1 Introduction

1.1 Santa Cruz County RCIS Overview

The Santa Cruz County Regional Transportation Commission (RTC) partnered with the Resource Conservation District of Santa Cruz County (RCD) to develop the Santa Cruz County Regional Conservation Investment Strategy (RCIS). The RCIS is a voluntary, non-binding, non-regulatory regional plan for the conservation of natural communities, species, and related biodiversity conservation values. The RCIS provides a comprehensive regional conservation strategy to safeguard Santa Cruz County's unique biodiversity and ecological communities and promote resilience to foreseeable pressures and stressors. It was developed to support efforts to align demands for infrastructure improvements, climate change resiliency and adaptability, and conservation, by helping to prioritize voluntary conservation investments, identify high-value conservation and habitat enhancement opportunities, inform regional advance mitigation planning and compensatory mitigation, develop projects to address legacy infrastructure impacts, and focus project mitigation on the highest conservation priorities.

The RCIS, which addresses the land and water within the geographic area of Santa Cruz County (Section 1.3), integrates the abundant existing, available scientific information, plans, and analyses to identify and develop strategies for a series of conservation elements: natural communities, other conservation elements, focal species, non-focal species, and co-benefited species (Section 3.2). Rather than focusing on species, the strategy emphasizes natural communities and other important aspects of the landscape, including habitat connectivity, working lands, and bat habitat, which collectively support rare as well as common species in Santa Cruz County.

The RCIS was developed through the engagement of technical advisors, stakeholders, and the broader community (Section 1.7). Through this outreach, the wealth of local knowledge was synthesized with prior conservation plans to develop a comprehensive regional strategy to protect Santa Cruz County's rare and unique species, biodiversity, and ecological communities and to sustain the landscape processes that support them, including by promoting resilience to identified pressures and stressors.

1.2 RCIS Program

Administered by the California Department of Fish and Wildlife (CDFW), the RCIS Program is a non-regulatory, and non-binding conservation program that uses a science-based approach to identify conservation and enhancement opportunities that, if implemented, will help California's declining and vulnerable species by protecting, creating, restoring, and reconnecting habitat and may contribute to species recovery and adaptation to climate change and resiliency (CDFW 2021). Once an RCIS is in place, public and private entities may enter into Mitigation Credit Agreements (MCAs), which create mitigation credits in advance of anticipated impacts resulting from projects including, maintenance of existing infrastructure and new infrastructure

and development projects. An MCA allows agencies implementing projects to obtain mitigation credits from CDFW, by implementing habitat conservation or enhancement actions that achieve the goals and strategies outlined in the RCIS (Section 6.1.3.2.3; CDFW 2021).

Though focused on biodiversity conservation, the RCIS actions can help sustain other important ecosystem services such as recreation, water protection, wildfire risk reduction, and flood risk reduction. Although the RCIS program was developed by CDFW, the RCIS addresses local, state, and federal natural resource regulatory agency mandates and needs to provide a unified strategy to guide conservation investment within the county.

1.3 The RCIS Area

This RCIS addresses land and water resources within the geographic area encompassed by Santa Cruz County, which is the jurisdiction of the RTC (Figure 1-1) and is referred to hereafter as the "RCIS Area". Present-day Santa Cruz County is located within the homeland of the Achistaca, Aptos, Cajastaca, Cotoni, Sayanta, and Uypi tribes, who spoke the Awaswas and Mutsun languages: two of six Ohlone languages. Today's Ohlones continue to honor their legacy through their cultural and tribal work, advocacy for the preservation of ancestral cultural sites and landscapes, and practice of traditional ecological knowledge (Native Land Digital 2021). The RCIS seeks to honor their traditions and practices as the original and current stewards of the land and support revitalization efforts of all indigenous tribes.

Santa Cruz County is a biodiversity hot spot known and valued for its globally rare natural communities such as old-growth redwood forests, Santa Cruz sandhills, karst caves, coastal prairie grasslands, and maritime chaparral, which feature 35 endemic species such as the Ben Lomond wallflower and Ohlone tiger beetle. Santa Cruz County also features sensitive aquatic habitats including ponds, wetlands, and coastal streams that support steelhead and coho salmon, and rare amphibians including Santa Cruz long-toed salamander.

Land within Santa Cruz County plays an important role in maintaining biological systems within the Santa Cruz Mountains bioregion and maintaining landscape connectivity within the broader Central Coast Ecoregion (Mackenzie et al. 2011). The county's biological systems provide a wealth of goods and services that support quality of life including crop pollination, water infiltration, flood protection, carbon sequestration, climate change adaptation, working lands production, recreation, and tourism (Schmidt et al. 2015).

The RCIS was developed to complement RCISs that have been recently adopted by Santa Clara (ICF 2019) and Monterey (AECOM 2021) counties, which are contiguous with the RCIS Area (Section 1.5.5). Collectively, these RCISs can be used to identify high-value conservation and habitat enhancement opportunities and to inform and facilitate comprehensive, cohesive, and connected regional conservation outcomes.

The RCIS was developed using available information for the planning area, which oftentimes included regional spatial data (Appendix B). While these data are appropriate for planning

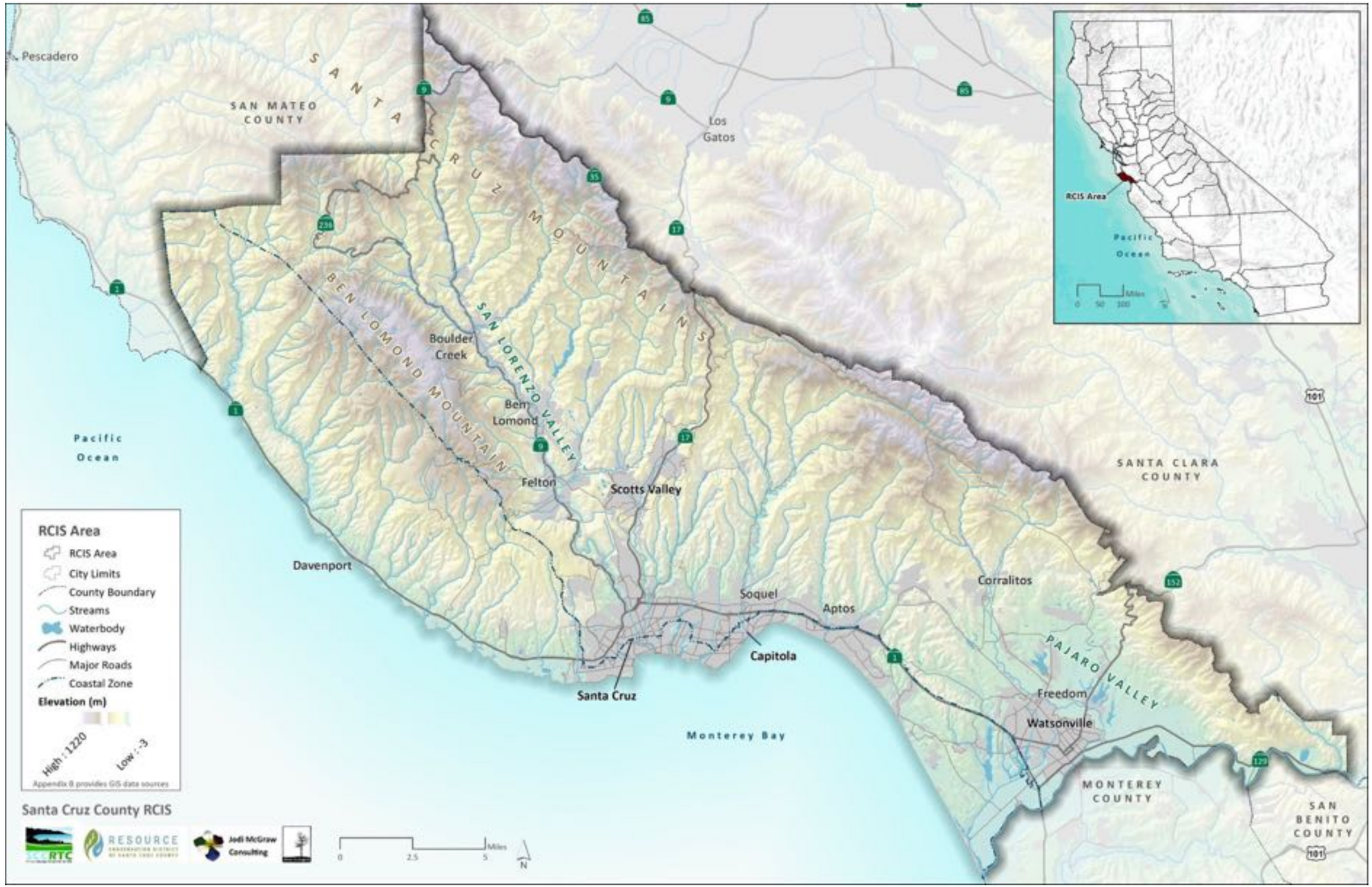

Figure 1-1: Santa Cruz County RCIS Area

purposes, they may not always accurately depict conditions at the site level, where additional assessments and planning may be required during implementation of the RCIS.

1.4 RCIS Planning Framework and Contents

The RCIS was developed through a stepwise conservation planning framework (Figure 1-2), which is reflected in the contents of the RCIS which are outlined below:

- **Introduction (Chapter 1):** This introduction provides background about the RCIS, including its origins, relationship to prior plans, purpose, public development process, planning framework, and uses.
- **Regional Setting (Chapter 2):** The Regional Setting characterizes the RCIS Area (Santa Cruz County), in terms of its: 1) natural systems, including ecoregions, watersheds, vegetation and other land cover; 2) its human activities, including land use and infrastructure; and 3) existing conservation plans. It guided selection of the conservation elements, and provided essential information for evaluating their pressures and stressors (Chapter 4) and developing the conservation strategies (Chapter 5).
- **Conservation Elements (Chapter 3):** This section identifies the communities, focal species, non-focal species, and other conservation elements selected for analysis in the RCIS and the criteria used to select them to create a comprehensive and cohesive conservation strategy for the RCIS Area.
- **Pressures and Stressors (Chapter 4):** This section identifies and briefly describes the anthropogenic or natural drivers (pressures) that create degraded ecological conditions (stressors) for the conservation elements. This analysis informed development of the conservation strategies (Chapter 5) which were designed to address the anthropogenic pressures and stressors.
- **Conservation Strategies (Chapter 5):** For each of the 23 conservation elements, Chapter 5 provides the conservation strategies. Each strategy includes: background information about the elements, including key ecological requirements, summary of primary pressures and stressors, and their climate change vulnerability, followed by a table listing the goals, objectives, actions, and priorities (i.e., the strategy). To make links between the conservation elements, each of the conservation strategies lists the other conservation elements, including focal and non-focal species, that will benefit from the strategy; they also list the other conservation element strategies that will benefit each conservation element.
- **Implementation (Chapter 6):** This section outlines approaches and guidance for implementing the RCIS, including methods of collaborating and funding the conservation strategy. It also outlines how the RCIS can changed over time, including through updates to maintain it as current.

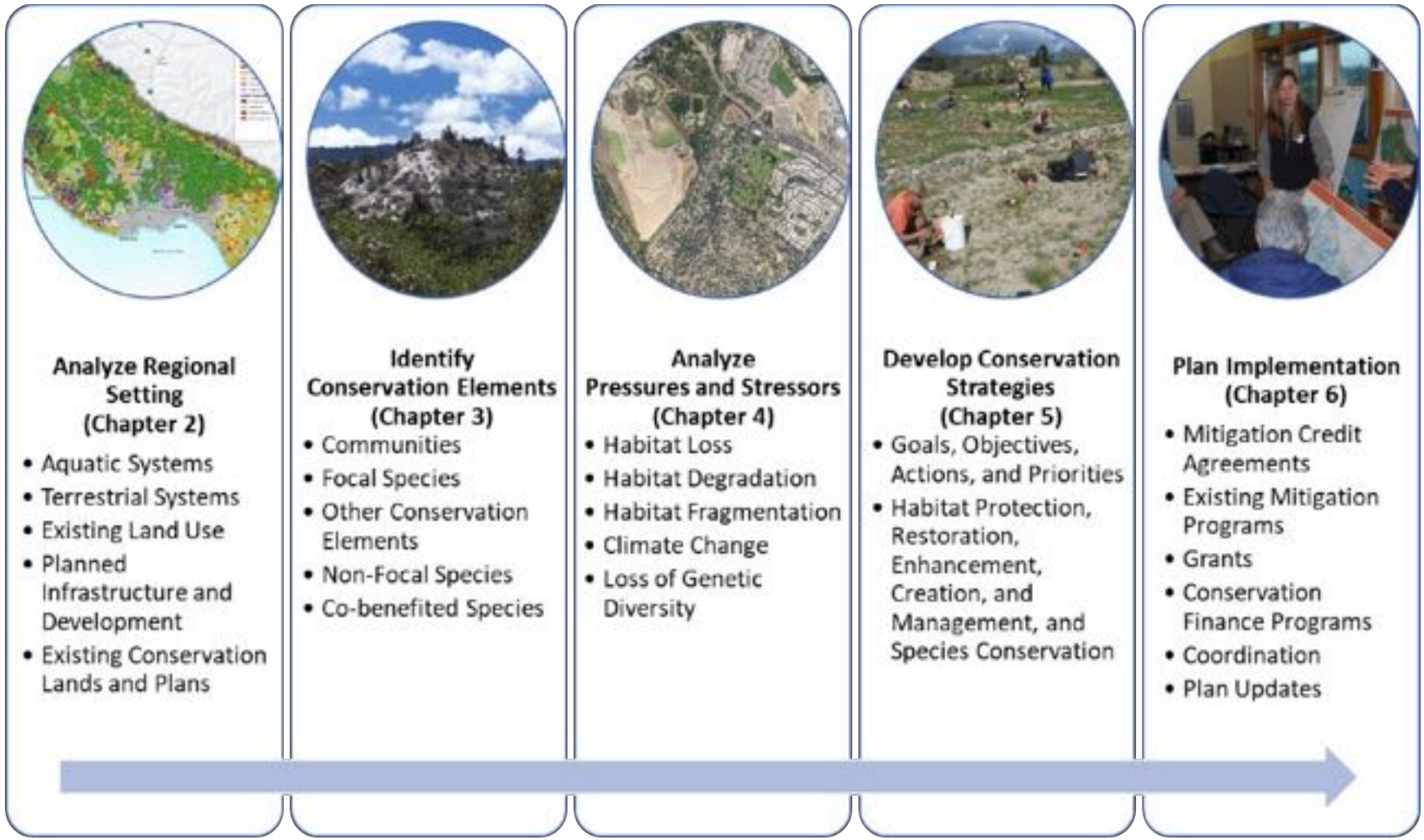

Figure 1-2: The RCIS Conservation Planning Framework and Contents

- **Appendices:** Additional information to aid use of the RCIS and understanding of how it was developed, including a glossary (Appendix A), list of GIS data sources (Appendix B), letters of support for the RCIS (Appendix C), details of public participation (Appendix D), infrastructure plans and projects (Appendix E), methods used to assemble the species database (Appendix F), and a table identifying the sections of the plan that address the RCIS requirements as identified in the Fish and Game Code (Appendix G).

1.5 Relationship of RCIS to Prior Plans, Programs, and Agreements

The RCIS builds upon a unique foundation of collaborative conservation planning and action, which are the hallmark of conservation in Santa Cruz County. Prior conservation planning efforts focused on protecting and restoring important lands, biological systems, and watersheds, and recovering rare species (Section 2.3). In addition, many of the prior plans developed goals and strategies to safeguard the region's other conservation values including working lands and water resources, while allowing orderly development and maintenance of essential infrastructure.

The RCIS leverages the Integrated Watershed Restoration Program, the Conservation Blueprint for Santa Cruz County (Mackenzie et al. 2011), and the Early Mitigation Planning for Transportation Improvements in Santa Cruz County Memorandum of Understanding as foundational pillars for both collaborative conservation and the identification and pursuit of priority conservation strategies and actions across the county. The RCIS builds upon, and will help implement, numerous other conservation and recovery plans, and was developed to be compatible with the region's habitat conservation plans.

1.5.1 Integrated Watershed Restoration Program

The Integrated Watershed Restoration Program (IWRP) grew out of a series of watershed assessments and plans in the late 1990s and early 2000s and has evolved to meet the recognized need for a coordinated, regional process for identifying, funding, and developing key projects to improve fish and wildlife habitat and water quality. IWRP was conceived in 2003 through a partnership between the RCD, the California Coastal Conservancy, CDFW, the City of Santa Cruz, the County of Santa Cruz, and the Coastal Watershed Council. Through its Technical Advisory Committee (TAC), IWRP brings together federal, state, and local natural resource regulatory and funding agencies to identify and oversee the design and implementation of high priority projects to restore watersheds. Though initially focused on Santa Cruz County, IWRP now also includes neighboring San Mateo and Monterey counties.

Over the past decades IWRP has implemented critical projects and developed a culture of trust and collaboration among participants. IWRP has won national and statewide recognition and continues to be the go-to program for coordinated regional recovery planning, resilience planning, innovating, and testing new techniques and technologies, as well as mediation and facilitation to resolve difficult and complex resource problems. As of 2020, the State Coastal Conservancy's cumulative $9.3 million investment in developing IWRP and designing and

permitting projects through IWRP has leveraged well over $41 million in implementation investment to complete over 180 restoration projects. The RCIS engaged the IWRP TAC for technical advising to inform the strategy including identification of priority conservation actions. IWRP is anticipated to provide a key forum to facilitate implementation of the RCIS (Section 6.1.2).

1.5.2 Conservation Blueprint for Santa Cruz County

The RCIS was informed by the Conservation Blueprint for Santa Cruz County—a comprehensive conservation plan developed by the Land Trust of Santa Cruz County, that identifies important areas to conserve and provides recommendations for their protection in Santa Cruz County (Mackenzie et al. 2011). The Conservation Blueprint was developed through a multi-year process that included a thorough assessment of the region, based on a synthesis of existing information and new research and analyses, and extensive community engagement to identify the conservation values and goals. These efforts informed the development of comprehensive and integrated strategies to protect biological resources, water resources, and working lands, and to create healthy communities by facilitating compatible recreation.

In addition to informing the RCIS strategies, this foundational document provided a key source of information about the conservation values, including spatial data, that was instrumental in the RCIS. Implementation of conservation strategies in the RCIS can further implementation of the Conservation Blueprint.

1.5.3 Early Mitigation Memorandum of Understanding

In 2018, the RTC, RCD, and 11 other transportation and natural resource regulatory agencies entered into the Santa Cruz Early Mitigation Partnership Memorandum of Understanding (EMP MOU). The EMP MOU leverages the collaborative relationships established through IWRP to foster early and collaborative engagement among transportation and natural resource regulatory agencies to improve predictability and effectiveness of transportation project mitigation to meet regional conservation priorities. Signatories to the EMP MOU include: the California Coastal Commission (Commission), California State Coastal Conservancy (Conservancy), CDFW, California Department of Transportation (Caltrans), Central Coast Regional Water Quality Control Board (CCRWQCB), National Marine Fisheries Service (NMFS), United States Fish and Wildlife Service (USFWS), RCD, Santa Cruz County Planning Department, Santa Cruz County Public Works, RTC, San Francisco District of the United States Army Corps of Engineers (USACE), and Region 9 of the United States Environmental Protection Agency (EPA).

1.5.4 Other Conservation Plans

The RCIS was developed to align with and incorporate additional applicable conservation plans. These include state and federal plans such as the State Wildlife Action Plan (CDFW 2015), species recovery plans, and habitat conservation plans, as well as conservation plans developed by various local public and private land managers. It addresses relevant goals and elements from related water use plans, such as the Sustainable Groundwater Management Plan and

Integrated Regional Water Management Plans. Section 2.3 provides further details on these plans, while Section 5.4 analyzes consistency of the RCIS with the recovery plans and HCPs.

1.5.5 Other RCISs

The RCIS was developed to complement RCISs adopted by the Santa Clara Valley Open Space Authority (OSA) for Santa Clara County in 2019 (ICF 2019) and by the Transportation Agency of Monterey County (TAMC) for Monterey County in 2021 (AECOM 2021). As such, this RCIS along with the adjacent RCISs collectively provide a comprehensive strategy for the region's 3,738,700 acres (5,842 square miles). These RCISs identify the importance of protecting critical wildlife linkages identified between the Santa Cruz Mountains and the Diablo Range in Santa Clara County and the Gabilan Range in Monterey County and adjacent San Benito County (Section 2.4.6). Section 5.4 describes how this RCIS was developed to complement these prior RCISs.

1.5.6 Land Use Plans and Regulations

There are numerous federal, State, and local land management plans and regulations that apply to and/or operate in the RCIS Area. As a voluntary, non-binding document, the RCIS does not create, modify, or impose regulatory requirements or standards, regulate land use, establish land use designations, or affect the land use authority of a public agency. The RCIS strategies are designed to complement protection measures afforded by existing policies and regulations, which play an essential role in protecting biological systems in Santa Cruz County.

The RCIS includes provisions ensuring compliance with all applicable state and local requirements and does not preempt the authority of the State. As a non-regulatory document, an RCIS does not preempt or the authority of local agencies to implement or regulate infrastructure and urban development within their jurisdiction. Additionally, the preparation or approval by CDFW of an RCIS does not alter the requirements of the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA), the Natural Community Conservation Planning Act (NCCPA), or the California Department of Fish and Wildlife's (CDFW's) Lake and Streambed Alteration (LSA) and Conservation and Mitigation Bank programs (Appendix C) or any applicable State or federal laws and regulations. During development of the RCIS, planning department staff and officials with the local land use agencies (Santa Cruz County and the four incorporated cities therein) were consulted along with staff from CDFW, the CCRWQCB, Coastal Commission, USFWS, and NMFS.

1.6 Purpose

The RCIS provides a scientifically rigorous, comprehensive regional conservation strategy to protect Santa Cruz County's unique biodiversity and ecological communities. It was developed to:

- Facilitate regional, early, and advance mitigation planning and implementation of mitigation projects; and

- direct conservation investments to the highest priority areas through science-based, collaborative, and voluntary actions to achieve more effective conservation outcomes.

The RCIS can also assist with regional and project planning.

1.6.1 Regional Advance Mitigation Planning

As noted in Section 1.5.3, the RCIS was born out of a partnership between the RTC, RCD, and numerous transportation and natural resource regulatory agencies who have a shared commitment to regional, early, and advance mitigation planning outlined in the Santa Cruz County EMP MOU. Advance mitigation is a science-based approach to identify mitigation opportunities to support regional conservation priorities. By considering mitigation development early in the planning process prior to design and permitting phases, proponents can identify higher-quality mitigation opportunities. The RCIS can support the desired regional and early mitigation planning efforts by partner agencies and advance mitigation programs such as Mitigation Credit Agreements and Caltrans Advanced Mitigation Program (AMP) by:

- providing a roadmap of conservation strategies and priority actions to direct regional advance mitigation planning and investment to achieve the greatest conservation outcomes on the ground; and
- by laying the natural-resource related groundwork for CDFW.

Regional advance mitigation can be facilitated through MCAs, which are legal agreements between a project proponent and CDFW to implement conservation or habitat enhancement actions in the RCIS. These agreements generate credits that can be used as compensatory mitigation for impacts to special-status species and sensitive habitats under California Environmental Quality Act, the California Endangered Species Act, and the Lake and Streambed Alteration Program. Additional natural resource regulatory agencies could potentially elect to have MCA credits satisfy the mitigation needs under other local, state, or federal regulations (Section 6.1.3.2.3). Likewise, when covering resources under their purview, additional natural resource regulatory agencies could potentially approve credits through an MCA or parallel regulatory process.

Senate Bill 1 (2017) also established the Advanced Mitigation Program (AMP) within Caltrans to oversee the planning and implementation of advanced mitigation projects funded through the Advance Mitigation Account (AMA), a revolving account. The AMP is designed to supply high-quality compensatory mitigation credits (or values) that will be available to satisfy future SHOPP and STIP transportation project compensatory mitigation needs, as defined in natural resource regulatory agency conditions on transportation projects. Under the AMP, Caltrans is authorized to (1) purchase credits created through a Mitigation Credit Agreement (MCA), in bulk, and (2) fund the preparation of a MCA with CDFW, where a Regional Conservation Investment Strategy (RCIS) has been approved by CDFW. Caltrans or another party can be the MCA sponsor.

The RCIS contains information that could guide Caltrans' advance mitigation project development under Article 2.5(b) of Chapter 4 of Division 1 of the Streets and Highway Code. In

addition, compensatory mitigation credits purchased in bulk or created in accordance with an MCA tiered off the RCIS and funded through the AMA may be usable by, and hence increase the delivery efficiency of, Caltrans' future SHOPP transportation projects and/or STIP transportation projects.

To understand where there are opportunities for early coordination and advanced mitigation may occur, the RTC is preparing a transportation mitigation needs assessment modeled after the Caltrans Advanced Mitigation Needs Assessment completed in 2019. The assessment evaluates the 2045 RTP project list for their potential to require compensatory mitigation based on the project scope and proximity to sensitive resources[1]. The projects with off-pavement disturbance that could potentially require mitigation are included in Appendix E (Table E-1). The State Advanced Mitigation Needs Assessment (SAMNA; Caltrans 2021a) and the District 5 Regional Advanced Mitigation Needs Assessment (RAMNA; Caltrans 2021b) identify State Highway Operation and Protection Program (SHOPP) transportation projects potentially affecting special-status species and aquatic resources and that may require mitigation.

1.6.2 Promoting Other Voluntary Conservation Investments

In addition to facilitating the alignment of mitigation with conservation, the RCIS can increase other voluntary conservation investments in the region. The RCIS proponents envision future public and private investment programs, such as public and private grants or other philanthropic endeavors, will be developed to support implementation of this strategy (Section 6.1.3).

1.6.3 Regional Planning

The RCIS can inform planning and provides project proponents with information that can assist with project prioritization and justification. For example, the RCIS may be used to assist in land use planning by identifying areas that are most important for biological resource conservation; it should be used in conjunction with other land use planning tools to address other factors not addressed in this document, such as physical geography, social, economic, and risk-reduction considerations.

1.7 RCIS Development Process

The RCIS was developed through the engagement of local experts and stakeholders as well as the broader public. The following summarizes the community outreach used to develop the RCIS, which is further detailed in Appendix D.

[1] RTC staff has initiated development of the 2045 RTP, for which a list of projects was compiled in April of 2020. The 2045 RTP is expected to be adopted by the Summer 2022.

1.7.1 Engagement of Experts and Stakeholders

Local interests and expertise were actively engaged throughout the RCIS planning process, to ensure that the RCIS reflected local knowledge and priorities and to promote coordinated implementation of the RCIS. Experts and stakeholders were engaged as part of three groups:

- **Steering Committee:** Development of the RCIS was guided by a Steering Committee comprised of the RTC, RCD, consultant team, CalTrans (Headquarters and District 5), CDFW, Land Trust of Santa Cruz County, and State Parks.
- **Stakeholder Group:** To obtain broad input on the RCIS, over 100 individuals were invited to participate in a stakeholder group, comprised of natural resource planners, transportation planners, landowners and land managers, tribal representatives, state, federal and local natural resource and transportation agency representatives, as well as representatives from the neighboring RCIS regions (Santa Clara and Monterey counties). This group included representatives of nearly all the EMP signatory agencies (Section 1.5.3).
- **Technical Advisory Committee:** To ensure that the RCIS reflected the best available scientific information, the RCIS team engaged over 70 individuals with extensive, relevant technical expertise and local experience. In addition to many local non-governmental experts, the Technical Advisory Committee also included technical experts from many of the state and federal natural resource regulatory agencies.

The respective groups were engaged in development of: 1) data and other resources to develop the RCIS; 2) description of the regional setting; 3) selection of the RCIS conservation elements; and 4) the conservation strategies including goals, objectives, actions and priorities for habitat protection, restoration, and enhancement projects.

1.7.2 Additional Community Outreach

To ensure robust community participation and provide opportunity for input and review, the RCIS project team conducted direct engagement with staff from natural resource regulatory agencies including the CCRWQCB, Coastal Commission, California State Parks, NMFS, NOAA's Southwest Fisheries Science Center, and the USFWS. In addition, presentations on the RCIS were provided at public meetings held by the Santa Cruz County Fish and Wildlife Advisory Commission and the Santa Cruz County Commission on the Environment, which act as advisory bodies to the County Board of Supervisors, and for the Santa Cruz Weed Management Area—a local collaboration of resource managers focused on addressing invasive plant issues in the RCIS Area.

The project team also outreached directly to tribal representatives to facilitate tribal engagement and to solicit indigenous community knowledge and conservation priorities for inclusion in the RCIS.

1.7.3 Opportunities for Public Input

The RCIS was also developed through input from the public, which was solicited through the RCIS website and public workshops and meetings.

1.7.3.1 Development of the Draft RCIS

Public input was solicited on key components of the RCIS early in its development by way of a virtual public workshop between January 11 and February 19, 2021, and an online public meeting/webinar on January 21, 2021. Input was solicited from the public on the following aspects of the RCIS: 1) the draft regional setting (Chapter 2), 2) the proposed conservation elements (Chapter 3), and 3) the types of conservation and enhancement actions that should be addressed in the conservation strategies (Chapter 5). Feedback through the workshop was received through a variety of methods including:

1. Completion of online surveys during the six-week period; and
2. Public comments submitted following a webinar held via Zoom on January 21, which provided participants with an overview of the draft components outlined above; and
3. Submittal of written comments including through the RCIS email address.

A notice of public meeting was posted December 22, 2020, 30 days prior to the meeting, on the RCIS project website, and in the Santa Cruz Sentinel (local newspaper). The notices were also sent directly to: 1) each city, and county within or adjacent to the RCIS Area, 2) the implementing entity for each natural community conservation plan or federal regional habitat conservation plan that overlaps with the RCIS Area; 3) each public agency, organization, or individual who filed a written request with CDFW for notices of all regional conservation investment strategy public meetings; and 4) to each public agency, organization, or individual who has filed a request with RTC to receive notices of RTC programs and projects.
Oral and written input received, and the responses to all comments received with an explanation for how the comments were addressed in the RCIS is provided in Appendix D.

1.7.3.2 Review of the Draft RCIS

The RTC hosted a second virtual public workshop and online meeting on June 29, 2022, to solicit input on the draft RCIS which was circulated for public review from June 17, 2022, to September 1, 2022. Section 6.4.2D.4 lists the written public comments on the draft RCIS that were received and describes how they were addressed in the final RCIS.