and that impacts would be less than significant. The proposed project includes no aviation-related uses. The proposed project makes no substantial changes to roads and facilities in BBRSP that might alter this finding. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The 2013 General Plan EIR determined that any improvements to roads and circulation as a result of implementing the General Plan would better accommodate existing and future uses, improving circulation and visitor safety and that any impacts around increasing hazards were less than significant.

Where the proposed project makes minor changes to the roadway system since the 2013 General Plan EIR, it includes project features that reduce the potential for hazardous conditions at new facilities. These features include siting entrance kiosks at Saddle Mountain and Sky Meadow Road to avoid vehicle queues spilling back onto major roadways, adding a left-turn pocket off Highway 236 at Saddle Mountain for northbound traffic, and locating driveways where there are sufficient sight lines for safe visibility. The proposed project also proposes various safety enhancements, such as speed limit reductions, advanced warning signs, flashing beacons, trimming back foliage, and potential intersection control changes.

The BBFMP does not yet include detailed plans for all foreseeable roadway changes. A new vehicle entrance is proposed at the Main Day-use Area along Highway 236. Due to the conceptual nature of the plans in the BBFMP, detailed plans have not yet been prepared. At the time that detailed designs are prepared, this entrance will be designed to meet applicable Caltrans roadway design standards included in the Highway Design Manual and will be subject to Caltrans' review and approval. Where plans have been prepared, the proposed project conforms to the Highway Design Manual and Caltrans has been included throughout the development of the proposed project and has had the opportunity to review proposed changes and make recommendations.

The 2013 General Plan EIR studied the provision of shuttle service in the park and determined that a shuttle would alleviate traffic and parking congestion. The proposed project includes regular shuttle service serving key visitor destinations in the Saddle Mountain, Main Day-use, and camping areas. The roads, driveways, and parking areas served have been designed to accommodate shuttles. The project does not include any changes in use that could result in incompatible use. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project result in inadequate emergency access?

The 2013 General Plan EIR found that project impacts to emergency access were less than significant. There have been no substantial changes in roadways in and around the park since the 2013 General Plan was prepared. The proposed project does not close or remove any roads necessary for emergency access, nor does it result in substantial congestion that could impede emergency access. The proposed project would include roadway improvements, including increasing widths in some areas for life safety for access to Little Basin and Lower and Upper Sky Meadow, as well as road improvements on Sky Meadow Road, Lodge Road, Little Basin Road, and Pine Mountain and Tanbark Loop Roads. These improvements include increasing widths in some areas to provide better emergency vehicle access, including allowing emergency vehicles to pass other vehicles. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

f) Would the proposed project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The 2013 General Plan EIR describes how changes to roads and circulation made as a result of implementation of the 2013 General Plan would better accommodate and manage existing and future uses, improving circulation and visitor safety and providing safe and adequate parking. As such, impacts on transportation and traffic resulting from implementation of the General Plan were less than significant.

The proposed project builds on the 2013 General Plan, which is the guiding document for transportation improvements at BBRSP. The proposed project implements many of the elements of the General Plan relating to transit, bicycle, or pedestrian facilities, including expanding shuttle access to the park and promoting separation of vehicle traffic from pedestrians and cyclists. The proposed project would also implement traffic-calming strategies to reduce vehicle speeds and enhance safety for all visitors, such as speed limit reductions, advanced warning signs, flashing beacons, and potential intersection-control changes, as described in the 2013 General Plan EIR. The proposed project includes roadway changes that conform to Caltrans' roadway design standards included in the Highway Design Manual. Further,

Caltrans has been included throughout the development of the proposed project and has had the opportunity to review proposed changes and make recommendations regarding the proposed project. The proposed project does not include any plans that would bring Highway 236 out of compliance with the Highway Design Manual. Where proposed changes do not yet have detailed plans, future plans that affect Highway 236 will be designed to conform to the Highway Design Manual and will be subject to Caltrans review and approval. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	LTS	No	No	No	No
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	LTS	No	No	No	No
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	LTS	No	No	No	No

Would the Project:	Level of Impact in the 2013 General Plan EIR?	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result in New Information Showing New or More Severe Significant Effects?	Result in New Mitigation or Alternative to Reduce Significant Effect Is Declined?	Meet the Conditions of CEQA Guidelines Section 15163?
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	LTS	No	No	No	No
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	LTS	No	No	No	No
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	LTS	No	No	No	No
g) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	LTS	No	No	No	No

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable; N/A = topic not analyzed in the 2013 General Plan EIR

2013 BIG BASIN REDWOODS STATE PARK GENERAL PLAN

The 2013 General Plan contains the following goals and guidelines related to utilities and service systems:

Geology and Hydrology Goal: Minimize human impacts on natural geologic and hydrologic processes and values while protecting human life and property from these natural processes.

Geology and Hydrology Guidelines:

Geology/Hydrology 3: Understand and comply with the surface and groundwater beneficial uses and water quality objectives set forth in the Water Quality Control Plan for the Central Coast Region (Basin Plan) for the Big Basin Redwoods SP watersheds and take appropriate actions to prevent degradation of surface and groundwater within the park. Examples of appropriate actions include ensuring that park sewage treatment meets water quality standards and planning and implementing new park projects so they do not degrade surface or groundwater quality or affect the water production rates of pre-existing nearby wells.

Geology/Hydrology 5: As appropriate, use standard Best Management Practices (BMPs) for erosion, dust, sediment control, and storm water runoff for park projects, and update regularly.

Sustainability Goal: Incorporate sustainable design principles into the design, development, operations, and maintenance of park facilities and programs.

Sustainability Guidelines:

Sustainability 1: Use sustainable design strategies to minimize impacts to the park's natural, cultural and aesthetic resources. Choose low-impact building sites, structures, building, and landscape materials, and maintenance and management practices that avoid the use of environmentally-damaging, waste-producing, or hazardous materials. Use natural, renewable, indigenous, and recyclable materials, and energy-efficient design.

Utilities Goal: Ensure long-term sustainable, environmentally compatible and energy-efficient infrastructure for the park.

Utilities Guidelines:

Utilities 1: Repair and upgrade the current potable water supply and distribution systems to the existing park buildings and key visitor locations. This would include items, such as the repair or replacement of the main water storage tank, water lines, and reservoirs.

Utilities 2: Upgrade the secondary wastewater treatment system and replace or relocate sewer lines, where necessary, to protect creeks and drainages.

Utilities 3: Identify other utility needs and implement utility improvements comprehensively to avoid unnecessary site disturbance and expensive rerouting of utility corridors and junctions over time.

Utilities 4: Locate and map the current utility systems in the park including telephone, electricity and water, so that all staff can recognize and respond to utility problems efficiently.

Utilities 5: Develop an infrastructure plan that reflects long-term facility needs and is compatible with other park management goals and guidelines.

APPLICABLE STANDARD PROJECT REQUIREMENTS

State Parks requires SPRs for all projects. The following SPR is related to utilities and service systems. A full list of SPRs is found in Appendix A, *Standard Project Requirements*.

HYD-1: Prior to the start of construction involving ground-disturbing activities of an area of at least one acre, the **contractor** will prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) for Department approval that identifies temporary best management practices (BMPs) (e.g., tarping of any stockpiled materials or soil; use of silt fences, straw bale barriers, fiber rolls) and permanent (e.g., structural containment, preserving or planting of vegetation) for use in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, trenching, repaving, or other ground-disturbing activities. The SWPPP will include BMPs for hazardous waste and contaminated soils management and a Spill Prevention and Control Plan (SPCP), as appropriate.

BASELINE CONDITIONS

Many of the utilities at BBRSP were constructed in the 1930 to 1950s. Utility systems in BBRSP include wet utilities: drinking water; fire water; wastewater; and dry utilities, including electrical, telecommunications, and propane. Most of the park's utilities were lost in the 2020 CZU fire. Nearly all the utility systems described in the 2013 General Plan EIR are no longer in working condition.

Before the fire, the potable water system included water wells and a surface water reservoir as water sources, a centralized water treatment facility, and a water distribution system. The water treatment system consisted of a centralized water treatment plant that treated water received from the Sempervirens Reservoir and included several chlorine dosing systems throughout the distribution network. The water distribution system included several water tanks located throughout the park fed by a mostly underground pipe network with supplemental booster pumps and water quality monitoring stations. The water system connected to the Little Basin, Old Growth Area, Huckleberry Campground, Lower Sky Meadow Campground, Upper Sky Meadow, and Rogers Road areas. Several sites not connected to the existing water system have existing wells; there are two wells at Saddle Mountain Gateway, one well at Potter, and one at Mortensen. Aboveground infrastructure, such as well heads and tanks, were destroyed while underground infrastructure was compromised due to exposure to aboveground contaminants.

Prior to the 2020 CZU fire, the wastewater system was composed of a park-wide sanitary sewer collection system that flowed to the park's centralized wastewater treatment plant at the southwestern boundary of the park and consisted of approximately 25,000 linear feet of 6- and 8-inch sanitary sewer segments. The wastewater collection system historically had issues with root intrusion, rainwater inundation, spills, and proximity to sensitive riparian areas. The wastewater collection system was compromised in the 2020 CZU fire and will ultimately need to be redesigned; currently, the system is being evaluated to determine which mains, laterals, and supporting infrastructure need new alignment, replacement, or further assessment. Three existing on-site wastewater treatment and dispersal systems are at the Upper Sky Meadow, Lower Sky Meadow, and Saddle Mountain Welcome Area sites, and were unaffected by the fire.

Prior to the CZU fire, BBRSP included a series of culverts and roadside ditches to support stormwater drainage; these facilities are mostly still functional. Groundwater seeps and springs are also common in the project area. Culverts along Highway 236 upslope of the Old Growth Area primarily direct flow to Opal Creek, north of the existing parking lot. The following discussion uses the existing, post-fire site conditions as the baseline for analysis of current facilities and infrastructure, and a pre-fire baseline to evaluate demand and capacity.

DISCUSSION

a) Would the proposed project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant. Further, any new infrastructure and services would be environmentally compatible with the resources in BBRSP, and any degradation of environmental values would not be substantial.

Since most of the utility systems in place during the creation of the 2013 General Plan EIR have since been lost to fire, the proposed project would include the development of appropriate utility systems to manage and treat expected wastewater. Because the proposed project does not anticipate an increase in visitation from pre-fire conditions, the total wastewater generated under the proposed project is similar to what was evaluated in the 2013 General Plan EIR.

The 2013 General Plan EIR recommended upgrading utility systems at Little Basin and Saddle Mountain. As described in the 2013 General Plan EIR, the Department would comply with the water quality objectives and requirements of the CCRWQCB (Guideline Geology/Hydrology 3) and would use sustainable design strategies to construct and maintain utility and service systems in the park (Guideline Sustainability 1). As described in the 2013 General Plan EIR, construction and operations of the equipment and the development of facilities due to implementation of the proposed project would follow State and federal regulations, as well as

management strategies and actions of the General Plan to minimize impacts. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

b) Would the proposed project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As described, the 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant.

Prior to the 2020 CZU fire, BBRSP maintained its own potable water supply and an on-site wastewater treatment facility. The proposed project includes reconstruction of BBRSP's utility systems and infrastructure as necessary to replace systems that were damaged or destroyed in the 2020 CZU fire. Because the proposed project does not anticipate an increase in visitation from pre-fire conditions, the total water demand and wastewater generated under the proposed project would be similar to what was evaluated in the 2013 General Plan EIR.

Before the fire, most zones in the Focus Area were connected to the park's existing water system or received water from existing wells or springs. Implementation of the proposed project would upgrade and reconstruct the water and wastewater infrastructure as necessary to reconnect these areas to BBRSP's existing water and wastewater systems.

The water treatment plant would be rehabilitated and the wastewater treatment plant re-designed and constructed. Other on-site wastewater treatment systems would be designed and installed in areas not connected to the wastewater treatment plant, such as Little Basin, Saddle Mountain, and Norabella. Water distribution from the water treatment plant would be reconstructed and would include new connections to Saddle Mountain and Little Basin. As described in the 2013 General Plan EIR, the Department would comply with the water quality objectives and requirements of the CCRWQCB (Guideline Geology/Hydrology 3) and would use sustainable design strategies to construct and maintain utility and service systems in the park (Guideline Sustainability 1). Further, construction and operation of the equipment and facilities due to implementation of the proposed project would follow State and federal regulations, as well as management strategies and actions of the General Plan, as described in the 2013 General Plan EIR.

The proposed project would require the construction of replacement water and wastewater facilities, though it would be required to follow the same General Plan guidelines as described in the 2013 General Plan EIR. Further, most of the reconstructed facilities would be in similar locations as the previous utility infrastructure, thus minimizing related environmental impacts. Where utility infrastructure is required in new locations, it would be installed in areas with

previous disturbance or otherwise suitable for development, minimizing related environmental impacts. The construction of these necessary infrastructure improvements is included as part of the proposed project and thus all related impacts are evaluated throughout this Initial Study. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

c) Would the proposed project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As described previously, the 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant.

The proposed project would result in the construction of new stormwater drainage facilities and, because current facilities are not in working order, updates to existing facilities. All new stormwater facilities due to implementation of the proposed project would be designed and constructed to not cause significant environmental effects pursuant to General Plan Guideline Sustainability 1. The proposed project describes stormwater strategies that prioritize stormwater treatment before discharge. Where appropriate, the proposed project would incorporate permeable or pervious pavement to reduce stormwater runoff, direct stormwater runoff to vegetated areas, and incorporate retention-based stormwater management. Further, with the proposed General Plan amendments, improvements would be consistent to goals and guidelines outlined in the 2013 General Plan and Santa Cruz County design standards for stormwater management and General Plan guidelines would be followed as described in the 2013 General Plan EIR. Alteration to overall drainage patterns would be minimal, with little if any changes in total stormwater runoff.

Construction activities under the proposed project would be designed to reduce or eliminate surface water runoff pursuant to SPR HYD-1. Natural landscaping is included in the proposed project at multiple sites; this landscaping would increase stormwater retention and be used as an additional stormwater quality enhancement mechanism. The addition of these new permeable areas would help to offset new parking lots and other increases in pavements to minimize the increase in total stormwater runoff. Projects that generate runoff pollutants are required under the National Pollutant Discharge Elimination System to develop and implement a Water Quality Management Plan that identifies the site design, source control, and treatment-control BMPs.

Additionally, separate rainwater collection and reuse is being considered with regards to sustainability and water reuse in the park. This would provide a benefit to the stormwater drainage that was not considered in the 2013 General Plan EIR by collecting stormwater runoff

for reuse. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

d) Would the proposed project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As described previously, the 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant.

Implementation of the proposed project is not expected to increase water demand over the levels evaluated in the 2013 General Plan EIR or pre-fire conditions. Water from within the park would be piped to the Saddle Mountain and Norabella sites. Implementation of General Plan Guidelines Utilities 1 through Utilities 4, as described in the 2013 General Plan EIR, would evaluate the current park infrastructure, repair and upgrade the current water supply and distribution system, as necessary, identify utility needs, and develop recommendations for utility upgrades and replacement.

Potable water infrastructure in the park was significantly compromised in the 2020 CZU fire, but once improvements and repairs are completed, the park's water system would adequately supply water for the proposed project. Thus, with the necessary reconstruction, the same sources as before the CZU fire would provide potable water for the proposed project. Further, the visitation and thus water demand would not increase due to the proposed project when compared to pre-fire conditions.

The construction of any new water facilities necessary for the implementation of the BBFMP is included as part of the proposed project and thus the related impacts are evaluated throughout this Initial Study. Further, implementation of the proposed project, including the potential replacement of the park's water source, was evaluated in the 2013 General Plan EIR and adherence to applicable General Plan guidelines would also be required under the proposed project, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

e) Would the proposed project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be mitigated to a less-than-significant level. Further, any new

infrastructure and services would be environmentally compatible with the resources in BBRSP, and any degradation of environmental values would not be substantial.

Prior to the 2020 CZU fire, BBRSP was served by a park-wide sanitary sewer collection system owned and operated by State Parks that flowed to the park's centralized wastewater treatment plant at the southwestern part of the Focus Area. A new wastewater treatment plant is proposed in the same location with adequate capacity to serve the proposed project's wastewater generation. Additional OWTS are also proposed at Little Basin, Saddle Mountain, and Sky Meadow. The construction of these additional wastewater facilities is included as part of the proposed project and thus all related impacts are evaluated throughout this Initial Study. As described in the 2013 General Plan EIR, the Department would comply with the water quality objectives and requirements of the CCRWQCB (Guideline Geology/Hydrology 3) and would use sustainable design strategies to construct and maintain utility and service systems in the park (Guideline Sustainability 1). Further, construction and operation of the equipment and facilities due to implementation of the proposed project would follow State and federal regulations, as well as management strategies and actions of the General Plan, as described in the 2013 General Plan EIR. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

f) Would the proposed project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal?

As described previously, the 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant.

The proposed project would be required to comply with all federal and State statutes and regulations related to solid waste. Implementation of the proposed project would not increase visitation or generate solid waste in excess compared to pre-fire conditions. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

g) Would the proposed project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

As described previously, the 2013 General Plan EIR determined that, while the exact nature of the infrastructure and service needs would not be determined until the development proposals become available, any adverse effects would be less than significant.

The proposed project would be required to comply with all federal and State statutes and regulations related to solid waste. Further, implementation of the proposed project would not

increase visitation or generate solid waste in excess compared to pre-fire conditions. Therefore, when compared to the 2013 General Plan EIR, the proposed project would not result in new impacts or a substantial increase in the severity of impacts, and further analysis of this topic is not warranted in the Draft Supplemental EIR.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

WOULD THE PROJECT:	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result In New Information Showing New or More Severe Significant Effects?	Result In New Mitigation or Alternative To Reduce Significant Effect is Declined?	Meet The Conditions of CEQA Guidelines Section 15163?
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	**Yes**	No	No	**Yes**
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	No	No	No	No

WOULD THE PROJECT:	Create a Substantial Change in Project or Circumstances Resulting in New Significant Effects?	Result In New Information Showing New or More Severe Significant Effects?	Result In New Mitigation or Alternative To Reduce Significant Effect is Declined?	Meet The Conditions of CEQA Guidelines Section 15163?
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects)	**Yes**	No	No	**Yes**
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	No	No	No	No

DISCUSSION

a) Would the proposed project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?

As described in Section IV, *Biological Resources,* the proposed project has the potential to negatively impact the marbled murrelet. This topic will be further evaluated in the Supplemental EIR.

b) Would the proposed project have the potential to eliminate important examples of the major periods of California history or prehistory?

As described in Section V, *Cultural Resources*, the proposed project does not have the potential to eliminate important examples of the major periods of California history or prehistory. The CZU fire destroyed all of the historic resources in the Focus Area. The proposed project would

serve as a management tool that would be used to guide the stewardship, management, and use of existing and future facilities and minimize impacts on natural and cultural resources. Implementation of the proposed project would include culturally and historically appropriate facilities. Implementation of the proposed project would also support tribal and cultural facilities that would honor the millennia-long connection that Indigenous people have had with the land and provide additional ways for visitors to connect with the history of the land.

c) Would the proposed project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects)

The proposed project is a planning document designed to guide the stewardship, management, and use of existing and future facilities within BBRSP. The Department would be aware of other cumulative projects occurring at the time of implementation of the proposed project and, through appropriate SPRs, would ensure that impacts from future improvements and facilities under the proposed project do not contribute to cumulative adverse effects. Visitation would not exceed pre-fire conditions due to the proposed project. This would further prevent cumulative impacts when considering the proposed project with other projects in the area. As described throughout this Initial Study, the proposed project would not result in new impacts or a substantial increase in the severity of impacts aside from biological resources which will be evaluated (including in regards to cumulative impacts) further in the Supplemental EIR.

d) Would the proposed project have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?

As described throughout this Initial Study, the proposed would not result in significant direct or indirect adverse impacts or result in substantial adverse effects on human beings. The proposed project would not result in new or a substantial increase in magnitude of impacts related to most topics, compared to the 2013 General Plan EIR. Impacts on biological resources will be evaluated further in the Supplemental EIR; however, impacts within this topic area would not cause substantial adverse effects on humans, either directly or indirectly.

APPENDIX A

STANDARD PROJECT REQUIREMENTS

California Department of Parks and Recreation

Resource Services

STANDARD PROJECT REQUIREMENTS

General

GEN-1: Prior to the start of on-site construction work, a DPR representative will consult with the contractor and project manager to identify all resources that must be protected.

GEN-3: Prior to the start of on-site construction work, a DPR-qualified Resources Specialist will train construction personnel in Resource identification and protection procedures.

Aesthetics

AES-1: Projects will be designed to incorporate appropriate park scenic & aesthetic values including the choices for: specific building sites, scope & scale; building and fencing materials and colors; use of compatible aesthetic treatments on pathways, retaining walls or other ancillary structures; location of and materials used in parking areas, campsites and picnic areas; development of appropriate landscaping. The park scenic and aesthetic values will also consider views into the park from neighboring properties.

AES-3: Permanent structures will be equipped with outdoor light shields that concentrate the illumination downward to reduce direct and reflected light pollution. The direct source of the lighting (bulb, lens, filament, tube, etc) will not be visible off site and the lighting will be installed as low as possible on poles and/or structures to minimize light pollution of the night sky. The candle power of the illumination at ground level will not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.

Air Quality

AQ-1: During dry, dusty conditions, all active construction areas will be lightly sprayed with water or another dust suppressant to reduce dust without causing runoff.

AQ-2: All trucks or light equipment hauling soil, sand, or other loose materials on public roads will be covered or required to maintain at least two feet of freeboard.

AQ-3: All gasoline-powered equipment will be maintained according to manufacturer's specifications, and in compliance with all State and federal requirements**.**

AQ-4: During construction, paved streets adjacent to the Park shall either be swept or washed at the end of each day, or as required, to remove excessive accumulations of silt and/or mud that could have resulted from project-related activities.

AQ-5: Excavation and grading activities will be suspended when sustained winds exceed 15 miles per hour (mph), instantaneous gusts exceed 25 mph, or when dust occurs from remediation related activities where visible emissions (dust) cannot be controlled by watering or conventional dust abatement controls.

AQ-6: Cover all inactive soil storage piles.

CUL-1: If forest thinning activities are required within a culturally sensitive area, downed timber and other forest debris will be removed by aerial suspension; no portion of logs, slash or debris will be dragged across the surface.

CUL-2: Prior to the start of on-site construction work, the **Cultural Resources Supervisor** will be notified, unless other arrangements are made in advance, a minimum of three weeks to schedule a **Cultural Resource Specialist** to monitor work, as necessary, to ensure that removal and reconstruction of historic fabric will occur in a manner consistent with the Secretary of the Interior's Standards.

CUL-3: Before, during, and after construction, a **Cultural Resource Specialist** will photo-document all aspects of the project and will add the photos to the historical records (archives) for the park.

CUL-4: Prior to the start of on-site construction work, and to the extent not already completed, a **Cultural Resource Specialist** will map and record all cultural features within the proposed Area of Potential Effects (APE) to a level appropriate to the Secretary of Interior Standards.

CUL-5: All historic work will comply with the Secretary of the Interior Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

- Historic character will be retained and preserved;
  - where safe, original materials that still maintain structural integrity will be retained; and
  - where replacement is required, materials and features will be replaced "in kind".
- A **Cultural Resource Specialist** familiar with the project site's cultural/historic resources will monitor all construction activities. All historical resources uncovered during the project will be recorded in place with a photograph and/or drawing showing any new material or recovered and archived, at the discretion of the monitor.
- Upon completion of the project, **Cultural Resource Specialist** will record any modifications to historic buildings or alterations of historic fabric on as-built drawings.

CUL-6: Prior to the start of any ground-disturbing activities, a DPR-approved archaeologist will complete pre-construction testing to determine specific avoidance areas.

- If necessary, a DPR-qualified Cultural Resource Specialist will prepare a research design, including appropriate trenching and/or pre-construction excavations
- Based on preconstruction testing, project design and/or implementation will be altered, as necessary, to avoid impacts to archaeological resources or reduce the impacts to a less than significant level, as determined in consultation with a DPR-qualified archaeologist.

CUL-8: If **anyone** discovers previously undocumented cultural resources during project construction, work within **100 feet** of the find will be temporarily halted until the archaeologist designs and implements appropriate treatments in accordance with the Secretary of the Interiors Standards and Guidelines for archaeological resource protection.

- The project will be modified to ensure that construction activities will avoid cultural resources upon review and approval of a **Cultural Resource Specialist**.

- If ground disturbing activities uncover intact cultural features (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic ash), when a DPR Qualified cultural resources specialist is not on-site,**the contractor** will contact the DPR State Representative immediately and **contractor** will temporarily halt or divert work within the immediate vicinity of the find a DPR-qualified cultural resources specialist evaluates the find and determines the appropriate treatment and disposition of the cultural resource.

CUL-9: In the event that human remains are discovered, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects will be left in place or returned to the point of discovery and covered with soil. The DPR Cultural Resources Program Manager (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (or Tribal Representative). The Santa Cuz District Tribal Liaison will be responsible for notifying the appropriate Native American authorities. The local County Coroner will make the determination of whether the human bone is of Native American origin.

- If the Coroner determines the remains represent Native American interment, the NAHC in Sacramento will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.
- If it is determined the find indicates a sacred or religious site, the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representatives will occur as necessary to define additional site mitigation or future restrictions.

Geology and Soils

GEO – 1: After a large earthquake event (i.e., magnitude 5.0 or greater within 50 miles of the project site), **State Parks** will inspect all project structures and features for damage, as soon as is possible after the event. Any damaged structures or features will be closed to park visitors, volunteers, residents, contractors, and staff.

GEO-2: No track-mounted or heavy-wheeled vehicles will be driven through non-disturbed areas during the rainy season or when soils are saturated to avoid compaction and/or damage to soil structure.

GEO-3: State Parks will develop rehabilitation plans for the decommissioned roads, paved areas and trails that includes using brush and trees for bio-mechanical erosion control (bundling slash and keying it into soil, filling damaged sections with soil and duff removed, constructing water bars, and replanting native trees and shrubs).

GEO-4: Prior to design and construction of structures and vehicular areas, a soil report will be prepared by a geotechnical engineer and recommendations of the soil engineer will guide structural design to minimize risk of seismic events, landslides or expansive soils.

Hazards

HAZ-1: Prior to the start of on-site construction activities, **Contractor** will inspect all equipment for leaks and regularly inspect thereafter until equipment is removed from the project site. All contaminated water, sludge, spill residue, or other hazardous compounds will be contained and disposed of outside the boundaries of the site, at a lawfully permitted or authorized destination.

HAZ-2: Prior to the start of on-site construction activities, **contractor** will prepare a Spill Prevention and Response Plan (SPRP) as part of the Storm Water Pollution Prevention Plan (SWPPP) for **DPR** approval to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. This plan will include (but not be limited to);

- a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment will occur;
- a list of items required in a spill kit on-site that will be maintained throughout the life of the project;
- procedures for the proper storage, use, and disposal of any solvents or other chemicals used in the restoration process;
- and identification of lawfully permitted or authorized disposal destinations outside of the project site.

HAZ-3: **Contractor** will develop a Materials Management Plan to include protocols and procedures that will protect human health and the environment during remediation and/or maintenance activities that cause disturbances to the native soil and/or mine and mill materials causing the potential exposure to metals and dust resulting from materials disturbances. All work will be performed in accordance with a Site Health and Safety Plan. The Materials Management Plan will include the following (where applicable):

- Requirement that staff will have appropriate training in compliance with 29 CFR, Section 1910.120;
- Methods to assess risks prior to starting onsite work;
- Procedures for the management and disposal of waste soils generated during construction activities or other activities that might disturb contaminated soil;
- Monitoring requirements;
- Storm water controls;
- Record-keeping; and,
- Emergency response plan.

HAZ-4: **Contractor** will set up decontamination areas for vehicles and equipment at Park entry/exit points. The decontamination areas will be designed to completely contain all wash water generated from washing vehicles and equipment. Best Management Practices (BMPs) will be installed, as necessary, to prevent the dispersal of wash water beyond the boundaries of the decontamination area, including over-spray.

HAZ-5: Prior to the start of construction, **contractor** will develop a Fire Safety Plan for **DPR** approval for the entire construction period. The plan will include the emergency calling procedures for both the California Department of Forestry and Fire Protection (CDF) and local fire department(s).

HAZ-6: All heavy equipment will be required to include spark arrestors or turbo chargers (which eliminate sparks in exhaust) and have fire extinguishers on-site.

HAZ-7: DPR personnel will have a State Park radio at the Park, which allows direct contact with CalFire and a centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

HAZ-8: Prior to the start of on-site construction activities, contractor will clean and repair (other than emergency repairs) all equipment outside the project site boundaries.

HAZ-9: Under dry conditions, a filled water truck and/or fire engine crew will be onsite during activities with the potential to start a fire.

HAZ-10: Contractor will designate and/or locate staging and stockpile areas to prevent leakage of oil, hydraulic fluids, etc. into surrounding areas.

Hydrology

HYD-1: Prior to the start of construction involving ground-disturbing activities of an area of at least on acre, **contractor** will prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) for DPR approval that identifies temporary Best Management Practices (BMPs) (e.g., tarping of any stockpiled materials or soil; use of silt fences, straw bale barriers, fiber rolls, etc.) and permanent (e.g., structural containment, preserving or planting of vegetation) for use in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, trenching, repaving, or other ground-disturbing activities. The SWPPP will include BMPs for hazardous waste and contaminated soils management and a Spill Prevention and Control Plan (SPCP), as appropriate.

HYD-2: All heavy equipment parking, refueling, and service will be conducted within designated areas outside of the 100-year floodplain to avoid water course contamination.

HYD-3: The project will comply with all applicable water quality standards as specified in the Water Quality Control Plan for the Central Coast Basin, also called the Basin Plan.

HYD-4: Construction activities will be suspended during heavy precipitation events (i.e., at least 1/2-inch of precipitation in a 24-hour period) or when heavy precipitation events are forecast.

HYD-5: If construction activities extend into the rainy season (Oct 15th – April 30th) or if an un-seasonal storm is anticipated, contractor will properly winterize the site by covering (tarping) any stockpiled materials or soils and by constructing silt fences, straw bale barriers, fiber rolls, or other structures around stockpiles and graded areas.

HYD-6: Contractor will install appropriate energy dissipators at water discharge points, as appropriate.

Noise

NOI-1: Temporary or permanent noise barriers such as berms or walls will be used, as appropriate, to reduce noise levels.

NOI-2: Internal combustion engines used for project implementation will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for Project-related activities will utilize the best available noise control techniques (e.g.,

engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever necessary.

NOI-3: Contractor will locate stationary noise sources and staging areas as far from potential sensitive noise receptors, as possible. If they must be located near potential sensitive noise receptors, stationary noise sources will be muffled or shielded, and/or enclosed within temporary sheds.

NOI-4: Construction activities will generally be limited to the daylight hours, Monday – Friday. If work during weekends or holidays is required, no work will occur on those days before 8 a.m. or after 5 p.m.

Transportation

TRANS-1: Prior to the start of on-site construction activities that would result in 50 or more construction vehicle trips during peak hours (7:00 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m.) for a period exceeding 6 months in duration, the contractor will prepare a Traffic Impact Study (TIS) for submittal and approval by agencies with jurisdiction of the applicable roads including Catrans, State Parks and County Department of Public Works. The TIS will include, but will not be limited to:

i. Description of traffic inducing actions;

ii. Types of vehicles anticipated;

iii. Approximate traffic volumes on/ offsite and roadways to be used;

iv. Existing Traffic Counts;

v. Analysis of Project Action traffic volume impacts on intersections and traffic index; and

vi. Any other TIS requirements as outlined in the appropriate jurisdiction's guidance on TIS preparation

TRANS-2: Prior to delivery and/or removal of project-related equipment or materials that could impede or block access to driveways, cross streets, or street parking, Contractor will coordinate with the local jurisdictions to develop and implement traffic control measures.

APPENDIX B

NOISE

NOISE FUNDAMENTALS

Fundamentals of Noise

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Maximum Sound Level (L_{max})**. The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Barely perceptible increase
± 5 dB	Readily perceptible increase
± 10 dB	Twice or half as loud
± 20 dB	Four times or one-quarter as loud

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00

PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the

square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage and RMS is typically more suitable for evaluating human response.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation (Caltrans). 2020, April. *Transportation and Construction Vibration Guidance Manual.* Prepared by ICF International.

CONSTRUCTION NOISE MODELING

SCAL-10.16 - Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	RCNM Reference Noise Level	Receptor at	Receptor at	Receptor at	Receptor at
Distance in feet	***50***	***100***	***200***	***300***	***400***
Demolition	85.0	79.0	73.0	69.4	66.9
Site Prep	85.0	79.0	73.0	69.4	66.9
Grading	85.0	79.0	73.0	69.4	66.9
Building Construction	80.0	74.0	68.0	64.4	61.9
Architectural Coating	74.0	68.0	62.0	58.4	55.9
Paving	80.0	74.0	68.0	64.4	61.9
Finish/Landscaping	80.0	74.0	68.0	64.4	61.9

Attenuation calculated through Inverse Square Law: Lp(R2) = Lp(R1) - 20Log(R2/R1)

SCAL-10.16 - Vibration Damage Attenuation Calculations

Levels, PPV (in/sec)

Distance in feet	**Vibration Reference Level at *25 feet***	**Receptor at 50 feet** *50*	**Receptorat 75 feet** *75*	**Receptor at 100 feet** *100*
Vibratory Roller	0.21	0.074	0.040	0.026
Clam shovel	0.202	0.071	0.039	0.025
Hoe Ram	0.089	0.031	0.017	0.011
Large Bulldozer	0.089	0.031	0.017	0.011
Caisson Drilling	0.089	0.031	0.017	0.011
Loaded Trucks	0.076	0.027	0.015	0.010
Jackhammer	0.035	0.012	0.007	0.004
Small Bulldozer	0.003	0.001	0.001	0.000

APPENDIX C

VMT MEMORANDUM

FEHR PEERS

Memorandum

Date: June 3, 2025

To: Alexis Mena and Rachel Goren, Placeworks

From: Kevin Zamzow-Pollock, Dana Weissman AICP, and Matt Goyne PE, Fehr & Peers

Subject: Vehicle Miles Travelled and Vehicle Trip Analysis for the Big Basin Facilities Management Plan

SF22-1216.02

This memorandum summarizes three analyses related to vehicle travel patterns prepared by Fehr & Peers for informational purposes regarding the Big Basin Facilities Management Plan (BBFMP) at Big Basin Redwoods State Park (BBRSP). The BBFMP has been undertaken primarily in response to the 2020 CZU Lightning Complex fire. As a result, baseline conditions are taken to be "pre-fire" conditions and future conditions with the BBFMP are "project" conditions.

The analyses presented in this memorandum are:

- Analysis of pre-fire vehicle miles travelled (VMT)
- Assessment of project VMT
- Potential for project to result in an increase in vehicle volume on nearby roadways

These analyses are presented for informational purposes only.

Pre-Fire VMT

To assess pre-fire vehicle miles travelled (VMT), Fehr & Peers used metrics from StreetLight Data. StreetLight Data is a big data resource that produces aggregate traffic metrics using location-based service (LBS) data from smartphones and other devices based on user-defined "zones".[1]

This analysis used zones placed along the northern portion of SR 236 near China Grade Road ("north zone") and along the southern portion of SR 236 between Sky Meadow Road and Little Basin Road ("south zone"). StreetLight Data aggregates the average distance travelled for all trips that passed through each of these zones during the identified time period. While it is possible that a small number of trips may

[1] In 2022, StreetLight Data shifted to using data from connected vehicles. However, during the time period analyzed here, StreetLight Data was still using LBS data.

drive straight through the park without stopping, Fehr & Peers assumed that nearly all trips were destined for locations within Big Basin Redwoods State Park, as SR 236 would not be a direct route to any other destinations. Fehr & Peers used StreetLight Data outputs for an average weekday and weekend day for both summer 2018 and summer 2019, as shown in **Table 1**.

The trip lengths reflect the role that BBRSP serves as a state park in serving recreational and outdoor needs for people living in nearby major population centers throughout the region (e.g., Santa Cruz and San Jose are roughly 20 miles away, while San Francisco is 40 miles away).

Table 1: Average One-Way Trip Length in Miles in Summer 2018 and 2019

Year[1]	Zone	Weekdays[2]	Weekends	Average of All Days
2018	North Zone	32.3	34.3	34.6
	South Zone	32.9	31.7	32.0
	Average	32.6	33.2	33.3
2019	North Zone	36.8	35.1	35.7
	South Zone	30.2	32.0	31.6
	Average	33.0	33.8	33.7

[1] Including the period between Memorial Day weekend and Labor Day weekend
[2] Weekday numbers exclude Fridays
Source: StreetLight Data, 2018; StreetLight Data, 2019; Fehr & Peers, 2025

To convert average one-way trip length to total VMT, Fehr & Peers multiplied the average one-way trip length by the average number of daily vehicle trips identified by StreetLight Data for the same time periods, as shown in **Table 2**. The resulting total VMT estimates are shown in **Table 3**.

Table 2: Average Daily Vehicle Trips in Summer 2018 and 2019

Year[1]	Weekdays[2]	Weekends	Average of All Days
2018	1,150	3,100	1,800
2019	800	2,000	1,200

Values rounded to nearest 50 trips.
[1] Including the period between Memorial Day weekend and Labor Day weekend
[2] Weekday numbers exclude Fridays
Source: StreetLight Data, 2018; StreetLight Data, 2019; Fehr & Peers, 2025

Table 3: Total Daily VMT in Summer 2018 and 2019

Year[1]	Weekdays[2]	Weekends	Average of All Days
2018	37,400	102,300	59,500
2019	26,400	67,900	40,900

Values rounded to nearest 100 VMT
[1] Including the period between Memorial Day weekend and Labor Day weekend
[2] Weekday numbers exclude Fridays
Source: StreetLight Data, 2018; StreetLight Data, 2019; Fehr & Peers, 2025

Project VMT

The BBFMP is intended as a planning document to guide recovery from the CZU Lightning Complex fire and to guide the stewardship, management, and use of existing and future facilities. The proposed project does not contain any transportation network changes anticipated to lead to a measurable or substantial increase in vehicle travel. The proposed project may contain the following transportation network changes identified by the California Governor's Office of Planning and Research (OPR) as not likely to require an induced travel analysis:[2]

- Rehabilitation, maintenance, replacement and repair projects designed to improve the condition of existing transportation assets (e.g., highways, roadways, bridges, culverts, tunnels, transit systems, and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadway shoulder enhancements to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, or emergency breakdown lanes that are not utilized as through lanes
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Initiation of new transit service
- Removal or relocation of off-street or on-street parking spaces
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way

[2] Governor's Office of Planning and Research. April 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* https://lci.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure

The proposed project is not intended to increase the capacity of the park for visitation nor substantively change the park's role within the California state park system. The project proposes a reduction in day use parking and a moderate increase in camping capacity, as detailed in **Table 4**, and a shuttle service from Scotts Valley to serve those unable to get a day use parking space. The park may also employ strategies like parking and/or shuttle reservation systems to manage demand as needed. As a result, day use visitation is assumed to be the same as pre-fire visitation and camping visitation is limited by camping capacity, as shown in **Table 4**.

Table 4: Change in Key Capacity-Related Features

Feature	Pre-Fire	Project	Change in Capacity
Day use parking spaces (Main Day Use and Saddle Mountain)	380[1]	225[2]	-155 parking spots
Total vehicle-accessible campsites/cabins	248[3]	262[4]	+14 sites
Total vehicle-accessible camping capacity (persons camping)[5]	2,174	2,368	+194 persons
Total camping-associated vehicles[6]	794	874	+80 vehicles

[1] Big Basin General Plan and EIR, May 2013, Table 2-2. The General Plan does not mention any pre-fire day use parking at Saddle Mountain.
[2] Based on 75 parking spaces at the MDU area with an average of 2.5 vehicles per day and 150 parking spaces at Saddle Mountain with an average of 1.5 vehicles per day.
[3] Big Basin General Plan and EIR, May 2013, Table 2-3 (Main Day Use) plus 12 cabins at Saddle Mountain (page 2-16) and 51 tent sites, cabins, and group camping areas at Little Basin (page 2-18).
[4] Based on 176 camp sites and 30 cabins along Sky Meadow Road near the MDU area and 44 camp sites and 12 tent cabins at Little Basin.
[5] Both pre-fire and project values assume maximum visitor capacity of 8 persons per campsite or cabin, 16 persons per friends and family campsite (project only), and 40-50 visitors per group campsite (varies by specific facility).
[6] Assumes 2.6 persons per vehicle for campsites and cabins and 5 persons per vehicle for group campsites.
Source: Big Basin General Plan and EIR, May 2013; Fehr & Peers, 2024-2025

With the improvements identified under the project, BBRSP would continue to serve similar populations as before the fire. No improvements proposed would attract visitors from farther away or otherwise increase the distances traveled to reach the park by changing the nature that the park serves within the Bay Area or statewide park systems. While the project would shift some parking and camping from the Main Day Use (MDU) area to Saddle Mountain and Little Basin, the change of location within the park would not represent a substantial change to regional VMT. Further, project features such as the reduction in day use parking capacity in the park and the addition of a Scotts Valley shuttle would reduce driving distances for many visitors. Those unable to obtain parking or unwilling to drive to Scotts Valley would need to pursue other recreational opportunities with the regional or state park system.

As a result, no increase in regional VMT is anticipated as a result of the BBFMP.

Analysis of Project Vehicle Volume on Nearby Roadways

Fehr & Peers assessed the potential for the BBRSP to increase vehicle volumes on nearby roadways. The project is unique from a traffic forecasting perspective, as it involves reallocating regional recreational trips rather than the addition of new residential or commercial land uses. Therefore, this assessment does not use a traditional travel demand model calibrated to residential or commercial travel, but rather presents the changes in vehicle travel patterns associated with the project and the relationship of these vehicle volumes to the existing volumes on the surrounding roadway network to support the project's Transportation and Noise CEQA analyses.

The BBFMP is not intended to increase the capacity of the park. As shown in **Table 4**, the project proposes a decrease in day use parking capacity and a moderate increase in camping capacity. As a result, the project is anticipated to reduce the overall vehicle traffic to BBRSP. However, due to the increase in camping facilities and relocation of day use parking from the Main Day Use area to Saddle Mountain, some visitors may choose to approach the park using different routes, contributing to a potential increase in traffic on some routes while decreasing overall traffic levels. The following sections present the context for these changes in traffic.

Potential Increase in Average Daily Vehicle Trips

Table 5 presents the estimated change in daily vehicle trips to BBRSP by trip destination and purpose. The estimates are based on the peak and average visitation days. The peak visitation days occur on summer weekends, when all day use parking and camping capacity is 100 percent occupied. However, this is an infrequent and conservative traffic condition. On an average summer day, the park was approximately 64 percent full based on pre-fire visitation data from June-August 2018. This typical summer day visitation level has remained consistent in more recent years based on traffic count data collected near the south entrance to BBRSP in June 2024 (the average summer day had 63 percent of the traffic of the peak summer day). This analysis is therefore based on an average summer day, which still represents a conservative estimate of annual average daily trips to the BBRSP, as it is based on summer visitation numbers and summer is the busiest season for park visitation.

As a conservative assumption for this assessment, each vehicle trip is assumed to occur once in each direction per day and thus the change in average daily bidirectional trips is provided. In reality, many people who camp at BBRSP remain for multiple nights and so the total number of daily camping-related vehicle trips is likely lower, reducing the average daily bidirectional trips.

Table 5: Estimated Change in Peak and Average Daily Vehicle Trips

Destination and Purpose	Pre-Fire	Project	Change in Peak Daily Trips	Change in Average Summer Daily Trips	Change in Average Summer Daily Bidirectional Trips
Main Day Use – Day Use	950[1]	187[2]	-763	-485	-970
Main Day Use – Camping (Sky Meadow Road)[3]	593	655	62	40	80
Saddle Mountain/Little Basin – Day Use	0[4]	225[5]	225	143	286
Saddle Mountain/Little Basin – Camping[3]	201	219	18	11	22
Total	**1,744**	**1,268**	**-458**	**-291**	**-582**
Potential Rerouted Vehicle Trips (Change in Trips to Saddle Mountain/Little Basin)			**243**	**155**	**308**

Rounded to nearest whole vehicle trip.
[1] Big Basin General Plan and EIR, May 2013, Table 2-2. which reports 380 parking spaces. Estimate assumes 2.5 daily vehicles per space.
[2] Based on a proposed 75 spaces and an assumption of 2.5 daily vehicles per space.
[3] Assumes 8 persons per campsite or cabin, 16 persons per friends and family campsite (project only), and 40-50 visitors per group campsite depending on specific facility. Assumes 2.6 persons per vehicle for campsites and cabins and 5 persons per vehicle for group campsites.
[4] Big Basin General Plan and EIR, May 2013 does not mention any pre-fire day use parking at Saddle Mountain.
[5] Based on a proposed 150 spaces and an assumption of 1.5 vehicles per space since Saddle Mountain parking is intended for longer visits.
Source: Big Basin General Plan and EIR, May 2013; Fehr & Peers, 2024-2025

The Main Day Use area experiences a large decrease in vehicle trips because the reduction in day use parking is greater than the small growth in camping capacity along Sky Meadow Road. Further, the routing of trips to the Main Day Use area will not change. Therefore, vehicle traffic traveling to and from the Main Day Use area will decrease on nearby roadways.

There is, however, an increase in trips to Saddle Mountain/Little Basin. This increase, estimated at 308 bidirectional trips on an average summer day, is the total number of vehicle trips which might contribute to an increase in vehicle traffic on nearby roadways in the vicinity of BBRSP.

This is a conservative approach that does not project a likely increase in trips on any specific roadway. The increase of 308 average daily bidirectional trips would likely be spread out among many roads which provide access to BBRSP; these different roads frequently have similar travel times from major population centers in the Bay Area which would encourage any increase in vehicle trips to be spread among them. Furthermore, many trips to Saddle Mountain/Little Basin would follow very similar routes as they would to the Main Day Use area, resulting in no traffic increase from those trips. Instead, this estimate is used as an upper bound for the purpose of CEQA analysis.

Comparison to Pre-Fire Baseline Vehicle Volumes

For comparison, this analysis relies on 2019 data from the Caltrans Traffic Census program to establish a pre-fire baseline volumes on major roads in the area.[3] The bidirectional Annual Average Daily Traffic (AADT) for key roads in the vicinity of BBRSP is provided in **Table 6**. This table also indicates which roads could potentially see an increase in traffic due to the increase in vehicle trips to Saddle Mountain and Little Basin. Since Saddle Mountain is located to the east of the Main Day Use area, the shortest route for trips may be different than the route those trips would have taken to the Main Day Use area, resulting in a possible increase in traffic on certain roads.

Table 6: Average Bidirectional Daily Vehicle Volume for Key Local Highways

Highway	Location	AADT[1]	May See an Increase in Traffic
SR 9	East of SR 236 (Waterman Gap)	2,600	No
SR 9	North of Bear Creek Road (Boulder Creek)	10,000	Yes
SR 17	North of SR 35	58,000	Yes
SR 35	North of SR 9	1,200	No
SR 35	East of Bear Creek Road	400	Yes
SR 236	North boundary of BBRSP	280	No
SR 236	South boundary of BBRSP	560	Yes
Bear Creek Road[2]	North of SR 35	580[2]	Yes

[1] Annual Average Daily Traffic (bidirectional)
[2] Bear Creek Road is not a Caltrans facility. However, the volume at its eastern end near SR 35 can be inferred from data for SR 35 by using the difference in volume between SR 35 east and west of its intersection with Bear Creek Road.
Source: Caltrans, 2019

The AADT from the Caltrans Traffic Census data reflects a lower average day than the summer average day presented in **Table 5**. Even so, the road with the lowest vehicle volume which could see an increase in traffic as a result of the BBFMP is SR 236 south of BBRSP, which has an AADT of 560, well above the previously identified upper bound of 308 bidirectional trips on an average summer day. Additionally, as previously noted, many of these trips would likely have taken SR 236 to access the Main Day Use area anyway, meaning the net increase would likely be much lower.

The BBFMP may also increase vehicle traffic to Scotts Valley, from which visitors can ride a shuttle into the park. However, since access to Scotts Valley is via SR 17, which had an AADT of 58,000 in 2019, any increase in traffic due to the BBFMP would be too small to represent a substantial increase in traffic or noise along SR 17. These trips would also use local roads like Scotts Valley Drive and Mount Hermon Road to access the Scotts Valley Transit Center itself. While historic volumes are not available for these roads, between SR 17 and the transit center both are four-lane arterial roads capable of accommodating well

[3] The Caltrans Traffic Census Program summarizes annually vehicle volume metrics for state highways. https://dot.ca.gov/programs/traffic-operations/census

over 10,000 bidirectional vehicles per day and similarly unlikely to be affected by an increase in traffic due to the BBFMP.

APPENDIX B:
Scoping Comments



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NATIVE AMERICAN HERITAGE COMMISSION

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June 30, 2025

Will Fourt
California Department of Parks and Recreation
PO Box 942896
Sacramento CA 94296-0001

Re: 2001112104 Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments Project, Santa Cruz and San Mateo Counties

Dear Mr. Fourt:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Mathew.Lin@NAHC.ca.gov.

Sincerely,

Mathew Lin

Mathew Lin
Cultural Resources Analyst

cc: State Clearinghouse

Monterey Bay Air Resources District
Serving Monterey, San Benito, and Santa Cruz Counties

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July 1, 2025

Will Fourt
California Department of Parks and Recreation
PO Box 942896
Sacramento, CA 94296-0001
Submitted via email: reimagining.bigbasin@parks.ca.gov

Re: Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Dear Mr. Fourt

Thank you for providing the Monterey Bay Air Resources District (MBARD) with the opportunity to comment on the Initial Study of the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments. MBARD has reviewed the initial study and has the following comments:

CEQA Guidelines
MBARD recommends the Big Basin Redwoods State Park utilize the MBARD CEQA Air Quality Guidelines as a resource for preparing the Supplemental Draft EIR.

Fugitive Dust Control
In addition to the Applicable Standard Project Requirements listed on Page 3-19, MBARD recommends adding, "Cover inactive soil storage piles" to the list. This will help further mitigate any fugitive dust impacts to visitors and employees within the project area.

Asbestos Notification
If any buildings are renovated or demolished as part of this project, Air District rules may apply. These include Rule 424, National Emissions Standards for Hazardous Air Pollutants and Rule 439, Building Removals. Rule 424 contains the investigation and reporting requirements for asbestos which includes surveys and advanced notification on structures being renovated or demolished. Notification to the Air District is required at least ten days prior to renovation or demolition activities. Rule 424 could also apply if old underground piping or other asbestos containing construction materials are encountered during trenching activities. District Rule 439 prohibits the release of any visible emissions from building removals. Rules 424 and 439 can be found online athttps://ww2.arb.ca.gov/current-air-district-rules. Please contact the MBARD Compliance Division, at (831) 647-9411 for more information regarding these rules.

Greenhouse Gas Emissions
MBARD supports the project incorporating electric vehicle infrastructure goals in the project plan. To achieve further emission reduction of criteria pollutants and greenhouse gases, MBARD suggests including publicly available dual port Level 2 & DC fast-charge charging stations throughout the project area.

Engine Permitting

If a generator, boiler, or other stationary source of air pollutants is needed to support the construction process or will be installed for use in the operation of the project, a permit may be required. Per Rule 201, any stationary piston-type internal combustion engine of greater than or equal to 50 brake horsepower (bhp) requires a permit. Please contact MBARD's Engineering Division if there are any questions regarding the permitting process.

Portable Equipment Registration Program

If project construction uses portable equipment registered with CARB in the Portable Equipment Registration Program (PERP), MBARD must be notified within two working days of commencing operations when the registered unit will be at the location for more than five days. Portable equipment not registered with CARB may be subject to MBARD permit requirements.

MBARD appreciates the opportunity to comment on the Initial Study of the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments. Please let me know if you have any questions. I may be reached at (831) 718-8030 or eballaron@mbard.org.

Regards,



Edward Ballaron
Air Quality Planner I

cc: Richard A. Stedman, Air Pollution Control Officer
David Frisbey, Planning and Air Monitoring Manager
Shawn Boyle, Planning and Air Monitoring Supervisor

Public Comments

Scoping Meeting, July 10, 2025

- Cynthia Denny, public lands subcommittee chair Santa Cruz group of the Sierra club
    - Got ranger led explanation of plan and saw restoration
    - Address the hydrology issues at little basin
- Lindsay Adrean- American Bird Conservancy
    - Marbled murrelet should be appropriately addressed in EIR
        - There has been more research done since 2013 EIR in the area
        - Lots of habitat lost in fire, making remaining habitat even more important
            - More fragmentation in habitat, nests more vulnerable to next predators
            - Nest predators increased densities in high visitation from humans and at campgrounds
- Steve Singer
    - Currently doing research on recovery of marbled murrelet nest trees in park
        - Before the fire, there were 107 nest trees
            - Now only 20% of those trees provide suitable nesting habitat
        - Resprouted branches don't get big enough to support marbled murrelet nest even 125 years later
        - Only a few suitable habitat areas in the park
            - Those areas need to be protected
        - EIR should incorporate the new research since 2013

July 17, 2025

Submitted via email to: Reimagining.BigBasin@parks.ca.gov

Will Fourt
California Department of Parks and Recreation
PO Box 942896
Sacramento, CA 94296-0001

Re: Notice of Preparation of a Supplemental Environmental Impact Report to the 2013 Big Basin Redwoods State Park General Plan Environmental Impact Report (State Clearinghouse No. 2001112104) for the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Dear Mr. Fourt,

These comments are submitted on behalf of the Center for Biological Diversity. The Center is a national, nonprofit conservation organization dedicated to the protection of endangered species and wild places with more than 1.8 million members and online activists. The Center has a long history of working to protect the marbled murrelet and its old-growth habitat in California and across the range, including our 2014 settlement agreement with State Parks prompting increased protections for marbled murrelets under the Big Basin Redwoods State Park General Plan.

We support the determination that the Supplement EIR should analyze impacts to biological resources—particularly the endangered marbled murrelet and address ways to avoid, minimize and mitigate impacts to this iconic old-growth species.

Although the proposed plan is not fully fleshed out in the NOP and accompanying documents, we strongly support the Facility Management Plan's proposal to not re-build the Blooms Creek, Sempervirens, and Jay Camp campgrounds in the "Old Growth Area" and instead provide camping facilities in the "Overnight Area" outside of redwood habitat. This will have important conservation benefits in reducing harms to the endangered murrelet population that depends on the old-growth habitat in Big Basin SP and surrounding areas for nesting. However, we remain concerned about the impacts to marbled murrelets from maintaining the Sequoia Group Campground in the Old Growth Area, with the capacity for up to 100 campers. We urge State Parks to include re-locating the group camping capacity from the Sequoia Campground to the "Overnight Area" or another area outside of the "Old Growth Area" as part of the proposed project or, at minimum, an alternative that is fully analyzed in the Supplemental EIR.

The proposed project analyzed in the Supplemental EIR should also include:

(1) Measures to ensure the proposed project design reduces food subsidies to jays, ravens, and other wildlife by providing covered dishwashing areas at all campsites and picnic areas, ample wildlife-proof trash containers and dumpsters throughout the park, and regular effective trash collection throughout the park particularly when park visitation is high.
(2) Ongoing implementation and enforcement of robust "Crumb Clean" measures including public education and signage which help to prevent wildlife access to human food and garbage in the park.

The Supplemental EIR should address key issues related to marbled murrelet protections including, but not limited to:

(1) Identification and analysis of impacts to marbled murrelets from the picnic areas, trail use, campgrounds, and day use areas in the Old-Growth Area and throughout the park along with consideration of alternatives that could avoid, minimize and mitigate those impacts;
(2) The need for regular, robust monitoring of marbled murrelets and nest predators including Steller's jays and ravens to detect changes in the status of these populations and the efficacy of any adopted minimization and mitigation measures; and
(3) Thresholds for implementing stronger minimization and mitigation measures as part of an adaptive management framework as needed.

Thank you for your consideration of these comments.

Sincerely,



Shaye Wolf, Ph.D.
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Juliet Lamb
PSG 2025 Past Chair and Awards Committee Chair
Pastchair@pacificseabirds.org

July 18, 2025

California Department of Parks and Recreation

PO Box 942896

Sacramento, CA 94296-0001

Reimagining.BigBasin@parks.ca.gov

RE: Big Basin Redwoods State Park General Plan Supplemental EIR

Dear Mr. Fourt and California Department of Parks and Recreation,

The **Pacific Seabird Group** (PSG) is a society of professional seabird researchers and managers dedicated to the study and conservation of seabirds. Among its members are biologists who have expertise and research interests in Pacific seabirds, government officials who manage seabird refuges and populations, and individuals who are interested in marine conservation. The Marbled Murrelet Technical Committee within PSG was established in 1986. Members of this technical committee have reviewed the documents and attended the scoping meeting for the Big Basin Facilities Management Plan (hereafter, Plan) and would like to provide comments for your consideration during the development of the draft supplemental EIR. Specifically, our comments focus on implications for conservation of the Marbled Murrelet (*Brachyramphus marmoratus*).

Firstly, we applaud the California Department of Park and Recreation's (State Park) reenvisioning plan to relocate most facilities out of the remaining old-growth forest portion Big Basin Redwoods State Park (Park). This alone may provide much needed conservation benefits to the Marbled Murrelet. However, there are facets of the proposed Plan that require careful consideration and analysis to best assure that protection of the remaining Marbled Murrelet population and their habitat in maximized to the fullest extent possible.

As you are aware, the Marbled Murrelet is a federally listed threatened species and state listed endangered species in California, and the population of the Santa Cruz mountain region is genetically distinct from populations found to the north. Big Basin Redwoods State Park is part of the core of the Santa Cruz Mountains population. In August 2020, the CZU Lightning Complex fire (CZU fire) in Big Basin Redwoods State Park caused major damage to Marbled Murrelet nesting habitat. This species requires wide, horizontal branches for nesting, with suitable lateral and overhead vegetation to provide camouflage and protection from nest predators (Baker et al. 2006, Hamer and Nelson 1995). These are key features of the late-successional and old-growth forests where murrelets exclusively nest in this part of the species' range. Large contiguous stands of this habitat type reduce the ability of predators to access nests and minimize microclimate variation of elements such as temperature and humidity. Many large branch "platforms" were destroyed and cover vegetation around remaining branch stubs was also eliminated by the fire. Field observations by long-time Big Basin Marbled Murrelet researcher Steve Singer, along with examinations of aerial imagery, reveal that only four small refugia of unburned old-growth trees remain, likely totaling less than 100 acres (see attached map, S. Singer, personal communication, July 2025). The remaining habitat now has heightened importance for the continued ability of murrelets to nest in Big Basin, further jeopardizing the persistence of the population in this region.

The following points should be included or analyzed in the draft supplemental EIR:

1. The current Plan does not identify the post-fire condition of the Big Basin forest, making it difficult to assess the potential impacts of the proposed development on Marbled Murrelets or to plan appropriate future forest management practices. The remaining late-successional and old-growth habitat should be quantified to precisely identify unburned refugia areas that are still potentially suitable for murrelet nesting. Additionally, burned areas with potential to develop into nesting habitat in the coming decades should be identified. A preliminary assessment of remaining tree stands with potential murrelet habitat has been provided by S. Singer and is attached for your information. However, a more thorough assessment is needed. Also, if there are groups of trees with broken-off tops or with large bare branches or dead stubs coincident with epicormic sprouting, those areas should be mapped out and protected since they have the potential to develop into future murrelet nesting platforms (Baker et al, 2006). This information should then be used to better inform campground and day-use area siting, as well as the locations for staging building materials and timing of construction activities, and to analyze potential impacts of these plans on Marbled Murrelets.

2. Buffer zones of a minimum of 100 meters should be designated around each unburned refugia. As outlined in the Pacific Seabird Group's *Terrestrial Habitat Management Recommendations for Marbled Murrelets*, published in 2024 (attached), buffers are areas of no-cut and no development around existing habitat. These buffer zones aid in minimizing the effects of forest edges on breeding murrelets by improving habitat conditions, decreasing disturbance from human activities, and reducing attraction of predators to nests.

3. Since re-building the park's infrastructure will take 10 years or longer, construction activities occurring within or near unburned refugia or the associated buffer zones should be avoided during the Marbled Murrelet breeding season (24 March through 15 September), or if it cannot be avoided, then it should be timed to occur as late as possible during the breeding season (preferably, after 1 August), and limited to the times of day when murrelet activity is less (i.e., the time period of two hours after sunrise to two hours before sunset). Staging of construction materials, vehicles, or workers should not occur within the unburned refugia or buffer zones.

4. Methods to reduce impacts of nest predators such as Steller's Jays (*Cyanocitta stelleri*) and Common Ravens (*Corvus corax*) on Marbled Murrelet nesting success should be implemented. Studies have shown that intensive management of human foods in and near Marbled Murrelet nesting areas can help manage populations of Steller's Jays (Goldenberg et al. 2016, Brunk et al. 2021) and potentially other scavenging predators. The Park's pre-fire Crumb Clean program, which included outreach and education, infrastructure development (e.g., dish-washing stations, predator-proof trash cans and dumpsters), and enforcement should be carried forward and even extended in future Park development plans to mitigate impacts of Park visitor use.

5. Long-term monitoring of habitat conditions, murrelet presence, and effectiveness of Crumb Clean activities should be implemented. Monitoring will inform the need for adaptive management over time.

6. Refer to the Marbled Murrelet Landscape Management Plan for Zone 6 (Halbert and Singer 2017), and The Pacific Seabird Group's *Terrestrial Habitat Management Recommendations for Marbled Murrelets* for more detailed information on the recommendations above and additional forest management techniques for managing existing Marbled Murrelet habitat and developing new habitat.

Thank you for your consideration of our comments. If you have any questions about our comments or seek additional information about Marbled Murrelets, please contact the chairs of the Marbled Murrelet Technical Committee at the email addresses provided.

Bill McIver **bill_mciver@fws.gov**

Lindsay Adrean **ladrean@abcbirds.org**

Sincerely,

2025 Executive Committee

Pacific Seabird Group

Literature Cited

Baker, L.M., M.Z. Peery, E.E. Burkett, S.W. Singer, D.L. Suddjian, and S.R. Beissinger. 2006. Nesting Habitat Characteristics of the Marbled Murrelet in Central California Redwood Forests. Journal of Wildlife Management 70:939-946

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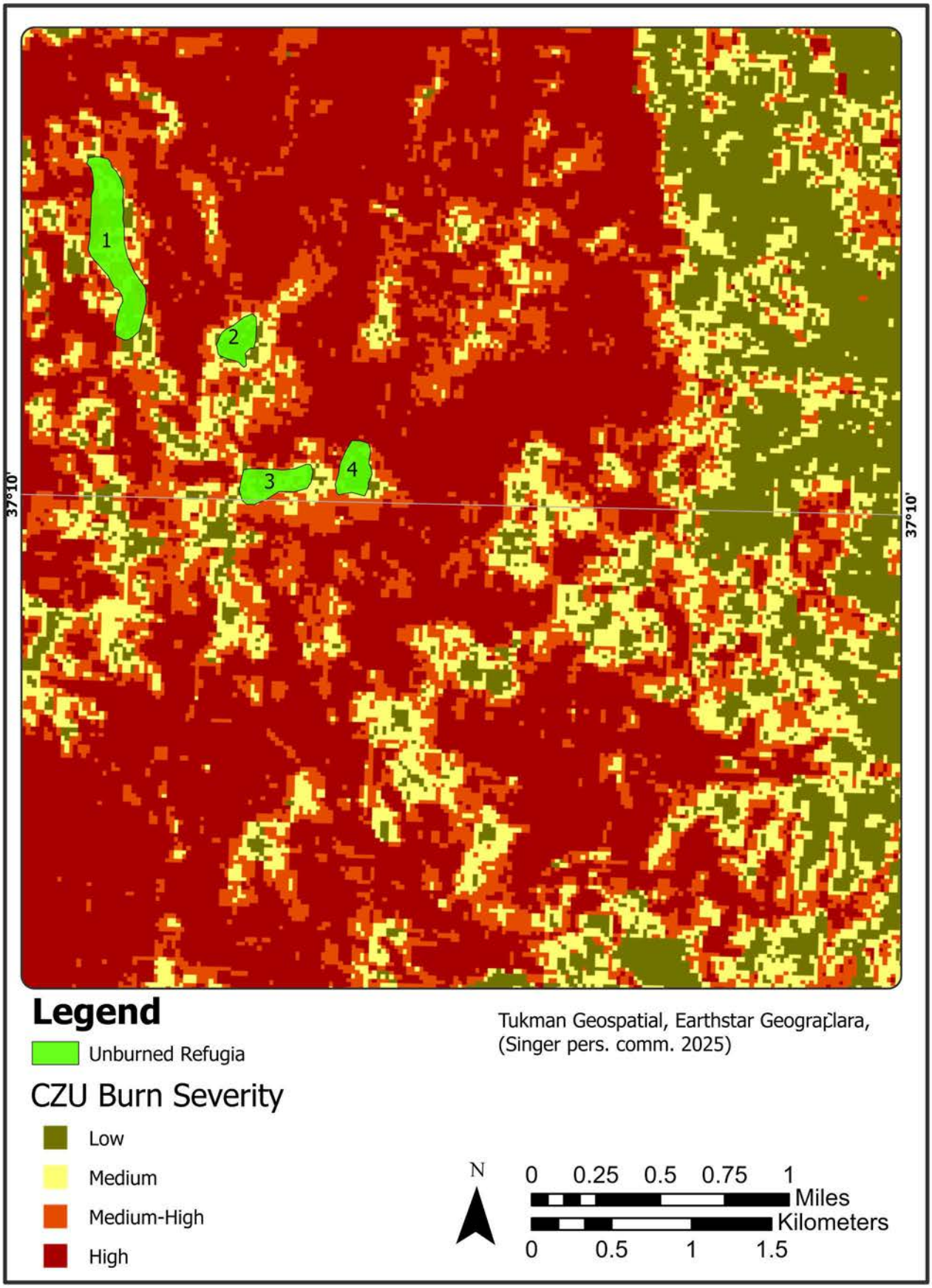
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Halbert, P. and S.W. Singer 2017. Marbled Murrelet Landscape Management Plan for Zone 6. Report prepared for the California State Parks, Santa Cruz District, and accessible online at http://www.parks.ca.gov/MAMU .

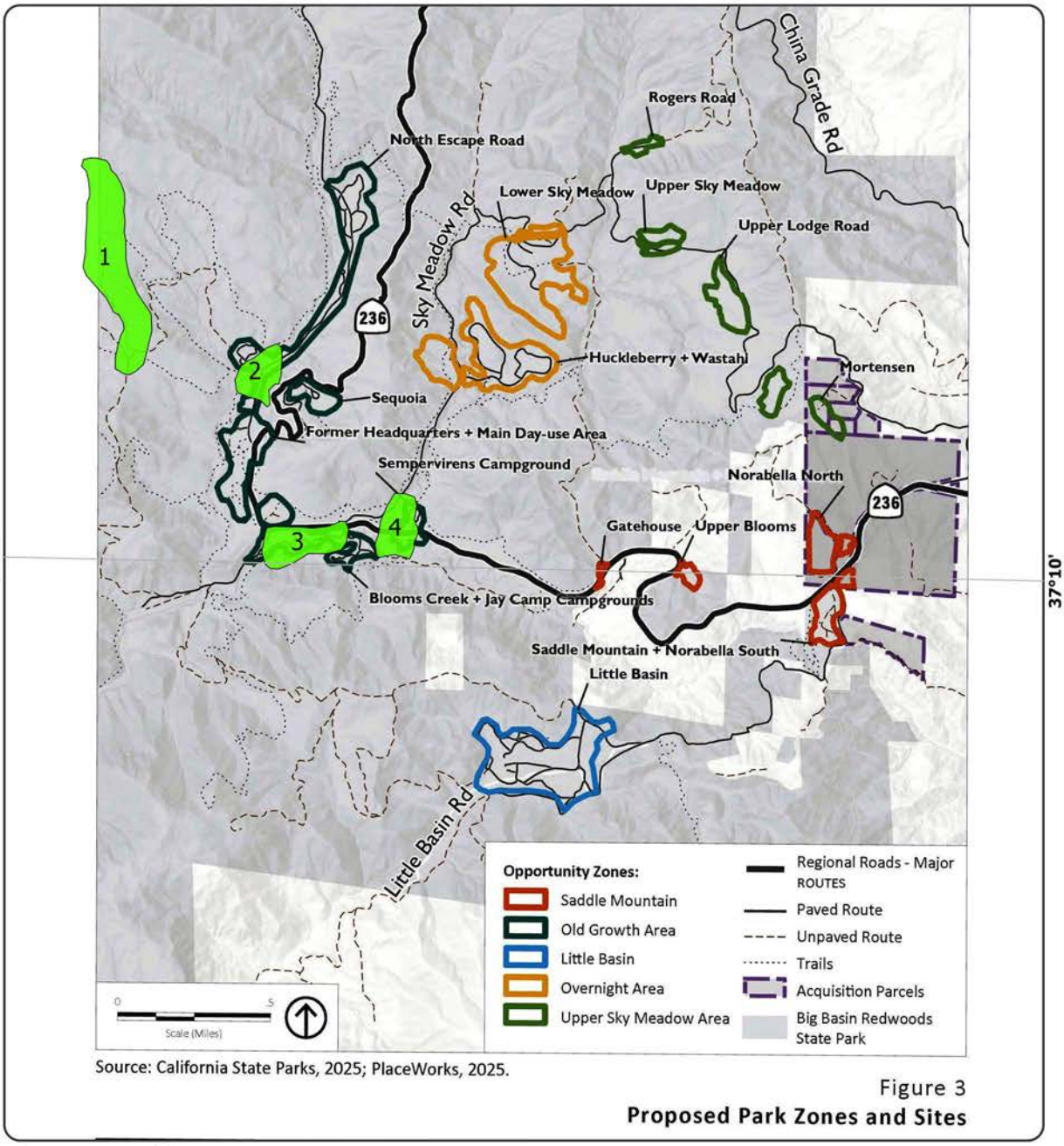
Hamer, T.E., and S.K. and Nelson. 1995. Characteristics of Marbled Murrelet nest trees and nesting stands. Pp. 69-82 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and J.F. Piatt, tech eds. Ecology and conservation of the Marbled Murrelet. USDA Forest Service General Technical Report PSW-GTR-152, Albany, CA.

Pacific Seabird Group. 2024. Terrestrial habitat management recommendations for Marbled Murrelets. Pacific Seabird Group Technical Publication Number 7. 38p. Available at https://pacificseabirdgroup.org/psg-publications/technical-publications/

Location of Refugia and Burn Severity of the 2020 CZU Fire *July 2025*



Location of Refugia Relative to Proposed Park Zone and Sites *July 2025*



Source: California State Parks, 2025; PlaceWorks, 2025.

Figure 3
Proposed Park Zones and Sites

Legend

Unburned Refugia

County of Santa Clara, M Singer
(Singer pers. comm. 202re 3
Figure 3 (Parkworks 202!

N

0 0.25 0.5 0.75 1 Miles

0 0.5 1 1.5 Kilometers

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

July 18, 2025

Will Fourt
California Department of Parks and Recreation
Post Office Box 942896
Sacramento, CA 94296-0001
Will.Fourt@parks.ca.gov

Subject: Reimagining Big Basin Redwoods State Park Facilities Managment Plan and General Plan Amendments, Notice of Preparation of a Supplemental Environmental Impact Report, SCH No. 2001112104, City of Boulder Creek, Santa Cruz County

Dear Will Fourt:

The California Department of Fish and Wildlife (CDFW) has reviewed the California Department of Parks and Recreation Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect fish and wildlife resources of the State. Please be advised, by law, CDFW may be required to carry out or approve aspects of the Project through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW is providing the California Department of Parks and Recreation, as the Lead Agency, with specific detail about the scope and content of the environmental information related to CDFW's area of statutory responsibility that must be included in the EIR (Cal. Code Regs., tit. 14, § 15082, subd. (b)).

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.). For purposes of CEQA, CDFW

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority over the Project pursuant to the Fish and Game Code. For example, the Project may be subject to CDFW's Lake and Streambed Alteration regulatory authority, if the Project impacts the bed, channel or bank of any river, stream or lake within the State (Fish & G. Code, § 1600 et seq.). Likewise, to the extent the Project may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

REGULATORY REQUIREMENTS

California Endangered Species Act

A CESA Incidental Take Permit (ITP) must be obtained from CDFW if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Under CESA, "take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish & G. Code, § 86.) CDFW's issuance of an ITP is subject to CEQA and to facilitate permit issuance, any project modifications and mitigation measures must be incorporated into the CEQA document analysis, discussion, and mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064 & 15065.) In addition, pursuant to CEQA, the lead agency cannot approve a project unless all impacts to the environment are avoided or mitigated to less-than-significant levels, or the Lead Agency makes and supports findings of overriding consideration for impacts that remain significant despite the implementation of all feasible mitigation. Findings of consideration under CEQA, however, do not eliminate the Project proponent's obligation to comply with the Fish and Game Code.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting river, lakes or streams and associated riparian

habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, drainage ditches, washes, watercourses with a subsurface flow, and floodplains is generally subject to notification requirements. In addition, infrastructure installed beneath such aquatic features, such as through hydraulic directional drilling, is also generally subject to notification requirements. Therefore, any impact to the mainstems, tributaries, or floodplains or associated riparian habitat caused by the proposed Project will likely require an LSA Notification. CDFW may not execute a final LSA Agreement until it has considered the final EIR and complied with its responsibilities as a responsible agency under CEQA.

Migratory Birds and Raptors

CDFW has authority over actions that may result in the disturbance or destruction of active bird nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nests or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

PROJECT DESCRIPTION AND LOCATION SUMMARY

Proponent: California Department of Parks and Recreation

Objective: The proposed Project includes amendments to the Big Basin Redwoods State Park General Plan and the adoption of the Reimagining Big Basin Redwoods State Park Facilities Management Plan. The proposed General Plan amendments include text changes to provide clarity and consistency between the 2013 General Plan and the Facilities Management Plan. The General Plan amendments would also expand the park boundary to include new parcels. The proposed Facilities Management Plan guides the stewardship, management, and use of existing and future facilities, consistent with the 2013 General Plan and other relevant planning documents. Additionally, the proposed Project would guide the rebuilding of facilities lost in the 2020 CZU Lightning Complex fire and the construction of new facilities and infrastructure. This includes 19 identified sites in five proposed zones, including visitor-serving facilities; overnight facilities; tribal facilities; transportation-related facilities; utilities infrastructure; administrative facilities; and staff residences. The Project also includes road and circulation improvements, the introduction of a shuttle program, utility upgrades and replacement, habitat restoration, and an improved emergency response and evacuation plan.

Location: Big Basin Redwoods State Park is in the western, coastal portion of the Santa Cruz Mountains between State Route (SR) 1 and SR-9, which both run north to south. The majority of the park is in Santa Cruz County and a small northern portion is in San Mateo County. The park is surrounded by other parks and open space with communities along SR-9. Big Basin Redwoods State Park encompasses approximately 18,200 acres; however, the proposed Project focuses specifically on areas along SR-236 and Sky Meadow Road, encompassing approximately 5,500 acres in the eastern part of the park.

Timeframe: Activities will be implemented over five to fifteen years, or longer dependent on funding.

The CEQA Guidelines (§§15124 & 15378) require that the draft EIR incorporate a full Project description, including reasonably foreseeable future phases of the Project, and that contains sufficient information to evaluate and review the Project's environmental impact. Please include a complete description of the following Project components in the Project description including, but not limited to the below information.

- Land use changes resulting from, for example, rezoning certain areas.
- Footprints of permanent Project features and temporarily impacted areas, such as staging areas and access routes.
- Area and plans for any proposed buildings/structures, ground disturbing activities, fencing, paving, stationary machinery, landscaping, and stormwater systems.
- Operational features of the Project, including level of anticipated human presence (describe seasonal or daily peaks in activity, if relevant), artificial lighting/light reflection, noise, traffic generation, and other features.
- Construction schedule, activities, equipment, and crew sizes.

ENVIRONMENTAL SETTING

Sufficient information regarding the environmental setting is necessary to understand any potentially significant impacts on the environment of the proposed Project and any alternatives identified in the draft EIR (CEQA Guidelines, §§15125 & 15360). CDFW recommends the draft EIR provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, and endangered species (CEQA Guidelines, §15380). The draft EIR should describe aquatic habitats, such as wetlands or waters of the U.S. or State, and any sensitive natural communities or riparian habitat occurring on or adjacent to the Project site (for sensitive natural communities

see:https://wildlife.ca.gov/Data/VegCAMP/NaturalCommunities#sensitive%20natural%20communities), and any stream or wetland set back distances the City or County may require. Fully protected, threatened or endangered, candidate, and other special-status species or sensitive natural communities that are known to occur, or have the potential to occur in or near the Project site, include, but are not limited to:

Common Name	**Scientific Name**	**Status**
California red-legged frog	*Rana draytonii*	FT, SSC
California giant salamander	*Dicamptodon ensatus*	SSC
Santa Cruz black salamander	*Aneides niger*	SSC
Southwestern pond turtle	*Emys marmorata pallida*	SSC
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	SSC
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC
Marbled murrelet	*Brachyramphus marmoratus*	FT, SE
Steelhead - central California coast DPS	*Oncorhynchus mykiss irideus pop. 8*	FT, SSC
Coho salmon- Central California coast ESU	*Oncorhynchus kisutch*	FE, SE
Pacific lamprey	*Entosphenus tridentatus*	SSC
Anderson's manzanita	*Arctostaphylos andersonii*	CRPR 1B.2
Ben Lomond spineflower	*Chorizanthe pungens var. hartwegiana*	FE, CRPR 1B.1
Santa Cruz Mountains pussypaws	*Calyptridium parryi var. hesseae*	CRPR 1B.1

Santa Cruz cypress	*Hesperocyparis abramsiana var. abramsiana*	FT, SE, CRPR 1B.2
Amphibians and other aquatic wildlife		
Roosting bats		
Nesting Birds		
Riparian vegetation		

Notes:

FT = listed as threatened under the federal Endangered Species Act; FE = listed as endangered under the federal Endangered Species Act; ST = listed as threatened under CESA; SE = listed as endangered under CESA; SSC = state species of special concern; SP = state listed as fully protected; CRPR = California Rare Plant Rank.

Habitat descriptions and species profiles included in the draft EIR should include robust information from multiple sources: aerial imagery; historical and recent survey data; field reconnaissance; scientific literature and reports; U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System; California Aquatic Resources Inventory; Santa Cruz County Regional Conservation Investment Strategy; and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB). Only with sufficient data and information can the California Department of Parks and Recreation adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocol.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (http://www.cnps.org/cnps/rareplants/inventory/), should also be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and include the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: https://www.wildlife.ca.gov/Conservation/Plants.

IMPACT ANALYSIS AND MITIGATION MEASURES

The CEQA Guidelines (§15126.2) necessitate the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts such as:

- Land use changes that would reduce open space or agricultural land uses and increase residential or other land use involving increased development;
- Changes in hydrological conditions that could alter the timing and magnitude of streamflows both during construction and operation of the Project;
- Potential for impacts to special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alteration of soils and hydrology, and removal of habitat structural features (e.g., snags, roosts, overhanging banks);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence;
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features;
- Water quality impacts resulting from construction and operation of the Project;
- Impacts both from construction and operation of the Project;
- Impacts to the bed, channel, and bank, in the reservoirs and creeks downstream of the Project; and
- Impacts to bed, channel, bank, and riparian habitat, and the direct and indirect effects to fish, wildlife, and their habitat.

The CEQA document also should identify existing and reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to each impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact (e.g., reduction of available habitat for a listed species) should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

The CEQA Guidelines direct the California Department of Parks and Recreation, as the Lead Agency, to consider and describe in the draft EIR all feasible mitigation measures to avoid and/or mitigate potentially significant impacts of the Project on the environment based on comprehensive analysis of the potential direct, indirect, and cumulative impacts of the Project. (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370.) This should include a discussion of take avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with the USFWS, National Marine Fisheries Service and CDFW. These measures can then be incorporated as enforceable Project conditions to reduce potential impacts to biological resources to less-than-significant levels.

Fully protected species may not be taken or possessed at any time except in limited circumstances (Fish & G. Code, §§ 3511, 4700, 5050, & 5515). Therefore, the draft EIR should include measures to completely avoid take of fully protected species.

COMMENTS AND RECOMMENDATIONS

Based on the information provided in the NOP CDFW offers the comments and recommendations below to assist the California Department of Parks and Recreation in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and/or indirect impacts on fish and wildlife (biological) resources. **These comments and recommendations are not an exhaustive list and CDFW may provide additional recommendations as more Project specific information is disclosed. The draft EIR must include a full Project Description, Environmental Setting, and Impact Analysis and Mitigation Measures as outlined above.** Editorial comments or other suggestions may also be included to improve the document.

COMMENT 1: Marbled Murrelet Avoidance

Issue: The Project has potential to impact breeding marbled murrelets (*Brachyramphus marmoratus*, MAMU) from auditory and visual disturbance generated during Project activities in proximity to suitable MAMU nesting habitat. While the 2013 Big Basin Redwoods State Park General Plan EIR provides a set of biological measures that would continue to apply to the Project, the measures may not provide clear avoidance of impacts or appropriate mitigation for MAMU.

Evidence impact would be significant: MAMU is a small pacific seabird listed as state endangered pursuant to Fish and Game Code 2050 *et seq*., and federally threatened pursuant to Title 16, United States Code 1531 *et seq*. MAMU uses coastal redwood forests from Santa Cruz to Del Norte counties during the breeding season (March 24 to September 15). MAMU have been documented nesting in mature, old-growth forests as well as younger forest stands with late-seral elements such as large trees with moss-covered limbs greater than six inches wide or limb defects (McShane et al. 2004).

Mature conifer stands often have a complex tree crown structure with gaps in the canopy that allow access by adult murrelets to and from nest platforms during parental incubation exchanges and chick feeding (Ralph et al. 1995b). Given the extent of MAMU habitat loss due to the CZU Fire in 2020, protection and preservation of remaining MAMU breeding habitat in the Santa Cruz Mountains, including within the Project area, is paramount.

Recommendation: CDFW recommends the following mitigation measures to be included in the Supplemental Draft EIR.

Mitigation Measure 1 – Marbled Murrelet Habitat Assessment: In areas where marbled murrelet nesting habitat or designated critical habitat may be present, a qualified biologist shall conduct a habitat assessment prior to the start of Project activities. The habitat assessment shall include a visual inspection of suitable nesting habitat features within 0.25 miles of the Project area and access road(s) that occur within forested unburned, low, or moderate burn severity areas, as these burn severities may result in habitat still considered suitable. Suitable habitat characteristics shall be defined as mature and old-growth coniferous forest stands, and younger coniferous forest stands having platforms with a relatively flat surface at least 10 centimeters in diameter and 10 meters high in the live crown of a coniferous tree. Platforms can be created by a wide bare branch, moss or lichen covering a branch, mistletoe, witches' brooms, and other deformities, or structures such as squirrel nests (Pacific Seabird Group 2024). Habitat features found during the assessment shall be identified for avoidance and retention as a sensitive area and shall be communicated to CDFW. If no suitable marbled murrelet nesting habitat is identified within 0.25 miles of the Project area and access road, then no specific marbled murrelet mitigation measures are required.

Mitigation Measure 2 – Marbled Murrelet Surveys: If any suitable marbled murrelet nesting habitat is identified during the habitat assessment, the habitat shall be assumed occupied by nesting MAMU unless a qualified biologist conducts protocol level audio-visual murrelet surveys following the Pacific Seabird Group A Revised Protocol for Surveying Marbled Murrelets in Forests (Pacific Seabird Group 2024), available online at http://www.pacificseabirdgroup.org, which may entail two years of surveys. Protocol level surveys shall be utilized to determine the presence of nesting murrelets within 0.25 miles of the Project area and access road(s) and whether Project activities will have an impact on marbled murrelets.

Mitigation Measure3 – Marbled Murrelet Nesting Habitat Avoidance: If conducting two-year protocol level surveys is not feasible, or if nesting marbled murrelets are detected during surveys, a qualified biologist shall develop appropriate avoidance disturbance buffers around suitable habitat identified within 0.25 miles of the Project area and access road(s) to be implemented during Project activities that occur during

the murrelet breeding season (March 24 to September 15). This shall minimally include implementation of the following measures:

Restrictions on Tree Removal:

1. Tree removal and trimming required by the Project shall occur outside of the MAMU breeding season (March 24 to September 15) to minimize disturbance to MAMU nesting.

2. Trees identified for removal under the Project shall first be assessed for suitability as MAMU nesting or screen trees by a qualified biologist. Typical credentials for a qualified biologist shall include a minimum of five years of academic training and professional experience in biological sciences and related resource management activities, and successful completion of the Inland Marbled Murrelet Observer Training (Certified Observer) and a minimum of two years of experience conducting surveys for MAMU.

3. Trees determined to have suitable elements for nesting by MAMU and screen trees will be retained under the Project, if feasible. If a suitable nest tree(s) or screen trees cannot be retained as part of the Project, the qualified biologist shall coordinate with the USFWS and CDFW regarding removal of a potential MAMU nest/screen tree from occupied habitat and shall identify additional measures to address this loss. This may include follow-up monitoring of nest activity in the area to provide additional data on MAMU use of the Project Area, or other measures considered appropriate by the USFWS and CDFW.

Project Construction Activities:

4. In consultation with USFWS and CDFW, the qualified biologist shall develop a Nest Avoidance Program (NAP) by evaluating the potential sound levels of proposed activities occurring at each stage of construction to calculate appropriate no-disturbance buffers to be employed. Appropriate audio and visual disturbance buffers shall follow USFWS' Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California, dated October 1, 2020. Although the cover letter indicates that the guidance is valid only to the southern limit of the Russian River watershed, CDFW recommends use of the guidance document throughout the entire MAMU range including San Mateo and Santa Cruz counties. A project area map, with seasonal no-disturbance buffers placed around occupied habitat, shall be distributed to work crews. To alert work crews to their presence,

MAMU no-disturbance buffers, as determined by the NAP, shall be flagged within the project area. If the determined audio and visual disturbance buffers around the identified suitable nesting habitat do not incorporate the Project area and access road(s) footprint, then no specific marbled murrelet mitigation measures are required.

5. No construction shall be allowed in the NAP-identified no-disturbance areas during the MAMU breeding season (March 24 to September 15). If Project construction activities must occur during the MAMU breeding season, the Project shall obtain a CESA ITP prior to construction.

6. The qualified biologist shall perform a worker training prior to the start of any construction to educate all workers on the sensitivity of the area, presence of MAMU, and importance of avoiding attracting predators as a result of construction activities. Ravens, crows and jays, which have large home ranges, are known predators of marbled murrelet eggs and nestlings (Marzluff and Neatherlin 2006). All garbage and food scraps shall be packed out and disposed of in animal-proof containers. Workers, when feasible, shall consume food inside their vehicles. These measures shall also apply for construction activities occurring during the marbled murrelet breeding season outside the seasonal disturbance buffer.

7. In sensitive areas identified in the NAP, vehicles shall be restricted to a speed limit of five miles per hour (mph) during the MAMU breeding season.

8. Access routes and the number and size of staging and work areas shall be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of staging areas and access shall be clearly marked prior to initiating construction or installation.

Mitigation Measure 2 – Prohibition of Marbled Murrelet Noise Deterrent: The Project shall not include any noise deterrents for MAMU intended to prevent MAMU use of a potential nesting location or area. Noise deterrents disrupt MAMU natural behavior during important stages of their life cycle, such as identifying nesting locations and feeding of young or fledglings, which could result in take.

COMMENT 2: Artificial Lighting

Issue: The Project has the potential to increase artificial lighting from the addition of buildings and other development. Artificial lighting often results in light pollution, which has the potential to significantly and adversely affect fish and wildlife.

Evidence impact would be significant: Night lighting can disrupt the circadian rhythms of wildlife species. Many species use photoperiod cues for communication such

as bird song (Miller, 2006), determining when to begin foraging (Stone et al., 2009), behavioral thermoregulation (Beiswenger, 1977), and migration (Longcore and Rich, 2004).

Recommendation: CDFW recommends eliminating all non-essential artificial lighting. If artificial lighting is necessary, CDFW recommends avoiding or limiting the use of artificial lights during the hours of dawn and dusk, when many wildlife species are most active. CDFW also recommends that outdoor lighting be shielded, cast downward, and does not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards at http://darksky.org/) and limited to warm light colors with an output temperature of 2700 kelvin or less.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to prepare subsequent CEQA documents or to make supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (d) & (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the CNDDB. The CNDDB field survey form can be filled out and submitted online here: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found here: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

CDFW anticipates that the proposed Project, will have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP in order to assist the California Department of Parks and Recreation in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Alexis Harrison, Environmental Scientist, at (707) 815-2779 or Alexis.Harrison@Wildlife.ca.gov; or Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

Docusign Envelope ID: 07332923-B2B9-4CC7-9CBD-35F4DEA49CE8

Sincerely,

DocuSigned by:
Erin Chappell
B77E9A6211EF486...

Erin Chappell
Regional Manager
Bay Delta Region

ec: Office of Land Use and Climate Innovation (SCH 2001112104)

California Department of Parks and Recreation

Reimagining.BigBasin@parks.ca.gov

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State Water Resources Control Board

July 22, 2025

Will Fourt
California Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA, 94296-0001

COMMENT LETTER ON THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION (DPR), NOTICE OF PREPARATION / INITIAL STUDY FOR A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (NOP/IS) FOR THE REIMAGINING BIG BASIN REDWOODS STATE PARK FACILITIES MANAGEMENT PLAN AND GENERAL PLAN AMENDMENTS (PROJECT); STATE CLEARINGHOUSE # 2001112104

Dear Mr. Fourt:

Thank you for the opportunity to review the NOP/IS for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (State Water Board, DDW) is responsible for regulating public water systems and issuing domestic water supply permits pursuant to the Safe Drinking Water Act. This Project is within the jurisdiction of the State Water Board, DDW Monterey District. The Monterey District issues permits and permit amendments according to the Title 22 California Code of Regulations (Cal. Code Regs) chapter 16.

Public water systems need a permit or permit amendment for modification of the water supply including new sources, new reservoirs with 100,000-gallon capacity or greater, service area expansions of twenty percent or more, and treatment design capacity or process changes as per Cal. Code Regs. § 64556.

Following the 2020 CZU Lightning Complex fire that damaged the Big Basin State Park and water system facilities, DDW inactivated the California State Parks (CSP) Big Basin water system on November 20, 2020. CSP Big Basin will need to apply for a new public water system permit.

The permit application must be prepared by a civil engineer licensed in California with experience in waters supply engineering (Cal. Code of Regs. § 64552). The surface water treatment plant must be designed in accordance with California Code of Regs. § 64658 by a licensed civil engineer with at least three years of experience in water treatment design, construction, operation, and watershed evaluations (Cal. Code of Regs. §64651.66).

Please contact the DDW Monterey District at dwpdist05@waterboards.ca.gov to request a list of documents and information required for a permit application package.

The State Water Board, DDW, as a responsible agency under the California Environmental Quality Act, has the following comments on DPR's Environmental Document:

- The Department proposes replacement and operation of domestic water infrastructure which is under the Monterey District's permitting jurisdiction. The Department also proposes construction of possible new infrastructure that may be under the Monterey District's permitting jurisdiction. In the Environmental Document, under Section 2.7 Required Permits and Approvals, please add "State Water Resources Control Board, Division of Drinking Water domestic water supply permit and/or permit amendment".
- Under IV Biological Resources (c), please discuss the effect the Project will have on state and federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

Once the Environmental Document is certified, please forward the following items in support of water system's permit application or amendment to the State Water Board, DDW Monterey District Office at DWPDIST05@waterboards.ca.gov:

- The Environmental Document and Mitigation Monitoring and Reporting Plan (MMRP);
- The Resolution or Board Minutes certifying the Environmental Document, approving the MMRP, and approving the Project; and
- The Notice of Determination filed at the County Clerk's Office and the State Clearinghouse.

Please contact Lori Schmitz of the State Water Board at (916) 449-5285 or Lori.Schmitz@waterboards.ca.gov, for questions regarding this comment letter.

Sincerely,

Lori Schmitz
Environmental Scientist
Division of Financial Assistance
Special Project Review Unit
1001 I Street, 16th floor
Sacramento, CA 95814

Cc:

State Clearinghouse

Jonathan Weininger
District Engineer
Monterey District

Amah Mutsun Land Trust | *Cultural Resources Program*
2460 17th Avenue #1019 Santa Cruz, CA 95062
thpo@amahmutsun.org | (831) 226-1724

July 29, 2025

Mike Grone
Senior State Archaeologist and Tribal Liaison
California Department of Parks and Recreation
303 Big Trees Park Road
Felton, CA 95018-9660
Email: michael.grone@parks.ca.gov

Re: 2025 Initial Study: Reimagining Big Basin Redwoods State Park Facilities Management Plan and General Plan Amendments

Dear Mr. Grone,

Please find the following preliminary comments submitted by the Amah Mutsun Land Trust (AMLT) on behalf of the Amah Mutsun Tribal Band (AMTB), regarding the 2025 "Reimagining Big Basin" Initial Study. Thank you for your letter dated June 30, 2025 that brought this tribal consultation opportunity to the attention of the Amah Mutsun Tribal Band.

1. AMLT applauds the critically important efforts of the Santa Cruz District to conduct systematic cultural resources surveys at Big Basin and other parklands in the district to locate previously unrecorded sites and features, and to re-survey previously recorded sites. AMLT/AMTB requests copies of the survey reports and new or updated primary records upon the completion of these studies.

2. As you know, [redacted] and within the identified "Overnight Area" on the Initial Study Focus Area Map. As overnight facilities are redesigned and reconstructed in the vicinity, we strongly recommend avoidance of this recorded site to the greatest extent feasible, including a generous protective buffer. In addition, we recommend developing and implementing a cultural site stewardship plan in this area through consultation with culturally affiliated tribes of the region, including the Amah Mutsun Tribal Band. Such a plan should include native plant restoration and measures to address prior impacts of facilities development, to aid in restoring integrity to the site.

3. As State Parks is well aware, Little Basin is a location of multiple recorded pre-colonial Indigenous archaeological sites. The Amah Mutsun Tribal Band recognizes Little Basin as a sensitive and important tribal cultural heritage area and recommends further archaeological, archaeobotanical and ethnographic research in collaboration with tribes to better define Little Basin as a distinct Tribal Cultural Landscape, and subsequently consider its nomination for listing on the California Register of Historical Resources.

4. Regrettably, past facilities development activities at Little Basin have resulted in severe impacts on the tribal cultural resources and archaeological sites in the area, as well as to the ecology of the basin and its unique grassland complex, which forms the headwaters of Scott Creek. Over time, grading, excavation, development and road/parking lot installation and recreational management and type conversion of native habitats transformed and degraded the character and integrity of the landscape. Each of the recorded archaeological sites at Little Basin have been directly impacted by road building, trenching, and excavation of soils, and much of the property has been subject to large-scale grading and alteration of landforms resulting in untold damage to tribal cultural sites and features, prior to their having been formally identified. The scale of these past impacts overall constitutes a significant offense to the Indigenous peoples of the region and desecration of an important cultural and spiritual touchstone place.

   Some specific examples quoted from archaeological site primary records and notes/recommendations:

a. [redacted] however also states that much of the site has been paved: *"Site is situated on a remaining landform, with development and grading on all sides."* Note: AMLT recommends that these remaining landforms, IE portions of intact native soils in the vicinity of archaeological sites, be specifically protected to the utmost degree within Big Basin's management plan.

b. [redacted] *is situated on the margins of a meadow."* Note: From the standpoint of AMTB and AMLT, this entire historic meadow adjacent to the recorded site, as well as any oak groves or hazelnut groves in the vicinity, should be considered part of the cultural site and fully protected accordingly.

c. [redacted] *"The site is immediately adjacent to a paved service road on the west and a terraced field and play ground area on the east. A small informal path bisects the site from east to west."* Note: AMLT recommends that this field and playground be decommissioned and carefully restored to native vegetation and a more natural landform.

d. [redacted] Note: In context of the presence of intact [redacted] AMLT recommends considering [redacted] to be a very expansive site, extending far beyond the recorded site boundaries. Please ensure that the surrounding landscape is preserved and restored to the maximum extent possible.

e. [redacted] *"Portions of this site have been paved over; other portions have had limited development (cabin 17) and disturbances have occurred from routine maintenance projects....* [redacted]

[redacted] — Note: Future management of this area should make certain that it is never again used as a location for burn piles and that soils in the area are not disturbed for any unnecessary purpose. In addition, AMLT recommends the removal of paved surfaces and development-related foundations from the vicinity of this recorded site, followed by efforts to restore the integrity of the native soils and plant communities.

f. [redacted] *"Artifacts are currently located in main office at Little Basin. Artifacts have not been catalogued or curated…this site may possess data that will lead to a greater understanding of prehistory in the Santa Cruz Mountains (Green 2009a)"* — Note: AMTB requests to be notified of the current storage location of the artifacts identified in this site record, and whether they have been appropriately catalogued to date.

5. The Amah Mutsun Land Trust respectfully suggests that truly reimagining the management of the Little Basin area should begin with prioritizing the protection, remediation and restoration of the native habitats and culturally significant contributing elements of the area as an Indigenous cultural landscape. Bringing Indigenous ceremony back to the Little Basin area is an essential element in restoring its cultural and spiritual integrity.

   The scale of transformation brought by the CZU fires presents an amazing opportunity for landscape-level restoration at Little Basin to remedy and provide redress for so much damage that has been done in the past, and we recommend specifically decommissioning and/or re-routing roads and developed facilities footprints within the more sensitive areas of Little Basin to the greatest extent possible. Naturally, the process of bringing healing to the tribal cultural landscape at Little Basin must be planned and executed in partnership with tribes.

6. AMTB/AMLT also notes that the springs and historic wetland areas associated with the headwaters of Scott Creek should be considered to be Tribal Cultural Resources associated with the cultural sites in the area, and protected accordingly.

7. AMLT appreciates the concept of Little Basin in the Initial Study as a “mixed tribal-use area with a cultural center for collaboration with Indigenous groups for stewardship, interpretation, and cultural activities,” described in greater detail on page 2-18. However, our AMLT cultural resources program regards other concepts in the Initial Study of developing staff housing facilities and a concessionaire building at Little Basin with concern. We question the appropriateness of this intensity of development within such a culturally and ecologically sensitive landscape and urge State Parks to consider alternative locations for these facilities. Careful, judicious planning will be required in the development of facilities to maintain a minimal developed footprint within the Little Basin area, and the appropriate scale of such facilities (including tent or tent cabin camping areas) will need to be evaluated in light of site stewardship and restoration priorities.

   AMLT recommends that the majority of the Little Basin property, including the overall vicinity of the recorded archaeological sites and the large expanse of historic grasslands and wetlands on the valley floor, should be primarily considered as a site of Indigenous-led cultural and ecological restoration rather than being considered as an opportunity area for the construction or reconstruction of parks housing. We recommend that any facilities plans developed in the Little Basin area prioritize the guidance and requests of tribal nations and support tribal cultural resources conservation and restoration objectives.

Thank you for the opportunity to comment on this Initial Study, and we look forward to participating in ongoing tribal consultation regarding the Big Basin Facilities Management Plan and General Plan Amendments.

Respectfully submitted,

Tyler Suttle
Tribal Historic Preservation Coordinator
Amah Mutsun Land Trust

APPENDIX C:
Biological Resources
Standard Project Requirements



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California Department of Parks and Recreation
Resource Services

BIOLOGICAL RESOURCES STANDARD PROJECT REQUIREMENTS

Construction Standard Project Requirements

BIO-1: New facilities will preferably be located in prior disturbed areas or in areas of relatively low resource value to minimize disturbance to higher value habitat areas.

BIO-2: As part of planning for new facilities or expanding existing ones, site-specific surveys/mapping of sensitive biological resources (such as special-status species, sensitive natural communities, regulated waters, and active nests or roosts) will be performed by a DPR-approved biologist and the location and extent of these resources will be taken into consideration during the planning and design process. Sensitive biological resources will be avoided during planning, design, and construction to the minimum needed to meet project purpose and goals. Where disturbance is to occur within sensitive natural community types such as old growth redwood forest and riparian woodland, grading and other modifications will be designed to avoid dominant characteristics of the habitat, including mature trees and sensitive root zones. Wildlife-friendly fencing and other methods may be used to exclude public access into environmentally sensitive areas, as necessary. Worker environmental awareness training will be conducted for construction personnel before construction is initiated and appropriate construction restrictions and monitoring provided as necessary to ensure avoidance of sensitive biological resources.

BIO-3: In the event that impacts on a sensitive biological resource are unavoidable, disturbance will be limited to the minimum area necessary to achieve the project purpose. Measures will be identified and implemented to offset impacts in consultation with a DPR-approved biologist and the appropriate resource agencies (e.g., CDFW, USFWS, USACE, and the RWQCB) where warranted, depending on the listing or protection status of the resource, magnitude of the impact, and other factors.

BIO-4: Prior to the start of on-site construction activities, the project manager and DPR-approved biologist will determine the minimum area required to complete the work (project footprint) and define the boundaries of the work area on the project drawings and with flagging or fencing on the ground, as appropriate.

BIO-5: At the discretion of a DPR-approved biologist, project activities will be monitored to ensure that impacts to sensitive resources are minimized.

BIO-6: State-of-the-art science and ecological knowledge will be applied to the management of natural communities and associated habitat functions. Management strategies will take current science and results from ongoing management and

research into consideration. DPR will continue to work with the academic community in researching sensitive biological resources and applying knowledge gained to site-specific resource management.

BIO-7: All construction activities that could spread non-native, invasive plant and animal species to new locations will be subject to the latest best management practices particular to each species, where available. Prior to mobilization of equipment, necessary precautions will be taken to avoid introducing invasive species. These will include the following:

- Any equipment from off-site shall be free of mud and vegetation before transport to the site. (Example: Vehicle and equipment tires, tread, feet, undercarriage, wheel wells, steps and bucket/attachments to equipment that contacted dirt, etc.)
- Tools such as chainsaws, hand clippers, pruners, etc. shall be washed and free of mud and vegetation before entering the work location.
- Waders, puddle boots, and other footwear or equipment contacting a water source will be cleaned appropriately between uses to avoid introduction of aquatic invasives across watersheds.
- Fill or imported aggregate must be screened for organic materials and weeds.

BIO-8: New lighting will be limited to the minimum necessary for critical security and safety needs to avoid disrupting natural conditions and wildlife habitat. Where night-time lighting is determined to be necessary, it will be shielded, cast downward, and designed to not spill onto surrounding areas or upwards into the night sky. Permanent structures will be equipped with outdoor light shields that concentrate the illumination downward to reduce direct and reflected light pollution to avoid disrupting natural conditions and wildlife habitat. The direct source of the lighting (bulb, lens, filament, tube, etc) will not be visible off site and the lighting will be installed as low as possible on poles and/or structures to minimize light pollution of the night sky. The candle power of the illumination at ground level will not exceed what is required by any safety or security regulations of any government agency with regulatory oversight.

Plant-Related Standard Project Requirements

BIO-9: Protocol-level surveys for special-status plants and sensitive natural communities will be conducted by a DPR-approved botanist at locations of proposed new facilities or expansion of existing facilities where suitable habitat remains to confirm their presence or absence. The surveys will be conducted during the blooming season for all potentially occurring special-status plant species according to the most current methodology recommended by CDFW and USFWS. The results of the surveys will be documented in a written report, together with a map showing the survey limits and the location and extent of all occurrences of special-status plant species and sensitive natural communities encountered, which will be maintained in the DPR Geographic Information System database. If construction of proposed facilities is

delayed by more than five years at that location, additional focal surveys for special-status plants will be conducted to ensure that data are current and account for long-term and seasonal variation in population distribution.

BIO-10: No state or federally listed rare or endangered species will be cut, pruned, pulled back, removed or damaged in any way without prior coordination with the appropriate resource agencies (e.g., CDFW, USFWS).

BIO-11: Occurrences of special-status plant species will be avoided and disturbance minimized in siting new facilities or expansion of existing facilities. If special-status plant species are within 50 feet of a proposed project footprint or limits of grading, these locations will be flagged by the DPR-approved biologist, fenced off prior to the start of on-site construction activities, and avoided.

Essential habitat components of sensitive natural communities will be avoided as part of rebuilding and relocating facilities in old growth and riparian woodlands. Facility improvements such as trails, picnic areas and creek crossings in redwood forest and riparian woodland will be designed to minimize tree removal and protect essential habitat elements of these sensitive natural community types.

BIO-12: Best management practices (BMPs) to avoid creation of dust will be used during all construction activities within 50 feet of special-status plant species occurrences. These may include periodic dust control using water truck spraying, hydromulching, installing straw or jute netting, and other methods.

BIO-13: Locations of native trees with a trunk greater than 24 inches diameter at breast height (DBH) will be considered as part of planning for new facilities or expansion of existing facilities and avoided to the extent possible. At both new and existing facilities, adverse direct and indirect effects on native trees to be retained will be avoided, such as root compaction and physical damage.

BIO-14: To minimize disturbance to tree root zones, no grading, staging or other activities that could damage the trees to be retained will be allowed within a distance of 5 times the DBH, unless approved in advance by a DPR-approved biologist, forester, or certified arborist.

BIO-15: All herbicides will be handled, applied, and disposed of in accordance with the Material Safety Data Sheet (MSDS Fact Sheet) and all local, State, and federal laws.

BIO-16: To maintain genetic integrity, only plant stock collected within the local region will be used for re-vegetation.

BIO-17: Contractors will employ best management practices (BMPs) for erosion control to avoid runoff of project-related sediments, vehicle fluids, and other liquids into

occurrences of special-status plants, sensitive natural communities, and regulated waters.

BIO-18: Percolation testing, boring for soil investigations or other borings and trenching will be restricted a distance of five times the DBH of trees to be retained unless performed under the supervision of a DPR-approved biologist, forester, or certified arborist to ensure no major roots are damaged in the process. Excavations will be completed by hand where necessary to avoid damage to larger roots.

Wildlife-Related Standard Project Requirements

BIO-19: New facilities and expansion of existing facilities will avoid known breeding locations and essential habitat of special-status animal species, such as ponds, streams, and trees known for active nesting and roosting.

BIO-20: In addition to controls related to marbled murrelet in BIO-23 to BIO-28, construction-related vegetation clearing and tree removal will be prioritized to occur between September and February to avoid disturbances to other nesting native birds.

BIO-21: If work is required during the nesting season (March–August), a DPR-approved biologist will conduct a preconstruction survey to identify nests within the project area. The survey will be conducted no more than seven calendar days prior to the beginning of construction. The survey will be completed if construction is not initiated within this seven-day period to confirm that no new nests have been established.

BIO-22: For any bird nests in active use encountered during the preconstruction survey in BIO-21, an appropriate no-disturbance buffer zone will be established to protect the nest from construction activities as determined necessary by a DPR-approved biologist. Construction will be restricted within this no-disturbance buffer zone until any young birds have fledged or the nest is no longer in use, as confirmed by the DPR-approved biologist. The no-disturbance buffer will be flagged or fenced as determined necessary by the DPR-approved biologist, depending on type of proposed construction activities, scheduling and other factors. Typical setbacks for nests to be used in establishing the no-disturbance buffer consist of 100 feet from the nest passerines, and 500 feet for raptors from the project footprint, although this may be adjusted by the DPR-approved biologist based on topography, existing structures, and other variables. Setbacks related to active marbled murrelet nests and occupied habitat will be established based on coordination with the CDFW and USFWS.

BIO-23: To improve habitat conditions for marbled murrelet, appropriate management activities such as the Crumb Clean Campaign and improved waste patrol and cleanup

in visitor-use areas will continue to be implemented by DPR to control corvid food sources and the risks these species pose to marbled murrelet breeding success.

BIO-24: Interpretive programs to educate visitors about the threatened status of marbled murrelet and why they should not feed wildlife will continue.

BIO-25: Trees determined to have suitable elements for nesting by marbled murrelet and screen trees important for nest protection will be retained.

BIO-26: DPR will continue to support and participate in marbled murrelet research that contributes to the conservation of this species, making every effort to obtain funding for and continue ongoing marbled murrelet monitoring, management, and studies. The CZU fire significantly changed the vast majority of marbled murrelet habitat in Big Basin. Much of this habitat burned at high intensity and is currently no longer suitable or occupied as it lacks the large limbs required for nesting. DPR will continue to assess the effects of the CZU fire on marbled murrelet habitat to document post-fire habitat conditions and monitoring marbled murrelet presence or absence, effectiveness of predator control programs, and suitability as marbled murrelet nesting habitat as old growth forest cover regenerates and suitable nesting substrate returns through limb growth, protective canopy development, and creation of broken top platforms. Long-term monitoring of habitat conditions will be used to inform the need for adaptive management over time and additional controls on visitor use and access in occupied habitat, if appropriate.

To determine occupancy of potential habitat stands (trees) within a quarter mile of areas mapped as old growth redwood forest, DPR will follow the latest Pacific Seabird Group protocols[1] and direction obtained through coordination with CDFW and USFWS. If the stand is not occupied, noisy construction activities may occur during the marbled murrelet breeding season. If the stand is occupied, activities will occur as spelled out in BIO-28. In addition to in person Audio-Visual (AV) surveys, DPR will use Audio Recording Units to passively monitor marbled murrelet presence in stands that have marginal habitat to confirm lack of occupancy.

BIO-27: During the marbled murrelet breeding season (March 24–September 15) project activities will minimize human-generated disturbances, trail building, tree removal and maintenance activities including the use of loud motorized equipment within a quarter mile of occupied habitat. This may include seasonal closure of trails and other visitor access controls where monitoring and scientific studies indicate a risk for disturbance to an active marbled murrelet nest.

BIO-28: DPR will coordinate with CDFW and USFWS prior to initiating construction activities that may affect marbled murrelet and/or their nesting habitat. Based on site-specific

[1] Pacific Seabird Group. 2024. A revised protocol for surveying Marbled Murrelets in Forests. Pacific Seabird Group Technical Publication Number 6. Available from https://pacificseabirdgroup.org/psg-publications/technical-publications/

conditions, if construction work must occur within a quarter mile of occupied habitat during the marbled murrelet breeding season (March 24–September 15), the latest USFWS's "Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California" (dated October 1, 2020) may be used by a DPR-approved biologist to allow limited construction activities that do not create noise disturbance that could result in inadvertent take of this species.

If limited activities are allowed during the marbled murrelet breeding season in occupied habitat, work activities will not begin until two hours after sunrise and will cease two hours before sunset each day. Appropriate worker training, vehicle access restrictions, maintenance of a clean site through daily trash removal, and other BMPs will be used to minimize disturbance and avoid attracting corvids and other predatory species.

BIO-29: If construction activities are planned within suitable upland habitat for special-status amphibians such as California red-legged frog, appropriate measures will be developed and implemented to avoid or compensate for potential direct and indirect impacts of project-specific activities. Avoidance and minimization measures may include, but not be limited to, worker training, installation of temporary exclusion fencing, biological monitoring during construction, and restrictions on timing of construction. As necessary, these avoidance and minimization measures will be developed in consultation with CDFW and USFWS to ensure compliance with applicable regulations.

BIO-30: Active bat roosts will be avoided for both special-status and common species. Where suitable habitat for roosting bats is present (i.e. large trees with cavities, exfoliating bark, rock outcrops, and unsealed attics) a DPR-approved biologist will conduct a preconstruction survey within 50 feet of the project footprint to confirm presence or absence of any active roosts. The survey will be conducted no more than seven calendar days prior to the beginning of proposed tree removal or construction. The survey will be repeated if construction is not initiated within this seven-day period to confirm that no new roosts have been established, unless no suitable roost habitat was encountered. Where an active roost is detected, appropriate avoidance and minimization measures will be developed by the DPR-approved biologist based on guidance from the CDFW, the best available science, and status of the species before conducting any construction activity within 50 feet of the roost location. If an active maternity roost is encountered during the maternity season (April 15 to August 31), the CDFW will be contacted for direction on how to proceed and an appropriate exclusion zone established around the occupied roost until young bats are old enough to leave the roost without jeopardy. The size of the buffer would take into account the proximity and noise level of project activities; distance and amount of vegetation or screening between the roost and construction activities; and species-specific needs, if known, such as sensitivity to disturbance.

BIO-31: Prior to the start of on-site construction activities, a DPR-approved biologist will train on-site construction personnel on the life history of special-status wildlife and commonly occurring wildlife, work constraints, and any other pertinent information related to the species.

BIO-32: Immediately prior to the start of work each morning, a DPR-approved biologist or trained project foreman will conduct a visual inspection of the construction zone to confirm that no common or special-status wildlife are present within the project footprint.

BIO-33: If wildlife is found on the project site, work in the vicinity of the animal will be delayed until the species moves out of the site on its own accord or is relocated by a DPR -approved biologist and released in suitable habitat, where appropriate to avoid injury to the animal.

BIO-34: To prevent trapping of wildlife, all holes and trenches will be covered at the end of each working day with plywood or similar materials or will include escape ramps constructed of earth fill or wooden planks; all pipes will be capped. A DPR-approved biologist or trained project foreman will inspect trenches and pipes for wildlife at the beginning of each workday. If a trapped animal is discovered, they will be relocated by the DPR-approved biologist and released in suitable habitat away from the project footprint.

Wetlands and Regulated Waters-Related Standard Project Requirements

BIO-35: Wetlands and regulated waters such as creeks, ponds and riparian habitat will be identified and avoided as part of planning for new facilities or expanding existing ones. Where indications of regulated waters are present in the vicinity of proposed improvements, a wetland assessment or delineation will be conducted by a DPR-approved biologist to identify the extent of any state and/or federally regulated waters.

BIO-36: During construction, the contractor will avoid or minimize impacts to regulated waters to the extent practicable by conducting work in upland areas. In the event that disturbing regulated waters is unavoidable, the disturbance will be minimized to the minimum area necessary to achieve the project purpose. Measures will be identified and implemented to offset those unavoidable impacts as defined in consultation with a DPR-approved biologist and the appropriate regulatory agencies (e.g., CDFW, USFWS, USACE, and the RWQCB) where required.

BIO-37: Where impacts to regulated waters are unavoidable, authorizations will be secured from the appropriate regulatory agencies (e.g., CDFW, USFWS, USACE, and the RWQCB). When necessary, compensatory mitigation will be provided through creation and/or enhancement of regulated habitats. Any created or enhanced regulated habitats provided as part of required compensatory mitigation will be

monitored and maintained to ensure successful establishment in accordance with the regulatory agency authorizations.

BIO-38: Best management practices (BMPs) will be identified and implemented for all grading within 50 feet of regulated waters. These may include restrictions on the timing of grading to occur outside the typical wet season from October 31 to April 15, installation of temporary silt fencing and/or straw wattles at the limits of grading, and other methods.

APPENDIX D:
Marbled Murrelet Literature Review (2012-2025)



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Big Basin Facilities Management Plan
Marbled Murrelet Literature Review: 2012–2025

prepared by

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This literature review on the marbled murrelet (*Brachyramphus marmoratus*) was conducted as part of the background review during preparation of the Supplemental Environmental Impact Report (SEIR) on the Big Basin Facility Management Plan. The purpose of this literature review is to expand on the annotated bibliography contained in the 2013 General Plan and Final EIR for Big Basin Redwoods State Park (California State Parks 2013), under the master response on marbled murrelet from the Final EIR, which reviewed available data on the species from 1991 to 2012. This expanded review provides a compendium of scientific literature and other reports from 2012 to August 2025 and focuses on research and monitoring performed in central coastal California, identified as Conservation Zone 6 in the 1997 federal Recovery Plan for the species (U.S. Fish and Wildlife Service 1997).

The following provides a summary of the key findings from the literature review, consisting of 1) the current status of the marbled murrelet in Zone 6, 2) major findings related to corvid research and monitoring in Zone 6, and 3) results of recent research and observations of human-related disturbance on the marbled murrelet. This is followed by the results of the literature review, which includes a chronological listing of each source with a brief summary or excerpts of salient information.

Status of the Marbled Murrelet in Zone 6

Marbled Murrelets are a challenging species to monitor because of the difficulty in observing them, variability of information that can be obtained from each survey type, and the high degree of temporal variability in murrelet activity, such that no one survey method is able to paint the complete picture of murrelet status. Various types of monitoring of the Santa Cruz Mountains population of murrelets has been conducted in some form every year since the late 1980s,[1] and rigorous monitoring beginning in the early 1990s documented higher inland murrelet activity levels than observed in the region today (Halbert and Singer 2017).

[1] Patton, P. W. C. and C. J. Ralph. 1990. *Distribution of the Marbled Murrelet at inland sites in California. Northwestern Naturalist 71:72–84.*

At-sea surveys between Half Moon Bay and Santa Cruz have provided annual population estimates based on adult abundance. There are no statistically significant trends in adult abundance since the inception of at-sea surveys in 1999, and adult abundance since 2012 appears to be stable, even after the CZU fire in 2020 (Felis et al. 2023b, White et al. 2024).

Inland monitoring since 1991 has included audio-visual (AV) surveys at many locations across the Santa Cruz Mountains, and more recently, passive acoustic monitoring. From the early 1990s to the early 2000s there was a significant long-term decline in inland murrelet activity where AV surveys were performed[2]; although since 2012, there appears to be no discernable trend in inland activity (Mori 2025). Beginning in 2022, inland activity at some locations has been lower than in previous years, and may be the first indication of change in the population as a result of habitat loss from the CZU fire (Mori 2023a, 2023b, 2025).

The effects of the CZU fire on murrelet nesting habitat are profound and lasting (Singer and Rinkert 2025), and its true impact on the population may take additional years to be clearly discerned. Passive acoustic monitoring is increasingly being relied upon for monitoring inland activity, although an analysis of trends using data collected with this technology has yet to be undertaken. An analysis of trends in passive acoustic data, continued AV and at-sea surveys, and further determination of the habitat loss incurred from the CZU fire and its effects on murrelet occupancy are needed to more conclusively determine the current status of the murrelet population breeding in the Santa Cruz Mountains.

Corvid Research and Monitoring in Zone 6

Corvid surveys, focusing on Steller's jay and common raven, first initiated in 1995 and performed on a regular basis since 2003, have been conducted within murrelet nesting habitat in the Santa Cruz Mountains in about half (43%) of the years since 2012. There is a long-term decline in Steller's jays, especially at campgrounds, as well as a less pronounced decline in adjacent low-impact areas (Rinkert 2021, 2022a, 2022b). Raven abundance has also declined significantly in some areas since 2003–2013, while American crows—a nascent threat to murrelets in the Santa Cruz Mountains—were recently documented breeding in murrelet habitat for the first time (Rinkert 2021, 2022a, 2022b).

Intensive research on Steller's jays in murrelet habitat from 2011–2019 revealed important information about their ecology, behavior, and space use that can be used to manage their populations to benefit murrelets. Numerous studies have now demonstrated how jay populations benefit from food subsidies within campgrounds. Food subsidies in campgrounds were found to increase the reproductive output of jays (West and Peery 2017), and high densities of jays in

[2] Suddjian, D. L. 2010. *Summary of 2009 Marbled Murrelet monitoring surveys in the Santa Cruz Mountains*. Unpublished report prepared for the Command Oil Spill Trustee Council.

campgrounds were maintained by dominant jays attempting to exclude subdominant birds (Brunk et al. 2022). Campgrounds also served as source populations for jays, which would breed at campgrounds and then disperse up to dozens of kilometers away to take advantage of human food subsidies outside of the park in fall and winter (West et al. 2019). Human food subsidies at campgrounds were shown to directly influence jays up to 2 km away (West et al. 2016). In response to inflated corvid populations, California State Parks implemented corvid management program that involved education, enforcement, and infrastructure improvements beginning in 2013; jays became less abundant and consumed less human food subsidies as a result (Brunk et al. 2021).

Conditioned taste aversion treatments to dissuade Steller's jays from predating murrelet eggs were implemented at various parks in the Santa Cruz Mountains from 2012–2016 (Gabriel et al. 2013, 2014a, 2014b, 2015, 2016). These studies documented a slight but significant decline in the predation of mimic eggs and apparent carryover of aversion to predation, especially where eggs were deployed across large, contiguous areas and where there were at least two deployments of mimic eggs in a season. While there were few actual documented predations of mimic eggs by Steller's jays, most predation of mimic eggs was attributed to this species.

Recent Research and Observations of Human-Related Disturbance on Marbled Murrelets

There is very limited information on how human-caused disturbance affects murrelets. Recent research and observations have focused on how noise (i.e., unwanted sound in an environment) can disturb murrelets by altering the behavior of nestlings and adults attending nests. Murrelets are generally sensitive to sound (Smith et al. 2023), and disturbance-causing noise could result in adverse impacts to murrelets when they are performing critical behaviors, such as feeding nestlings (USFWS 2020). If a nestling is fed an intermediate- or low-quality diet, it is estimated that just one missed feeding can adversely impact the nestling's development and survival (Nelson and Fitzgerald 2024).

Prior to the CZU fire, the ambient noise in murrelet nesting habitat at Big Basin Redwoods State Park was unusually elevated compared to noise levels in typical nesting habitat, and additional construction noise exceeded thresholds of acceptable noise near murrelet nests until modifications to equipment and work areas were implemented (Singer and Houston 2012). The U.S. Fish and Wildlife Service (2020) recently issued updated temporal and spatial noise restrictions in and near murrelet nesting habitat to avoid adverse impacts to the species, and based on a new analysis of local inland murrelet activity and noise attenuation, Halbert (2022) has recommended further refinement of temporal restrictions for restorative forest treatments following the CZU fire.

2012

Singer, S. and D. Houston. 2012. Investigation and mitigation of construction noise impacts on the Marbled Murrelet--facilities upgrade at Big Basin Redwoods State Park. Unpublished report prepared for California State Parks, Sacramento, CA.

"Pre-project noise levels at Big Basin Redwoods State Park were 53–123 dBC, measured in 2006," while construction noises measured in 2012 were generally 80–100 dBA. The report also provides recommendations on how to modify work equipment and practices to produce less noise that could disturb murrelets.

2013

California Department of Parks and Recreation. 2013. *Big Basin Redwoods State Parks, Final General Plan and Environmental Impact Report*. State Clearinghouse No. 2001112104. Approved by the State Park and Recreation Commission May 2013.

The Final EIR contains a review of studies related to the Marbled Murrelet conducted from 1991 to 2012.

Gabriel, P. O., P. Halbert, and R. T. Golightly. 2013. Steller's Jay conditioned taste aversion treatment in the Santa Cruz Mountains in 2012. Unpublished report prepared for the COSCO BUSAN Trustee Council.

"Deployment of murrelet-mimic eggs laced with carbachol in the forests surrounding high-visitor use areas of Butano State Park and Portola Redwoods State Park was effective at reducing predation by Steller's jays on the murrelet-mimic eggs."

"With an estimated decrease in predation of at least 44 to 80%, CTA can likely achieve the target reductions in corvid predation (40 to 70%; Peery and Henry 2010) to assist recovery of murrelets in this region."

Halbert, P. 2013. Summary of 2013 corvid monitoring surveys in the Santa Cruz Mountains. Unpublished report prepared by California State Parks, Santa Cruz District, Felton, CA.

Corvid surveys conducted at Butano State Park, Big Basin and Portola Redwoods State Parks, and Memorial County Park found jays to be significantly more abundant in campgrounds than in control areas at all parks except Butano.

Singer, S.W. 2013. Results of 2013 Marbled Murrelet surveys at Gazos Mountain Camp and other sites. Unpublished report prepared by Steven Singer Environmental & Ecological Services, Santa Cruz, CA.

[The report presents the results of ten murrelet AV surveys conducted at Gazos Mountain Camp, and Big Basin and Portola Redwoods State Parks in July 2013. Most surveys at Gazos had a moderate number of detections (28.1 average), while two surveys at Big Basin had 76 and 1 detection, and one survey at Portola had 11 detections.]

Vásquez-Carrillo, C., V. Friesen, L. Hall, and M. Z. Peery. 2013. Variation in MHC class II B genes in marbled murrelets: implications for delineating conservation units. Animal Conservation 17:244–255.

While previously determined to be a genetically distinct population, the murrelets breeding in the Santa Cruz Mountains did not differ in their MHC exon 2 alleles or peptides compared to other, more northerly breeding populations.

". . . we recommend that central California be considered a separate conservation unit despite the lack of MHC differentiation."

2014

Gabriel, P. O., P. Halbert, and R. T. Golightly. 2014a. Steller's Jay aversion conditioning treatment in the Santa Cruz Mountains in 2013. Unpublished report prepared for the COSCO BUSAN Trustee Council.

"Deployment of murrelet-mimic eggs laced with carbachol for a second consecutive year in the forests surrounding high-visitor use areas of Butano State Park and Portola Redwoods State Park was effective at reducing predation by Steller's jays on the murrelet-mimic eggs. Moreover, the initial predation rate on murrelet-mimic eggs in 2013 was similar to the predation rate after conditioning in 2012, suggesting a possible carry-over effect of conditioned aversion, where many jays that were treated in 2012 may still have retained their avoidance of mimic eggs in 2013."

"The effectiveness of aversion achieved by the conditioning in 2013 was somewhat lower than in 2012 (Gabriel et al. 2013)."

Gabriel, P. O., P. Halbert, and R. T. Golightly. 2014b. Steller's Jay aversion conditioning treatment in the Santa Cruz Mountains in 2014. Unpublished report prepared for the COSCO BUSAN Trustee Council.

"The initial predation rate on murrelet-mimic eggs in areas that had previously received treatment was similar to the predation rate after conditioning in 2013, suggesting that conditioned aversion persisted from one year to the next, where many jays that were treated in 2012 or 2013 may still have retained their avoidance of mimic eggs in 2014. In contrast to the two previous years, however, use of murrelet-mimic eggs for a third consecutive year in 2014 did not further reduce predation by Steller's jays on the mimic eggs."

"The absence of a detectable treatment effect specifically in newly treated, mostly small and isolated areas emphasizes that treatment is likely to be most effective if it is conducted in a mostly contiguous area, where it can reach the majority of a contiguous jay population."

2015

Borker, A. L., P. Halbert, M. W. McKown, B. R. Tershy, and D. A. Croll. 2015. A comparison of automated and traditional monitoring techniques for marbled murrelets using passive acoustic sensors. Wildlife Society Bulletin 39:813–818.

> "We found automated acoustic surveys and analysis had fewer detections per morning compared with audio–visual surveyors, but the rate of automated acoustic detections per morning was positively and strongly correlated with the rate of audio–visual detections per mornings ($r=0.96$, $P<0.01$). Furthermore, acoustic monitoring sampled 10 times more mornings per site ($\bar{x}=48$) than were monitored by human surveyors ($\bar{x}=4.4$) at a comparable cost."

Halbert, P. 2015. Summary of 2012 corvid monitoring surveys in the Santa Cruz Mountains. Unpublished report prepared by California State Parks, Santa Cruz District, Felton, CA.

> Steller's Jay and Common Raven abundance remained considerably higher in campgrounds than in control areas at Big Basin and Portola Redwoods State Parks, Butano State Park, and Memorial County Park.

Singer, S. W. 2015a. 2014 forest survey results, Marbled Murrelets in the Santa Cruz Mountains. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Simultaneous A-V survey were conducted at the Butano, Gazos Camp, Portola, Big Basin, and Memorial breeding areas on 3 days in 2014."

> "The highest murrelet activity levels were found at Gazos Camp and Butano, which had a record number of wing sound detections."

> "Five partial surveys on July 11, 12, 13, 15, and 19 had from 23 to 76 total detections with an average of 43 (Kuyper, pers. comm. cited in Singer, 2013). These values hinted at a possible recovery of murrelet activity levels at Big Basin."

Singer, S. W. 2015b. 2015 forest survey results, Marbled Murrelets in the Santa Cruz Mountains. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Simultaneous A-V survey were conducted at the Butano, Gazos Camp, Portola, and Big Basin breeding areas on 5 days in 2015."

> "A simple way of stating the findings, is that our four survey stations consist of two high activity stations – Butano and Gazos Camp, and two low activity level stations – Big Basin and Portola."

2016

Gabriel, P. O., P. Halbert, and R. T. Golightly. 2016. Steller's Jay aversion conditioning treatment in the Santa Cruz Mountains in 2015. Unpublished report prepared for the COSCO BUSAN Trustee Council.

> "The initial predation rate on murrelet-mimic eggs throughout all treatment areas was well below initial predation rates in previous years, especially compared to the first treatment year of 2012. In addition, no Steller's jays were detected on trail camera photos that documented a total of 45 wildlife interactions at mimic egg locations. These results suggested that conditioned aversion persisted across years, and the treatment effect on corvids in the area has now spread through the population."

Henry, R. W., W. B. Tyler, and M. Z. Peery. 2016. Abundance and productivity of Marbled Murrelets off central California during the 2012 breeding season. Unpublished report prepared for the Luckenbach Oil Spill Trustees.

> The central California population had an estimated 403–588 murrelets in the 2012 breeding season.
>
> "These results indicate regional abundance has remain relatively similar since 2010, greater than the 2007/08 estimates, but less than estimates from 1999-2003 and 2009 (Figure 3A)."

West, E. H., W. R. Henry, W. Goldenberg, and M. Z. Peery. 2016. Influence of food subsidies on the foraging ecology of a synanthropic species in protected areas. Ecosphere 7(10):e01532.

> ". . . campgrounds subsidize Steller's jays beyond their boundaries and potentially indicate that the quality of old-growth habitat surrounding campgrounds may be reduced for nesting marbled murrelets by these subsidies."
>
> "Based on space-use patterns of intermediate jays, we estimated that the "ecological footprint" of campgrounds extended 2 km beyond their spatial footprint."

2017

Fleishman, A. B. and M. McKown. 2017. Automated acoustic surveys for Marbled Murrelets in the Santa Cruz Mountains – 2017. Unpublished report prepared by Conservation Metrics, Inc., Santa Cruz, CA for California State Parks, Santa Cruz District, Felton, CA and Steven Singer Environmental & Ecological Services, Santa Cruz, CA.

> "Marbled Murrelet keer calls were detected at Gazos Mountain Camp and Berry Creek. There were no calls detected at the Fall Creek site (Figure 5)."
>
> "Although the automated surveys detected fewer calls (typically ~60% of what human counters heard), there was a consistent relationship between counts from traditional and automated surveys."

Gabriel, P. O., P. Halbert, and R. T. Golightly. 2017. Steller's Jay aversion conditioning treatment in the Santa Cruz Mountains in 2016. Unpublished report prepared for the COSCO BUSAN Trustee Council.

> "Predation rates on murrelet-mimic eggs both during the first and second treatments throughout all treatment areas were generally below initial predation rates in early treatment years, especially compared to the first treatment year of 2012. These results suggested that conditioned aversion persisted across years, and the treatment effect on corvids in the area has now spread through the population."

Halbert, P. and S. W. Singer. 2017. Marbled Murrelet Landscape Management Plan for Zone 6. California Department of Parks and Recreation, Santa Cruz District, Felton, CA.

> This plan summarizes current knowledge of the Marbled Murrelet population, their habitat, their predators, and threats to their population in Zone 6 through 2017. The plan analyzes this information and identifies gaps in knowledge and makes recommendations for future research, monitoring, and other work to conserve the murrelet population.

Singer, S. W. 2017a. 2016 forest survey results - Marbled Murrelets in the Santa Cruz Mountains. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Simultaneous A-V surveys were conducted at the Butano, Gazos Camp, Portola, Big Basin, and, for the first time, Pescadero Creek County Park breeding areas on 5 days in July 2016."
>
> " There was a decrease in the number of detections at Butano and an increase at Portola and Big Basin."

Singer, S. W. 2017b. 2017 forest survey results - Marbled Murrelets in the Santa Cruz Mountains. Steve Singer Environmental & Ecological Services. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Simultaneous A-V surveys were conducted at the Butano, Gazos Camp, Big Basin, and at Pescadero Creek County Park (new location) survey stations on 5 days in July 2017."
>
> "Total detection numbers for all three stations combined in 2017 were similar to the 2016 value. Of interest was the fact that the number of detections at Big Basin, although relatively small, reached an all-time high for recent years."

Webb, W. C. 2017. Corvid density and population trends inside and outside campgrounds at Big Basin Redwoods State Park. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Jays and ravens occurred at greater densities and were detected more frequently in campgrounds compared to control plots."
>
> "The absence of observations of successful foraging by corvids in campsites suggests a high level of compliance by campers with management efforts to reduce human food subsidies."

West, E. H. and M. Z. Peery. 2017. Behavioral mechanisms leading to improved fitness in a subsidized predator. Oecologia 184:787–798.

> In a study of Steller's Jays in campgrounds and surrounding low-impact areas at Big Basin Redwoods State Park, jays were found at campgrounds to consume more anthropogenic foods, occur in higher densities, be in better body condition, and have greater reproductive output than jays in low-impact areas.

2018

Felis, J. J., J. Adams, and E. C. Kelsey. 2018. Abundance and productivity of marbled murrelets (*Brachyramphus marmoratus*) off central California during the 2017 breeding season. U.S. Geological Survey Data Series 1093. https://doi.org/10.3133/ds1093.

> The central California breeding population contained an estimated 384–732 murrelets during the 2017 breeding season.
>
> "Estimated abundances from 2017 are comparable to most prior years of study, except for 2008 and 2015, which had anomalously low abundances (table 3, fig. 3)."

Gondek, N., A. Fleishman, and M. McKown. 2018. Automated acoustic surveys for Marbled Murrelets in the Santa Cruz Mountains – 2018. Unpublished report prepared by Conservation Metrics, Inc., Santa Cruz, CA for California State Parks, Santa Cruz District, Felton, CA and Steven Singer Environmental & Ecological Services, Santa Cruz, CA.

> "Marbled Murrelet keer calls were detected at Gazos Mountain Camp and Redwood Meadows. For the second consecutive year, there were no calls detected at the Fall Creek site (Figure 4, Figure 5)."

Singer, S. W. 2018 forest survey results – Marbled Murrelets in the Santa Cruz Mountains. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "Simultaneous A-V surveys were conducted at the Butano, Gazos (Gazos Camp), and Big Basin survey stations on 5 days in July 2018 using the PSG Forest Survey protocol."
>
> "Over the 2014 – 2018 period, the results from all three stations combined did not show any significant trend. However, over this same short-term period, total detections numbers at Butano and at Gazos have declined. In contrast, total detection numbers at Big Basin have increased."

2019

Felis, J.J., E. C. Kelsey, and J. Adams. 2019. Abundance and productivity of marbled murrelets (*Brachyramphus marmoratus*) off central California during the 2018 breeding season: U.S. Geological Survey Data Series 1107. https://doi.org/10.3133/ds1107.

The central California breeding population contained an estimated 250–546 murrelets during the 2018 breeding season.

"Estimated abundance from 2018 was below the long-term mean (2001–18: 497 murrelets) but is comparable at the 95-percent CI level to most prior years of study, except for 2001–03, which had greater estimated abundances."

Fleishman, A. and M. McKown. 2019. Automated acoustic surveys for Marbled Murrelets in the Santa Cruz Mountains – 2019. Unpublished report prepared by Conservation Metrics, Inc., Santa Cruz, CA for California State Parks, Santa Cruz District, Felton, CA and Steven Singer Environmental & Ecological Services, Santa Cruz, CA.

"The primary goals of the survey were to search for Marbled Murrelet acoustic activity at three monitoring sites in the Santa Cruz Mountains: Gazos Mt. Camp, Redwood Meadows in Big Basin State Park, and Girl Scout Creek in Butano State Park."

Murrelets were regularly detected at Gazos Mountain Camp and Redwood Meadow at Big Basin Redwoods State Park between April and July/August, but only a few call bouts were recorded at Girl Scout Creek in Butano State Park.

Singer, S. W. 2019 forest survey results – Marbled Murrelets in the Santa Cruz Mountains. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

"Simultaneous A-V surveys were conducted at the Butano, Gazos (Gazos Camp), Big Basin, and Portola survey stations on 5 days in July 2019 using the PSG Forest Survey protocol."

"Combined data from these three stations [Gazos, Big Basin, and Butano] reveal that total detections, occupied behavior detections, and below one canopy detections all show no trend since 2014, either decreasing or increasing (Table 4 and Graph 1)."

West, E. H., K. Brunk, and M. Z. Peery. 2019. When protected areas produce source populations of overabundant species. Biological Conservation 238:108220.

"Our study suggests that heavily-visited sites in a protected area promoted a source population of an overabundant nest predator that "seeded" the surrounding landscape within the park with recruiting breeders, potentially exacerbating risk to a threatened species that is at the heart of the park's conservation mission."

2020

Felis, J., J. Adams, and E. C. Kelsey. 2020. Summary of Marbled Murrelet at-sea survey results in USFWS Conservation Zone 6, central California, during the 2020 breeding season. Unpublished report prepared by U.S. Geological Survey, Western Ecological Research Center.

The central California breeding population contained an estimated 313–707 murrelets during the 2020 breeding season.

United States Fish and Wildlife Service. 2020. Revised transmittal of guidance: estimating the effects of auditory and visual disturbance to Northern Spotted Owls and Marbled Murrelets in northwestern California. Arcata Fish and Wildlife Office, U. S. Fish and Wildlife Service, Arcata, CA.

This memo outlines the thresholds for disturbance of murrelets and Northern Spotted Owls in northwestern California. Disturbance is defined by the U. S. Fish and Wildlife Service as flushing an adult or juvenile from an active nest, or precluding feeding of young during the daily feeding cycle or during part of multiple feeding cycles.

"We interpret the best available published data on owls, murrelets and appropriate surrogate species as indicating that the above behaviors may manifest when: (a) the action-generated sound level substantially exceeds (i.e., by 20-25 dB or more as experienced by the animal) ambient conditions existing prior to the project; (b) when the total sound level, including the combined existing ambient and action-generated sound, is very high (i.e., exceeds 90 dB, as experienced by the animal); or (c) when visual proximity of human activities occurs close to (i.e., within 330 feet) of) an active nest site."

2021

Brunk, K. M., E. H. West, M. Z. Peery, and A. M. Pidgeon. 2021. Reducing anthropogenic subsidies can curb density of overabundant predators in protected areas. Biological Conservation 256:109081.

A study of Steller's Jay response to corvid management (education, compliance, and infrastructure improvements) at Big Basin Redwoods State Park found jays consumed less anthropogenic food and were less abundant following the implementation of corvid management at the park in 2013.

"Indeed, we observed a substantial reduction in the consumption of anthropogenic foods by jays following the implementation of the visitor education program that led to changes that supported our second hypothesis, specifically that jay density would decrease while body condition and fecundity would remain reasonably stable in subsidized areas."

Himmelwright, C. and A. Rinkert. 2021. Peregrine Falcon nest monitoring and prey remains analysis in the Santa Cruz Mountains from 2018–2021. Unpublished data collected for California State Parks, Santa Cruz District, Felton, CA.

Two Peregrine Falcon nest sites located at Big Basin Redwoods State Park and near Butano State Park, both within major flyways of the Marbled Murrelet, were monitored from 2018–2021. Both nest sites were occupied most of the four years they were monitored, and three successful nesting attempts produced a total of six fledglings. Prey remains were

collected and identified to lowest taxonomic rank in three of the four years at each of the two nest sites. At least 44 bird species were identified in prey remains; Band-tailed Pigeon, Eurasian Collared-Dove, and Red-winged Blackbird were identified from remains at both nest sites in most years. Shorebird and passerine species were also well-represented in prey remains at both nest sites in all years. Marbled Murrelet remains were only detected in one year at one nest site, and the remains comprised two or three individual murrelets.

Mori, B. 2021. Marbled Murrelet inland monitoring program, Santa Cruz Mountains region, 2020 progress report. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

In 2020, the level of murrelet activity was noticeably higher than over the previous 6 years of the monitoring program. Mean total detections were up significantly, for the region (e.g., Big Basin, Butano and Gazos combined) and for Butano, Gazos and Portola individually. This increase also was mirrored at Memorial County Park and Pescadero Creek County Park (H. Ormshaw, pers. comm.).

Rinkert, A. 2021a. Corvid surveys in the Santa Cruz Mountains: 2020 summary. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

"Steller's Jays were more abundant in treatment areas than in control areas at all parks combined and Big Basin, but not at Butano or Portola. This was the first year there was no significant difference in abundance between treatment and control areas at Portola, and the first year there was no difference at multiple parks (Portola and Butano)."

"Raven abundance was higher in treatment areas than in control areas in 2020. Their abundance in 2020 did not significantly differ from previous years of corvid surveys."

Rinkert, A. 2021b. Initial observations of a Marbled Murrelet (*Brachyramphus marmoratus*) nest found at Big Basin Redwoods State Park in July 2021. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

The finding of a murrelet nest and the chick's response to construction and predator activity near the nest is described. The nest was located in a patch of old growth forest burned at low intensity by the CZU fire at Big Basin Redwoods State Park.
The chick became visibly alert by the presence of ravens near the nest, a repeatedly sounded vehicle horn, and loud scraping noises from construction activity, but did not respond to vehicles driving directly below the nest or the ambient construction noise.

2022

Brunk, K. M., E. H. West, M. Z. Peery, and A. Pidgeon. 2022. Failed despots and the equitable distribution of fitness in a subsidized species. Behavioral Ecology 33:979–988.

A study of Steller's Jay behavior at Big Basin Redwoods State Park campgrounds found high jay densities are attained because dominant jays do not exclude subordinates from

human food subsidies, and dominant jay territories overlap more with campgrounds than subordinate jay territories. Jays of all dominance categories had similar fitness and fecundity, and consumed similar amounts of human food subsidies.

Felis, J., J. Adams, C. A. Horton, E. C. Kelsey, and L. M. White. 2022. Abundance and productivity of Marbled Murrelets (*Brachyramphus marmoratus*) off central California during the 2020 and 2021 breeding seasons. U.S. Geological Survey Data Report 1157. https://doi.org/ 10.3133/ dr1157.

The central California breeding population contained an estimated 219–737 murrelets during the 2021 breeding season.

"The abundance estimated for the entire study area was 470 birds (95-percent confidence interval, 313–707 birds) in 2020 and 402 birds (95-percent confidence interval, 219–737 birds) in 2021. Estimated abundances for both years are comparable with most prior years of study."

"Despite the significant loss of breeding habitat due to the CZU fire, estimated abundance and productivity results for 2021, as well as the spatial distribution of murrelet sightings, were not dramatically different than results from recent years; . . ."

Gustafson, Z. and J. Schlueter. 2022. Automated acoustic surveys for Marbled Murrelet and Spotted Owl in the Santa Cruz Mountains – 2021. Unpublished report prepared by Conservation Metrics, Inc., Santa Cruz, CA for California State Parks, Santa Cruz District, Felton, CA.

"We analyzed data from eight sites for vocalizations of Marbled Murrelet (*Brachyramphus marmoratus*), Barred Owl (*Strix varia*), and Northern Spotted Owl (*Strix occidentalis caurina*). Marbled Murrelets were detected at six of the eight sites, with the highest activity at Gazos Mt. Camp and Portola Ramada. No Barred Owl or Northern Spotted Owl vocalizations were detected."

Halbert, P. 2022. Avoidance measure recommendations for Marbled Murrelets in the Santa Cruz Mountains following the CZU Lightning Complex. Unpublished report prepared by California State Parks, Santa Cruz District, Felton, CA.

The report recommends modifying the temporal restrictions when high decibel activities can occur in and near suitable habitat for murrelets in the Santa Cruz Mountains.

"The localized marbled murrelet behavioral data outlined in this report are supportive of wider operational windows; April 1 – August 5 are dates that better reflect known time of use based on AV and ARU surveys, except for the marbled murrelet important areas within Portola State Park and Pescadero Creek County Park or Gazos Mountain Camp where September 1st is appropriate."

The modifications the report recommends are summarized below.

1. Expands the operational window for high decibel work near or within occupied or important habitat areas for murrelets to be between August 5 and March 24. Work in prime unburned habitat for murrelets in Pescadero Creek County Park and Portola Redwoods State Park can begin August 15, and at Gazos Mountain Camp by September 1. Work in moderate-high and high severity burned forest can be conducted year-round with no noise restrictions.
2. Work should be conducted between 1.5 hours after sunrise and 1 hour before sunset.
3. Noise buffers can be reduced to 330 feet in forest burned at low to moderate severity.
4. Forestry work should be strategically planned to be conducted as far as possible from murrelet habitat in July.
5. AV and ARU monitoring will continue in areas where these recommendations are applied, survey data will be shared with agencies as it becomes available, and adaptive management will be implemented based on survey results.

Mori, B. 2022. Marbled Murrelet inland monitoring program, Santa Cruz Mountains region, 2021 progress report – post CZU fire results. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "From a regional perspective (i.e., Big Basin, Butano and Gazos combined), total detections dropped from a record high in 2020, but was still greater than the long-term average, prior to the 2020."
>
> "The drop in overall detections at Memorial and Pescadero County Parks in 2021 did not support the idea that detection levels would be similar to or higher in these two parks than in 2020, given the extensive fire damage to MAMU habitat in the Santa Cruz Mountains, south of Pescadero Creek."

Rinkert, A. 2022a. Corvid surveys in the Santa Cruz Mountains: 2021 summary. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "For the first time since corvid surveys began in 2003, there was no significant difference in Steller's Jay and Common Raven abundance between treatment and control areas at multiple state parks in consecutive years."
>
> "The CZU fire reduced the population of jays at Big Basin, and likely changed the distribution of ravens but did not directly reduce their population. There was little indication corvid populations changed at Butano, perhaps because it was less severely burned than Big Basin."

Rinkert, A. 2022b. Corvid surveys in the Santa Cruz Mountains: 2022 summary. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "After accounting for differing burn severities, there was no significant difference in jay abundance between treatment and control areas at Big Basin, Butano, and Portola. This is

the second consecutive year that abundance between treatment and control areas did not differ at these three parks."

"Jay abundance remained low in high severity burn areas at Big Basin in the second year following the CZU Lightning Complex Fire. There was still no indication the fire had any impact on the raven population in these two parks, or that jays were less abundant at Butano, which burned at low severity."

United States Fish and Wildlife Service. 2022. Programmatic biological and conference opinion, California statewide programmatic restoration effort, FWS Reference: 2022-0005149-S7. Pacific Southwest Regional Office, U. S. Fish and Wildlife Service, Region 8, Sacramento, CA.

The U. S. Fish and Wildlife Service issues protections on listed species and their habitats. Murrelets are protected by the following restrictions to project activities:

"MAMU-1-a: damage or removal to potential nest trees or trees with potential nesting platforms shall be avoided. Project activities shall not alter suitable habitat to the extent that it is no longer functioning. No nest loss of critical habitat shall occur as a result of project activities.

MAMU-1-b: in occupied habitat.

i. No proposed activity generating sound levels 20 or more decibels above ambient sound levels, or with maximum sound levels (ambient sound levels plus activity generated sound levels) above 90 decibels (excluding vehicle back-up alarms), may occur in confirmed marbled murrelet nesting habitat during the majority of the murrelet nesting season (i.e., March 24 through August 5) (USFWS 2020a).

ii. Between August 6 (date when most murrelets have fledged in coastal northern California) and September 15 (end of murrelet nesting season) of any year, project activities, with adjacent suitable nesting habitat, that will generate sound levels ≥10 dB above ambient sound levels will observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. However, prep work that does not generate sound levels above ambient sound levels, including street sweeping and manual removal of pavement markers, can occur during all hours.

. . .

iv. No human activities shall occur within visual line-of-sight of 100 meters or less from a known nest location within the Action Area (USFWS 2020a), or from unsurveyed suitable nesting habitat containing potential murrelet nest trees within 100 meters of proposed activities."

2023

Felis, J. J., J. Adams, C. Horton, E. C. Kelsey, and L. M. White. 2023a. Abundance and productivity of marbled murrelets (*Brachyramphus marmoratus*) off central California during the 2022 breeding season. Summary provisional data report to Luckenbach Trustee Council and California State Parks, Santa Cruz District, Felton, CA.

> The central California breeding population contained an estimated 277–568 murrelets during the 2018 breeding season.
>
> "The abundance estimate for 2022 was similar to the long term (1999–present) average of 379 murrelets (range 163–585 annually; Table 2)."

Felis, J. J., J. Adams, and B. Becker. 2023b. Status, trend, and monitoring effectiveness of Marbled Murrelet (*Brachyramphus marmoratus*) at sea abundance and reproductive output off central California, 1999–2021. U.S. Geological Survey Open-File Report 2023–1065. https://doi.org/10.3133/ofr20231065.

> "Abundance of murrelets has been estimated at sea along an 85-km length of coastline adjacent to the Santa Cruz Mountains in Zone 6 since 1999 (excluding 2004–06), with annual estimates of 174–699 individuals at sea (Felis and others, 2022a)."
>
> "The long-term AHY [after hatch-year, or "adult"] murrelet abundance at sea in Zone 6 seemed stable, and we did not detect any statistically significant trend for 23 years"
>
> "The current survey design for estimating reproductive output by counting HY [hatch-year, or "juvenile"] birds at sea may not be effective given the high CVs [coefficient of variances] and large confidence limits associated with annual estimates, regardless of which metric is used."

Mori, B. 2023a. Marbled Murrelet inland monitoring program, Santa Cruz Mountains region, 2022 progress report. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "On a regional level, all three detection categories dropped in 2022. Although total detections were within the variability seen in previous years, occupied behavior and SSBBC [Single Silent Birds Below Canopy] matched lows not seen since 2014 (see Figure 2) and are consistent with expectations following a severe burn."

Mori, B. 2023b. Marbled Murrelet inland monitoring program, Santa Cruz Mountains region, 2023 progress report. Bryan Mori Biological Consulting. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "From a regional perspective (i.e., surveys at Big Basin, Butano, Gazos and Portola combined), mean total detections (TD), occupied behavior (OB) and single-silent birds-below-canopy (SSBBC) all gradually declined from 2022, with OB and SSBBC detections recorded at their lowest values since 2014."

Ng, E. M., A. Pidgeon, E. H. West, M. Z. Peery, and K. M. Brunk. 2023. Garbage in may not equal garbage out: sex mediates effects of 'junk food' in a synanthropic species. Journal of Urban Ecology 9(1): juad014.

In a study of Steller's Jay diet and fitness consequences in campgrounds at Big Basin Redwoods State Park, researchers found male jays consumed more human food subsidies compared to females, but the amount of human food subsidies consumed did not impact body condition or fecundity.

Rinkert, A. and S. W. Singer. 2023. Nesting status of the Marbled Murrelet at Big Basin Redwoods State Park in 2022. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

A murrelet nest search was undertaken at Big Basin Redwoods State Park two years after the CZU fire. One probable murrelet nest site was found in an unburned area of the park, but the nest was suspected to have failed.

"Dawn murrelet activity in June 2022 was generally very low where suitable habitat still exists at the park after the 2020 CZU Lightning Complex Fire."

Smith, A. B., M. Kissling, A. M. Capuano, S. B. Lewis, and T. A. Mooney. 2023. Aerial hearing thresholds and ecoacoustics of a threatened pursuit-diving seabird, the marbled murrelet *Brachyramphus marmoratus*. Endangered Species Research 50:167–179.

"We conclude marbled murrelets exhibit generally sensitive aerial hearing despite their amphibious lifestyle. Moreover, short-term acoustic recordings indicate this solitary and inland nesting seabird nests in a relatively quiet environment which may permit heightened incursion of nearby anthropogenic sounds."

2024

Nelson, S. L. and K. Fitzgerald. 2024. Potential nutritional effects of missed feedings to Marbled Murrelet (*Brachyramphus marmoratus*) chicks due to disturbance. Northwest Science 97:2–14.

"Six dietary scenarios were developed to simulate murrelet chick feeding: a high-quality, intermediate, and low-quality diet, with one or two feedings missing from each diet. Five of the six scenarios resulted in insufficient energy for marbled murrelet chicks, with only the high-quality diet able to provide sufficient energy with one missed feeding."

"Therefore, caloric insufficiency, as seen with the loss of even one fish meal within the intermediate and low-quality diet, occurring within the first 15 days of the nesting period would be much more influential to chick development and stature than if it occurred in the second 15-day period of nesting."

White, L. M., J. Adams, E. C. Kelsey, A. Rinkert, and G. Haight. 2024. Abundance of marbled murrelets (*Brachyramphus marmoratus*) off central California during the 2024 breeding season. Summary provisional data report to California State Parks, Santa Cruz District, Felton, CA.

> The murrelet abundance estimate for the 2024 season was similar to previous years, and no statistically significant trends in abundance were found between 1999–2024 and 2007–2024.

2025

Mori, B. 2025. Marbled Murrelet inland monitoring program, Santa Cruz Mountains region, 2024 progress report. Bryan Mori Biological Consulting, Watsonville, CA. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> "The overall downward trend of MAMU activity regionally and at specific stations may be starting to reveal changes in behavior due to habitat loss from the CZU Fire. Of special concern is the absence of single-silent birds-below-canopy (SSBBC) at Big Basin for the first time since 2014 and the pronounced decline of MAMU activity at Butano."

Singer, S. W. 2025. The 1904 crown fire in Big Basin Redwoods State Park - and the implications of epicormic branching for nesting Marbled Murrelets. Unpublished report prepared for California State Parks, Santa Cruz District, Felton, CA.

> The boundary of the 1904 crown fire at Big Basin Redwoods State Park was estimated from observations of limb characteristics of old-growth coast redwoods. Limbs that formed as a result of the 1904 crown fire reportedly had a more swirly or curved growth pattern compared to a flatter, more horizontal growth pattern of trees with their original limbs.

Singer, S. W. and A. Rinkert. 2025. Impact of the 2020 CZU Fire on Marbled Murrelet nesting habitat at Big Basin Redwoods State Park. Unpublished report *in prep*.

> The status of 107 platform trees was monitored at Big Basin Redwoods State Park before the CZU fire and at two intervals afterward to determine their suitability for murrelets. A substantial number of platform trees were lost, with losses becoming significant within two years after the fire. Only 11% of Douglas-firs and 40% of coast redwoods were still suitable within two years after the fire, and both tree species fared significantly better in areas burned at moderate and low severity compared to areas burned at extreme and high severity...