Appendix C – General Monitoring Plan

GUIDELINES FOR PROJECT IMPLEMENTATION

The BLM will consider appropriate methods as described by the Council on Environmental Quality (definition below) to avoid, minimize, rectify, and reduce impacts when implementing projects consistent with law and agency policy.

- Avoidance is defined as those measures that result in a potential impact not occurring from the outset by not taking a certain action or parts of an action. The RMPA alternatives identify a range of potential avoidance measures. Examples of avoidance measures are withdrawn areas, closures, and exclusion areas.
- **Minimization** occurs through limiting the degree or magnitude of the action and its implementation. The RMPA alternatives identify multiple potential minimization options for a variety of projects and land uses. Examples of minimization are facility placement, timing of activities, facility design, and interim reclamation.
- **Rectification** is the repairing, rehabilitating, or restoring of the affected environment. This approach is more action-specific. An example would be the reclamation of the abandoned quarries.
- **Reduction** of impacts involves preservation and maintenance operations during the life of the proposed project to be mitigated. This approach is more design-specific. An example might be a phased development and reclamation project design or a similar approach to a related impact on the landscape.

The RMPA prioritizes the avoidance of impacts, followed by minimization techniques, which generally include rectification and reduction.

ADAPTIVE MANAGEMENT

The RMPA will be implemented using adaptive management processes. Under adaptive management, decisions, plans, and proposed activities are treated as working hypotheses rather than final solutions. For the purposes of this plan, adaptive management is a process that tests, evaluates, and adjusts the assumptions, objectives, actions, and subsequent on-the-ground results from the implementation of RMPA decisions. Used effectively, adaptive management provides resource managers with the flexibility to respond quickly and effectively to changing resource and user conditions. Changes in management actions are based on site-specific resource monitoring and evaluation. Adaptive management is not static but instead is an iterative process of monitoring, evaluation, and adjustment. General monitoring objectives are identified below. Specific objectives will be determined as part of the implementation plan after baseline monitoring has been completed.

The intent of adaptive management is to allow future management actions, as applied through resource management guidelines, to fully incorporate the knowledge and experience gained up to that time from monitoring, evaluation, and experimentation. However, adaptive management does not relieve managers of their responsibilities to consider the effects to the human environment of actions proposed under the guise of adaptive management. Managers would still be required to comply with the provisions of NEPA and other applicable laws, regulations, and policies before such actions are applied. Certain actions proposed as adaptive management techniques may require revision of the RMPA with additional environmental review and public-involvement opportunities to evaluate changes to the plan.

The adaptive management process is a continuous cycle through the following four phases:

- **Planning:** Management guidelines, actions, and objectives are developed. Monitoring techniques and adjustment thresholds are designed based upon available information, past monitoring information, and current scientific information.
- **Implementation:** Objectives, guidelines, actions, and constraints developed and identified during planning processes at all scales are applied as on-the-ground management.
- **Monitoring:** Monitoring includes all efforts to document the current state of implementation, the resulting resource conditions as measured through indicators, and the effectiveness of the implementation. Monitoring is derived from existing data and techniques, is outcome based, technically feasible, affordable, and operationally attainable. Two types of monitoring occur:
 - Implementation monitoring: Determines whether the decisions and proposed actions developed during planning are actually being implemented.
 - Effectiveness monitoring: Determines whether implemented decisions and actions have changed resource condition indicators. If so, determines whether the changes in the indicators are consistent with meeting the objectives.

When additional monitoring is required to fill information gaps, standardized monitoring techniques will be used where available before new techniques are developed. The BLM staff will be responsible for developing monitoring and adaptive management protocols and ensuring that documentation is sufficient to facilitate feedback into the adaptive management process.

- **Modification Evaluation:** The part of the process through which specific objectives, actions, monitoring thresholds, and even resource condition indicators may be modified to better meet the goals of the plan.
- **Timing Evaluation:** Determines the need for and time frames during which changes to planning, implementation, and monitoring should occur. The BLM staff will also be responsible for ensuring that monitoring results and other new information is compiled and evaluated in accordance with the two evaluation phases.

Recreation Development Phasing – Alternative D

Alternative D introduces a 2-phased approach to recreation facility development. The purpose of these phases is to ensure effective recreation management under Phase 1 prior to initiating Phase 2. Effectiveness is defined in Chapter 2 with broad goals. These goals are further defined here:

Goal	Definition	Monitoring/Reporting
		Interval
Safe and adequate public access to	Sufficient parking is provided on-	Monthly monitoring, summarized
accommodate the recreation needs	site to reduce conflicts, facilities	in quarterly report
of the region.	are maintained regularly, including	
	removal of trash and/or graffiti.	
Trails maintained in good or very	Ruts, holes, braking bumps, and	Monthly monitoring, summarized
good condition	other damage to the trail tread	in quarterly report
	occurring through trail use will be	
	filled and resurfaced to the original	
	trail condition as determined by	
	the adjacent trail surface.	
	Maintenance will be performed as	
	needed to prevent sedimentation	
	to sensitive drainages and improve	
	public safety on the trail.	

	If there are erosional features	
	leading from trail tread to an	
	adjacent drainage, initial steps	
	would be taken within 1 month of	
	initial discovery (weather and soil	
	conditions permitting) to address	
	resource concerns.	
Unauthorized social trails	Unauthorized social trails are	Monthly monitoring, summarized
addressed in timely manner	physically closed within 1 month of	in quarterly report
	discovery. Unauthorized trails are	
	rehabilitated (as necessary) within	
	6 months of discovery.	
Unauthorized visitation to sensitive	Unauthorized entry detected at key	Monthly monitoring, summarized
habitat areas is infrequent	observation points in RMZ2 and	in quarterly report
	RMZ4 would be addressed through	
	signage and/or patrol, if they	
	increase by more than 5% in any	
	reporting interval after opening of	
	the property to public use.	

Monitoring

Monitoring will help determine if planning objectives are being met and allow the BLM to identify adaptive management necessary to achieve the plan goals. The information developed through monitoring will feed the evaluation process that may alter decisions or the timing of decisions, change implementation or maintain current management direction. The key step in developing a monitoring strategy is to define the questions that must be answered to evaluate the attainment of broad-scale management goals and objectives in the RMP. These questions will be used to focus monitoring on appropriate issues and avoid gathering irrelevant information. Focused monitoring also helps to keep costs within agency budgets. The first step is to select key monitoring elements and indicators that can be effectively sampled and can provide desired data at a reasonable cost. An example of such indicators is provided in the table below. A standard set of core data elements will be collected. Core data, including data necessary to evaluate achievement of the applicable Land Health Standards, are the minimum set of variables to be collected at all scales. Photomonitoring points will be established prior to project activities to determine where additional data should be collected.

Standardized measurement and reporting protocols will be developed in an Implementation Level Monitoring Plan because the need for consistency is essential. To the extent practicable, the Assessment, Inventory, and Monitoring (AIM) program will be incorporated into the implementation level monitoring plans (Toevs et al. 2015) and relevant data will be collected such that it is consistent with AIM methodology BLM IM 2016-139. Where possible, monitoring protocols will be designed to integrate existing monitoring efforts and will address multiple questions. Also, the design will have the flexibility to add data elements required to answer new questions raised during subsequent site-specific planning. Determining the specific monitoring approach for any question requires knowledge of detailed information on existing conditions. For example, trend assessment first requires gathering baseline or status information. Just a few of the projects that have occurred or will be anticipated during implementation of the RMP include: Landscape scale vegetation assessments; overviews for paleontology, history and archaeology; planning area-wide surveys for special status species; and visitor use inventories. Data from these projects will be vital to monitoring trends. A monitoring strategy must also identify the techniques needed to acquire a complete picture of the structure and pattern of a resource (i.e., remote sensing, sample-based studies, modeling).

A monitoring system requires the development and use of indicators and thresholds based on guidelines. Thresholds are measurable indicators of when a change in management needs to be made. For example, the specific amount of resource impacts that would be tolerated before a trail would be closed to public use and rehabilitated is a threshold. The development of indicators and thresholds will occur during the early part of plan implementation. Until these measures are in place, evaluations may not be completed. Indicators and thresholds will be periodically evaluated to assure that they remain appropriate for the Planning Area.

Monitoring Plan Indicators

Major Uses and Resources	Indicators to be Monitored
Land Health	- Ground Cover by Type and Plant Species
	- Evidence of Soil Erosion, Loss of Soil Depth
	- Riparian Functional Condition
	- Water Quality
	- Species of Concern Monitoring
Recreational Use	- Trail Condition
	- Numbers of Recreational Conflicts
	- Numbers of Search and Rescue Incidents
	- Erosion/Resource Damage Associated with Trails – See Land Health
	- Occurrences of New Trails
	- Evidence of Human Waste and Garbage
	- Vandalism
	- Area of Impact – See Land Health, Fish & Wildlife, & Spec. Stat. Sp.
	- SRP Stipulation Requirements
	- Visitor Experience
	- Unauthorized entry into closed areas
Cultural Resources	- Evidence of Looting/Vandalism
	- Changes in Site Integrity
	- Unauthorized Use of Historical Facilities
Paleontological	- Evidence of Looting/Vandalism
	- Changes in Site Integrity
Vegetation	- See Land Health Indicators
Livestock Grazing	- See Land Health Indicators

Major Uses and Resources	Indicators to be Monitored	
	-Residual Dry Matter	
Wildland Fire	- Fuel Characteristics	
	- Burn Area Recovery	
	- Rehabilitation Success	
Fish & Wildlife	- Population Numbers/Trends	
	- Impacts to Habitat – See Land Health Indicators	
Special Status Species	- See Land Health Indicators	
	- See Fish & Wildlife	
	- See Water Resources	
Visual Resources	- Changes in Visual Quality	
	- Changes to Visual Intrusions/Contrast	
	- Uses comply with VRM Class	
Water Resources	- See Land Health Indicators	
	- Flows and Rates for Anadromous Fish	
Soils	- See Land Health Indicators	
Public Information/ Visitor	- Brochure Distribution	
Services	- Adequacy of Information	
	- Visitor Satisfaction	
	- Demand for Facilities	
	- Numbers of Search and Rescue Incidents	
	- Numbers of Law Enforcement Incidents	

RMP EVALUATION

Evaluations are the mechanism that reviews implementation of the RMP at several levels to see whether management goals and objectives are being met and determine whether management direction is sound. Evaluation examines management actions to determine whether they are consistent with thresholds established for the achievement of the objectives. If they are not, evaluation identifies the reasons. The conclusions are then used to make recommendations on whether to continue current management guidelines, to make changes in management practices to meet plan goals and objectives, or to amend the plan objectives or decision to better meet the capabilities of the land and the intent of the legislation.

Reviews of the evaluation process will be periodically scheduled to ensure that:

- Monitoring data is gathered sufficiently in advance to be used effectively in the evaluation process.
- Evaluations are conducted at intervals that allow for adjustments to be made in management direction before crises develop. RMP Evaluations made too frequently will not detect changes in ecosystems because cost-effective monitoring systems cannot detect changes at this scale. On the other hand, if plan evaluations are delayed for too long or are not conducted at all, irreversible changes may take place without detection. RMP evaluations will be conducted every five years to assess the progress toward achieving broad-scale objectives and desired future conditions.

The evaluation process will review progress toward RMP implementation as well as new, scientific research, monitoring data, and other information on changed resource or social circumstances that that needs to be considered in future management. The evaluation may conclude:

- Management actions are moving resources toward the desired objectives. In this case, management actions are affirmed and may not need to be adjusted.
- Further research needs to be initiated or that actions must be adjusted to achieve objectives of the Plan more efficiently. If new information or research demonstrates better ways to achieve plan objectives, changes in activity planning and project implementation may be made.
- The objectives should be altered based on the new information. If the new information indicates that plan objectives should be reconsidered, a plan amendment may be required that will reexamine desired future conditions and ways to reach those conditions.

Appendix D: Project Design Features

Introduction

Project Design Features (PDFs) are actions that the BLM will take at the time of implementation to minimize the impact of the management action. This appendix defines the PDFs from which the BLM would select when implementing projects within C-CD in order to best eliminate or minimize impacts.

The PDFs below address activities that would be allowed under one or more of the draft alternatives. They are a compilation of commonly employed practices developed through professional experience or research and designed to minimize impacts to resources. They include, but are not limited to, avoidance, structural and nonstructural treatments, operations, and maintenance procedures. Although normally preventative, PDFs can be applied before, during, and after planned activities. Project Design Features are not intended to serve as detailed engineering specifications.

As noted in the alternatives, in the event that the approved RMP for C-CD includes the use of herbicides and pesticides as a tool for implementation, Bureau mandated Standard Operating Procedures (SOPs) would be applied. Some of the standard operating procedures serve the function of PDFs. These standard operating procedures are located in Appendix B the BLM's 2007 Record of Decision for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Final Programmatic EIS (BLM 2007) and Appendix A of the BLM's 2016 Record of Decision for Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Final Programmatic EIS (BLM 2016).

Best Management Practices (BMPs) are practices or a combination of practices that have been determined to be most effective and practicable in preventing or reducing impacts of management actions. Many of the PDFs are also BMPs.

Selection and Application of PDFs

For actions implemented consistent with this RMP, BLM decision-makers will confer with BLM specialists and select appropriate and applicable PDFs from the lists below. The BLM will select PDFs based upon site-specific conditions, presence of listed species, or their critical habitat, technical feasibility, resource availability, and the resources potentially impacted. Not all of the PDFs listed will be selected for any specific management action.

The PDFs below do not provide an exhaustive list of all possible measures. During project planning and analysis, the BLM may identify measures not listed below for use in addition to a selection from this appendix. All measures will be applied in conformance with the RMP management direction.

Monitoring and Adjustment

The BLM will monitor the application of PDFs through implementation and effectiveness monitoring. Post-project implementation monitoring will evaluate whether the BLM applied the PDFs selected during the project planning process. Effectiveness monitoring will evaluate whether resource objectives were met using the PDFs.

The BLM will modify PDFs if monitoring demonstrates that resource objectives are not being met. The BLM will make changes to individual PDFs, or additions or deletions to the PDF lists below, through plan maintenance, consistent with CFR 1610.5–4.

PDF Lists

The PDF lists below address core activities that may take place within the Monument under one or more of the draft alternatives.

Biological Resources

- 1. Surveys will be conducted at the appropriate time of year to detect sensitive species and important biological resources.
- 2. Surveys will comply with current BLM, USFWS, NMFS and CDFW protocols, to the extent consistent with Federal law.
- 3. Critical and essential habitat for federal listed anadromous salmon and steelhead will be incorporated into trails planning

Wetland-Riparian Habitat

- 4. Stream crossings will be designed to minimize adverse impacts to soils, water quality, and riparian vegetation and provide for fish passage as appropriate.
- 5. Stream crossings of critical habitat for listed anadromous fishes will require channel spanning bridges or use of existing channel-spanning infrastructure (e.g. existing earthen dams) and the BLM will employ control measures to prevent erosion into the stream.
- 6. Trails will be designed to minimize short- and long-term damage to soils, vegetation, and wetlands. Boardwalks will be built to protect soils and wetland areas and to avoid take of listed frogs.

Railings and interpretative signs will be used to keep people on the trails and from entering habitat for listed species.

7. The spread of non-native species between waterbodies will be prevented by cleaning equipment of debris and residue that may contain biological dispersal propagules (seeds, eggs, larvae, etc.)

Rehabilitation/Restoration

- 8. All disturbance features including abandoned roads and trails and other significant disturbed sites (abandoned quarries) will be evaluated, ranked by priority, and restored to natural conditions.
- 9. Disturbed sites will be restored to natural conditions using site-appropriate measures and timelines developed in consultation/coordination with BLM resource specialists.
- 10. Restoration plans and requirements will be developed on a case-by-case basis and include post-project management
- 11. Local, native plant species and to the extent practical, local ecotypes/genotypes, will be used for restoration. Non-native plant species with no persistence and no ability to spread, such as sterile barley, may be used as temporary erosion control.
- 12. The Sudden Oak Death (SOD) pathogen *Phytophtora*, is locally common in wildlands of the north Monterey Bay area, as well as in plant nurseries. Careful inspection should be made of any native plants used in restoration that are imported from SOD areas, including nurseries.

Non-native Species

13. Projects and activities on BLM lands will include measures to minimize the introduction and spread of non-native plant and animal species.

- 14. Certified weed-free erosion control, soil and soil amendment (e.g. compost), and road base aggregate will be used to the extent practical. Importing soil from locations outside of C-CD will be strongly discouraged to prevent the import of weed seeds. Moving large volumes of soil between separate watersheds of C-CD will be strongly discouraged to prevent the spread of weed seeds. Moving chipped plant material between separate watersheds of C-CD will be strongly discouraged to prevent the spread of weed seeds (e.g. French broom) and Sudden Oak Death (SOD). Chipped plant material produced during fuel break construction should remain onsite where it is chipped.
- 15. Non-native species control methods will follow integrated pest management principles.
- 16. The use of pesticides shall comply with applicable Federal and State laws. BLM policy requires project-specific NEPA analysis and the issuance of a Pesticide Use Permit before the application of pesticides. Only products on the California BLM's list of approved pesticides may be used.
- 17. The release of non-native species will be prohibited, other than those legally introduced for biological control.

Special Status Species

Many measures to protect threatened and endangered species have been developed as a result of formal consultations between the BLM and USFWS on a variety of BLM actions. BLM has also developed BMPs, SOPs, and conservation measures and design criteria to mitigate specific threats to sensitive species. As additional measures are developed to minimize the adverse effects from future management activities, they are likely to become additional SOPs.

Special status species survey, avoidance, take minimization, mitigation measures, compensation, and monitoring measures required in biological opinions (programmatic and site-specific) will be incorporated into project design attached as conditions of approval, grant, or lease terms and conditions, or otherwise implemented in all BLM projects and authorizations that may affect listed species. These measures may change due to new information or new biological requirements. Current practices are found below:

General Guidelines for Conserving Habitat and Minimizing Project Impacts

- 1. Habitat disturbance will be minimized and conducted in a manner that reduces, as much as possible, the potential for take of individuals of a listed species.
- 2. Habitat improvement projects will be implemented where necessary to stabilize or improve unsatisfactory or declining wildlife habitat condition. Such projects will be identified through habitat management plans or project plans.
- 3. Whenever possible, management activities in habitat for special status species will be designed to benefit those species thorough habitat improvement.
- 4. Unless specified for reducing impacts, actions will be minimized during evening hours when some listed species are active and vulnerable to vehicle or equipment-induced injury or mortality will be minimized.
- 5. Food items and garbage will be contained in closed containers and removed daily.
- 6. The protective measures being implemented for listed species shall be extended to candidate and proposed species in the project area to the maximum extent practicable.

Water Resources

California's Non-Point Source (NPS) Program Plan (adopted by SWRCB in December 1999) identifies 61 Management Measures (MMs) which constitute the State's BMPs for controlling NPS pollution. MMs applicable to BLM program and management actions include, but are not limited to, those that pertain to chemical management (pesticide use), route construction and management, soil erosion and sediment control, hydromodification, and riparian areas and wetlands.

The BLM demonstrates compliance with the Clean Water Act and State water quality objectives by implementing PDFs that are consistent with the State's MMs. A suite of PDFs have been developed by various agencies, including the BLM, to address non-point source pollution on Federal lands.

- 1. Protect the existing water quality improvement functions of riparian areas and wetlands as a component of NPS programs. Degraded riparian areas and wetlands should be restored where restoration of such systems will abate polluted runoff.
- 2. Employ soil erosion and sediment control measures during watershed restoration activities to reduce or eliminate erosion and sediment transport or incidental sediment discharge. Soil erosion control measures include seasonal limits on operations, construction of runoff dissipation features (e.g rolling dips), placement of straw rolls and hay bales, mulching, and seeding to re-establish vegetative cover.
- 3. Road and trail construction/reconstruction shall utilize route design measures and BMPs to minimize soil erosion and sediment transport to riparian areas and wetlands. This can be accomplished by following designs for road systems, incorporating rolling dips and adequate drainage structures, properly installing stream crossings, avoiding road construction in streamside management areas, removing debris from streams, and stabilizing areas of disturbed soil such as road fills.
- 4. In areas with 303D listing, work with soil and water specialists to design parking or roads which help to reduce non-point source pollution. Address area contributing to non-point source pollution as part of the project.
- 5. Manage roads and trails to prevent sedimentation, minimize erosion, maintain stability, and reduce the risk that drainage structures and stream crossings will fail or become less effective. Components of this measure include inspections and maintenance actions to prevent erosion of road surfaces and to ensure the effectiveness of stream-crossing structures. This measure also addresses appropriate methods for closing roads that are no longer in use.
- 6. Promote revegetation of areas disturbed during road or trail construction.
- 7. Do not apply chemicals within 100 feet of perennial streams or channels with beneficial use(s) recognized by the State.
- 8. Do not apply chemicals directly into intermittent streams or channels with beneficial use(s) recognized by the State.
- 9. Avoid aerial application of chemicals when wind speeds would cause drift or where listed aquatic species habitat cannot be avoided.
- 10. Water withdraw from streams (for use in construction and dust abatement, as necessary) will employ necessary screening and reduction of pumping rates to prevent entrainment of aquatic species. Access to streams for purposes of water withdraw will minimize disturbance to streambanks and riparian vegetation.

Soil Resources

- 1. Minimize soil disturbance by limiting developments to the smallest area possible and by using previously disturbed areas and existing roads to the extent practicable.
- 2. Minimize soil disturbance on steep slopes.
- 3. Consider restricting access and suspend authorized projects during wet weather when soil resources will be adversely impacted by rutting, compaction, and increased erosion.
- 4. Minimize fire control lines to the width necessary to effectively stop fire spread. Rehabilitate lines by smoothing out berms and installing waterbars prior to the rainy season.

- 5. Assess the need for soil stabilization and erosion control following wildfires. Use the Emergency Stabilization and Rehabilitation process to determine and implement needed actions.
- 6. Actively patrol public lands to prevent unauthorized off-road travel. If unauthorized routes are found, block access to minimize further soil disturbance and reduce the potential for erosion through rehabilitation action.

Cultural Resources

- 1. Prior to the implementation of all proposed actions, cultural resource compliance with the National Historic Preservation Act, Section 106 and 110, will be coordinated pursuant to the current and any subsequent versions, supplemental procedures and amendments of the National Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which the BLM Will Meet its Responsibilities Under the National Historic Preservation Act and the State Protocol Agreement Among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada Historic Preservation Officer Regarding the Manner in Which the Bureau of Land Management Will Meet its Responsibilities Under the National Historic Preservation Act and the National Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation. Should the either of these agreements be terminated, the BLM would comply with requirements under Sections 106 and 110 of the National Historic Preservation Act (NHPA) through the implementation of procedures put forth in 36 CFR 800.
- 2. Archaeologists, law enforcement rangers, resource staff specialists, Native Americans, or designated volunteer stewards will patrol and monitor selected significant cultural resources on public lands in the Central Coast FO to reduce threats from human and natural disturbances.
- 3. The BLM will coordinate with Native Americans, cultural resource specialists, interdisciplinary specialists, conservationists, and interested public, as appropriate, to apply the best available science to determine the amount and type of maintenance desired at cultural sites that are threatened by human or natural causes and how best to mitigate identified problems.
- 4. The Central Coast FO will continue to support access by the Native Americans to traditional material collecting and gathering locations and ceremonial places. It is a federal policy to protect and preserve for the American Indian, the inherent right of freedom to believe, express, and exercise their traditional religions, including access to religious sites, use and possession of sacred objects, and freedom to worship through ceremonies and traditional rites (American Indian Religious Freedom Act of 1978). Executive Order 13007, Indian Sacred Sites (1996), directs federal agencies to manage federal lands in a manner that accommodates Indian religious practitioners' access to and ceremonial use of Indian sacred sites and that avoids adversely affecting the physical integrity of such sacred sites, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions.
- 5. Continue open dialogue and share information with Native Americans and ethnic groups that have cultural ties to lands managed by the Central Coast FO.
- 6. Conduct cultural resource inventory and evaluations for all projects that require soil disturbance or cause a visual intrusion on a historic property. The presence or absence of cultural properties would be determined prior to the approval of any surface-disturbing activity. When cultural properties are present, the project would be redesigned or modified

to safely avoid impacting cultural sites or steps would be taken to adequately mitigate impacts through project redesign or data recovery.

- 7. Soil erosion can severely impact surface and subsurface cultural resource integrity. Potential secondary impacts on cultural resources caused by erosion would be analyzed during project planning. Residual impacts on cultural resources outside the project area would be carefully considered in surface-disturbing projects.
- 8. Identification, safe avoidance, or mitigation of potential adverse effect on cultural properties shall be required as a condition of a lease, permit, license, and other federal undertakings for both external and internal projects.
- 9. Any late discovery of a cultural or paleontological resource during a project would be reported to the authorized officer. All activity in the immediate discovery area associated with the project would be suspended until an evaluation of the discovery is made by the archaeologist to determine appropriate actions to prevent the loss of significant cultural, paleontological, or scientific values. A written authorization to resume the project, or to take appropriate mitigation action, would be issued by the authorized officer.

Recreation

The following criteria are used to determine suitable locations for new trails and trail reroutes within C-CD. This document utilizes terminology from the "Roads and Trails Terminology" (Technical Note 422, Nov. 2006). These criteria are to be followed as guidelines. Not all of the criteria can be met on every segment of every trail. Their purpose is to help create sustainable, low maintenance trails that provide quality recreation experiences based on predetermined trail management objectives (TMOs). Specialty trails requiring higher maintenance may be allowed in appropriate locations.

- 1. Access for and use by the physically challenged will be considered in all project planning.
- 2. Create loops and avoid dead end trails. All trails should begin and end at a trailhead or another trail. A well-planned stacked loop trail system offers recreationists a variety of trail options. Easier, shorter loops are arranged close to the trailhead, with longer, more challenging loops extending further beyond the trailhead. Occasionally, destination trails to a point of interest will require an out and back trail, but only if they cannot be reasonably incorporated into a loop.

Identify control points and use them to guide trail design and layout. Control points are specific places or features that influence where the trail goes. Basic control points include the beginning and end of the trail, property boundaries, intersections, drainage crossings, locations for turns, and other trails. Positive control points are places where you want users to visit, including scenic overlooks, historic sites, waterfalls, rock outcroppings, lakes, rivers and other natural features or points of interest. If the trail does not incorporate these features, users will likely create unsustainable social trails to get to them. - Negative control points are places you want users to avoid, such as low-laying wet areas, flat ground, extremely steep cross slopes or cliffs, unstable soils, environmentally sensitive areas, sensitive archaeological sites, streams with listed species, safety hazards, and private property.

3. Knowing these control points provides a design framework. Try to connect positive control points while avoiding the negative control points. Use cross slope and avoid flat ground whenever possible. The trail tread should generally run perpendicular to the cross slope and should utilize frequent grade reversals. This is the best way to keep water off the trail. Use curvilinear design principles to create a trail that follows the natural contours of the topography, sheds water, blends with the surrounding terrain, and provides fun recreation opportunities. The following grade guidelines and the PDFs listed in specialty sections, will help determine appropriate tread locations:

- a) The Half Rule: "A trail's grade shouldn't exceed half the grade of the hillside or side slope (cross slope) that the trail traverses. If the grade does exceed half the side slope, it's considered a fall-line trail. Water will flow down a fall-line trail rather than run across it. For example, if you're building across a hillside with a (cross slope) of 20 percent, the trail tread grade should not exceed 10 percent." (IMBA 2004). Steeper cross slopes allow more flexibility for sustainable tread grades while flat or low angle cross slopes can be problematic. There is an upper limit to this rule. Sustaining a 24 percent tread grade, even on a 50 percent cross slope is unlikely. Additionally, trail segments may break this rule on durable tread surfaces such as solid rock.
- b) The Ten Percent Average Guideline: The average trail grade over the length of the trail should be 10 percent or less for greatest sustainability. Short sections of the trail may exceed this, but overall grade should remain at 10 percent or less.
- c) Maximum Sustainable Grade: This is the upper grade limit for those short trail segments that push the limits of the previous two guidelines. It is determined by a site-specific analysis 193 based on TMO's, environmental conditions, and observations of existing trails what's working and what's not?
- d) Grade Reversals: Frequent changes in direction of tread grade (gentle up and down undulations) will ensure that water is forced off the trail at frequent intervals.
- 4. Locate trails in stable soils.
- 5. Drainage crossings are key control points and should be selected carefully. Consider both the trail's impact on the drainage (soil erosion and sedimentation), and the drainage's impact on the trail (changing tread surface, water channeling onto trail). The trail should descend into the climb out of the drainage to prevent water from flowing down the trail. Avoid long or steep entries into drainages. Design grade reversals into the trail on each side of the approach to minimize water and sediment entering from the trail. Site trail drainage crossings on rocky stream beds or bedrock, wherever possible.
- 6. Avoid switchbacks. Switchbacks are difficult, time-consuming, and expensive to construct, and require regular maintenance. Users often cut them, causing avoidable impacts. Utilizing curvilinear design principles eliminates the need for most switchbacks. Climbing turns are easier to construct and maintain and utilize natural terrain features (benches, knolls, rock outcrops) to change the direction of a trail.
- 7. Avoid ridge tops. Ridge tops are often primary transportation corridors for wildlife and were often used by Native Americans as travel routes. Noise from ridge top trails is broadcast over a wide area. Locate trails on side hills, off ridge tops, using ridges and watersheds as natural sound barriers to isolate noise.
- 8. Use vegetation and other natural features to conceal the trail and absorb noise. Try to minimize the visual impact of the trail by following natural transitions in vegetation or soil type. A trail near the base of a side slope or on rimrock is usually less visible then a mid-slope trail. Denser vegetation will hide a trail, lessen noise transmission, and can dissipate the energy of rainfall on the bare soil of the trail tread.
- 9. Carefully design intersections to avoid safety problems. When designing bicycle use trails, be aware of sighting distance and sight lines. Collisions can be avoided if recreationists can see each other. Avoid four-way intersections. Offsetting the cross traffic helps reduce speeds and reduces the risk of collisions.
- 10. Sites that cannot be maintained to acceptable health and safety standards will be closed until deficiencies are corrected.

Visual Resources

- 1. Require projects to be evaluated against the context of their unique environment and regulate structure height, setbacks and design to protect visual and aesthetic resources.
- 2. Protect significant public vistas from all publicly used roads, trails, and vista points by minimizing disruption of landform and aesthetic character caused by parking areas, signs, and structure design. Provide necessary grading design and landscaping to screen development which is unavoidably sited within these vistas
- 3. Prohibit the placement of new permanent structures that would be visible from the beach.
- 4. Require parking areas, signs, and structures to be sited out of public view, and obscured by natural landforms and/or existing vegetation. Where proposed projects are unavoidably visible, identify those visual qualities worthy of protection and require the siting, architectural design, grading design, and landscaping to mitigate the impacts on those visual qualities.
- 5. All grading and land disturbance projects shall blend contours of the finished surface with the adjacent natural terrain and landscape to achieve a smooth transition and natural appearance and incorporate only characteristic or indigenous plant species appropriate for the area.

Appendix E - Wild & Scenic River Study for Cotoni-Coast Dairies

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As part of the current Resource Management Plan amendment (RMPA) process being conducted by the US Department of the Interior, Bureau of Land Management (BLM), Central Coast Field Office (CCFO), an inventory and analysis of rivers and streams within the Cotoni-Coast Dairies (C-CD) unit of the California Coastal National Monument (CCNM) is required to determine whether rivers or segments of rivers are "eligible" and "suitable" for consideration in the National Wild and Scenic Rivers System (NWSRS).

I. Statutory Background

The Wild and Scenic River Act (WSR Act) was enacted by Congress in 1968 with the realization that, "the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes." Rivers that fall under this designation have to meet criteria of being free flowing from WSR Act, Section 16(b) "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway") and possess outstandingly remarkable values (ORVs: scenic, recreational, geologic, fish, wildlife, cultural, historical, or other). The act provides for protection for included river segments so they are "preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."

Rivers and river segments designated under the act are protected and managed to maintain their free flowing character and values that led to designation. Section 10 of the WSR Act mandates, "each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values." Protections put in place for designated segments are intended to protect and/or enhance the river from its current state. If a river or segment is added to the NWSRS a specific plan based on the characteristics of an area will be created, tailored to the specific qualities and competing factors of an area.

Most rivers are added to the NWSRS through federal legislation, after a study of the river's eligibility and suitability for designation. Under Section 5(d)(1) of the WSR Act, federal agencies are required to consider and evaluate rivers on lands they manage for potential designation in conjunction with the preparation of their RMP. The BLM Manual, 6400, further defines and establishes the policy, program direction and procedural standards for fulfilling the requirements of the WSR Act. The NWSRS study process has three distinct steps:

1. Determine what rivers or river segments are eligible for NWSRS designation;

2. Determine the potential classification of eligible river segments as wild, scenic, recreational or any combination thereof; and

3. Conduct a suitability study to determine if the river segments are suitable for designation as components of the NWSRS.

This report documents the three steps of the process for the streams in the planning area.

II. Eligibility of Rivers & Streams

Identification

The initial step in the eligibility determination was to create an inventory of all potential rivers and river segments falling on lands administered by the BLM at C-CD. A variety of sources were reviewed to identify waterways which could have potential for wild and scenic river designation. They include the USGS National Hydrography Dataset, river segments identified by state or local government, river segments identified by the public during formulation of the C-CD RMPA/EA, and river segments identified by the planning team as having potential to meet Wild and Scenic River eligibility requirements. Intermittent streams were added to the inventory based on input from BLM specialists where potential outstandingly remarkable values (ORVs) may exist. None of the river segments being considered are identified on the U.S. National Parks Service's Nationwide Rivers Inventory List, or the Outstanding Rivers List compiled by American Rivers, Inc. (1988).

Per the WSR Act, an eligible segment must be free flowing and possess one or more ORV(s). River values are evaluated within a region of comparison and are identified as outstandingly remarkable if the value is significant on a regional or national scale. Eligibility decisions are based solely on the values of a river. Managerial constraints and other factors are considered during the suitability determination stage of the process. If a river segment is determined eligible, it is then assigned a tentative classification (wild, scenic, recreational) based on the level of human development in the river corridor.

The C-CD Interdisciplinary Team is made up of specialists covering resources and programs under the field office jurisdiction. This team reviewed the initial inventory list and added segments potentially containing ORVs. The interdisciplinary team reviewed the data collected and determinations made during field visits to each segment to provide a final determination on eligibility for each segment. Determinations of free-flowing and ORVs rely on professional judgment making the collective knowledge and experience of this team critical to the eligibility determination process.

There are six perennial and intermittent streams totaling 20.1 miles located on C-CD including Molino Creek, Agua Puerca (Ferrari) Creek, San Vicente Creek, Liddell Creek, Yellow Bank Creek, and Laguna Creek. The watersheds of several of these streams are entirely or almost entirely on C-CD. The larger streams, Laguna Creek and San Vicente Creek, have watershed areas that extend well beyond the C-CD boundary. The streams tend to exhibit "flashy" (rapidly rising and falling) winter flows in response to storm events, which themselves are intensified by the orographic effect of the mountains. As the dry season progresses and the soil dries out, the streams continue to be fed by seeps and springs. These streams segments are identified in Figure 1 and are listed in Table 2 below.

Eligibility Determination

Per the WSR Act, an eligible segment must be free flowing and possess one or more ORV. If a river segment is determined eligible, it is then assigned a tentative classification. The suitability stage of the assessment considers a variety of factors beyond resource values in determining the segments for designation. Each identified river segment was evaluated to determine whether it is eligible for inclusion in the NWSRS.

The WSR Act defines free-flowing as, "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway." A segment does not need to be perennial to be qualified as free-flowing. Intermittent watercourses with regular and predictable flows, enough to maintain the segment's ORVs, can qualify, provided the flow comes from a natural source. Watercourses that only flow from unpredictable events such as flash floods are generally not free flowing. In determining if a segment is free-flowing, "evaluation should focus on normal water years, with

consideration of drought or wet years during the inventory." Free flowing does not necessarily connotate natural hydrology; existence of small dams, diversion works, or other minor structures at the time the river segment is being considered shall not automatically disqualify it.

Outstandingly Remarkable Values and their Region of Comparison

A variety of values were evaluated for each segment to determine if they are Outstandingly Remarkable. The WSR Act stipulates that ORVs of a river segment will be in their immediate environments and need to be river related. This means in the vicinity of the river (with a 0.25-mile preliminary boundary per BLM Manual 8351) or created by or exists because of the river. Potential ORVs include scenic, recreational, fish, wildlife, cultural, and historic values, and other similar values. Determination of ORVs relies on a professional assessment of the values associated with a river based on objective, scientific reasoning. An ORV, "would be one that is a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary". This report documents the reasoning and justification for declaring segments eligible. Each value was evaluated over a Region of Comparison. Values were evaluated based on the ecoregion the river segment is located within, the California Coast Ranges, within the Pacific Border Province (California Coastal Commission 1987).

Scenic - The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features or attractions. The BLM Visual Resource Inventory Handbook, H-8410-1, may be used in assessing visual quality and in evaluating the extent of development on scenic values. The rating area must be scenic quality "A," as defined in the BLM Visual Resource Inventory Handbook.

When analyzing scenic values, additional factors, such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse on most of the river or river segment.

The scenic designation is used when the landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features or attraction. Additional factors, such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed, can also be considered when analyzing scenic values. Scenery and visual attractions may be highly diverse over most of the public lands involved, are not common to other waterways in the region, and must be of a quality to attract visitors from outside the area.

Recreational - Recreational opportunities in the subject river corridor are or could be popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare in the region. River-related opportunities include sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Such a recreational opportunity may be an ORV without the underlying recreational resource being an ORV; for example, fishing may be an ORV without the fish species being an ORV. The river may provide settings for national or regional usage or competitive events.

Geologic - The river area contains one or more examples of a geologic feature, process, or phenomenon that is unique or rare in the region of comparison. The features may be in an unusually active stage of development, represent a textbook example, or represent a unique or rare combination of geologic features, such as erosional, volcanic, glacial, or other geologic feature.

Fish - Fish values include either indigenous fish populations or habitat or a combination of these river-related conditions, described as follows:

a. Populations—The river supports nationally or regionally important populations of indigenous resident or anadromous fish species. Of particular significance is the presence of wild stocks or federally or state-listed or candidate, Threatened, Endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an ORV.

b. Habitat—The river provides exceptionally high-quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks or federally- or state-listed or candidate, Threatened, Endangered, or BLM sensitive species. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an ORV.

Wildlife - Wildlife values include either terrestrial or aquatic wildlife populations or habitat or a combination of these conditions, as described below:

a. Populations—The river or area within the river corridor contains nationally or regionally important populations of indigenous wildlife species dependent on the river environment. Of particular significance are species considered unique to the area or populations of federally or statelisted or candidate, Threatened, Endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an ORV.

b. Habitat—The river, or area within the river corridor, provides exceptionally high-quality habitat for wildlife of national or regional significance or may provide unique habitat or a critical link in habitat conditions for federally- or state-listed or candidate, Threatened, Endangered, or BLM sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an ORV.

Cultural - Cultural values are archaeological resources and traditional cultural properties. Archaeological resources are the physical remains of past human activities, whereas traditional cultural properties are locations associated with cultural traditions or religious importance of a living community.

a. Archaeological Resources—The river, or river corridor, has scientifically or culturally valuable locations of past human uses that retain integrity or contains an example of a district, site, building, or structure that is rare or outstanding, is associated with a distinctive style, or is associated with a regionally or nationally important event or person. Examples of such locations are prehistoric or historic archaeological sites or historic structures that are eligible for listing on the National Register of Historic Places or have been designated a National Historic Landmark.

b. Traditional cultural properties—The river or area within the river corridor contains locations of traditional cultural or religious importance to a specified social or cultural group. Examples of traditional cultural properties are a unique plant procurement site of contemporary significance, fishing grounds, ceremonial areas, and historic village locations. Traditional cultural properties may or may not be integrated with archaeological locations.

Historical - The river, or area within the river corridor, has scientific value or contains a rare or outstanding example of a district, site, building, or structure that is associated with an event, person, or distinctive style. Likely candidates include sites that are eligible for the National Register of Historic Places at the national level or have been designated a national historic landmark by the Secretary of the Interior.

Other Similar Values - While no specific evaluation guidelines have been developed for the "other similar values" category, additional values deemed relevant to the eligibility of the river segment should be considered in a manner consistent with the foregoing guidance. Other similar values may include but not limited to, hydrological, ecological/biological diversity, paleontological, botanical, and scientific study opportunities.

To be considered as "outstandingly remarkable", a river related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. Only one such value is needed for eligibility. All values should be directly river related, meaning they should:

- 1. Be located in the river or on its immediate shorelands (generally within ¹/₄ mile on either side of the river);
- 2. Contribute substantially to the functioning of the river ecosystem; and/or
- 3. Owe their location or existence to the presence of the river.

These are the only factors considered in determining the eligibility of a river segment. All other relevant factors are considered in determining suitability. A river need not be navigable by watercraft to be eligible. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain the outstandingly remarkable value(s) identified within the segment.

Potential Classifications for Eligible Segments

River and stream segments determined to be free-flowing and possessing at least one ORV were assigned a tentative classification. There are three possible classifications based on the amount of development, accessibility, and water quality along the watercourse or shoreline. There is some flexibility in this determination, and the final decision relies on professional judgment (Table 1).

	Classification				
Attributes	Wild	Scenic	Recreational		
Water	Free of impoundment	Free of impoundment	Some existing		
Resources			impoundment or		
Development			diversion.		
(impoundments,			The existence of low		
diversions, etc.)			dams,		
			diversions, riprap, or		
			other		
			modifications of the		
			waterway is		
			acceptable, provided		
			the waterway remains		
			generally		
			natural and riverine in		
			appearance.		
Shoreline	Essentially primitive.	Largely primitive and	Some development.		
Development	_	undeveloped.	_		

Table 1. Attributes Leading to Tentative Classification of Eligible River Segment under the Wild a	nd
Scenic Rivers Act of 1968	

	Classification				
Attributes	Wild	Scenic	Recreational		
	Little or no evidence of	No substantial evidence	Substantial evidence		
	human	of	of human activity.		
	activity.	human activity.	The presence of		
	The presence of a few	The presence of small	extensive		
	inconspicuous structures,	communities or	residential		
	particularly those of	dispersed	development and a		
	historic or cultural value,	dwellings or farm	few commercial		
	is acceptable.	structures is	structures is		
	A limited amount of	acceptable.	acceptable.		
	domestic livestock grazing	The presence of	Lands may have been		
	or hay production is	grazing, hay	developed for the full		
	acceptable.	production, or row	range of agricultural		
	Little or no evidence of	crops is	and forestry uses.		
	past timber harvest.	acceptable.	May show evidence		
	No ongoing timber	Evidence of past or	of past and ongoing		
	harvest.	ongoing	timber harvest.		
		timber harvest is			
		acceptable,			
		provided the forest			
		appears			
		natural from the			
		riverbank.	N 111 111		
Accessibility	Generally inaccessible	Accessible in places by	Readily accessible by		
	except by trail.	road.	road or		
	No roads, railroads, or	Roads may	railroad.		
	other provision for	occasionally reach or	The existence of		
	venicular travel within the	The evictor of chart	parallel roads or		
	niver area.	the existence of short	ranfoads on one or		
	A few existing foads	succession of longer	bridge crossings and		
	the river gree is	stratches of	other river access		
		inconspicuous roads or	points including		
		railroads is acceptable	fords is acceptable		
Water Quality	Meets or exceeds Federal	No criteria prescribed by	the WSR Act The		
Water Quanty	criteria or Federally	Federal Water Pollution	Control Act		
	approved state standards	Amendments of 1972 has	ve made it a national		
	for aesthetics for	goal that all waters of the	US be made fishable		
	propagation of fish and	and swimmable. Therefore	re rivers will not be		
	wildlife normally adapted	precluded from scenic or	recreational		
	to the habitat of the river	classification because of	poor water quality at		
	and for primary	the time of their study. m	ovided a water quality		
	contact recreation	improvement plan exists or is being developed			
	(swimming), except where	e in compliance with applicable federal and state			
	exceeded by natural	laws.			
	conditions.				

Protection of Eligible Segments

Segments determined eligible in this report are subject to protection until the suitability stage is completed. Following suitability determinations, river segments determined non-suitable return to the underlying management prescribed in the effective RMPA, while suitable rivers are managed to maintain their free flowing character and ORVs as per the alternative selected in the Proposed RMPA. During the period between issuing the final eligibility report and the DR, eligible segments identified during a planning process (Section 5(d)(1) of the WSR Act) are offered a different level of protection then river identified for study by Congress (Section 5(a) of the WSR Act). While congressionally authorized study rivers receive protection under the WSR Act, protection of the free-flowing characteristics and ORVs of agency-identified study rivers occurs through other authorities including the National Environmental Policy Act (NEPA), the Federal Lands Policy and Management Act (FLPMA), the Clean Water Act (CWA), and the Endangered Species Act (ESA). For example, a federal or federally permitted action subject to the NEPA process would have to consider the effects on the free-flowing and ORVs of any affected eligible stream segments.

Molino Creek

Description

The Molino watershed supports mixed conifer and redwood forests, scrub communities, native and annual grasslands, and riparian and wetland communities. Grazing leases extend through a majority of the grassland, scrub, and woodland communities. The Molino woodland and scrub communities have a high proportion of grassland openings and grassland/woodland edge. Wildlife diversity is presumed high and relatively disturbance-tolerant. The watershed supports anadromous salmonids and has 40 percent of the known locations of the federally-threatened California red-legged frog on C-CD (Environmental Science Associates [ESA] 2004).

Molino Creek originates beyond the northeastern corner of C-CD, flows through the upper northern part of the property, and eventually ends at the ocean. Although the stream length and watershed size of Molino Creek are relatively small compared to other coastal streams in the region (e.g., Scotts Creek, San Vicente Creek), the stream does provide limited habitat for anadromous salmonids. However, there is at least one impassable barrier downstream of potential spawning and rearing sites where the creek channel cross underneath Swanton Road and drops approximately 6' over a vertical ledge into a small series of plunge pools. The County has a project plan to replace the failed bridge crossing above Molino Creek and restoring the stream to natural grade at this location. There is another impoundment on the creek further upstream on C-CD. At this site a dam constricts the creek and the water flows through a pipe. Due to these features, Molino Creek is not considered to be free-flowing.

Outstandingly Remarkable Values

Molino Creek provides designated critical habitat for the Central California Coast Distinct Population Segment (DPS) of steelhead, which is listed as threatened under the Federal Endangered Species Act (National Oceanic and Atmospheric Administration National Marine Fisheries Service [NOAA Fisheries 2005). The Molino Creek area is also designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (U.S. Fish and Wildlife Service [USFWS] 2010). This species is thought to utilize all of the creeks on C-CD for summer habitat.

Classification

The section of Molino Creek that flows through C-CD has an old dam structure, as well as grazing infrastructure. An old road runs along a portion of the segment, which is also bisected by the county-maintained Swanton Road. Due to the presence of these features, the tentative classification is recreational.

Agua Puerca Creek

Description

Agua Puerca is also located in the northern portion of the Property and enters the ocean at Davenport Landing after flowing through the U.S. Abalone facility. The mouth of the creek consists of an old concrete flume which was previously used by a fish farm to guide returning adult salmon back into the farm. The headwaters of Agua Puerca Creek occur within C-CD.

With respect to the geomorphologic and biotic conditions of the stream, Agua Puerca Creek appears to provide adequate habitat for a small salmonid population although the presence of difficult-to-pass and/or impassable migration barriers are likely to be limiting factors. Within C-CD, a small dam blocks the creek and diverts water to a residence. As is the case with Molino Creek, the small watershed size of Agua Puerca Creek may also limit water availability. Due to the presence of these barriers and impoundments, Agua Puerca Creek is not considered to be free-flowing.

Outstandingly Remarkable Values

Agua Puerca Creek provides designated critical habitat for the Central California Coast Distinct Population Segment (DPS) of steelhead, which is listed as threatened under the Federal Endangered Species Act. The Agua Puerca Creek area is also designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (USFWS 2010). This species is thought to utilize all of the creeks on C-CD for summer habitat. Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

Classification

The section of Agua Puerca Creek that flows through C-CD has an old dam structure, as well as grazing infrastructure. An old road runs along a portion of the segment, which is also bisected by the county-maintained Swanton Road. Due to the presence of these features, particularly the impoundment structure, the tentative classification is recreational.

San Vicente Creek

Description

San Vicente Creek flows through the town of Davenport on its way to the ocean. At the C-CD property boundary, the creek passes through a railroad crossing (an artificial bore through bedrock) and the Highway 1 crossing (a box culvert) before emptying into the Pacific Ocean. These crossings do appear passable to salmonids during at least parts of the migration season.

The San Vicente Creek watershed is dominated by riparian areas and wetlands, grasslands, coastal scrub, and conifer forest. San Vicente Creek is the only stream on C-CD that supports coho salmon and steelhead. In addition, the San Vicente watershed has the most extensive area of redwood forest on the property.

Generally high levels may of sand and silt in the creek may create sub-optimal salmonid conditions, and potentially high stream temperatures due to limited channel shading, particularly in the lower reaches. The source of sedimentation was not identified, but old quarries located upstream of C-CD may contribute to these conditions.

Outstandingly Remarkable Values

San Vicente Creek is one of the few streams south of the Golden Gate Bridge with a coho run. San Vicente Creek also supports a healthy steelhead run, and overall has the best salmonid habitat on C-CD. Both of these species are listed as threatened under the Endangered Species Act [NOAA Fisheries 1999, 2005]. The National Marine Fisheries Service has been stocking San Vicente Creek with coho salmon from a hatchery on nearby Scotts Creek since 2011 (Resource Conservation District of Santa Cruz County [RCD] 2014).

The San Vicente Creek area is also designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (USFWS 2010). This species is thought to utilize all of the creeks on C-CD for summer habitat. Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

Classification

A large portion of the physical watershed of San Vicente Creek is leased by Cemex cement, where mining activities included a large shale quarries; several abandoned quarries; conveyor line; and an extensive road network; operations have now ceased and reclamation activities are underway. The old San Vicente Railroad alignment, which cuts across the north side of the canyon high above the creek, is a private inholding. Lower portions of the watershed support residential housing and structures associated with the town of Davenport, which has dozens of privately owned lots situated immediately adjacent to the BLM-managed lands along the floodplains of the lower portion of San Vicente Creek. Due to the presence of these features, the tentative classification is scenic.

Liddell Creek

Description

The Liddell watershed supports riparian areas and wetlands, grasslands, coastal scrub, live oak woodlands, and conifer forest. There are three branches to Liddell Creek including West Liddell Creek, Liddell Creek, and the East Branch. Liddell Creek appears to originate and terminate on C-CD, and California State Water Resources Control Board (SWRCB) records do not indicate appropriation. The east and west branches originate just beyond C-CD and eventually merge into Liddell Creek.

All three branches of Liddell Creek are exposed to sedimentation due to the soil types in this watershed and past mining operations. This sedimentation appears to be the primary limiting factor in this watershed, although the dense canopy cover in this system has also been shown to limit primary production, and thus food supplies for fish (McGinnis 1991). While dense canopy cover is a natural condition, the input of fine sediments undoubtedly reduces available spawning habitat.

Outstandingly Remarkable Values

All three branches of Liddell Creek support steelhead and are designated as critical habitat for the California Central Coast steelhead (NOAA Fisheries 2005), listed as threatened under the Endangered Species Act.

The Liddell Creek area is also designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (USFWS 2010). This species is thought to utilize all of the creeks on C-CD for summer habitat. Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

The Liddell Creek area contains associations of significant cultural resources, culturally significant landscape features, and ethnobiological resources identified by the Amah Mutsun Tribal Band. Pre-contact cultural resources in C-CD include sites where food gathering and preparation occurred, as well as lithics.

Classification

Lower portions of the Liddell Creek watershed support active and fallow agriculture and contain farm worker housing and farm structures. The county-maintained Bonny Doon Road runs along portions of the creek. Upstream of the BLM-managed segment of this creek, the City of Santa Cruz's Liddell Spring water diversion diverts water for domestic use. The tentative classification of this segment is scenic.

Yellow Bank Creek

Description

Yellow Bank Creek's watershed is prototypical of the general character of C-CD - it rises from sandy beaches and coastal terraces through grassland and coastal scrub to the heavily wooded conifer forest interior at the top of the Property. Yellow Bank Creek has no surface water connection to the ocean. The stream passes through two bore tunnels under the railroad tracks and Highway 1. At the location where the creek exits the downstream bore onto the beach, a 3-foot drop with a very shallow plunge pool may present a migration barrier during parts of the year. Upstream of the reservoir formed by Yellow Bank Dam, natural stream reaches provide both spawning and rearing habitat for salmonids. Due to the presence of this dam, Yellow Bank Creek is not considered free-flowing.

Yellow Bank Creek itself is a small perennial stream that supports a landlocked population of rainbow trout, due to the presence of three migration barriers near the mouth of the stream. Other sensitive resources within the watershed include California red-legged frog, native grasslands, live oak woodlands, redwoods, riparian communities, a high number of raptors, limestone cliffs that may provide nesting habitat for peregrine falcons, and cultural artifacts. Although the coastal terraces are relatively narrow compared to the other terraces on the Property, they still support row crop agriculture. Grasslands are leased for grazing.

Outstandingly Remarkable Values

The Yellow Bank Creek area is designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (USFWS 2010). This species is thought to utilize all of the creeks on C-CD for summer habitat. Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

In 2018, the BLM constructed two off-channel ponds for California red-legged frog. These ponds are already being utilized by the species, although breeding has not yet been documented on site.

Classification

There are numerous existing roads in the Yellow Bank Creek and Laguna Creek watersheds, including routes (or ways) used by grazing leaseholders and the City of Santa Cruz Water Department. An old dam is located just upstream of the BLM property boundary. Due to the presence of these features, the tentative classification is recreational.

Laguna Creek

Description

The majority of the Laguna Creek watershed is located outside of C-CD. Portions of the watershed within the Property include the lower portion of Laguna Creek and the majority of the Y Creek sub-watershed. The upper portions of the watershed are leased for grazing, while the lower portions support row crop agriculture.

Although Laguna watershed has a low erosion hazard potential, portions of the watershed are underlain by the highly erosive Santa Margarita and Lompico Sandstones. Laguna Creek was assigned a moderate rating for both acute and chronic turbidity, indicating that sedimentation is an issue (ESA 2001). Laguna Creek originates near Ben Lomond Mountain and enters the Pacific Ocean just below the BLM property boundary.

Outstandingly Remarkable Values

Both Laguna Creek and Y Creek support anadromous steelhead and are designated critical habitat for this species, listed as threatened under the Endangered Species Act (NOAA Fisheries 2005).

The Laguna Creek area is designated critical habitat for the California red-legged frog, listed as threatened under the Federal Endangered Species Act (USFWS 2010). This species is thought to utilize all the creeks on C-CD for summer habitat. Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

The Laguna Creek area contains associations of significant cultural resources, culturally significant landscape features, and ethnobiological resources identified by the Amah Mutsun Tribal Band. Pre-contact cultural resources in C-CD include sites where food gathering and preparation occurred, as well as lithics.

Classification

The City of Santa Cruz claims a pre-1914 right to appropriate from Laguna Creek, recorded with the SWRCB as Statement of Water Diversion and Use 2042. There are numerous existing roads in the Laguna Creek watershed, including numerous routes used by grazing leaseholders and the City of Santa Cruz Water Department. The tentative classification is scenic.

III. Eligible Segments

The eligibility study for C-CD has determined that three of the segments evaluate met the criteria of freeflowing and possessed at least one ORV. During the suitability phase of the WSR Act process, the support of and coordination with other landowners and users will be analyzed for eligible segments. Table 2 summarizes the eligibility evaluation of all identified river segments. The table includes information on stream segments managed by BLM at C-CD, including the length on BLM property, acreage of BLM property within 0.25 miles of each segment, free-flowing status, outstandingly remarkable value(s), and tentative classification.

	BLM	BLM Acres			Tentative Classification		
River Name/Segment	Length (mi.)	within 0.25 miles	Free Flowing	ORVs ¹	Wild	Sceni c	Recreation al
Molino Creek	0.728	376	Ν	E,F			
Agua Puerca Creek	2.629	768	Ν	E,F			
San Vicente Creek	4.127	1,069	Y	E,F		Х	
Liddell Creek	6.851	1,544	Y	E,F,G		Х	
Yellow Bank Creek	2.558	823	Ν	F			
Laguna Creek	3.173	858	Y	E,F,G		Х	

 Table 2: Wild & Scenic River Inventory for Cotoni-Coast Dairies

1. Outstandingly Remarkable Values

- A Non-existent
- B Scenery
- C Recreation
- D Geology
- E Fish
- F-Wildlife
- G Cultural
- H Historical
- I Other

IV. Suitability of Rivers and Streams

The BLM's policy, direction, and guidance for identifying, evaluating, planning, and managing eligible and suitable WSRs and managing designated components of the National System is contained in Manual 6400, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, Planning, and Management (BLM 2012).

This section describes the determinations made during the suitability evaluation for the C-CD RMPA. Three stream segments within the C-CD were determined to be eligible for inclusion in the National System (see **Table 3** and the RMPA/EA Appendix A: **Figure 11**).

Table 3. Eligible Stream Segments

River Name/Segment	BLM Length (mi.)	Eligibility Classification
San Vicente Creek	4.127	Scenic
Liddell Creek	6.851	Scenic
Laguna Creek	3.173	Scenic

SUMMARY OF SUITABILITY FINDINGS

As documented in this report, one river segment was found suitable for inclusion into the National System: San Vicente Creek (Table 4, below).

Table 4. Segments Determined Suitable for Inclusion in the National System

River Segment	Length under BLM administration (miles)	Outstandingly Remarkable Value(s)	Tentative Classification
San Vicente Creek	4.127	T&E species	Scenic

Rationale

San Vicente Creek would make a worthy addition to the NWSRS for the following reasons:

- In contrast with all other streams originating from the C-CD, San Vicente Creek contains outstandingly remarkable values that are unique when viewed within the context of the California Coast Range Physiographic Province.
- Magnificent (redwood forest) scenic views, extensive research and educational opportunities for stewardship in the C-CD unit of the CCNM.
- Excellent spawning and rearing habitat exist for Federally listed threatened steelhead and coho salmon, as well as Federally listed California red-legged frog.

- The presence of these known fisheries is also related to the cultural and historical values of the San Vicente Creek, as well as on-going efforts in the region to protect these values.
- Designation would preserve and protect the rivers' free-flowing character, water quality, and outstandingly remarkable values mentioned above.
- A commitment has been demonstrated by the local community and non-federal entities to work collaboratively with BLM in implementing protective management.
- No land ownership or potential uses would be in conflict or curtailed if these river segments were designated.
- No costs would be involved in acquiring necessary lands and interest in lands, because protective management would only apply to lands already managed by BLM.

SUITABILITY EVALUATIONS AND DETERMINATIONS

California has approximately 189,454 miles of river, of which 1,999.6 miles are designated as wild & scenic—1% of the state's river miles (website: <u>https://www.rivers.gov/california.php</u>, visited on June 30, 2020). River segments in the C-CD unit of the CCNM are located within the California Coast Range Physiographic Province. In the Northern Coast Ranges there are more than 400 miles of designated Wild & Scenic Rivers, including the Black Butte River, Van Duzen River, the Main Stem & Middle Fork of the Eel River, and the entire South Fork Eel River. In the Central Coast Ranges, the designated "wild" Big Sur River (19.5 miles) is the only designated river segment in the Central Coast Field Office. There are no coastal streams in the Southern Coast Ranges that are designated part of the system.

In accordance with NEPA and the WSR Act, BLM used an interdisciplinary planning team to analyze an array of alternatives for WSRs in the Draft RMPA/EA. As described in the draft plan, none of the eligible river segments be managed as suitable under Alternative A, three river segments managed as suitable under Alternative B, two river segments managed as suitable under Alternative C. Following review of public comments on the draft plan and suitability criteria, one river segment would be managed as suitable under Alternative D (Preferred Alternative) in the Proposed RMPA/EA.

The three river segments under evaluation have similar land tenure status, historical uses, and potential or existing uses. Therefore, the primary distinction for suitability of C-CD streams is the outstandingly remarkable values that make them worthy additions to the NWSRS. Although each of the eligible river segments have anadromous fisheries and/or cultural values, when considered in the context of several other rivers in the region, the BLM planning team found that two river segments did not meet suitability standards that would make them worthy additions to the system.

After a suitability analysis, which is documented in this section, one of the three eligible segments were found suitable for inclusion in the National System: San Vicente Creek; because it exceeds multiple suitability standards, as defined in BLM Manual 6400. Individual maps of the suitable segments and an overview map of the inventoried and eligible rivers are included in the C-CD Proposed RMPA/EA, Appendix A: Figure 11.

In selecting the one segment found suitable in Alternative D, the planning team determined that San Vicente Creek represents the 'crown jewel' of the Cotoni-Coast Dairies unit of the CCNM with its wild character, scenic beauty, and many other outstandingly remarkable values described in the following section. These river-related values are destined for the benefit of surrounding communities and visitors alike, making this stream a truly worthy addition to the NWSRS.

SAN VICENTE CREEK

Corridor Description

San Vicente Creek is a 9.3-mile-long coastal stream originating in the San Vicente Redwoods on the west facing slopes of the Santa Cruz Mountains, flowing through C-CD and the town of Davenport on its way to the Pacific Ocean. The San Vicente Redwoods is an 8,532-acre area held under a private conservation trust by the Sempervirens Fund, Peninsula Open Space Trust and Save the Redwoods League to protect the area from subdivision and development. About half (4.1 miles) of the length of San Vicente Creek occurs within C-CD. There are 1,069 acres managed by the BLM within 0.25 miles of the creek.



Figure 4. San Vicente Creek

As displayed in Figure 4 (above), Reach 1 consists of the mouth of the creek flowing across the beach. Reach 2 includes the railroad crossing (an artificial bore through bedrock), the Highway 1 crossing (a box culvert) and the short, open stretch between the two. Reach 3 is relatively wide and consists primarily of riffles with a few pools approximately 2 to 3 feet deep. Slack water habitat for young-of-the-year salmonids is abundant and between 500 and 700 recently emerged steelhead were observed. Yearlings-and-older salmonids were also observed in some pools.

An off-channel reservoir located in Reach 3 has been identified by researchers as excellent rearing habitat. However, while small fish can easily enter this pond, escapement of smolts is not as certain. Therefore, officials with the National Marine Fisheries Service, US Fish and Wildlife Service, and California Department of Fish and Wildlife (CDFW) have made several attempts to remove vegetation and reconstruct the inlet and outlet to allow passage for all salmonid life stages since 2001.

Reach 4 has similar channel dimensions, habitat diversity, and substrate composition as Reach 3, although riparian shading in this section amounts to only about 50 percent. Young-of-the-year and yearlings were observed throughout. The reach offers good salmonid habitat, including several deep pools installed during a restoration projects and the replacement of a bridge in the upstream portion of the reach.

Reach 5 continues with similar channel dimensions as the previous two reaches, but the vegetation quickly transitions from a deciduous riparian zone to mixed evergreens, primarily redwoods. Riffles and runs dominate the reach, with significant pools being fairly sparse (again, most significant pools are associated with CDFW restoration structures). Isolated bank failures have occurred adjacent to the access road running alongside the channel. The average width of Reach 6 is somewhat narrower than previous reaches, but substrate and embeddedness (50-60 percent) characteristics are similar. The reach also contains further bank failures associated with the access road.

Eighty-five percent of the watershed has an elevation of less than 1,960 feet. About 64 percent of the watershed is in the 0-10 percent slope class. Only about 5 percent of the watershed has slopes in excess of 20 percent. Limestone and shale quarrying in the uplands of San Vicente Creek removed the soil and chaparral and forest vegetation. The quarries have been abandoned for more than 20 years. Vegetation recruitment on the quarry floors and on tailings piles has consisted primarily of a mix of non-native annual and perennial grasses and forbs; non-native shrubs including French broom and pampas grass; pioneer native woody species including coyote brush and California sagebrush; and planted (restoration) native trees including knobcone pine and Douglas fir.

Landownership and Land Uses

The majority of San Vicente Creek occurs within the San Vicente Redwoods and C-CD. However, a large portion of San Vicente Creek's physical watershed is leased by Cemex cement, where mining activities included a large shale quarries; several abandoned quarries; conveyor line; and an extensive road network; operations have now ceased and reclamation activities are underway. The old San Vicente Railroad alignment, which cuts across the north side of the canyon high above the creek, is a private in-holding. Lower portions of the watershed support residential housing and structures associated with the town of Davenport, which has dozens of privately owned lots situated immediately adjacent to the BLM-managed lands along the floodplains of the lower portion of San Vicente Creek.

Mineral and Energy Resource Activities

Shale was mined from the San Vicente Creek watershed. There is no federal mineral estate associated with the property, and Proclamation 9563 withdrew the C-CD from entry under the mining laws, so there is no potential for mineral and energy resource development in the watershed.

Water Resources Development

Diversions on San Vicente Creek and on Mill Creek, a tributary of San Vicente Creek, provide the sole source of domestic water to the town of Davenport. Water is conveyed via pipelines (approximately 4.2 miles from the San Vicente Creek diversion and 3.5 miles from the Mill Creek diversion) to a water tank and sediment collector known as the "sandbox" which is located on the property currently owned by Cemex, a cement plant that has been near Davenport since about 1905. Historically the sandbox served as a junction point from which water can be delivered in one direction to the cement plant and in another direction to the town of Davenport. Water being conveyed to Davenport is sent to a treatment plant that is owned and operated by the County Sanitation District and located on Cemex property. From there it is distributed for municipal use throughout Davenport. The cement plant ceased operations in 2009 and it uses little to no water at this time. Davenport relies on water diverted from the sandbox to serve all its domestic and municipal needs. Before exiting to the Pacific Ocean, San Vicente Creek flows through the Highway 1 (box culvert) and railroad (artificial bore through bedrock) crossings.

Transportation, Facilities, and Other Developments

Before exiting to the Pacific Ocean, San Vicente Creek flows through the Highway 1 (box culvert) and railroad (artificial bore through bedrock) crossings. San Vicente Road, a large portion of which is a county-maintained road, parallels the lower end of the creek. At the BLM property boundary, the road becomes a gravel road and a bridge spans the creek. On BLM property, this road is used by BLM and contractors for administrative purposes and by CEMEX for ongoing remediation activities.

Recreation Activities

Under the preferred alternative, guided tours, educational visits, and hunting under a special permit are the only recreational opportunity proposed along San Vicente Creek. San Vicente Creek occurs in RMZ2 which does not contain any proposed trail development.

Other Resource Activities

The upper watershed of San Vicente Creek is subject to sustainable timber harvesting. Other resource activities include water uses for industrial reclamation, municipalities, and fish and wildlife protection.

Special Areas

No areas of critical environmental concern (ACECs), wilderness study areas (WSAs), or wilderness areas overlap the river corridor, but San Vicente Creek is within the California Coastal National Monument (CCNM). The CCNM is a component of the BLM's National Conservation Lands (NCL). The mission of the NCL is to conserve, protect, and restore these nationally significant landscapes. As stated in Proclamation 9563, the C-CD contains significant scientific or historic resources that are closely tied to the values of the CCNM. Therefore, it is the landscape aspect that connects the C-CD with the various coastal ecosystems of which it is an important part. The landscape also links the C-CD to the local and regional communities, partners, and the general public. For example, it is the landscape that provides the opportunity for using the C-CD as a focal point to link regional conservation efforts and other coastal initiatives.

Socioeconomic Environment

San Vicente Creek passes through Davenport and is within Santa Cruz County. The small unincorporated community of Davenport has a population of approximately 400 people and includes residences, shops, restaurants, lodging, other visitor serving retail uses and Pacific Elementary School, a small public school (US Census 2010). The County of Santa Cruz was estimated to have a 2018 population of approximately 274,244 (refer to RMPA Appendix I). The North Coast area is used widely for recreational purposes, including hiking, running, biking, walking, surfing, and equestrian use. Travel and tourism and agriculture are prevalent in Santa Cruz County as reflected in the percent of employment in both these sectors, which are markedly higher than State and U.S. In addition to direct jobs associated with C-CD, future economic activity would support other secondary jobs established in the local communities. These jobs result from

indirect economic effects of tourism activity (purchases of goods and services by visitors). Both tourism and recreation have market components individually, which are heavily affected by BLM land use decisions.

Current Administration and Funding Needs if Designated

The BLM administers land within the San Vicente Creek river corridor. The BLM would work with nearby interested landowners to determine administrative needs if designated. In recent years, the BLM has partnered with upstream neighbors on stream and riparian restoration projects.

Suitability Criteria

Criteria 1: Characteristics that do, or do not, make the area a worthy addition to the National System

Within San Vincente Creek, two ORVs have been identified as making this segment a worthy addition to the National System. ORVs for fish and wildlife were identified as unique, rare, or exemplary at a comparative regional or national scale.

The National Marine Fisheries Service has been stocking San Vicente Creek with coho salmon from a hatchery on nearby Scotts Creek since 2009. San Vicente Creek will remain a NOAA Fisheries focus for recovery of coho salmon populations (NMFS 2012). The federally listed Threatened Central and South-Central California Coast DPS (Distinct Population Segment) populations of steelhead have been confirmed to be present in San Vicente Creek.

San Vicente Creek also provides critical habitat for the federally listed threatened California red-legged frog. Hunting via special permit is the only recreational opportunities that is expected to be present along the C-CD managed portions of San Vicente Creek.

Criteria 2: Current status of landownership and use in the area

From the origin of San Vicente Creek in the Santa Cruz Mountains to the terminus at the Pacific Ocean, the BLM manages 1,069 acres of the stream corridor (44%). The remaining 2,430 acres are private land, much of it occurring within the San Vicente Redwoods. The last segment of San Vicente Creek flow through the town of Davenport. Zoning for the portion of San Vicente Creek downstream of C-CD is Single Family Residential.

Criteria 3: Reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the National System

The basic objectives of designation are to maintain the river's existing condition and protect the identified outstandingly remarkable values. Designation would enhance fish and wildlife populations by helping to preserve existing habitat. Coho salmon, steelhead, and California red-legged frogs would continue to be protected under the Endangered Species Act and further enhanced by the National System. Designation would complement the goals and objectives of the BLM.

All public lands within the authorized boundaries of a designated component of the NCL are withdrawn from entry, sale, or disposition under the public laws of the United States. The mineral estate is held in private ownership and many existing uses are maintained under water rights that may be affected with designation.

Uses that could be curtailed by designation could include downstream agricultural activities, which require water withdrawals, and upland uses such as cattle grazing. In addition, further development of water resources in this area for use by residents of Davenport could be impacted. These activities could continue

unless they are shown to affect the ORVs such that the segment would no longer be suitable for designation in the National System.

Criteria 4: The federal agency that will administer the area should it be added to the National System

The BLM manages the area as part of the California Coastal National Monument and would continue if the San Vicente Creek segment were added to the National System.

Criteria 5: The extent to which the agency proposes that administration of the river, including the costs thereof, is shared by state and local agencies

The BLM would encourage state and local agency cooperation in the management and maintenance of the river corridor, where appropriate, to meet overall goals of river protection. Administration and funding would be determined in cooperation with state and local agencies after designation.

Criteria 6: The estimated cost of acquiring necessary lands or interests in land within the corridor, as well as the cost of administering the area should it be added to the National System

Approximately half of the river corridor is on BLM-administered land. The other (upstream) half of San Vicente Creek is in the San Vicente Redwoods, which is owned by the Sempervirens Fund and subject to a conservation easement. The Santa Cruz County Board of Supervisors (and other interested parties) also expressed opposition to Federal acquisition of lands or interest in lands in the study area. As a result, acquisition of lands or interest in lands is not necessary (or feasible).

Criteria 7: The extent that other federal agencies, the state, or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System

Cooperative efforts with the owners of San Vicente Redwoods would likely benefit ORVs in the river corridor. The fish and wildlife resources within the river corridor continue upstream into the San Vicente Redwoods, and shared participation in the preservation and administration of San Vicente Creek would support more consistent treatment of the ORVs.

Preservation and administration of the state-listed and federally listed species of coho salmon and California red-legged frogs within San Vicente Creek would also be supported by participation from state and federal agencies, including NOAA Fisheries, California Department of Fish and Wildlife (CDFW) and USFWS, who are both mandated to conserve listed resources.

Criteria 8: An evaluation of local zoning and other land use controls in protecting the river's outstandingly remarkable values and preventing incompatible development

The upstream portion of the river corridor is under a conservation easement with Save the Redwoods League and is zoned as agricultural, with an Agricultural Preserve or Farmland Security contract with the County to maintain the land in its natural state for 10-years. The purpose of the conservation easement is to protect lands from subdivision and development while allowing for sustainable timber harvesting, public access, restoration work and scientific research. The downstream portion of San Vicente Creek that flows through Davenport is classified as single-family residential.

Criteria 9: The state/local government's capacity to manage and protect the ORVs on nonfederal lands A variety of local, state, and governmental agencies and commercial, private, and nonprofit entities have a role in planning for, providing, and managing recreation and open space resources and services in the State

of California.

The CDFW has a mandate to protect native species threatened with extinction under the California Endangered Species Act (CESA). The CDFW also coordinates with other state and federal entities through

the Water Operations Unit. The Water Operations Unit coordinates with NOAA Fisheries and USFWS are on several fisheries technical teams that make recommendations for adjusting operations to minimize adverse effects on state- and federally listed fish species and to ensure compliance with the federal Endangered Species Act of 1973 (ESA) and the CESA.

The State Water Resources Control Board is responsible for water quality and is the state water pollution control agency for all purposes under the Clean Water Act (CWA). The Act prohibits the discharge of materials that adversely affect the beneficial uses of the waters of the State. The Regional Water Board has the authority to take enforcement action, ranging from a notice of violation to issuing administrative civil liabilities (fines) against persons who violate the Act or a permit.

Criteria 10: The existing support or opposition of designation

The public provided input regarding WSRs during public involvement opportunities supported the designation of San Vicente Creek for its outstandingly remarkable value for wildlife and anadromous fish. There were no comments opposed to designating San Vicente Creek as a WSR.

Criteria 11: The consistency of designation with other agency plans, programs, and policies in meeting regional objectives

The ESA and the CWA are two federal Acts that are meant to provide for the recovery and preservation of endangered and threatened species and the quality of the nation's waters. The BLM is required to assist in implementing these two Acts. Designation of San Vicente Creek as a WSR would support the goals and objectives of the CWA and the ESA. On a state level, the CWA, administered by the Central Coast Regional Board, enforces California water quality laws. Designation of San Vicente Creek as a WSR would be consistent with the Central Coast Regional Board's mission of protecting water quality.

Criteria 12: The contribution to river system or basin integrity

The limits to anadromous fisheries populations in San Vicente Creek are not clearly understood, but are related to water temperature, diet, and predation, which are, in turn, related to the availability of riparian habitat. In gross terms, all ecological problems in the creek are related to its function as an endpoint of inriver storage of sediment. Any management action that reduces the input of sediment into the river system will benefit aquatic habitat for fish. Furthermore, because coho populations are diminished to a point where their viability remains a question, WSR designation of the river segment under evaluation will contribute significantly to the integrity of the San Vicente Creek system as a whole.

Criteria 13: The potential for water resources development

There are no Federal Energy Regulatory Commission (FERC) projects proposed for San Vicente Creek. San Vicente Creek and Mill Creek (tributary) provide the drinking water for the unincorporated town of Davenport. There is substantial demand for water associated with agriculture and residential use in the region, so there may be interest in water resource development, but due to the existing rights and the presence of listed species the potential is low.

Land Use Plan Alternatives

In accordance with NEPA and the WSR Act, various combinations and alternative river classifications were considered. These alternatives were analyzed further with respect to the impacts of WSR designation on several resource management programs. These programs include recreation, transportation and travel management, livestock grazing, vegetation management (including the use of herbicides and fire), listed species protection, research, and monitoring.

Under all the action alternatives, including the Preferred Alternative, the BLM proposes restricted access to the San Vicente Creek watershed for the protection of sensitive resources, including areas with high densities of cultural resources, and critical habitat for steelhead and coho salmon. Emphasis on conservation in the stream corridor is consistent with management of private lands on the adjacent San Vicente Redwoods property, providing a large block of undisturbed habitat for wildlife. For these reasons, public access would be limited in these areas to guided tours and permitted access, including infrequent archery hunting opportunities. By precluding trail development and restricting public access in this zone, the BLM is minimizing potential adverse impacts to wildlife from habitat fragmentation and human presence.

Refer to the Cotoni-Coast Dairies Proposed RMPA/EA (BLM 2020) Chapter VI, Environmental Consequences for analysis of the impacts of designation on these programs.

Suitability Determination

San Vicente Creek was found **suitable** for inclusion in the National System. Designation of San Vicente Creek may contribute to more consistent management of the ORVs.

Location: See Proposed RMPA/EA, Appendix A: Figure 11. Total Segment Length: 4.1 miles.

LIDDELL CREEK

Corridor Description

Liddell Creek originates in three locations in Ben Lomond Mountain. The west fork originates north of Bonny Doon Road just outside C-CD on private lands south of the Bonny Doon Quarry. The main fork begins within C-CD near the Limestone Quarry, and the east fork originates in Liddell Spring just outside C-CD on a parcel owned by the City of Santa Cruz. The three branches of the creek combine and exit to the Pacific Ocean at Bonny Doon Beach. There are 6.9 miles of Liddell Creek that flow through C-CD and 1,544 acres of river corridor within ¹/₄ mile of the creek within C-CD, which comprises more than 90% of the total length and area. Limestone and shale quarrying in the uplands of Liddell Creek removed the soil and chaparral and forest vegetation. The quarries have been subject to on-going reclamation for almost 20 years. Vegetation recruitment on the quarry floors and on tailings piles has consisted primarily of a mix of non-native annual and perennial grasses and forbs; non-native shrubs including French broom and pampas grass; pioneer native woody species including coyote brush and California sagebrush; and planted (restoration) native trees including knobcone pine and Douglas fir.

Landownership and Land Uses

The majority of Liddell Creek occurs within the boundary of the C-CD. The City of Santa Cruz owns the parcel adjacent to C-CD where Liddell Spring is located. They procured the water rights surrounding Liddell Spring, Liddell Creek, and associated water rights, including downstream riparian rights in 1913. After crossing Highway 1, the downstream portion of Liddell Creek is managed by the state of California and is under consideration for addition to the State Park system. Lower portions of the Liddell Creek watershed support active and fallow agriculture and contain farm worker housing and farm structures.

Mineral and Energy Resource Activities

Large volumes of limestone and marble were historically removed from the Bonny Doon quarry (uplands of Liddell Creek).

Water Resources Development

The City of Santa Cruz holds senior water rights for Liddell Creek and withdraws a substantial amount of water from the creek. The City of Santa Cruz voluntarily maintains bypass flows sufficient for all salmonid life-stages in Liddell Creek to comply with CDFW regulations. The City submitted a draft Habitat Conservation Plan (HCP) to the regulatory agencies in 2011, and negotiations are presently underway to finalize new regulatory permits to continue operation of water supply sources for the benefit of the community as well as steelhead and other aquatic organisms in the Liddell Creek watershed.

Transportation, Facilities, and Other Developments

The main branch of Liddell Creek leaves the C-CD property at the intersection of Bonny Doon Road and Highway 1 where it flows through a bedrock tunnel (reinforced with concrete) under the highway and across the beach to the ocean. Upstream from this point, Liddell Creek runs parallel to Bonny Doon Road for approximately one mile along the west branch. The main branch and east branch include a series of unimproved logging roads that have not been maintained for several decades leading into the upper watershed. These unused roads terminate at the intersection with a larger road system that in the upper Liddell Creek watershed. This larger road system is also unimproved, but it is maintained for vehicle use to access the limestone quarry and the City of Santa Cruz properties.

Recreation Activities

Under the Preferred Alternative, the BLM proposes restricted access to the Liddell Creek watershed for the protection of sensitive resources, including areas with high densities of cultural resources. Public access would be limited in these areas to guided tours and permitted access, including infrequent archery hunting opportunities. By precluding trail development and restricting public access in this zone, the BLM is minimizing potential adverse impacts to wildlife from habitat fragmentation and human presence.

Other Resource Activities

Historically, the upper watershed of Liddell Creek was subject to intense timber harvesting. Nowadays, other resource activities that affect the stream include water uses for municipalities and fish and wildlife protection. Development activities associated with reclamation of quarries, light industrial uses, rural residences, and local roads are expected to continue within the northern-most portions of the Liddell Creek watershed.

Special Areas

No areas of critical environmental concern (ACECs), wilderness study areas (WSAs), or wilderness areas overlap the river corridor, but Liddell Creek is within the California Coastal National Monument (CCNM). The CCNM is a component of the BLM's National Conservation Lands (NCL). The mission of the NCL is to conserve, protect, and restore these nationally significant landscapes. As stated in Proclamation 9563, the C-CD contains significant scientific or historic resources that are closely tied to the values of the CCNM. The landscape also links the C-CD to local communities and regional conservation efforts.

Socioeconomic Environment

Most of the population in Santa Cruz County is located centrally in the urban and residential development areas that depend on drinking water that is delivered from the North Coast streams and rivers. The County of Santa Cruz was estimated to have a 2018 population of approximately 274,244 (Refer to RMPA/EA Appendix I). The North Coast area is used widely for recreational purposes, including hiking, running, biking, walking, surfing, and equestrian use. Travel and tourism and agriculture are prevalent in Santa Cruz County as reflected in the percent of employment in both these sectors, which are markedly higher than State and U.S. In addition to direct jobs associated with C-CD, future economic activity would support other secondary jobs established in the local communities. These jobs result from indirect economic effects
of tourism activity (purchases of goods and services by visitors). Both tourism and recreation have market components individually, which are heavily affected by BLM land use decisions.

Current Administration and Funding Needs if Designated

The BLM administers 6.9 miles of the land within the Liddell Creek river corridor. The BLM would work with local and state agencies to determine administrative needs if designated.

Suitability Criteria

Criteria 1: Characteristics that do, or do not, make the area a worthy addition to the National System

In 2018, juvenile coho salmon were discovered in Liddell Creek. The federally listed Threatened Central and South-Central California Coast Distinct Population Segment (DPS) populations of steelhead have been confirmed to be present in Liddell Creek.

The Liddell Creek area contains associations of significant cultural resources, culturally significant landscape features, and ethnobiological resources identified by the Amah Mutsun Tribal Band. Pre-contact cultural resources in C-CD include sites where food gathering and preparation occurred, as well as lithics.

Criteria 2: Current status of landownership and use in the area

The majority of the Liddell Creek river corridor occurs within the C-CD property. Liddell springs (the headwater of the east branch) is owned by the City of Santa Cruz. The west fork of Liddell Creek originates on private lands in Bonny Doon. The main fork originates within C-CD. The downstream portions (0.25 mile) is managed by the state of California as part of the State Parks system.

Criteria 3: Reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the National System

Designation would enhance fish and wildlife populations by helping to preserve existing habitat. Steelhead and California red-legged frogs would continue to be protected under federal and state laws and be further enhanced by the National System.

All public lands within the authorized boundaries of a designated component of the National System would be withdrawn from entry, sale, or disposition under the public laws of the United States. Water right status and future applications may be limited with designation.

Further, any activity that affects the identified ORVs could be restricted. These activities could continue unless they are shown to affect the ORVs such that the segment would no longer be suitable for designation in the National System.

Criteria 4: The federal agency that will administer the area should it be added to the National System If the Liddell Creek segment were added to the National System, the BLM would manage the land and resources within this boundary. The BLM currently administers approximately 6.9 miles of surface along Liddell Creek.

Criteria 5: The extent to which the agency proposes that administration of the river, including the costs thereof, is shared by state and local agencies

The BLM would encourage state and local agency cooperation in the management and maintenance of the river corridor, where appropriate, to meet overall goals of river protection. Administration and funding would be determined in cooperation with state and local agencies after designation.

Criteria 6: The estimated cost of acquiring necessary lands or interests in land within the corridor, as well as the cost of administering the area should it be added to the National System

Acquisition of lands or interest in lands is not necessary because there are no in-holdings, and more than 95% percent of the river corridor is already on BLM-administered land. The Santa Cruz County Board of Supervisors (and other interested parties) also expressed opposition to Federal acquisition of lands or interest in lands in the study area.

Criteria 7: The extent that other federal agencies, the state, or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System

Cooperative efforts with the City of Santa Cruz and the state of California would be likely to benefit ORVs in the river corridor. The fish and wildlife resources within the river corridor continue downstream and shared participation in the preservation and administration of Liddell Creek would support more consistent treatment of the ORVs.

Criteria 8: An evaluation of local zoning and other land use controls in protecting the river's outstandingly remarkable values and preventing incompatible development

The majority of Liddell Creek is zoned as Agricultural and has an Agricultural Preserve or Farmland Security contract with the County to maintain the land in its natural state for 10 years. The west branch of Liddell Creek originates on private land zoned as Agricultural with an owner executed open space easement contract with the County to maintain the land in its natural state for 10 years. Although small sections of Liddell Creek pass through areas zoned as Single Family Residential, Santa Cruz County ordinances, such as the Riparian Corridor and Wetlands Protection Ordinance, adopted to help protect wildlife and aquatic habitat, reduce flooding, and safeguard water quality and cultural and aesthetic values are expected to help protect the rivers ORVs and prevent incompatible development.

Criteria 9: The state/local government's capacity to manage and protect the ORVs on nonfederal lands A variety of local, state, and governmental agencies have a role in planning for, providing, and managing recreation and open space resources and services in the State of California.

The CDFW has a mandate to protect native species threatened with extinction under the California Endangered Species Act. The CDFW also coordinates with other state and federal entities. The CDFW coordinates with NOAA Fisheries and USFWS on several fisheries technical teams that make recommendations for adjusting operations to minimize adverse effects on state- and federally listed fish species and to ensure compliance with the federal ESA and the CESA.

Criteria 10: The existing support or opposition of designation

Public comments supported the WSR designation of Liddell Creek There were no comments opposed to designating Liddell Creek as a WSR.

Criteria 11: The consistency of designation with other agency plans, programs, and policies in meeting regional objectives

The ESA and the CWA are two federal laws that are meant to provide for the recovery and preservation of endangered and threatened species and the quality of the nation's waters. The BLM is required to assist in implementing these two laws. Designation of Liddell Creek as a WSR would support the goals and objectives of the CWA and ESA. On a state level, designation of Liddell Creek as a WSR would be consistent with the state's mission of protecting water quality.

Criteria 12: The contribution to river system or basin integrity

The limits to anadromous fisheries populations in Liddell Creek are not clearly understood, but a report created for the City of Santa Cruz by Hagar Environmental Science in 2012 describing existing conditions for steelhead and coho salmon, states that sedimentation may be the primary limiting factor in Liddell Creek and lists pool depth, cover, substrate, and spring season flows as additional limiting factors based on several other reports documenting conditions in Santa Cruz County streams (ESA 2001). Any management action that reduces the input of sediment into the river system will benefit aquatic habitat for fish. Furthermore, because coho populations are diminished to a point where their viability remains a question, WSR designation of the river segment under evaluation will contribute significantly to the integrity of the Liddell Creek system as a whole.

Criteria 13: The potential for water resources development

There is little to no potential for water resources developments, such as a dam, water conduit, reservoir, powerhouse, or transmission line to be proposed for Liddell Creek because the provision of water is contingent on there being water in the Santa Cruz Water Department's (SCWD) pipeline that crosses the property, and as such the provision of water is interruptible. Additionally, the SCWD maintains bypass flows from creek diversions to meet CDFW regulations. An increase in water withdrawals from the creek below the diversion site could have a direct impact at the City's compliance gage site downstream and therefore have a direct effect on City water operations. This could also have a direct impact on habitat availability for listed special-status anadromous salmonids such as coho and steelhead.

Land Use Plan Alternatives

In accordance with NEPA and the WSR Act, various combinations and alternative river classifications were considered. These alternatives were analyzed further with respect to the impacts of WSR designation on several resource management programs. These programs include recreation, transportation and travel management, livestock grazing, vegetation management (including the use of herbicides and fire), listed species protection, research, and monitoring. Refer to the Cotoni-Coast Dairies Proposed RMPA/EA (BLM 2020) Chapter VI, Environmental Consequences for analysis of the impacts of designation on these programs.

Under the Preferred Alternative, the BLM proposes restricted access to the Liddell Creek watershed for the protection of sensitive resources, including areas with high densities of cultural resources, and critical habitat for steelhead and coho salmon. For these reasons, public access would be limited in these areas to guided tours and permitted access, including infrequent archery hunting opportunities. By precluding trail development and restricting public access in this zone, the BLM is minimizing potential adverse impacts to wildlife from habitat fragmentation and human presence.

Suitability Determination

Liddell Creek was found **not suitable** for inclusion in the National System.

LAGUNA CREEK

Corridor Description

Laguna Creek, originating in Ben Lomond Mountain, flows for 8.5 miles and culminates in a lagoon just before it enters the Pacific Ocean. Approximately 3.1 miles of Laguna Creek, following the southeasternmost boundary of the property, are within the C-CD, associated with 853 acres of BLM-managed river corridor. Several smaller tributaries enter Laguna Creek, the most notable of which are Reggiardo Creek and Y Creek. The confluence of Reggiardo Creek and Laguna Creek occur north of the

C-CD. Y Creek originates within the C-CD flows for 1.6 miles before joining Laguna Creek. Portions of the watershed within the Property include the lower portion of Laguna Creek and the majority of the Y Creek sub-watershed. The upper portions of the watershed are leased for grazing, while the lower portions support row crop agriculture.

Landownership and Land Uses

The majority of the Laguna Creek watershed is located outside of C-CD. Portions of the watershed within the C-CD include the lower portion of Laguna Creek and the majority of the Y Creek sub-watershed.

Mineral and Energy Resource Activities

There are no mineral and energy resource activities in the Laguna Creek riparian area.

Water Resources Development

The City of Santa Cruz claims a pre-1914 right to appropriate from Laguna Creek, recorded with the SWRCB as Statement of Water Diversion and Use 2042 and diverts nearly 100% of the headwaters. The City submitted a draft Habitat Conservation Plan (HCP) to the regulatory agencies in 2011, and negotiations are presently underway to finalize new regulatory permits to continue operation of water supply sources for the benefit of the community as well as steelhead and other aquatic organisms in the Laguna Creek watershed. There are two diversions outside of C-CD on Reggiardo and Laguna Creeks that have been prioritized for removal under the Draft City of Santa Cruz Habitat Conservation Plan Conservation Strategy for Steelhead and Coho Salmon, released on August 10, 2011. Levees that had formerly constrained the creek and lagoon were removed prior to 2010 and restored using native plants.

Transportation, Facilities, and Other Developments

Laguna Creek is located along the southern boundary of the C-CD property line and empties into the Pacific Ocean at Laguna Beach after it flows through a culvert beneath Highway 1. At this location, a portion of Laguna Road parallels Laguna Creek for about 1/3 mile and serves as a driveway for a private residence. The remainder of Laguna Road is closed to public access by a locked gate. The road is regularly maintained and used by local agencies to access utilities.

Recreation Activities

Under all action alternatives, including the Preferred Alternative, the BLM proposes restricted access to the Laguna Creek watershed for the protection of sensitive resources, including areas with high densities of cultural resources. For these reasons, public access would be limited in these areas to guided tours and permitted access, including infrequent archery hunting opportunities. By precluding trail development and restricting public access in this zone, the BLM is minimizing potential adverse impacts to wildlife from habitat fragmentation and human presence.

There is a (retired) agricultural parcel that was part of the former Coast Dairies property on the inland side of Highway 1 where Laguna Creek and Laguna Road form the southern boundary of the C-CD unit of the CCNM. This parcel of land was donated to the California State Parks for public use and enjoyment, but to date there are no plans to promote recreation within ¹/₄ mile of Laguna Creek.

Other Resource Activities

Historically, the upper watershed of Laguna Creek was subject to intense timber harvesting. Nowadays, other resource activities include water uses for irrigation, municipalities, and fish and wildlife protection.

Special Areas

No areas of critical environmental concern (ACECs), wilderness study areas (WSAs), or wilderness areas overlap the river corridor, but Laguna Creek is within the California Coastal National Monument (CCNM). The CCNM is a component of the BLM's National Conservation Lands (NCL). The mission of the NCL is to conserve, protect, and restore these nationally significant landscapes. As stated in Proclamation 9563, the C-CD contains significant scientific or historic resources that are closely tied to the values of the CCNM. Therefore, it is the landscape aspect that connects the C-CD with the various coastal ecosystems of which it is an important part. The landscape also links the C-CD to the local and regional communities, partners, and the general public. For example, it is the landscape that provides the opportunity for using the C-CD as a focal point to link regional conservation efforts and other coastal initiatives.

Socioeconomic Environment

The County of Santa Cruz was estimated to have a 2018 population of approximately 274,244 (refer to RMPA/EA, Appendix I). Standard measures of growth and decline are population, employment, and real personal income. Trends indicate the population, employment, and real personal income in Santa Cruz County increased at a greater rate than the rest of California and the U.S. from 1970 - 2018. Long-term, steady growth of population, employment, and real personal income is generally an indication of a healthy, prosperous economy. Growth can benefit the general population of a place, especially by providing economic opportunities, but it can also stress communities and lead to income stratification. If the population growth trend in this region continues for the next 10 years, Santa Cruz County could see up to 25,000 additional residents in rural and urban locations during the life of this plan.

The North Coast area is used widely for recreational purposes, including hiking, running, biking, walking, surfing, and equestrian use. Travel and tourism and agriculture are prevalent in Santa Cruz County as reflected in the percent of employment in both these sectors, which are markedly higher than State and U.S. In addition to direct jobs associated with C-CD, future economic activity would support other secondary jobs established in the local communities. These jobs result from indirect economic effects of tourism activity (purchases of goods and services by visitors). Both tourism and recreation have market components individually, which are heavily affected by BLM land use decisions.

Current Administration and Funding Needs if Designated

The BLM only administers the Y Creek tributary and other lands that are adjacent to the Laguna Creek river corridor. The BLM would have to work with interested landowners to determine administrative needs if designated.

Suitability Criteria

Criteria 1: Characteristics that do, or do not, make the area a worthy addition to the National System

Steelhead, coho salmon, California red-legged frogs and the federally listed endangered Tidewater goby have been recorded in Laguna Creek. The Tidewater goby occur downstream from the C-CD boundary where the creek forms an estuary before joining the Pacific Ocean. Laguna Creek is one of two NOAA Fisheries focus areas on the C-CD for recovery of coho salmon populations (NOAA Fisheries 2012). Other sensitive wildlife resources within the watershed include habitat for bats, raptors, and San Francisco dusky-footed woodrat.

The Laguna Creek area contains associations of significant cultural resources, culturally significant landscape features, and ethnobiological resources identified by the Amah Mutsun Tribal Band. Pre-contact cultural resources in C-CD include sites where food gathering and preparation occurred, as well as lithics.

Criteria 2: Current status of landownership and use in the area Landownership within Laguna Creek's watershed is a combination of federal (BLM), state and local government and private lands. The BLM manages 858 acres (less than 10 percent) of land within the Laguna Creek corridor. Upper Laguna Creek and Lower Laguna Creek are predominantly private lands develop for residents or ranching operations.

Criteria 3: Reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the National System

The basic objectives of designation are to maintain the river's existing condition and protect the identified outstandingly remarkable values. Designation would enhance fish and wildlife populations by helping to preserve existing habitat. Steelhead, coho salmon, and California red-legged frogs would continue to be protected under the ESA and further enhanced by the National System. Designation would complement the goals and objectives of the Draft City of Santa Cruz Habitat Conservation Plan Conservation Strategy for Steelhead and Coho Salmon, released on August 10, 2011, and state (CDFW) and federal organizations (BLM and USFWS).

Designation could prohibit development of hydroelectric power facilities. Currently, there are no applications for dams or diversions on file for this river segment.

All public lands within the authorized boundaries of a designated component of the National System would be withdrawn from entry, sale, or disposition under the public laws of the United States. However, these lands are already withdrawn as part of the National Monument designation. Water right status and future applications may be limited with designation.

Designation of Laguna Creek could affect private land use and development of the surrounding land. Designation may influence development by limiting vegetation management practices and may establish further requirements regarding maintenance and development of private lands. Compliance measures to existing laws and regulations may be more consistently and routinely monitored and enforced.

Criteria 4: The federal agency that will administer the area should it be added to the National System

If Laguna Creek segment was added to the National System, the BLM would be most suited to manage the land and resources within this boundary, unless Congress designated another agency. The BLM currently administers 3.1 miles of Laguna Creek. No other portion of Laguna Creek is currently under federal management, making the BLM the most suitable federal agency to manage Laguna Creek.

Criteria 5: The extent to which the agency proposes that administration of the river, including the costs thereof, is shared by state and local agencies

The BLM would encourage state and local agency cooperation in the management and maintenance of the river corridor, where appropriate, to meet overall goals of river protection. Administration and funding would be determined in cooperation with state and local agencies after designation.

Criteria 6: The estimated cost of acquiring necessary lands or interests in land within the corridor, as well as the cost of administering the area should it be added to the National System

The BLM does not currently plan to pursue land acquisition from willing sellers within the river corridor.

Criteria 7: The extent that other federal agencies, the state, or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System The City of Santa Cruz, CDFW, NOAA Fisheries, and USFWS have all participated in the administration of Laguna Creek. If the river were not included in the National System, federal, state and local land management agencies could continue to protect land under their jurisdiction for the riparian values and ORVs along the river area under existing laws, authorities, and ordinances. Applicable laws would include the ESA, the CWA, the CESA, and California Water Code.

Criteria 8: An evaluation of local zoning and other land use controls in protecting the river's outstandingly remarkable values and preventing incompatible development

The majority of Laguna Creek is zoned as Agricultural. Santa Cruz County ordinances, such as the Riparian Corridor and Wetlands Protection Ordinance, adopted to help protect wildlife and aquatic habitat, reduce flooding, and safeguard water quality and cultural and aesthetic values are expected to help protect the rivers ORVs and prevent incompatible development.

Criteria 9: The state/local government's capacity to manage and protect the ORVs on nonfederal lands

A variety of local, state, and governmental agencies and commercial, private, and nonprofit entities have a role in planning for, providing, and managing recreation and open space resources and services in the State of California.

The City of Santa Cruz has ordinances, such as the Riparian Corridor and Wetlands Protection Ordinance, adopted to help protect wildlife and aquatic habitat, reduce flooding, and safeguard water quality and cultural and aesthetic values. The CDFW has a mandate to protect native species threatened with extinction under the CESA. The CDFW coordinates with other state and federal entities including NOAA Fisheries and USFWS to minimize adverse effects on state- and federally listed fish species and to ensure compliance with the ESA and the CESA. The Coastal Commission helps regulate development in the coastal zone.

Criteria 10: The existing support or opposition of designation

Public comments supported the WSR designation of Laguna Creek. There were no comments opposed to designating Laguna Creek as a WSR.

Criteria 11: The consistency of designation with other agency plans, programs, and policies in meeting regional objectives

Laguna Creek is identified as a NOAA Fisheries focus areas on the C-CD for recovery of coho salmon populations (NOAA Fisheries 2012). The designation of Laguna Creek as a WSR would be consistent with the goals and objectives of the recovery plan.

The upper portion Laguna Creek passes through the Bonny Doon Ecological Reserve. The ESA and the CWA are two federal laws that are meant to provide for the recovery and preservation of endangered and threatened species and the quality of the nation's waters. The BLM is required to assist in implementing these two laws. Designation of Laguna Creek as a WSR would support the goals and objectives of the CWA and ESA.

Criteria 12: The contribution to river system or basin integrity

Most of the Laguna Creek watershed is outside the C-CD property. Y Creek is the informal name for a tributary to Laguna Creek that flows through the southeastern part of the C-CD. One of the branches of the City of Santa Cruz's water supply lines crosses the creek and joins the other branch of the supply line on the east bank of the creek. The creek became known as Y Creek because the pipeline junction or "Y" is on its bank. The watershed above this junction encompasses about 0.79 square miles. There is a bedrock cascade just downstream that is assumed to be a barrier to salmonid migration. Therefore, WSR designation

of the river segment under evaluation would not contribute significantly to the integrity of the Laguna Creek system as a whole.

Criteria 13: The potential for water resources development

There is little to no potential for new water resources developments, such as a dam, water conduit, reservoir, powerhouse, or transmission line to be proposed for Laguna Creek because the provision of water is contingent on there being water in the Santa Cruz Water Department's (SCWD) pipeline that crosses the property, and as such the provision of water is interruptible. Additionally, the SCWD maintains bypass flows from creek diversions to meet CDFW regulations. An increase in water withdrawals from the creek below the diversion site could have a direct impact at the City's compliance gage site downstream and therefore have a direct effect on City water operations. This could also have a direct impact on habitat availability for listed special-status anadromous salmonids such as coho and steelhead.

Land Use Plan Alternatives

In accordance with NEPA and the WSR Act, various combinations and alternative river classifications were considered. These alternatives were analyzed further with respect to the impacts of WSR designation on several resource management programs. These programs include recreation, transportation and travel management, livestock grazing, vegetation management (including the use of herbicides and fire), listed species protection, research, and monitoring.

Under all the action alternatives, including the Preferred Alternative, the BLM proposes restricted access to the Laguna Creek watershed for the protection of sensitive resources, including areas with high densities of cultural resources, and critical habitat for steelhead and coho salmon. Emphasis on conservation in the stream corridor is consistent with management of private lands on the adjacent San Vicente Redwoods property, providing a large block of undisturbed habitat for wildlife. For these reasons, public access would be limited in these areas to guided tours and permitted access, including infrequent archery hunting opportunities. By precluding trail development and restricting public access in this zone, the BLM is minimizing potential adverse impacts to wildlife from habitat fragmentation and human presence.

Refer to the Cotoni-Coast Dairies Proposed RMPA/EA (BLM 2020) Chapter VI, Environmental Consequences for analysis of the impacts of designation on these programs.

Suitability Determination

The Laguna Creek segments were identified as **not suitable** for inclusion based on information within this report. Nonetheless, there has been a remarkable degree of cooperation between local, state, and federal agencies to foster conservation of the biological resources and preserve the river corridor itself. The existing framework recognizes a need to provide a balance between water supply for the federally listed anadromous fish population and water needed for ranching and production of agriculture.

References

- California Coastal Commission. (1987). The California Coastal Resource Guide. University of California Press. 384 pages.
- McGinnis, S. M. (1991). An evaluation of the anadromous fish spawning and parr rearing habitats of the Liddell and San Vicente Creek systems, Santa Cruz County, California. Prepared for RMC Lonestar, October 25, 1991.
- [ESA] Environmental Science Associates. (2004). *Coast Dairies long-term resource protection and use plan: existing conditions report for the coast dairies property*. Prepared for the Trust for Public Land. San Francisco, CA. 360 pp.
- [NOAA Fisheries] National Oceanic and Atmospheric Administration National Marine Fisheries Service. (1999). Designated critical habitat; Central California Coast and Southern Oregon/Northern California Coasts Coho Salmon. Federal Register 64:24049-24062.
- [NOAA Fisheries] National Oceanic and Atmospheric Administration National Marine Fisheries Service. (2005). Endangered and threated species designation of critical habitat for seven evolutionarily significant units of Pacific salmon and steelhead in California; Final Rule. Federal Register 70:170:52487-52564.
- [RCD] Resource Conservation District of Santa Cruz County. (2014). San Vicente Creek Watershed Plan for Salmonid Recovery. <u>http://www.rcdsantacruz.org/images/watershed_plans/sv-existing-cond-</u> <u>report-final-2014-04-09-low-res.pdf</u>.
- [US Census] US Census. (2010). 2010 Census. Retrieved from <u>https://www.census.gov/programs-</u> <u>surveys/decennial-census/decade.2010.html</u>

[USFWS] U.S. Fish and Wildlife Service. (2010). Endangered and threatened wildlife and plants: Revised designation of Critical Habitat for California Red-legged Frog; Final Rule. Federal Register 75:51:12816-12959.



Figure 11: Cotoni-Coast Dairies Wild & Scenic River Inventory

RMPA Appendix A, Figure 11. Cotoni-Coast Dairies Wild and Scenic River Study

Proposal Number: EA Number: DOI-BLM-CA-C090-2020-0015-RMP-EA

State: CA	District:	CenCal	Field Office:	Central Coast
County:	Santa Cruz		Date:_[subjec	t to Decision Record]

Location of Application(s) (including township, range, section, portion of section, and estimated acreage for each location. You may attach a separate page and reference it here):

Cotoni-Coast Dairies unit of the California Coastal National Monument.

Duration of Proposal: (3 years).

I. Pesticide Application (including mixtures, surfactants, and colorants):

For Herbicide Common Name, Trade Name, Manufacturer, EPA Registration Number, and California Registration Number, see **Table 1**.

For Herbicide Formulation, Target Vegetation Type, Application Method, and Stock Solution Concentration, see **Table 2**.

For Adjuvants Common Name, Trade Name, Manufacturer, EPA Registration Number, and California Registration Number, see **Table 3**.

Table 1. Proposed herbicides for use at Cotoni-Coast Dairies, including Common Name, Manufacturer Trade Name, Manufacturer Name, EPA Registration Number, and California Registration Number. **Blue** = aquatic formulation (labeled for application in and around surface water). **Brown** = terrestrial formulation (not labeled for aquatic application).

Common Name	Manufacturer Trade Name	Manufacturer Name	EPA Reg. Number	CA Reg. Number
Glyphosate	Aqua Neat	Nufarm Americas Inc.	228-365	228-365-ZA
Glyphosate	Aqua Star	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-59	42750-59-ZA
Glyphosate	Imitator Aquatic	Drexel Chemical Company	19713-623	19713-623-AA
Glyphosate	Rodeo	Dow AgroSciences	62719-324	62719-324-ZB
Triclopyr	Alligare Triclopyr 3	Alligare, LLC	81927-13	81927-13-AA
Triclopyr	Element 3A	Dow AgroSciences	62719-37	62719-37-ZE
Triclopyr	Garlon 3A	Dow AgroSciences	62719-37	62719-37-ZC
Triclopyr	Tahoe 3A	Nufarm Americas Inc.	228-520	228-520-AA
Triclopyr	Vastlan	Dow AgroSciences	62719-687	62719-687-AA
Aminopyralid	Milestone	Dow AgroSciences	62719-519	62719-519-AA
Aminopyralid + 2,4-D	ForeFront HL	Dow AgroSciences	62719-630	62719-630-AA
Aminopyralid + 2,4-D	GrazonNext HL	Dow AgroSciences	62719-628	62719-628-AA
Clopyralid	Alligare Clopyralid 3	Alligare, LLC	81927-14	81927-14-AA
Clopyralid	Spur	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-89	42750-89-AA
Clopyralid	Stinger	Dow AgroSciences	62719-73	62719-73-AA
Clopyralid	Transline	Dow AgroSciences	62719-259	62719-259-AA
2,4-D	2,4-D 4# Amine Weed Killer	UAP-Platte Chem. Co.	34704-120	34704-120-AA
2,4-D	2,4-D Amine 4	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-19	42750-19-AA
2,4-D	Alligre 2,4-D Amine	Alligare, LLC	81927-38	81927-38-AA
2,4-D	Clean Amine	Loveland Products Inc.	34704-120	34704-120-ZA
2,4-D	Formula 40	Nufarm Americas Inc.	228-357	228-357-ZA
2,4-D	HardBall	Helena Agri-Enterprises, LLC	5905-549	5905-549-AA
2,4-D	Saber	Loveland Products Inc.	34704-803	34704-803-ZB
2,4-D	Shredder Amine 4	WinField-United	1381-103	1381-103-AA
2,4-D	Unison	Helena Agri-Enterprises, LLC	5905-542	5905-542-AA
2,4-D	WEEDestroy AM-40	Nufarm Americas Inc.	228-145	228-145-ZA
Dicamba	Alligare Dicamba 4 Herbicide	Alligare, LLC	81927-55	81927-55-AA
Dicamba	Banvel	Arysta LifeScience N.A. Corp.	66330-276	66330-276-AA
Dicamba	Clarity	BASF Corporation	7969-137	7969-137-AA
Dicamba	Diablo	Nufarm Americas Inc.	228-379	228-379-ZA
Dicamba	Dicamba DMA	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-40	42750-40-AA
Dicamba	Rifle	Loveland Products Inc.	34704-861	34704-861-AA
Dicamba	Vanquish Herbicide	Nufarm Americas Inc.	228-397	228-397-AA
Dicamba + 2,4-D	Rifle-D	Loveland Products Inc.	34704-869	34704-869-AA
Dicamba + 2,4-D	Weedmaster	Nufarm Americas Inc.	71368-34	71368-34-AA

Table 1, continued. Proposed herbicides for use at Cotoni-Coast Dairies, including Common Name, Manufacturer Trade Name, Manufacturer Name, EPA Registration Number, and California Registration Number. **Blue** = aquatic formulation (labeled for application in and around surface water). **Brown** = terrestrial formulation (not labeled for aquatic application).

Common Name	Manufacturer Trade Name	Manufacturer Name	EPA Reg. Number	CA Reg. Number
Glyphosate	Accord XRT II	Dow AgroSciences	62719-556	62719-556-AA
Glyphosate	Alligare Glyphosate 4 PLUS	Alligare, LLC	81927-9	81927-9-AA
Glyphosate	Alligare Glyphosate 5.4	Alligare, LLC	81927-8	81927-8-AA
Glyphosate	Buccaneer	Tenkoz	55467-10	55467-10-AA
Glyphosate	Buccaneer Plus	Tenkoz	55467-9	55467-9-AA
Glyphosate	Credit Xtreme	Nufarm Americas Inc.	71368-81	71368-81-AA
Glyphosate	Gly Star Gold	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61	42750-61-ZC
Glyphosate	Gly Star Original	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-60	42750-60-AA
Glyphosate	Gly Star Plus	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61	42750-61-AA
Glyphosate	Gly Star Pro	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61	42750-61-ZA
Glyphosate	GlyphoMate 41	PBI/Gordon Corporation	2217-847	2217-847-AA
Glyphosate	Glypro	Dow AgroSciences	62719-324	62719-324-AA
Glyphosate	Glypro Plus	Dow AgroSciences	62719-322	62719-322-AA
Glyphosate	Honcho Plus	Monsanto	524-454	524-454-ZB
Glyphosate	Imitator DA	Drexel Chemical Company	19713-586	19713-586-AA
Glyphosate	Imitator Plus	Drexel Chemical Company	19713-526	19713-526-AA
Glyphosate	KleenUp Pro	Loveland Products, Inc.	34704-890	34704-890-ZB
Glyphosate	Mad Dog Plus	Loveland Products, Inc.	34704-890	34704-890-ZC
Glyphosate	Makaze	Loveland Products, Inc.	34704-890	34704-890-ZA
Glyphosate	Razor Pro	Nufarm Americas Inc.	228-366	228-366-ZD
Glyphosate	Roundup PRO	Monsanto	524-475	524-475-ZA
Glyphosate	Roundup PRO Concentrate	Monsanto	524-529	524-529-AA
Glyphosate	Roundup PROMAX	Monsanto	524-579	524-579-AA
Diuron	Alligare Diuron 4L	Alligare, LLC	81927-44	81927-44-AA
Diuron	Alligare Diuron 80DF	Alligare, LLC	81927-12	81927-12-AA
Diuron	Direx 4L	Makhteshim Agan of N. A. (ADAMA)	66222-54	66222-54-ZC
Diuron	Diuron 4L	Drexel Chemical Company	19713-36	19713-36-AA
Diuron	Diuron 4L	Loveland Products Inc.	34704-854	34704-854-AA
Diuron	Diuron 80	Drexel Chemical Company	19713-274	19713-274-AA
Diuron	Diuron 80 WDG	Loveland Products Inc.	34704-648	34704-648-AA
Tebuthiuron	Alligare Tebuthiuron 20 P	Alligare, LLC	81927-41	81927-41-AA
Tebuthiuron	Alligare Tebuthiuron 80 WG	Alligare, LLC	81927-37	81927-37-AA
Tebuthiuron	Spike 20P	Dow AgroSciences	62719-121	62719-121-AA
Tebuthiuron	Spike 80DF	Dow AgroSciences	62719-107	62719-107-ZA
Tebuthiuron	SpraKil S-5 Granules	SSI Maxim Co., Inc.	34913-10	34913-10-AA
Tebuthiuron + Diuron	SpraKil SK-13 Granular	SSI Maxim Co., Inc.	34913-15	34913-15-AA
Tebuthiuron + Diuron	SpraKil SK-26 Granular	SSI Maxim Co., Inc.	34913-16	34913-16-AA

Table 2. Proposed herbicides for use at Cotoni-Coast Dairies, including Common Name, Manufacturer Trade Name, Formulation, Target Vegetation Type, Application Method, and Stock Solution Concentration. **Blue** = aquatic formulation (labeled for application in and around surface water). **Brown** = terrestrial formulation (not labeled for aquatic application).

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Common Name	Manufacturer Trade Name	Fon	Fon	Dry	D	Ligi	Gra	Gra	Gra	Rip	Scri	Gra	Bac	Mo	Concentration	Units of Conc.												
Glyphosate	Aqua Neat		Х		1	Х				Х			Х		4	Lbs. A.E. per gal.												
Glyphosate	Aqua Star		Х			х				Х			Х		4	Lbs. A.E. per gal.												
Glyphosate	Imitator Aquatic		Х			Х				Х			Х		4	Lbs. A.E. per gal.												
Glyphosate	Rodeo		Χ			Х				Х			Х		4	Lbs. A.E. per gal.												
Triclopyr	Alligare Triclopyr 3		Χ			Х				X			Х		3	Lbs. A.E. per gal.												
Triclopyr	Element 3A		X			Х				X			Х		3	Lbs. A.E. per gal.												
Triclopyr	Garlon 3A		X			Х				X			Х		3	Lbs. A.E. per gal.												
Triclopyr	Tahoe 3A		X			Х				Х			Х		3	Lbs. A.E. per gal.												
Triclopyr	Vastlan		Х			Х				Х			Х		4	Lbs. A.E. per gal.												
Aminopyralid	Milestone	Х				Х		Х					Х	Х	2	Lbs. A.E. per gal.												
Aminopyralid + 2,4-D	ForeFront HL	Х				Х		Х	Х				Х	Х	0.41 + 3.33	Lbs. A.E. per gal.												
Aminopyralid + 2,4-D	GrazonNext HL	Х				Х		Х	Х				Х	Х	0.41 + 3.33	Lbs. A.E. per gal.												
Clopyralid	Alligare Clopyralid 3	Х				Х		Х					Х	Х	3	Lbs. A.E. per gal.												
Clopyralid	Spur	Х				Х		Х					Х	Х	3	Lbs. A.E. per gal.												
Clopyralid	Stinger	Х				Х		Х					Х	Х	3	Lbs. A.E. per gal.												
Clopyralid	Transline	Х				Х		Х					Х	Х	3	Lbs. A.E. per gal.												
2,4-D	2,4-D 4# Amine Weed Killer	Х				Х			Х				Х	Х	3.74	Lbs. A.E. per gal.												
2,4-D	2,4-D Amine 4	Х				Х			Х				Х	Х	3.8	Lbs. A.E. per gal.												
2,4-D	Alligre 2,4-D Amine	Х				Х			Х				Х	Х	3.8	Lbs. A.E. per gal.												
2,4-D	Clean Amine	Х				Х			Х				Х	Х	3.74	Lbs. A.E. per gal.												
2,4-D	Formula 40	Х				Х			Х				Х	Х	3.67	Lbs. A.E. per gal.												
2,4-D	HardBall	Х				Х			Х				Х	Х	1.74	Lbs. A.E. per gal.												
2,4-D	Saber	Х				Х			Х				Х	Х	3.8	Lbs. A.E. per gal.												
2,4-D	Shredder Amine 4	Х				Х			Х				Х	Х	3.8	Lbs. A.E. per gal.												
2,4-D	Unison	Х				Х			Х				Х	Х	1.74	Lbs. A.E. per gal.												
2,4-D	WEEDestroy AM-40	Х				Х			Х				Х	Х	3.8	Lbs. A.E. per gal.												
Dicamba	Alligare Dicamba 4 Herbicide	Х				Х			Х				Х	Х	5 Lbs. A.E. per g													
Dicamba	Banvel	Х				Х			Х				Х	Х	4 Lbs. A.E. per g													
Dicamba	Clarity	Х				Х			Х				Х	Х	4	Lbs. A.E. per gal.												
Dicamba	Diablo	Х				Х			Х				Х	Х	4	Lbs. A.E. per gal.												
Dicamba	Dicamba DMA	Х				Х			Х				Х	Х	4	Lbs. A.E. per gal.												
Dicamba	Rifle	Х				Х			Х				Х	Х	4	Lbs. A.E. per gal.												
Dicamba	Vanquish Herbicide	Х				Х			Х				Х	Х	4	Lbs. A.E. per gal.												
Dicamba + 2,4-D	Rifle-D	Х				Х			Х				Х	Х	1.0 + 2.88	Lbs. A.E. per gal.												
Dicamba + 2,4-D	Weedmaster	Х				Х			Х				Х	Х	1.0 + 2.87	Lbs. A.E. per gal.												

Table 2, continued. Proposed herbicides for use at Cotoni-Coast Dairies, including Common Name, Manufacturer Trade Name, Formulation, Target Vegetation Type, Application Method, and Stock Solution Concentration. **Blue** = aquatic formulation (labeled for application in and around surface water). **Brown** = terrestrial formulation (not labeled for aquatic application).

												Арр	olicat	tion						
								Nor	n-na	tive		m	etho	bd						
			Forn	nula	tior	1	ta	arge	t ve	g typ	be	G	rour	nd						
Common Name	Manufacturer Trade Name	Formulation - Terrestrial	Formulation - Aquatic	Dry, granular	Dry, flowable	Liquid, flowable	Grassland - All veg - Day Use Areas	Grassland - Non-nat. thistles	Grassland - Non-nat. broadleaf ann.	Riparian - Non-nat. perennial vines	Scrub - Non-native woody shrubs	Granular spreader - broadcast	Backpack sprayer - spot spray	Motorized vehicle - broadcast spray	Stock	solution Units of Conc.				
Glyphosate	Accord XRT II	Х				Х	Х	Х	Х		Х		Х	Х	4	Lbs. A.E. per gal.				
Glyphosate	Alligare Glyphosate 4 PLUS	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Alligare Glyphosate 5.4	Х				Х	Х	Х	Х		Х		Х	Х	4	Lbs. A.E. per gal.				
Glyphosate	Buccaneer	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Buccaneer Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Credit Xtreme	Х				Х	Х	Х	Х		Х		Х	Х	4.5	Lbs. A.E. per gal.				
Glyphosate	Gly Star Gold	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Gly Star Original	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Gly Star Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Gly Star Pro	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	GlyphoMate 41	Х				Х	Х	Х	Х		Х		Х	Х	2.8	Lbs. A.E. per gal.				
Glyphosate	Glypro	Х				Х	Х	Х	Х		Х		Х	Х	4	Lbs. A.E. per gal.				
Glyphosate	Glypro Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Honcho Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Imitator DA	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Imitator Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	KleenUp Pro	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Mad Dog Plus	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Makaze	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Razor Pro	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Roundup PRO	Х				Х	Х	Х	Х		Х		Х	Х	3	Lbs. A.E. per gal.				
Glyphosate	Roundup PRO Concentrate	Х				Х	Х	Х	Х		Х		Х	Х	3.7	Lbs. A.E. per gal.				
Glyphosate	Roundup PROMAX	Х				Х	Х	Х	Х		Х		Х	Х	4.5	Lbs. A.E. per gal.				
Diuron	Alligare Diuron 4L	Х				Х	Х						Х	Х	4	Lbs. A.I. per gal.				
Diuron	Alligare Diuron 80DF	Х			Х		Х						Х	Х	80	% A.I.				
Diuron	Direx 4L	Х				Х	Х						Х	Х	4 Lbs. A.I. per gal.					
Diuron	Diuron 4L	Х				Х	Х						Х	Х	4 Lbs. A.I. per gal.					
Diuron	Diuron 4L	Х				Х	Х						Х	Х	4 Lbs. A.I. per gal					
Diuron	Diuron 80	Х			Х		Х						Х	Х	80 % A.I.					
Diuron	Diuron 80 WDG	Х			Х		Х						Х	Х	80	% A.I.				
Tebuthiuron	Alligare Tebuthiuron 20 P	Х		Х			Х						Х	Х	20	% A.I.				
Tebuthiuron	Alligare Tebuthiuron 80 WG	Х			Х		Х						Х	Х	80	% A.I.				
Tebuthiuron	Spike 20P	Х		Х			Х					Х			20	% A.I.				
Tebuthiuron	Spike 80DF	Х			Х		Х						Х	Х	80	% A.I.				
Tebuthiuron	SpraKil S-5 Granules	Х		Х			Х					Х			5	% A.I.				
Tebuthiuron + Diuron	SpraKil SK-13 Granular	Х		Х			Х					Х			1+3	% A.I.				
Tebuthiuron + Diuron	SpraKil SK-26 Granular	Х		Х			Х					Х			2+6	% A.I.				

Table 3. Proposed adjuvants for use at Cotoni-Coast Dairies, including Common Name,Trade Name, Manufacturer, EPA Registration Number, and California RegistrationNumber.

Adjuvant Type	Manufacturer Trade Name	Manufacturer	EPA Reg Number	CA Reg. Number
Colorant/Dye	Alligare Super Marking Dye	Alligare, LLC	Not applicable	Not applicable
Colorant/Dye	BullsEye	Milliken Chemical	Not applicable	Not applicable
Colorant/Dye	Elite Ruby	Red River Specialties, Inc.	Not applicable	Not applicable
Colorant/Dye	Elite Sapphire	Red River Specialties, Inc.	Not applicable	Not applicable
Colorant/Dye	Elite Sapphire WSB	Red River Specialties, Inc.	Not applicable	Not applicable
Colorant/Dye	Elite Splendor	Red River Specialties, Inc.	Not applicable	Not applicable
Colorant/Dye	Hash Mark Blue Liquid	Exacto, Inc.	Not applicable	Not applicable
Colorant/Dye	Hash Mark Blue Liquid HC	Exacto, Inc.	Not applicable	Not applicable
Colorant/Dye	Hash Mark Blue Powder	Exacto, Inc.	Not applicable	Not applicable
Colorant/Dye	Hash Mark Green Liquid	Exacto, Inc.	Not applicable	Not applicable
Colorant/Dye	Hash Mark Green Powder	Exacto, Inc.	Not applicable	Not applicable
Colorant/Dye	Hi-Light	Becker-Underwood	Not applicable	Not applicable
Colorant/Dye	Hi-Light WSP	Becker-Underwood	Not applicable	Not applicable
Colorant/Dye	Marker Dye	Loveland Products, Inc.	Not applicable	Not applicable
Colorant/Dye	Mark-It Blue	Monterey AgResources	Not applicable	Not applicable
Colorant/Dye	Mark-It Red	Monterey AgResources	Not applicable	Not applicable
Colorant/Dye	Mystic HC	WinField United	Not applicable	Not applicable
Colorant/Dye	Signal	Precision Laboratories, LLC	Not applicable	Not applicable
Colorant/Dye	SPI-Max Blue Spray Marker	PROKoZ	Not applicable	Not applicable
Colorant/Dye	Spray Indicator XL	Helena Agri-Enterprises, LLC	Not applicable	Not applicable
Colorant/Dye	TurfTrax	Loveland Products, Inc.	Not applicable	Not applicable
Colorant/Dye	TurfTrax Blue Spray Indicator	Loveland Products, Inc.	Not applicable	Not applicable
Defoaming Agent	Alligare Anti-Foamer	Alligare, LLC	Not applicable	Not applicable
Defoaming Agent	Alligare Defoamer	Alligare, LLC	Not applicable	Not applicable
Defoaming Agent	Cornbelt Defoamer	Van Diest Supply Co.	Not applicable	Not applicable
Defoaming Agent	Defoamer	Brewer International	Not applicable	Not applicable
Defoaming Agent	Fighter-F 10	Loveland Products, Inc.	Not applicable	Not applicable
Defoaming Agent	Fighter-F Dry	Loveland Products, Inc.	Not applicable	Not applicable
Defoaming Agent	Foam Buster	Helena Agri-Enterprises, LLC	Not applicable	Not applicable
Defoaming Agent	Foambuster Max	Helena Agri-Enterprises, LLC	Not applicable	Not applicable
Defoaming Agent	Foam Fighter	Miller Chem. & Fert. Corp.	Not applicable	Not applicable
Defoaming Agent	Fome-Kil	Drexel Chemical Company	Not applicable	Not applicable
Defoaming Agent	FTF Defoamer	Wilbur-Ellis Co. LLC	Not applicable	Not applicable
Defoaming Agent	Gundown Max	Precision Laboratories, LLC	Not applicable	Not applicable
Defoaming Agent	No Foam	Wilbur-Ellis Co. LLC	Not applicable	Not applicable
Defoaming Agent	Red River Defoamer	Red River Specialties, Inc.	Not applicable	Not applicable
Defoaming Agent	Reverse	Exacto, Inc.	Not applicable	Not applicable
Defoaming Agent	Suppression	Chemorse Ltd.	Not applicable	Not applicable
Defoaming Agent	Tripleline	Creative Marketing & Research, Inc.	Not applicable	Not applicable
Defoaming Agent	Unfoamer	Loveland Products, Inc.	Not applicable	Not applicable
Tank Cleaner	All Clear	Loveland Products, Inc.	Not applicable	Not applicable
Tank Cleaner	Back Field	Exacto, Inc.	Not applicable	Not applicable
Tank Cleaner	Cornbelt Tank-Aid	Van Diest Supply Co.	Not applicable	Not applicable
Tank Cleaner	Elite Vigor	Red River Specialties, Inc.	Not applicable	Not applicable
Tank Cleaner	Kutter	Wilbur-Ellis Co. LLC	Not applicable	Not applicable
Tank Cleaner	Neutral-Clean	Wilbur-Ellis Co. LLC	Not applicable	Not applicable
Tank Cleaner	Pro Tank	WinField United	Not applicable	Not applicable
Tank Cleaner	Red River Tank Cleaner	Red River Specialties, Inc.	Not applicable	Not applicable
Tank Cleaner	SSC-11	Wilbur-Ellis Co. LLC	Not applicable	Not applicable
Tank Cleaner	Tank and Equipment Cleaner	Loveland Products, Inc.	Not applicable	Not applicable
Tank Cleaner	Wipe Out	Helena Agri-Enterprises, LLC	Not applicable	Not applicable

Method of Application:

The method of application is indicated for each herbicide type in **Table 2**. Additionally, the Integrated Pest Management strategy is summarized below in **METHODS of WEEDS CONTROL**, also found in the **Cotoni-Coast Dairies Weed Management Plan**.

A detailed analysis of effects for application of these herbicides at Cotoni-Coast Dairies is found in the **Cotoni-Coast Dairies Weed Management Plan**. The analysis is tiered to the following documents –

- 2007 Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Final Programmatic Environmental Impact Statement
- 2016 Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement

METHODS of WEEDS CONTROL

Non-native, tall, broadleaf annuals in grasslands

Due to their annual life cycle, herbaceous growth form, and widespread distribution in grasslands, the control of non-native broadleaf annuals is best accomplished by livestock grazing and mowing. Cattle are present within most of the grassland area grazing allotments of C-CD. The balance in dominance between the less competitive annual grasses and more competitive non-native, tall, broadleaf annuals in grasslands of C-CD, is largely influenced by the intensity of cattle grazing. Intensive grazing favors annual grass cover and native forbs, while the lack of grazing promotes dominance of non-native, tall, broadleaf annuals (Hayes and Holl 2003; Stromberg et al. 2007; Sotoyome RCD 2019). Management of cattle grazing will be the primary method of control for non-native, tall, broadleaf annuals in grasslands of C-CD. Some areas of grassland within allotments at C-CD are undergrazed by cattle due to poor access across steep terrain or lack of water availability in the uplands. Range improvements are proposed including placing water troughs in upland areas and updating fencing to encourage more even grazing across the grasslands of C-CD.

Within and around fenced Day Use Areas and around other infrastructure in grasslands, annual mowing will be used as the primary method to reduce fine fuel loads and wildfire risk. Mowing will also be used to reduce tall weeds along trails, roads, and fire breaks. Mowing equipment may include a mower attachment to a tractor, riding mower, walkbehind mower, or weedeaters. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to mowing is 50 acres.

In some cases, herbicide will be used in place of grazing and mowing to treat weeds within and around Day Use Areas, other infrastructure, trails, roads, and fire breaks. The non-selective, post-emergent herbicide Glyphosate (liquid) will be broadcast applied with small-scale, ground-based application methods including a backpack sprayer (spot

spraying) and spray boom on a motorized vehicle (UTV or Truck; broadcast spraying). The use of Glyphosate will be primarily limited to situations where vegetation presents a wildfire risk, but the risk of wildfire caused by a blade mower would be even higher. The non-selective, pre-emergent herbicides Diuron and Tebuthiuron (solid, granular) will be locally applied by hand operated spreaders to small areas of the soil where complete removal of any herbaceous annual plant growth and bare ground is desired for several years. The application of Diuron and Tebuthiuron will be entirely limited to around Day Use Areas and infrastructure. No Diuron or Tebuthiuron treatments will be conducted in grasslands accessible to livestock.

In areas where non-native, tall broadleaf annuals are persistent in large areas of grasslands despite efforts to control them with livestock grazing and mowing, broadcast applications of selective herbicides will be conducted. The selective herbicides only control broadleaf annual plant species and do not affect grasses. These herbicide applications will be primarily undertaken in conjunction with efforts to restore non-native grassland to native grassland.

The selective, post-emergent, herbicides Dicamba and 2,4-D (liquid) will be applied to specifically control only broadleaf annual plant species (Ditomaso et al. 2013). Dicamba and 2,4-D are California Restricted Materials that have an exception for use in small quantities on small areas only (CDPR 2020). These two herbicides would be used primarily to control broadleaf annuals in small areas for native grassland restoration and research. The selective, post-emergent, herbicides Aminopyralid and Clopyralid (liquid) will be applied to specifically control only annual aster species (e.g. thistles; Ditomaso et al. 2013). Small-scale, ground-based application methods would be used to apply Dicamba and 2,4-D including backpack sprayer (spot spraying) and spray boom on motorized vehicle (UTV and Truck; broadcast spraying). Small-scale, ground-based application methods would be used to apply Aminopyralid and Clopyralid including backpack sprayer (spot spraying) and spray boom on motorized vehicle (UTV and Truck; broadcast spraying). Per the herbicide product labels, there are no restrictions on grazing grasslands following application of Dicamba, 2,4-D, Aminopyralid, and Clopyralid. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to treatment with herbicide is 50 acres.

Prescribed fire may be used to reduce fine fuel loads and the abundance on non-native grasses and forbs in order to restore native grasslands. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to prescribed fire treatment is 10 acres.

Non-native perennial vines in riparian areas

Non-native perennial vines present special challenges to control since they are tangled with native riparian vegetation and grow from extensive rhizome systems in the soil. Additionally, they grow in very close proximity to surface water. The control of non-native perennial vines focuses on manual removal by cutting, removal, and disposal of vines, followed by application of aquatic formulations of Glyphosate and Triclopyr to resprouts (DiTomaso et al. 2013). Due to the dense riparian vegetation and close

proximity to surface water, the herbicide application method is limited to a backpack sprayer (spot spraying). The total estimated annual area of non-native perennial vines in riparian areas subject to treatment with herbicide is 5 acres.

Non-native woody shrubs and large perennial grasses in coastal scrub

Non-native woody shrubs and large grasses typically grow on very steep slopes. Although Pampas grass has very short-lived seed (<1 year) and has no persistent seed bank, French broom has very long lived seed (50+ years) and forms a large, persistent seed bank (Ditomaso et al. 2013). Non-native woody shrubs and large grasses can be removed manually by hand pulling or mechanical grubbing (shovel, pick axe, or weed wrench). More extensive infestations may be more effectively controlled with foliar applications of Glyphosate and Triclopyr (Ditomaso et al. 2013). Due to their location on steep slopes and away from roads, a backpack sprayer (spot spraying) may be the only option for herbicide application. The very long-lived, persistent soil seed bank of French broom that it continually emerges from necessitates dedicated, long-term monitoring and control to achieve eradication. The total estimated annual area of non-native woody shrubs and large perennial grasses subject to treatment with herbicide is 20 acres.

Intended (Maximum) Rates of Application:

Table 4 lists the maximum application rates for each herbicide.

Table 4. Herbicide Common Name and maximum application rates of application.

Common Name	Ibs. A.I. per acre
Glyphosate	2.00
Aminopyralid	0.11
Clopyralid	0.25
Dicamba	0.50
2,4-D	0.50
Triclopyr	2.00
Diuron	12.00
Tebuthiuron	4.00

Application Date(s):

Table 5 summarizes the application periods for each herbicide.

Common Name	Application Period
Glyphosate	Any time of year, but avoid Winter
Aminopyralid	Spring (March - April)
Clopyralid	Spring (March - April)
Dicamba	Spring (March - April)
2,4-D	Spring (March - April)
Triclopyr	Spring and Summer (March - September)
Diuron	Fall (September - October)
Tebuthiuron	Fall (September - October)

Table 5. Herbicide Common Name and application periods.

II. Pest (list specific pest(s) and reason(s) for application. Documentation must be attached for species not listed on the label):

WEED SPECIES of CONCERN at COTONI-COAST DAIRIES

Three categories of weeds have significant impacts on natural resources at C-CD, including 1) Non-native, tall, broadleaf annual in grasslands, 2) Non-native perennial vines in riparian areas, and 3) Non-native woody shrubs and large perennial grasses in coastal scrub.

1) Non-native, tall, broadleaf annuals in grasslands include Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), radish (*Raphanus sativus*), and poison hemlock (*Conium maculatum*). Table 6 lists Cal-IPC and CDFA noxious weed ratings. These weeds form tall, dense patches in grasslands and directly compete with native grasses and forbs of the native grassland vegetation type. Purple starthistle (*Centaurea calcitrapa*) is also a non-native annual species of concern that occurs in non-native grasslands. These weeds present a fine fuel fire hazard in close proximity to Day Use Areas and infrastructure and also adversely impact grassland habitat and rangeland quality. These weed species are most common at C-CD in annual grassland areas of Terrace 2 of proposed RMZs #1, #2, and #3. The estimated total project area for the control of non-native, tall, broadleaf annuals in grasslands is 600 acres.

	Italian thistle	milk thistle	black mustard	summer mustard	radish	poison hemlock
Cal-IPC rating \rightarrow	Moderate	Limited	Moderate	Moderate	Limited	Moderate
CDFA rating \rightarrow	С	•			•	

Table 6. Cal-IPC and CDFA noxious weed ratings for non-native, tall, broadleaf annuals in grasslands.

2) Non-native perennial vines in riparian areas include cape ivy (*Delairea odorata*) and old man's beard (*Clematis vitalba*). Table 7 lists Cal-IPC and CDFA noxious weed ratings. These weeds form dense cloaks that smother native riparian plant species and degrade riparian vegetation structure, resulting in degradation of the wetland and riparian habitat that supports several special status fish and amphibian species. These weed species are most common in riparian areas of proposed RMZ #1 including Agua Puerca Creek and proposed RMZ #2 including San Vicente Creek and Liddell Creek. The estimated total project area for the control of non-native perennial vines in riparian areas is 100 acres.

Table 7. Cal-IPC and CDFA noxious weed ratings for non-native perennial vines in riparian areas.

		old man's
	cape ivy	beard
Cal-IPC rating \rightarrow	High	Moderate
CDFA rating \rightarrow		А

3) Non-native woody shrubs and large perennial grasses in coastal scrub include French broom (*Genista monspessulana*) and pampas grass (*Cortaderia jubata*). Table 8 lists Cal-IPC and CDFA noxious weed ratings. These weeds form dense stands that directly compete with native shrub species of the coastal scrub vegetation type. These weeds are most common at C-CD in drastically disturbed areas including the quarries (abandoned) and along road edges in coastal scrub of proposed RMZs #1 and #2. The estimated total project area for the control of non-native woody shrubs and large perennial grasses in coastal scrub is 100 acres.

Table 8. Cal-IPC and CDFA noxious weed ratings for non-native woody shrubs and large perennial grasses in coastal scrub.

	French broom	pampas grass
Cal-IPC rating \rightarrow	High	High
CDFA rating \rightarrow		•

Prioritization of weed treatments will generally follow as: 1) Non-native, tall, broadleaf annuals in grasslands, 2) Non-native perennial vines in riparian areas, and 3) Non-native woody shrubs and large perennial grasses in coastal scrub. The methods utilized to control each weed species will be dependent upon several factors including plant growth form (herbaceous forb vs. woody shrub vs vine), plant life cycle (annual vs. perennial), habitat type (upland terrestrial vs. riparian area and wetland), potential to adversely impact non-target species, and potential to impact other resources and activities at C-CD.

III. Major Desired Plant Species Present:

Native plant species and native vegetation types. Native grassland, native wetland, native riparian area, native coastal scrub.

IV. Treatment Site: (describe land type or use, size, stage of growth of target species, slope and soil type).

The treatment site includes the entire Cotoni-Coast Dairies (C-CD) unit of the California Coastal National Monument. C-CD is a topographically complex landscape that includes a diversity of vegetation types including perennial wetlands, riparian areas, non-native weedy/ruderal patches, non-native grassland, native grassland, coastal scrub, chaparral, non-native woody shrubs, coast live oak woodland, broadleaf forest, and conifer forest. Most of the herbicide treatment areas will be located in non-native weedy/ruderal patches, non-native grassland, riparian areas, and coastal scrub, as previously described in **WEED SPECIES of CONCERN at COTONI-COAST DAIRIES.** The current dominant land use is cattle grazing, but will soon also include light recreation (hiking, biking, equestrian), once it is open to public access.

V. Sensitive Aspects and Precautions: (describe sensitive areas [e.g. marsh, endangered, threatened, candidate and sensitive species habitat] and distance to treatment site. List measures taken to avoid impact to sensitive areas).

Sensitive resources include special status amphibian and fish species and the wetland and riparian area habitat that supports them. Other sensitive resources include plants of Native American cultural interest and adjacent private, certified organic farms and private residences. Adverse impacts to wetlands and riparian areas will be minimized by using only herbicides approved for application in aquatic settings and using only spot spray treatment. Adverse impacts to plants of Native American cultural interest and adjacent private, certified organic farms and private residences will be minimized by maintaining adequate buffer zones from herbicide treatment areas. The **Cotoni-Coast Dairies Weed Management Plan** list numerous additional Standard Operating Procedures to avoid impacts to sensitive resources and for human health and safety.

VI. Nontarget Vegetation: (describe impacts to nontarget vegetation in the project area).

The overall Integrated Pest Management strategy described in the Cotoni-Coast Dairies Weed Management Plan is designed to achieve maximum reduction of the target weed species, while minimizing adverse impacts to non-target native plant species and other resources. Some minor, short-term (< 1 year), adverse impact to non-target vegetation is anticipated with the application of Glyphosate, which is a non-selective herbicide. Adverse impacts to non-target vegetation will be minimized by primarily using spot spray application method for glyphosate.

VII. Integrated Weed Management: (describe other aspects of the IWM program that are being used in addition to this chemical application in the project area).

Other Integrated Pest Management methods that will be used to control weed species include manual removal (hand-pulling), mowing, livestock grazing, and prescribed fire.

VIII. REFERENCES

Bureau of Land Management (BLM). 2007. Vegetation Treatment Using Herbicides on BLM Lands in Seventeen Western States Programmatic EIS.

Bureau of Land Management (BLM). 2016. The Record of Decision on Vegetation Treatments Using Aminopyralid, Floroxypyr and Rimsulfuron.

California Department of Pesticide Regulation. 2020. California Restricted Materials Requirements. Available: https://www.cdpr.ca.gov/docs/enforce/dpr-enf-013a.pdf

DiTomaso J.M. et al. 2013. Weed Control in Natural Areas in the Western United States. University of California, Davis. Department of Plant Sciences, University of California, Davis. Weed Research and Information Center. 544 pp.

Hayes G.F. and K.D. Holl. 2003. Cattle grazing impacts on annual forbs and vegetation composition of mesic grasslands in California. Conservation Biology 17:1694-1702.

Sotoyome RCD. 2019. Grazing Handbook. A Guide for Resource Managers in Coastal California.

https://www.carangeland.org/images/GrazingHandbook.pdf [Accessed December 3, 2019]

Stromberg M., Corbin J., and C. D'Antonio. 2007. California Grasslands. University of California Press. 408 pp.

Appendix F: Cotoni-Coast Dairies Weed Management Plan

INTRODUCTION

This Cotoni-Coast Dairies Weed Management Plan is a general plan for prioritizing and controlling the most invasive, non-native plant species (weeds) using an adaptive management approach. As part of this adaptive strategy, weed management priorities and strategies will be modified over time, based on inventory and monitoring results. Prioritization, implementation, and evaluation of weed treatments will be based on 1) wildfire risk due to accumulations of fine fuels around Day Use Areas and other infrastructure, 2) adverse impacts of weeds to rangeland (grassland) quality, and 3) impacts of weeds to native species and their communities, particularly special status species.

Adaptive management relies on an inventory and monitoring program that includes regular inventory of the area to detect and map the distribution, abundance, and spread of new and established infestations and monitoring to track the outcomes of implemented weed treatments. Early detection and rapid response (EDRR) is the most efficient and cost-effective method of dealing with any invasive species. In order to implement EDRR, it is critical to have the tools available to enable early detection of - and rapid response to - new weed invasions.

Photomonitoring and casual monitoring with a GPS will be used to document and quantify existing weed infestations. Regular, casual survey (patrol) with a GPS will be used to detect and document new weed invasions. Emphasis will also be placed in preventing new infestations though education and BMPs. Priorities for weed management actions will emphasize: 1) mitigation of wildfire risk by reducing fine fuel loads near potential ignition sources (e.g. tall weeds around Day Use Areas), 2) control of highly undesirable weeds that adversely impact rangelands (e.g. thistles in grasslands), and 3) control of weeds that adversely impact native vegetation and habitat of native species, particularly special status species (e.g. cape ivy in riparian zones).

Tools and methods for treating and managing invasive weeds will include: 1) manual (i.e. handpulling), 2) mechanical (i.e. mowing), 3) targeted livestock grazing, 4) prescribed fire; and 5) herbicide treatment. Integrated Pest Management (IPM) is an effective and environmentally sensitive approach that optimizes control of weeds, while minimizing risks to human health, beneficial and non-target organisms, and the environment. IPM focuses on managing either the ecosystem that supports the weed or the weed species directly to reduce establishment, reproduction, dispersal, and survival.

CONFORMANCE WITH APPLICABLE LAND USE PLANS

The proposed action would be subject to the Cotoni-Coast Dairies amendment to the California Coastal National Monument Resource Management Plan that is being considered in this RMPA/EA.

Relationship to statutes, regulations, and other plans

The Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 1712) states that the BLM must manage public lands according to the principles of multiple use and sustained yield. The Public Rangelands Improvement Act of 1978 requires that BLM manage, maintain, and improve the condition of public rangelands for optimal productivity. The Carson-Foley Act (43 USC 1241) of 1968 directs agency leads to enter upon lands under their jurisdiction and control noxious, invasive plant species. BLM Departmental Manual 517 prescribes policy for the use of pesticides on the lands and waters under its jurisdiction, and for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. BLM Departmental Manual 609 prescribes policy to control noxious, invasive plant species on the lands, waters, or facilities under its jurisdiction to the extent that is economically feasible, and as needed for resource protection and accomplishment of resource management objectives. BLM Manual 9011 and Handbook H-9011-1 provide policy for conducting chemical pest control programs under an Integrated Pest Management approach.

This Plan is tiered to the following documents -

- 2007 Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Final Programmatic Environmental Impact Statement
- 2016 Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement

All herbicides and adjuvants used must be approved for use on BLM land and must be registered for use in California. Herbicide application will comply with the label, BLM policy and applicable federal and state laws. Cotoni-Coast Dairies is not located within an EPA Pesticide Use Limitation Area (PULA) for any herbicide type application during any time of year.

WEED SPECIES of CONCERN at COTONI-COAST DAIRIES

Three categories of weeds have significant impacts on natural resources at C-CD, including 1) Non-native, tall, broadleaf annuals in grasslands, 2) Non-native perennial vines in riparian areas, and 3) Non-native woody shrubs and large perennial grasses in coastal scrub and abandoned quarries (**Figure F.1**)

1) Non-native, tall, broadleaf annuals in grasslands include Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), radish (*Raphanus sativus*), and poison hemlock (*Conium maculatum*). These weeds form tall, dense patches in grasslands and directly compete with native grasses and forbs of the native grassland vegetation type. Purple starthistle (*Centaurea calcitrapa*) is also a non-native annual species of concern that occurs in non-native grasslands. These weeds present a fine fuel fire hazard in close proximity to Day Use Areas and infrastructure and also adversely impact grassland habitat and rangeland quality. These weed species (weedy/ruderal patches) are most common at C-CD in annual

grassland areas of Terrace 2 of proposed RMZs #1, #2, and #3. The estimated total project area for the control of non-native, tall, broadleaf annuals in grasslands is 600 acres.

- 2) Non-native perennial vines in riparian areas include cape ivy (*Delairea odorata*) and old man's beard (*Clematis vitalba*). These weeds form dense cloaks that smother native riparian plant species and degrade riparian vegetation structure, resulting in degradation of the wetland and riparian habitat that supports several special status fish and amphibian species. These weed species are most common in riparian areas of proposed RMZ #1 including Agua Puerca Creek and proposed RMZ #2 including San Vicente Creek and Liddell Creek. The estimated total project area for the control of non-native perennial vines in riparian areas is 100 acres.
- 3) Non-native woody shrubs and large perennial grasses in coastal scrub include French broom (*Genista monspessulana*) and pampas grass (*Cortaderia jubata*). These weeds form dense stands that directly compete with native shrub species of the coastal scrub vegetation type. These weeds are most common at C-CD in drastically disturbed areas including the quarries (abandoned) and along road edges in coastal scrub of proposed RMZs #1 and #2. The estimated total project area for the control of non-native woody shrubs and large perennial grasses in coastal scrub is 100 acres.

Prioritization of weed treatments will generally follow as: 1) Non-native, tall, broadleaf annuals in grasslands, 2) Non-native perennial vines in riparian areas, and 3) Non-native woody shrubs and large perennial grasses in coastal scrub. The methods utilized to control each weed species will be dependent upon several factors including plant growth form (herbaceous forb vs. woody shrub vs. vine), plant life cycle (annual vs. perennial), habitat type (upland terrestrial vs. riparian area and wetland), potential to adversely impact non-target species, and potential to impact other resources and activities at C-CD.

METHODS of WEEDS CONTROL

Non-native, tall, broadleaf annuals in grasslands

Due to their annual life cycle, herbaceous growth form, and widespread distribution in grasslands, the control of non-native broadleaf annuals is best accomplished by livestock grazing and mowing (**Figure F.1**). Cattle are present within most of the grassland area grazing allotments of C-CD. The balance in dominance between the less competitive annual grasses and more competitive non-native, tall, broadleaf annuals in grasslands of C-CD, is largely influenced by the intensity of cattle grazing. Intensive grazing favors annual grass cover and native forbs, while the lack of grazing promotes dominance of non-native, tall, broadleaf annuals (Popay and Field 1996; Hayes and Holl 2003; Stromberg et al. 2007; Sotoyome RCD 2019). Management of cattle grazing will be the primary method of control for non-native, tall, broadleaf annuals in grasslands of C-CD. Some areas of grassland within allotments at C-CD are undergrazed by cattle due to poor access across steep terrain or lack of water availability in the uplands. Range improvements are proposed including placing water troughs in upland areas and updating fencing to encourage more even grazing across the grasslands of C-CD.

Within and around fenced Day Use Areas and around other infrastructure in grasslands, annual mowing will be used as the primary method to reduce fine fuel loads and wildfire risk. Mowing will also be used to reduce tall weeds along trails, roads, and fire breaks. Mowing equipment may include a mower attachment to a tractor, riding mower, walk-behind mower, or weedeaters. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to mowing is 50 acres.

In some cases, herbicide will be used in place of grazing and mowing to treat weeds within and around Day Use Areas, other infrastructure, trails, roads, and fire breaks. The non-selective, postemergent herbicide Glyphosate (liquid) will be broadcast applied with small-scale ground-based application methods including a backpack sprayer (spot spraying) and spray boom on a motorized vehicle (UTV; broadcast spraying). The use of Glyphosate will be primarily limited to situations where vegetation presents a wildfire risk, but the risk of wildfire caused by a blade mower would be even higher. The non-selective, pre-emergent herbicides Diuron and Tebuthiuron (solid, granular) will be locally applied by hand operated spreaders to small areas of the soil where complete removal of any herbaceous annual plant growth and bare ground is desired for several years. The application of Diuron and Tebuthiuron will be entirely limited to around Day Use Areas and infrastructure. No Diuron or Tebuthiuron treatments will be conducted in grasslands accessible to livestock.

In areas where non-native, tall broadleaf annuals are persistent in large areas of grasslands despite efforts to control them with livestock grazing and mowing, broadcast applications of selective herbicides will be conducted. The selective herbicides only control broadleaf annual plant species and do not affect grasses. These herbicide applications will be primarily undertaken in conjunction with efforts to restore non-native grassland to native grassland.

The selective, post-emergent, herbicides Dicamba and 2,4-D (liquid) will be applied to specifically control only broadleaf annual plant species (Ditomaso et al. 2013). Both Dicamba and 2,4-D are California Restricted Materials with exceptions for use of small quantities in small areas (CDPR 2020). These two herbicides would only be used in small quantities on small areas for native grassland restoration and research. The selective, post-emergent, herbicides Aminopyralid and Clopyralid (liquid) will be applied to specifically control only annual aster species (e.g. thistles; Ditomaso et al. 2013). Only small-scale, ground-based application methods will be used to apply herbicides, including:1) backpack sprayer with spray wand (spot spraying), and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). Per the herbicide product labels, there are no restrictions on grazing grasslands following application of Dicamba, 2,4-D, Aminopyralid, and Clopyralid. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to treatment with herbicide is 50 acres.

Prescribed fire may be used to reduce fine fuel loads and the abundance on non-native grasses and forbs in order to restore native grasslands. The total estimated annual area of non-native, tall, broadleaf annuals and non-native grasslands subject to prescribed fire treatment is 10 acres.

Non-native perennial vines in riparian areas

Non-native perennial vines present special challenges to control since they are tangled with native riparian vegetation and grow from extensive rhizome systems in the soil. Additionally, they grow in very close proximity to surface water. The control of non-native perennial vines focuses on manual removal by cutting, removal, and disposal of vines (**Figure F.1**). The highest level of control is achieved with application of aquatic formulations of Glyphosate and Triclopyr to resprouts (DiTomaso et al. 2013). Due to the dense riparian vegetation and close proximity to surface water, the herbicide application method is limited to a backpack sprayer with a spray wand (spot spraying). The total estimated annual area of non-native perennial vines in riparian areas subject to treatment with herbicide is 5 acres.

Non-native woody shrubs and large perennial grasses in coastal scrub

Non-native woody shrubs and large grasses typically grow on very steep slopes. Although Pampas grass has very short-lived seed (<1 year) and has no persistent seed bank, French broom has very long lived seed (50+ years) and forms a large, persistent seed bank (Ditomaso et al. 2013). Non-native woody shrubs and large grasses can be removed manually by hand pulling or mechanical grubbing (shovel, pick axe, or weed wrench; **Figure F.1**). More extensive infestations may be more effectively controlled with foliar applications of Glyphosate and Triclopyr (Ditomaso et al. 2013). Due to their location on steep slopes and away from roads, a backpack sprayer with a spray wand (spot spraying) may be the only option for herbicide application. The very long-lived, persistent soil seed bank of French broom that it continually emerges from necessitates dedicated, long-term monitoring and control to achieve eradication. The total estimated annual area of non-native woody shrubs and large perennial grasses subject to treatment with herbicide is 20 acres.

		TARGET WEEDS																														
		Ar	าทน	als		Р	erer	nnia	ls	v	'ege	etati	ion	typ	е	Purpose Control method							nod	Herbicides								
Locations	Non-native grasses	Non-native thistles	Non-native mustards	Non-native radishes	Non-native posion hemlock	Non-native cape ivy	Non-native old man's beard	Non-native french broom	Non-native pampas grass	Riparian zone	Weedy/ruderal patch	Non-native grassland	Native grassland	Coastal scrub	Quarries (abandoned)	Reduce weeds introduction	Control existing weeds	Reduce fuel loads (fire hazard)	Cattle grazing	Mower/weedeater	Manual removal - pulling	Backpack sprayer - spot spray	UTV sprayer - broadcast spray	Glyposate	Dicamba	2,4-D	Aminopyralid	Clopyralid	Triclopyr	Diuron	Tebuthiuron	
Day Use Areas - parking lots	х	х	х	х	х			•	•	•	Х	Х	•	•	•	Х	Х	Х	•	1	1	2	2	2	2	2	2	2		2	2	
Trails, roads, fire breaks	х	х	х	х	х			х	х	•	Х	Х	Х	Х	Х	Х	Х	Х	1	2	2	3	3	3	3	3	3	3				
Rangelands - terraces	х	х	х	х	х			х	х	•	Х	Х	Х	Х		Х	Х	Х	1	2	2	3	3	3	3	3	3	3				
Wildlands - steep hillslopes								х	х	•			•	Х	Х	Х	Х	Х		1	1	2		2								
Perennial creeks						х	х	•	•	Х		•	•	•		Х	Х				1	2		2					2			
Figure F.1 . Summary of the target locations at C-CD for the control of non-native plant species, including target weeds at each location, vegetation type, purpose of control, control method, and herbicides to be used. The prioritization strategy for the use of													ch of																			

location, vegetation type, purpose of control, control method, and herbicides to be used. The prioritization strategy for the use of control methods is indicated by 1 (primary), 2 (secondary), and 3 (tertiary). Non-native plant species control emphasizes the use of cattle grazing first (where appropriate), then manual control methods, and finally, herbicide control methods last.

HERBICIDE DESCRIPTIONS

Glyphosate

Glyphosate is a non-selective, post-emergent, systemic herbicide. It is active on all plant species. It is soluble in water and applied as a spray to foliage. The target season interval for application of Glyphosate to control any types of emergent weeds at C-CD will be any time of the year; however, application during the Winter rainy season will be avoided.

<u>Dicamba</u>

Dicamba is a selective, pre-emergent and post-emergent, systemic herbicide. It is active on broadleaf annuals. It is soluble in water and applied as a spray to foliage. The target season interval for application of Dicamba to control non-native broadleaf annuals in grasslands at C-CD will be Spring (March – April), when broadleaf annuals are at the rosette stage. Dicamba is a California Restricted Material with exceptions for use of small quantities in small areas (CDPR 2020). This herbicide would only be used in small quantities on small areas for native grassland restoration and research.

<u>2,4-D</u>

2,4-D is a selective, pre-emergent and post-emergent, systemic herbicide. It is active on broadleaf annuals. It is soluble in water and applied as a spray to foliage. The target season interval for application of 2,4-D to control non-native broadleaf annuals in grasslands at C-CD will be Spring (March – April), when broadleaf annuals are at the rosette stage. 2,4-D is a California Restricted Material with exceptions for use of small quantities in small areas (CDPR 2020). This herbicide would only be used in small quantities on small areas for native grassland restoration and research.

Aminopyralid

Aminopyralid is a selective, post-emergent, systemic herbicide. It is most active on annual aster species (Asteraceae). It is soluble in water and applied as a spray to foliage. The target season interval for application of Aminopyralid to control non-native thistles in grasslands at C-CD will be Spring (March – April), when the thistles are at the rosette stage

Clopyralid

Clopyralid is a selective, post-emergent, systemic herbicide. It is most active on annual aster species (Asteraceae). It is soluble in water and applied as a spray to foliage. The target season interval for application of Clopyralid to control non-native thistles in grasslands at C-CD will be Spring (March – April), when the thistles are at the rosette stage.

<u>Triclopyr</u>

Triclopyr is a selective, post-emergent, systemic herbicide. It is soluble in water and applied as a spray to foliage. The target season interval for application of Triclopyr to control non-native perennial vines at C-CD will be during the Spring and Summer (March – September).

<u>Diuron</u>

Diuron is a non-selective, pre-emergent, systemic herbicide. It is a granular solid that is applied to the soil surface and kills all seedlings as they emerge. The target season interval for application of Diuron to Day Use Areas at C-CD to control all emerging plant seedlings will be Fall (September - October), just prior to the first fall rains.

<u>Tebuthiuron</u>

Tebuthiuron is a non-selective, pre-emergent, systemic herbicide. It is a granular solid that is applied to the soil surface and kills all seedlings as they emerge. The target season interval for application of Tebuthiuron to Day Use Areas at C-CD to control all emerging plant seedlings will be Fall (September - October), just prior to the first fall rains.

HERBICIDE ANALYSIS OF EFFECTS

Analysis of effects is tiered to the 2007 Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Final Programmatic Environmental Impact Statement (BLM 2007b), and the 2016 Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (BLM 2016). Where relevant, site-specific effects are analyzed for conditions specific to C-CD.

Factors that Influence the Fate, Transport, and Persistence of Herbicides

The fate and transport of herbicides in soil is a function of their interaction with the soil environment, and is a complex process. Chemical, physical, and biological soil processes influence herbicide availability, phytotoxicity, and fate and transport. Herbicides dissipate from soils by immobilization through adsorption onto soil surfaces, by transport with water, or through chemical or biological degradation processes.

Adsorption to soil surfaces is the most influential factor on the fate and transport of herbicides in soils. Adsorption occurs onto clay particles and organic matter. Adsorption affects herbicide mobility and availability to organisms, which in turn influences herbicide fate. The lower the adsorption of an herbicide to soil, the higher the mobility in soil. Transport with water is the primary mode of herbicide movement off of the application area. The higher the mobility of an herbicide is in soil and the higher the rainfall (leaching), the higher the probability that an herbicide will be transported off of the application site.

Photodegradation and biodegradation are the two common degradation pathways for herbicides in the environment. Degradation of herbicide results in a chemical transformation that replaces portions of the herbicide's active ingredient chemical structure, rendering it inactive. The length of time that an herbicide remains active in the soil is called soil persistence or soil residual life. The life of herbicide in soil is typically expressed as half-life – the time it takes for half of the mass of an herbicide to degrade and disappear.

Glyphosate

Air Quality

Glyphosate is not a volatile compound, therefore it has no effects on air quality.

Soil Resources

Glyphosate is soluble in water. It is strongly adsorbed to soil and has no mobility in soil. The herbicide is inactivated by adsorption to soil. Glyphosate has a half-life in soil of 47 days. Glyphosate has no direct effect on soil resources.

Water Resources and Quality

Non-aquatic formulations of Glyphosate will be applied in terrestrial uplands. Aquatic formulations of Glyphosate will be applied in wetlands and riparian areas. Glyphosate applied in terrestrial uplands is strongly adsorbed to soil and deactivated. Glyphosate applied in wetlands and riparian zones dissipates rapidly from surface water through adsorption to soil. Due to the rapid, strong attraction and binding to soil particles, Glyphosate does not remain dissolved in water as runoff from terrestrial uplands or in wetlands and riparian zones. Therefore, Glyphosate has no effect on water resources or water quality.

Wetland and Riparian Areas

Non-aquatic formulations of Glyphosate will be applied in terrestrial uplands. Aquatic formulations of Glyphosate will be applied in wetlands and riparian areas. Glyphosate applied in terrestrial uplands is strongly adsorbed to soil and deactivated. Glyphosate applied in wetlands and riparian zones dissipates rapidly from surface water through adsorption to soil. Due to the rapid, strong attraction and binding to soil particles, Glyphosate does not remain dissolved in water as runoff from terrestrial uplands or in wetlands and riparian zones. Therefore, Glyphosate has no effect on water resources in wetlands and riparian areas. Spot spray applications of Glyphosate to non-native perennial vines in wetlands and riparian areas has the potential for some overspray and impact to non-target, native vegetation. The undesirable impact to non-target, native vegetation would be localized and short-term and the native vegetation would rapidly recover.

Vegetation

Non-aquatic formulations of Glyphosate will be applied in terrestrial uplands. Aquatic formulations of Glyphosate will be applied in wetlands and riparian areas. Spot spray applications of Glyphosate have the potential for some overspray and impact to non-target, native vegetation. The undesirable impact to non-target, native vegetation would be localized and short-term and the native vegetation would rapidly recover.

Fish and Other Aquatic Organisms

Non-aquatic formulations of Glyphosate will be applied in terrestrial uplands. Aquatic formulations of Glyphosate will be applied in wetlands and riparian areas. Glyphosate applied in terrestrial uplands is strongly adsorbed to soil and deactivated. Glyphosate applied in wetlands and riparian zones dissipates rapidly from surface water through adsorption to soil. Due to the rapid, strong attraction and binding to soil particles, Glyphosate does not remain dissolved in water as runoff from terrestrial uplands or in wetlands and riparian zones. Rodeo has been shown to affect larval stages of frogs and to interfere with the protective microbial film on the skin of frogs

(Krynak and Benard 2017). This has the potential to expose frogs to many diseases including chytrid (McCoy and Peralta 2018). Freshwater zooplankton (found in wetlands and ponds) show toxicity dependent on the levels of application (Huaraca et al. 2020). Care should be taken not to let spray enter critical habitat for salmonids as the effects on young of the year are unknown.

Wildlife Resources

Direct spray of Glyphosate to insects and small mammals poses a low risk at the typical rate and a moderate risk at the maximum application rate. Insectivores consuming large quantities of insects incidentally sprayed with Glyphosate are at low risk of exposure. Herbivores consuming large quantities of grass and other vegetation treated with Glyphosate are at low risk of exposure. Risks of exposure of wildlife to Glyphosate will be mitigated by only treating relatively small areas of vegetation in any given year, leaving the vast majority of vegetation at C-CD untreated. Treating only a small amount every year will increase native pollinator plants. Native Bees are negatively affected by Glyphosate (Motta et al. 2018, Sponsler et al. 2019). Surveys for these bees should be done and the phenology of their nectar sources assessed prior to planning spraying. Since bees track their nectar sources and these shift as the season progresses a time for spraying could be worked out so as not to impact native bees.

Livestock

Non-aquatic formulations of Glyphosate will be applied in terrestrial uplands. Aquatic formulations of Glyphosate will be applied in wetlands and riparian areas. Cattle at C-CD spend the majority of time grazing in terrestrial uplands, primarily in grasslands, and spend little to no time in densely vegetated riparian zones. The probability of livestock encountering and consuming Glyphosate treated non-native perennial vines in the dense riparian zone vegetation is very low, therefore the overall risk of Glyphosate exposure in that setting is very low. Control of herbaceous annual plant growth with Glyphosate application will be conducted around Day Use Areas, other infrastructure, trails, roads, and fire breaks. The control may us a combination of spot spraying and narrow width broadcast spraying of strips (< 5 feet wide) along existing, developed linear features. The majority of these Glyphosate treatment areas would be located in grasslands accessible to cattle. Cattle consuming Glyphosate contaminated vegetation face low acute risk scenarios involving the typical application rate, moderate acute risk for scenarios involving the maximum application rate, and low chronic risk for scenarios involving the maximum application rate. Based on label directions, there are no restrictions on livestock use of Glyphosate treated areas. Risks of exposure of livestock to Glyphosate will be mitigated by only treating relatively small areas of vegetation in any given year, leaving the vast majority of vegetation at C-CD untreated.

Paleontological and Cultural Resources

Glyphosate may be applied to any vegetation type. Risks of treatment of cultural use sites or human exposure to Glyphosate from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Glyphosate may be applied to vegetation types where the effects may be visible on the landscape. The target vegetation types where these effects may be most visible include the grasslands and coastal scrub. Control of herbaceous annual plant growth with Glyphosate application may be conducted around Day Use Areas, other infrastructure, trails, roads, and fire breaks. The control may us a combination of spot spraying and narrow width broadcast spraying of strips (< 5 feet wide) along existing, developed linear features. Treated areas may appear as brown spots and strips, paralleling and immediately adjacent to existing linear features. Since herbaceous annuals at C-CD generally senesce and turn brown in summer, the Glyphosate treated areas would only be visible for a few months, between March and May. Herbaceous annuals readily produce new growth every year, so Glyphosate treated areas of grassland would turn green again the following growing season. Glyphosate treated areas of grassland would have a negligible to minor, short-term effect on visual resources.

Control of non-native woody shrubs and large perennial grasses in coastal scrub could result in large patches of dead shrubs that may take several years to decompose. Native coastal scrub would take several years to fill in the vacant spaces. Most areas that would be targeted for the control of non-native woody shrubs and large perennial grasses, would be located in quarries (abandoned) which already appear as large disturbances on the landscape. Relative to the much larger scars of the quarries on the landscape, Glyphosate treated non-native woody shrubs and large perennial grasses would have a negligible effect on visual resources.

Recreation

Glyphosate will be applied to vegetation types in the vicinity of Day Use Areas and recreation trails. Due to the high degree of overlap of proposed recreation trails with vegetation types targeted for Glyphosate treatment, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain Day Use Areas, trails, and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety.

Social and Economic Conditions

Glyphosate will be applied to vegetation types in the vicinity of Day Use Areas and recreation trails. Due to the high degree of overlap of proposed recreation trails with vegetation types targeted for Glyphosate treatment, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Glyphosate will be applied to vegetation types in the vicinity of Day Use Areas and trails. Due to the high degree of overlap of proposed recreation trails with vegetation types targeted for Glyphosate treatment, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety. For the routine application scenarios at the typical and maximum application rates, Glyphosate does not present a risk to workers or the public. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>Dicamba</u>

Air Quality

Dicamba is a volatile compound, therefore it may directly affect air quality, but not significantly due to the small columes of herbicide that would potentially be applied. Dicamba is a California Restricted Material with exceptions for use of small quantities in small areas (CDPR 2020). This herbicide would only be used in small quantities on small areas for native grassland restoration and research. Special precautions would be taken to prevent off-site drift of this volatile compound.

Soil Resources

Dicamba is soluble in water. It has high mobility in soil and does not bind to soil. Dicamba degrades to 3,6-dichlorosalicyclic acid, which does bind strongly to soil. Dicamba has a half-life in soil of 14 days. Dicamba has no direct effect on soil resources.

Water Resources and Quality

Dicamba will not be applied to wetlands and riparian zones. Dicamba will only be applied to terrestrial uplands (grasslands). Dicamba is a California Restricted Material and will only be used in small quantities to small areas for native grassland restoration and research. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Dicamba has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of Dicamba will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Dicamba should fully degrade. The half-life in soil is 14 days and the dry season is a minimum of 210 days.

Wetland and Riparian Areas

Dicamba will not be applied to wetlands and riparian zones. Dicamba will only be applied to terrestrial uplands (grasslands). A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Dicamba has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of Dicamba will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April

– October) during which time Dicamba should fully degrade. The half-life in soil is 14 days and the dry season is a minimum of 210 days.

Vegetation

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Dicamba will be broadcast applied to grasslands to control non-native broadleaf annuals including thistles, mustard, radish, and poison hemlock. Application methods may include:1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). No special status broadleaf annual plant species are known or suspected to occur in grasslands at C-CD. Due to the specificity of Dicamba to broadleaf annuals and the lack of native broadleaf annuals in the annual grasslands at C-CD, broadcast treatments of Dicamba are expected to primarily impact non-native broadleaf annuals. No grass species will be affected by the Dicamba treatments. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent contamination of surface water by spray drift. Special precautions would be taken to prevent off-site drift of this volatile compound.

Fish and Other Aquatic Organisms

Dicamba will not be applied to wetlands and riparian zones. Dicamba will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Dicamba has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of Dicamba will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Dicamba should fully degrade. The half-life in soil is 14 days and the dry season is a minimum of 210 days.

Wildlife Resources

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Direct spray of Dicamba at both typical and maximum application rates poses a moderate risk to insects and small mammals. Insectivores consuming large quantities of insects incidentally sprayed with Dicamba are at risk of exposure. Herbivores consuming large quantities of grass and other vegetation treated with Dicamba are at risk of exposure. Risks of exposure of wildlife to Dicamba will be mitigated by only treating relatively small portions of grazing allotments in any given year, leaving the majority of grasslands untreated.

Livestock

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Most of the treated grasslands would be within rangeland allotments grazed by cattle. Dicamba presents some risk to livestock under direct spray and ingestion scenarios. Risks of exposure of cattle to Dicamba will be mitigated by only treating portions of grazing allotments in any given year, removing cattle from the treatment areas prior to
herbicide application, and temporarily restricting cattle from the treatment areas for one year. The half-life of Dicamba is 14 days and a year (365 days) of exclusion of cattle from grazing in the treatment areas should be more than sufficient to mitigate exposure risk.

Paleontological and Cultural Resources

Dicamba will only be applied to grasslands in terrestrial uplands. Risks of treatment of cultural use sites or human exposure to Dicamba from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). Due to the specificity of Dicamba to broadleaf annuals, broadcast treatments of Dicamba are expected to only adversely impact non-native thistles, mustard, radish, and poison hemlock. All other grassland species will not be impacted and therefore, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety.

Social and Economic Conditions

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent visitor exposure to herbicide. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to prevent visitor exposure to herbicide. Certain trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety. For the routine application scenarios at the typical and maximum application rates, Dicamba does not present a risk to workers or the public. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>2,4-D</u>

Air Quality

2,4-D is not a volatile compound, therefore it has no effects on air quality.

Soil Resources

2,4-D is soluble in water. It has high mobility in soil and does not bind to soil. 2,4-D has a halflife in soil of 10 days. 2,4-D has no direct effect on soil resources.

Water Resources and Quality

2,4-D will not be applied to wetlands and riparian zones. 2,4-D will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. 2,4-D has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of 2,4-D will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time, the 2,4-D should fully degrade. The half-life in soil is 10 days and the dry season is a minimum of 210 days.

Wetland and Riparian Areas

2,4-D will not be applied to wetlands and riparian zones. 2,4-D will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. 2,4-D has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of 2,4-D will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time 2,4-D should fully degrade. The half-life in soil is 10 days and the dry season is a minimum of 210 days.

Vegetation

2,4-D is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. D 2,4-D will be broadcast applied to grasslands to control non-native broadleaf annuals including thistles, mustard, radish, and poison hemlock. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying)... No special status broadleaf annual plant species known or suspected to occur in grasslands at C-

CD. Due to the specificity of 2,4-D to broadleaf annuals and the lack of native broadleaf annuals in the annual grasslands at C-CD, broadcast treatments of 2,4-D are expected to primarily impact non-native broadleaf annuals. No grass species will be affected by the 2,4-D treatments. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift.

Fish and Other Aquatic Organisms

2,4-D will not be applied to wetlands and riparian zones. 2,4-D will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. 2,4-D has high potential to leach with surface water and to leach to groundwater due to its high mobility in soil. Leaching of 2,4-D will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time 2,4-D should fully degrade. The half-life in soil is 10 days and the dry season is a minimum of 210 days.

Wildlife Resources

2,4-D is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Direct spray of 2,4-D at both typical and maximum application rates poses a moderate risk to insects and small mammals. Insectivores consuming large quantities of insects incidentally sprayed with 2,4-D are at risk of exposure. Herbivores consuming large quantities of grass and other vegetation treated with 2,4-D are at risk of exposure. Risks of exposure of wildlife to 2,4-D will be mitigated by only treating relatively small portions of grazing allotments in any given year, leaving the majority of grasslands untreated.

Livestock

2,4-D is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Most of the treated grasslands would be within rangeland allotments grazed by cattle. 2,4-D presents some risk to livestock under direct spray and ingestion scenarios. Risks of exposure of cattle to 2,4-D will be mitigated by only treating portions of grazing allotments in any given year, removing cattle from the treatment areas prior to herbicide application, and temporarily restricting cattle from the treatment areas for one year. The half-life of 2,4-D is 10 days and a year (365 days) of exclusion of cattle from grazing in the treatment areas should be more than sufficient to mitigate exposure risk.

Paleontological and Cultural Resources

2,4-D will only be applied to grasslands in terrestrial uplands. Risks of treatment of cultural use sites or human exposure to 2,4-D from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Application methods may include: 1) backpack

sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). Due to the specificity of 2,4-D to broadleaf annuals, broadcast treatments of 2,4-D are expected to only adversely impact non-native thistles, mustard, radish, and poison hemlock. All other grassland species will not be impacted and therefore, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety.

Social and Economic Conditions

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent visitor exposure to herbicide. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Dicamba is a California Restricted Material and will only be used in small quantities over small areas for native grassland restoration and research. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to prevent visitor exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety. Workers face low to moderate risk from direct spray of 2,4-D at the maximum application rates. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>Aminopyralid</u>

Air Quality

Aminopyralid is not a volatile compound, therefore it has no direct effects on air quality. Localized, brief, minor to negligible impacts to air quality are possible due to activities that support

the herbicide applications. These may include exhaust emissions from motorized vehicles and particulate emissions (dust) from vehicle travel on unpaved roads.

Soil Resources

Aminopyralid is soluble in water. It has moderate mobility in soil and only weakly binds to soil. Aminopyralid has a half-life in soil of 32 days. Aminopyralid has no direct effect on soil resources.

Water Resources and Quality

Aminopyralid will not be applied to wetlands and riparian zones. Aminopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Aminopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Aminopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Aminopyralid should fully degrade. The half-life in soil is 32 days and the dry season is a minimum of 210 days.

Wetland and Riparian Areas

Aminopyralid will not be applied to wetlands and riparian zones. Aminopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Aminopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Aminopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Aminopyralid should fully degrade. The half-life in soil is 32 days and the dry season is a minimum of 210 days.

Vegetation

Aminopyralid will be broadcast applied to grasslands to control non-native annual thistles. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). No special status annual plant species in the Asteraceae family are known or suspected to occur in grasslands at C-CD. Due to the high specificity of Aminopyralid to annual asters, broadcast treatments of Aminopyralid are expected to only adversely impact non-native annual thistles. All other grassland species should not be impacted. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift.

Fish and Other Aquatic Organisms

Aminopyralid will not be applied to wetlands and riparian zones. Aminopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Aminopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Aminopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Aminopyralid should fully degrade. The half-life in soil is 40 days and the dry season is a minimum of 210 days.

Wildlife Resources

Aminopyralid will only be applied to grasslands in terrestrial uplands. Aminopyralid applied at typical label rates is not likely to pose a risk to terrestrial animals.

Livestock

Aminopyralid will only be applied to grasslands in terrestrial uplands. Most of the treated grasslands would be within rangeland allotments grazed by cattle. Aminopyralid applied at typical label rates is not likely to pose a risk to terrestrial animals. Application of Aminopyralid at the maximum application rate poses a low chronic risk to large mammals consuming Aminopyralid contaminated vegetation. The most likely livestock risk scenario would be the consumption of contaminated grass across large areas by livestock. Risks of exposure of cattle to Aminopyralid will be mitigated by only treating portions of grazing allotments in any given year, removing cattle from the treatment areas prior to herbicide application, and temporarily restricting cattle from the treatment areas for one year. The half-life of Aminopyralid is 40 days and a year (365 days) of exclusion of cattle from grazing in the treatment areas should be more than sufficient to mitigate exposure risk.

Paleontological and Cultural Resources

Aminopyralid will only be applied to grasslands in terrestrial uplands. Risks of treatment of cultural use sites or human exposure to Aminopyralid from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Aminopyralid will be broadcast applied to grasslands to control non-native annual thistles. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying).. Due to the high specificity of Aminopyralid to annual asters, broadcast treatments of Aminopyralid are expected to only adversely impact non-native annual thistles. All other grassland species should not be impacted and therefore, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Aminopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety.

Social and Economic Conditions

Aminopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent visitor exposure to herbicide. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Aminopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to prevent visitor exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety. There are no risks to public or occupational receptors associated with most of the anticipated typical and accidental exposure scenarios for Aminopyralid. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

Clopyralid

Air Quality

Clopyralid is not a volatile compound, therefore it has no direct effects on air quality. Localized, brief, minor to negligible impacts to air quality are possible due to activities that support the herbicide applications. These may include exhaust emissions from motorized vehicles and particulate emissions (dust) from vehicle travel on unpaved roads.

Soil Resources

Clopyralid is soluble in water. It has moderate mobility in soil and only weakly binds to soil. Clopyralid has a half-life in soil of 40 days. Clopyralid has no direct effect on soil resources.

Water Resources and Quality

Clopyralid will not be applied to wetlands and riparian zones. Clopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Clopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Clopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Clopyralid should fully degrade. The half-life in soil is 40 days and the dry season is a minimum of 210 days.

Wetland and Riparian Areas

Clopyralid will not be applied to wetlands and riparian zones. Clopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Clopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Clopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Clopyralid should fully degrade. The half-life in soil is 40 days and the dry season is a minimum of 210 days.

Vegetation

Clopyralid will be broadcast applied to grasslands to control non-native annual thistles. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). No special status annual plant species in the Asteraceae family are known or suspected to occur in grasslands at C-CD. Due to the high specificity of Clopyralid to annual asters, broadcast treatments of Clopyralid are expected to only adversely impact non-native annual thistles. All other grassland species should not be impacted. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift.

Fish and Other Aquatic Organisms

Clopyralid will not be applied to wetlands and riparian zones. Clopyralid will only be applied to grasslands in terrestrial uplands. Sufficient buffer zones will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent surface water contamination by spray drift. Clopyralid has moderate potential to leach with surface water and to leach to groundwater due to its moderate mobility in soil. Leaching of Clopyralid will be mitigated by the target application interval being the onset of the dry season (March – April), followed by the long dry season (April – October) during which time Clopyralid should fully degrade. The half-life in soil is 40 days and the dry season is a minimum of 210 days.

Wildlife Resources

Clopyralid will only be applied to grasslands in terrestrial uplands. Clopyralid applied at typical label rates is not likely to pose a risk to terrestrial animals.

Livestock

Clopyralid will only be applied to grasslands in terrestrial uplands. Most of the treated grasslands would be within rangeland allotments grazed by cattle. Clopyralid applied at typical label rates is not likely to pose a risk to terrestrial animals. Application of Clopyralid at the maximum application rate poses a low chronic risk to large mammals consuming Clopyralid contaminated vegetation. Risks of exposure of cattle to Clopyralid will be mitigated by only treating portions of grazing allotments in any given year, removing cattle from the treatment area prior to herbicide

application, and temporarily restricting cattle from the treatment areas for one year. The half-life of Clopyralid is 40 days and a year (365 days) of exclusion of cattle from grazing in the treatment areas should be more than sufficient to mitigate exposure risk.

Paleontological and Cultural Resources

Clopyralid will only be applied to grasslands in terrestrial uplands. Risks of treatment of cultural use sites or human exposure to Clopyralid from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Clopyralid will be broadcast applied to grasslands to control non-native annual thistles. Application methods may include: 1) backpack sprayer with spray wand (spot spraying) and, 2) spray wand and spray boom on motorized vehicle (UTV or full-sized vehicle; broadcast spraying). Due to the high specificity of Clopyralid to annual asters, broadcast treatments of Clopyralid are expected to only adversely impact non-native annual thistles. All other grassland species will not be impacted and therefore, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Clopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent human exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety.

Social and Economic Conditions

Clopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to minimize disruption to recreation and to prevent visitor exposure to herbicide. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Clopyralid will only be applied to grasslands in terrestrial uplands. Due to the high degree of overlap of proposed recreation trails with the grassland areas, careful project-level planning will be necessary to prevent visitor exposure to herbicide. Certain recreation trails and other recreation areas may be posted as temporarily closed during active herbicide application, for visitor safety. There are no risks to public or occupational receptors associated with most of the anticipated typical and accidental exposure scenarios for Clopyralid. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport,

following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>Triclopyr</u>

Air Quality

Triclopyr is not a volatile compound, therefore it has no direct effects on air quality. Localized, brief, minor to negligible impacts to air quality are possible due to activities that support the herbicide applications. These may include exhaust emissions from motorized vehicles and particulate emissions (dust) from vehicle travel on unpaved roads.

Soil Resources

Triclopyr is soluble in water. It has high mobility in soil and does not bind to soil. Triclopyr salt degrades to triclopyr acid, which does bind strongly to soil. Triclopyr has a half-life in soil of 46 days. Triclopyr has no direct effect on soil resources.

Water Resources and Quality

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. No adverse effects on water quality occur from application of this herbicide at label rates directly to surface water.

Wetland and Riparian Areas

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. Spot spray applications of Triclopyr to non-native perennial vines in wetlands and riparian areas has the potential for some overspray and impact to non-target, native vegetation. The undesirable impact to non-target, native vegetation would be localized and short-term and the native vegetation would rapidly recover.

Vegetation

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. Spot spray applications of Triclopyr to non-native perennial vines in wetlands and riparian areas has the potential for some overspray and impact to non-target, native vegetation. The undesirable impact to non-target, native vegetation would be localized and short-term and the native vegetation would rapidly recover.

Fish and Other Aquatic Organisms

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. Total application rates will be relatively low due to spot treatment. When applied at the typical and maximum application rate, Triclopyr poses no risk to amphibians, fish or other aquatic invertebrates in streams or ponds under acute and chronic exposure scenarios.

Wildlife Resources

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. Acute or accidental direct spray would pose a low to moderate risk to terrestrial insects and small mammals. Consumption of contaminated vegetation would pose a low to moderate risk to large mammals. Consumption of contaminated insects would pose a low to moderate risk to small birds. Total application rates will be relatively low due to spot treatment and the small, discontinuous areas of herbicide application should reduce the exposure risk to wildlife.

Livestock

An aquatic formulation of Triclopyr will be applied to non-native perennial vines in wetlands and densely vegetated riparian zones, where livestock spend little time. Triclopyr presents some risk to livestock, particularly through the consumption of contaminated vegetation. The probability of livestock encountering and consuming treated non-native perennial vines in the dense riparian zone vegetation is very low, therefore the overall risk of Triclopyr to livestock is very low.

Paleontological and Cultural Resources

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. Risks of treatment of cultural use sites or human exposure to Triclopyr from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones. The relatively small, spot treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones where little recreation or other visitor uses will occur except for certain stretches of creeks and creek crossings. Most of the spot treatments will be conducted in dense riparian vegetation and should not impact recreation activities.

Social and Economic Conditions

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones where little recreation or other visitor uses will occur except for certain stretches of creeks and creek crossings. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

An aquatic formulation of Triclopyr will be applied in wetlands and riparian zones where little recreation or other visitor uses will occur except for certain stretches of creeks and creek crossings. Workers face low risk from directed spray of Triclopyr at the maximum application rates. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed

by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>Diuron</u>

Air Quality

Diuron is not a volatile compound, therefore it has no direct effects on air quality. Localized, brief, minor to negligible impacts to air quality are possible due to activities that support the herbicide applications. These may include exhaust emissions from motorized vehicles and particulate emissions (dust) from vehicle travel on unpaved roads.

Soil Resources

Diuron is insoluble in water. It has moderate to low mobility in soil and only weakly binds to soil. Diuron has a half-life in soil of 90 days. Diruon has no direct effect on soil resources. Due to the long half-life and ability to completely control (remove) vegetative cover, there is potential for localized, minor, long-term soil erosion. Soil erosion would be mitigated by limiting the application of Diuron to relatively small areas which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion.

Water Resources and Quality

Diruon will not be applied to wetlands and riparian areas. Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Diuron to relatively small areas which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off site transport.

Wetland and Riparian Areas

Diruon will not be applied to wetlands and riparian areas. Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Diuron to relatively small areas which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Vegetation

Diuron will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between treatment areas (Day Use Areas and infrastructure) and native vegetation to prevent offsite transport in runoff to sensitive native vegetation. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Diuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Fish and Other Aquatic Organisms

Diruon will not be applied to wetlands and riparian areas. Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Diuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Wildlife Resources

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. There are low acute and chronic risks for ingestion scenarios for small mammals, small birds, and large mammalian carnivores. It is highly likely that the frequent disturbance associated with concentrated visitor activity around the Day Use Areas will dissuade wildlife from foraging or lingering around the treated Day Use Areas.

Livestock

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Since the Day Use Areas will be fenced and not accessible to cattle and the areas treated around other unfenced infrastructure will be small, there should be very low to no risk to cattle.

Paleontological and Cultural Resources

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Risks of treatment of cultural use sites or human exposure to Diuron from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Due to location within already developed and chronically disturbed sites, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. The once every 5-year application interval of the granular herbicide to recreation sites will not significantly disrupt recreation activity. Day Use Areas may be posted temporarily closed briefly (< 2 hours) during active herbicide application, for visitor safety.

Social and Economic Conditions

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Diuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. According to the 1991 13-State EIS, there are risks to workers and the general public associated with both routine and accidental exposures to Diuron. The majority of Diuron applied to Day Use Areas will be applied in waste areas between areas kept weed free by chronic disturbance from vehicle travel and the parking area fence line. Since the primary treatment area will generally be outside of the areas that will be encountered by the visiting public, exposure risk of Diuron is likely to be very low. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

<u>Tebuthiuron</u>

Air Quality

Tebuthiuron is not a volatile compound, therefore it has no direct effects on air quality. Localized, brief, minor to negligible impacts to air quality are possible due to activities that support the herbicide applications. These may include exhaust emissions from motorized vehicles and particulate emissions (dust) from vehicle travel on unpaved roads.

Soil Resources

Tebuthiuron is insoluble in water. It has moderate mobility in soil and only weakly binds to soil. Tebuthiuron has a half-life in soil of 360 days. Tebuthiuron has no direct effect on soil resources. Due to the long half-life and ability to completely control (remove) vegetative cover, there is potential for localized, minor, long-term soil erosion. Soil erosion would be mitigated by limiting the application of Tebuthiuron to relatively small areas which would have mineral covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion.

Water Resources and Quality

Tebuthiuron will not be applied to wetlands and riparian areas. Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Tebuthiuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Wetland and Riparian Areas

Tebuthiuron will not be applied to wetlands and riparian areas. Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Tebuthiuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Vegetation

Tebuthiuron will only be applied to terrestrial uplands. A sufficient buffer zone will be maintained between treatment areas (Day Use Areas and infrastructure) and native vegetation to prevent offsite transport in runoff to sensitive native vegetation. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Tebuthiuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Fish and Other Aquatic Organisms

Tebuthiuron will not be applied to wetlands and riparian areas. Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A sufficient buffer zone will be maintained between the upland terrestrial treatment areas and wetlands and riparian zones to prevent off-site transport in runoff to wetlands and riparian areas. In addition to the distance buffer, the potential for off-site transport will be mitigated by limiting the application of Tebuthiuron to relatively small areas, which would have mineral aggregate covers (gravel parking lots) to protect from erosion. Additionally, areas of untreated grassland immediately adjacent to the treated areas would serve as a vegetated buffer strip to protect from any potential erosion and off-site transport.

Wildlife Resources

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. There are low acute and chronic risks for ingestion scenarios for small mammals, small birds, and large mammalian carnivores. It is highly likely that the frequent disturbance associated with concentrated visitor activity around the Day Use Areas will dissuade wildlife from foraging or lingering around the treated Day Use Areas.

Livestock

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Since the Day Use Areas will be fenced and not accessible to cattle and the areas treated around other unfenced infrastructure will be small, there should be very low to no risk to cattle.

Paleontological and Cultural Resources

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Risks of treatment of cultural use sites or human exposure to Tebuthiuron from ingestion of Native American traditional use plants will be mitigated by project-level consultation with local Tribes prior to any herbicide application.

Visual Resources

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. Due to location within already developed and chronically disturbed sites, the treatments will have no significant visual effect on the vegetation or appearance of the landscape.

Recreation

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. The once every 5 year application interval of the granular herbicide to recreation sites will not significantly disrupt recreation activity. Day Use Areas may be posted temporarily closed briefly (< 2 hours) during active herbicide application, for visitor safety.

Social and Economic Conditions

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. A wide diversity of the public is anticipated to visit C-CD for recreation with no disproportionate effects of herbicide treatments on any specific group of visitors.

Human Health and Safety

Tebuthiuron will only be applied to terrestrial uplands on Day Use Areas and around other infrastructure. According to the 1991 13-State EIS, there are risks to workers and the general public associated with both routine and accidental exposures to Tebuthiuron. The majority of Tebuthiuron applied to Day Use Areas will be applied in waste areas between areas kept weed free by chronic disturbance from vehicle travel and the parking area fence line. Since the primary treatment area will generally be outside of the areas that will be encountered by the visiting public, exposure risk of Tebuthiuron is likely to be very low. Standard operating procedures will be followed for human safety including establishing buffer zones between treatment areas and

residences and organic fields, using protective equipment as directed by the herbicide label, posting treated areas with signs, observing restricted entry intervals specified by the herbicide label, having a copy of the Safety Data Sheets at work sites, securing containers during transport, following herbicide labels during transport, following herbicide label directions for use and storage, and disposing of unwanted herbicides promptly and correctly.

HERBICIDE APPLICATION STANDARD OPERATING PROCEDURES

The Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS (PEIS) identifies the following Standard Operating Procedures (SOP) in Chapter 2 and in Appendices B and C. Additional SOPs have been added in bold text:

General SOP:

- Conduct pre-treatment surveys for sensitive habitat and special status species within or adjacent to proposed treatment areas.
- Conduct a pretreatment survey before applying herbicides.
- Prepare spill contingency plan in advance of treatment.
- Select herbicide that is least damaging to the environment while providing the desired results.
- Select herbicide products carefully to minimize additional impacts from degradates, adjuvants, inert ingredients, and tank mixtures.
- Apply the least amount of herbicide needed to achieve the desired result.
- Follow product label for use and storage.
- Have licensed applicators apply herbicides.
- Use only USEPA- approved herbicides and follow product label directions and "advisory" statements.
- Review, understand, and conform to the "Environmental Hazards" section on the herbicide label. This section warns of known pesticide risks to the environment and provides practical ways to avoid harm to organisms or to the environment.
- Minimize the size of application areas, when feasible.
- Comply with herbicide-free buffer zones to ensure that drift will not affect crops or nearby residents/landowners.
- Avoid accidental direct spray and spill conditions to minimize risks to resources.
- Take precautions to minimize drift by not applying herbicides when winds exceed >10 mph or a serious rainfall event is imminent.
- Use drift control agents and low volatile formulations.
- Consider site characteristics, environmental conditions, and application equipment in order to minimize damage to non-target vegetation.
- Use drift reduction agents, as appropriate, to reduce the drift hazard to non-target species.
- Turn off applied treatments at the completion of spray runs and during turns to start another spray run.
- Post treated areas and specify reentry or rest times, if appropriate.
- Notify adjacent landowners prior to treatment.

- Keep copy of Material Safety Data Sheets (MSDSs) at work sites. MSDSs available for review at http://www.cdms.net/.
- Keep records of each application, including the active ingredient, formulation, application rate, date, time, and location.
- Refer to the herbicide label when planning revegetation to ensure that subsequent vegetation would not be injured following application of the herbicide.
- Clean vehicles to remove seeds.

Air Quality:

- Consider the effects of wind, humidity, temperature inversions, and heavy rainfall on herbicide effectiveness and risks.
- Apply herbicides in favorable weather conditions to minimize drift. For example, do not treat when winds exceed 10 mph or rainfall is imminent.
- Use drift reduction agents, as appropriate, to reduce the drift hazard.
- Take special precautions evaluating climate conditions (temperature, and wind) when applying the volatile herbicide dicamba, in order to prevent off-site drift.
- Select proper application equipment (e.g., spray equipment that produces 200- to 800micron diameter droplets [spray droplets of 100 microns and less are most prone to drift]).
- Select proper application methods (e.g., set maximum spray heights, use appropriate buffer distances between spray sites and non-target resources).

Soil Resources:

- Minimize treatments in areas where herbicide runoff is likely, such as steep slopes when heavy rainfall is expected.
- Minimize use of herbicides that have high soil mobility, particularly in areas where soil properties increase the potential for mobility.
- Do not apply granular herbicides on slopes of more than 15% where there is the possibility of runoff carrying the granules into non-target areas.

Water Resources:

- Consider climate, soil type, slope, and vegetation type when developing herbicide treatment programs.
- Select herbicide products to minimize impacts to water. This is especially important for application scenarios that involve risk from active ingredients in a particular herbicide, as predicted by risk assessments.
- Use local historical weather data to choose the month of treatment. Considering the phenology of the target species, schedule treatments based on the condition of the water body and existing water quality conditions.
- Plan to treat between weather fronts (calms) and at appropriate time of day to avoid high winds that increase water movements, and to avoid potential storm water runoff and water turbidity.
- Review hydrogeologic maps of proposed treatment areas. Note depths to groundwater and areas of shallow groundwater and areas of surface water and groundwater interaction.

- Minimize treating areas with high risk for groundwater contamination.
- Conduct mixing and loading operations in an area where an accidental spill would not contaminate an aquatic body.
- Do not rinse spray tanks in or near water bodies. Do not broadcast pellets where there is danger of contaminating water supplies.
- Maintain buffers between treatment areas and water bodies. Buffer widths should be developed based on herbicide- and site-specific criteria to minimize impacts to water bodies.
- Minimize the potential effects to surface water quality and quantity by stabilizing terrestrial areas as quickly as possible following treatment.

Wetlands and Riparian Areas:

- Use a selective herbicide and a wick or backpack sprayer.
- Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths of 10 feet for hand spray applications and 25 feet for vehicle.

Vegetation:

- Refer to the herbicide label when planning revegetation to ensure that subsequent vegetation would not be injured following application of the herbicide.
- Use native or sterile plant species for revegetation and restoration projects to compete with invasive species until desired vegetation establishes
- Use weed-free feed for horses and pack animals. Use weed-free straw and mulch for revegetation and other activities.
- Identify and implement any temporary domestic livestock grazing and/or supplemental feeding restrictions needed to enhance desirable vegetation recovery following treatment. Consider adjustments in the existing grazing permit, needed to maintain desirable vegetation on the treatment site.

Pollinators:

- Complete vegetation treatments seasonally before pollinator foraging plants bloom.
- Time vegetation treatments to take place when foraging pollinators are least active both seasonally and daily.
- Design vegetation treatment projects so that nectar and pollen sources for important pollinators and resources are treated in patches rather than in one single treatment.
- Minimize herbicide application rates. Use typical rather than maximum rates where there are important pollinator resources.
- Maintain herbicide free buffer zones around patches of important pollinator nectar and pollen sources.
- Maintain herbicide free buffer zones around patches of important pollinator nesting habitat and hibernacula.
- Make special note of pollinators that have single host plant species, and minimize herbicide spraying on those plants (if invasive species) and in their habitats.

Fish and Other Aquatic Organisms:

- Use appropriate buffer zones based on label and risk assessment guidance.
- Minimize treatments near fish-bearing water bodies during periods when fish are in life stages most sensitive to the herbicide(s) used, and use spot rather than broadcast treatments..
- Use appropriate application equipment/method near water bodies if the potential for offsite drift exists.
- For treatment of aquatic vegetation, 1) treat only that portion of the aquatic system necessary to achieve acceptable vegetation management; 2) use the appropriate application method to minimize the potential for injury to desirable vegetation and aquatic organisms; and 3) follow water use restrictions presented on the herbicide label.

Wildlife:

- Use herbicides of low toxicity to wildlife, where feasible.
- Use spot applications or low-boom broadcast operations where possible to limit the probability of contaminating non-target food and water sources, especially non-target vegetation over areas larger than the treatment area.
- Use timing restrictions (e.g., do not treat during critical wildlife breeding or staging periods) to minimize impacts to wildlife.

Special Status Species:

- Survey for special status species before treating an area.
- Use a selective herbicide and spray methods to minimize risks to special status plants.
- Avoid treating vegetation during time-sensitive periods (e.g., nesting and migration, sensitive life stages) for special status species in area to be treated.

Livestock:

- Whenever possible and whenever needed, schedule treatments when livestock are not present in the treatment area. Design treatments to take advantage of normal livestock grazing rest periods, when possible.
- As directed by the herbicide label, remove livestock from treatment sites prior to herbicide application, where applicable.
- Use herbicides of low toxicity to livestock, where feasible.
- Take into account the different types of application equipment and methods, where possible, to reduce the probability of contamination of non-target food and water sources.
- Notify permittees of the project to improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment.
- Notify permittees of livestock grazing, feeding, or slaughter restrictions, if necessary.
- Provide alternative forage sites for livestock, if possible.

Cultural Resources:

- Follow standard procedures for compliance with Section 106 of the National Historic Preservation Act as implemented through the Programmatic Agreement among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act and state protocols or 36 Code of Federal Regulations Part 800, including necessary consultations with State Historic Preservation Officers and interested tribes.
- Follow BLM Handbook H-8270-1 (General Procedural Guidance for Paleontological Resource Management) to determine known Condition I and Condition 2 paleontological areas, or collect information through inventory to establish Condition 1 and Condition 2 areas, determine resource types at risk from the proposed treatment, and develop appropriate measures to minimize or mitigate adverse impacts.
- Consult with tribes to locate any areas of vegetation that are of significance to the tribe and that might be affected by herbicide treatments. Work with tribes to minimize impacts to these resources.
- Follow guidance under Human Health and Safety in the PEIS in areas that may be visited by Native peoples after treatments.

Visual Resources:

- Minimize the use of broadcast foliar applications in sensitive watersheds to avoid creating large areas of browned vegetation.
- Minimize off-site drift and mobility of herbicides (e.g., do not treat when winds exceed 10 mph; minimize treatment in areas where herbicide runoff is likely; establish appropriate buffer widths between treatment areas and residences) to contain visual changes to the intended treatment area.
- If the area is a Class I or II visual resource, ensure that the change to the characteristic landscape is low and does not attract attention (Class I), or if seen, does not attract the attention of the casual viewer (Class II).
- Lessen visual impacts by: 1) designing projects to blend in with topographic forms; 2) leaving some low-growing trees or planting some low-growing tree seedlings adjacent to the treatment area to screen short-term effects; and 3) revegetating the site following treatment.
- When restoring treated areas, design activities to repeat the form, line, color, and texture of the natural landscape character conditions to meet established Visual Resource Management (VRM) objectives.

Recreation:

- Schedule treatments to avoid peak recreational use times, while taking into account the optimum management period for the targeted species.
- Notify the public of treatment methods, hazards, times, and nearby alternative recreation areas.
- Adhere to entry restrictions identified on the herbicide product label for public and worker access.

- Post signs noting exclusion areas and the duration of exclusion, if necessary.
- Use herbicides during periods of low human use, where feasible.

Social & Economic:

- Post treated areas and specify reentry or rest times, if appropriate.
- Notify grazing permittees of livestock feeding restrictions in treated areas, if necessary, as per label instructions.
- Notify the public of the project to improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment.
- Control public access until potential treatment hazards no longer exist, per label instructions.
- Observe restricted entry intervals specified by the herbicide label.
- Notify local emergency personnel of proposed treatments.
- Use spot applications or low-boom broadcast applications where possible to limit the probability of contaminating non-target food and water sources, especially vegetation over areas larger than the treatment area.
- Consult with Native American tribes to locate any areas of vegetation that are of significance to the tribe and that might be affected by herbicide treatments. Herbicide applications will be limited in RMZ #4, an area identified as high cultural significance.
- To the degree possible within the law, hire local contractors and workers to assist with herbicide application projects and purchase materials and supplies, including chemicals, for herbicide treatment projects through local suppliers.
- To minimize fears based on lack of information, provide public educational information on the need for vegetation treatments and the use of herbicides in an Integrated Pest Management program for projects proposing local use of herbicides.

Rights-of-Way:

- Coordinate vegetation management activities where joint or multiple use of a ROW exists.
- Notify other public land users within or adjacent to the ROW proposed for treatment.
- Use only herbicides that are approved for use in ROW areas.

Human Health and Safety:

- Establish a buffer between treatment areas and human residences based on guidance given in the HHRA, with a minimum buffer of 100 feet for broadcast treatment applications, unless a written waiver is granted.
- Establish a buffer between treatment areas and private, organic farms based on guidance, per 7 CFR 205.202, with a minimum buffer of 50 feet for broadcast treatment applications.
- Use protective equipment as directed by the herbicide product label.
- Post treated areas with appropriate signs at common public access areas.
- Observe restricted entry intervals specified by the herbicide product label.
- Provide public notification in newspapers or other media where the potential exists for public exposure.

- Have a copy of MSDSs at work site.
- Notify local emergency personnel of proposed treatments.
- Contain and clean up spills and request help as needed.
- Secure containers during transport.
- Follow label directions for use and storage.
- Dispose of unwanted herbicides promptly and correctly.

MITIGATION MEASURES

The 2007 PEIS also identifies the following relevant mitigation measures specific to individual resources in Chapter 2. The relevant herbicides have text in bold:

Water Resources and Quality & Wetland and Riparian Areas:

• Establish appropriate (herbicide specific) buffer zones to downstream water bodies, habitats, and species/populations of interest.

Vegetation:

- Minimize the use of terrestrial herbicides (especially bromacil, **diuron**, and sulfometuron methyl) in watersheds with downgradient ponds and streams if potential impacts to aquatic plants are of concern.
- Establish appropriate (herbicide specific) buffer zones around downstream water bodies, habitats, and species/populations of interest. Consult the ERAs for more specific information on appropriate buffer distances under different soil, moisture, vegetation, and application scenarios.
- To protect special status plant species, implement all conservation measures for plants presented in the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Biological Assessment.

Fish and Other Aquatic Organisms:

- Limit the use of terrestrial herbicides in watersheds with characteristics suitable for potential surface runoff, that have fish-bearing streams, during periods when fish are in life stages most sensitive to the herbicide(s) used.
- To protect special status fish and other aquatic organisms, implement all conservation measures for aquatic animals presented in the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Biological Assessment.
- Establish appropriate herbicide-specific buffer zones for water bodies, habitats, or fish or other aquatic species of interest.
- Avoid using the adjuvant R-11 in aquatic environments, and either avoid using **glyphosate** formulations containing POEA, or seek to use formulations with the least amount of POEA, to reduce risks to aquatic organisms.

Wildlife:

- To minimize risks to terrestrial wildlife, do not exceed the typical application rate for applications of dicamba, **diuron**, **glyphosate**, hexazinone, **tebuthiuron**, or **triclopyr**, where feasible.
- Minimize the size of application areas, where practical, when applying **2,4-D**, bromacil, **diuron**, and Overdrive to limit impacts to wildlife, particularly through contamination of food items.
- Where practical, limit **glyphosate** and hexazinone to spot applications in rangeland and wildlife habitat areas to avoid contamination of wildlife food items.
- Avoid using the adjuvant R-11 in aquatic environments, and either avoid using **glyphosate** formulations containing POEA, or seek to use formulations with the least amount of POEA, to reduce risks to amphibians.
- Do not apply bromacil or **diuron** in rangelands and use appropriate buffer zones to limit contamination of off-site vegetation, which may serve as forage for wildlife.
- To protect special status wildlife species, implement all conservation measures for terrestrial animals presented in the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Biological Assessment. Apply these measures to special status species (refer to conservation measures for a similar size and type of species, of the same trophic guild).

Livestock:

- Minimize potential risks to livestock by applying **diuron**, **glyphosate**, hexazinone, **tebuthiuron**, and **triclopyr** at the typical application rate, where feasible.
- Do not apply **2,4-D**, bromacil, dicamba, **diuron**, Overdrive, picloram, or **triclopyr** across large application areas, where feasible, to limit impacts to livestock, particularly through the contamination of food items.
- Where feasible, limit **glyphosate** and hexazinone to spot applications in rangeland.
- Do not apply bromacil or **diuron** in rangelands and use appropriate buffer zones.

Paleontological and Cultural Resources:

- Do not exceed the typical application rate when applying **2,4-D**, bromacil, diquat, **diuron**, fluridone, hexazinone, **tebuthiuron**, and **triclopyr** in known traditional use areas.
- Avoid applying bromacil or **tebuthiuron** aerially in known traditional use areas.

Human Health and Safety:

- Use the typical application rate, where feasible, when applying **2,4-D**, 2,4-DP, atrazine, bromacil, diquat, **diuron**, fluridone, fosamine, hexazinone, **tebuthiuron**, and **triclopyr** to reduce risk to occupational and public receptors.
- Avoid applying atrazine, bromacil, **diuron**, or simazine aerially.
- Evaluate **diuron** applications on a site-by-site basis to avoid risks to humans. There appear to be few scenarios where **diuron** can be applied without risk to occupational receptors.

REFERENCES

Bureau of Land Management (BLM). 2007a. Resource Management Plan for the Southern Diablo Mountain Range & Central Coast of California. Record of Decision. Bureau of Land Management. Hollister Field Office. California.

Bureau of Land Management (BLM). 2007b. Vegetation Treatment Using Herbicides on BLM Lands in Seventeen Western States Programmatic EIS.

Bureau of Land Management (BLM). 2016. The Record of Decision on Vegetation Treatments Using Aminopyralid, Floroxypyr and Rimsulfuron.

California Department of Pesticide Regulation. 2020. California Restricted Materials Requirements. Available: <u>https://www.cdpr.ca.gov/docs/enforce/dpr-enf-013a.pdf</u>

DiTomaso J.M. et al. 2013. Weed Control in Natural Areas in the Western United States. University of California, Davis. Department of Plant Sciences, University of California, Davis. Weed Research and Information Center. 544 pp.

Hayes G.F. and K.D. Holl. 2003. Cattle grazing impacts on annual forbs and vegetation composition of mesic grasslands in California. Conservation Biology 17:1694-1702.

Huaraca, L.F., Chamorro, S.A., Hernández, V., Bay-Schmith, E. and Villamar, C.A., 2020. Comparative acute toxicity of glyphosate-based herbicide (GBH) to Daphnia magna, Tisbe longicornis, and Emerita analoga. Journal of Environmental Science and Health, Part B, pp.1-9.

Krynak, K.L., Burke, D.J. and Benard, M.F., 2017. Rodeo[™] herbicide negatively affects Blanchard's Cricket Frogs (Acris blanchardi) survival and alters the skin-associated bacterial community. Journal of Herpetology, 51(3), pp.402-410.

McCoy KA and Peralta AL (2018) Pesticides Could Alter Amphibian Skin Microbiomes and the Effects of Batrachochytrium dendrobatidis. Front. Microbiol. 9:748. doi: 10.3389/fmicb.2018.00748

Motta, E.V., Raymann, K. and Moran, N.A., 2018. Glyphosate perturbs the gut microbiota of honey bees. Proceedings of the National Academy of Sciences, 115(41), pp.10305-10310.

Sotoyome RCD. 2019. Grazing Handbook. A Guide for Resource Managers in Coastal California. https://www.carangeland.org/images/GrazingHandbook.pdf [Accessed Dec. 3, 2019]

Sponsler, D.B., Grozinger, C.M., Hitaj, C., Rundlöf, M., Botías, C., Code, A., Lonsdorf, E.V., Melathopoulos, A.P., Smith, D.J., Suryanarayanan, S. and Thogmartin, W.E., 2019. Pesticides and pollinators: A socioecological synthesis. Science of the Total Environment, 662, pp.1012-1027.

Stromberg M., Corbin J., and C. D'Antonio. 2007. California Grasslands. University of California Press. 408 pp.

Trust for Public Land (TPL). 2004. Coast Dairies Long-Term Resource Protection and Access Plan. Environmental Science Associates. 360 pp.

Appendix G - Cotoni-Coast Dairies Visitor Use Estimates, July 2020.

This appendix documents the BLM's estimate of visitor use for Cotoni-Coast Dairies (C-CD). Estimates were developed for each of four management alternatives under consideration in the RMPA/EA. Estimates were then used to determine parking needs under each alternative.

METHODOLOGY

The anticipated future visitor use at C-CD was estimated using the assumption that visitor use will be directly tied to two key variables: recreational opportunities provided (in this case primarily hiking, mountain biking, horseback riding) and ease of access (i.e. proximity to communities and major transportation corridors). Visitor use was estimated by comparing current visitor use at nearby parks and open spaces in the region. Visitor use at comparable parks and open spaces is based on estimates prepared by Placeworks (Minn and Fleischmann 2016) for the neighboring San Vicente Redwoods property, and the Santa Cruz County Regional Transportation Commission's North Coast Rail Trail Final Environmental Impact Report (2019).

Comparable parks and open spaces include Wilder Ranch State Park, Soquel Demonstration Forest, and San Vicente Redwoods. Wilder Ranch State Park is a 7,000-acre property with approximately 34 miles of trails for hiking, mountain biking, and horseback riding. The property also provides direct access to several popular beaches and supports tourism associated with agricultural leases on the State Park. The annual visitor use at Wilder Ranch is estimated to be 472,809, representing approximately 9,000 visitors per week. Trail use is estimated to be equivalent to 38 visitors per day per mile of trail. Wilder Ranch has significantly higher use than other parks on the North Coast of Santa Cruz. The high use is due largely to the proximity to Santa Cruz and the diversity of recreation opportunities provided.

The Soquel Demonstration State Forest (SDSF) is a 2,681-acre property with 24 miles of trail and an estimated 106,094 visitors per year, equivalent to over 2,000 visitors per week, for hiking, mountain biking, horseback riding. The annual visitor use is equivalent to 8 visitors per day per mile of trail. Over 60 percent of visitors come on the weekend versus during the week and mountain bike riding is the most common activity. The SDSF is more remote than either C-CD or Wilder Ranch. Recreational opportunities are also more limited than those provided at Wilder Ranch.

The Forests of Nisene Marks State Park is a 10,257-acre property with 30 miles of trail and an estimated annual visitation of 106,094 visitors per year, equivalent to a weekly visitation of approximately 2,000 visitors per week. Recreational opportunities on this property are similar to those provided at SDSF. However, Nisene Marks is significantly closer in proximity to major population centers in Santa Cruz County and the Highway One transportation corridor when compared to SDSF. Annual visitor use at this park is estimated to be equivalent to 10 visitors per day per mile of trail.

The San Vicente Redwoods (SVR) is a 7,000 acre property with approximately 28 miles of trails planned for hiking, mountain biking, horseback riding. A potential future trail connection between SVR and the C-CD property would result in visitors to both properties. PlaceWorks (Minn and Fleischmann 2016) anticipates that 47 parking spaces and 3-5 equestrian trailer spaces would accommodate demand at SVR based on projections for approximately 97,000 annual visitors, which is equivalent to less than 6-8 visitors per day per mile of trail.

The Santa Cruz County Regional Transportation Commission certified the North Coast Rail Trail (NCRT) Final Environmental Impact Report (Volume 2, Draft EIR) in 2019. Daily use estimates for summer weekends were based on the assumption that 85% of visitors would arrive by vehicle, with an average 2.5 persons per vehicle, and observations of parking turnover at the Davenport Lot: North, Bonny Doon Beach, and Panther/Yellowbank Beach parking lots. They estimated 300 vehicle trips per day would need 100 parking spaces in the peak hour because up to 50 percent of parking spaces turned over at these parking lots. This EIR determined that 77% of visitors will be residents of Santa Cruz County, who would be more likely to access the trail using alternative transportation (e.g. drive or walk from locations within the City of Santa Cruz).

COTONI-COAST DAIRIES

Visitor use estimates for Cotoni-Coast Dairies are provided below for each alternative presented in the Draft RMPA/EA. Visitor use is expected to vary based on the type of recreational opportunities provided and the accessibility of those opportunities from major population centers and transportation corridors.

Alternative A

Recreational Opportunities. Under Alternative A, the BLM would develop 2.7 miles of trails for day use hiking and on-lease dog walking. Mountain biking and horseback riding would not be allowed. Recreational opportunities are more limited than those provided at the comparable properties described above.

Accessibility. Under Alternative A, the BLM would develop two locations for public access to the recreational trails from staging areas on Swanton Road and Bonny Doon Road. Neither of these access points is directly adjacent to Highway One, nor do they connect to regional trail systems (i.e. North Coast Rail Trail, San Vicente Redwoods). Under this alternative, accessibility would be similar to SDSF, the Forests of Nisene Marks and San Vicente Redwoods.

Annual Visitation Estimate. The BLM estimates that 50,000 people will visit C-CD annually under this alternative due to the factors described above. As with the NCRT EIR, approximately 75% of these visitors are likely to be residents of Santa Cruz County. Many of these visitors would be visiting C-CD in lieu of or in combination with another recreation destination on the North Coast (e.g. Wilder Ranch State Park, Coast Dairies State Park). The BLM assumes that initial visitation will be higher for 6-12 months due to the novelty of public access to the C-CD. However, given limited visitor services, facilities, and recreation opportunities under Alternative A, it is reasonable to expect annual visitor use will decrease after the inauguration of this unit of the California Coastal National Monument.

Estimated Visitors per mile of trail. The BLM assumes an average of 10 visitors per mile of trail based on comparable properties in the region.

Alternative B

Recreational Opportunities. Under Alternative B, the BLM would construct approximately 20 miles of trails for hiking, mountain biking, and horseback riding. Mountain biking trail opportunities would be largely confined to the northern half of the property (north of Warranella Road), while horseback riding opportunities would be confined to the southern half of the property (south of Bonny Doon Road). Hikers would be allowed on all trails. The trail network

would include connections to regional trail networks on the North Coast Rail Trail and San Vicente Redwoods. Facilities would be designed for day-use and may include kiosks and vault toilets.

Recreational opportunities would be comparable to those provided at Wilder Ranch, Forests of Nisene Marks, and San Vicente Redwoods. However, opportunities are less than those provided at Wilder Ranch, particularly because beach access drives a significant number of visitors to Wilder Ranch.

Accessibility. Alternative B proposes to establish parking areas at three locations, two year-round access points at Warrenella Road and Marina Ranch Road and a seasonal access point further up Warrenella Road. There would also be a trailhead connection via a pedestrian bridge at Panther Beach, providing two access points directly adjacent to Highway One. Accessibility is comparable to Wilder Ranch, although further removed from the major metropolitan center of Santa Cruz. It is anticipated that visitation will be roughly split between the two access points north of Davenport and the two access points south of Davenport.

Annual Visitation Estimate. The BLM estimates that 150,000 people will visit C-CD annually under this alternative due to the factors described above. As with the NCRT EIR, approximately 75% of these visitors are likely to be residents of Santa Cruz County. Many of these visitors would be visiting C-CD in lieu of or in combination with another recreation destination on the North Coast (e.g. Wilder Ranch State Park, Coast Dairies State Park). The BLM assumes that initial visitation will be higher for 6-12 months due to the novelty of public access to the C-CD. However, due to the phased buildout planned under this alternative, full annual visitation numbers will not be reached for several years.

Visitors per mile of trail. The BLM assumes an average of 20 visitors per mile of trail based on comparable properties in the region. The BLM assumes that initial visitation per mile of trail will be higher for 6-12 months due to the novelty of public access to the C-CD and the phased buildout of trails on the property.

Alternative C

Recreational Opportunities. Under Alternative C, the BLM would construct approximately 29 miles of trails for hiking, mountain biking, and horseback riding. Most of these trails would be accessible for mountain biking, horseback riding, and hiking. The trail network would include connections to regional trail networks on the North Coast Rail Trail and San Vicente Redwoods. Facilities would be designed for day-use and may include kiosks and vault toilets.

Recreational opportunities would be comparable to those provided at Wilder Ranch, Forests of Nisene Marks, and San Vicente Redwoods. However, opportunities are less than those provided at Wilder Ranch, particularly because beach access drives a significant number of visitors to Wilder Ranch.

Accessibility. Accessibility would be similar to that described for Alternative B, except there is one additional parking lot proposed on Swanton Road. This access point would be approximately 16 miles north of the City of Santa Cruz. It is anticipated that visitation would be notably higher at other locations in closer proximity to Santa Cruz and Highway One.

Annual Visitation Estimate. The BLM estimates that 250,000 people will visit C-CD annually under this alternative due to the factors described above. As with the NCRT EIR, approximately 75% of these visitors are likely to be residents of Santa Cruz County. Many of these visitors would be visiting C-CD in lieu of or in combination with another recreation destination on the North Coast (e.g. Wilder Ranch State Park, Coast Dairies State Park). The BLM assumes that initial visitation will be higher for 6-12 months due to the novelty of public access to the C-CD. However, due to the phased buildout planned under this alternative, full annual visitation numbers will not be reached for several years.

Visitors per mile of trail. The BLM assumes 30 visitors per mile of trail due to the multi-use nature of trails in this alternative. This would provide a comparable estimate to Wilder Ranch, while accounting for the closer proximity of that park to Santa Cruz.

Alternative D

Recreational Opportunities. Under Alternative D, the BLM would construct approximately 27 miles of trails for hiking, mountain biking, and horseback riding. Similar to Alternative B, mountain biking trail opportunities would be largely confined to the northern half of the property (north of Warranella Road), while horseback riding opportunities would be confined to the southern half of the property (south of Bonny Doon Road). Hikers would be allowed on all trails. The trail network would include connections to regional trail networks on the North Coast Rail Trail and San Vicente Redwoods. Facilities would be designed for day-use and would include kiosks and vault toilets.

Recreational opportunities would be comparable to those provided at Wilder Ranch, Forests of Nisene Marks, and San Vicente Redwoods. However, opportunities are less than those provided at Wilder Ranch, particularly because beach access drives a significant number of visitors to Wilder Ranch.

Accessibility. Similar to Alternative B, Alternative D proposes to establish parking areas at three locations, two year-round access points at Warrenella Road and Marina Ranch Road and a seasonal access point further up Warrenella Road. There would also be a trailhead connection via a pedestrian bridge at Panther Beach, providing two access points directly adjacent to Highway One. Accessibility is comparable to Wilder Ranch, although further removed from the major metropolitan center of Santa Cruz. It is anticipated that visitation will be roughly split between the two access points north of Davenport and the two access points south of Davenport.

Annual Visitation Estimate. At full buildout, the BLM estimates that up to 250,000 people will visit C-CD annually under this alternative due to the factors described above. As with the NCRT EIR, approximately 75% of these visitors are likely to be residents of Santa Cruz County. Many of these visitors would be visiting C-CD in lieu of or in combination with another recreation destination on the North Coast (e.g. Wilder Ranch State Park, Coast Dairies State Park). The BLM assumes that initial visitation will be higher for 6-12 months due to the novelty of public access to the C-CD. However, due to the phased buildout planned under this alternative, annual visitation numbers projected for full buildout will not be reached for several years. Based on monitoring during the phased approach to implementation of the RMPA, the BLM will be able to determine the average demand for parking during peak hours and evaluate adaptive management options to accommodate new information and/or circumstances.

While visitor use (and thus parking demand) is not expected to exceed estimates for Alternatives B and C, additional parking capacity was included within this alternative in order to reduce the potential for offsite parking during peak visitation weekends.

Visitors per mile of trail. The BLM assumes an average of 20 visitors per mile of trail based on comparable properties in the region. The BLM assumes that initial visitation per mile of trail will be higher for 6-12 months due to the novelty of public access to the C-CD and the phased buildout of trails on the property.

ESTIMATED PARKING DEMAND

Parking demand was estimated for C-CD based on the existing parking supply/demand discussed above. Parking estimates are based on the high end of the range of expected annual visitors.

Alternative A anticipates that approximately 40 parking spaces and zero trailer spaces would accommodate demand based on the following assumptions:

Visitation projections of 50,000 annual visitors

75-percent of visitation will take place on the weekend, equally distributed between Saturday and Sunday (equivalent to 350 visitors/day on a weekend)

95-percent of visitors will drive-in (others will walk from Bonny Doon Beach parking area)

There will be an average of 2.5 visitors/vehicle

Vehicles will stay an average of 2 hours, therefore 6 vehicles can occupy one parking space each (6 vehicles/parking space/day)

Demand will be lower than nearby State Parks due to longer distance and lower trail mileage.

Alternative B anticipates that approximately 78 parking spaces and 1-2 equestrian trailer spaces would accommodate demand based on the following assumptions:

Visitation projections of 150,000 annual visitors

75-percent of visitation will take place on the weekend, equally distributed between Saturday and Sunday (equivalent to 700 visitors/day on a weekend)

65-percent of visitors will drive-in (30% of visitors would be expected to access the property via the Yellowbank/Panther Beach Highway One overpass and 5% would be expected to access the property from San Vicente Redwoods)

There will be an average of 2.5 visitors/vehicle

Vehicles will stay an average of 2 hours, therefore 6 vehicles can occupy one parking space each (6 vehicles/parking space/day)

Equestrian trailer demand will be lower than nearby State Parks due to longer distance and lower trail mileage.

Alternative C anticipates that 100 parking spaces and 3-5 equestrian trailer spaces would accommodate demand based on the following assumptions:

Visitation projections of 250,000 annual visitors

75-percent of visitation will take place on the weekend, equally distributed between Saturday and Sunday (Equivalent to 1500 visitors/day on a weekend)

Staging areas at will have adequate capacity to accommodate visitors, including equestrian trailers

65-percent of visitors will drive-in (30% of visitors would be expected to access the property via the Yellowbank/Panther Beach Highway One overpass and 5% would be expected to access the property from San Vicente Redwoods)

There will be an average of 2.5 visitors/vehicle

Vehicles will stay an average of 1.5 hours, therefore 6 vehicles can occupy one parking space each (6 vehicles/parking space/day)

Alternative D anticipates that approximately 167 standard vehicle parking spaces and 4 equestrian trailer spaces would accommodate demand based on the following assumptions:

Visitation projections of 150,000-250,000 annual visitors during Phase 1 and Phase 2, respectively.

75-percent of visitation will take place on the weekend, equally distributed between Saturday and Sunday (equivalent to 1,500 visitors/day on a weekend)

65-percent of visitors will drive-in (30% of visitors would be expected to access the property via the Yellowbank/Panther Beach Highway One overpass and 5% would be expected to access the property from San Vicente Redwoods)

There will be an average of 2.5 visitors/vehicle

Vehicles will stay an average of 2 hours, therefore 6 vehicles can occupy one parking space each (6 vehicles/parking space/day)

Equestrian trailer demand will be lower than nearby State Parks due to longer distance and lower trail mileage.

SUMMARY

The RMPA/EA assumes a conservative ratio of 10 trail users per mile of trail under Alternative A and 20 trail users per mile of trail under Alternative B based on the average number of visitors on the comparable properties in Santa Cruz County. The RMPA also analyzes a maximum ratio of 30 trail users per mile of trail under Alternative C and D based on comments on the BLM's Draft RMPA. Based on these assumptions, the total estimated annual visitor use for Alternative A is 50,000; the total annual visitor use

for Alternative B is 150,000; and the total annual visitor use for Alternative C is 250,000. The total annual visitor use for Alternative D is estimated to fall between Alternatives B and C (150,000-250,000). New vehicle trips projected to travel to C-CD were estimated based on the anticipated number of trail users and the proportion of trail users expected to arrive and leave by motor vehicle. As a result, daily use of the C-CD during average summer weekends was estimated to range from 350 visitors during summer weekends under Alternative A to 1,500 visitors during summer weekends under Alternative C. As described above, approximately 75% of visitors to C-CD are likely to be residents of Santa Cruz County. Many of these visitors would be visiting C-CD in lieu of or in combination with another recreation destination on the North Coast (e.g. Wilder Ranch State Park, Coast Dairies State Park).

Based on these estimates, it is recommended that the staging areas be designed to accommodate up to 167 standard vehicles and 4 trailer spaces under Alternative D, 100 vehicles and 3-5 trailers under Alternative C, 78 spaces and 1-2 trailer spaces for Alternative B, and 40 vehicles and zero trailer spaces under Alternative A to maximize parking space and to minimize the impacts of overflow parking on the surrounding neighborhoods.

RECOMMENDATION

Based on these estimates, it is recommended that the staging areas be designed to accommodate up to 167 standard vehicles and 4 trailer spaces under Alternative D, 100 vehicles and 3-5 trailers under Alternative C, 78 spaces and 1-2 trailer spaces for Alternative B, and 40 vehicles and zero trailer spaces under Alternative A to maximize parking space and to minimize the impacts of overflow parking on the surrounding neighborhoods.

Appendix H: References

- Alonso, A. & Castro-Diaz, P. (2012). The exotic mud snail *Potamopyrgus antipodarum* (Hydrobiidae, Mollusca): state of the art of a worldwide invasion. Aquatic Sciences 74:375-383.
- Amme, D. (1999). Range survey and conservation grazing program for Coast Dairies and Land Company. Prepared for Coast Dairies and Land Company.
- Banks, P.B., & Bryant, J.V. (2007). Four-legged friend or foe? Dog walking displaces native birds from natural areas. Biology Letters 3(6), 611-613.
- Barbour, M.G., Keeler-Wolf, T., & Schoenherr, A.A. (2007). *Terrestrial vegetation of California*. Berkely, CA: University of California Press. 712 p.
- Beale, C.M., & Monaghan, P. (2004). Human disturbance: people as predation-free predators? *Journal of Applied Ecology* 41:335-343.
- Beck H.E., Zimmermann, N.E., McVicar, T.R., Vergopolan, N., Berg, A., & Wood E.F. (2018). Present and future Köppen-Geiger climate classification maps at the 1-km resolution. *Scientific Data* 5, 180214.
- Bennett D.M., Dudley, T.L., Cooper, S.D. & Sweet, S.S. (2015). Ecology of the invasive New Zealand mud snail, *Potamopyrgus antipodarum* (Hydrobiidae), in a Mediterranean-climate stream system. *Hydrobiologia* 746, 375-399.
- Borunda, A. (2018). See how a warmer world primed California for large fires. National Geographic. Retrieved January 8, 2020 from <u>https://www.nationalgeographic.com/environment/2018/11/climate-change-california-wildfire/#close</u>.
- Bowman, R.H. and D.C. Estrada. (1980). Soil survey of Santa Cruz County, California. Washington, DC.: U.S. Department of Agriculture, Soil Conservation Service, 160 p.
- Brabb, E.E. (1997). Geologic map of Santa Cruz County, California: a digital database: U.S. Geological Survey, Open-File Report OF-97-489, scale 1:62,500. Retrieved from https://ngmdb.usgs.gov/Prodesc/proddesc_18796.htm
- Brittingham, M. (nd.) Habitat fragmentation. Retrieved on January 16, 2020 from <u>http://www.marcellusfieldguide.org/index.php/guide/ecological_concepts/habitat_fragmentation/</u>
- Bulger, J.B., Scott, N.J., & Seymour, R.B. (2003). Terrestrial activity of adult California red-legged frogs *Rana aurora draytonii* in coastal forest and grasslands. *Biological Conservation* 110, 85-95.
- [BLM] Bureau of Land Management. (1998). BLM Manual 8270. *General procedural guidance for paleontological resource management*. Bureau of Land Management. 12p.
- [BLM] Bureau of Land Management. (2005a). *California Coastal National Monument Resource Management Plan*. California State Office, Sacramento CA
- [BLM] Bureau of Land Management. (2005b). *Land use planning handbook, H-1601-1*. Washington D.C.: Department of the Interior, Bureau of Land Management.

- [BLM] Bureau of Land Management. (2006). Proposed Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California.
- [BLM] Bureau of Land Management. (2007). *Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California Record of Decision.*
- [BLM] Bureau of Land Management. (2008). Instruction Memorandum No. 2008-009. Potential Fossil Yield Classification (PFYC) System.
- [BLM] Bureau of Land Management. (2014). Interim Management Plan for Cotoni-Coast Dairies.
- [BLM] Bureau of Land Management. (2016). Instructional Memorandum No. 2016-124. Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands.
- [BLM] Bureau of Land Management. (2019). Scoping report. Retrieved from <u>https://eplanning.blm.gov/epl-front-</u> <u>office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=1</u> <u>81479</u>
- Cal-Adapt. (2019). Cal-Adapt. Exploring California's climate change research. Retrieved on October 29, 2019 from <u>https://cal-adapt.org/</u>.
- [CalFire] California Department of Forestry and Fire Protection. (2009). San Mateo-Santa Cruz Unit Lockheed Fire Post Fire Risk Assessment. Retrieved on September 18, 2020 from <u>http://www.santacruzcountyfire.com/resource_mgmt/final_lockheed_ra.pdf</u>
- [CCH] Consortium of California Herbaria (CCH). (2019). Consortium of California Herbaria. Georeferenced herbarium specimen records. Referenced on October 29, 2019 from http://ucjeps.berkeley.edu/consortium/ interfaced through Calflora Website http://www.calflora.org/.
- [CDFW] California Department of Fish and Wildlife. (1996). Stream inventory report San Vicente Creek (Surveyed 1996).
- [CDFW] California Department of Fish and Wildlife. (2013). Stream inventory report San Vicente Creek (Surveyed 2010).
- [CGS] California Geological Society. (2002). California geomorphic provinces. Retrieved on February 5, 2020 from https://www.conservation.ca.gov/cgs/Documents/CGS-Note-36.pdf
- Clark, J.C. (1981) Stratigraphy, paleontology, and geology of the central Santa Cruz Mountains, California Coast Ranges. USGS Professional Paper 1168. https://doi.org/10.3133/pp1168
- [CNDDB] California Natural Diversity Database. (2019). California natural diversity database. California Department of Fish and Wildlife, Sacramento, California, USA. Retrieved on October 29, 2019 from map.dfg.ca.gov/bios/?tool=cnddbQuick.
- Cushman, H. J., Cooper, M., Meentemeyer, R. K., & Benson, S. (2008). Human activity and the spread of *Phytophthora ramorum*. In: Frankel, Susan J.; Kliejunas, John T.; Palmieri, Katharine M., tech. coords. 2008. *Proceedings of the sudden oak death third science symposium. Gen. Tech. Rep. PSW-GTR-214* (pp. 179-180). Albany, CA: US Department of Agriculture, Forest Service, Pacific Southwest Research Station.

- Dana, R.H., Jr. (1964). Two years before the mast. New York: Signet Classic.
- Delgado, J.P. (1990). *To California by sea: a maritime history of the California Gold Rush*. Columbia, SC: University of South Carolina Press.
- Douglass, M., & Wandsnider, L. (2012). Fragmentation resistant measures of chipped stone abundance and size: results of an experimental investigation of the impact of cattle trampling on surface chipped stone scatters. *Plains Anthropologist* 57(224), 353-365.
- [ESA] Environmental Science Associates. (2001). *Coast Dairies long-term resource protection and use plan: existing conditions report for the coast dairies property*. Prepared for the Trust for Public Land. San Francisco, CA. 603 pp.
- [ESA] Environmental Science Associates. (2004). *Coast Dairies long-term resource protection and use plan: existing conditions report for the coast dairies property*. Prepared for the Trust for Public Land. San Francisco, CA. 360 pp.
- Fellers, G.M., & Kleeman, P.M. (2007). California red-legged frog (*Rana draytonii*) movement and habitat use: implications for conservation. *Journal of Herpetology* 41, 176-286.
- Field, C.B., Chiariello, N.R., & Diffenbaugh, N.S. (2016). Climate Change Impacts. In H. Mooney and E. Zavaleta (eds.), *Ecosystems of California* (pp. 251-264). Berkeley, CA: University of California Press.
- Gaynor, K.M., Hojnowski, C.E., Carter, N.H., & Brashares, J.S. (2018). The influence of human disturbance on wildlife nocturnality. *Science* 360(6394), 1232-1235.
- Gilbert, M.M. & Chalfoun, A.D. (2011). Energy development affects populations of sagebrush songbirds in Wyoming. *Wildlife Management* 75, 816-824.
- Gill, J.A., Sutherland, W.J., & Watkinson, A.R. (1996). A method to quantify the effects of human disturbance on animal populations. *Journal of Applied Ecology* 33, 786-792
- Gompper, M.E. (2014). The dog-human-wildlife interface: assessing the scope of the problem. In *Free-Ranging Dogs and Wildlife Conservation*. New York, NY: Oxford University Press. 336pp.
- Gordon, R.T, Karl, J.W, Taylor, J.J, Spurrier, C.S., Karl, M.S., Bobo, M.R., & Herrick, J.E. (2015) Consistent indicators and methods and a scalable sample design to meet Assessment, Inventory, and Monitoring information needs across scales. Society for Range Management.
- Hayes, G. (2002). *Cattle grazing effects on California coastal prairie and associated annual forbs* (Doctoral dissertation). Santa Cruz: University of California. 152 p.
- Hayes, G.F. & Holl, K.D. (2003). Cattle grazing impacts on annual forbs and vegetation composition of mesic grasslands in California. *Conservation Biology* 17, 1694-1702.
- Hecht B. (1982). Geomorphology and hydrology of lower Arana Gulch, Santa Cruz, California, Bases for planning habitat restoration and sediment management. HEA, a division of J.H. Kleinfelder & Associates consulting report prepared for Harvey & Stanley Associates. 104 p.
- Hennings, L.A. (2016). *The impacts of dogs on wildlife and water quality: a literature review*. Portland, OR: Metro Parks and Nature. 2016.

- Huaraca, L.F., Chamorro, S.A., Hernández, V., Bay-Schmith, E. and Villamar, C.A., 2020. *Comparative acute toxicity of glyphosate-based herbicide (GBH) to Daphnia magna, Tisbe longicornis, and Emerita analoga.* Journal of Environmental Science and Health, Part B, pp.1-9.
- Huddart, D., & Stott, T. (2019) *Outdoor Recreation: environmental impacts and management*. Retrieved from DOI: 10.1007/978-3-319-97758-4
- Jensen, K. (1976). *The Lime Industry in Santa Cruz County* (Unpublished master's thesis). San Jose State University, San Jose, CA.
- Jepson eFlora. (2019). Jepson Flora Project: Jepson eFlora. University and Jepson Herbaria, University of California, Berkeley, CA. Retrieved on October 29, 2019 from http://ucjeps.berkeley.edu/eflora/.
- Kerans, B.L., Dybdahl, M.F., Gangloff, M.M., & Jannot, J.E. (2005). Potamopyrgus antipodarum: distribution, density, and effects on native macroinvertebrate assemblages in the Greater Yellowstone Ecosystem. Journal of the North American Benthological Society 24, 123-138.
- Kindon, A.W. (2018). Archaeological investigations at the Adams Creek Lime Kilns Site (CA-SCr-338H). In: Shipwrecks and lime kilns: the hidden history of 19th century sailors and quarrymen of the Central Coast, Publications in Cultural Heritage Number 35, 2018. Sacramento, CA: Department of Parks and Recreation Cultural Resources Division.
- Knight, R.L., & Cole, D.N. (1991). Effects of recreational activity on wildlife in wildlands. *Transactions* of the North American Wildlife and Natural Resources Conference 56, 238-247.
- Knobel, D.L., Butler, J.R.A., Lembo, T., Critchlow, R., & Gompper, M.E. (2014). Dogs, disease, and wildlife (pp. 144–169). In: M.E, Gompper (ed.) *Free-Ranging Dogs and Wildlife Conservation*. New York, NY: Oxford University Press.
- Krober A.L. (1976). Handbook of the Indians of California. New York: Dover Publications.
- Krusic, R.A., Yamasaki, M., Neefus, C.D., & Pekins, P.J. (1996). Bat habitat use in white mountain national forest. Journal of Wildlife Management 60(3), 625-631.
- Krynak, K.L., Burke, D.J. and Benard, M.F., 2017. *Rodeo™ herbicide negatively affects Blanchard's Cricket Frogs (Acris blanchardi) survival and alters the skin-associated bacterial community*. Journal of Herpetology, 51(3), pp.402-410.
- Larson, C.L., Reed, S.E., Merenlender, A.M., & Crooks, C.R. (2016). Effects of recreation on animals revealed as widespread through a global systematic review. *PLOS One*. https://doi.org/10.1371/journal.pone.0167259
- Larson, C.L., Reed, S.E., Merenlender, A.M., & Crooks, C.R. (2019). A meta-analysis of recreation effects on vertebrate species richness and abundance. *Conservation Science and Practice* 1:e93. https://doi.org/10.1111/csp2.93
- Mackenzie, A., McGraw, J. & Freeman, M. (2011). Conservation blueprint for Santa Cruz County: an assessment and recommendations from the Land Trust of Santa Cruz County. Santa Cruz, CA: Land Trust of Santa Cruz County. 180 pages. Retrieved from at http://www.landtrustsantacruz.org/blueprint
- Mallord, J.W., Dolman, P.M., Brown, A.F., & Sutherland, W.J. (2006). Linking recreational disturbance to population size in a ground nesting passerine. *Journal of Applied Ecology* 44, 185-195.
- McBrearty, S., Bishop, L., Plummer, T., Dewar, R., & Conrad, N. (2019). Tools underfoot: human trampling as an agent of lithic artifact edge modification. *American Antiquity* 63 (1), 108-129.
- McCoy KA and Peralta AL (2018) Pesticides Could Alter Amphibian Skin Microbiomes and the Effects of Batrachochytrium dendrobatidis. Front. Microbiol. 9:748. doi: 10.3389/fmicb.2018.00748
- McGinnis S.M. (1991). An evaluation of the anadromous fish spawning and rearing habitats of the Liddell and San Vicente Creek Systems, Santa Cruz County, California. Prepared for RMC Pacific Materials, October 25.
- Miller, S.G., Knight, R.L., & Miller, C.K. (2001). Wildlife responses to pedestrians and dogs. Wildlife Society Bulletin 29, 124-132.
- Milliken R. (1995). A Time of Little Choice: The disintegration of Tribal culture in the San Francisco Bay area, 1769-1810. Menlo Park, CA: Ballena Press.
- Minn, I., & Fleischmann, I. (2016, January 12). *Projected visitor counts and parking needs* [Memorandum]. Placeworks.
- Minnich R.A. (2008). California's *fading wildflowers: Lost legacy and biological invasions*. Berkeley, CA: University of California Press. 344 pp.
- Morrison, C.D., Boyce, M.S., Nielsen, S.E., & Bacon, M.M. (2014). Habitat selection of re-colonized cougar population in response to seasonal fluctuations of human activity. *Journal of Wildlife Management* 78, 1394-1403.
- Motta, E.V., Raymann, K. and Moran, N.A., 2018. Glyphosate perturbs the gut microbiota of honey bees. Proceedings of the National Academy of Sciences, 115(41), pp.10305-10310.
- Moyle P.B., Yoshiyama, R.M., Williams, J.E., & Wikramanayake, E.D. (1995). Fish species of special concern in California, Second Edition. Prepared for the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. Contract No. 2128IF.
- [NMFS] National Marine Fisheries Service. (2012). Final Recovery Plan for Central California Coast Coho salmon Evolutionarily Significant Unit. National Marine Fisheries Service, Southwest Region, Santa Rosa, California.
- Nieto, N.C., Madigan, J.E., & Foley, J.E. (2010). The duskyfooted woodrat (*Neotoma fuscipes*) is susceptible to infection by *Anaplasma phagocytophilum* originating from woodrats, horses, and dogs. *Journal of Wildlife Disease* 46, 810–817.
- Nielsen, T. Palmatier, S.M., & Proffitt, A. 2019. *Literature review: recreation conflicts focused on emerging e-bike technology*. Boulder County Parks and Open Space.
- Nolan Associates. (2016). Final Report on the Karst Protection Zone Investigation. Retrieved from http://www.slvwd.com/pdf/KarstMappingProgram.pdf.
- Quinn, J.H., Girard, Y.A., Gilardi, K., Hernandez, Y., Poppenga, R., Chomel, B., Foley, J.E., & Johnson, C.K. (2012). Pathogen and rodenticide exposure in American badgers (*Taxidea taxus*) in California. *Journal of Wildlife Diseases* 48(2), 467–472.

- Reidy, J.L., Thompson, F.R., III, & Peak, R.G. (2009). Factors affecting golden-cheeked warbler nest survival in urban and rural landscapes. *Journal of Wildlife Management* 73, 407-413.
- Reilly, M.L., Tobler, M.W., Sonderegger, D.L & Beier, P. (2017). Spatial and temporal response of wildlife to recreational activities in the San Francisco Bay ecoregion. *Biological Conservation* 207:117-126.
- [RCD] Resource Conservation District of Santa Cruz County. (2014). San Vicente Creek Watershed Plan for Salmonid Recovery. Retrieved on January 6, 2020 from <u>http://www.rcdsantacruz.org/images/watershed_plans/sv-existing-cond-report-final-2014-04-09-low-res.pdf</u>.
- Riley, S.P.D., Foley, J., & Chomel, B. (2004). Exposure to feline and canine pathogens in bobcats and gray Foxes in urban and rural zones of a National Park in California. *Journal of Wildlife Diseases* 40(1), 11–22.
- River Alliance of Wisconsin. (2017). New Zealand mudsnails invading southern Wisconsin, anglers are likely culprit. Urban Milwaukee. Milwaukee, WI. Retrieved on December 27, 2017 from https://urbanmilwaukee.com/pressrelease/new-zealand-mudsnails-invading-southern-wisconsin-anglers-are-likely-culprit/.
- RRM (RRM Design Group). (2018). Cotoni-Coast Dairies trail feasibility study.
- [SCCRTC] Santa Cruz County Regional Transportation Commission. (2019). North Coast Rail Trail Final Certified Environmental Impact Report.
- Sawyer, J.O., Keeler-Wolf, T., & Evens, J.M. (2009). *A manual of California vegetation* (2nd ed.) Sacramento, CA: California Native Plant Society Press. 1300 p.
- Shueler, T. (2000). Microbes and urban watersheds: concentrations, sources, and pathways. *Watershed Protection Techniques* 3: 1-12.
- Smith JA, Wang Y, Wilmers CC. (2015) *Top carnivores increase their kill rates on prey as a response to human-induced fear*. Proc. R. Soc. B 282: 20142711. http://dx.doi.org/10.1098/rspb.2014.2711
- SoilWeb. (2019). SoilWeb: an online soil survey browser. California Soil Resource Lab. University of California, Davis. Retrieved on October 29, 2019 from https://casoilresource.lawr.ucdavis.edu/gmap/.
- Soulard, D.F. (2017). Impacts of recreational trails on wildlife species: implications for Gatineau Park. (master's thesis). Retrieved from https://ruor.uottawa.ca/bitstream/10393/36819/1/Soulard_Danielle_Impact_of_Recreation_Trails _on_Wildlife_Species.pdf
- Spitzer, R.M.E. (2015). *The Maritime Shipping Industry of the geographic region bounded by Aptos and Alviso, CA, 1850-1950* (master's thesis). Retrieved from: http://www.sjsu.edu/anthropology/docs/projectfolder/Spitzer-Rebecca-Thesis.pdf
- Sponsler, D.B., Grozinger, C.M., Hitaj, C., Rundlöf, M., Botías, C., Code, A., Lonsdorf, E.V., Melathopoulos, A.P., Smith, D.J., Suryanarayanan, S. and Thogmartin, W.E., 2019. *Pesticides* and pollinators: A socioecological synthesis. Science of the Total Environment, 662, pp.1012-1027.

- Stoffer, P.W., & Gordon, L.C. (2001). Geology and natural history of the San Francisco Bay area; a field-trip guidebook: U.S. Geological Survey Bulletin 2188, 194 p. Retrieved from https://pubs.usgs.gov/bul/b2188/.
- Suraci, J.P., Clinchy, M., Zanette, L.Y., & Wilmers, C.C. (2019). Fear of humans as apex predators has landscape-scale impacts from mountain lions to mice. *Ecology Letters* 22, 1578-1586.
- Taylor, K., Anderson, R., Taylor, P., Longden, K., & Fisher, P. (2005). Dogs, access and nature conservation. *English Nature Research Report* 649, Peterborough
- Taylor, A.R., & Knight, R.L. (2003). Wildlife responses to recreation and associated visitor perceptions. *Ecological Applications* 13, 951-963.
- Thorne J.H., Boynton, R.M., Holguin, A.J., Stewart, J.A.E., & Bjorkman J. (2016). A climate change vulnerability assessment of California's terrestrial vegetation. Final report to California Department of Fish and Wildlife. Davis, California: University of California, Davis. Retrieved from https://lccnetwork.org/sites/default/files/Resources/California%20Climate%20Vulnerability%20 Assessment%200f%20Macrogroup%20Vegetation 01.31.2016 FINAL.pdf
- Toevs, G.R., Karl, J.W., Taylor, J.J., Spurrier, C.S., Karl, M., Bobo, M.R., & Herrick, J.E. 2011. Consistent indicators and methods and a scalable sample design to meet assessment, inventory and monitoring needs across scales. *Rangelands* 33(4), 14-20.Trail, P.W., & Baptista, L.F. (1993). The impact of brown-headed cowbird parasitism on populations of the Nuttall's whitecrowned sparrow. *Conservation Biology* 7(2), 309 - 315.
- Townsend, S.E., Hammerich, S., Halbur M. (2020). *Wildlife occupancy and trail use before and after a park opens to the public*. California Fish and Wildlife, Recreation Special Issue; 74-94; 2020. Retrieved from Scientific Journal ISSN: 2689-4203 (online): https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178955&inline
- [UCMP] University of California Museum of Paleontology. [2019]. University of California Museum of Paleontology. Online collections. Retrieved on October 29, 2019 from https://ucmpdb.berkeley.edu/.
- US Census. (2010). 2010 Census. Retrieved from <u>https://www.census.gov/programs-surveys/decennial-census/decade.2010.html</u>
- US Census. (2017). 2017 Census. Retrieved from https://www.census.gov/en.html
- [USGS] United States Geological Survey. 2020. Preliminary Hazard Assessment of the CZU Lightning Complex (San Mateo and Santa Cruz Counties, CA). Retrieved on September 17, 2020 from https://landslides.usgs.gov/hazards/postfire_debrisflow/detail.php?objectid=299
- [USGS] United States Geological Survey. (n.d.). NAS Nonindigenous aquatic species: *Potamopyrgus antipodarum*. Retrieved from <u>https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=1008</u>
- [USFWS] U.S. Fish and Wildlife Service. (2002). *Recovery Plan for the California Red-legged Frog* (*Rana aurora draytonii*). Portland, Oregon: U.S. Fish and Wildlife Service.

- Wang Y, Smith JA, Wilmers CC (2017) Residential development alters behavior, movement, and energetics in an apex predator, the puma. PLoS ONE 12(10): e0184687. https://doi.org/10.1371/journal.pone.0184687
- Weber, G.E., & Allwardt A.O. (2001). The geology from Santa Cruz to Point Año Nuevo— The San Gregorio fault zone and Pleistocene marine terraces. Geology and Natural History of the San Francisco Bay Area: A 2001 NAGT Field-Trip Guidebook. Retrieved on February 5, 2020 from <u>https://pubs.usgs.gov/bul/b2188%202/b2188ch1.pdf</u>
- Weston M. A. & Stankowich T. (2013) Dogs as agents of disturbance. In M. E. Gompper, ed. Free-Ranging Dogs and Wildlife Conservation (pp. 94-116). Oxford, United Kingdom: Oxford University Press.
- Whittaker, D., & Knight, R.L. (1999). Understanding wildlife responses to humans. *Wildlife Society Bulletin* 26, 312-317.
- Wilcove, D.S., McLellan, C.H., & Dobson, A.P. (1986). Habitat fragmentation in the temperate zone. in M. E. Soule, editor. *Conservation biology. The science of scarcity and diversity* (pp. 237-256). Sunderland, Massachusetts: Sinauer Associates.
- Wilmers CC, Wang Y, Nickel B, Houghtaling P, Shakeri Y, et al. (2013) Scale Dependent Behavioral Responses to Human Development by a Large Predator, the Puma. PLoS ONE 8(4): e60590. doi:10.1371/journal.pone.0060590



A Summary Profile

Selected Geographies: Santa Cruz County, CA

> Benchmark Geographies: U.S.

Produced by Headwaters Economics' Economic Profile System (EPS) https://headwaterseconomics.org/eps January 22, 2020

About the Economic Profile System (EPS)

EPS is a free web tool created by Headwaters Economics to build customized socioeconomic reports of U.S. counties, states, and regions. Reports can be easily created to compare or aggregate different areas. EPS uses published statistics from federal data sources, including the U.S. Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics.

The Bureau of Land Management and Forest Service have made significant financial and intellectual contributions to the operation and content of EPS.

See https://headwaterseconomics.org/eps for more information about the capabilities of EPS. For technical questions, contact Patty Gude at eps@headwaterseconomics.org or telephone 406-599-7425.



Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions.



The Bureau of Land Management, an agency within the U.S. Department of Interior, administers 249.8 million acres of America's public lands, located primarily in western states. It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations.



The Forest Service, an agency of the U.S. Department of Agriculture, administers national forests and grasslands encompassing 193 million acres. The Forest Service's mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

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Note to Users:

This is one of 14 reports that can be created and downloaded from EPS. Topics include land use, demographics, specific industry sectors, the role of non-labor income, the wildland-urban interface, the role of amenities in economic development, and payments to county governments from federal lands. The EPS reports are downloadable as Excel or PDF documents. See https://headwaterseconomics.org/eps.

Overview

	Santa Cruz County, CA	California	U.S.
Population, 2018	274,255	39,557,045	327,167,434
Trends			
Population % change, 1970-2018	119.8%	97.6%	60.5%
Employment % change, 1970-2018	219.3%	167.4%	119.9%
Personal Income % change, 1970-2018	426.9%	291.2%	222.1%
Prosperity			
Unemployment rate, 2018	4.9%	4.2%	3.9%
Average earnings per job, 2018 (2018 \$s)	\$60,944	\$73,815	\$62,321
Per capita income, 2018 (2018 \$s)	\$69,355	\$63,557	\$54,446
Economy			
Non-Labor % of personal income, 2018	36.5%	36.2%	37.4%
Services % of employment, 2018	70.8%	75.3%	73.1%
Government % of employment, 2018	13.0%	11.6%	12.2%
Use Sectors^			
Timber % of private employment, 2016	~0.2%	0.3%	0.6%
Mining % of private employment, 2016	~0.0%	0.1%	0.5%
Fossil fuels (oil, gas, & coal), 2016	~0.0%	~0.1%	0.4%
Other mining, 2016	~0.0%	0.1%	0.3%
Agriculture % of employment, 2018	4.4%	1.0%	1.3%
Travel & Tourism % of private emp., 2016	22.3%	16.8%	15.8%
Federal Land*			
Federal Land % total land ownership	2.1%	47.4%	27.5%
Forest Service %	0.0%	20.5%	8.4%
BLM %	2.0%	14.9%	10.5%
Park Service %	0.0%	7.6%	3.4%
Military %	0.0%	3.9%	1.1%
Other %	0.1%	0.5%	4.1%
Federal land % Type A**	100.0%	49.9%	37.6%
Federal payments % of gov. revenue, FY2012			
Development			
Residential area % change, 2000-2010	-3.0%	15.5%	12.3%
Wildland-Urban Interface % developed,	58.8%	17.2%	16.3%
2010			

Estimates for data that were not disclosed are indicated with tildes (~).

[^]Data for timber, mining, and travel and tourism-related are from County Business Patterns which excludes proprietors, and data for agriculture are from Bureau of Economic Analysis which includes proprietors.

* The land ownership data source and year vary depending on the selected geography. See following pages for specifics.

** Federal public lands that are managed primarily for natural, cultural, and recreational features. These lands include National Parks and Preserves (NPS), Wilderness (NPS, FWS, FS, BLM), National Conservation Areas (BLM), National Monuments (NPS, FS, BLM), National Recreation Areas (NPS, FS, BLM), National Wild and Scenic Rivers (NPS), Waterfowl Production Areas (FWS), Wildlife Management Areas (FWS), Research Natural Areas (FS, BLM), Areas of Critical Environmental Concern (BLM), and National Wildlife Refuges (FWS).

Overview

What do we measure on this page?

Using summary statistics from topical EPS reports, this page compares socioeconomic indicators¹ of the selected area to a benchmark.

Trends: General indicators of economic well-being (population, employment, and real personal income) measured over time.

Prosperity: Common indicators of individual well-being or hardship (unemployment, average earnings per job, and per capita income).

Economy: Three significant sectors of the economy: non-labor income (e.g., government transfer payments, and investment and retirement income), services, and government employment.

Use Sectors: Components of the economy (commodity sectors including timber, mining and agriculture, and industries that include travel and tourism) that could be associated with the use of public lands.

Federal Land: The amount and type of federal land ownership, and the dependence of county governments on payments related to federal lands such as National Park Service (NPS), Forest Service (FS), Bureau of Land Management (BLM), and Fish and Wildlife Service (FWS).

Development: Residential development of private lands, including the wildland-urban interface. The wildland-urban interface data are available and reported only for the 11 western states and do not include Alaska and Hawaii.

Why is it important?

This report allows the user to compare a broad range of socioeconomic measurements. A user can refer to EPS topic-specific reports for more details. For example, when a county shows unusually high unemployment rates, a user may want to create an EPS Socioeconomic Measures report for that county. Or an EPS Timber report could be created for a county that shows a relatively high number of people employed in the timber industry.

This report uses information from the following EPS reports: Socioeconomic Measures, Demographics, Agriculture, Mining, Services, Tourism, Government, Non-Labor Income, Timber, Land Use, Public Land Amenities, Wildland-Urban Interface, and Federal Land Payments. Consult these reports directly for additional information at https://headwaterseconomics.org/eps.

Population, Employment, and Personal Income

• Between 1970 and 2018, Santa Cruz County, CA had the largest percent change in population (119.8%), and the U.S. had the smallest (60.5%).



Population, Percent Change, 1970-2018

Employment, Percent Change, 1970-2018



• Between 1970 and 2018, Santa Cruz County, CA had the largest percent change in employment (219.3%), and the U.S. had the smallest (119.9%).

Personal Income, Percent Change, 1970-2018



• Between 1970 and 2018, Santa Cruz County, CA had the largest percent change in personal income (426.9%), and the U.S. had the smallest (222.1%).

Population, Employment, and Personal Income

What do we measure on this page?

This page describes percent change in population, employment, and real personal income.

The EPS Demographics report provides additional information on population dynamics, while the EPS Socioeconomic Measures report provides additional information on employment and personal income. See https://headwaterseconomics.org/eps.

The Bureau of Economic Analysis reports data either by place of residence or by place of work. Population and personal income data on this page are reported by place of residence, and employment data by place of work.²

Why is it important?

One measure of economic performance is whether a location is growing or declining. Standard measures of growth and decline are population, employment, and real personal income.

The information on this page helps users understand whether locations are growing or declining at different rates, and makes it easy to see discrepancies between changes in population, employment, and real personal income. If population and employment are growing faster than real personal income, for example, it may be worthwhile to research whether growth has been in low-wage industries and occupations. Alternatively, if personal income is growing faster than employment, it may be caused by growth in high-wage industries and occupations and/or non-labor income sources.

Unemployment, Earnings, and Per Capita Income

2018 \$s

• In 2018, Santa Cruz County, CA had the highest unemployment rate (4.9%), and the U.S. had the lowest (3.9%).

Annual Unemployment Rate, 2018 6% 4.9% 5% 4.2% 3.9% 4% 3% 2% 1% 0% Santa Cruz California U.S. County, CA

• In 2018, California had the highest average earnings per job (\$73,815), and Santa Cruz County, CA had the lowest (\$60,944).

Average Earnings per Job, 2018 \$73,815 \$80.000 \$70,000 \$62,321 \$60,944 \$60,000 \$50,000 \$40,000 \$30.000 \$20,000 \$10,000 \$0 Santa Cruz California U.S.

County, CA



• In 2018, Santa Cruz County, CA had the highest per capita income (\$69,355), and the U.S. had the lowest (\$54,446).

Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Labor. 2019. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

Unemployment, Earnings, and Per Capita Income

What do we measure on this page?

This page describes three measures of individual prosperity: unemployment, average earnings per job, and per capita income.¹

Unemployment Rate: The number of people who are jobless, looking for jobs, and available for work divided by the labor force.³

Average Earnings per Job: Total earnings divided by total employment. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included.

Per Capita Income: Total personal income (from labor and non-labor sources) divided by total population.

Why is it important?

Statistics presented on this page are important indicators of economic well-being.

The annual unemployment rate is the number of people actively seeking but not finding work as a percent of the labor force. This figure can go up during national recessions and/or when more localized economies are affected by area downturns. Seasonal variations in unemployment can be viewed in the EPS Socioeconomic Measures report at https://headwaterseconomics.org/eps.

Average earnings per job is an indicator of the quality of local employment. A higher average earning per job indicates relatively more high-wage occupations.⁴ It can be useful to consider earnings against local cost of living indicators.

Per capita income is one of the most important measures of economic well-being. However, it can be misleading. Per capita income is total personal income divided by population. Because per capita income is calculated using total population and not the labor force, per capita income can be relatively low when a disproportionate number of children and/or elderly people are in the population. And because total personal income includes non-labor income sources, per capita income can be relatively high due to the presence of retirees and people with investment income. To investigate the impact of non-labor income sources on total personal income, create the EPS Non-Labor report at https://headwaterseconomics.org/eps.

To see how these measurements have changed over time, create an EPS Socioeconomic Measures report at https://headwaterseconomics.org/eps.

Non-Labor Income, Services, and Government

 In 2018, the U.S. had the largest percent of total personal income from non-labor income sources (37.4%), and California had the smallest (36.2%). Non-Labor Income, Percent of Total Personal Income, 2018



 In 2018, California had the largest percent of total jobs in services (75.3%), and Santa Cruz County, CA had the smallest (70.8%).

Services, Percent of Total Employment, 2018



Government, Percent of Total Employment, 2018 13.0% 14% 12.2% 11.6% 12% 10% 8% 6% 4% 2% 0% Santa Cruz County, California U.S. CA

• In 2018, Santa Cruz County, CA had the largest percent of total jobs in government (13%), and California had the smallest (11.6%).

Non-Labor Income, Services, and Government

What do we measure on this page?

This page describes non-labor income and employment in services and government.¹

Non-Labor Income: Dividends, interest and rent (money earned from investments), and transfer payments (includes government retirement and disability insurance benefits, medical payments such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, etc.). Non-labor income is reported by place of residence.

Services: Employment in the following sectors: Utilities, Wholesale Trade, Retail Trade, Transportation & Warehousing, Information, Finance & Insurance, Real Estate & Rental & Leasing, Professional & Scientific & Tech., Management of Companies & Enterprises, Administrative & Support Services, Educational Services, Health Care & Social Assistance, Arts & Entertainment & Recreation, Accommodation & Food Services, and Other Services.

Government: Employment in federal, state, and local government agencies and government enterprises.

For more detailed information about the role of non-labor income, service industry employment, and government employment in the economy, create an EPS Non-Labor report, an EPS Services report, or an EPS Government report at https://headwaterseconomics.org/eps.

Why is it important?

In many counties, non-labor income (for example, retirement and investment income, government transfer payments) can be more than a third of all personal income. As the Baby Boomer generation retires, this source of income will continue to grow. A high dependence on non-labor income can indicate a location with an aging population and/or attractiveness to people with investment income. In some cases, it can also signal hardship, such as when there is a high dependence on Medicaid and income maintenance payments.

Nationally, services account for more than 95 percent of the growth in new jobs since 2000. Despite the strong growth of employment in services, the term "services" is often misunderstood. Services consist of a wide mix of jobs including high-wage, high-skilled occupations (e.g., doctors, engineers, software developers) and low-wage, low-skilled occupations (e.g., restaurant workers, tour bus operators). The service sector typically provides services, such as banking and education, rather than creating tangible objects. However, many service sectors such as utilities, engineering, and architecture are closely associated with goods-producing sectors.

Government can be a major employer in some locations, particularly in rural areas and locations with significant government facilities such as federal land management offices, military bases, prisons, or research facilities. Changes in government employment tend to track population trends. Local government often accounts for much of job growth in the government sector as additional services are demanded by a growing population.

Employment in Commodity Sectors

• In 2016, the U.S. had the largest percent of total jobs in timber (0.65%), and Santa Cruz County, CA had the smallest (0.2%).



Timber, Percent of Total Private Employment, 2016

- In 2016, the U.S. had the largest percent of total jobs in mining of fossil fuels (0.36%), and Santa Cruz County, CA had the smallest (0%).
- In 2016, the U.S. had the largest percent of total jobs in mining unrelated to fossil fuels (0.27%), and Santa Cruz County, CA had the smallest (0.01%).

In 2018, Santa Cruz County, CA had

agriculture (4.41%), and California had

the largest percent of total jobs in

the smallest (0.98%).

0.7% 0.6% 0.5% 0.4% 0.3% 0.2% 0.1% 0.1% 0.0% Santa Cruz County, California U.S. CA ■ Fossil fuels (oil, gas, & coal) ■ Other mining

Mining, Percent of Total Private Employment, 2016



Agriculture, Percent of Total Employment, 2018

Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2018. Census Bureau, County Business Patterns, Washington, D.C.

Employment in Commodity Sectors

What do we measure on this page?

This page describes employment¹ in three commodity sectors: timber, mining (minerals, oil, gas, and coal), and agriculture. These are sectors of the economy that extract commodities from land (for example, timber harvesting, energy development, and grazing).

Timber: Employment associated with growing and harvesting trees, employment at sawmills and paper mills, and wood products manufacturing.

Mining: Employment associated with oil and gas extraction, coal mining, metals mining, and nonmetallic minerals mining.

Agriculture: Employment associated with all forms of agriculture, including farming and ranching.

County Business Patterns (CBP)⁵ are used in EPS reports as a data source for timber and mining because this data set has fewer data gaps compared to other sources.

The Bureau of Economic Analysis (BEA) is used as the data source for agriculture because CBP data do not include agriculture. However, the BEA data include proprietors, which are not included in CBP data. As a result, the data for agriculture are not strictly comparable to data for timber and mining. The latest year for each data source may vary due to different data release schedules.

For more detailed information about commodity sectors and for industry definitions, create an EPS Timber, Mining, or Agriculture report at <u>https://headwaterseconomics.org/eps</u>.

Why is it important?

Opportunities for commodity extraction can stimulate local employment.

Timber industries, mining—including fossil fuel development (oil, natural gas, and coal)—and farming and ranching play important roles in some locations. Information on this page helps explain whether that is the case in the locations selected, and whether locations differ from one another.

Employment in Commodities, Travel & Tourism

- Santa Cruz County, CA had the largest percent of total jobs in commodity sectors (4.6%), and California had the smallest (1.4%).
- · Agriculture was the largest component of commodity sector employment (4.4% of total jobs) in the Santa Cruz County, CA, and mining was the smallest component (0% of total jobs).



Commodity Sectors, Percent of Total Private Employment**





- In 2016, Santa Cruz County, CA had the largest percent of total jobs in industries that include travel and tourism (22.3%), and the U.S. had the smallest (15.7%).
- In 2016, accommodations & food* was the largest component of travel and tourism-related employment (15.6% of total jobs) in Santa Cruz County, CA, and passenger transportation* was the smallest (0.1% of total jobs).

Accommodations & Food* Passenger Transportation* Arts, Entertainment, & Recreation* Retail Trade*

* Charted values do not represent the entirety of these sectors, rather their components typically related to travel & tourism.

** Data for timber and mining are from County Business Patterns which excludes proprietors, government, agriculture, and railroad. Data for agriculture are from Bureau of Economic Analysis. The latest year for each data source may vary due to different data release schedules.

Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2018. Census Bureau, County Business Patterns, Washington, D.C. Find more reports like this at headwaterseconomics.org/eps Data and Graphics | Page 14

Employment in Commodities, Travel & Tourism

What do we measure on this page?

This page describes employment for commodity sectors and for industries that are associated with travel and tourism.

Commodity Sectors: Employment in timber, mining (including oil, gas, and coal), and agriculture.

Travel and Tourism: Employment in sectors that provide goods and services to visitors as well as to the local population. These industries are: Retail Trade, Passenger Transportation, Arts & Entertainment & Recreation, and Accommodation & Food Services. There is no single industrial classification for travel and tourism under the North American Industrial Classification System (NAICS). The exact proportion of jobs in these sectors attributable to expenditures by visitors, including business and pleasure travelers, is not known without additional research such as surveys.

County Business Patterns (CBP)⁵ are used in EPS reports as a data source for timber and mining because this data set has fewer data gaps¹ compared to other sources.

The Bureau of Economic Analysis (BEA) is used as a data source for agriculture because CBP data do not include agriculture. However, the BEA data include proprietors, which are not included in CBP data. As a result, the data for agriculture are not strictly comparable to data for timber and mining. The latest year for each data source may vary due to different data release schedules.

For more detailed information about commodity sectors and for industry definitions, create an EPS Timber, Mining, or Agriculture report. For more information about the tourism-related components of the economy, create an EPS Tourism report at https://headwaterseconomics.org/eps.

Why is it important?

Commodity extraction can stimulate local employment. It is important to understand the relative size of sectors to put the commodityrelated economy into perspective. For example, decisions that permit (or restrict) timber, mining, and grazing activities have a higher chance of impacting a county with a high percentage of its employment in the commodity sectors.

Tourism and recreation can stimulate local employment. Communities can benefit directly from visitors who spend money in hotels, restaurants, ski resorts, gift shops, and elsewhere. Tourism can also help communities retain and attract capital and spur transitions to move diverse economies. This report can be used to understand whether travel-and tourism-related economic activity is present and whether there are differences between locations.

Federal Lands and Federal Land Payments

- California had the largest percent of total land area in federal ownership (47.1%), and Santa Cruz County, CA had the smallest (2%).
- BLM lands were the largest component of federal land ownership (2%) in Santa Cruz County, CA, and Forest Service lands were the smallest (0%).



Federal Land, Percent of Total Land Area



CA

• Santa Cruz County, CA had the largest percent of federal lands in Type A (100%), and the U.S. had the smallest (37.6%).

> Federal Land Payments, Percent of Total General Government Revenue, 2012



Data Sources: NASA MODIS Land Cover Type Yearly L3 Global 1km MOD12Q1, 2006; U.S. Geological Survey, Gap Analysis Program. 2018. Protected Areas Database of the United States (PADUS) version 2.0; U.S. Department of Commerce. 2014. Census Bureau, Governments Division, Washington, D.C.

Federal Lands and Federal Land Payments

What do we measure on this page?

This page describes differences in the percent of federal land ownership by agency; the share of federal lands managed primarily for natural, cultural, and recreational features; and the percent of county revenue derived from payments related to federal lands.

Type A Federal Lands: Federal public lands that are managed primarily for natural, cultural, and recreational features. There can be exceptions (for example, oil and gas development within a National Monument area), but generally Type A lands are less likely to be used for commodity production than other federal land types. Type A lands include National Parks and Preserves (NPS), Wilderness (NPS, FWS, FS, BLM), National Conservation Areas (BLM), National Monuments (NPS, FS, BLM), National Recreation Areas (NPS, FS, BLM), National Wild and Scenic Rivers (NPS), Waterfowl Production Areas (FWS), Wildlife Management Areas (FWS), Research Natural Areas (FS, BLM), Areas of Critical Environmental Concern (BLM), and National Wildlife Refuges (FWS). These definitions of land classifications are not legal or agency-adopted classifications—they are only provided for comparative purposes.

NPS = National Park Service; FS = Forest Service; BLM = Bureau of Land Management; FWS = Fish & Wildlife Service.

For additional information about land ownership and development patterns, create an EPS Land Use report. The EPS Public Land Amenities report provides additional information about the role of environmental amenities in economic development; see https://headwaterseconomics.org/eps.

Federal Land Payments: Federal payments that compensate state and local governments for non-taxable federal lands within their borders. Payments are funded by federal appropriations (e.g., PILT), from receipts received by federal agencies from activities on federal public lands (e.g., timber, grazing, and minerals), and from other programs such as the Secure Rural Schools & Community Self-Determination Act.

For additional information about the importance of federal payments to counties, create an EPS Federal Land Payments report at https://headwaterseconomics.org/eps.

Why is it important?

Understanding the composition of land ownership and management in an area is important because actions on federal lands may affect the local economy, particularly when federal lands are a large portion of the land base.

Some Type A federal public lands prohibit most forms of commercial use and development. These lands include national parks, wilderness areas, and national monuments. Because these lands are managed primarily for their non-commercial values (i.e., scenery, wildlife, recreation), they potentially play a different economic role than public lands more commonly associated with commodity sectors.^{6, 7}

Locations with federal public lands receive government payments—for example, funding through Payments in Lieu of Taxes (PILT), the 25% Fund, or the Secure Rural Schools and Community Self-Determination Act. When these payments are a significant portion of the local county's budget, activities on public lands may affect the fiscal well-being of a county.⁸

Development and the Wildland-Urban Interface

 Between 2000 and 2010, California had the largest percent change in residential land area developed (15.5%), and Santa Cruz County, CA had the smallest (-3%).



Land Area Developed with Residences, Percent Change, 2000-2010



- Wildland-Urban Interface (WUI), Percent Developed, 2010
- In 2010, Santa Cruz County, CA had the largest proportion of the wildlandurban interface that is developed (58.8%), and the west had the smallest (16.3%).

Data Sources: Theobald, DM. 2013. Land use classes for ICLUS/SERGoM v2013. Unpublished report, Colorado State University; Gude, P.H., Rasker, R., and van den Noort, J. 2008. Potential for Future Development on Fire-Prone Lands. Journal of Forestry 106(4):198-205; U.S. Department of Commerce. 2011. TIGER/Line 2010 Census Blocks and 2010 Summary File 1, Washington, D.C.

Find more reports like this at headwaterseconomics.org/eps

Development and the Wildland-Urban Interface

What do we measure on this page?

This page describes residential development on private lands, and the proportion of the wildland-urban interface (WUI) that is developed.⁹ The EPS Land Use report provides additional information on land ownership, management, cover, and development: https://headwaterseconomics.org/eps.

This information is available only for the 11 western states and does not include Alaska and Hawaii.

Wildland-Urban Interface (WUI): Private forestlands that are within 500 meters of public forestlands. We use the threshold of 500 meters to identify the existing and potential WUI area because guidelines for the amount of defensible space necessary to protect homes from wildfire range from 40 to 500 meters around a home. We focus on adjacency to public forests because roughly 70 percent of western forests are publicly owned and because wildfire is a natural disturbance in many of these forests, creating a potential risk to adjacent private lands.¹⁰

Why is it important?

The conversion of open space and agricultural land to residential development has occurred at a rapid pace in many parts of the U.S. The popularity of exurban lot sizes in much of the country has exacerbated this trend. (Low-density development results in a larger area of land converted to residential development). The pattern of development can reflect a number of factors, including demographic trends, the increasingly "footloose" nature of economic activity, the availability and price of land, and preferences for homes on larger lots. Locations with a large percent change in the area of residential development often have experienced significant in-migration from more urbanized areas. Counties with a small percent change either experienced little growth or were already highly urbanized in 2000.

Development of homes adjacent to fire-prone federal public lands poses several challenges including the rising cost of protecting homes from wildfires; increased danger to wildland firefighters; and the consumption of funds that might otherwise be used for restoration, recreation, research, and other activities. When protecting homes is a priority, agencies are unable to allow otherwise beneficial fires to burn, even those that could reduce fuel loads.

Data Sources & Methods

This EPS Summary report uses national statistics from public government sources. All data used in EPS can be readily verified with the original sources:

- County Business Patterns
 Census Bureau, U.S. Department of Commerce
 <u>https://www.census.gov/programs-surveys/cbp.html</u>
 Contacts
 https://www.census.gov/about/contact-us.html
- Regional Economic Information Data
 Bureau of Economic Analysis, U.S. Department of
 Commerce
 <u>https://www.bea.gov/iTable/index_regional.cfm</u>
 Contacts
 <u>https://www.bea.gov/contacts/search.htm</u>
- Local Area Unemployment Statistics
 Bureau of Labor Statistics, U.S. Department of Labor
 <u>https://www.bls.gov/lau/</u>
 Contacts
 <u>https://www.bls.gov/bls/contact.htm</u>

The EPS Summary report also uses data derived from Geographic Information Systems (GIS) to show more accurate statistics for land ownership:

• TIGER/Line County Boundaries Bureau of the Census, U.S. Department of Commerce

https://www.census.gov/geo/maps-data/data/tiger.html

• Protected Areas Database U.S. Geological Survey, Gap Analysis Program https://gapanalysis.usgs.gov/padus/

EPS core approaches

EPS is designed to focus on long-term trends across a range of important measures. Trend analysis provides a more comprehensive view of changes than spot data for select years. We encourage users to focus on major trends rather than absolute numbers. EPS displays detailed industry-level data to show changes in the composition of the economy over time and the mix of industries at points in time. EPS employs cross-sectional benchmarking – comparing smaller areas such as counties to larger regions, states, and the nation – to give a sense of relative performance. EPS allows users to aggregate data for multiple locations to allow for more sophisticated cross-sectional comparisons.

Adjusting dollar figures for inflation

Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in EPS are adjusted to real (or constant) dollars using the Consumer Price Index. Figures are adjusted to the latest date for which the annual Consumer Price Index is available.

Data gaps and estimation

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These are indicated with tildes (~) in tables. Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at https://headwaterseconomics.org/eps.

Endnotes

- Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics estimates these data gaps. Estimates are indicated with tildes (~). Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at <u>https://headwaterseconomics.org/eps</u>.
- 2 For details on Bureau of Economic Analysis terms, see: <u>https://bea.gov/regional/definitions</u>.
- 3 For more information on unemployment, see the Bureau of Labor Statistics resources on this topic at https://www.bls.gov/bls/unemployment.htm.
- 4 The Monthly Labor Review Online, published by the Bureau of Labor statistics, addresses earnings and wages by industry, sex, and educational achievement. Search at https://www.bls.gov/mlr/.
- 5- Data from County Business Patterns includes both full- and part-time employment. However, CBP data do not include employment in government, agriculture, railroads, or the self-employed and, as a result, under-count the size of industry sectors. Also, CBP data are based on mid-March employment and do not take into account seasonal fluctuations. For these reasons, the data are most useful for showing long-term trends, displaying differences between locations, and showing relationships between sectors over time.
- ⁶ For examples of literature on the economic role of environmental amenities, see: Booth DE. 1999. Spatial Patterns in the Economic Development of the Mountain West. Growth and Change 30(3):384-405; Duffy-Deno KT. 1998. The Effect of Federal Wilderness on County Growth in the Intermountain Western United States. Journal of Regional Science 38(1):109-136; Lorah P and Southwick R. 2003. Environmental Protection, Population Change, and Economic Development in the Rural Western United States. Population and Environment 24(3):255-272; McGranahan DA. 1999. Natural Amenities Drive Rural Population Change. USDA Economic Research Service, Agricultural Economic Report No. 781. https://www.ers.usda.gov/webdocs/publications/41047/13201_aer781.pdf?v=42061; Rasker R. 2006. An Exploration Into the Economic Impact of Industrial Development Versus Conservation on Western Public Lands. Society & Natural Resources 19(3):191-207; Rudzitis G, Johansen HE. 1991. How Important is Wilderness? Results from a United States Survey. Environmental Management 15(2):227-233.
- 7- A bibliography of studies documenting the economic role of public lands can be found here: https://headwaterseconomics.org/wp-content/uploads/Annotated_Bib_Value_Public_Lands.pdf.
- 8- An online data visualization and map showing the history of federal land payments to counties can be seen here: https://headwaterseconomics.org/dataviz/county-payments/
- 9- For resources related to the wildland-urban interface (WUI), including planning tools and related solutions, see https://headwaterseconomics.org/wildfire/.
- 10- For a description of the methods used to define and measure the wildland-urban interface, see: Gude P, Rasker R, and van den Noort J. 2008. Potential for Future Development on Fire-Prone Lands. Journal of Forestry 106(4):198-205.



U.S. Department of the Interior Bureau of Land Management

Cotoni-Coast Dairies

California Coastal National Monument

Draft Resource Management Plan Amendment & Environmental Assessment Public Comments Report | June 2020

U.S. Department of the Interior Bureau of Land Management



Draft Resource Management Plan Amendment & Environmental Assessment

Cotoni-Coast Dairies California Coastal National Monument

Public Comment Summary Report

Prepared by the Consensus Building Institute

June 2020

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SECTION 1 | OVERVIEW OF PUBLIC COMMENT REPORT

1.1. INTRODUCTION TO THIS REPORT

This report contains a summary of the public comments (in the form of letters, emails, electronic submissions, and comment forms) received by the Central Coast Field Office from agencies, organizations, and individuals on the Cotoni-Coast Dairies (C-CD) Draft Resource Management Plan Amendment (RMPA) and Environmental Assessment (EA). Pursuant to 43 CFR 46.305, the BLM considered the public comments and revised the Proposed RMPA and associated environmental assessment accordingly. Although the public comments on the draft were voluminous, there are many major themes that were identified repeatedly among the interested parties. Whether or not these comments were thought to merit individual discussion, the BLM responded by modifying the proposed action, improving the impact analyses, making factual corrections, or indicating those circumstances which would trigger additional NEPA review.

This report is organized as follows:

Section 1 | Overview of the Comments

This section describes the organization of this document; summary of the comments; and how to use this document.

• Section 2 | General Comment Topics

This section presents a summary of general comments received by the BLM on the Draft RMPA/EA. Similar comments have been collected into topic areas for which a single response will be provided.

• Section 3 | Agency and Organization Comments & Form Letters

This section provides a list of the commenters by name of the agency/organization and a codified identifier for each commenting entity. Each entity's comments are summarized and grouped by topics. This section also includes example from letters submitted by numerous entities.

• <u>Section 4 | Individual Commenters</u>

This section lists the names of individuals not associated with a particular agency, organization, or form letter. Individuals who indicated they are affiliated with a specific business or company are noted. While individuals often commented on multiple topics, this section groups individuals by the primary issue mentioned in the comments.

1.2. SUMMARY OF COMMENTS RECEIVED

During the public comment period (which lasted from February 14 to April 3, 2020), 862 comment submissions were received from individuals, agencies, and organizations. The commenters included federal and state officials; public interest groups; and private citizens. Public comments on the Draft RMPA/EA were assessed both individually and collectively by the BLM. Several of these were letters and/or emails containing identical text that had been suggested by environmental groups, neighborhood associations, recreation organizations, and agricultural groups. Each comment letter typically contained multiple individual comments on one or more of the topics addressed in the Draft RMPA/EA.

The following sections include a summary of the comments received during the public comment period for the Draft RMPA/EA in order to provide an overview of the concerns expressed during the comment period and to demonstrate the BLM decision-makers are aware of these concerns. All the comments received during the public comment period for the C-CD Draft RMPA/EA are included in the administrative record for the C-CD Draft RMPA/EA and are available for review upon request to the BLM's Central Coast Field Office.

1.3. How to Find a Specific Comment

A numeric identifier was used to develop the "Comment Code" for each comment letter, form, electronic submission and/or email received by the Central Coast Field Office. Each commenting entity has a unique commenter code. For the purpose of this document, multiple comments received by the same agency/organization are combined under the same commenter code.

A legend of "Commenter Codes" used to track comments on the C-CD Draft RMPA/EA is provided below:

AG-*NAME*	Agency Comment
ORG-*NAME*	Organization (or Club) Comment
FORM_*NAME*	Form Letter
IND-	Individual Commenter

Commenter Code Legend

The BLM has made a good faith effort to interpret names and comments that were hand-written on comment forms and letters.

SECTION 2 | GENERAL COMMENTS

This section provides a summary of comments received on general or recurrent issues. These comments are aggregated by topic. The comment summaries provide a brief overview of the comments for the reader's convenience in reviewing the responses; comment summaries may include one or more example comments to help summarize the issue. The comment summaries are not intended to provide a complete representation or interpretation of the comment's meaning.

The comment topics (or major themes) are listed briefly below and are provided in full in the remainder of Section 2:

- 2.1 Non-NEPA/BLM Issues
 - 2.1.1 Outside BLM Jurisdiction, Authority, or Scope
 - 2.1.2 Addressed through Policy, Regulations, or Administrative Actions
 - 2.1.3 Issues Considered, but Not Analyzed in Detail
 - 2.1.4 Cited References
 - 2.1.5 General Comments, Non-Substantive
- 2.2 NEPA Process
 - 2.2.1 Level of NEPA Documentation
 - 2.2.2 Stakeholder Consultation and Public Involvement
 - 2.2.3 Informed Decision
- 2.3 Purpose and Need
 - 2.3.1 Statutes, Policies, and Regulations
- 2.4 Management Alternatives
 - 2.4.1 Range of Alternatives
 - 2.4.2 Preferred Alternative
 - 2.4.3 Alternatives Considered But Not Analyzed in Detail

2.5 Alternatives: Menu of Options for Preferred Alternative

- 2.5.1 Land Uses
- 2.5.2 Cultural and Heritage Resources
- 2.5.3 Fire and Fuels
- 2.5.4 Vegetation and Management
- 2.5.5 Biological Resources: Habitat, Wildlife, and Special Status Species
- 2.5.6 Services and Facilities
- 2.5.7 Recreation
- 2.5.8 Hunting / Shooting

2.6 Environmental Analysis

- 2.6.1 Analysis and Uncertainty
- 2.6.2 Existing Conditions and Environmental Consequences
- 2.6.3 Cumulative Effects

2.1. NON-NEPA/BLM ISSUES

Many comments raised concerns that are not environmental issues within the context of the National Environmental Policy Act (NEPA) or are outside the scope of the C-CD RMPA/EA because they are not under the authority or within the jurisdiction of the BLM.

2.1.1 Outside BLM Jurisdiction, Authority, or Scope

A. Leaving Property As-Is

Multiple comments requested that the BLM leave the property as-is, citing concerns including the need to protect and preserve remaining open lands and potential impacts to neighboring communities and local public services.

B. Outside BLM Jurisdiction or Authority

The BLM received comments requesting that the BLM take management actions that fall under the authority of other entities.

2.1.2 Addressed through Policy, Regulations, or Administrative Actions

A. Planning vs. Implementation-Level Decisions

Several comments requested the BLM make site- or project-specific decisions or management actions. While the RMPA/EA does include some project-specific decisions related to recreation and travel and transportation management (e.g. the location of trailheads and trails), these decisions are typically not included within an RMPA.

2.1.3 Issues Considered, but Not Analyzed in Detail

A. Resource Inventories

Several comments acknowledged the lack of information or data related to robust resource inventories on the C-CD property at the time of developing the Draft RMPA/EA; however, commenters frequently expressed concerns about the implications if planning decisions and management were to move forward without completed inventories and surveys.

ORG-CLF: CLF is concerned that the agency intends to limit the RMP development process, thereby not doing their due diligence to assess, document, and disclose necessary information. BLM must adhere to their own guidance and NEPA in developing an RMP, which includes analysis and inventory of objects and values and "rigorously explor[ing] and objectively evaluat[ing]" a range of alternatives

B. Revenue and Expenditures

Comments frequently expressed a need to identify reliable funding sources for implementing the RMPA that would ensure adequate and sustainable management of the C-CD property.

ORG-DF: The RMPA fails to explain how these services [e.g., monitoring, enforcement, maintenance, etc.] could be provided given current funding and capacity.

ORG-FONC: [The Preferred Alternative should include:] Access and usage not to exceed sufficiency of funding and personnel to fully implement, monitor, and enforce compliance with the RMPA.

C. Patrol/Law Enforcement

ORG-DNCA: The RMPA/EA does not adequately address the local impacts of the proposed alternatives on fire readiness and response, other emergency services, or security of adjacent landowners and the Davenport community.... While these may be administrative actions that do not fall under the purview of "planning activities," the North Coast community needs a better understanding of what they are to be reassured that activities contemplated in the RMPA do not pose undue burdens on local citizens.

D. Cumulative Impacts on Neighboring Properties

Several commenters requested the BLM to thoroughly analyze and discuss impacts (including cumulative impacts) of proposed C-CD development activities on adjacent properties and projects.

2.1.4 Cited References

A. 2004 Coast Dairies Long Term Resource Protection and Access Plan

The BLM received comments that indicated some of the RMPA/EA decisions are based on outdated information in the 2004 plan.

There were also requests for the BLM to address potential conflicting information.

ORG-DNCA: [P]lease address how the RMPA will follow the guidance of the Coast Dairies Long Term Resource Protection and Access Plan particularly the "Goals and Standards" identified in Chapter V, the "Adaptive Management" in Chapter VIII, and the "List of Laws, Ordinances, Regulations, and Standards" in Appendix 9. How will inherent conflicts between the two plans be resolved?

2.1.5 General Comments, Non-Substantive

A. Document Format and Terminology

The BLM received comments conveying challenges to assimilate and provide germane comments due to the document format and length.

B. Non-Environmental Issues or Non-Substantive Comments

The BLM received multiple comments that were unrelated to environmental issues or impacts and/or lacked substantive input to inform the draft RMPA/EA review (e.g., expressed support or opposition for a particular alternative without additional discussion).

2.2. NEPA PROCESS

2.2.1 Level of NEPA Documentation

A. EIS Warranted or Revised EA Supporting FONSI Decision

Multiple commenters were of the opinion that an EA is not the appropriate level of NEPA documentation, and that an environmental impact Statement (EIS) should be prepared. Several commenters indicated that the RMPA should undergo the more robust EIS process, or the EA would require substantial revisions (e.g., robust resource inventory surveys, cumulative impact analyses,

well-defined preferred alternative, and mitigation measures) to sufficiently support a FONSI decision.

ORG-RBDA: ...BLM should identify a Preferred Alternative that complies with all applicable state and federal laws and policies, conduct a full Environmental Impact Study before proceeding with any public access, and clearly spell out the mitigations it intends (and has the resources) to implement to reduce all impacts to an insignificant level.

AG-COUNTY_SCPD: The analysis in Chapter 4 would be much clearer and understandable if the impact analysis and conclusions were organized and summarized in a table or separate section. There needs to be a detailed explanation and presentation of how the adverse effects described in Chapter 4 would be avoided, minimized, or mitigated to a less than significant level. For each adverse effect identified in Chapter 4 the analysis needs to identify a project design feature(s) or use restrictions that avoid, minimize or mitigate the adverse effect. This is a critical step needed to support either a FONSI or a requirement for an environmental impact statement or a supplement to the existing environmental impact statement.

2.2.2 Stakeholder Consultation and Public Involvement

A. Public Comment Period

Several comments requested more time for the public comment period for at least 30 days, particularly due to the impacts of COVID-19.

B. BLM Engagement

Multiple comments expressed appreciation for the BLM staff's effort and public involvement process through the scoping period.

The BLM also received comments requesting the BLM provide more details on public involvement through the next stages of ongoing management planning and implementation (e.g., reviewing progress and applying adaptive management measures).

AG-COUNTY-SCPD: Appendix C contains a "General Monitoring Plan" which provides very general information on monitoring and adaptive management.... The RMPA Appendix C General Monitoring Plan should provide more specific information about this process. Are the five-year updates an internal, administrative process, or are they intended to include a publicly available report with opportunity for public participation and comment?

C. Coordination with Others

Commenters frequently emphasized the importance of consultation and coordination with related projects and planning efforts.

AG-CCC: [T]hese nearby projects and planning efforts will collectively increase the volume of visitors to the north coast, as will the RMPA, and it is important to ensure that all of these projects are designed in collaboration with one another, and that the connectivity or potential connectivity between the projects and the properties is clearly defined. At a minimum, planned physical improvements need to be coordinated, but perhaps most importantly, the final RMPA
will need to identify appropriate and complementary management provisions that can be implemented to ensure that use occurs in a manner that is sustainable and protective of coastal resources throughout the north coast area. The RMPA needs to clearly and explicitly account for this broader context, and include enforceable provisions that can ensure that its implementation will not overwhelm the resource, including the need for adequate funding to fully support integrated use, maintenance, and management, both initially and going into the future, as the surrounding context changes as these other projects and planning efforts come to fruition.

2.2.3 Informed Decision

A. Additional Studies Needed

Commenters shared concerns that additional studies (e.g., resource inventories and cumulative impact analyses) are needed before an informed decision can be made to move forward with the RMPA. Commenters expressed concerns with the BLM deferring analysis of impacts of the proposed management uses until after selecting a specific mix of uses and trail locations.

ORG-RBDA: [The ORG-FONC Comment Letter] contains a number of comments by highlyqualified experts in various fields relevant to management of Cotoni-Coast Dairies in a manner consistent with the above- cited legal requirements. Those experts conclude that your Environmental Assessment is inadequate to the goal of informed decision-making and public participation, but rather gives only cloudy assurances that potential impacts will be addressed.

2.3. PURPOSE AND NEED

2.3.1 Statutes, Policies, and Restrictions

A. Management Requirements

The BLM received comments expressing concerns that the draft RMPA/EA does not align with the intent and stipulations outlined in the FLPMA and Presidential Proclamation 9563 to support public access while ensuring protection of the objects and values identified in the Presidential Proclamation (e.g., sensitive habitats, special status species, etc.). Commenters stated that although the RMPA/EA indicates that public access will have environmental impacts, it does not adequately provide assurances for protecting the property's objects and values. In addition to the Presidential Proclamation, commenters cited other laws, policies, and management restrictions (e.g., Omnibus Public Lands Act, Secretarial Order 3308, BLM policy manuals, and the property deed restrictions) that indicate the RMPA/EA should prioritize conservation over public access.

ORG-DF: [Although] adding the C-CD property to the California Coastal National Monument necessitates public access, the original monument proclamation named first and foremost the protection of the "biological treasures" within the Monument. We believe that this perspective should remain paramount and that expanded access to the property should pose minimal impact to these treasures.

ORG-SF: Numerous statutes, policies and legal requirements dictate how this unit is supposed to be managed. They consistently provide clarity that the ecological, archeological and cultural values are paramount and must be preserved.... The Omnibus Public Lands Act - This statute makes clear that units of the system must be managed to a higher conservation standard than other lands managed by the BLM and further supports the argument that recreational activities

can occur on national monument lands only when there is adequate protection for the ecological, archeological and cultural values.... Policies of the Department of the Interior and Bureau of Land Management - The Secretarial Order, 15-Year Strategy and Policy Manuals make clear that agency policy prioritizes conservation over other uses, including recreation, within the National Conservation Lands.

2.4. MANAGEMENT ALTERNATIVES

This section 2.4 briefly describes recurrent themes about the RMPA alternatives in general. The following section 2.5 provides more specific public input related to the menu of options (e.g., vegetation management options and potential access points).

2.4.1 Range of Alternatives

A. Alternative A / No Action Alternative

Multiple commenters supported Alternative A because it offered the greatest protection and preservation of natural resources and habitats; however, many of the same commenters expressed concern the minimal management approach does not ensure long-term stewardship of the property. Several commenters therefore suggested the Preferred Alternative incorporate additional management measures (e.g., comprehensive grazing and vegetation management similar to Alternatives B and C) and adaptive management into the land use plan.

ORG-CNPS-SC: ...supports Alternative A along with a planned grazing program to maintain the grasslands of the Cotoni-Coast Dairies property. ...provides the greatest protection and preservation of natural resources and habitats. Land use plans must include specific, measurable goals and objectives to effect desired outcomes. We support adaptive management to enable long-term stewardship of the property.

Other commenters conveyed that Alternative A does not offer sufficient public access opportunities. Several commenters also had concerns with particular components of the public access design (e.g., support or concerns with a particular proposed access point or trail route).

AG-CCC: As a general point, Alternative A would result in underutilization of the public recreational access potential of the nearly 6,000-acre BLM property, thereby not appropriately maximizing public recreational access opportunities as required by the Coastal Act.... Alternative A does not appear consistent with the Coastal Act, nor does it conform with the terms and conditions of CDP 3-11-035. Thus, it does not appear that Alternative A is an appropriate alternative to pursue for long-term use and management of the property.

The BLM received several comments stating that Alternative A does not qualify as a No Action Alternative and is therefore noncompliant with NEPA. Commenters called for the BLM to analyze the status quo as the No Action Alternative.

B. Alternative B

Several commenters indicated Alternative B offered a suitable balance between Alternative A, which includes the least amount of public access, and Alternative C, which offers the most public access

opportunities. Overall, comments indicated support for the BLM's proposed phased approach to expanding and developing recreational opportunities and access.

AG-COUNTY_SCPD: Alternative B, or a similar amount of parking and trail development, provides a balance between recreation and wildlife habitat protection.

ORG-SBIS: [W]e support the lower trail mileage proposed in Alternative B unless or until BLM can demonstrate it has the capacity to manage a more extensive trail network. There is no need to impact cultural or natural resources with ill-conceived or unnecessary trails.

Concerns and support related to components shared with either Alternative A or Alternative C frequently carried over for Alternative B. For example, several commenters valued the additional level of fuels reduction, vegetation, and invasive species management in Alternatives B and C.

ORG-SRL: Regarding Alternative B, similar to Alternative A, the exclusion of equestrian use along the section of trail in RMZ#1 does not align with the proposed trail use in the SVR public access plan.

Common concerns with Alternative B often related to allowing recreational hunting with habitat/wildlife enhancements and broadcast spraying of herbicides.

C. Alternative C

Multiple commenters supported Alternative C because it offered the highest level of public access among the three alternatives. Similar to Alternative B, commenters appreciated the additional management activities to protect communities and the natural environment from major threats like hazardous wildfires and the spread of invasive species.

As with Alternative B, comments overall supported the BLM's proposed phased approach for providing public access. However, several commenters still felt the level of public access and activities would be too harmful (e.g., habitat damage, water quality degradation, community disturbance, etc.).

The increased proposed recreational activities in Alternative C corresponded with increased concerns about the potential negative environmental, social, and economic impacts. For instance, several commenters indicated they were fine with dogs on leash (as described in Alternatives A and B), but were opposed to off-leash areas (as described in Alternative C). Similar to Alternative B, common concerns with Alternative C often related to allowing recreational hunting with habitat/wildlife enhancements and broadcast spraying of herbicides.

ORG-CAMTB: [O]f the three proposed alternatives, only Alternative C provides a minimum viable mileage of trails to provide for a meaningful user experience. We believe that there are additional opportunities to increase trail access and reconfigure the trail layout to be more conducive to public enjoyment while still meeting management goals.

ORG-DF: [P]roceeding with the scope and scale of development in Alternative C could cause overuse of the property in terms of human access and the extent of disturbance to wildlife, and it

should be rejected outright.... In short, despite best intentions, people will push their use opportunities beyond enforceable limits, and this creep of human overuse will exceed the capacity of managers to regulate.

2.4.2 Preferred Alternative

A. Preferred Alternative Missing

The BLM received comments expressing concerns that the RMPA/EA does not define and analyze a preferred alternative.

ORG-FONC: The EA is invalid as a matter of law for failing to include a proposed action... By only identifying three conceptual alternatives from which various components will be selected by BLM to divulge a proposed action at a later date, BLM renders it impossible for the public or the agencies – including BLM – to evaluate "the environmental impact of the proposed action", compare the proposed action to alternatives, or to have a clear basis of choice among options with the issues sharply defined.

Multiple commenters (e.g., <u>ORG-FONC</u> and <u>ORG-DNCA</u>) developed separate alternatives that they requested the BLM consider for the Preferred Alternative and analyze compared to the other alternatives.

2.4.3 Alternatives Considered, but Not Analyzed in Detail

A. Recreation Outside CCNM Boundaries

Commenters conveyed the importance for the BLM to manage the CCNM in a way that considers impacts to and by the larger landscape.

ORG-SF: Because it is at the center of this network of protected lands, CCD serves as an essential link, both for wildlife and for recreation users, to other portions of the larger landscape. As such, the BLM's management decisions will determine whether this unit supports, or harms, the conservation and sustainable recreation opportunities that are occurring (or being planned) across these other properties.

2.5. ALTERNATIVES: MENU OF OPTIONS FOR PREFERRED ALTERNATIVE

2.5.1 Land Uses

A. Agriculture and Grazing

Generally commenters conveyed support for the benefits and protection of sustainably managed agriculture and grazing operations. A few raised concerns about managing grazing in a way that minimizes its impact on habitat and wildlife.

ORG-PLC: We support BLM's Alternative A that would "continue to manage livestock grazing as specified in the 2014 Interim Management Plan, replacing and maintaining infrastructure over time to support this program." We are not supportive of additional grazing. In addition, grazing should be phased out when inappropriate due to resource concerns such as water quality or endangered species.

B. Acquisition / Easements

The BLM received comments that expressed both support for and concerns with potential land acquisition and easements. Those who raised concerns stated that Presidential Proclamation 9563 prohibits incorporating any lands into the property that are not already included within the property's boundaries. If adjacent land were proposed to be acquired by the BLM, that would require a separate presidential proclamation/congressional legislation, and the property would need to undergo its own NEPA planning process. Other comments supported the BLM considering opportunities for land acquisition/easements, as this would expand options to design more sustainable and logical public access (e.g., trail networks).

AG-COUNTY_SC-BOS-D3: [W]ith respect to the C-CD property, no lands outside of the current property boundaries can be automatically incorporated into the CCNM. Moreover, if adjacent land is proposed to be acquired by the BLM, that property would have to go through its own process to become part of the CCNM, either through a separate Presidential Proclamation or through Congressional Legislation, where that property would go through its own environmental review and management plan with public participation.

FORM_A-MTB: Consider acquisition of neighboring lands, or easements, from willing sellers that support C- CD objects and values or provide opportunities for public access to C-CD, consistent with resource management goals and objectives. Collaborate with local experts in trail design and construction to ensure locally appropriate, high quality, and low maintenance trail infrastructure.

2.5.2 Cultural and Heritage Resources

A. Local Tribal Uses

Commenters emphasized a need to protect cultural resources and protect the rights of Tribes. Several specifically mentioned the descendants of the Cotoni People and expressed appreciation for the BLM's engagement with the Amah Mutsun Tribal Band as an advisory partner in the management of the C-CD property.

2.5.3 Fire and Fuels

A. Fire Management

Overall, comments frequently identified fire management as a major priority for the BLM.

ORG-SF: It is essential that the BLM develop a comprehensive plan to prevent, mitigate, and respond to wildfire. The BLM should develop its wildfire prevention and response plan in close coordination with CalFire, the Bonny Doon Fire Safe Council, and with input from the surrounding communities. We are pleased that the BLM is proposing to continue, and expand, its shaded fuel break projects along Warrenella Road and Bonny Doon Road to mitigate the risks of wildfire and help keep surrounding communities safe. We also strongly support the proposed prescribed burning program on Cotoni-Coast Dairies presented in Alternatives B and C to promote ecological health and reduce the risk of catastrophic wildfire.

2.5.4 Vegetation Management

A. General Management of Vegetation

The BLM received comments that overall supported the BLM implementing a comprehensive weed management plan, particularly to help reduce wildfire risk and the spread of non-native species. Multiple comments encouraged the BLM to work with biological processes for vegetation control (e.g., insects) and ecological succession. Commenters also requested the BLM further articulate its Integrated Pest Management approach for the property. Those that supported the option with the greatest land preservation approach, Alternative A (which does not include substantial new vegetation or fuels management), requested the BLM to develop a planned grazing program to maintain grasslands on the property.

B. Herbicides and Pesticides

The BLM received many comments expressing concern about the application of herbicides and pesticides. Many expressed opposition specifically to aerial or broadcast application as described in Alternative C. Some comments suggested specific conditions and limitations for applying herbicides and pesticides, including no use of synthetic herbicides/pesticides, use herbicides/ pesticides after exhausting other alternatives, and implement informational and notification procedures for neighboring properties.

ORG-CCOF: The monument boundaries are adjacent to a number of certified organic farms for which herbicide drift can cause economic damages.... [The BLM should] remove the option to allow helicopter application of Aminopyralid and Clopyralid or any synthetic herbicide or pesticide within monument boundaries. The risk of drift from aerial applications is too high.

ORG-POST: Selective use of herbicides for managing invasive species (e.g. Clematis vitalba) is important for effective control, but must be implemented in a measured way and not through broadcast spraying (MA-VEG-7).

2.5.5 Biological Resources: Habitat, Wildlife, and Special Status Species

A. Habitat Protection and Restoration

ORG-POST: ...strongly supports the creation of core fish and wildlife protection areas that will help ensure biodiversity conservation goals can be achieved more effectively and efficiently. It's unclear whether the Recreation Management Zones (RMZs) were defined to achieve these goals. Core habitat areas should be defined to meet biodiversity conservation goals and located in areas known or likely to be used by wildlife, including creek corridors and ridgelines. Diverse habitat types, elevation gradients, and connectivity must be protected to support climate change adaptation.

A few comments also requested the BLM further consider Wild and Scenic designation of San Vicente Creek and other creeks, which could help support recovery of native fishes and other aquatic species.

B. Wildlife and Special Status Species Protection

ORG-DF: Any extensive development of the property would trigger the need for Biological Opinions from NOAA Fisheries and the US Fish and Wildlife Service for the various listed species found on the property, including Central California Coast coho salmon, Central California Coast steelhead trout, California red- legged frog, and potentially tidewater goby. It is not clear to Defenders how development of the site could proceed given the high levels of potential disturbance to listed species proposed in several of the RMPA alternatives. The C-CD RMPA already outlines substantial disturbance to listed species caused by general habitat damage, grading of new parking areas, etc. This type of development seems contrary to the California Coastal National Monument Boundary Enlargement proclamation....

IND-0036: ...such trail networks (and potential areas where bikers, hikers, and dogs might foray from such networks) should not negatively impact the 40 specific species (plus) that are "objects" to be protected on the C-CD site many of which are concentrated in the riparian areas on site – as well as not deteriorate habitat conditions in ANY of the C-CD site's riparian areas.

IND-0273: Given the documented impacts of human activity on animal communities and the already substantial land area in the Santa Cruz Mountains devoted to recreation, further research is needed to understand how large a geographic area devoted to recreation and at what human densities these animal populations can withstand without declining.... With these results in mind, I ask that BLM have an adaptive roll out of recreation on the property with the most restrictive measures first (such as those outlined in alternative A) combined with monitoring to assess impacts on wildlife. If impacts are determined to be negligible, then and only then would further development be allowed.

2.5.6 Services and Facilities

A. 4 T's – Traffic, Trauma, Toilets, and Trash

The BLM received several comments concerned with the amenities and services to fully cover what were often referred to as the "4T's" – Traffic, Trauma (police, fire, and rescue response), Toilets, and Trash. Occasionally, "transients" were also identified as a concern. Commenters appreciated management actions that would minimize public access impacts like providing garbage receptacles in closed containers and removed daily. Commenters also valued amenities that supported equitable access to those with limited mobility (e.g., ADA compliant picnic tables).

Commenters requested evidence that the BLM will have the capacity and resources to implement these amenities and services. Several comments suggested leveraging opportunities such as volunteer backcountry patrols to help expand the BLM's capacity to monitor and enforce activities on the property.

IND-0008: Our North Coast landscape is shared by a continuous stream of travelers. The expense of our local area and other social factors result in an abundance of transients living out of vehicles parked nightly up and down our coast. Any new parking & public toilet facility needs to be designed to mitigate against these becoming relied on for nightly camping.

IND-099: ...reoccurring problems had to do with irresponsible behavior by out-of-area visitors who frequented the North Coast beaches and literally left tons garbage for the Santa Cruz

County to pick up.... There were also continual problems with make-shift and generally poorly designed & inadequate parking space and constant crime due to the remoteness of the area and the relatively long wait for response time from police and other emergency services.

ORG-SCC-HA: Before the monument can open, we need a sustainable source of funds for maintenance, including trash pickup, bathroom cleaning, and rule enforcement.

2.5.7 Access Opportunities

A. General Access and Allowable Uses

Commenters expressed diverse perspectives on the types and level of allowable recreational activities. As previously mentioned, those who wished to maximize public access generally supported the public access and allowable recreational uses in Alternative C (although not all proposed access/uses were supported), whereas others generally supported the components in Alternative A that limited access and allowable activities to have a smaller environmental impact than the other alternatives.

Commenters generally supported allowing multiple types of activities, as long as these activities are managed in a way that minimizes impacts to the ecosystem and neighboring communities and aligns with current or upcoming planning and management.

Commenters expressed concern about impacts to the neighboring communities and properties and suggested either prohibiting or limiting activities in areas close to these communities and properties.

B. Research, Education, and Stewardship

Several commenters requested the BLM support opportunities for research and education to enhance awareness and understanding of the Monument and the surrounding landscape. Commenters also recommended supporting volunteer opportunities that could both help address personnel capacity concerns as well as support educating visitors about the Monument's history, culture, geology, biology, trails, etc.

C. Parking/Access Fees

The BLM received differing viewpoints related to charging fees or permits for parking and/or trail use. Several commenters viewed fees and permits as a reliable source of funding; others were concerned this could lead to potentially dangerous and crowded on-road parking.

ORG-MBOSC: The BLM should charge for parking to create a sustainable funding source for the management of the property. Parking lots should be large enough to prevent overflow parking on local roads.

AG-COUNTY_SC-BOS-D3: Parking on the North Coast also requires vigilance to prevent unauthorized and dangerous parking along the coast highway and county roads.... The EA needs to analyze the potential impact on public safety from the charging of parking fees that would result in on-road parking at C-CD access points.

D. Trails and Access Points

Commenters shared different perspectives for specific trail design and access points. Several comments raised safety concerns for specific local roads, which they stated the road conditions would be unsafe (e.g., steep grade, narrow, or sharp turns) or impede local services (e.g., Cal Fire responsiveness as the Big Creek Fire Station on Swanton Road). Comments on the potential access points and trailheads were similar to previous comments raised during the scoping period and documented in the <u>scoping report appendices</u>. Comments related to the specific trail design and access points include:

Access Points / Trails

- Swanton Road. Offers access from major roads to the northern part of the property. However, there are concerns related to public safety and road conditions (e.g., tight corners and narrow road) and potentially impeding the Big Creek Fire Station emergency response.
- **Molino Creek**. Proposed trailhead promotes public access; however, the area has sensitive habitat and wildlife.
- **Warrenella Road**. Utilizes existing road to access areas closer to the middle of the property; however, has safety and road condition concerns.
- **Cement Plant Road**. Presents an alternative to using Warrenella Road. However, there were concerns about unsafe road conditions, potential for traffic accidents, and negative impacts to small community nearby.
- **CEMEX Site**. Currently unavailable (county planning underway), but was proposed as an alternative to Cement Plant Road.
- San Vicente Creek. Utilizes existing parking and access to the center of the property; however, there are special status species (salmonids) in the creek.
- Liddell Creek. Proposed trailhead promotes additional public access; however has sensitive habitat, wildlife, and cultural resource concerns. There are also public safety concerns (flooding potential) and possible land use conflicts (quarry operations and public water supply facility).
- **Bonny Doon Road**. Utilizes an existing road. However, there were concerns about unsafe road conditions and negative impacts to local communities.
- Yellow Bank Creek. Potential location for building a pedestrian bridge across Hwy 1.
- Marina Ranch Gate. Offers an access point to the southern part of the property; however, there are sensitive and culturally significant areas to avoid.
- "Northgate" (Hwy 1 marker 30.22). Proposed as an alternative access point (rather than Swanton Road and Cement Plant Road) that allows for connecting to the San Vicente Redwoods.
- **"Southgate."** Proposed as an alternative access and trail system for accessing Recreation Management Zone 3. Some comments recommended a hybrid access option of Northgate and Southgate.

Trail Connectivity

- San Vicente Redwoods. In general, overall support for connecting to the San Vicente Redwoods trail. Several requested that trail development prioritize this connection.
- Rail Trail. Connecting to the Rail Trail was also generally supported.

• **East-West / North-South**. Several comments requested the BLM to consider connecting the ends of the property together to promote regional trails. Commenters noted that the BLM should avoid sensitive habitat, wildlife, and cultural resource areas.

E. Common Recreational Uses – Hiking, Biking, and Equestrians

Commenters with concerns mentioned environmental impacts (e.g., erosion) of several of these common recreational uses and recommended limiting these activities to minimize such impacts. Several also expressed concerns about potential user conflicts on multi-user trails. Comments in support of allowing biking, hiking, and equestrian access stated these activities provide the public with an immersive natural experience, and can be managed in a way that minimizes environmental impacts (e.g., close bike and equestrian trails during wet periods to limit erosion and trail failure).

F. Off-Trail Hiking and Camping

Comments ranged from a desire to have backcountry hiking and camping options to prohibiting offtrail hiking and camping. Comments with concerns about allowing hike-in/off-trail or dispersed camping stated that this may lead to issues such as increased wildfire risk, transient encampments, trash, and crowded parking/trails. Comments suggested either prohibiting camping or minimize impacts (e.g., special use permits, seasonal limitations, and prohibiting campfires).

G. E-bikes

Comments differed on whether e-bikes should be allowed on trails. Those in support indicated ebikes enable access by a more diverse array of cyclists and should be allowed on bike access trails in a manner consistent with the BLM regulations. Other commenters expressed safety concerns about the speed of e-bikes, questioned whether e-bikes are allowed under the C-CD deed restrictions, and/or questioned e-bike management given neighboring properties' restrictions (e.g., San Vicente Redwoods prohibits e-bikes). Some comments clarified support for allowing Class I e-bikes, but had concerns about Class II e-bikes.

H. Dogs

Comments ranged from allowing dogs to be off leash to prohibiting dogs on the property. Those who recommended prohibiting dogs expressed concerns that even with on-leash rules, dogs might disturb sensitive species (e.g., red-legged frog) and vegetation, risk spread of invasive species, and potentially conflict with other recreational users. Other comments conveyed caution and suggested methods to minimize potential dog impacts (e.g., dogs stay on leash, confined to established trails, and/or kept out of sensitive habitats). Among those who supported allowing dogs with limitations, there were diverse opinions on whether to establish enclosed, off-leash areas.

I. Other Specific Recreational Uses

The following issues were raised less frequently than the vast majority of comments and/or no comments offered an opposing opinion:

- Hang gliding/paragliding Differing perspectives on allowing this activity. Comments in support offered specific strategies to address safety concerns. Others noted the neighboring San Vicente Redwoods property prohibits this activity.
- Rock climbing/rappelling Differing perspectives on allowing this activity. Several comments who voiced concerns also noted the San Vicente Redwoods property prohibits this activity.

- **Fishing** Commenters generally supported the BLM's decision to prohibit fishing, citing concerns about impacts to endangered/special status species and habitat.
- **Smoking** Comments supported prohibiting smoking on the property, particularly due to fire risks. No comments were received that conveyed an opposing view.

2.5.8 Hunting / Shooting

Commenters expressed diverse perspectives about allowing recreational hunting and/or target shooting. Several indicated allowing hunting conflicts with management restrictions like the Presidential Proclamation. Many shared concerns that hunting/shooting poses public safety risks (particularly due to the property's relative small size and proximity to other properties/ communities) and potential environmental damage (e.g., habitat/vegetation degradation, risk to cultural resources, pollution, wildfire risk, noise disturbance, and affected wildlife). Among these comments, several also expressed opposition to habitat/wildlife enhancement for the purposes of recreational hunting.

Some comments clarified that the only hunting that should be allowed is necessary management actions to reduce non-native wildlife (e.g., feral pigs).

Comments in support for allowing these activities included those stating that hunting can be managed in a safe and sustainable manner through close coordination with California Department of Fish and Wildlife (CDFW). Commenters identified multiple benefits including providing a source of funding to support management and provide an opportunity for an activity unavailable anywhere else in the county. As an alternative to firearms, some requested that the BLM at least allow archery hunting.

Multiple comments, including from the California Coastal Commission (AG-CCC), indicated they need more information about the proposed hunting-related activities to adequately evaluate potential impacts. CDFW (AG-CDFW) issued a comment to address several of the concerns raised about hunting and offered several considerations for how the BLM might structure and implement its hunting program.

2.6. ENVIRONMENTAL ANALYSIS

2.6.1 Analysis and Uncertainty

A. Adequate Analyses and Baselines

The BLM received multiple comments that stated that the EA did not provide sufficient descriptions of existing conditions (Chapter 3) or analyses on environmental consequences (Chapter 4). This often led to commenters requesting the BLM conduct an EIS process.

ORG-SF: ...urges the BLM to complete more thorough baseline inventories of natural and cultural resources prior to commencing any new recreational activity.... Furthermore, the BLM should develop adaptive management criteria that outline the circumstances under which recreation uses might be limited or modified if deleterious impacts are observed. Those adaptive management criteria, and plans, should be completed before new recreation is allowed.

ORG-DNCA: [P]ublic access is a new and completely different activity on this property. The shortterm and cumulative impacts of such a fundamental change in management from a century-old practice must be fully assessed with a full EIS process.

2.6.2 Existing Conditions and Environmental Consequences

A. Biological Resources

The BLM received comments indicated the RMPA/EA did not adequately survey and document specific biological resources (e.g., plant communities, animal species, habitat areas, etc.). Commenters often requested that more detailed surveys and impact reports are completed prior to any activities that might disturb the soil and include adequate monitoring.

AG-CITY_SCWD: The SCWD completes annual juvenile salmonid monitoring surveys in Liddell Creek and Laguna Creek through snorkel survey methods. In 2015 and 2016, juvenile coho salmon (Onchorhyncus kitsuch) were observed in Laguna Creek; in 2018, juvenile coho salmon were observed in Liddell Creek. Please update the document to reflect recent observations of coho salmon in Liddell Creek and Laguna Creek.

B. Cultural and Historic Resources

The BLM received comments requesting that archaeological surveys and impact reports are completed prior to any activities that might disturb the soil and include adequate monitoring.

C. Fire and Fuels

As mentioned previously, comments generally supported proactive management actions to reduce the rise of hazardous fire. A few comments raised concerns with specific strategies such as the effectiveness for current rural road conditions as fuel breaks.

ORG_DNCA: Based on recent fires in California, where wildfires have jumped Highway 101, rural roads like these cannot be considered firebreaks or even reliable access for suppression. The Wildland Urban Interface (WUI) between C-CD and Bonny Doon, Davenport, New Town, and or Swanton is of particular concern to the DNCA.

D. Water Resources

A few commenters were concerned the RMPA/EA utilized previous research on existing water use, water rights, and diversions (e.g., compiled by the Santa Cruz Resource Conservation District in 2013), that they believe to be inadequate. Commenters requested the BLM conduct a more thorough and updated survey of water use, water rights, and diversions.

AG-CITY_SCWD: In Chapter 3.9, the RMPA-EA references additional research on existing water use and diversions on the Cotoni-Coast Dairies property compiled by the Santa Cruz Resource Conservation District in 2013. As the senior water rights holder on Liddell Creek and Laguna Creek, it is our belief that the referenced document was not sufficiently detailed to adequately identify all existing and potential water uses and restrictions or otherwise fully characterize water rights on the property. Please include an exhaustive study of existing and potential water uses and restrictions, diversions and water rights from Liddell Creek, Laguna Creek, and associated springs and tributaries.

E. Agriculture and Grazing

Commenters shared concerns that the RMPA/EA does not adequately describe agriculture and grazing benefits (e.g., habitat connectivity and vegetation fuels management), nor does the EA sufficiently consider and present mitigation measures to minimize public access impacts on agriculture and grazing.

ORG-SCCFB: [N]owhere does the EA acknowledge or attempt to identify, evaluate, and mitigate the adverse impact that the proposed alternatives will have on agriculture [e.g., aerial spraying of herbicides adjacent to organically farmed fields, trespassing, vandalism, stress to grazing cattle].

F. Lands and Realty

AG-COUNTY_SC-BOS-D3: [T]he RMPA needs to be amended to accurately reflect the language in Proclamation 9563 and to specify that the RMPA only applies to the current C-CD boundaries. This means that the Lands and Realty section needs to be revised to reflect, that with respect to the C-CD property, no lands outside of the current property boundaries can be automatically incorporated into the CCNM.

G. Services and Facilities

The BLM received multiple comments expressing concerns that local services (e.g., local law enforcement) have the capacity to support sufficient monitoring, enforcement, and emergency response. Commenters indicated that local authorities already limited staffing and resource challenges.

H. Transportation and Travel Management

Commenters requested more information on the transportation system (e.g., traffic analysis, parking analysis, and design features), both for near-term and long-term projected impacts.

AG-CT: We request to review the full traffic analysis to see how the increased vehicle trips will impact our facilities. Specifically, we would like to see the impacts of the project at the Caltrans intersections on State Route (SR) 1 to examine what operational and safety issues may occur.

AG-COUNTY_SCPD: A traffic analysis should address overall circulation and quantitatively assess transportation impacts using trip generation calculations. Additionally, a parking analysis should be provided as part of the traffic study to determine the appropriate amount of parking supply to prevent overflow parking on Highway 1. The analysis should also address safety issues, specifically related access off of Highway 1 and pedestrian roadway crossings.

ORG-DNCA: There must be a detailed analysis of traffic safety issues based on accurate peak visitor projections now and using future planning horizons, including background traffic.

I. Access and Recreation

Many comments called for more detailed analyses related to increased public access and recreational activities.

ORG-DNCA: Human access to this new addition to the CCNM brings with it likely impacts of human access to sensitive species and habitats never considered under the original CCNM. These impacts, and particularly their cumulative impacts, must be fully considered as new uses and access is developed.

Commenters frequently requested the BLM provide information and analyses specific to the proposed activity (e.g., specifically analyze hunting impacts).

J. Noise

Given that public access is new to the property, several commenters requested the BLM conduct more detailed analyses on potential noise impacts on wildlife and neighboring communities.

K. Visual Resources

Commenters called for additional information about facilities and other development to analyze potential visual impacts.

ORG_DNCA: [T]here is no mention of how the visual impacts of parking areas and associated facilities will be mitigated. The DNCA requests that Appendix D be amended to include visual mitigation measures. Additionally, the DNCA does not support the VRM Class III assigned to the three Alternatives. Changes to the visual landscape should be managed pursuant to VRM Class II. Lastly, site topography is not acknowledged as a key determinant of impact [e.g., parking lot visible from upper marine terraces].

2.6.3 Cumulative Effects

The BLM received multiple comments that identified where the EA appeared to lack sufficient analyses of cumulative or synergistic environmental, economic, and social impacts of allowing increased public access. For instance, several comments said the cumulative impacts did not analyze proposed allowable uses in adequate detail (e.g., specifically analyze impacts of recreational hunting).

Concerns were raised about impacts on a range of issues, including adjacent properties and communities, non-federal public services and infrastructure, sensitive plant and animal species, water reliability, pollution, fire risk, illegal activities, etc. Comments also requested the BLM consider how other recreational opportunities in the region might further add to these impacts (e.g., potentially even more traffic and crowding due to overall attraction to the region). Comments called for more detailed and quantified analyses of these cumulative/synergistic impacts and associated mitigation measures.

ORG-DNCA: The RMPA/EA fails to adequately analyze the RMPA's synergistic impacts with the two Reasonably Foreseeable Future Actions (RFFAs), which are identified.... It underestimates both the scale of impacts and the qualitative changes in impacts, which result uniquely from the combination of C-CD actions with other adjacent new recreation uses. In particular the revision must address additive and synergistic effects on the immediate risks to transportation, emergency services, public health, and safety of the Davenport/Swanton communities.

ORG-FONC: [D]espite acknowledging the existing water quality degradation already adversely affecting steelhead and coho, the EA fails to provide sufficient data to reasonably assess whether the proposed trails, parking areas, visitor numbers and proposed uses, when combined with existing sediment sources to the creeks, will significantly contribute to cumulative impacts to water quality and listed salmonids.

Comments also indicated that without a separate cumulative effects analysis for each alternative, it is difficult to ascertain each alternative's beneficial or negative impacts.

SECTION 3 | AGENCY, ORGANIZATION, & FORM LETTER COMMENTS

Comment Code Legend

AG-*NAME*	Agency Comment
ORG-*NAME*	Organization (or Club) Comment
FORM-	Form Letter

Agency and Organization Comments

- <u>Subsection 3.1</u> provides comments submitted by agencies. Table 3.1.1 lists the commenting agencies.
- <u>Subsection 3.2</u> provides comments submitted by organizations or clubs. Table 3.2.1 lists the commenting organizations.

Form Letters

The BLM received two types of form letters – one focused on public access and recreational activities, including mountain biking ["Form Letter A" - FORM_A-MTB], and the other focused on natural resource and recreation/trail management issues ["Form Letter B" - FORM_B-ENV].

• <u>Subsection 3.3</u> provides the lists of individuals who submitted either Form Letter A or Form Letter B. An example of each type of form letter follow the list of individuals.

3.1. AGENCY COMMENTS

Table 3.1.1 lists the agencies provided written comments on the Draft RMPA/EA.

Comment Code	From	Commenter
AG-CCC	California Coastal Commission	Rainey Graeven
AG-CDFW	California Department of Fish and Wildlife	Gregg Erickson
AG-CT	California Department of Transportation	Chris Bjornstad
AG-CITY_SCWD	City of Santa Cruz Water Department	Rosemary Menard
		Ezekiel Bean
		Maryna Sedoryk
AG-COUNTY_SCPD	County of Santa Cruz Planning Department	David Carlson
AG-COUNTY_SC-BOS	Santa Cruz County Board of Supervisors	Greg Caput
AG-COUNTY_SC-BOS-D3	Santa Cruz County Board of Supervisors,	Ryan Coonerty
	District 3	
AG-COUNTY_SMPD	County of San Mateo Parks Department	Samuel Herzberg
AG-US_HR	Unites States House of Representatives	Anna Eshoo
		Jimmy Panetta

Table 3.1.1 Commenting Agency List

California Coastal Commission

[AG-CCC]

A. General Management, Planning, and Coordination

The California Coastal Commission described the Commission's role in the RMPA (e.g., jurisdiction under the Coastal Act and the Act's requirements, the coastal development permit [CDP 3-11-035 that includes the C-CD property). The Commission expressed support for the overall planning and long-term management intent of the RMP.

The Coastal Commission recommended additional interaction and coordination planning with nearby projects and plans (e.g., Local Coastal Program amendments and reuse plan for the Cemex Property and County Regional Transportation Commission rail and trail project), including understanding and addressing combined impacts on the north coast area more broadly.

The agency also encouraged the BLM to engage in ongoing collaboration with the Mutsun Land Trust and other entities representing tribal interests (e.g., California Native American Heritage Commission, California State Office of Historic Preservation, and other Tribal Historic Preservation Officers).

B. Overall Review of the Alternatives

The Coastal Commission indicated all three alternatives seem consistent with Coastal Commission requirements in regards to maintaining ag lands, no timber operations, and minimize/avoid impacts to archaeological resources.

The agency expressed concerns that Alternative A would result in underutilization of the public recreational access potential of the property, thereby not appropriately maximizing public recreational access opportunities as required by the Coastal Act or the terms and conditions of the coastal development permit (CDP) 3-11-035. The Coastal Commission noted the 2011 Interim Management Plan that the agency approved served as a starting point for public access with the assumption that a significantly greater portion of the property for a wider range of public recreational access opportunities would be available at a later date. The Coastal Commission stated that both Alternatives B and C appear to be more compliant with the Coastal Act and CDP in terms of offering greater public recreational access opportunities.

The Coastal Commission recommended that the complete array of public access and recreational opportunities (including but not limited to those considered in Alternative C), should be a part of the final RMPA, including considering Liddell Creek and Molino Creek as trailhead opportunities.

C. Vegetation Management

The Coastal Commission requested more information on the use of grazing and herbicides in the final RMPA/EA, including the goals, methods, and adaptive management strategies identified in a grazing management plan. The agency requested more details on herbicide application (e.g., targeted or applied broadly) and recommended that herbicides be used only after less environmentally damaging alternatives have been exhausted.

D. Habitat

The Coastal Commission indicated that Alternative A generally appeared to minimize impacts to Environmentally Sensitive Habitat Areas (ESHA) as required under the Coastal Act; however, the alternative did not include longer-term measures needed to address significant ecological areas.

E. Hunting

The Coastal Commission stated it is not clear if hunting is appropriate or allowable under the Coastal Act or CDP. Therefore, the agency recommended the BLM eliminate hunting from the final RMPA unless the final RMPA and EA adequately demonstrates that hunting is consistent with these property management requirements. The RMPA and EA would also need greater detail on how hunting would be administered, managed, regulated, and monitored.

F. Parking Fees

The Coastal Commission recommended that the BLM provide free parking, which aligns with Coastal Act direction (Section 30213) to support lower-cost or free access and avoid incentivizing the public to seek free options and parking illegally or haphazardly. If parking fees will be used, the final RMPA/EA should adequately demonstrate the need for parking fees and describe a fee-based program.

G. Visual Resources

The Coastal Commission stated that Alternatives B and C appeared to minimize adverse impacts to visual resources. Alternative A also appeared to minimize visual impacts; however it did not align with the Coastal Act's intent to maximize ocean and coastal view opportunities. The agency spoke to specific developments that could be constructed/implemented in a way that would be sensitive to public views and support public access (e.g., Highway 1 pedestrian bridge crossing).

California Department of Fish and Wildlife

A. Hunting

[AG-CDFW]

The California Department of Fish and Wildlife (CDFW) addressed several recurrent hunting impact concerns raised by the public, particularly those related to safety, wildlife, and noise pollution.

- **Safety**. CDFW articulated numerous ways that hunting and hunters can be regulated to improve public safety (e.g., spatial and physical buffers between hunting and residential areas, designated special hunt days, and limited user groups). CDFW stated that hunter safety has substantially improved since implementing State-required safety trainings.
- Wildlife. CDFW clarified how hunts can be structured to significantly reduce negative impacts to sensitive wildlife (e.g., limit allowable game species and hunter use levels). CDFW stated that hunter use levels should be established base on baseline game population surveys and should include follow-up monitoring in conjunction with CDFW.
- **Noise Pollution**. CDFW indicated that noise pollution should be negligible, as shooting a firearm while hunting occurs infrequently due to the nature of the sport.

California Department of Transportation

A. Traffic

The California Department of Transportation (Caltrans) stated that it supports local development that is consistent with State planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. The agency requested review of the full traffic analysis to understand how increased vehicle trips would impact Caltrans' facilities (e.g., operational and safety impacts and needed improvements). Caltrans noted that new direct access to Highway 1 should not be considered as an alternative. Any work completed in the State's right-of-way will require an encroachment permit from Caltrans and must be done to Caltrans' engineering and environmental standards, and at no cost to the State.

City of Santa Cruz Water Department

[AG-CITY_SCWD]

[AG-CT]

A. General Management, Planning, and Coordination

The City of Santa Cruz Water Department (SCWD) described its water supply and infrastructure system that occurs within or near the project area (e.g., raw water pipeline north from Laguna Road and forks to two diversion facilities). The agency also explained it has two pending Habitat Conservation Plans (HCPs) and one complete HCP, some of which occur within the project area.

Therefore, SCWD urged the BLM to plan and design projects appropriately to avoid impacts to SCWD's water supply and infrastructure system, including impacts to water quantity/quality and protected species. The agency requested early coordination if the BLM anticipated impacts to SCWD facilities or listed species.

B. Grazing

SCWD expressed concerns that the proposed grazing activities in Alternatives B and C will negatively impact water resources, habitat and wildlife (e.g., reduced surface water flows, eroded habitat, reduced/damaged vegetation, increased sedimentation, and increased nutrients from manure). The agency requested the BLM analyze water quality impacts due to grazing activities and more detailed information regarding the water source for the proposed infrastructure improvements and any anticipated changes in water demand from Liddell Creek or Laguna Creek as a result of changes to total pasture area, total head of cattle, and updated water infrastructure.

C. Water Use and Water Rights

SCWD expressed concern that the RMPA/EA utilized previous research on existing water use and diversions that SCWD believes did not adequately identify and characterize water use and water rights. The agency requested the BLM include an exhaustive study of existing and potential water uses and restrictions, diversions and water rights from Liddell Creek, Laguna Creek, and associated springs and tributaries.

The agency also requested the BLM fix a typographical date error about SCWD's water rights - the document should state that SCWD procured rights to the property surrounding Liddell spring, Liddell Creek, and associated water rights, including downstream riparian rights, in *1913* and operates its diversion under senior pre-1914 water rights.

D. Fire and Fuels

SCWD requested that the BLM describe the increased potential for, and impacts of, wildland fires due to increased recreation activity particularly from mountain bikes and camping.

E. Vegetation Management - Herbicides

SCWD expressed concerns about protecting source water from potential herbicide contamination. The agency requested the BLM expand herbicide buffer zones to include and protect all water bodies and features that potentially connect to water sources (e.g., karst features).

F. Special Status Species

SCWD noted juvenile coho salmon were observed in Laguna Creek (in 2015 and 2016) and Liddell Creek (in 2018), and requested the RMPA/EA be updated to include these recent observations of salmonids.

The agency stated that the RMPA/EA should be corrected to reflect that SCWD diversions in Liddell Creek and Laguna Creek should not be considered "significant limiting factors," because SCWD voluntarily maintains bypass flows sufficient for salmonids to comply with CDFW regulations.

G. Trails

SCWD shared specific concerns with trail designs associated with Liddell Creek (i.e., Bonny Doon Road trailhead and the Liddell Creek Trail, Alternative A), and that these design features will negatively impact the sensitive habitat, wildlife, and water resources in the area. SCWD requested the BLM study (prior to development) the potential water, habitat, and special status species impacts from the proposed development in the Liddell Creek area.

SCWD was also concerned with the proposed Cotoni Trail (Alternative B) and Yellow Bank North Loop Trail (Alternative C), where recreational use could lead to erosion and security risks to pipeline infrastructure and the potential degradation of critical access routes. SCWD requested the BLM describe all preventative and enforcement measures that will be taken to prevent the creation and use of unauthorized trails and closed access roads throughout the project area.

County of Santa Cruz Planning Department

[AG-COUNTY_SCPD]

A. RMPA/EA and FONSI

Santa Cruz County staff called for the BLM to more clearly describe how it arrived at the draft Finding of No Significant Impact decision based on the environmental analysis described in Chapter 4. For instance, County staff requested a detailed explanation and presentation of how the adverse effects described in Chapter 4 would be avoided, minimized, or mitigated to a less than significant level (e.g., identify a project design feature(s) or use restrictions that avoid, minimize or mitigate the adverse effect).

B. General Management

County staff indicated that Alternative B, or a similar amount of parking and trail development, provided a balance between recreation and wildlife habitat protection. County staff encouraged the BLM to incorporate best management practices and mitigation projects to compensate for

development impacts on wildlife and native plant communities (e.g., removal of non-native plants, habitat enhancement for special status species, etc.).

County staff requested that the General Monitoring Plan (Appendix C) include more details on the monitoring and adaptive management process, including public involvement during management evaluation.

C. Vegetation Management

County staff requested more information about the BLM's integrated pest management (IPM) policy and Weed Management Plan and offered several resources for reference and coordination (e.g., County IPM policy and roadside vegetation management plan and the County Weed Management Area).

County staff did not support the use of helicopter herbicide spraying, expressing concern aerial spraying would impact adjacent communities and farms.

County staff supported the use of fire to manage and restore the landscape.

D. Habitat and Wildlife

County staff called for the RMPA/EA management actions to include provisions for identifying and considering less environmentally damaging alternatives, which would make these actions more consistent with County policy and local laws.

County staff preferred the Alternative B trail routes (compared to Alternative A) that better protected the Molino Creek and Liddell Creek sensitive areas. County staff also stated that San Vicente Creek should be identified as a coho salmon and steelhead stream.

E. Trails and Access Points

County staff called for more information or additional analyses for trail uses (e.g., dogs with or with leashes; single and/or multi-use trails) and trail alignments (particularly to avoid existing wildlife communities). County encouraged offering "hiking only" trails for visitors to have a quieter experience option without constantly being on alert for bikes.

County staff were concerned with several of the proposed trail alignments and parking options:

- Swanton Road. Potential traffic/community impacts.
- Bonny Doon Road. Potential disturbance to riparian and scenic views and safety concerns.
- Liddell Creek. Located within a floodplain and riparian woodland area.
- Warrenella Road Top. Potential conflicts with other uses of the private Warrenella Road; uncertain if minimization measures such as acquiring access easements and parking fees are viable.

Staff specifically did not support the proposed parking alternative at Bonny Doon Road and recommended avoiding Liddell Creek parking area (Alternative A), and Warrenella Road Top (Alternatives B and C). County staff offered minimization measures for several of these options (e.g., road improvements and adequate signage and physical barriers and warnings to the public about prohibited areas).

F. Transportation - Traffic and Parking Strategy

County staff requested more information on the transportation system (e.g., traffic analysis, parking analysis, and design features). In general, County staff supported fewer parking locations with higher amounts of parking to reduce congestion issues, and more evenly distribute parking locations (and therefore access) within the monument.

G. Trash

County staff underscored that one of the most critical aspects of reducing impacts on wildlife will be a robust system for preventing and managing garbage (and funding to maintain that system). Staff offered several specific components to that system (e.g., visitor education, designated picnic areas, no open garbage containers).

County staff were also concerned that overnight camping may lead to increased visitors and associated garbage. Staff instead supported the development of a small number of modest "hike in" camping.

H. Visual Resources

County staff expressed concerns that county-designated scenic roads could be impacted by project implementation. Staff offered specific design feature guidelines from the County General Plan (e.g., projects are to be evaluated against the context of their unique environment and regulate structure height, setbacks and design to protect visual and aesthetic resources).

Santa Cruz County Board of Supervisors

[AG-COUNTY_SC-BOS]

A. Comment Period Extension

Chairman Greg Caput, on behalf of the Santa Cruz County Board of Supervisors, requested an additional 30 days be added to the comment period.

Santa Cruz County Board of Supervisors, District 3

[AG-COUNTY_SC-BOS-D3]

A. RMPA/EA and FONSI

Santa Cruz County Board of Supervisor, District 3, Ryan Coonerty, stated the RMPA/EA overall lacked sufficient information to adequately justify the preliminary conclusion that the proposed FONSI decision. He said the revised RMPA/EA must either identify a preferred alternative that eliminates the inadequacy in the draft document or revise the environmental analysis in that document to adequately conform to the requirements of NEPA.

Supervisor Coonerty emphasized the Presidential Proclamation 9563 is, and should be more clearly presented in the RMPA/EA as, a guiding document for the RMPA/EA (e.g., fully list all the Proclamation provisions).

The Supervisor also requested some of the terminology be clarified and used consistently to reduce public confusion with the language (e.g., what is considered as "adverse" impacts and when "major" impacts are adverse or beneficial).

B. General Management, Planning, and Coordination

Supervisor Coonerty called for the RMPA/EA to provide evidence that the BLM will obtain resources (e.g., staffing and funding) necessary to ensure management sustainability (trash, facilities maintenance, law enforcement, etc).

The Supervisor also expressed concern about impacts on local law enforcement capacity and emergency response on the property, and ensuring sufficient resources to match increased visitors. He requested the EA provide evidence that either the impacts would not be significant with existing personnel or include mitigation measures to ensure adequate personnel.

C. Lands and Realty

Supervisor Coonerty stated the Presidential Proclamation 9563 prohibits incorporating any lands into C-CD that are not already included within the boundaries of the C-CD property. The RMPA needs reflect Proclamation 9563 provisions and to specify that the RMPA only applies to the current C-CD boundaries.

D. Education and Research

Supervisor Coonerty conveyed appreciation that the RMPA/EA fostered opportunities for partnerships with researchers across a variety of disciplines.

E. Cultural and Historic Resources

Supervisor Coonerty expressed support for protecting cultural and historic resources important to the Amah Mutsun and which also provide opportunities for public education of the Native Californians history.

F. Vegetation Management

Supervisor Coonerty supported vegetation management methods including cattle grazing, mechanical treatments, and prescribed burning.

The Supervisor opposed utilizing herbicides and pesticides.

G. Transportation and Access

Supervisor Coonerty requested more information on the transportation system (e.g., traffic analysis, parking analysis, and parking fees).

The Supervisor conveyed appreciation for design features that foster equitable access (e.g., public restrooms and picnic tables at access points).

The Supervisor expressed concerns with the proposed public access locations in Alternatives A, B, and C. The Supervisor encouraged the BLM to consider and analyze a specific northern access point (i.e., "Northgate" - Highway 1 mile marker 30.22), to minimize impacts on neighbors and county roads while still providing trail access and connectivity to San Vicente Redwoods.

H. Recreation

Supervisor Coonerty conveyed support or concerns for the following:

- Support for trail connectivity and offering trails for multiple use types (e.g., bike, horse, or hiking).
- Opposed to allowing campfires for overnight campers due to wildfire risk. If campfires are allowed, the RMPA/EA should comprehensively analyze potential impacts and articulated in a preferred alternative.

I. Hunting

Supervisor Coonerty expressed opposition to allowing hunting on the C-CD property due to concerns with public safety, wildlife. He stated that if hunting is allowed, the RMPA/EA should comprehensively analyze potential impacts and articulated in a preferred alternative.

County of San Mateo Parks Department

A. Trail Network

San Mateo County Parks indicated the C-CD National Monument has the opportunity to become part of a regional trail network. The agency shared specific nearby efforts (e.g., Ohlone-Portola Heritage Trail and the California Coastal Trail).

United States House of Representatives

A. Comment Period Extension

Members of Congress Anna Eshoo and Jimmy Panetta requested an additional 30 days be added to the comment period.

[AG-US_HR]

[AG-COUNTY-SMPD]

3.2. ORGANIZATION COMMENTS

The table below lists the organizations that provided written comments on the Draft RMPA/EA.

Comment	From	Commenter
ORG-AMLT	Amah Mutsun Land Trust	Rick Flores
ORG-CAMTB	California Mountain Biking Coalition	Austin McInerny
ORG-CC	Clean Coalition	Sahm W.
ORG-CCOF	California Certified Organic Farmers	Jane Sooby
ORG-CLF	Conservation Lands Foundation	Danielle Murray
ORG-CNPS-SC	California Native Plant Society, Santa Cruz Chapter	Linda Brodman
ORG-DF	Defenders of Wildlife	Andrew Johnson
ORG-DNCA	Davenport North Coast Association	Noel Bock
ORG-FOJ	Friends of Juristac	Greg SeaLion Cotton
ORG-FONC	Friend of the North Coast	Michael Lozeau
ORG-GRWMB	Girls Rock Women's Mountain Biking	Alexis Morgan
ORG-MBOSC	Mountain Bikers of Santa Cruz	Matt De Young
ORG-MLF	Mountain Lion Foundation	Debra Chase
ORG-PLC	Public Lands Conservancy	Tom Baty
ORG-POST	Peninsula Open Space Trust	Walter Moore
ORG-RBDA	Rural Bonny Doon Association	Ted Benhari
ORG-RMRHOA	Redwood Meadows Ranch Homeowners Association	Pamela Koch
ORG-SALC	San Andreas Land Conservancy	David Kossack
ORG-SASS	Safe Ag Safe Schools	Hektor Calderon
		Edward Rehanek
ORG-SBIS	South Bay Indigenous Solidarity	Membership
ORG-SC_CAN	Santa Cruz Climate Action Network	Pauline Seales
ORG-SCC-HA	Santa Cruz County Horseman's Association	Debbie Boscoe
ORG-SCCFB	Santa Cruz County Farm Bureau	Brendan Miele
ORG-SDMBA	San Diego Mountain Bikers Association	Susie Murphy
ORG-SF	Sempervirens Fund	Sara Barth
ORG-SRL	Save the Redwoods League	Anthony Castaños
ORG-USHPA	US Hanggliding and Paragliding Association	Jugdeep Aggarwal

Table 3.2.1 Commenting Organization List

Amah Mutsun Land Trust

[ORG-AMLT]

A. RMPA/EA Planning Process

AMLT indicated it was pleased to find that overall the issues in AMLT's scoping report comments were addressed in the Draft RMPA/EA related to protecting and preserving tribal access to ancestral land and resources.

B. Cultural and Historic Resources

AMLT conveyed satisfaction that the RMPA recognizes: a) the need to protect natural and cultural resources, b) active approaches to land stewardship practices, c) Resource Management Zone 4 will be managed for traditional cultural property values in collaboration with AMLT, and d) that through the 2016 Memorandum of Understanding with AMLT, traditional ceremonies and cultural practices of the Amah Mutsun Tribal Band, traditional ecological knowledge and traditional resource and environmental management practices, resource gathering, and education and interpretation will be fostered on the property.

C. Grazing

AMLT requested that the BLM evaluate the effects of cattle access on habitat quality (including water quality), particularly sensitive habitats like seeps, springs, and wetlands.

D. Trails and Access Points

Due to the sensitive riparian habitat and special status species present at Lower Liddell Creek, AMLT expressed concerns that public access could degrade the habitat quality (i.e., opposed the proposed parking lot and trails in Alternative A and the trail system located in Lower Liddell Creek in Alternative C; supported Alternative B which omits parking and trails from Lower Liddell Creek Watershed).

E. Recreation

Due to the large and heavy nature of horses and the erosion they can cause to trails, AMLT requested that the BLM limit the number of horses allowed on the trails.

F. Hunting

AMLT indicated it opposes hunting on the property except for cases where land managers are working to eradicate invasive species (e.g., feral pigs).

California Mountain Biking Coalition

[ORG-CAMTB]

A. General Planning, Management, and Coordination

The California Mountain Biking Coalition (CAMTB) encouraged the BLM to consult and coordinate with local/ experienced stakeholders, including neighboring property owners, land managers, communities, agencies, NGOs, etc. during planning phases (e.g., trail design) and management implementation (e.g., volunteer patrols).

CAMTB suggested specific strategies to help expand and sustain the BLM's management capacity, including:

- **Parking Fees**. <u>Charging for parking (including offering annual parking passes)</u> as a means to establish a sustainable funding source for property management.
- Volunteer Patrol. Establishing a volunteer backcountry patrol to augment the BLM's ability to provide public safety and protect sensitive resources.

B. Lands and Realty

[Similar comments to FORM_A-MTB related to acquisition and easements.]

C. Access and Trails

CAMTB stated that trail design should prioritize maximizing access for all trail users and mitigating trail conflict potential, using today's best practices (e.g., BLM's Guidelines For A Quality User Experience, ADA accessible pathways, and educational opportunities on trails). MBOSC supported trail connectivity, including between east and west ends of the property and with neighboring properties (e.g., Rail Trail). However, MBOSC shared concerns about trails allowing a specific use(s) intersecting with a trail(s) that conflicts with that said use(s) (e.g., multi-use trail intersecting with restricted use).

[Similar comments to FORM_A-MTB related to total trail access, trail connections, and trail design.]

D. Recreation

[Similar comments to <u>Form_A-MTB</u> mountain bike directional trails, special use permits, and e-bikes.]

In addition to the similar comments in FORM_A-MTB, CAMTB specified that allowing Class I e-bikes into national trail network seems to be an emergent and logical policy trend.

Clean Coalition

A. Grazing

The Clean Coalition expressed support for minimizing grazing activities (e.g., Alternative A).

B. Transportation and Access

The Clean Coalition indicated support for access and transportation that maximizes foot access onto the property and could be served by public transit (reducing the need for parking developments).

California Certified Organic Farmers

A. Vegetation Management

The California Certified Organic Farmers expressed general support for a comprehensive weed management plan. The organization requested more details and commitment to use an integrated pest management approach (e.g., grazing, prescribed fire, ecological succession, biological controls, etc.).

The California Certified Organic Farmers shared concerns about the proposed herbicide activities, particularly herbicide drift or transport from aerial applications that can compromise neighboring organic farm operations.

The organization recommended specific methods and restrictions for applying herbicides and pesticides, including no helicopter application of Aminopyralid and Clopyralid or any synthetic herbicide or pesticide, and implement notification procedures for neighboring farms and ranches.

[ORG-CC]

[ORG-CCOF]

Conservation Lands Foundation

A. RMPA/EA and NEPA Process

[ORG-CLF]

The Conservation Lands Foundation (CLF) stated several statutes, policies, and legal requirements (e.g., Presidential Proclamation; Omnibus Public Lands Act; and BLM policies including Secretarial Order 3308, 2011 15-Year Strategic Plan, and policy manuals 6100 and 6220) dictate the property should be managed in a way that prioritizes conservation of its ecological, archeological, and cultural values over other uses, including recreation, within the National Conservation Lands.

CLF conveyed that the RMPA/EA overall lacked information to adequately analyze impacts of the proposed uses, particularly without a defined preferred alternative, and failed to foster informed decision-making and informed public participation.

CLF also requested the BLM extend the comment period until after the COVID-19 national emergency declaration is revoked.

B. General Planning, Management, and Coordination

CLF expressed concerns that the BLM will lack the capacity to manage a new expansive trail system (e.g., high trail mileage described in Alternative C). The organization supported the BLM's phased approach to constructing trails to monitor for impacts and apply adaptive management as needed.

C. Grazing

CLF shared concerns about grazing impacts (e.g., soil erosion) on sensitive habitat and wildlife. CLF recommended limited to no expansion of grazing activities.

D. Access Points

CLF recommended the BLM limit or prohibit development at the lower Liddell Creek area.

E. Recreation

CLF identified concerns with specific recreational activities, including:

- Camping. Prohibit off-trail or dispersed camping
- **E-bikes**. Prohibit e-bikes
- Horses. Limit or prohibit equestrian use to reduce habitat impacts

F. Hunting

CLF recommended the BLM prohibit hunting on the property due to the small size of the property posing safety concerns to recreationists and local residents.

California Native Plant Society, Santa Cruz Chapter

[ORG-CNPS-SC]

A. General Management and Planning

The Santa Cruz Chapter of the California Native Plant Society expressed support for Alternative A and recommended the BLM develop and implement a grazing program. The organization stated that these two management approaches offer the greatest protection and preservation of natural resources and wildlife. The organization expressed support for the BLM applying adaptive

management (e.g., using land use plans with specific, measurable goals, and outcomes to evaluate and modify to realize desired outcomes) for long-term stewardship of the property.

Defenders of Wildlife

[ORG-DF]

A. RMPA/EA and NEPA Process

Defenders of Wildlife (Defenders) conveyed that the RMPA/EA overall lacked information to adequately analyze impacts of the proposed uses. Defenders stated the proposed development and public activities appear to be contrary to the California Coastal National Monument Boundary Enlargement proclamation. Defenders called for the BLM to prioritize resource values over increased public access.

B. General Planning and Management

Defenders stated it supports a blending of lower-impact options for human access and long-term maintenance of the property (e.g., non-native/invasive species removal, habitat restoration, and wildlife mitigation). Defenders indicated opposition to the scope and scale of development in Alternative C, because it could cause overuse of the property and substantial wildlife disturbance.

Defenders shared concerns about long-term BLM capacity and requested the BLM provide more specific information about how BLM plans to obtain funding and resources to ensure management sustainability (e.g., trash services, facilities maintenance, enforcement, etc.). Defenders was particularly that Alternatives B and C would require constant management beyond the BLM's capacity. The organization expressed support for a phased approach for RMPA implementation with associated monitoring.

C. Recreation

Defenders state the level of public access and allowable activities described in Alternatives B and C would lead to multiple negative impacts to resources (habitat, wildlife, and cultural sites) and user/community conflicts, including public safety. Defenders expressed concerns that allowing camping and off-leash dogs, even with tight regulation, could further threaten wildlife, increase risks to safety, and create concern within local communities.

D. Hunting

Defenders indicated opposition to hunting given the risks to habitat, wildlife, and human safety.

Davenport North Coast Association

[ORG-DNCA]

A. RMPA/EA and CCNM

The Davenport North Coast Association (DNCA) conveyed that the RMPA/EA overall lacked information to adequately analyze impacts of the proposed uses, including a Preferred Alternative. Given the lack of available information, DNCA expressed concerns about adequate projections and planning/mitigating accordingly. DNCA called for the BLM to either conduct an EIS or revise the EA to include sufficient, comprehensive analyses and documentation to justify EA conclusions. DNCA identified specific examples in the RMPA/EA where information about potential impacts appeared lacking (e.g., climate change impacts under the conditions in the alternatives, detailed characterization of Monument resources, and alignment with existing plans and policies).

DNCA questioned how the proposed access and recreation activities align with the 2005 CCNM RMP goals (which does not mention public access or recreation), and if/what protections the National Conservation Lands designation affords C-CD over and above the protection of the rest of the CCNM or other BLM lands.

DNCA supported designating San Vicente, Liddell, and Laguna Creeks as Wild and Scenic Rivers as described in Alternatives B and C. DNCA indicated that such a designation is another reason to pursue an EIS.

DNCA stated the RMPA/EA did not adequately consider cumulative and synergistic impacts of the new public access activities nor adequately provide design considerations for mitigation. DNCA expressed concerns that the RMPA/EA did not quantify impacts due to lack of visitation use data and made unsupported assertions that certain effects were "negligible." DNCA suggested several considerations, including public access impacts (on habitat, sensitive species, water resources, neighboring communities, neighboring private and public properties, and non-federal public safety services), climate change impacts, and defining baselines for evaluating impacts. Additionally, DNCA stated that ascertaining merits and drawbacks of the alternatives is difficult without a separate analysis for each alternative. DNCA called for the BLM to work around information gap challenges, describing how and when the BLM will address these information gaps.

B. Management, Planning, and Coordination

Given the mixed property ownership in the area, multiple policies and planning efforts, and opportunity to leverage resources, DNCA encouraged the BLM to establish a coordination framework with adjacent property owners and related management entities. DNCA offered specific approaches and considerations (e.g., Interagency Ecosystem Management Task Force [IEMTF] principles, specific coordination partners, and a notification process about RMPA implementation).

DNCA identified various planning efforts that the BLM should incorporate into the RMPA/EA, such as the Santa Cruz Coastal Reuse Plan for the CEMEX property and trail plans in the region. The CEMEX plan should be considered as Reasonably Foreseeable Future Action in the cumulative impacts analysis.

C. Lands and Realty

DNCA stated that it concurs with Santa Cruz County's comment regarding opposition to acquisition of additional adjacent properties.

D. Water

DNCA shared concerns that public access water use on the property will reduce water available to neighboring communities and for supporting habitat and wildlife. DNCA stated the RMPA/EA does not adequately analyze and address future water supply concerns.

E. Habitat and Wildlife

DNCA expressed overall support for protecting natural plant and wildlife species and specific conservation provisions outlined in the Presidential Proclamation. For instance, DNCA

recommended the BLM adopt management actions for restoring naturally functioning riparian systems (in Alternatives B and C) and habitat restoration for special status species.

F. Emergency Services, Fire, and Security

DNCA recommended the RMPA/EA provide quantitative analyses of impacts on emergency services (e.g., fire readiness) and private property security on neighboring communities and properties, and provide mitigation actions. DNCA stated that while these may be administrative actions that do not fall under the purview of "planning activities," local communities need a better understanding of these issues and proposed activities to address their concerns.

DNCA stated that fire risk prevention and protection is a top public safety priority. DNCA identified the wildland urban interface (WUI) areas as a major concern for communities and wildfire risk. DNCA said that the rural roads in the area (i.e., Warrenella Road and Bonny Doon Road) are not wide enough to serve as adequate fire breaks or allow access for suppression.

G. Vegetation Management

DNCA recommended using multiple vegetation management strategies to manage invasive species, reduce erosion, and minimize fire risk.

DNCA stated that herbicide use should be minimized and only used where necessary (e.g., enable other methods like mechanical removal, grazing and controlled burn to be more effective).

H. Agriculture and Grazing

DNCA stated that the RMPA/EA did not adequately analyze and offer mitigation measures for public access impacts on local agriculture operations near the property, including cumulative and synergistic impacts on neighboring agricultural operations.

DNCA expressed concerns about grazing activities impacting sensitive habitat and wildlife. DNCA supported grazing mitigation measures outlined in Alternatives B and C (e.g., fencing off springs and riparian areas).

I. Transportation, Parking, and Access

DNCA called for overall more information and quantitative analyses of the transportation system that evaluates local, off-property traffic and parking impacts, including the environmental consequences (e.g., air quality) of traffic degradation, and cumulative analysis including other foreseen actions. The final RMPA must provide for adequate mitigating measures coordinated with pertinent agencies.

DNCA was concerned that charging visitor use fees would lead to off-site parking. DNCA stated it would not support visitor use fees unless there was a multi-agency cooperation and enforcement plan to minimize public safety risks.

DNCA identified concerns and opposition with several of the proposed access points and parking options. DNCA stated the BLM should adequately analyze and address these traffic and safety concerns if these areas are included in the final RMPA/EA:

- **Swanton Road**. Potential impacts on Cal Fire responsiveness as the Big Creek Fire Station is on the same road.
- **Warrenella Road**. Narrow, steep, and tight curves in portions of the road could be dangerous and not suitable for RVs.
- Bonny Doon Road. Potentially dangerous road conditions (e.g., too narrow).
- Cement Plant Road. Poor road conditions, traffic accidents, and small community nearby.

DNCA proposed that the BLM consider the future redeveloped CEMEX site as an alternative to the Cement Plan Road access.

DNCA expressed concerns about potential crowding despite spreading visitor access and usage.

J. Recreation

DNCA in general supported mixed recreational use of trails by hikers, mountain bikers, and equestrians. DNCA identified specific uses or use limitations it did or did not support:

- Support segregation of hikers, bikers, and equestrians into different areas (although DNCA had concerns about how this will be enforced).
- Support closing bike and equestrian trails during wet periods to limit erosion and trail failure.
- Potential support for e-bikes (DNCA had monitoring and enforcement concerns given that San Vicente Redwoods does not allow e-bikes). Support for Class I e-bikes, but not Class II.
- Opposed to allowing camping due to wildfire risk and lack of site-specific information and analyses of impacts.
- Opposed to off-leash areas for dogs. DNCA had leash requirement enforcement concerns.

K. Hunting

DNCA expressed opposition to allowing hunting on any part of the property for any kind of game (with the exception for state/federal-directed management of invasive species) due to safety and wildlife impact concerns.

DNCA stated that the BLM should not enhance natural populations of deer, quail, or turkey through hunting.

L. Visual Resources

DNCA recommended including mitigation measures for visual impacts and using VRM Class II objectives over Class III to retain the landscape character. DNCA also recommended considering visual impacts from different vantage points (e.g., upper marine terraces).

M. Facilities Management

DNCA supported the daily garbage services and closed containers described in Appendix D and recommended adding these to Fish and Wildlife Management Actions. DNCA requested more information and mitigation measures to address concerns with other types of disposal and cleaning needs (e.g., abandoned cars, restroom cleaning/maintenance, and graffiti).

N. DNCA Proposed Preferred Alternative

The DNCA offered its preferred alternative, which was a hybrid "Northgate-Southgate" parking and trailhead concept to serve the northern section of the property directly off Highway 1. DNCA articulated that its preferred alternative was designed to meet several goals, including safe and adequate public access, mixed recreational use, protection of sensitive habitats, promotion of public safety and minimizing conflicts, assuming full protection of "objects" described in Proclamation 9563, fire risk prevention/ protection, future connectivity with San Vicente Redwoods, accommodation of Santa Cruz Coastal Reuse Plan, and eliminating/mitigating conflicts between local community and visitors. The DNCA preferred alternative included concepts summarized below, assuming adequate NEPA compliant analyses of all potential impacts occur:

- Adoption of the "Southgate" access and trail system for Recreation Management Zone 3, and addition of a "Northgate" parking/restroom/trailhead accessed directly from Highway 1 at mile 30.22
- Working with CalTrans to ensure adequate ingress and egress at a Southgate parking/restroom/trailhead and "Northgate" public trailhead facilities
- Implementation of improvements in two phases, with development of the Southgate access as Phase One and the Northgate access as Phase Two
- Eliminate the controversial proposed parking and trailheads at Swanton Road past Molino Creek, Warrenella Road Gate, and Warrenella Road "Top"
- Reducing the number of trailheads while still accommodating the maximum miles of trails in the future
- Future trail connectivity with the adjacent San Vicente Redwoods property from the Northgate trailhead; and future trail connectivity with the North Coast Rail Trail
- Northern sector trails located away from Warrenella Road and west of Agua Puerca Creek
- Provide mountain bike specific-directional descending trails and avoid the re-use of steep fire roads as trails, as they contribute disproportionately to erosion and injuries
- Guided tours, education, and research in RMZs 2 and 4
- Future North-South connectivity across the Cotoni-Coast Dairies National Monument following the conclusion of reclamation activities in RMZ 2; future connectivity from the "Northgate" trailhead to the future redeveloped CEMEX site with its visitor services and interpretive center, as well as the terminus of the North Coast Rail Trail
- Establish safe connectivity to the North Coast Rail Trail using a pedestrian/bicycle overpass over Route 1
- DNCA generally supports the recommendations of the Mountain Bikers of Santa Cruz's "Official Position on the Draft Resource Management Plan for Cotoni-Cast Dairies" and particularly points 8-17, which include principles for the design and implementation of a multi-use trail system

Friends of Juristac

[ORG-FOJ]

A. Cultural and Historic Resources

Friends of Juristac encouraged the BLM to continue engaging the indigenous people (e.g., Amah Mutsun Tribal Band).

A. RMPA/EA

[ORG-FONC]

The Friends of the North Coast (FONC) FONC identified RMPA/EA proposed activities that appeared inconsistent with regulations, policies, and restrictions (e.g., FLPMA, Presidential Proclamation 9563, National Landscape Conservation System, C-CD property deed restrictions, California Coastal Act, and Coastal Development Permit 3-11-025). For instance, FONC indicated that prioritizing recreational activities over the Monument's natural, cultural and biological resources is contrary to the Presidential Proclamation 9563. FONC also stated the proposed trails and uses are inconsistent with Secretarial Order 3308, because they fail to manage the monument as an integral part of the larger, surrounding landscape.

FONC conveyed that the RMPA/EA overall lacked information to adequately analyze impacts of the proposed uses and failed to foster informed decision-making and informed public participation. FONC identified specific examples where it viewed the EA as inadequate pursuant to NEPA (e.g., lacking a No Project Alternative and a proposed action, using inadequate baselines to evaluate impacts on resources and protected "objects," and deferring analysis of impacts of proposed management uses). FONC stated that Alternative A does not qualify as a "No Project" alternative, as it does not reflect current ongoing management of the Monument.

FONC included detailed information from subject-matter experts that further elaborated on issues that FONC recommended the BLM further analyze and address in an EIS (e.g., wildlife populations, special status species, biotic communities, sedimentation and erosion, noise impacts, cascading impacts of visitor use, agricultural operations, and herbicides). FONC articulated that due to the lack of information/analyses and proposed activities that may be inconsistent with existing policies and regulations, the draft RMPA/EA alternatives may significantly degrade the Monument and objects under Proclamation 9563 protection. Therefore, FONC called for the BLM to conduct an EIS to proceed with a management plan.

B. Agriculture and Grazing

FONC expressed concerns that the RMPA/EA does not adequately protect and preserve agricultural and grazing operations aligned with the intent of the Coastal Development Permit and deed restrictions. FONC indicated the EA did not adequately describe the value of agriculture and grazing (e.g., habitat connectivity and fire-prone vegetation reduction). FONC called for more analyses on how the proposed activities and uses may affect adjoining and nearby agricultural operations.

C. Vegetation Management and Herbicides

FONC stated the BLM's weed management strategy should emphasize working with natural ecological succession processes to foster establishment of more desirable species (e.g., sowing native plants in addition to weed removal and using insects as biological control options). FONC stated the RMPA should demonstrate BLM's commitment to using an integrated pest management (IPM) approach.

FONC expressed specific concerns about herbicide applications (particularly aerial spraying) that could affect nearby organic agricultural operations. Herbicides could also enter the water and be carried off-site, affecting agriculture, wildlife, etc. FONC indicated aerial herbicide applications

should be prohibited, and that herbicides applications should be used as a last resort in managing non-native weeds and that cultural methods should be prioritized over using synthetic pesticides.

D. Habitat, Plants, Wildlife, and Special Status Species

FONC stated components of the alternatives appear inconsistent with the California Coastal Act – many of the uses, trails, parking, etc. would disrupt environmentally sensitive habitat areas and these features do not appear to depend on threatened species and rare habitats.

FONC indicated the RMPA/EA did not set adequate baselines to assess watershed impacts to wildlife, plants, biotic communities, and wetlands (e.g., lack of species-specific wildlife surveys, missing sensitive plant species, and incomplete mapping of biological communities and wetlands/waterways). FONC called for baselines and additional analyses on a number of habitat and wildlife issues to evaluate impacts and implement adaptive management. These include impacts on the watershed/landscape as a whole, biotic communities and plant species, coastal zone wetlands, and corvids (e.g., crows) impacting endangered marbled murrelet. FONC called for more analyses particularly related to trails, parking, and associated visitors – analyze their impacts on special status species' habitat, and other wildlife habitat and movement.

E. Water

FONC commented the need for adequate baselines for analyzing impacts to water resources and the watershed. FONC raised specific concerns related to public access and use impacting water quality (e.g., sedimentation, erosion, and turbidity) needed for salmonid habitat.

F. Access Points, Trails, and Parking

FONC articulated concerns with several of the proposed access points, parking, and trail alignments, including:

- Warrenella Top and Warrenella Road Gate. Potentially impact biotic communities and plant species protected as "objects of the Monument."
- Bonny Doon Road. Sensitive wetland and riparian habitat in the area.
- Liddell Creek. Sensitive wetland and riparian habitat in the area.
- Molino Creek Gate. Sensitive wetland and riparian habitat in the area.
- Marina Ranch Gate. Sensitive wetland and riparian habitat in the area.
- Swanton Road Gate. Safety concerns.
- Cement Plant Road. Safety concerns.

FONC recommend BLM consider a different access point at Mile Marker 30.22 as an alternative to Swanton and Cement Plant Roads.

G. Recreation

FONC commented the RMPA/EA did not sufficiently analyze recreational impacts, in part due to lack of information on proposed trails, parking, visitor numbers, uses, etc. and inadequate baselines. Therefore, an EIS is warranted.

FONC identified a number of activities that warrant further analyses and managed appropriately, including:

• **Bikes/e-Bikes.** Further analyze bike and e-bike impacts, particularly on habitat that wildlife currently use or move through those areas. FONC also said e-bikes should be considered a

motorized vehicle, and therefore prohibited according to the property deed restrictions and Presidential Proclamation 9563, superseding conflicting policies like Secretarial Order 3376.

• **Dogs.** Further analyze impacts dogs may have on habitat and wildlife, particularly habitat for special status species like the red-legged frogs. FONC expressed concerns about allowing dogs, on or off leash.

FONC presented its proposed alternative, which recommended activities that should be allowed, limited, or prohibited (e.g., no hunting, camping, or fire-making).

H. Hunting

FONC stated the RMPA/EA did not provide sufficient information or analyses on hunting impacts and identified several concerns including safety, habitat degradation, noise disturbance, and affected wildlife. FONC expressed support for San Vicente Redwood's hunting prohibition and opposed hunting on any portion of the property.

I. Noise

FONC called for setting baselines for existing noise conditions to adequately evaluate potential noise impacts of the various proposed facilities and uses. FONC expressed concerns that additional noise (e.g., from construction, dogs, hunting, crowds, etc.) could disturb both wildlife and neighboring communities.

J. FONC Proposed Preferred Alternative

FONC stated that the BLM should include an alternative that avoids most or all of the significant impacts raised in FONC's comments and recommended the BLM select FONC's alternative as the proposed action. FONC indicated the BLM should prepare an EIS addressing the concerns and issues raised in FONC's comments, identify a proposed action, and compare potential impacts with the proposed action and other alternatives. FONC offered detailed information and resources, including maps and other visuals. Several provisions were also derived from the San Vicente Redwoods Public Access Plan. Major components of FONC's preferred alternative are summarized below by topic:

General Management

- Management as unit of National Landscape Conservation System
- Compliance with California Coastal Act, 2012 Coastal Development Permit 3-11-035, and Deed Restrictions
- Access and usage not to exceed sufficiency of funding and personnel to fully implement, monitor, and enforce compliance with the RMPA.

Analyses and Monitoring

- Recognition that direct human impact on C-CD has been minimal for many decades
- Update of the existing conditions report
- Initial survey of biological resources.
- Conduct monitoring (biological and social variables, condition of access features, etc.) to inform adaptive management
- Publish science plan

Services

• Amenities and services to fully cover the 4 Ts = Traffic, Trauma (police, fire, and rescue needed), Toilets, and Trash
Agriculture/Grazing

• Management consistent with the protection and preservation of adjacent sustainable agricultural uses

Cultural and Historic Resources

• Management consistent with BLM's MOU with the Amah Mutsun.

Habitat and Wildlife

- Implement similar habitat and wildlife provisions outlined in the San Vicente Redwoods Public Access Plan (e.g., minimize access impacts to sensitive resources; monitor access features to inform adaptive management) and include additional standards (e.g., certain wetland delineation methods and thresholds for impacts on habitat and wildlife).
- Compliance with the recovery plans for the endangered Red-Legged Frog, Central California Coast Coho Salmon, and South-Central California Steelhead.

Vegetation Management

- Conduct targeted and prioritized weed control strategies
- Preclusion of aerial herbicide application

Recreation - Phased Implementation - Phases proceed upon demonstrated management success of the previous phase(s) with adequate transparency (e.g., independent monitoring and evaluation and publicly available reports)

- Phase 1: RMZ 3 Access at Yellow Bank Creek; connectivity to the North Coast Rail-Trail; a
 pedestrian/bicycle overpass over State Highway One. Allowable activities include hiking and
 horseback only at Yellow Bank South and Cotoni Trail; hiking, biking, and horseback on
 Bonny Doon Loops and Yellow Bank North trails.
- Phase 2: RMZ 1 Access via new Access Road at Mile Marker 30.22. No access to or over Warrenella Road/Gate or Swanton Road.
- Phase 3: RMZ 1- Potentially connect to San Vicente Redwoods trails.
- RMZ 2 and 4 No access, use, or development allowed.

Recreation – Allowable Activities and Public Access Management

- Prohibited activities include: fire making, smoking, collecting, hunting or habitat manipulation, fishing, off-leash dogs, motorized dirt biking (including e-bikes), unauthorized trail building, rock climbing/rappelling, camping, and commercial uses.
- Implementation of a visitor registration system and special use permit system (with a maximum threshold of annual visitors).

Girls Rock Women's Mountain Biking

[ORG-GRWMB]

A. General Planning, Management, and Coordination

The Girls Rock Women's Mountain Biking (Girls Rock) indicated opportunities for collaboration as communities of mountain bikers and non-bikers are ready and willing to support trail stewardship.

B. Access, Trails, and Recreation

Girls Rock stated its interest in more biking access and opportunities and the organization's strong support for a responsibly built, sustainable trail system.

Mountain Bikers of Santa Cruz

[ORG-MBOSC]

A. General Planning, Management, and Coordination

The Mountain Bikes of Santa Cruz (MBOSC) frequently encouraged the BLM to collaborate with stakeholders, including neighboring property owners, land managers, communities, agencies, NGOs, and other local experts during planning phases (e.g., trail design) and management implementation (e.g., volunteer patrols). MBOSC indicated that partnerships will reduce BLM management and implementation costs as well as encourage public stewardship.

MBOSC suggested specific strategies to help expand and sustain the BLM's management capacity, including:

- **Parking Fees**. Charging for parking (including offering annual parking passes) as a means to establish a sustainable funding source for property management.
- Volunteer Patrol. Establishing a volunteer backcountry patrol to augment the BLM's ability to provide public safety and protect sensitive resources.

B. Lands and Realty

[Similar comment to FORM_A-MTB related to acquisition and easements.]

MBOSC suggested specific partnership opportunities (e.g., Trust for Public Lands). The organization stated that these acquisitions/easements enable greater flexibility to develop sustainable and logical trail arrangements, including alleviate impacts to specific areas of concern (e.g., Hwy 1, Swanton Rd, Cement Plant Rd, and Davenport).

C. Facilities Management

MBOSC suggested several parking facility amenities and services, including parking lots large enough to prevent overflow on local roads, bathroom, trash receptacles, regular bathroom and trash services, horse trailer parking with adequate staging space, seating/shade structures, and signage. The organization specifically indicated the four trailer parking spaces as proposed in the RMPA is inadequate.

D. Trails and Access Points

[Similar comments to Form_A-MTB related to total trail access, trail connection to San Vicente Redwoods, specific trail design at Bonny Doon Road, and trail connection to Rail Trail.]

MBOSC stated that trail design should prioritize maximizing access for all trail users and mitigating trail conflict potential, using today's best practices (e.g., BLM's Guidelines For A Quality User Experience, ADA accessible pathways, and educational opportunities on trails). MBOSC supported trail connectivity, including between east and west ends of the property and with neighboring properties (e.g., Rail Trail). However, MBOSC shared concerns about trails allowing a specific use(s) intersecting with a trail(s) that conflicts with that said use(s) (e.g., multi-use trail intersecting with restricted use).

MBOSC proposed specific access point alternatives:

- On the Trust for Public Lands property at Hwy 1 and Swanton Road
- Between Cement Plant and Swanton Roads (defined as "Northgate parking" by DNCA)

[ORG-MLF]

[ORG-PLC]

• MBOSC recommended the BLM create a trail alternative to Warrenella Road (including the connection from Molino Creek to Warrenella trailhead) due to safety concerns.

In addition to the trail design recommendations similarly stated in FORM_A-MTB, MBOSC proposed specific trail designs, including stacked loop trails south of Molino Creek, extended loop trails between Liddell and Yellow Bank Creeks, rerouted trail through the southern end of Sempervirens Fund's property, and modified trail from the second terrace to Molino Creek.

E. Recreation

[Similar comments to Form_A-MTB related multi-user activities, mountain bike directional trails, special use permits, and e-bikes.]

In addition to the similar comments in FORM_A-MTB, MBOSC proposed specific trail management tools for bikes, including designating multi-use trails as directional where appropriate and specifying that allowing Class I e-bikes is consistent with other parks that permit e-bikes locally.

Mountain Lion Foundation

A. Hunting

The Mountain Lion Foundation stated it opposed permitting hunting as described in the draft RMPA/EA due to potential impacts on mountain lions (e.g., by calling game species like turkeys, hunters may inadvertently lure mountain lions) and increased risk of human-mountain lion conflict. At a minimum, adequate signage should be provided that informs recreationists and hunters how to avoid conflicts with mountain lions and what to do if there is an encounter.

Public Lands Conservancy

A. General Planning, Management, and Coordination

The Public Lands Conservancy (PLC) expressed its support for the BLM to coordinate planning and management activities with numerous jurisdictions on and adjacent to the CCNM. PLC also conveyed support and encouragement for the BLM to conduct and continue inventory and monitoring programs that ensure the long-term health of the area.

B. Grazing

PLC expressed support for the minimal levels of grazing described in Alternative A. PLC recommended no expansion of grazing activities and to phase grazing out where appropriate due to resources concerns (e.g., water quality and endangered species).

C. Fire and Fuels

PLC stated its support for the BLM to reduce risks of catastrophic wildfire through a Wildland Fire Management Plan (e.g., use of fuel breaks). PLC specifically expressed support for prescribed burning, which provides both public safety and ecological health.

D. Vegetation Management

PLC conveyed general support for a comprehensive Weed Management Plan (similar to the approach described in Alternatives B and C) to combat invasive plant species. However, PLC stated its opposition to aerial/broadcast spraying of herbicides or pesticides.

E. Habitat and Wildlife

PLC encouraged the BLM to implement ecological restoration of any degraded areas.

F. Access and Trails

PLC stated its support for connecting C-CD trails with other properties, including with San Vicente Redwoods and the proposed Rail Trail.

G. Recreation

PLC expressed specific concerns with off-trail activities due to risks of harming resources (e.g., sensitive plant species and cultural resources), particularly when the BLM does not currently have comprehensive inventories of these resources on the property. Therefore, the organization stated it opposed off-trail hiking and dispersed camping.

H. Hunting

PLC conveyed its opposition to allowing recreational hunting and any habitat or wildlife enhancements for the purposes of promoting hunting. PLC said these activities are inconsistent with adjacent land uses and pose too high of a risk to wildlife, habitat, and public safety.

Peninsula Open Space Trust

[ORG-POST]

A. RMPA/EA and NEPA

The Peninsula Open Space Trust (POST) encouraged the BLM to investigate designating the San Vicente and other creeks as Wild and Scenic Rivers that will offer greater protections and help support recovery of native fish species and other aquatic species

B. General Planning, Management, and Coordination

POST called for the BLM to ensure an appropriate balance between recreation and resource protection by providing safe and sustainable opportunities for public recreation that make appropriate use of existing infrastructure, protect natural and cultural resources, and compliment neighboring and regional recreational resources.

C. Grazing

POST recommended specific strategies to reduce grazing impacts on wildlife and habitat (e.g., wildlife-friendly fencing, water management infrastructure, and managed cattle stocking levels).

D. Fire and Fuels

POST urged the BLM to prioritize and actively use natural land management tools to prevent catastrophic wildfires (e.g., reduce fuel loads).

E. Vegetation Management

POST indicated that selective use of herbicides for managing invasive species is an important management tool, but should be applied in a measured way and not through broadcast spraying.

F. Habitat and Wildlife

POST stated that the BLM should prioritize biodiversity conservation and threatened species recovery in all management actions and implementation decisions (e.g., protect core habitat and habitat connectivity). POST said it supported the creation of core fish and wildlife protection areas that will help ensure biodiversity conservation goals can be achieved more effectively and efficiently. POST questioned whether the RMZ boundaries align with these conservation goals.

G. Trails and Access

POST offered specific trail and access recommendations, including:

- Warrenella Road. Use only for property management and emergency services, not recreation
- San Vicente Redwoods. Design trail system to connect to SVR's trail system.
- **Quarry**. Design trails away from the quarry on San Vicente Redwoods property due to potential safety risks.

H. Recreation

POST identified conditions under which certain recreational activities can be allowed and balanced with natural and cultural resource conservation goals:

- **Trails**. In general, keep recreational activities to designated trails to avoid spread of invasive plants.
- **Camping**. Allow only in designated camp sites; consider seasonal camping to avoid dry and windy times of the year (i.e., higher fire risk conditions).
- **Campfire**. Prohibit campfires due to risk of unintentional ignitions.
- **Dogs**. Keep dogs on leash and not allowed in sensitive habitats.

Rural Bonny Doon Association

[ORG-RBDA]

A. RMPA/EA and CCNM

The Rural Boon Doon Association (RBDA) identified RMPA/EA proposed activities that appeared inconsistent with regulations, policies, and restrictions (e.g., FLPMA, Presidential Proclamation 9563, National Landscape Conservation System, C-CD property deed restrictions, California Coastal Act, and Coastal Development Permit 3-11-025). For instance, RBDA indicated that prioritizing recreational activities over the Monument's natural, cultural and biological resources is contrary to the Presidential Proclamation 9563. FONC also stated the proposed trails and uses are inconsistent with Secretarial Order 3308, because they fail to manage the monument as an integral part of the larger, surrounding landscape.

RBDA expressed concerns that the proposed alternatives in the draft RMPA/EA could significantly degrade Monument resources (e.g., the ecology, habitat, cultural and archeological resources, and historic vistas). RBDA stated the RMPA/EA overall lacked information to adequately analyze impacts of the proposed uses, including a Preferred Alternative. Given the lack of available information, RBDA expressed concerns about adequate projections and planning/ mitigating accordingly.

Additionally, RBDA said that Alternative A does not qualify as a "No Project" alternative, as it does not reflect current management.

RBDA stated that the draft RMPA/EA insufficiencies (e.g., lack of resource surveys, comprehensive impact analyses and a defined Preferred Alternative) conflict with NEPA requirements; RBDA called for the BLM to conduct an EIS before finalizing a management plan. RBDA indicated the EIS should include full resource surveys, comprehensive analyses of potential impacts (particularly cumulative impacts), mitigation measures, and evidence the BLM has the capacity to manage the property aligned with the proposed activities.

B. Habitat and Wildlife

RBDA stated components of the alternatives appear inconsistent with the California Coastal Act, as the proposed public access uses and development would disrupt environmentally sensitive habitat areas, and the EA does not provide adequate evidence it is compliant with the Coastal Act requirements.

RBDA indicated the RMPA/EA did not set adequate baselines to assess impacts habitat, wildlife, and special status species (e.g., water quality of salmonid habitat). RBDA called for baselines and additional analyses on a number of habitat and wildlife issues to evaluate impacts and implement adaptive management. RBDA called for more analyses particularly related to trails, parking, hunting and other recreational activities, and associated visitors, etc. The organization stated the BLM should study these impacts on wildlife, habitat, and adjacent lands.

C. Recreation

RBDA expressed concerns that some of the proposed allowed activities (e-bikes, off-leash dogs, camping, campfires, and hunting) conflict with San Vicente Redwoods, which could lead management conflicts (e.g., connecting trails with different allowable activities) and the need for additional enforcement.

RBDA shared concerns with a number of specific activities, including:

- Dogs. Concerned that off-leash dogs may be hazardous to birds, small animals, and other habitat and sensitive species. BLM should either prohibit off-leash dogs or adequately analyze their impacts, propose mitigation measures, and demonstrate sufficient capacity to enforce mitigation.
- **Bikes/e-Bikes.** RBDA said e-bikes should be considered a motorized vehicle, and therefore prohibited according to the property deed restrictions and Presidential Proclamation 9563, superseding conflicting policies like Secretarial Order 3376.

Hunting

RBDA identified several concerns including safety, noise disturbance, and affected wildlife. RBDA stated the RMPA/EA did not adequately evaluate or address how the BLM will mitigate these impacts.

Redwood Meadows Ranch Homeowners Association

A. RMPA/EA

[ORG-RMRHOA]

The Redwood Meadows Ranch Homeowners Association (RMRHOA) indicated the RMPA/EA overall lacked information to adequately analyze impacts of the proposed activities, particularly related to hunting and those that increase wildfire risk. Given the lack of available information, DNCA expressed concerns about adequate projections and planning/mitigating accordingly.

RMRHOA conveyed that the proposed public access and management are inconsistent with multiple policies and restrictions (e.g., Presidential Proclamation, National Landscape Conservation System, and the property deed restrictions). RMRHOA called for the BLM to better demonstrate the proposed public access is balanced and consistent with protection and preservation of the property's natural and cultural resources.

B. Vegetation Management

RMRHOA stated the BLM should exercise caution when applying herbicides/pesticides in general. The organization said it opposed aerial spraying of herbicides or pesticides due to the public health risks to nearby communities and C-CD visitors and potential negative impacts on agricultural operations and grazing cattle.

Fire and Fuels

RMRHOA identified wildlife as one of its greatest concerns and expressed support for management measures to reduce wildfire hazards (e.g., shaded fuel breaks and prescribed burning). The organization encouraged the BLM to manage recreation in a way that minimized wildfire risk (e.g., prohibit campfires, camping, and smoking).

Emergency Services and Security

RMRHOA requested robust monitoring and enforcement now and in the future and that it is appropriately modified in relationship to visitation numbers and to illegal activities.

C. Recreation

RMRHOA referenced the San Vicente Redwoods public access standards and encouraged the BLM to apply similar measures. For instance, activities and recreational uses that will not be allowed on the San Vicente Redwoods property through special use permits or under any circumstance include, but are not limited to, fire making, collecting, hunting, fishing, off-leash dogs, off-road vehicles or motorized dirt biking (including electric bikes), trail building and rock climbing, and rappelling.

RMRHOA expressed concern that the RMPA/EA did not include cumulative analyses for specific recreational activities like camping and campfires, which could significantly impact wildlife, neighbors, visitors, and wildfire risk).

RMRHOA requested that specific uses (i.e., hunting, camping, campfire, and smoking) be prohibited in the areas adjacent and around residential households, families, agricultural farms, schools, natural preserve areas, and businesses

D. Hunting

RMRHOA expressed opposition to allowing hunting on the property and to wildlife or habitat enhancements that promote hunting opportunities. The organization identified several public safety, noise disturbance, and habitat and wildlife concerns. RMRHOA stated that existing policies and regulations (e.g., Presidential Proclamation) do not support the proposed hunting on the property.

RMRHOA stated that the RMPA/EA lacked sufficient information about the proposed hunting activities (e.g., missing cumulative impact analyses on hunting) that should be adequately addressed before making a final determination related to the proposed alternatives.

San Andreas Land Conservancy

[ORG-SALC]

A. NEPA Processes and Content

The San Andreas Land Conservancy (SALC) indicated the proposed activities are inconsistent with property restrictions and previous discussions with the BLM (e.g., 2014 Grant Deed, 2016 Correction Grant Deed and 2003 Citizen Advisory Group meeting), and that the BLM is required to manage the property in a way that offers public access and recreation, but not at the expense of the property's natural resources, habitats, and wildlife. SALC called for the BLM to specifically address "the protection and preservation of natural resources, restoration of endangered species and their associated natural habitats" consistent with the grant deed restrictions, including how the BLM will implement these restrictions in perpetuity.

SALC expressed a desire for more public involvement opportunities, expressing dissatisfaction with the planning process limiting protest appeals to an 'in-house' Interior Board of Land Appeals. SALC conveyed that an EIS process allows for greater public involvement and transparency.

SALC indicated the BLM should analyze and develop appropriate management measures to address impacts of other projects in the region (e.g., San Vicente Redwoods' mountain bike track), and the growth inducing and cumulative impacts that the proposed developments may have on other projects and adjacent properties. The BLM should also describe how it will set and enforce rules and limitations on activities and ensure habitat protection.

B. Water Rights

SALC called for the RMPA to list, quantify, and identify the legal status of any and all diversions on the property (including BLM and third parties). SALC conveyed particular concerns with Liddell Creek and San Vicente Creek diversion points. SALC indicated the BLM should identify and quantify its water reserves, including water reserved for endangered species' recovery.

C. Habitat and Wildlife

SALC expressed concerns that user activities will reduce the quantity and quality of habitat and water necessary for native species. SALC also stated that the Presidential Proclamation excluded other ecologically important species (e.g., tule elk, beaver, spotted owl, marten and marbled murrelet) that should be reintroduced to the area.

SALC called for a mechanism and schedule for retiring the leases that are inconsistent with the protection and preservation of C-CD's natural resources or restoration of endangered species habitat (e.g., tule elk, a native grazer, to replace cattle).

D. Hunting

SALC conveyed its opposition to allowing hunting, citing concerns related to fire risk, safety, habitat, and endangered species.

Safe Ag Safe Schools

A. Vegetation Management

Safe Ag Safe Schools stated opposition to the use of synthetic herbicides and pesticides, particularly against aerial applications, as proposed in Alternative C. The organization expressed concerns that herbicides and pesticides could negatively impact water quality, riparian habitats, connecting marine habitats, adjacent communities, drinking water, streams, organic farms, etc. The organization encouraged the BLM to use other vegetation management options like manual means described in Alternative A and to develop an alternative pest management plan that omits using synthetic herbicides or pesticides.

South Bay Indigenous Solidarity

A. General Planning, Management, and Coordination

The South Bay Indigenous Solidarity (SBIS) encouraged the BLM to consult and coordinate with the Amah Mutsun Tribal Band (AMTB) before implementing major projects (e.g., large-scale plantings or prescribed burns) to avoid negatively impacting cultural resources.

B. Cultural and Historic Resources

SBIS emphasized a need to protect cultural resources and protect the fundamental human rights of Tribes and expressed appreciation for the BLM's engagement with the Amah Mutsun Tribal Band as an advisory partner in the management of the C-CD property. Additional recommendations included:

- Conduct archaeological surveys and impact reports prior to any activities that might disturb the soil (e.g., large-scale planting of trees, plowing/discing soil, the creation of embankments, or conducting controlled burns). Utilize tribal monitors in addition to archaeological monitors when earth-disturbing activities take place.
- Voluntarily agree to temporarily halt projects that are opposed by Tribal partners, and offer stakeholders the opportunity to comment on such projects before those projects are allowed to proceed in a mitigated form, if at all.
- Allow the Amah Mutsun Tribal Band unrestricted access or set aside protected areas in the Monument in order to respectfully gather traditional materials and utilize sacred spaces for ceremony.

C. Fire and Fuels

SBIS conveyed general support for a prescribed burn program to reduce risk of catastrophic wildfire and support ecological health. SBIS recommended that before conducting prescribed burns, the

[ORG-SASS]

[ORG-SBIS]

BLM should coordinate with the Amah Mutsun Tribal Band and its Land Stewardship Program to avoid unintentionally harming culturally sensitive areas.

D. Vegetation Management

SBIS stated its opposition to aerial spraying of herbicides or pesticides due to potential negative impacts on adjacent communities, C-CD visitors, water quality (including safe drinking water), and sensitive habitats.

E. Trails

SBIS stated its support for a phased approach to trail building to allow for careful monitoring and adaptive management where needed. SBIS expressed concerns with trail construction in general due to risks to impacting cultural resources and disrupting sensitive ecosystems. Therefore, SBIS preferred the lower trail mileage proposed in Alternative B unless or until the BLM can demonstrate sufficient capacity to manage a more extensive trail network.

F. Recreation

SBIS identified conditions under which specific recreational activities can be allowed and balanced with natural and cultural resource conservation goals:

- **Trails/Campgrounds**. In general, keep recreational activities to designated trails and campgrounds. Prohibit off-trail activities (i.e., no off-trail hiking or dispersed camping).
- **Camping**. Allow only in designated camp sites.
- **Campfire**. Prohibit campfires due to risk of unintentional ignitions.
- **Dogs**. Keep dogs on leash and confined to trails.
- **Fishing**. Support the BLM's prohibition of fishing to protect endangered species and discourage off-trail activities.

G. Hunting and Shooting

SBIS conveyed its opposition to allowing recreational hunting, shooting, and any habitat or wildlife enhancements for the purposes of promoting hunting. SBIS said these activities are inconsistent with adjacent land uses and the conservation priorities identified in monument proclamation. The organization said these activities pose too high of a risk to wildlife, habitat, cultural resources, and public safety.

Santa Cruz Climate Action Network

[ORG-SC_CAN]

The Santa Cruz Climate Action Network submitted a form letter (Form Letter B, Environment).

Santa Cruz County Horseman's Association

[ORG-SCC-HA]

A. General Planning, Management, and Coordination

The Santa Cruz County Horseman's Association (SCCHA) encouraged the BLM open public access through a phased approach to ensure components like trails are appropriate and are being used appropriately (e.g., San Vicente Redwoods public access plan).

SCCHA requested the BLM develop a plan to fund the monument in order to provide for trail maintenance, sanitation facilities, and law enforcement.

SCCHA suggested specific strategies to help expand and sustain the BLM's management capacity, including:

- **Parking Fees**. Charging for parking (including large group fees and annual parking passes) as a means to establish a sustainable funding source for property management.
- Volunteer Patrol. Establishing a volunteer wilderness patrol to augment the BLM's ability to provide public safety and protect sensitive resources.

B. Facilities Management

SCCHA suggested several parking facility amenities and services, including parking lots large enough to prevent overflow on local roads, water (for people, dogs, and horses), bathrooms, trash receptacles, regular bathroom and trash services, horse trailer parking with adequate staging space, seating/shade structures, and signage. The organization specifically requested five trailer parking spaces in each parking lot.

C. Access and Trails

SCCHA indicated its support for the trail plan described in Alternative C as it offered the most trail access. As previously mentioned, SCCHA supported for a phased approach to trails; SCCHA also requested a general larger buildout of trails. SCCHA supported connecting trails to neighboring properties such as San Vicente Redwoods.

SCCHA referenced and supported trail design and construction best practices that ORG-MBOSC articulated in its comment letter (e.g., methods to minimize disturbance to sensitive cultural, biological, and hydrological resources).

D. Recreation

SCCHA stated support for good access to all user groups and support the effort of other user groups advocating public access described in Alternative C. SCCHA conveyed support for multi-use trails, including offering single-use and uni-directional trails to minimize user conflicts. SCCHA requested that the BLM aim to provide equal miles for hikers and horses (which can be compatible on the same trails).

SCCHA suggested providing a large, fenced dog part for dogs to be off leash and require dogs to be on leash on trails.

E. Hunting

SCCHA stated it did not support hunting on the property as it seems contradictive to being good stewards of flora and fauna.

Santa Cruz County Farm Bureau

[ORG-SCCFB]

A. Agriculture and Grazing

The Santa Cruz County Farm Bureau (County Farm Bureau) expressed concerns that the draft RMPA/EA would not adequately protect or preserve agriculture and grazing operations. The County

Farm Bureau identified several statutes, policies, and legal requirements (e.g., Presidential Proclamation, California Coastal Act, and Coastal Development Permit 3-11-035) that offer protections for preserving current agriculture row crop production. The organization stated that the EA failed to identify and evaluate the impacts of the Alternatives on the local farming operations and grazing (e.g., drift or transport of herbicides onto nearby organic farms, trespassing, vandalism, and stress to grazing cattle) or articulate mitigation measures against impacts. The organization also requested the BLM further describe the benefits that agriculture and grazing offers (e.g., land connectivity and reducing vegetation wildfire fuels).

San Diego Mountain Bikers Association

[ORG-SDMBA]

[ORG-SF]

A. Access and Recreational Activities

The San Diego Mountain Bikers Association (SDMBA) submitted comments similar to <u>FORM_A-MTB</u> related to:

- 1. Multi-User Activities
- 2. Total Trail Access
- 3. Trail Connection to San Vicente Redwoods
- 4. Specific Trail Design (Bonny Doon Rd)
- 5. Mountain Bike Directional Trails
- 6. Trail Connection to Rail Trail
- 7. Special Use Permits
- 8. Acquisition/Easements
- 9. E-bikes

In addition to the comments similarly stated in <u>FORM_A-MTB</u>, SDMBA also expressed support for trail connectivity between east and west ends of the property.

Sempervirens Fund

A. RMPA/EA

The Sempervirens Fund stated several statutes, policies, and legal requirements (e.g., Presidential Proclamation; Omnibus Public Lands Act; and BLM policies including Secretarial Order 3308, 2011 15-Year Strategic Plan, and policy manuals 6100 and 6220) dictate the property should be managed in a way that prioritizes conservation of its ecological, archeological, and cultural values over other uses, including recreation, within the National Conservation Lands.

B. General Management, Planning, and Coordination

Sempervirens Fund conveyed the C-CD property is important and unique in that it serves as an essential link, both for wildlife and recreation users, to other portions of the larger landscape, and requires substantial stakeholder coordination and engagement.

The organization urged the BLM to complete more thorough baseline inventories of natural and cultural resources prior to commencing any new recreational activity. BLM should also develop adaptive management criteria that outline the circumstances under which recreation uses might be limited or modified if deleterious impacts are observed. Adaptive management criteria and plans should be completed before new recreation is allowed.

C. Cultural and Historic Resources

Sempervirens Fund emphasized that the property be managed in ways that ensure the Native American resources are honored and preserved.

D. Fire and Fuels

Sempervirens Fund encouraged the BLM to develop a comprehensive wildfire plan in coordination with partners including CAL FIRE, local fire safe councils, and surrounding communities. The organization supported the proposed prescribed burning program to promote ecological health and reduce risk of catastrophic wildfire.

E. Vegetation Management

Sempervirens Fund opposed use of aerial herbicide spraying or other forms of broadcast distribution due to risks to habitats, water quality, and adjacent communities. Except for aerial spraying, the organization supported the BLM's overall Weed Management Plan proposed in Alternatives B and C, such as using natural management methods like cattle to reduce non-native vegetation.

F. Access Points and Trails

Sempervirens Fund urged the BLM to limit its trail footprint whenever possible and gather wildlife baseline data before trail buildout to limit impacts to wildlife. The organization stated it opposed the extensive trail buildout described in Alternative C unless the BLM demonstrated it has the capacity to manage the more extensive trail network. The organization supported using a phased approach for trail buildout so that impacts can be monitored and inform adaptive management.

Sempervirens Fund supported the BLM's regional trail network considerations with San Vicente Redwoods and others (e.g., Rail Trail).

The organization expressed concerns about trespassing and recommended against trails near San Vicente Redwoods where there is not a clearly planned connection (e.g., opposed to the proposed) Agua Puerca Trail).

Sempervirens Fund shared specific safety concerns with the proposed Warrenella Road Access Point and recommended the BLM close Warrenella Road to all recreational uses and also route trails away from the road. The organization advised the BLM to use the road only for administrative or emergency services.

G. Recreation

To minimize visitors' impacts, Sempervirens Fund recommended recreation should only occur in concentrated and defined areas where the BLM has sufficient data to ensure that conflicts can be avoided.

The organization identified a number of activities that should be allowed, limited, or prohibited, including:

- Access. Limiting all recreation to established trails and campgrounds (i.e., no off-trail hiking).
- **Camping**. Opposed to campfires and dispersed camping. Consider limiting camping (e.g., seasonal limitations).

• **Dogs**. Opposed to allowing dogs being off leash. If dogs are allowed, dogs should be on leash and only on designated trails.

H. Hunting

Due to concerns about public safety and impacts to habitat and wildlife, Sempervirens Fund stated it opposed recreation hunting and any wildlife or habitat enhancement promoting hunting opportunities.

Save the Redwoods League

A. Vegetation Management

[ORG-SRL]

Save the Redwoods League stated that spraying herbicide by aerial application potentially threatens or compromises future efforts to protect natural resources on C-CD and San Vicente Redwoods properties.

B. Trails and Access Points

Save the Redwoods League expressed support for creating a regional trail network, including connecting to trails on the San Vicente Redwoods property.

The organization identified concerns with particular access points:

- **Molino Creek Trail.** Requesting modifications to the trail as described in Alternative A to better connect to the San Vicente Redwoods property.
- Warrenella Road. Safety concerns due to the narrow road. Ending the proposed trail at the San Vicente Redwoods property border risks trespassing onto the property that is not designated for public access.

C. Recreational Activities

Save the Redwoods League indicated there should be better alignment in allowable recreational activities between C-CD and San Vicente Redwoods (e.g., connected trails allow for the same uses).

The organization expressed general support for accommodating hiking, biking, and equestrian uses.

The organization shared concerns with allowing the following activities due to potential negative impacts to natural resources on both properties:

- Off-trail hiking or camping, even with special use permits
- Hiking with dogs off leash
- Paragliding or hang gliding
- E-bikes

D. Hunting

Save the Redwoods League recommended against allowing hunting on the property, citing public health and safety concerns, including potential risks to staff and contractors managing San Vicente Redwoods.

US Hang Gliding and Paragliding Association

E. Hang Gliding / Paragliding

[ORG-USHPA]

The US Hang Gliding and Paragliding Association addressed common concerns about allowing paragliding and hang gliding and offered several specific suggestions for safely allowing these activities (e.g., site scouting, pilots carry emergency equipment, and applying a phased approach for allowing activities).

3.3. FORM LETTERS

Overview

The BLM received two types of form letters – one focused on public access and recreational activities, including mountain biking ["Form Letter A" - FORM_A-MTB], and the other focused on natural resource and recreation/trail management issues ["Form Letter B" - FORM_B-ENV]. The exact wording of some of the form letters varied slightly, but the BLM reviewed them all to ensure the public comments are considered appropriately.

Form Letter A (MTB) - Author List

The BLM received 331 submittals for Form Letter A (omitting three duplicates). The following individuals submitted form letters focused on public access and recreational activities. 35 submittals were either anonymous, illegible, or did not provide a name. An <u>example of Form Letter A</u> follows the author list.

Jesus A. R. Adams Chessa Adsit Morris Stephanie Aguiar Stian Alesandrini David Allen Jackson Allen Matt Ammann Adam Anderson Jeff Anderson Joel Atleinberg Andrew Bactzus Chris Baker **Tony Ballard** Scott Bartlebaugh John Bartron Brier Basilko **Terrence Bauer** Alex Becker Asa Becker Bill Becker William Becker **Robert Beckman Steffany Beddes David Benterou** Lyle Bergerson Sarah Bernanrdini **Daniel Biagiotti** Mary Bishop Matthew Blain **Roland Blanton**

Doug Bloom Jim Boardman Tony G. Bommarito **Troy Boone** Jason Borgen **Gary Boulanger** Peter Braun E. Brenner **Joaquin Bridges Guillaume Brivet** Shannon Brockman Brook Burley **Tina Butler** Oscar C Scott C **David Cameron** Kristen Cameron Jesus Campos Piet Canin Dave Carbonell **Brent Carlson** Tarren Carter Nathan Cauffman **Brian Chapman** Dan Chen **Tony Chen** Kris Chopra Oscar Chorizo Leslie Chow Judy Clayton **Daniel Clemens**

Bryan Cobb Maury Cohen John Cohn Aaron Cole Harry Cominos Matt Conn Philip Cox **Burke Culligan** Mary Kate Cunningham Emily D Steve D. Joseph David **Eve Davidson** Mark Davidson Lam Day Nicholas Decker Ed Dee Michel Deloux Hannah Dillard Matt Disney Malanie Doty-Cohen Dean Dubbe Paul Dubiel Zach Dunn Colin Duwe **Robert Easthope** Andrew Ebberg Jennifer Eisele **Daniel Elenius** Bob Estes Mike Evans

Lori Fabris **Kyle Feldmann** Fernando Fernandez **Gabriel Flores Saiffe** Todd Ford Chris Fox Natasha Fraley Sergio Fuentes Jr. Ari Garabedian Rob Gaukel Stacy Geiken Megan Gemelos Steven Gemelos Jesse Gibson Ian Gillies Kevin Glisson Shelby Gol Janice Golda **Daniel Gomez** Martin Gomez O. Abel Gonzalez Brian Gonzalez Ortiz Ian Goodfellow Kayla Graff **Benjamin Griffes** Kyle Gronin Amber Gustafson **Curtis Hamm** Paul Haney/Brooke Elliot Casey Hansen Jim Hasenauer Gary Hatcher **Kevin Hays** Lindsay Helmuth **Keith Henderson** Dale Hendsbee Talia Hernandez **Carl Hettiger** Tyson Hill Ryan Hoffman Paul Hogan Scott Holland Chris Holmes Veronica Hoover Steve Horner Matt Hornland

Colin Hughes Dan Hughes Jason Hughes Kevin Ivev Doug Jacobson Michael Jordan Michelle Kacy Jen Karno **Travis Karrle** Pete Katsaros **Kirk Kaubish** Roger Kern Jeffrey Kung Mike Labbe Tim Landeik John Leckrone Seong Lee Emma Lepak Jonah Lepak Pam Linstedt **Ryan Loomis** Lindsey Loperena Ted Lorek Peter Lunk Dylan MacDonald Sieg Magenheim Jenifer Mandella **Rick Mathers Brian Mccarthy** Brent McCoy **Emily McKissock** Chris McNiff Morgan Meredith Isaac Merrill Juan Meza Nicole Miller Jeffrey Mize Rene Monroy **Doug Moore** Jamie Morgan Tom Morgan Harry Motro Marin Muller **Caroline Murphy** Elana Nadel Andre Nagel

Paul Neall Michael Nelley Amy Nelson Nancy Newsom G. Nichols Ben Nielsen **Rob Nolan** Brendan O'Neill **Rick Ortenblad Tobin Ortenblad** Edward Owen **Miguel Pacheco David Palic** Scott Papola John Parker John Parsons Justin Peck Tim Peek **Tony Perkins** Kent Persson **Richard Petersen Blair Peterson** Amy Phinn Ryan Phinn Monica Pielage Arleen Pietrzak Michael Pisano Trent Poltronetti Samantha Price Ximena Prugue **Mike Pruitt** Paul Raffaeli Michael Raider Heather Raponi Zebulah Rapp Jonathan Reber **Bill Reno Ruben Reyes** Jon Rhinehart Donna Riggs Gary Riggs **Darius Rike** Luis Rivera Sara Roach Mark Robb Mary Anne Robb

Paul Roberts	Neil Silva	Heather Troy
Kent Robinett	John Simmon	Jesus V.
Jenny Robinson	Diana Slater	Jonathan V.
David Rocha	Allison Smith	Luis Valerio
Charles Rogerson	Justin Smith	Nathan Van Zandt
Dirk Rohloff	Dustin Snider	Dennis Vander Meer
Julie Rohloff	Al Souza	Kees Vander Meer
Mike Rolcik	Wyatt Starn	Matthias Vitten
Saffron Roohani Russo	Ashley Starr	Topher Walters
Laura Rose	Cassie Steel	Peter Wampler
Graham Rosemary	Joel Steinberg	Christine Weir
Bill Russell	Tanner Stinchfield	Isaac West
Robert Russo	Krista Stivala	Matthew Wilbur
Nicole Rutherford	Manny Swan	Gle Williams
Hayden Ryan	Erik Swannack	Craig Wilson
Triago Santos	Jou Takao	Brent Wood
Tom Schiess	Emily Tatasciore	Luke Wroblewski
Laura Schniedwind	Coral Taylor	Peter Yee
Rich Schwerin	Antonio Thomas	Lisa Young
Rich Serten	Bryan Thompson	Andy
Christopher Seruge	Robert Tidmore	Mark
Sam Shaffer	Ray Tracy	

Form Letter A (MTB) - Example

[FORM_A-MTB]

SUBJECT: Request for Public Input on the Draft Cotoni-Coast Dairies Property Management Plan

BLM Central Coast Field Office,

Cotoni-Coast Dairies (CCD) is an area with both ecological and cultural importance, and has the potential for a healthy and sustainable trail network to serve the needs of local residents and visitors of the Santa Cruz Coast. As this project moves through the public comment phase of the planning process, I ask that your team consider the following recommendations on the specific alternatives provided:

- 1. Biking, hiking, and equestrian access is the key to providing the public with an immersive natural experience.
- 2. Of the three proposed alternatives, only Alternative C provides a minimum viable mileage of trails for a meaningful user experience.
- 3. The trail connection to San Vicente Redwoods should be prioritized as it provides a key regional connection.
- 4. Please consider extending the loops along Bonny Doon Road to the Northern extent of the property. This will allow for a safe alternative to walking and cycling on the busy Bonny

Doon Road. This would also provide access for Bonny Doon residents for future regional connections.

- 5. Consider providing mountain bike specific-directional descending trails. This will help to avoid the re-use of steep fire roads as trails since they contribute disproportionately to erosion and injuries.
- 6. Providing a connection to the North Coast segment of the Rail Trail should be prioritized to provide a key connection to Santa Cruz and to Davenport. This will help to encourage alternative transport for access to Cotoni-Coast Dairies.
- 7. Special use permits will provide for a variety of events and partnerships that can highlight the natural features and recreational potential of the property. Please include provisions for competitive events as well.
- 8. Consider acquisition of neighboring lands, or easements, from willing sellers that support C-CD objects and values or provide opportunities for public access to C-CD, consistent with resource management goals and objectives. Collaborate with local experts in trail design and construction to ensure locally appropriate, high quality, and low maintenance trail infrastructure.
- 9. E-bikes should be allowed on bike access trails in a manner consistent with BLM regulations.

Thanks for your consideration and for your work stewarding our public lands.

Form Letter B (ENV) - Author List

The BLM received 189 unique submittals for Form Letter B (omitting 13 supplemental/ duplicate submittals). The following individuals submitted form letters focused on natural resource and recreation/trail management issues. The exact wording of some of the form letters varied slightly, but the BLM reviewed them all to ensure the public comments are considered appropriately. An <u>example of Form Letter B</u> follows the author list.

Ed Aiken Jean Aiken Anna Akker **Reed Alper** Allen Altman Judith S. Anderson **Rosalind Andrews** Mark Anisman **Raymond Arent** Julie Bannister Thomas Bately Toni Bauer Kay Baum Abbie Bernstein **Dirk Beving** Brandon Bible **Diane Bigler** Jeri Bodemar Debora Bone **Tracey Bonner Carol Bower Foote** David J. Boyer Joseph Braus **Ralph Britton** Eva Brunner Randall Brynsvold Neilson Buchanan Waltraud Buckland Robert Burch Leslie Burpo Rewa Bush Sam Butler Sheila Carrillo Jacqueline Cathcart Susan Cavalieri John Charles Don Chesterman **Rebecca Clark** Madeleine Clyde

Sandra Cohen **Ronit Corry** Carvn L. Cowin John Cremin Nicolette Czarrunchick **Chevenne Daleiden Ashley Daniels** Michael Dillon Nancy L. Donahoe **Coleen Douglas** Cynthia Dzendzel **Deborah Ebersold** Ros Edmonds Eve Egan William Epstien **Dave Fassler** James Feichtl Mary Flodin Jim Ford Alexander G Fordyce Brett Garrett Peter Gelblum Argo Gherardi Lois Goldfrank June Graham Allan Greenberg Jacquelyn Griffith Maria Gritsch J. Barry Gurdin Marie Haka Diana Hall Michele A. Halligan **Barbara Harper Terry Hawkins** Kathlene Henry-Gorman Freya Hermanson Nita Hertel Nancy Hiestand Thomas D. Howell

Sharon Hull Suzanne Hume **Karen Jacques** Navindra Jain Joe Jordan Willow Katz Susan Kauffman Penny Khounta Karen Kirschling Lindsay Knights Dennis Koski Ed La Pointe Tom Lawson Julia Lin Chris Lish Carol Long Steve Lustgarden John R. Manning Lvnda Marín Pat Marriott Alice Martineau Susan Martinez Cynthia Mathews Laura Mattos Barbara Mauk **Bobbie Mayer** Ellen McCann Sandra McCann **Douglas McElwain** Sharon McGuire Quinn McLaughlin Philip McManus Dan Melin Jan Merryweather Liz Milazzo **Kendrick Miller** Julia Monahan Gailen Moore Marcel E. Moran

Lizabeth Morell Pamela Morgan Pam Newbury Rae Newman Eric Nylen Marion Odell Dave Olson Satya Orion Anthony Owen Laurie Palmer Janet Parkins Rex Payne **Rachel Pfotenhauer** Charlotte Pirch Alice Polesky Reetta Raag **Maxine Reneker** Wyndham Robertson III Lois Robin Dorah Rosen Shuey **Dennis Ruby** Linda Rudin Cahterine Rusmore Steve Rutledge **Roland Saher**

Kenneth Sahm White Mark Salamon Meg Sandow Lisa Schallop Peter Schubart Janet Schwind Kathryn Scott **Pauline Seales** Marsha Seeley Lynda Sereno Pete Shanks G. Silva Philip Simon Torunn Sivesind Jeffrey Smedberg Judith Smith **Robert Snyder** Todd Snyder David Spinner & Andrea Kean Deborah St. Julien **Ketury Stein Faith Strailey Kristin Sullivan** John Teevan

Glen Tepke Larry Thompson Janet Tilp Carolyn Trupti Israel Elissa Wagner Marie Wakefield Andrew Wallach Judv Ward Elizabeth Watts A. Webb **Russell Weisz** Janice Wilfing Craig Wilson **Rachel Wolf** Charles Wolfe Nanlouise Wolfe **Dolores Wood** Heather Woods Teri Xirakis Teri Yazdi Jan Ysselstein Aaron Zachmeier Antonette Zeiss

Form Letter B (ENV) - Example

[FORM_B-ENV]

[Numbers were added to the example form letter below to assist with tracking the BLM's responses.]

SUBJECT: Cotoni-Coast Dairies National Monument Draft Resource Management Plan Amendment and Associated Environmental Assessment

Dear Mr. Blom:

Please accept these comments on the draft Cotoni-Coast Dairies National Monument Resource Management Plan Amendment (RMPA) and Environmental Assessment (EA). [You may add an introduction of who you are and your connection with Cotoni-Coast Dairies National Monument] I care deeply about the future management of the Monument and encourage the Bureau of Land Management (BLM) to work cooperatively with all its partners to protect the natural and cultural resources of this important landscape. I appreciate this opportunity to comment and appreciate BLM's commitment to addressing the circumstances and values related to management of the public resources within the Monument. There are several key issues that I am concerned about and several that I am supportive of that are presented in the three Alternatives comprising the draft RMPA and EA. My recommendations to the BLM are as follows:

Natural Resource Management

- 1. I oppose aerial spraying, an option proposed under Alternative C in the draft RMPA. Under no circumstances should BLM utilize broadcast spraying of herbicides or pesticides as proposed in Alterative C, due to its potential for negative impacts on adjacent communities and monument visitors, as well as on the monument's water quality, riparian habitats, and connecting marine habitats. The streams in this landscape provide the drinking water for the town of Davenport and the City of Santa Cruz; aerial spraying has the potential to contaminate this important water source.
- 2. I support BLM's Weed Management Plan presented in Alternatives B and C. Overall, BLM is proposing a comprehensive plan to combat invasive plant species across Cotoni-Coast Dairies which will greatly enhance the health and abundance of native species. However, I encourage BLM to act judiciously in using herbicides and pesticides to meet their weed management goals and reiterate my opposition to aerial spraying for reasons stated above.
- 3. I support BLM proposing to continue, and expand, its shaded fuel break projects along Warrenella Road and Bonny Doon Road to mitigate the risks of wildfire and keep surrounding communities safe.
- 4. I support a prescribed burning program on Cotoni-Coast Dairies as proposed in Alternatives B and C to promote ecological health and reduce the risk of catastrophic wildfire.
- 5. I oppose wildlife "enhancement" and any management efforts that artificially manipulate wildlife or habitat purely for the purposes of supporting game species that can be hunted. This has significant potential to impact and disrupt existing wildlife populations and vegetation communities and is inconsistent with the conservation priorities expressed in the monument proclamation.

Recreation and Trail Management

6. I oppose recreational hunting within Cotoni-Coast Dairies, an option presented in both Alternative B and C. I recognize that hunters have a legitimate place on other public lands and play a positive role in conservation in this country. Nevertheless, I strongly oppose hunting on Cotoni-Coast Dairies. The property is simply too small with too many people nearby for hunting to be done safely. Many people live directly adjacent to the property and there is a highway along one border of the monument. I am greatly concerned about the safety of other recreationists, neighbors, and drivers on Highway 1 and Bonny Doon Road. Hunting is inconsistent with adjacent land uses and places too great a stress on already sensitive wildlife populations.

- 7. I oppose off-trail hiking and dispersed camping. The monument proclamation documents the many sensitive and imperiled plant species on the monument. BLM has also acknowledged that they have not completed a thorough inventory of the property's cultural resources but they are expected to be significant. To help mitigate the impact of monument visitors on these cultural resources as well as on vulnerable species, recreation should only occur in concentrated and defined areas. We recommend all recreation be limited to established trails and campgrounds. In relation to this recommendation, I also encourage BLM to ban campfires in order to minimize potential wildfire ignition sources.
- 8. I oppose off-leash dogs. I do not support dogs off-leash or off-trail as this has a highly negative impact on wildlife, higher potential to spread invasive species, and can create significant conflicts with other recreational users.
- 9. I support the creation of a trail connection between Cotoni-Coast Dairies and San Vicente Redwoods (provided in both Alternative B and C) to facilitate the establishment of a regional trail network. Similarly, I appreciate the consideration BLM has shown to other possible regional trail connections, including the proposed Rail Trail. Collectively, these trail networks could provide a transformative set of recreation opportunities in this region.
- 10. I support a phased approach to trail building. It is important that the monument finally be opened to the public for recreational opportunities. However, this is a sensitive ecosystem. For that reason, I am pleased to see BLM proposing that public trails be constructed and opened in a phased approach so that impacts can be more carefully monitored and adaptive management can be applied where needed. For this same reason, I support the lower trail mileage proposed in Alternative B unless or until BLM can demonstrate it has the capacity to manage a more extensive trail network.
- 11. I support the prohibition on target shooting. I am pleased that target shooting is not included in the range of recreational activities being proposed. Because the monument is relatively small and there are many adjacent communities, this recreational activity would present a significant safety risk.
- 12. I support the prohibition on fishing. I agree that fishing is inappropriate on the monument, particularly given the presence of endangered anadromous fish like Coho and steelhead.

Thank you for this opportunity to comment on the draft Cotoni-Coast Dairies National Monument Resource Management Plan Amendment and Environmental Assessment.

Sincerely, Your full name, address, and contact information

SECTION 4 | INDIVIDUAL COMMENTERS

The tables in this section list the individuals who submitted comments not associated with a particular agency, organization, or form letter. Individuals who indicated they are affiliated with a specific business / company are noted. While individuals often commented on multiple topics (in fact, many called for a sustainable balance among diverse interests), this section groups individuals by the primary issue mentioned in the comments. Excerpts from comments are also provided.

4.1 NEPA AND GENERAL MANAGEMENT/PLANNING

Comment Code	Commenter
IND-0053	C. Doll
IND-0122	Joel Kauffman
IND-0123	Emma Kelsey
IND-0142	Mark Lipson, Molino Creek Farm
IND-0196	Josto Puddu
IND-0210	Drew Rogers
IND-0219	Ken Sanford
IND-0267	Anita Webb
IND-0269	Janet Webb
IND-0275	Sarah Wise

4.1.1 RMPA/EA Process and General Management/Planning

Examples:

IND-0142: The Cumulative Effects analysis is inadequate and constitutes a major defect of the Draft EA/RMPA. Recommendation: A full EIS should be conducted with greatly increased emphasis on cumulative effects and corresponding planning scenarios to mitigate these impacts.

IND-0275: I propose you provide an Environmental Impact Statement rather than an EA. Only an EIS will provide the info needed to manage the property and all associated environmental concerns effectively.

IND-123: I would like to voice my support of additional monitoring to occur before the implementation of any management plan... BLM should take clear direct monitoring action to adequately capture the current ecosystem landscape prior to trail construction. The way in which monitoring efforts are approached can directly influence the success of the resulting management actions.

4.1.2 Non-NEPA or BLM Issues / Non-Substantive

Many comments raised concerns that are not environmental issues within the context of the National Environmental Policy Act (NEPA) or are outside the scope of the C-CD RMPA/EA because they are not under the authority or within the jurisdiction of the BLM.

Several comments lacked substantive input to inform the draft RMPA/EA review (e.g., expressed support or opposition for a particular alternative without additional discussion).

Comment Code	Commenter
IND-0286	Elizabeth
IND-0002	lan Alper
IND-0005	Mike Anciaux
IND-0030	Ralph Britton
IND-0060	Linda Farnell
IND-0070	Jeff Fromberg
IND-0073	John Gamman
IND-0079	North G. Grueskin
IND-0080	Laura Gustoson
IND-0129	Bliss Kok
IND-0146	Thalia Lubin
IND-0160	Karla McNamara

Comment Code	Commenter
IND-0162	Michelle Mehlhorn
IND-0191	Sandi Pensinger
IND-0201	Robert Reed
IND-0216	Gary Ruppel
IND-0221	Linda Schauble
IND-0240	David Stull
IND-0243	Marie Takada
IND-0261	Lorie Wade
IND-0276	Lori Wolfson
IND-0283	John Zey
IND-0284	Pam Zimmerman
IND-0290	[Anonymous]

Examples:

IND-0070: This monument must be preserved.

IND-0276: ... I strongly urge a refuge instead with little or no human intervention. There's a new priority. Less is more.

IND-0073: Please register my comment on draft RMPA and EA; I prefer the No Project alternative.

4.2 PRESERVATION OF RESOURCES AND LAND USES

Commenters frequently emphasized preserving natural, environmental, and cultural resources. BLM also received comments that highlighted a need to protect existing land uses, particularly organic agricultural operations.

Comment Code	Commenter
IND-0020	Linore Blackstone
IND-0025	Lorrie Bornstein
IND-0026	Stefanie Bourcier
IND-0031	Cassandra Brown
IND-0033	Colleen Cabot
IND-0036	Bruce Campbell
IND-0037	Louis Robert Chiaramonte, SBIS
IND-0038	Rose Erline Chiaramonte
IND-0040	Nicolas Cortez
IND-0041	Amy Courtney
IND-0045	Patricia L. Damron
IND-0054	Benny Drescher
IND-0055	D. Dryer
IND-0061	William Feiling
IND-0067	Patricia Jeanne Forrest
IND-0069	Linda Friedlander
IND-0075	Reed Geisreiter
IND-0083	Will Hale
IND-0090	Emma Hartung
IND-0102	Ed Hopkins
IND-0104	Thomas D. Howell
IND-0105	Andrew William Hubbs

Comment Code	Commenter
IND-0114	Jacqueline A. Jenkins
IND-0118	Jocelyn Kahn
IND-0120	Jen Karno
IND-0121	Pat Katsky
IND-0125	Tehmina Khan
IND-0127	Ilana King
IND-0139	Geri Lieby
IND-0143	Kirsten Liske
IND-0145	Donna Logan
IND-0148	Nancy Macallister
IND-0150	Joan MacDonald
IND-0151	T. Malven
IND-0163	Tom Melkonian
IND-0166	Joanna Miller
IND-0168	Jane Mio
IND-0172	Dennis Morton
IND-0177	Joe O'Brien
IND-0180	Kerri O'Neill
IND-0188	Jennifer Parks
IND-0200	Paul W. Rea
IND-0205	Melissa Cara Rigoli
IND-0209	Dee E. Roe

Comment Code	Commenter
IND-0226	Beth Sherman
IND-0236	Mike Splain
IND-0254	Christine Z. Tucker
IND-0257	Ellen Uhler
IND-0263	Joshua Walden
IND-0265	Kim T. Waterson
IND-0266	Jennifer Watson
IND-0273	Chris Wilmers

Examples:

IND-0168: Choice A has to be applied to the Cotoni-Coast Dairies Natl. Monument, because it does justice to the unique and bio- diverse Natural Resources. It is of outmost importance that best management policies are developed, evaluated in depth to assure that thorough, well thought out policies are in place for the protection and conservation of the Cotoni-Coast Dairies Natl. Monument's fauna and flora. This approach is essential since the National Monument Proclamation mentions that attention needs to be given to [sensitive species and biotic groups/communities]

IND-0025: I am concerned in particular by the plans in B and C to use herbicides to control invasive species and the plan not only to allow hunting but to actually stock wildlife for the purposes of enhancing recreational hunting. ... I would like to think that our federal lands would remain as toxin free as possible to protect the public who will use them.

IND-0037: Because all natural resource management efforts have the potential to impact cultural resources, I urge BLM to ensure that archaeological surveys and impact reports are completed prior to any activities that might disturb the soil. This includes the large-scale planting of trees, plowing/discing soil, the creation of embankments, or conducting controlled burns. Tribal monitors should be utilized in addition to archaeological monitors when earth-disturbing activities take place.

4.3 Services and Facilities – the 4 T's

Comment Code	Commenter
IND-0008	Robert Arko
IND-0013	Catherine Bayer
IND-0013	Cathy Bayer
IND-0017	Clint Biddle
IND-0022	Barrett Boaen, Swanton Berry
	Farm
IND-0023	Bud Bogle
IND-0050	Carren Dixon, Buttercup Cakes
	Farmhouse Frosting
IND-0057	Alison Edwards
IND-0058	Zoltan Egeresi
IND-0062	Maria Fernandez
IND-0066	Blu Forman
IND-0087	Colin Hannon
IND-0092	Michelle Henderson
IND-0096	Jan Hilkert
IND-0098	David Hodges
IND-0099	Eric Hoffman
IND-0119	Henry Kaiser
IND-0126	Glenn Kimmel
IND-0128	Kathy King
IND-0130	Marion Kok
IND-0133	Bob Landry
IND-0134	Paul Langen

Comment Code	Commenter
IND-0140	Michael Liguori
IND-0144	Roxanne Lo
IND-0156	Gale McCreary
IND-0157	Brian McElroy
IND-0158	John McKeon
IND-0159	Torauni N. McKinney
IND-0161	Jennifer McNulty
IND-0173	Carmen Mulholand
IND-0178	Maureen O'Connell
IND-0198	Kristen Raugust
IND-0206	Ellen Rinde
IND-0215	Mathers Rowley
IND-0223	Courtney Scruggs
IND-0224	Matisse Selman
IND-0235	Jeanne Smith
IND-0238	P. Dawn Stevens
IND-0251	Kay Todd
IND-0262	Patricia Walberg
IND-0268	Dennis Webb
IND-0274	Hannah Wilson-James
IND-0277	Rose Wood
IND-0282	Chela J. Zabin
IND-0295	[Anonymous]

Examples:

IND-0013: There is not any plan for enforcement of the 'rules'... there is no way for the BLM to know who goes into the wilderness and when they come out... there is no enforcement of littering, pollution, vandalism, people and animals going off trail...

IND-0235: The cost of enforcing regulations, including park boundaries, on these lands and protecting residents is quite large. Is there money available? As a resident living on the border of this proposed park I am very concerned for safety and security.

IND-0251: We know the reality of taking any action that would increase the risk of having a fire this area. There is limited fire protection with Cal Fire in Swanton and volunteers providing service from Davenport and Bonny Doon. In addition, medical response is a minimum of 30 minutes away. There is also limited to no cell reception throughout our area. It is very important that this reality be considered in any proposal that would greatly increase people coming into the North Coast area.

IND-0268: ... the access point on Swanton Road is the most difficult to reach and would provide the least benefit to National Monument visitors. The Swanton Road site is dangerous to reach by car or bike, it isn't served by the bus system, it doesn't connect to the Santa Cruz Coastal Rail Trail or planned trails on San Vicente Redwoods, it will be the hardest for first responders to reach and it funnels traffic down a road that can barely handle the limited traffic that exists today, let alone the crowds that are going to be accessing the National Monument.

4.4 PUBLIC ACCESS AND RECREATION

4.4.1 Educational Opportunities and Common Recreation (Hiking, Biking, and Equestrian Use)

Many commenters supported public access and encouraged fostering educational opportunities. Generally comments supported finding a balance that would allow for hiking, biking, and equestrian use. Other comments indicated they supported only one or two of the common activities (most often hiking and horseback riding) or expressed concerns with one or more of the common activities (most often biking).

Comment Code	Commenter
IND-0001	Jacob Albrecht
IND-0003	Timothy Alton
IND-0004	Christine Amber
IND-0006	Laura Marie Anderson
IND-0007	Manaj Apte
IND-0014	Garen Becker
IND-0015	Scott Bellecitti
IND-0016	Mike Bennett
IND-0027	Carla Braden
IND-0028	Mitch Bramlett
IND-0029	S. Briscoe
IND-0034	Rodney Cahill
IND-0035	John Caletti
IND-0039	Mark Conover
IND-0042	Jason Crandon
IND-0043	Mike Dahlberg
IND-0044	Susan Damon
IND-0046	Jeff Davdson
IND-0047	Casey Devonshire

Comment Code	Commenter
IND-0052	Lauren Dockendorf
IND-0056	Robert Easthope
IND-0059	Joe Fabris
IND-0063	James Fitzgerald
IND-0072	Alan Gale
IND-0078	Devon Goldsby
IND-0082	Joe Haberman
IND-0086	Garrett Hammack
IND-0088	Linda Harris
IND-0089	Russ Harris
IND-0091	George Haye
IND-0094	Jayne Hesley
IND-0095	DJ Higdon
IND-0100	Luke Holoubek
IND-0101	Kerstin Holster
IND-0103	Eliece Horton
IND-0106	Darren Huckle
IND-0107	Traci Hukill
IND-0109	Jesse Hull

Comment Code	Commenter
IND-0110	Emilee Hurley
IND-0111	Margaret A. Ingraham
IND-0112	Devon Jackson
IND-0115	Monica Jensen
IND-0117	Sarah Jordan, Girls Rock
	Board of Directors
IND-0131	Jan Koval
IND-0135	Denise M. Larsen
IND-0147	Michelle M.
IND-0149	Harrison MacDonald
IND-0152	Emily Marriott
IND-0154	Mike McCarthy
IND-0155	Travis McCort
IND-0164	Raymond Mendoza
IND-0165	Saris Mercanti, Ibis Cycles
IND-0167	Ryan Miller
IND-0169	Brian Monty
IND-0170	Alexis Morgan, Girls Rock Women's Mountain Biking
IND-0174	Erica Murphy
IND-0175	Syd Newson
IND-0176	Chris Northrup
IND-0185	Lindsay Overton
IND-0186	Don Palermini
IND-0189	Karissa Paxton
IND-0190	Chris Pearson
IND-0192	Evan Peterson

Comment Code	Commenter
IND-0193	Katy Pomatowski
IND-0195	Mike Pruitt
IND-0197	Yakeen Qawasmeh
IND-0199	Michael Rea
IND-0202	Steven Reeves
IND-0207	David Robinson, dave@therideguides.com
IND-0208	Justin Robinson
IND-0213	Mark Rooney
IND-0225	Renee Shepherd
IND-0229	Joel Shrock
IND-0230	Paul Shufflebotham
IND-0231	Heather Shupe
IND-0232	Ann Simonton
IND-0233	Oxo Slayer
IND-0237	Campbell Steers
IND-0239	Dimitry Struve
IND-0241	Loren Sunding
IND-0244	Charles Telesco
IND-0246	Catherine Thompson
IND-0248	Melissa Thompson
IND-0249	John Thornton
IND-0253	Nate Trumble
IND-0256	Andrea Turner
IND-0258	David Van Brink
IND-0259	Mike Vandeman
IND-0260	René Voss

Comment Code	Commenter
IND-0264	Collin Waledisol
IND-0270	Sam Weinstein
IND-0272	Patsy Wilkes
IND-0278	Todd Woodward
IND-0279	John Work
IND-0285	Chad
IND-0287	Maddie

Comment Code	Commenter
IND-0288	Michael
IND-0289	Mike
IND-0291	[Anonymous]
IND-0292	[Anonymous]
IND-0293	[Anonymous]
IND-0294	[Anonymous]

Examples:

IND-0088: Particularly, I'd like to see challenging technical unidirectional mountain bike trails and MORE connectivity between the trail networks than option c.... Mountain biking has been a lifeline of exercise to get [those with injuries or joint issues] out into the natural world.

IND-0107: ... Alternative C combines hiking, biking and horses on a majority of trails – not usually a good outcome for the horses, which are startled by the bikes.... A better option in my view is Alternative B, which offers a good amount of trail development, including a generous number of designated-use trail miles that separate mountain bikers from horses, and which does not feature hunting.

IND-0225: For example, there could be some bike-only one way trails many bikers go very fast and conflict with walkers and equestrians. At the same time, I definitely want to full development of trails for hikers and equestrians (both of which are very compatible in my long experience as both!). So perhaps a "separate but equal" trail plan needs to be looked at where necessary.

IND-0258: I'm personally excited by the future possibilities of Cotoni Coast Dairies and its development for recreational and educational activities. In particular, among the Trail choices, I naturally prefer (C), the most amount of trails. Even if we start with (B) and build out over time. One point though. Options B and C include only a single connection to the North Coast Rail Trail. It would be potentially valuable to include at least two, given the large extent of the Monument, and to further encourage non-car accessibility and creating route choices with variety.

IND-0260: I strongly urge the BLM not to allow mountain biking on any trails in the new monument, for the safety of visitors and natural resources. Also any e-bikes should be restricted to paved roads only.

4.4.2 Hunting

A. Supportive of Hunting

Comment Code	Commenter
IND-0012	Debra Baker
IND-0018	Alexander C Birkhofer
IND-0081	Roger Haas
IND-0187	David Palm
IND-0203	Joshua Restad
IND-0250	Matthew Titchenal
IND-0255	Jeff Tucker

Examples:

IND-0250: I recognize that hunting needs to be done in a sustainable and safe manner and am confident this can be achieved with the help of the California Department of Fish and Wildlife.... If it is determined that hunting with firearms will not be allowed, I ask that the BLM please consider at least allowing archery hunting on the land during the deer archery and general hunting season for Zone A.

IND-0255: I would like to see this property be available for hunting and other recreational activities. BLM property is traditionally available for hunting throughout the nation. Santa Cruz County is exceptionally limited on areas to hunt. For this reason I believe this BLM property should be allowed for this recreational activity. There are many other areas in Santa Cruz County used for hiking bike riding and horseback riding. I believe this property again should be used for hunting or allowed on team. I am personally and archery hunter And would be interested in discussing this as well.

B. Opposed to Hunting

Comment Code	Commenter
IND-0009	Susan Arnold
IND-0010	Katherine Astromoff
IND-0011	Nicholas Astromoff
IND-0019	James Bishop
IND-0021	Susan Blake
IND-0024	Michael Bolte
IND-0032	Charles Bruffey
IND-0048	Daryl Dichek
IND-0049	Dan Dion
IND-0051	Daniel Dobson
IND-0064	Kevin Flynn, Sempervirens Fund
IND-0065	Alex Fordyce
IND-0068	Jan Freiwald
IND-0071	Alexander Gaguine
IND-0074	Fred Geiger
IND-0076	Lalita Godbole
IND-0077	Suhas A. Godbole
IND-0084	Joe Hall
IND-0085	Hilary Hamm
IND-0093	Jack Herman
IND-0097	Kirsten Hill
IND-0108	Douglas Hull
IND-0113	Karen Jackson
IND-0116	Ken Johnson
IND-0124	Susan Kent
IND-0132	Paul Krug

Comment Code	Commenter
IND-0136	George Leonard
IND-0137	Ross Levoy
IND-0138	Jocelyn Levy
IND-0141	Angela Lipanovich
IND-0153	Julie Mascarenhas
IND-0171	Joseph Morlan
IND-0179	Katherine O'Dea
IND-0181	Clay Olson
IND-0182	Jane Orbuch
IND-0183	Vivienne Orgel
IND-0184	Shawn Orgel-Olson
IND-0194	Ann Pomper
IND-0204	Donna Riggs
IND-0214	Tony Rostron
IND-0217	Saladin Sale
IND-0218	Kristen Sandel
IND-0220	Michael Schallop
IND-0222	Robert Schettino
IND-0227	Judi Sherman
IND-0228	Barry Shilman
IND-0234	Anthony Sloss
IND-0242	Ellen Sweeney
IND-0245	David Terrazas, Brereton Law Office
IND-0247	John Thompson
IND-0252	Michael Trionfetti
IND-0271	Jacqueline Wender

Comment Code	Commenter
IND-0280	Stephen Wyckoff
IND-0281	Jan Ysselstein

Examples:

IND-0182: ... I am concerned about Alternatives B and C that allow hunting. Hunting in an area with hikers, mountain bikers etc seems incompatible. I am not against hunting per se—as it makes sense in Central Valley Wetlands, but in a heavily recreated area—it just doesn't make sense from a public safety standpoint.

IND-0247: Of much greater concern to me is the possibility that hunting and shooting could be permitted on Monument property. Hunting and shooting are activities that are incompatible with other users, present a clear and present danger to hikers, bikers, horseback riders and neighbors, and that pose obvious threats to wildlife. Permitting hunting and shooting of guns on the property would be contrary to the primary objective of establishing the Monument, which is to conserve, protect and restore this still largely wild natural area. It also jeopardizes the safety and enjoyment of other users.



July 14, 2020

Mr. Ben Blom Bureau of Land Management 940 2nd Avenue Marina, CA 93933

FINAL Traffic Study for the Cotoni-Coast Dairies Project

Dear Mr. Blom;

As requested, W-Trans has evaluated traffic operation issues associated with the proposed Cotoni-Coast Dairies public access and recreation project to be located near Davenport in the County of Santa Cruz. We understand that there are three alternatives for trailhead parking locations which would all be accessed via intersections with State Route 1 at various locations. The focus of this investigation was to determine the extent of improvements needed at the various access alternative sites as well as to discuss potential traffic congestion due to the project. This letter includes the project description, trip generation of the proposed project alternatives, and an assessment of traffic facility needs as a result of the additional traffic expected to be generated by the project.

Project Description

The proposed Cotoni-Coast Dairies project would establish public access and recreation at the Cotoni-Coast unit of the California Coastal National Monument in the vicinity of the community of Davenport in the County of Santa Cruz. The 5,843-acre park would include hiking trails and lookouts, and potentially equestrian facilities. There are three project alternatives; each has different levels of activities and different points of access from State Route 1.

Alternative A would include minimal action, focusing on day-use hiking trails with the following two access points.

- Swanton Road Gate, accessible from Swanton Road east of Highway 1
- Liddell Creek, accessible from Bonny Doon Road east of Highway 1

Alternative B would include hiking, equestrian, and mountain biking in designated areas, and research and education opportunities with four access points, as follows.

- Warrenella Road Gate, accessible from Cement Plant Road east of Highway 1
- Warrenella Road Top, accessible from Warrenella Road east of Highway 1
- Yellow Bank Creek Gate, accessible from the existing Panther Beach parking lot west of Highway 1
- Marina Ranch Gate, accessible from Highway 1

Alternative C would further increase these opportunities and overall park activity and include these five access points.

- Swanton Road Gate, accessible from Swanton Road east of Highway 1
- Warrenella Road Gate, accessible from Cement Plant Road east of Highway 1
- Warrenella Road Top, accessible from Warrenella Road east of Highway 1
- Yellow Bank Creek Gate, accessible from the existing Panther Beach parking lot west of Highway 1
- Marina Ranch Gate, accessible from Highway 1
Project Vehicle Traffic Volumes

Trip Generation Based on Parking Lot Capacity

The anticipated vehicle trip generation for the proposed project was estimated using data from Appendix G of the *Cotoni-Coast Dairies California Coastal National Monument Draft Resource Management Plan Amendment and Environmental Assessment*, Bureau of Land Management, February 2020 (RMPA), with revisions as advised by Bureau of Land Management staff. The RMPA estimates that during a typical weekend day there would be 350 visitors for Alternative A, 700 visitors for Alternative B, and 1,500 visitors for Alternative C. The RMPA also estimates that 95 percent of visitors would drive in for Alternative A, and 65 percent for Alternatives B and C, with the remainder walking, hiking, or bicycling in using existing regional trails. For all three alternatives, the RMPA estimates 2.5 visitors per vehicle. For Alternatives A, B, and C, this translates to 133, 182, and 390 vehicles respectively during a typical weekend day. Doubling these to account for one vehicle generating two trips (one inbound and one outbound), the weekend daily trip generation would be 266, 364, and 780 vehicle trips per day for Alternatives A, B, and C, respectively.

The RMPA contains two key pieces of information that were used to estimate the peak hour trip generation: the estimated maximum number of parking spaces needed and the average parked duration for each visiting vehicle. For the estimated parking spaces, it is anticipated that Alternative A would require 40 spaces, Alternative B would require 80 spaces, and Alternative C would require 105 spaces. For all three alternatives, an average stay of two hours is anticipated for each vehicle.

To convert the parking spaces to vehicle trips, the parking spaces were first divided by the average stay per vehicle. If there are 40 spaces and each one turns over every 2 hours, then it is estimated that 20 of the spaces would turn over in one hour. This was then doubled to account for each turnover resulting in one inbound trip and one outbound trip. Applied to the 20 spaces that turned over, this results in 40 vehicles (total inbound and outbound) during the peak hour.

Data on the ratio of inbound and outbound trips was not provided in the RMPA. While the above analysis assumed an even split between inbound and outbound, this is only when applied on a daily basis. On an hourly basis, it cannot be assumed to be perfectly split, as certain hours will have more inbound trips and other hours will have more outbound trips. Inbound versus outbound ratio data was collected from the *Trip Generation Manual*, 10th *Edition*, Institute of Transportation Engineers, 2017. While the parks used in this data set are not of a similar size to the Cotoni-Coast Dairies project and therefore invalid for overall trip generation rates, the ratio of inbound and outbound trips would be similar regardless of park size. It was found that during the weekend midday peak hour, approximately 55 percent of trips were inbound and 45 percent were outbound.

This data was also used to compute the weekday p.m. peak hour trip generation, as weekday demand was not covered in the RMPA. The ITE *Trip Generation Manual* indicates that the weekday p.m. peak hour has approximately 39 percent of the traffic volumes of the weekend midday peak hour. Additionally, these trips were approximately 60 percent inbound and 40 percent outbound.

These calculations and sources are documented in Table 1.

Tal	Table 1 – Trip Generation Summary Based on Parking Lot Capacity						
Ca	culation		Alternative				
		A	В	С			
We	ekend Daily Trip Generation						
Α.	Weekend All-Day Visitors	350	700	1500	RMPA		
В.	Percent that Drive in	0.95	0.65	0.65	RMPA		
C.	Visitors per Vehicle	2.5	2.5	2.5	RMPA		
D.	Weekend All-Day Vehicles (A * B / C)	133	182	390	Calculation		
E.	Weekend All-Day Trip Generation (D * 2)	266	364	780	Calculation		
We	ekend Midday Peak Hour						
F.	Parking Supply in Spaces	40	80	105	RMPA		
G.	Average Stay in Hours	2	2	2	RMPA		
Н.	Parking Turnovers per Hour (F / G)	20	40	52.5	Calculation		
١.	Weekend Midday Peak Hour Trips (H * 2)	40	80	105	Calculation		
J.	Inbound Trips (I * 55%)	22	44	58	ITE		
К.	Outbound Trips (I * 45%)	18	36	47	ITE		
We	ekday PM Peak Hour						
L.	Weekday PM Peak Hour Trips (I * 39%)	16	31	41	ITE		
M.	Inbound Trips (L * 40%)	6	12	16	ITE		
N.	Outbound Trips (L * 60%)	10	19	25	ITE		

Note: RMPA = Cotoni-Coast Dairies California Coastal National Monument Draft Resource Management Plan Amendment and Environmental Assessment, Bureau of Land Management, February 2020; Calculation = value computed using formula in parentheses; ITE = data from the *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers, 2017, was used to compute the formula in parentheses

Trip Generation Based on Visitor Count

The trip generation was also assessed using the weekend all-day visitors from the RMPA as the basis rather than the anticipated parking demand from the RMPA. The key difference is that while both use the same methodology to compute the weekend daily trip generation, the parking lot basis starts with anticipated parking demand for the peak hour analysis, whereas the visitor basis uses ratios from the ITE *Trip Generation Manual*, 10th Edition, 2017, to convert daily trip generation to peak hour generation. Essentially, the weekend midday peak hour represents 14 percent of the total daily trips on a typical Saturday, and the weekday p.m. peak hour represents six percent of the same total Saturday trips. The process is summarized in Table 2 below.

Ta	Table 2 – Trip Generation Summary Based on Visitor Count							
Ca	culation		Alternative		Source			
		A	В	С				
We	ekend Daily Trip Generation							
Α.	Weekend All-Day Visitors	350	700	1500	RMPA			
В.	Percent Drive-in	0.95	0.65	0.65	RMPA			
C.	Visitors per Vehicle	2.5	2.5	2.5	RMPA			
D.	Weekend All-Day Vehicles (A * B / C)	133	182	390	Calculation			
E.	Weekend All-Day Trip Generation (D * 2)	266	364	780	Calculation			
We	ekend Midday Peak Hour							
F.	Weekend Midday Peak Hour Trips (E * 14%)	38	52	111	ITE			
G.	Inbound Trips (F * 55%)	21	29	61	ITE			
Н.	Outbound Trips (F * 45%)	17	23	50	ITE			
We	ekday PM Peak Hour							
I.	Weekday PM Peak Hour Trips (E * 6%)	15	20	44	ITE			
J.	Inbound Trips (I * 40%)	6	8	18	ITE			
к.	Outbound Trips (I * 60%)	9	12	26	ITE			

Note: RMPA = Cotoni-Coast Dairies California Coastal National Monument Draft Resource Management Plan Amendment and Environmental Assessment, Bureau of Land Management, February 2020; Calculation = value computed using formula in parentheses; ITE = data from the *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers, 2017, was used to compute the formula in parentheses

Vehicle Trip Generation Findings

Trip generations from both the parking capacity and visitor count methodologies were compared, and the parking capacity method anticipates slightly higher peak hour volumes for Alternative A and Alternative B, whereas the visitor count method anticipates slightly higher peak hour volumes for Alternative C. To be conservative, the warrant analysis was conducted using the highest anticipated peak hour volume from either alternative, which is summarized below:

- The trips generated by each alternative for the weekend midday peak hour would include:
 - Alternative A 40 vehicle trips
 - Alternative B 80 vehicle trips
 - Alternative C 111 vehicle trips
- The vehicle trips generated for the weekday p.m. peak hour would include:
 - Alternative A 16 vehicle trips
 - Alternative B 31 vehicle trips
 - Alternative C 44 vehicle trips

Parking Lot Vehicle Trip Allocation

Through discussions with staff at the Bureau of Land Management staff and Land Trust of Santa Cruz County, approximate distributions of project generated traffic to each parking lot were developed. Proposed distributions and the resulting trip generation of each parking lot are included in Table 3.

Table 3 – Parking Lot Distribution and Trip Generation									
Parking Lot	Alternative A Trips		Alternative B Trips		Alternative C Trips				
		РМ	MD		РМ	MD		РМ	MD
	Split	Peak	Peak	Split	Peak	Peak	Split	Peak	Peak
Swanton Rd Gate	50%	8	20				20%	9	22
Warrenella Rd - Gate				30%	9	24	15%	7	17
Warrenella Rd - Top				10%	4	8	5%	2	6
Liddell Creek at Bonny Doon Rd	50%	8	20						
Panther Beach				30%	9	24	30%	13	33
Marina Ranch Gate				30%	9	24	30%	13	33
TOTAL	100%	16	40	100%	31	80	100%	44	111

Notes: Split = the percentage of total trips estimated to travel to or from each parking lot; PM Peak = the weekday p.m. peak hour; MD Peak = the weekend midday peak hour

External Trip Distribution

The parking lot trip allocation analysis covers what proportion of drivers would use each parking lot, whereas the external trip distribution analysis focuses on where these trips are starting or ending within the region. Since the primary access to the project area is from Highway 1, the two proposed origin/destination directions are Highway 1 to/from the north of the project area, and Highway 1 to/from the south of the project area. Trips originating in the South Bay were assumed to primarily access the site via SR 17 and SR 1 to/from the south. The proposed distribution and resultant trips are summarized in Table 4.

Table 4 – External Trip Distribution								
Direction	Weekday PM Peak Hour Weel		Weeke	kend Midday Peak Hour				
	Split	Trips by Alternative		Split	Trips	by Alter	native	
		Α	В	С		Α	В	С
Hwy 1 to/from the North	10%	2	3	4	30%	12	24	33
Hwy 1 to/from the South	90%	14	28	40	70%	28	56	78
TOTAL	100%	16	31	44	100%	40	80	111

For both distributions, the proximity to Santa Cruz and the SR 17 interchange to the south drives the assumption that the majority of trips would start or end to the south of the project area. It is assumed that this effect would be stronger during the weekday p.m. peak hour, when trips to regional parks may be shorter due to the workday.

Traffic Facility Needs

Public safety impacts and need for mitigation were examined for each alternative focusing on warrants for turn lanes, traffic control and adequacy of sight distance. Warrants for left- or right-turn lanes at the SR 1 intersections were completed using standard warrants based on volume and speed of traffic. Traffic control needs at the SR 1 intersections were assessed and the adequacy of driver sight distances at both the SR 1 intersections and trailhead parking lot access points were evaluated.

Turn Lane Warrant Analysis

The need for left-turn lanes was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the *Method For Prioritizing Intersection Improvements*, January 1997. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes in order to determine the need for a left-turn pocket based on safety issues. Based on our research and discussions with Caltrans staff, this methodology is consistent with the *Guidelines for Reconstruction of Intersections*, August 1985, which was referenced in Section 405.2, Left-turn Channelization, of previous editions of the Caltrans *Highway Design Manual*, though this reference has been deleted from the most recent edition of this manual.

The need for a right-turn lane or taper was also evaluated based on criteria contained in the *Intersection Channelization Design Guide*. A right-turn lane would consist of a lane installed to the right of the travel lane and would be a minimum of ten feet wide, plus a shoulder where not adjacent to a curb. A right-turn taper is a shoulder area that gets progressively wider as the motorist drives toward the intersection. Both improvements are meant to provide an area for motorists turning right to move out of the traffic lane without impeding through traffic.

Existing Volumes

Traffic volumes were collected in the study area in October 2017 on a Saturday during a non-holiday weekend, as contained in the *North Coast Rail Trail EIR Transportation Impact Analysis*, Santa Cruz County Regional Transportation Commission, November 2018. The anticipated project volumes for each of the alternatives were applied to these volumes to test the applicability of turn lanes or tapers.

Alternative A

Warrants were assessed for the intersection of Highway 1/Swanton Road with the addition of the traffic generated by Alternative A. Under existing volumes with added project traffic from Alternative A, left-turn lanes, right-turn lanes or right-turn tapers would not be warranted at the intersection. It should be noted that Highway 1/Bonny Doon Road was not analyzed because it already includes left-turn lanes on Highway 1 and a right-turn taper.

Alternative B

For Alternative B, the warrants were assessed for the intersections of Highway 1 with Cement Plant Road (North), Panther Beach Parking Access, and the proposed Marina Ranch Driveway. Under existing volumes with Alternative B trips added, no turn lanes or tapers would be warranted for any of these intersections.

Alternative C

The warrants were assessed with Alternative C trips added for the intersections of Highway 1 with Swanton Ranch Road, Cement Plant Road (North), Panther Beach Parking Access, and the proposed Marina Ranch Driveway. Turn lanes or tapers would not be warranted for any of these intersections under existing volumes with the addition of Alternative C traffic.

Future Volumes

Data from the Association of Monterey Bay Governments (AMBAG) Regional Travel Demand Model (RTDM) indicates that traffic volumes on Highway 1 are anticipated to grow 23.3 percent from 2017 (the year existing volumes were collected) to 2040. This growth rate was applied to the 2017 volumes to generate anticipated future volumes for the year 2040. The anticipated trip generation volumes from each of the three alternatives was applied to these future volumes to determine if turn lanes or tapers would be warranted.

Alternative A

For Highway 1/Swanton Road, turns lanes and tapers would not be warranted under future volumes with the addition of traffic from Alternative A.

Alternative B

Turn lanes and tapers would not be warranted under future volumes with the addition of Alternative B traffic for Highway 1/Cement Plant Road (North) and the proposed Highway 1/Marina Ranch Driveway. However, a left-turn lane in the northbound direction would be warranted for Highway 1/Panther Beach Parking Access. To determine if this impact was specific to the addition of Alternative B traffic, the warrant was assessed with future volumes only without the addition of any project traffic. Under future volumes without Alternative B traffic, the northbound left-turn lane would not be warranted.

As the majority of project trips are anticipated to arrive from the south, traveling northbound on Highway 1, and as the Panther Beach Parking Access would be on west side of Highway 1, this would result in most inbound trips turning left from Highway 1. For the other parking areas that would be located on the east side of Highway 1, the majority of inbound trips would involve right turns which have higher warrant thresholds for turn lanes or tapers.

Alternative C

The addition of traffic that would be generated by Alternative C to future volumes would not warrant turn lanes or tapers at Highway 1/Swanton Ranch Road, Highway 1/Cement Plant Road (North), or the proposed Highway 1/Marina Ranch Driveway. As noted above, turn lanes and tapers would not be warranted for Highway 1/Panther Beach Parking Access under future volumes without project traffic from any of the alternatives. However, the addition of traffic anticipated to be generated by Alternative C would result in a northbound left-turn lane being warranted for Highway 1/Panther Beach Access.

Copies of the turn lane warrant worksheets are enclosed.

Traffic Control Needs

All the intersections on Highway 1 which would provide access to the alternative trailhead locations are currently uncontrolled, with free flow on Highway 1 and stop controls on the side streets. Because of the limitation of data and inability to collect new data due to the COVID-19 pandemic and associated Shelter in Place orders, the need for changes in the traffic control, such as a traffic signal, was determined for the Highway 1 intersection with the highest volume of side street traffic, which is at Bonny Doon Road. Currently, there are 69 peak hour vehicles approaching Highway 1 from Bonny Doon Road. With the addition of the maximum volume of project traffic expected at any of the access locations, the side street volume would increase to approximately 85 westbound entering vehicles with Alternative A. These volumes were assessed versus the peak hour signal warrant from Chapter 4 of the *California Manual on Uniform Traffic Control Devices, Revision 4*, Caltrans, 2019. With the addition of Alternative A traffic to existing volumes, the volumes entering the intersection would not be sufficient to warrant the installation of a traffic signal.

The growth in traffic volumes in the study area anticipated by the AMBAG RTDM for 2040 would result in a signal being warranted for Highway 1/Bonny Doon Road per the peak hour signal warrant. The addition of traffic that would be generated by Alternative A would continue to warrant this signal. It is noted that while a signal would be warranted for Highway 1/Bonny Doon Road for future plus Alternative A volumes, it would still be warranted without the addition of project traffic to future volumes as the project background traffic growth is significantly higher than the project traffic volumes.

A copy of the peak hour traffic signal warrant analysis for Highway 1/Bonny Doon Road is enclosed.

Sight Distance

A field visit was conducted in April 2020 to measure the sight distance available for drivers departing each of the planned parking areas above, except Warrenella Road – Top, which was not accessible to the public at the time of the visit. Additionally, the sight distances for traffic entering Highway 1 was measured from Swanton Road, Cement Plant Road, and Bonny Doon Road.

Sight distances for these driveways and intersections were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets is based on corner sight distances, while recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance. Both use the approach travel speeds as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street. Table 5 summarizes the minimum sight distance requirements.

Table 5 – Intersection Sight Distance Criteria						
Speed	Public Road Minor Approach Corner Sight Distance	Private Road and Rural Driveway Stopping Sight Distance				
25 mph	275 feet	150 feet				
30 mph	330 feet	200 feet				
35 mph	385 feet	250 feet				
40 mph	440 feet	300 feet				
45 mph	495 feet	360 feet				
50 mph	550 feet	430 feet				
55 mph	605 feet	500 feet				

Source: Highway Design Manual, 6th Edition, California Department of Transportation, 2017

Following are the results of the sight distance inventory, in order from south to north.

The proposed Marina Ranch Gate is approximately 1.3 miles south of Bonny Doon Road on Highway 1. At this location, the speed limit on Highway 1 is 55 miles per hour (mph) and the required sight distance is 500 feet. As sight lines in excess of 500 feet were established in both directions on Highway 1, sight distance for this location is acceptable.

The Liddell Creek parking area would be accessed from Bonny Doon Road. At Highway 1/Bonny Doon Road, the speed limit is 55 mph and the required sight distance is 605 feet as Bonny Doon Road is a public road. Acceptable sight distance in excess of 605 feet was measured during the field visit in both directions on Highway 1.

From the Liddell Creek parking area itself, sight distance was measured as 310 feet to the south. Speeds of several northbound vehicles were measured; all were traveling under 40 mph. At 40 mph, a sight distance of 300 feet is required. Therefore, sight distance to the south is sufficient. To the north, sight distance was measured as 250 feet. Speeds of several southbound vehicles were measured and all were traveling at speeds between 30 and 40 mph. As 40 mph requires 300 feet of sight distance but only 250 is available, the available sight distance to the north is insufficient. It is recommended that either the driveway be moved to allow at least 300 feet of sight distance in each direction, or sight lines of at least 300 feet to the north be established through clearing vegetation along the red arrow depicted in Plate 1. It is important to note that this only affects Alternative A as the other two alternatives do not include a parking area at Liddell Creek.



Plate 1 Liddell Creek Parking Exit Sight Distance to North (Source: Google Earth)

The Warrenella Road parking lots would be accessed from Cement Plant Road, which has two public connections to Highway 1. Project traffic would likely use the north connection as it is closer to the site, but both were measured for sight distance. At Highway 1/Cement Plant Road (South), the posted speed limit is 40 mph which requires 440 of sight distance for the minor approach from a public road. Sight lines in excess of 500 feet were established in both directions, therefore sight distance at this location is acceptable.

At the other connection of Highway 1/Cement Plant Road (North), the posted speed limit is 55 mph, requiring 605 feet of sight distance; sight lines of at least 605 feet were established during the field visit.

The proposed Warrenella Road – Gate parking area would be accessed from Cement Plant Road approximately 250 feet north of Cement Plant Road/Warrenella Road. At this location, sight distance was measured as 250 feet to the north and 350 feet to the south. There is no speed limit posted, but the *prima facie* speed limit is 55 mph. A *prima facie* speed limit is one that applies when there are no other speed limits posted, which in California is typically 55 mph for a two-lane undivided roadway outside of a residential, business, or school district.

However, 55 mph is not reasonable in this location given the alignment, visibility, and geometry of Cement Plan Road in the vicinity of the proposed Warrenella Road – Gate parking area. Most drivers would be more comfortable traveling at 15 to 20 mph although 25 mph is assumed to be more conservative. At 25 mph, the sight distance required is 150 feet, therefore sight distance in this location is acceptable.

The speed limit on Highway 1 in the vicinity of Swanton Road is 55 mph, requiring 605 feet of sight distance for drivers approaching from this minor public road. As sight lines in excess of 605 feet were measured, the sight distance for this location is adequate.

At the proposed Swanton Road Gate, sight distance in excess of 500 feet was measured to the north, and 310 feet to the south. A speed limit was not posted and there were too few vehicles during the field visit to assess prevailing speeds, but the sight distance is adequate provided that the prevailing speed is 40 mph or slower.

Sight Distance Findings

- The available sight distances of most of the parking areas and access to Highway 1 was measured and generally were acceptable.
- The only location that has insufficient sight distance is the Liddell Creek parking area on Bonny Doon Road, where sight distance to the north is less than required. The parking exit driveway should be moved to a more suitable location, or vegetation cleared in order to provide at least 300 feet of sight distance.

Conclusions and Recommendations

- Vehicle trip generation was determined based on data from the RMPA and ITE *Trip Generation Manual*. It is estimated that during the weekday p.m. peak hour Alternatives A, B, and C would respectively generate 16, 31, and 44 trips. For the weekend midday peak hour, this would be 40, 80, and 111 trips, respectively.
- These volumes were added to existing volumes for each location on Highway 1 where an intersecting road or driveway would carry project traffic for each of the three alternatives. It was found that left-turn lanes, right-turn lanes, and right-turn tapers would not be warranted for any of the alternatives under volumes resulting from adding project trips to existing volumes.
- Future volumes were determined using the anticipated growth rate to 2040 from the AMBAG RTDM. Under these future volumes, turn lanes and tapers would continue to not be warranted for the study intersections. However, a northbound left-turn lane would be warranted for Highway 1/Panther Beach Parking Access with the addition of Alternative B or C traffic to the future volumes. It is noted that the Panther Beach parking area uniquely would be on the west side of Highway 1, whereas the other study parking areas would be on the east side.
- The peak hour traffic signal warrant was assessed for volumes at Highway 1/Bonny Doon Road as Bonny Doon Road has the highest traffic volume of any road intersecting Highway 1 that would carry project traffic. With the addition of the maximum expected traffic generated by the project at any of the access locations, a traffic signal would not be warranted for existing volumes with the addition of Alternative A traffic. It was found that a signal would be warranted for this location under future volumes without or with the addition of Alternative A traffic.
- Sight distance was assessed for each proposed parking area driveway and where public roadways that would be used by project traffic intersect with Highway 1, except for the Warrenella Road Top parking area as it was inaccessible at the time of this study. All locations have adequate sight distance in both directions, except the Liddell Creek parking area on Bonny Doon Road. For this location, it is recommended that the parking lot connection be moved or that vegetation be cleared such that sufficient sight distance is achieved. This only affects Alternative A, as Alternatives B and C do not include a parking area at Liddell Creek.

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Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

ten Q

Kevin Carstens, PE Associate Engineer Steve Weinberger, PE OE Senior Principal



SJW/krc/SZX014.L1

Enclosures: Turn Lane Warrant Worksheets, Peak Hour Signal Warrant Worksheets





































































Warrant 3: Peak-Hour Volumes and Delay

Highway 1 & Bonny Doon Road	Project Name: Cotoni-Coast Dairies Project
County of Santa Cruz	

		Intersectio	on: I			
	Major Stre	eet	Minor Street			
Street Name	Highway	1	Bonny Doon Road	-		
Direction	N-S		E-W			
Number of Lanes	1		1			
Approach Speed	55		30			
Population less than 10,000?	Yes					
Date of Count:	Saturday, Octob	er 28, 2017				
Scenario:	Existing Weeken	d Midday plus Alt	ernative A			
Wayyant 2 Mat2: Matuhan aitha	Condition A or Pic			N		
Condition A: Met when condit	ions A1 A2 and A3 a	re met		Not Met		
Condition A1						
The total delay exper controlled by a STOP or five vehicle-hours	ienced by traffic on c sign equals or excee for a two-lane approa	ne minor street ar ds four vehicle-ho ach	oproach (one direction only) urs for a one lane approach,			
Minor	Approach Delay:	N/A vehicle-h	nours			
Condition A2				Not Met		
The volume on the sa 100 vph for one mov	ame minor street app ing lane of traffic of 1	roach (one directi 50 vph for two mc	on only) equals or exceeds oving lanes			
Minor A	oproach Volume:	85 vph				
Condition A3				Met		
The total entering vo intersections with for approaches	lume serviced during ur or more appraches	the hour equals c or 650 vph for int	or exceeds 800 vph for ersections with three			
Total I	Entering Volume:	974 vph				
Condition B	2	•		Not Met		
The plotted point fall	s above the curve					



Warrant 3, Peak Hour (70% Factor)



Warrant 3: Peak-Hour Volumes and Delay

Highway 1 & Bonny Doon Road Project Name: Cotoni-Coast Dairies Project County of Santa Cruz

		Intersection	on: 1			
	Major Str	eet	Minor Street			
Street Name	Highway	1	Bonny Doon Road			
Direction	N-S		E-W			
Number of Lanes	1		1			
Approach Speed	55		30			
Population less than 10,000?	Yes					
Date of Count:	Saturday, Octob	oer 28, 2017				
Scenario:	Scenario: Future Weekend Midday without Project Traffic					
Warrant 3 Met?: Met when eith	er Condition A or B is	s met		Yes		
Condition A: Met when condi	tions A1, A2, and A3 a	ire met		Not Met		
Condition A1						
The total delay expe controlled by a STO or five vehicle-hours	rienced by traffic on c P sign equals or excee s for a two-lane appro-	one minor street a ds four vehicle-ho ach	pproach (one direction only) urs for a one lane approach,			
Mino	r Approach Delay:	N/A vehicle-l	hours			
Condition A2				Not Met		
The volume on the s 100 vph for one mo	same minor street app ving lane of traffic of 1	proach (one directi 50 vph for two mo	on only) equals or exceeds oving lanes			
Minor A	pproach Volume:	85 vph				
Condition A3				Met		
The total entering ve intersections with fo approaches	olume serviced during our or more appraches	g the hour equals c s or 650 vph for int	or exceeds 800 vph for ersections with three			
Total	Entering Volume:	1150 vph				
Condition B	2	·		Met		
The plotted point fa	lls above the curve					







Warrant 3: Peak-Hour Volumes and Delay

Highway 1 & Bonny Doon Road	Project Name: Cotor	ni-Coast Dairies Project
County of Santa Cruz		
	Intersection: 1	

	Major Str	eet	Minor Street		
Street Name	Highway	/1	Bonny Doon Road		
Direction	N-S		E-W		
Number of Lanes	1		1		
Approach Speed	55		30		
Population less than 10,000?	Yes				
Date of Count:	Saturday, Octob	oer 28, 2017			
Scenario: Future Weekend Midday plus Alternative A					
Warrant 3 Met?: Met when either	Condition A or B	is met	[Yes	
Condition A: Met when condition	ons A1, A2, and A3 a	are met	-	Not Met	
Condition A1			-	Not Met	
The total delay experie controlled by a STOP s or five vehicle-hours fo	enced by traffic on ign equals or excee or a two-lane appro	one minor street eds four vehicle-h bach	approach (one direction only) hours for a one lane approach,		
Minor A	pproach Delay:	N/A vehicle	-hours		
Condition A2			_	Not Met	
The volume on the sar 100 vph for one movir	ne minor street app ng lane of traffic of	proach (one direo 150 vph for two r	tion only) equals or exceeds noving lanes		
Minor App	oroach Volume:	94 vph			
Condition A3				Met	
The total entering volu intersections with four approaches	ume serviced during or more apprache	g the hour equal s or 650 vph for i	s or exceeds 800 vph for ntersections with three		
Total En	tering Volume:	1184 vph			
Condition B	2			Met	
The plotted point falls	above the curve		-		



Warrant 3, Peak Hour (70% Factor)

W-Trans